MarinTrust Standard V2

By-product Fishery Assessment

ECU22 – Bigeye tuna in FAO 77, 87

MarinTrust Programme
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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, 87
	Country of origin of the product:	Ecuador, Spain, Panama
	Stock:	Eastern Pacific Ocean
Date		October 2024
Report Code		ECU22
Assessor		Sam Peacock
Country of origin of the product - PASS		Ecuador, Spain, Panama
Country of origin of the product - FAIL		n/a

Application details and summary of the assessment outcome			
Company Name(s): Marine Protein S.A., NIRSA S.A., Borsea, Lucomercon SA			
Country: Ecuador			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Sam Peacock	Sam Dignan	0.2	Surveillance 1
Assessment Period		November 2024 – November 2025	

Scope Details	
Main Species	Bigeye tuna (*Thunnus obesus*)
Stock	Eastern Pacific Ocean
Fishery Location	FAO 77, 87
Management Authority (Country/ State)	Inter-American Tropical Tuna Commission (IATTC)
Gear Type(s)	Purse seine (free and associated schools), longline, handline, gillnet, and pole-and-line.
Outcome of Assessment	
Peer Review Evaluation	Approve
Recommendation	Approve

Table 2. Assessment Determination

Assessment Determination
Bigeye tuna has been categorised by the IUCN Red List as Vulnerable, and it does not appear in the CITES appendices. It is managed using regular stock assessments relative to established target reference points, and was therefore assessed under Category C. Regular stock assessments are conducted by the Inter-American Tropical Tuna Commission (IATTC). The most recent of these was carried out in 2020, using all international landings data. The assessment concluded that stock biomass is very likely to be above the target and limit reference point levels. For these reasons the byproduct continues to meet the MT requirements and should remain approved for use as a raw material.
Fishery Assessment Peer Review Comments
Based on the relevant species not being categorised as Endangered or Critically Endangered on the IUCN Red List or listed in CITES Appendix 1, fishery removals being appropriately included in stock assessment processes, and evidence that the stock biomass is above its limit reference point, continuing approval is appropriate.
Notes for On-site Auditor

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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

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[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.

Bigeye tuna in the EPO is subject to regular stock assessment by the Inter-American Tropical Tuna Commission (IATTC). The most recent full stock assessment remains the one 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. In 2023, risk-based Stock Status Indicators (SSIs) were introduced. SSIs are considered to be important alternatives to formal stock assessments, particularly where those stock assessments may be too unreliable to form the basis for management advice (IATTC 2022). In the case of bigeye, they are incorporated into the annual stock status review (IATTC 2023). 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 – 2022. 2021 and 2022 data are preliminary (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 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 ($Scur$) being lower than the target and limit reference levels are 53% and 6%, respectively" (IATTC 2023). Therefore, there was a very low probability of the biomass being below the limit reference point, and C1.2 is met.
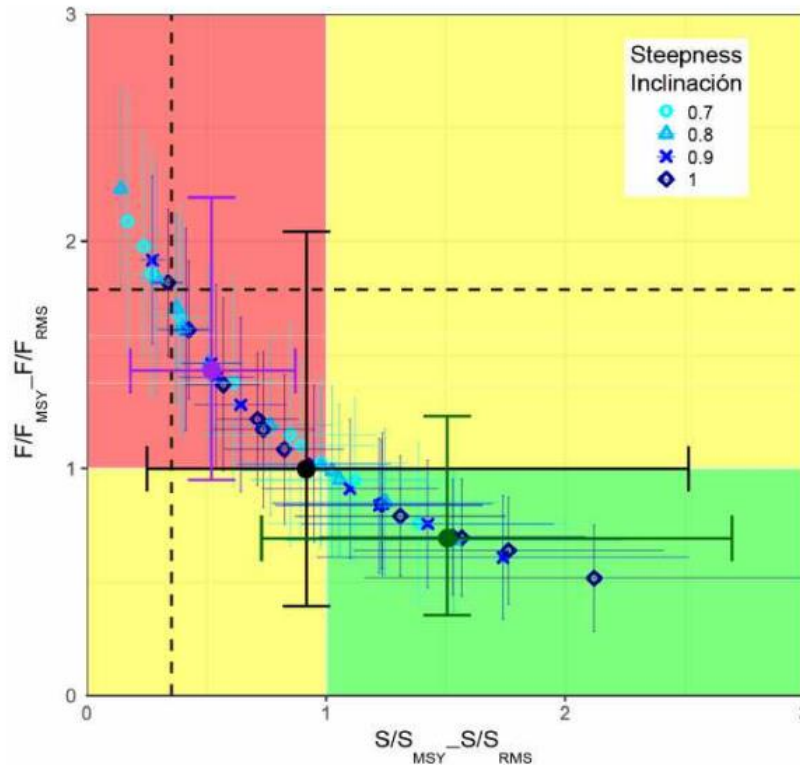
Kobe plot of the most recent estimates of spawning biomass (S) and fishing mortality (F) relative to their MSY (target) reference points. Black dashed lines indicate the average limit reference points generated by the 44 converged model runs. The black dot represents the combined estimate across all models, with the purple and green dots representing all pessimistic and all optimistic models, respectively (IATTC 2023)

References

IATTC (2022). Stock Status Indicators (SSIs) for tropical tunas in the Eastern Pacific Ocean. 13th Meeting of the IATTC Scientific Advisory Committee, Document SAC-13-06 Corr. https://www.iattc.org/GetAttachment/22511b5b-ba2b-4126-9ba2-0bffee89f4d5/SAC-13-06%20-%20Stock%20status%20indicators%20(SSIs)%20for%20tropical%20tunas%20in%20the%20EPO

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**	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