MarinTrust Standard V2

By-product Fishery Assessment

USA25 – Bigeye tuna in FAO Areas 77 & 87 (Eastern Pacific Ocean bigeye)

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:	Bigeye tuna (*Thunnus obesus*)
	Geographical area:	FAO Areas 77, 87
	Country of origin of the product:	USA [Seychelles, South Africa]
	Stock:	Eastern Pacific Ocean bigeye
Date	June 2023	
Report Code	USAXX	
Assessor	Sam Peacock	
Country of origin of the product - PASS	USA [Seychelles, South Africa]	
Country of origin of the product - FAIL	n/a	

Application details and summary of the assessment outcome			
Company Name(s): The Scoular Company - Indian Ocean Tuna Ltd (ID preserved)			
Country: USA			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Sam Peacock	Kate Morris	0.2	Initial
Assessment Period	June 2023 – June 2024		

Scope Details	
Main Species	Bigeye tuna (*Thunnus obesus*)
Stock	Eastern Pacific Ocean bigeye
Fishery Location	FAO Areas 77, 87
Management Authority (Country/ State)	Inter-American Tropical Tuna Commission (IATTC)
Gear Type(s)	Longline, purse seine
Outcome of Assessment	
Peer Review Evaluation	Pass
Recommendation	Pass

Table 2. Assessment Determination

Assessment Determination
Bigeye tuna has been categorised by the IUCN Red List as Vulnerable, and does not appear in the CITES appendices. Bigeye in the Eastern Pacific Ocean is managed relative to reference points by the Inter-American Tropical Tuna Commission, and was therefore assessed under Category C. The most recent stock assessment was conducted in 2020, and took into account all available catch data. The assessment concluded that there was a very low probability (6%) that the stock biomass was below the limit reference point. As the byproduct meets the MT requirements, it should be approved for use as a raw material in the manufacture of MT-certified marine ingredients.
Fishery Assessment Peer Review Comments
The by-product fishery under assessment here is the Bigeye tuna (*Thunnus obesus*) fishery, pursued by vessels in FAO fishing area 77 and 87. Bigeye tuna is managed by international or state regulations. Therefore, for this Marin Trust assessment, the skipjack tuna stock is scored against Category C. The species scoring table has been completed by the auditor with sufficient evidence presented to support their final determination. The peer review supports the auditor's recommendation to pass the FAO 77 and 87, Bigeye tuna stock pursued by the fishery under the Marin Trust IFFO RS v2.0 by-fishery standard for the production of fishmeal and fish oil.
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]
Bigeye tuna	*Thunnus obesus*	Eastern Pacific Ocean	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

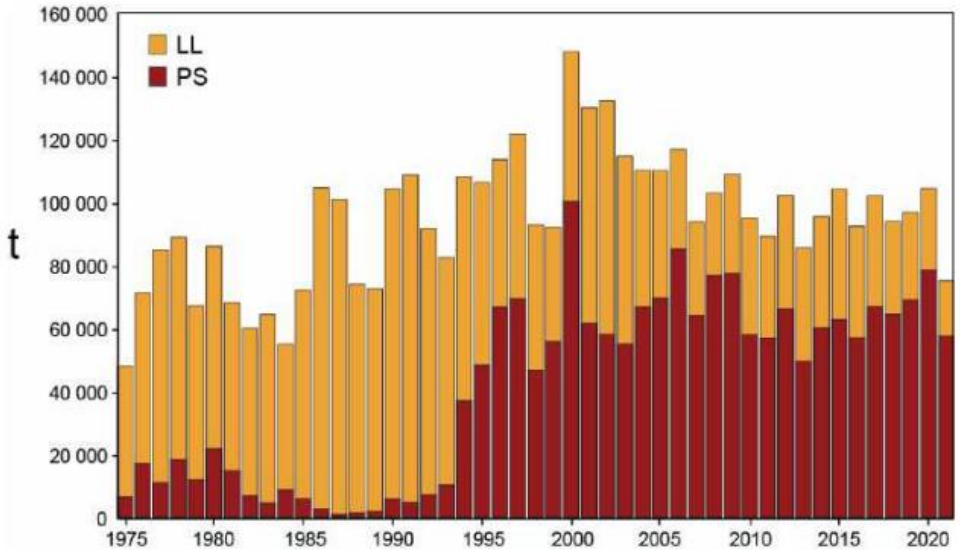
In a by-product assessment, Category C species are those which are subject to a species-specific management regime and are usually targeted species in fisheries for human consumption.

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**	
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.

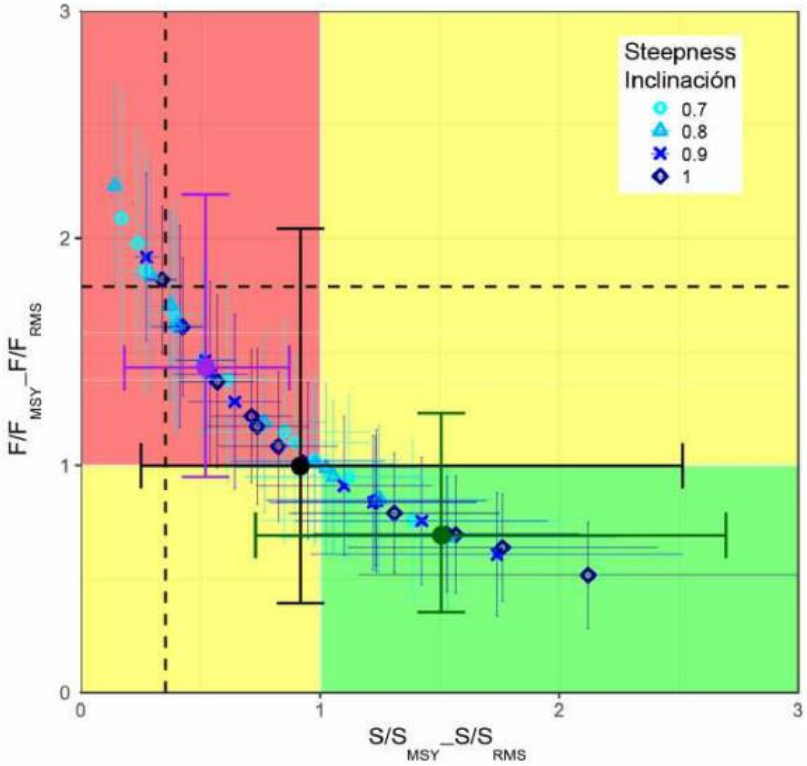
Bigeye tuna in the EPO is subject to regular stock assessment by the Inter-American Tropical Tuna Commission (IATTC). The most recent of these assessments was conducted in 2020. The assessment utilised all international catch data. 44 models were applied to take into account the main sources of uncertainty, and the results are presented alongside the likely confidence intervals (IATTC 2021). All available catch data are incorporated into the assessment, and C1.1 is met.



Total EPO bigeye catch by purse seine gears (PS), and retained catches by longline gears (LL), 1975 – 2021. 2020 and 2021 data are preliminary (IATTC 2021)

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 2020 stock assessment produced statistical probabilities for the status of the stock relative to target and limit reference points. The key conclusion for the purposes of this byproduct assessment is that "the probabilities of spawning biomass at the beginning of 2020 (S_{cur}) being lower than the target and limit reference levels are 53% and 6%, respectively" (IATTC 2021). Therefore, there is a very low probability of the biomass being below the limit reference point, and C1.2 is met.



Kobe plot of the most recent estimates of spawning biomass (S) and fishing mortality (F) relative to their MSY (target) reference points. Black dashed lines indicate the average limit reference points generated by the 44 converged model runs. The black dot represents the combined estimate across all models, with the purple and green dots representing all pessimistic and all optimistic models, respectively (IATTC 2021)

References

IATCC (2022). Report on the tuna fishery, stocks, and ecosystem in the Eastern Pacific Ocean in 2021. https://www.iattc.org/GetAttachment/99dc87b3-cf5f-4b7b-8e6e-f5aa9cab0fce/No-20-2022_Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2021.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**	**n/a**	
	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	n/a	
	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