MarinTrust Standard V2

By-product Fishery Assessment

Bigeye tuna (*Thunnus obesus*), FAO 77 (Eastern Central Pacific)

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Bigeye tuna (*Thunnus obesus*)
	Geographical area:	FAO 77 (Eastern Central Pacific)
	Country of origin of the product:	USA (Seychelles, South Africa)
	Stock:	Eastern Central Pacific
Date	July 2024	
Report Code	USA25	
Assessor	Blanca Gonzalez	
Country of origin of the product - PASS	USA (Seychelles, South Africa)	
Country of origin of the product - FAIL	None	

Application details and summary of the assessment outcome			
Company Name(s): Indian Ocean Tuna Ltd			
Country: USA (Seychelles, South Africa)			
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	July 2024 – July 2025		

Scope Details	
Main Species	Bigeye tuna (*Thunnus obesus*)
Stock	Eastern Central Pacific
Fishery Location	FAO 77
Management Authority (Country/ State)	Inter-American Tropical Tuna Commission (IATTC)
Gear Type(s)	Longline and purse seine
Outcome of Assessment	
Peer Review Evaluation	Agree with recommendation
Recommendation	PASS

Table 2. Assessment Determination

Assessment Determination
Bigeye tuna (*Thunnus obesus*) was assessed as a category C species considering that it is a Vulnerable species by the IUCN, it is not in included in any CITES Appendixes, and the stock is managed relative to established reference points. Bigeye tuna in Eastern Central Pacific (FAO 77) is subject to regular stock assessment by the Inter-American Tropical Tuna Commission (IATTC). The last assessment was carried out in 2022 and published in 2023 using catches data in several models. Reference models indicates that in the combined estimates across all models the spawning biomass is above the average limit reference point. The bigeye tuna by-product meets the Marin Trust requirements and it should be remained approved for use as a raw material.
Fishery Assessment Peer Review Comments
The peer reviewer agrees that this bigeye tuna stock should be assessed under Category C. The assessor has provided adequate evidence to demonstrate that the stock meets the requirements of category C, and therefore the peer reviewer agrees that the byproduct should remain approved for use as a raw material.
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]
Bigeye tuna	*Thunnus obesus*	FAO77 (Eastern Central Pacific)	Yes	C	Vulnerable[3]	No

[1] https://www.iucnredlist.org/
[2] https://cites.org/eng/app/appendices.php
3 https://www.iucnredlist.org/species/21859/46912402

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		**Bigeye tuna (*Thunnus obesus*)**	
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.

The clause is met considering that:

The bigeye tuna most recent assessment was published in 2023 by the Inter-American Tropical Tuna Commission (IATTC). In 2022 the assessment stock status was based upon a 44 reference models. Time series of total annual catch by fishing gear over the full assessment period in all region is also included (figure 1). Thus, removals of the species are included in the stock assessment process (IATTC 2023).

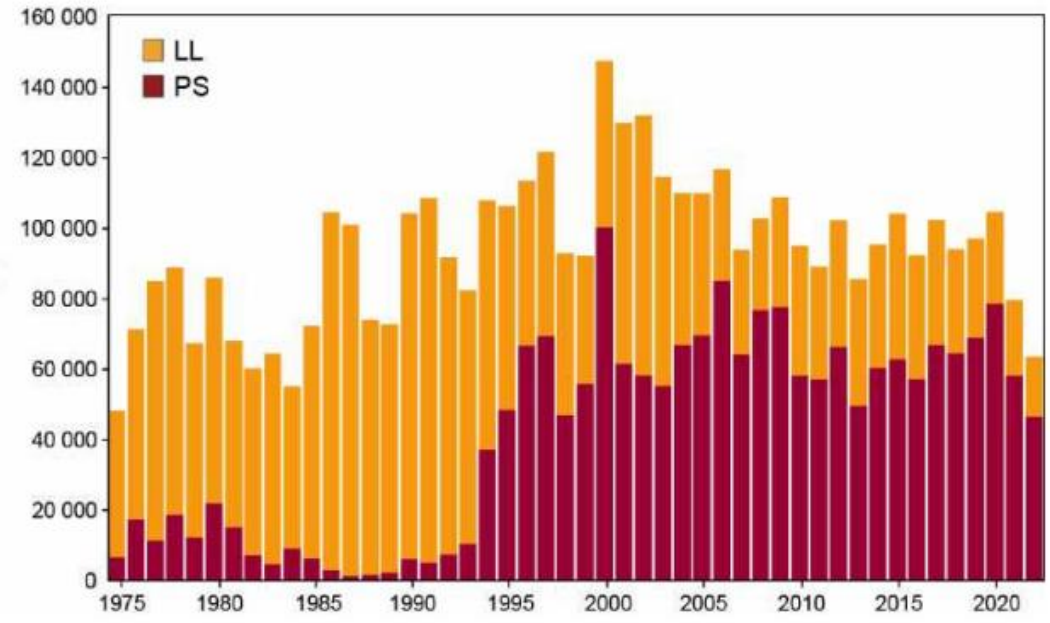

Figure 1. Bigeye tuna total catches (retained catches plus discards) by the purse-seine (PS) fisheries, and retained catches by the longline (LL) fisheries, of bigeye tuna in the eastern Pacific Ocean, 1975-2022. (IATTC 2023).

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.

The Clause is met considering that:

The 2022 stock assessment using the 44 reference models indicates that in the combined estimates across all models (all pessimistic and all optimistic models) the spawning biomass is above the average limit reference point (figure 1) (IATTC 2023).

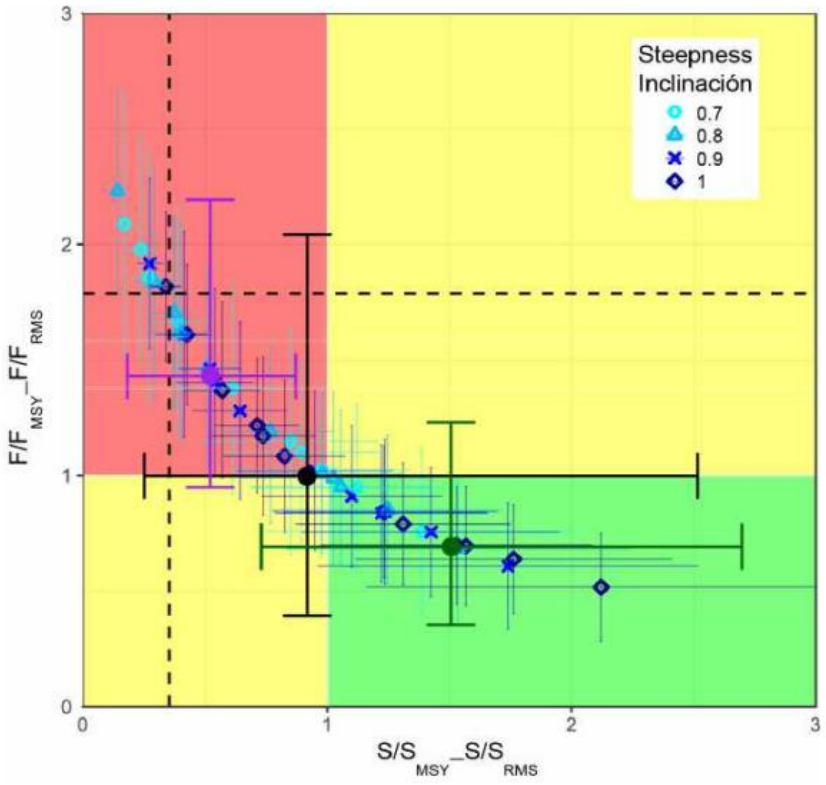

Figure 1. Bigeye tuna Kobe plot of the most recent estimates of spawning biomass (S) and fishing mortality (F) relative to their MSY reference points (SMSY_d and FMSY) estimated by the 44 converged reference model runs. Each dot is based on the average F over the most recent three years. The dashed lines represent the limit reference points averaged for the 44 converged reference model runs. The error bars represent the 95% confidence interval of the estimates. The black, purple, and green dots are the combined estimates across all models, all pessimistic models, and all optimistic models, respectively. (IATTC 2023).

References

IATTC (2023). THE TUNA FISHERY IN THE EASTERN PACIFIC OCEAN IN 2022. https://www.iattc.org/GetAttachment/0f48f889-2aa5-437f-8d03-648d62ecfb75/No-21-2023_Tunas,-stocks-and-ecosystem-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	NA	
	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