MarinTrust Standard V2

By-product Fishery Assessment

Report- ECU03

Pacific thread herring (Opisthonema spp.) FAO 77, 87

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Table 1. Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Pacific thread herrings representing a complex of: 1. Pacific thread herring (*Opisthonema libertate*) 2. Middling thread herring (*Opisthonema medirastre*) 3. Slender thread herring (*Opisthonema bulleri*)
	Geographical area:	FAO Major Fishing Areas: 77 Pacific, Eastern Central 87 Pacific, Southeast
	Country of origin of the product:	Ecuador
	Stock:	Pacific Eastern Central & Pacific Southeast (Ecuadorian waters)
Date		December 2024
Report Code		ECU03
Assessor		Sam Dignan
Country of origin of the product - PASS		Ecuador
Country of origin of the product - FAIL		Not applicable

Application details and summary of the assessment outcome			
Company Name(s): – Manabita de Comercio SA – Mancorsacom – Lucomercon SA – URISA SA – Tadel SA – Fortidex SA – Marine Protein S.A. – Universal de Comercio S.A. – Unicorsa, Exu SA – Productos Pesqueros SA Produpes			
Country: Ecuador			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Sam Dignan	Phoebe Schouten	0.2	Surveillance 2
Assessment Period	To December 2025		

Scope Details	
Main Species	Pacific thread herrings representing a complex of: 1. Pacific thread herring (*Opisthonema libertate*) 2. Middling thread herring (*Opisthonema medirastre*) 3. Slender thread herring (*Opisthonema bulleri*)
Stock	Pacific Eastern Central & Pacific Southeast (Ecuadorian waters)
Fishery Location	FAO Major Fishing Areas: 77 Pacific, Eastern Central 87 Pacific, Southeast
Management Authority (Country/ State)	Ecuador
Gear Type(s)	Purse seine
Outcome of Assessment	
Peer Review Evaluation	Pass
Recommendation	Pass

Table 2. Assessment Determination

Assessment Determination
Thread herring in the context of this assessment represents a complex of three species (*Opisthonema libertate*, *O. medirastre* and *O. bulleri*) that are captured together and treated as a single unit for assessment and management purposes[1]. All three species have been categorised by the IUCN as Least Concern and none are listed on CITES Appendix 1. An updated stock assessment, from May 2024, is available since the last surveillance assessment of this fishery[2]. Based on updated information, fishery removals are still included in the stock assessment process and biomass is above management limits such that continuing approval of this byproduct for use as a raw material is appropriate.
Fishery Assessment Peer Review Comments
The three species making up the management complex Opisthonema spp., all categorised as least concern by the IUCN, and none of them appear on CITES appendix list 1. They are therefore eligible to be included in this Marin Trust by-product assessment. The assessor clearly demonstrates how the stock complex qualifies for category C, and how C1.1 and C1.2 are met, and references the most recent stock assessment. The peer reviewer therefore agrees that Opisthonema spp., from FAO 77 and 87 should be approved for use as Marin Trust raw material.
Notes for On-site Auditor

[1] FishSource profile *for* Thread herrings nei – Ecuador: https://www.fishsource.org/stock_page/2311
[2] Canales C. M. and Jurado, V. 2024. Evaluation of Ecuador's Small Pelagic Resource Stock 2023: https://institutopesca.gob.ec/wp-content/uploads/2024/07/Informe_Evaluacion_2024.pdf

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[3]	CITES Appendix 1[4]
Pacific thread herring - representing a complex of: 1. Pacific thread herring 2. Middling thread herring 3. Slender thread herring	Complex of the following: 1. Opisthonema libertate) 2. Opisthonema medirastre) 3. Opisthonema bulleri	Pacific Eastern Central & Pacific Southeast (Ecuadorian waters)	Ecuador	C	LC	No

[3] https://www.iucnredlist.org/
[4] 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		**Pacific thread herring – Pacific Eastern Central & Pacific Southeast (Ecuadorian waters)**	
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.

Fishery removals are not negligible, and removals (landings data) corresponding to the period 1975 – 2023 are included in the latest stock assessment (ref. 3.2 Datos e información (3.2 Data and information) – a) Estadísticas de desembarques (a) Landing statistics) *in* Canales and Jurado, 2024[5]).

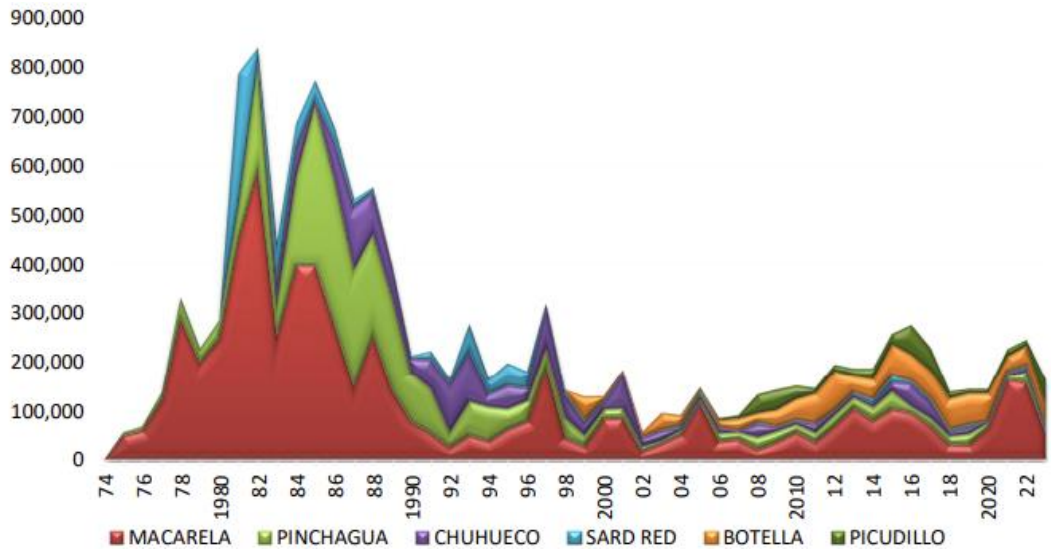

Figure 1: Landings of main small pelagic species in Ecuador (1975 – 2023) (Species under assessment = Pinchagua) (ref. Figura 1 *in* Canales and Jurado, 2024[6]).

As fishery removals are included in the stock assessment process, **C1.1 is met.**

[5] Canales C. M. and Jurado, V. 2024. Evaluation of Ecuador's Small Pelagic Resource Stock 2023: https://institutopesca.gob.ec/wp-content/uploads/2024/07/Informe_Evaluacion_2024.pdf

[6] *Ibid.*

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 most recent assessment of the status of the stock (Canales and Jurado, 2024[7]) concluded that the adult biomass is estimated on average around 86 thousand tons equivalent to 49% of the virgin biomass against a management objective equivalent to safeguarding 40% of the virgin adult biomass. Stock status is summarised in the below Kobe diagram (Figure 2) together with the uncertainty measures, highlighting practically no risk of overfishing or overexploitation.

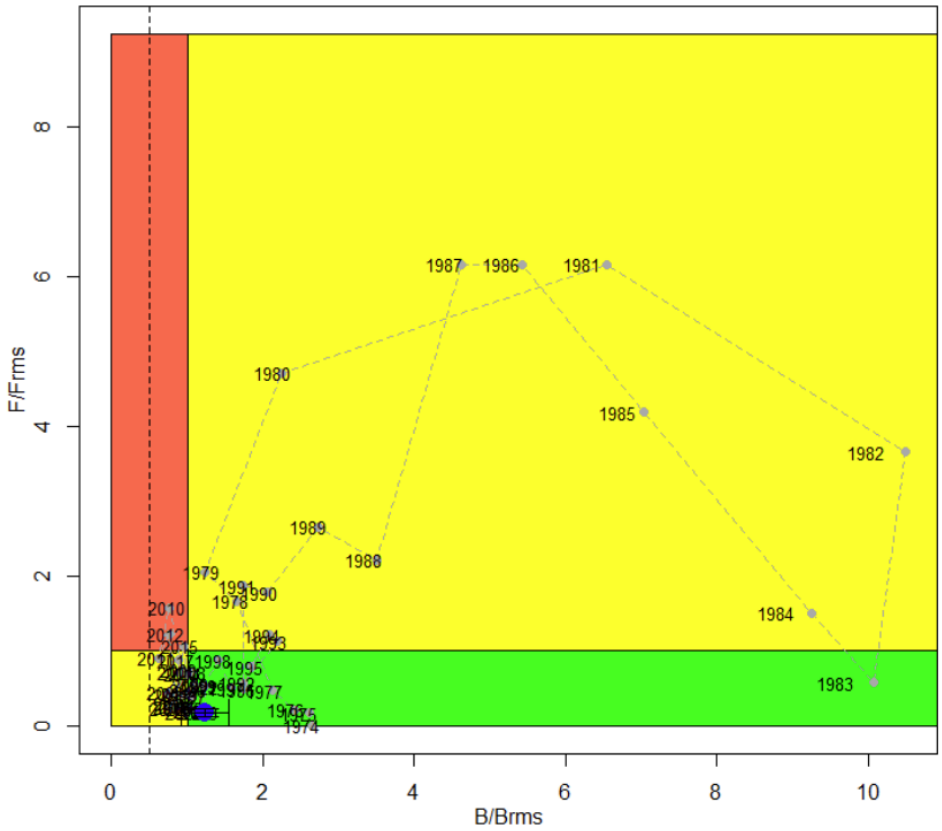

Figure 2: Kobe diagram for the stock (B/B_{MSY} -= 1.23 (Risk_SE = 0.08); F/F_{MSY} = 0.18 (Risk_SP = 0) (ref. Figura P19 in Canales and Jurado, 2024[8]).

As the stock is considered, in its most recent stock assessment, to have a biomass above the limit reference point, C1.2 is met.

References

Canales C. M. and Jurado, V. 2024. Evaluation of Ecuador's Small Pelagic Resource Stock 2023: https://institutopesca.gob.ec/wp-content/uploads/2024/07/Informe_Evaluacion_2024.pdf

Links	
MarinTrust Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01

[7] Canales C. M. and Jurado, V. 2024. Evaluation of Ecuador's Small Pelagic Resource Stock 2023: https://institutopesca.gob.ec/wp-content/uploads/2024/07/Informe_Evaluacion_2024.pdf

[8] *Ibid.*

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