



MarinTrust Standard V2

By-product Fishery Assessment

ECU03 – Pacific Thread Herring in FAO Areas 77 & 87

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:	Pacific Thread Herring, <i>Opisthonema spp</i>
	Geographical area:	FAO 77 & 87
	Country of origin of the product:	Ecuador
	Stock:	Pacific Eastern Central & Pacific Southeast (Ecuadorian waters)
Date	December 2023	
Report Code	ECU03	
Assessor	Sam Peacock	
Country of origin of the product - PASS	Ecuador	
Country of origin of the product - FAIL	n/a	

Application details and summary of the assessment outcome			
Company Name(s): URISA S.A.; TADEL S.A.; PRODUCTOS PESQUEROS S.A.; PESQUERA EXU S.A.; NIRSA S.A			
Country:			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		LRQA	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Sam Peacock	Jose Peiro Crespo	0.2	Surveillance 1
Assessment Period	December 2023 – December 2024		

Scope Details	
Main Species	Pacific Thread Herring, <i>Opisthonema spp</i>
Stock	Pacific Eastern Central & Pacific Southeast (Ecuadorian waters)
Fishery Location	FAO 77 & 87
Management Authority (Country/ State)	Ecuador
Gear Type(s)	Purse seine
Outcome of Assessment	
Peer Review Evaluation	Pass
Recommendation	Approve for use as a raw material

Table 2. Assessment Determination

Assessment Determination
<p>Pacific thread herring (<i>Opisthonema spp.</i>; locally known as "pinchagua") refers to three different species in Ecuador: <i>Opisthonema bulleri</i>, <i>O. libertate</i> and <i>O. medirastre</i>. There is no information on stock structure of any of the three species in Ecuador; however, for assessment purposes, <i>Opisthonema spp.</i> off Ecuador is considered a single and independent stock¹. All three species have been categorised by the IUCN as Least Concern.</p> <p>There does not appear to have been any further stock assessment carried out since the 2021 assessment identified by the previous MT assessment of this species; for this reason, conclusions remain unchanged. Fishery removals are considered in the stock assessment process, and SSB was considered in the most recent stock assessment to be slightly above the target reference point. Therefore this byproduct continues to meet the MT requirements and should be approved for use as a raw material.</p>
Fishery Assessment Peer Review Comments
<p>The by-product fishery under assessment is the Pacific thread herring (<i>Opisthonema spp.</i>) caught with purse seine in FAO areas 77 and 87 (Pacific Eastern Central & Pacific Southeast (Ecuadorian waters)). The species are listed as LC in the IUCN red list. The stock is managed relative to reference points. Therefore, it is assessed under category C.</p> <p>The most recent stock assessment conducted in 2021 indicated that the biomass of the stock is above the target reference point. Therefore, it passes category C.</p> <p>The peer review supports the auditor’s recommendation to pass the Pacific thread herring caught with purse seine in Ecuadorian waters (Pacific Eastern Central & Pacific Southeast, FAO areas 77 and 87) under the Marin Trust IFFO RS v2.0 by-fishery standard for the production of fishmeal and fish oil.</p>
Notes for On-site Auditor

¹ https://www.fishsource.org/stock_page/2311

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 a 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 ²	CITES Appendix 1 ³
Pacific thread herring	<i>Opisthonema spp.</i>	Pacific Eastern Central & Pacific Southeast (Ecuadorian waters)	Yes	C	Least Concern ⁴ Least Concern ⁵ Least Concern ⁶	No

² <https://www.iucnredlist.org/>

³ <https://cites.org/eng/app/appendices.php>

⁴ <https://www.iucnredlist.org/species/183662/8154151> (*O. libertate*)

⁵ <https://www.iucnredlist.org/species/183910/102896852> (*O. bulleri*)

⁶ <https://www.iucnredlist.org/species/183235/102897018> (*O. medirastre*)

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.

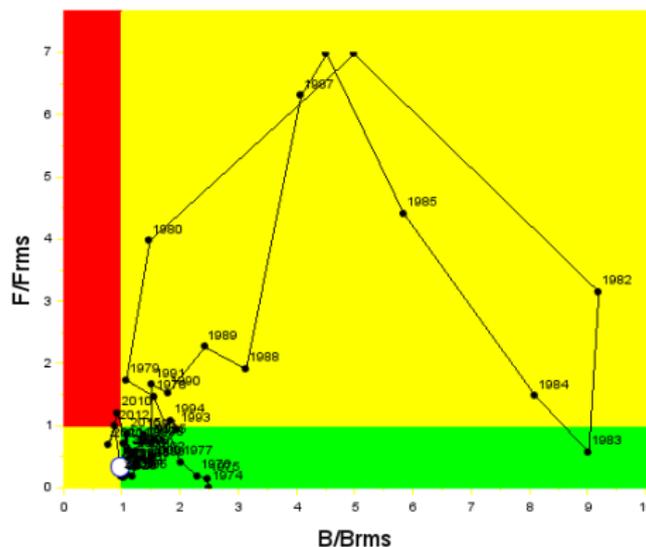
Species Name		Pacific thread herring	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	PASS
	C1.2	The species is considered, 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 most recent stock assessment for thread herring in Ecuadorian waters remains the one identified by the previous MT assessment of this byproduct, conducted in 2021 (Canales & Jurado 2022). The assessment combined three methods: Length Based pseudo-cohort analysis (LBPA), Schaefer dynamic biomass (MBD) and an age-based statistical model (MESTOCKL). The assessment utilised landings data from 1975-2020, and also data on weight, sex and size, catch per unit effort, acoustic survey information until 2020, as well as available life history information. C1.1 is met.

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 2021 stock assessment included an indication of the status of the stock relative to target reference points. Biomass was estimated to be 90,398t, representing $B/B_0 = 0.443$. As the target reference point is set at 40% of the unfished biomass, this value is slightly above the target reference point. C1.2 is met.



Kobe plot for Ecuadorian thread herring. The white circle indicates the most recent year (2020). From Canales & Jurado, 2022.

References

Canales CM, Jurado V (2022). Evaluación del stock de recursos pelágicos pequeños del Ecuador. Año 2022. Informe Técnico. Guayaquil, Julio 2022. 114 p https://institutopesca.gob.ec/wp-content/uploads/2022/10/Informe_Eval_Final_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) <i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i>		
	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	