



By-Product assessment report

BP 072

NIRSA SA

Document TEM-003 (prev. FISH-1) - Version 3.1

Issued April 2025 – Effective April 2025

Report code	BP072	Date of issue	SEPTEMBER 2026
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1. Application details		
Applicant	NIRSA SA	
Applicant country	ECUADOR	
2. Certification Body details		
Name of Certification Body (CB)	LRQA	
Contact information for CB	mt-ca@lrqa.com	
Assessor name	Virginia Polonio Povedano	
CB internal peer reviewer name	Ayana Sabu	
Internal peer review evaluation	Agree with evaluation	
Number of Assessment days	0.5	
Comments on the assessment	The four byproduct species listed in this report are not considered ETP species according to the MarinTrust definition and Approved (Source with Caution) – Ecuador is a high-risk country (Coastal 2.63, Port 2.11) triggering step 3 assessment . Category C stock status passed for all the species assessed in this report and Path 2 country risk (IUU Fishing Risk Index 2023) resulting downgrading Ecuador to Medium risk thus Approved but source with caution.	
3. Approval validity	Valid from September 2026	Valid until September 2027
4. Assessment cycle	Re-Approval	

5. By-product assessment outcomes			
By-product species name <i>Common and Latin names</i>	Flag country(ies)	Fishing Areas <i>Only applicable to Step 3 assessed species</i>	MarinTrust approval status

Pacific chub mackerel/Macarela - <i>Scomber japonicus</i>	Ecuador	FAO 87 - Southeast Pacific	Approved source with caution
ortfin scad/Picudillo – <i>Decapterus macrosoma</i>	Ecuador	FAO 87 - Southeast Pacific	Approved source with caution
Frigate tuna / Botella – <i>Auxis</i> spp.	Ecuador	FAO 87 - Southeast Pacific	Approved source with caution
Pacific thread herring/Pinchagua - <i>Opisthonema liberate</i>	Ecuador	FAO 87 - Southeast Pacific	Approved source with caution

Guidance for on-site auditor

For the audit, the auditor will check how the facility manages by-products deemed medium risk. Any by-products downrated from high to medium risk will require additional due diligence checks.

It is important that facilities check all raw materials from and verify their suppliers especially if there is a perceived risk of sourcing from known or suspected IUU fishing activity. This requires checking supplier records or procedures in place to understand how the supplier can ensure there is no IUU in the raw material they provide. For raw materials risk rated medium, additional or more frequent checks may be required until the facility is certain that the raw materials are not from IUU fishing activity.

The audit requirements are covered in clause 2.11.3 of the MarinTrust Global Standard for Responsible Supply of Marine Ingredients (the MarinTrust Standard) and associated interpretation guidance.

Approved by-products

- No further checks are required beyond those included in the MarinTrust Standard.

Additional checks of Approved Source with Caution by-products

- Review supplier records or procedures in place.

Additional checks of by-products Approved Source with Caution via Step 3 assessment

- In addition to checks for medium risk Approved Source with Caution by-products, by-products that have had risk downgraded from high to medium at Step 3 (use **Appendix 1** to identify these by-product species), confirm that the relevant traceability information continues to be collected for this by-product. During the audit, a traceability check on any by-products downgraded from high to medium risk shall be included as part of the required traceability checks (Section 4).

Guidance for the applicant/certificate holder

The applicant/certificate holder is responsible for ensuring the relevant actions are taken to comply with the MarinTrust Standard.

The certificate holder is responsible for communicating any changes to the by-products sourced by submitting a scope extension request through the MarinTrust online Application Portal.

Appendix 1 – assessment outcomes

Step 2 Assessment Outcomes

By-product species name <i>Common and Latin names</i>	Flag country(ies)	IUCN Red List <i>Select IUCN red list category from dropdown</i>	CITES Appendices <i>Select CITES appendix status from dropdown</i>	Step 2 risk status <i>Low risk/ Medium risk/ High risk</i>	Step 3 required <i>Yes / No</i>
Pacific chub mackerel/Macarela - Scomber japonicus	Ecuador	Least concern	Not listed	High risk	Yes
Shortfin scad/Picudillo – Decapterus macrosoma	Ecuador	Least concern	Not listed	High risk	Yes
Frigate tuna / Botella – Auxis spp.	Ecuador	Least concern	Not listed	High risk	Yes
Pacific thread herring/Pinchagua - Opisthonema liberate	Ecuador	Least concern	Not listed	High risk	Yes

Step 3 Assessment Outcomes

By-product species name <i>Common and Latin names</i>	Flag country(ies)	Fishing Area	Stock name <i>(If applicable e.g. Eastern Pacific stock)</i>	Category C Assessment Outcome <i>Pass/Fail</i>	Traceability information <i>Path 1 – Yes OR Path 2 – Yes/No OR MT Approved Whole Fish</i>	Step 3 Risk Outcome <i>Risk downgraded to Medium Risk/ Remains High Risk</i>
Pacific chub mackerel/Macarela - Scomber japonicus	Ecuador	FAO 87 - Southeast Pacific	Ecuador EEZ	Pass	Path 2 – Yes	<i>Risk downgraded to Medium Risk</i>
Shortfin scad/Picudillo – Decapterus macrosoma	Ecuador	FAO 87 - Southeast Pacific	Ecuador EEZ	Pass	Path 2 – Yes	<i>Risk downgraded to Medium Risk</i>
Frigate tuna / Botella – Auxis spp.	Ecuador	FAO 87 - Southeast Pacific	Ecuador EEZ	Pass	Path 2 – Yes	<i>Risk downgraded to Medium Risk</i>

Pacific thread herring/Pinchagua - Opisthonema liberate	Ecuador	FAO 87 - Southeast Pacific	Ecuador EEZ	Pass	Path 2 – Yes	<i>Risk downgraded to Medium Risk</i>
Comments on Step 3 Assessment: N/A						

Appendix 2 – detailed assessment outcomes (step 2 and step 3 if applicable)

Step 2 outcomes

Flag state	Risk rating	Flag score	Port score	General score	Flag State is contracting party or cooperating non-contracting party to all relevant RFMOs	'Carded' under EU Carding system	Flag state party to PSMA	Flag state mandatory vessel tracking for commercial seagoing fleet	WGI Governance rank
Ecuador	High	2.58	2.11	2.43	1	3	1	1	35.38%

Step 3 outcomes

Category C assessment

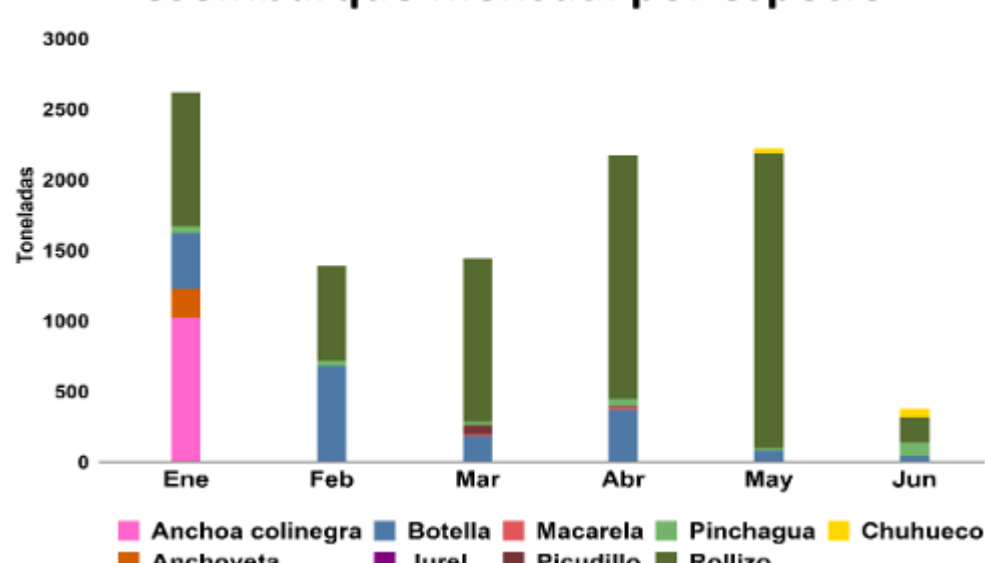
Species name		Pacific chub mackerel/Macarela - <i>Scomber japonicus</i>																																																																							
Fishing area and stock		FAO 87 – Southeast Pacific Ecuador EZZ																																																																							
C1	Category C Stock Status - 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.																																																																									
Removals of <i>S. japonicus</i> by the Ecuadorian small pelagics purse-seine fleet are explicitly incorporated into the stock assessment process. The most recent stock assessment (IPIAP, 2024 - "Evaluación del Stock de Recursos Pelágicos Pequeños del Ecuador 2023", data updated to 2023) is based on an integrated age-structured statistical model that uses the full historical commercial catch series (1991-2023) together with fishery-dependent CPUE indices and hydroacoustic biomass survey data as direct inputs. Total fishery removals are therefore fully accounted for in the assessment (Figure 1). C1.1 is met.																																																																									
Desembarque mensual por especie <table><caption>Estimated monthly landings (Toneladas) from the chart</caption><thead><tr><th>Month</th><th>Anchoa colinegra</th><th>Anchoveta</th><th>Botella</th><th>Macarela</th><th>Pinchagua</th><th>Chuhueco</th><th>Jurel</th><th>Picudillo</th><th>Rollizo</th></tr></thead><tbody><tr><td>Ene</td><td>1000</td><td>200</td><td>400</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1000</td></tr><tr><td>Feb</td><td>0</td><td>0</td><td>700</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>700</td></tr><tr><td>Mar</td><td>0</td><td>0</td><td>200</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1200</td></tr><tr><td>Abr</td><td>0</td><td>0</td><td>400</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1800</td></tr><tr><td>May</td><td>0</td><td>0</td><td>100</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>2100</td></tr><tr><td>Jun</td><td>0</td><td>0</td><td>100</td><td>0</td><td>0</td><td>0</td><td>0</td><td>0</td><td>200</td></tr></tbody></table>				Month	Anchoa colinegra	Anchoveta	Botella	Macarela	Pinchagua	Chuhueco	Jurel	Picudillo	Rollizo	Ene	1000	200	400	0	0	0	0	0	1000	Feb	0	0	700	0	0	0	0	0	700	Mar	0	0	200	0	0	0	0	0	1200	Abr	0	0	400	0	0	0	0	0	1800	May	0	0	100	0	0	0	0	0	2100	Jun	0	0	100	0	0	0	0	0	200
Month	Anchoa colinegra	Anchoveta	Botella	Macarela	Pinchagua	Chuhueco	Jurel	Picudillo	Rollizo																																																																
Ene	1000	200	400	0	0	0	0	0	1000																																																																
Feb	0	0	700	0	0	0	0	0	700																																																																
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Abr	0	0	400	0	0	0	0	0	1800																																																																
May	0	0	100	0	0	0	0	0	2100																																																																
Jun	0	0	100	0	0	0	0	0	200																																																																

Figure 1. Monthly small pelagics landings reported by IPIAP — monthly monitoring bulletin, June 2026. Source: IPIAP June 2026

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 2024 assessment (data year 2023) estimates adult biomass of *S. japonicus* at approximately 352,000 t, equivalent to 38% of unfished (virgin) biomass, with a B/BRMS ratio of 0.94 (i.e. close to, and only marginally below, BRMS, the biomass associated with maximum sustainable yield). Although the probabilistic risk of biomass being below BRMS in 2023 was estimated at 61%, current biomass remains well above 0.5 BRMS, the proxy commonly applied as the limit reference point (BLIM) for this type of data-limited small pelagic assessment. Fishing mortality ($F/FRMS = 0.36$) is estimated at 64% below the reference level, and the assessment concludes the stock is not undergoing overfishing (Figure 2).

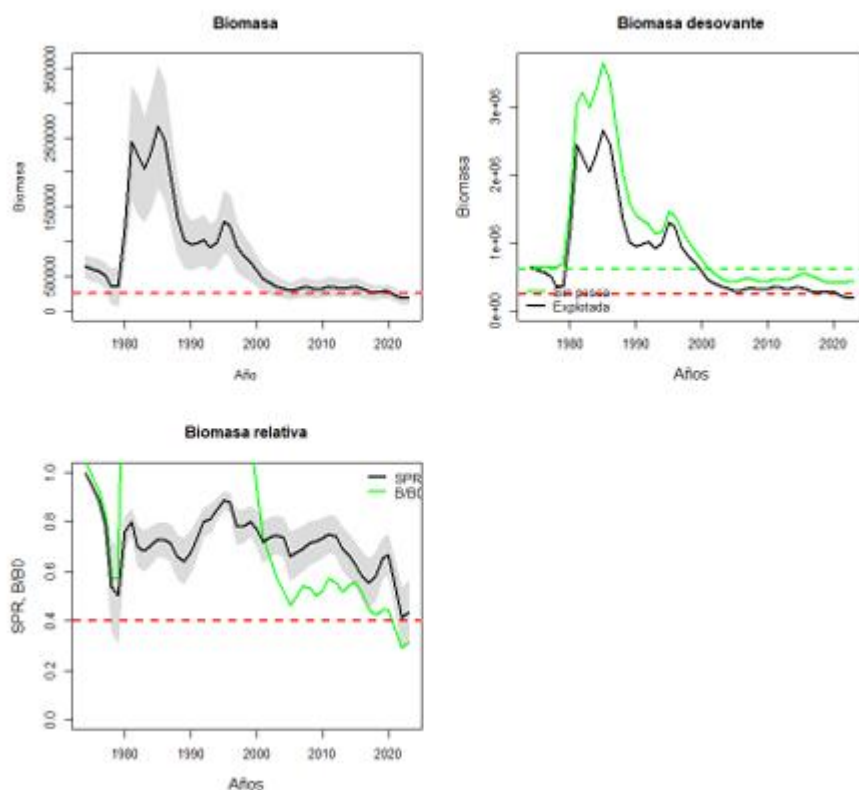


Figure 2. Annual variation in spawning biomass with and without fishing, and in the spawning potential ratio (SPR) / relative biomass, for Pacific chub mackerel (Macarela). Source: IPIAP 2024

On this basis biomass is considered to be above the limit reference point (or proxy). C1.2 is met.

References

Instituto Público de Investigación de Acuicultura y Pesca (IPIAP). 2024. Evaluación del Stock de Recursos Pelágicos Pequeños del Ecuador 2023. Canales, C.M. & Jurado, V. Guayaquil, mayo 2024. https://institutopesca.gob.ec/wp-content/uploads/2024/07/Informe_Evaluacion_2024.pdf

Peces Pelágicos Pequeños - IPIAP (listado de informes)

Investigación y estado de los recursos - Pesca Responsable

Species name		Shortfin scad / Picudillo – Decapterus macrosoma	
Fishing area and stock		Ecuador FAO 87 - Southeast Pacific Ecuador EEZ	
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
	PASS	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.	
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.			
Removals of <i>D. macrosoma</i> are directly incorporated into the stock assessment process. The most recent assessment (IPIAP, 2024, data updated to 2023) applies an integrated modelling approach that uses commercial catch data and biological (length/age) sampling of the fishery as core inputs to estimate current stock status. Fishery removals are therefore fully included in the assessment (Figure 1). 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 2024 assessment estimates adult biomass of <i>D. macrosoma</i> at approximately 52,000 t, equivalent to 87% of unfished (virgin) biomass, with a B/BRMS ratio of 2.19 - well above the target biomass reference point and consequently far above any limit reference point proxy (e.g. 0.5 BRMS). Estimated risks are low (3% overfishing risk; 18% overexploitation risk), and fishing mortality (F/FRMS = 0.81) remains below the reference level. Biomass is clearly above the limit reference point (or proxy). (Figure 3).			

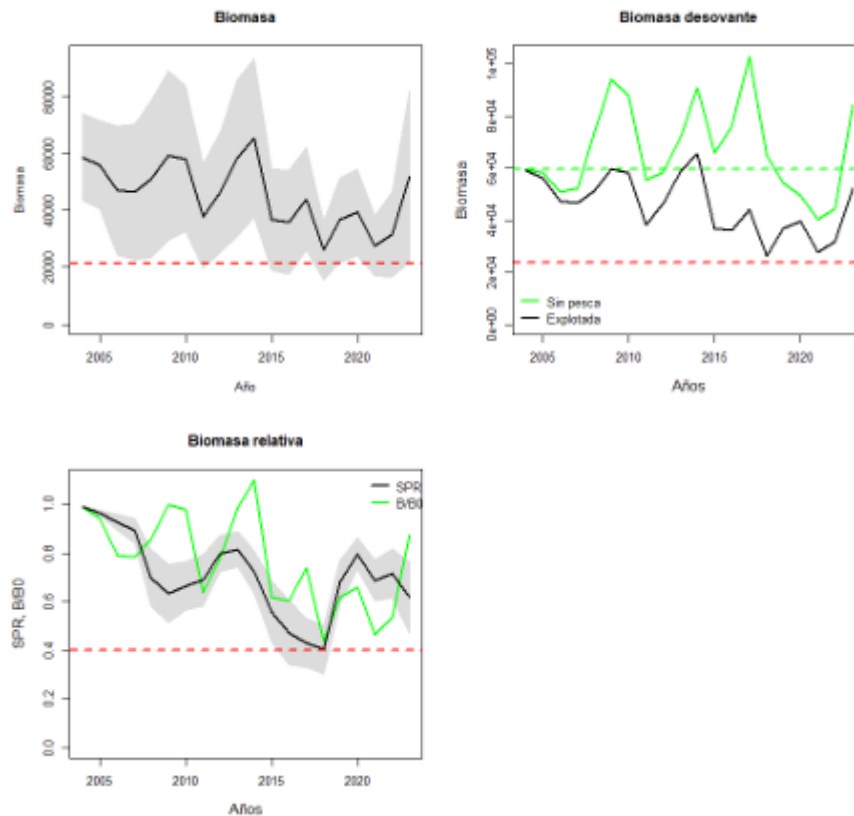


Figure 3. Annual variation in spawning biomass with and without fishing, and in the spawning potential ratio (SPR) / relative biomass, for Shortfin scad / Picudillo. Source: IPIAP 2024

C1.2 is met.

References

Instituto Público de Investigación de Acuicultura y Pesca (IPIAP). 2024. Evaluación del Stock de Recursos Pelágicos Pequeños del Ecuador 2023. Canales, C.M. & Jurado, V. Guayaquil, mayo 2024. https://institutopesca.gob.ec/wp-content/uploads/2024/07/Informe_Evaluacion_2024.pdf

Peces Pelágicos Pequeños - IPIAP (listado de informes)

Investigación y estado de los recursos - Pesca Responsable

Species name		Frigate tuna / Botella – Auxis spp	
Fishing area and stock		Ecuador FAO 87 - Southeast Pacific Ecuador EEZ	
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.			
Removals of Auxis spp. are explicitly included in the stock assessment process. The most recent assessment (IPIAP, 2024, data updated to 2023; confirmed in a 2nd, peer-reviewed version issued following a technical review workshop in April 2025) is based on an integrated model using the historical catch series from 1975-2023, updated biological parameters (including new maturity estimates), and hydroacoustic biomass surveys. Fishery removals are therefore fully incorporated into the assessment (Figure 1). 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 assessment estimates adult biomass of Auxis spp. at approximately 74,000 t, equivalent to 43% of unfished (virgin) biomass, with BRMS estimated at 69,000 t (MSY = 41,000 t) and a B/BRMS ratio of 1.07 - i.e. current biomass is at or slightly above the target biomass reference point itself, and therefore well above any limit reference point proxy (e.g. 0.5 BRMS ≈ 34,500 t). Moderate risks of overfishing (32%) and overexploitation (37%) were identified, and fishing mortality (F/FRMS = 0.90, FRMS = 0.70) is close to, but below, the reference level, reflecting a historical upward trend in fishing mortality that warrants continued monitoring. Nonetheless, on current point estimates, biomass is above the limit reference point (or proxy) (Figure 4).			

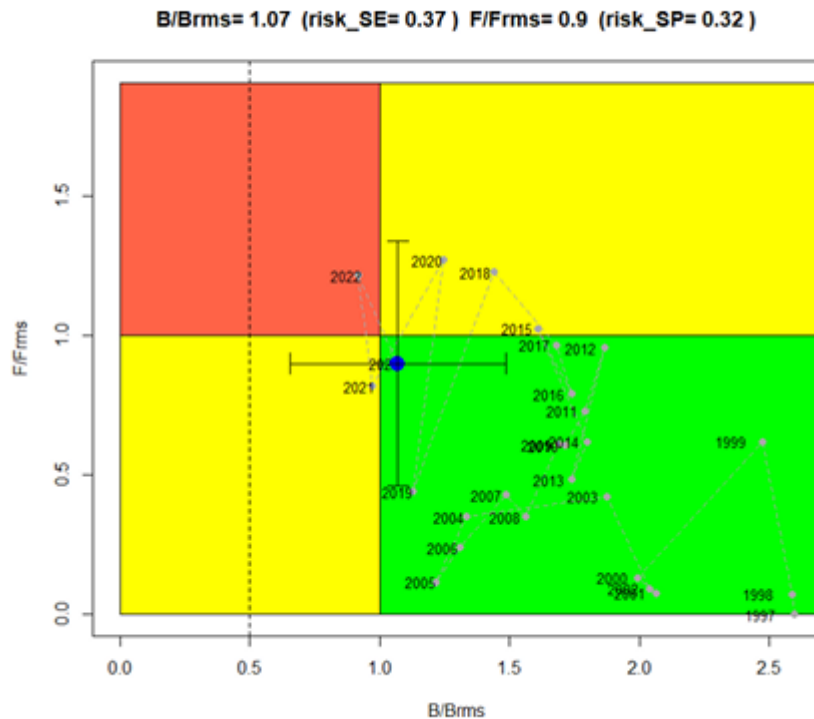


Figure 4. Revised kobe plot for Frigate tuna / Botella. Source: IPIAP 2025

C1.2 is met.

References

- Instituto Público de Investigación de Acuicultura y Pesca (IPIAP). 2024. Evaluación del Stock de Recursos Pelágicos Pequeños del Ecuador 2023. Canales, C.M. & Jurado, V. Guayaquil, mayo 2024. https://institutopesca.gob.ec/wp-content/uploads/2024/07/Informe_Evaluacion_2024.pdf
- Instituto Público de Investigación de Acuicultura y Pesca (IPIAP). 2025. Taller de Revisión/Implementación - Evaluación de Stock del Recurso Botella (Auxis spp.) 2023, 2da versión. https://institutopesca.gob.ec/wpcontent/uploads/2025/04/Informe_Evaluacion_Botella_v_2_.pdf

Species name		Pacific thread herring / Pinchagua – <i>Opisthonema libertate</i>	
Fishing area and stock		cuador FAO 87 - Southeast Pacific Ecuador EEZ	
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.			
Removals of <i>O. libertate</i> are directly incorporated into the stock assessment process. The most recent assessment (IPIAP, 2024, data updated to 2023) uses an integrated model incorporating the historical commercial catch series (1975-2023), fleet-dependent CPUE indices, and hydroacoustic biomass estimates as core inputs. Fishery removals are therefore fully included in the assessment (Figure 1). 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 2024 assessment estimates adult biomass of <i>O. libertate</i> at approximately 86,000 t, equivalent to 49% of unfished (virgin) biomass, with a B/BRMS ratio of 1.23 - i.e. 23% above the target biomass reference point, and consequently well above any limit reference point proxy (e.g. 0.5 BRMS). The assessment concludes that "practically no risk of overfishing or overexploitation exists" for this stock, with fishing mortality (F/FRMS = 0.18, FRMS = 0.441) estimated at 82% below the reference level, and a slight increasing trend in biomass over the last decade. Biomass is clearly above the limit reference point (or proxy). C1.2 is met.			
References			
Instituto Público de Investigación de Acuicultura y Pesca (IPIAP). 2024. Evaluación del Stock de Recursos Pelágicos Pequeños del Ecuador 2023. Canales, C.M. & Jurado, V. Guayaquil, mayo 2024. https://institutopesca.gob.ec/wp-content/uploads/2024/07/Informe_Evaluacion_2024.pdf			
Investigación y estado de los recursos - Pesca Responsable			

Traceability information

Information provided for Step 3 Path 1 or Path 2

Species name	Pacific chub mackerel/Macarela - <i>Scomber japonicus</i>			
Path 1	Yes ☐ No ☒			
Confirm all KDEs are provided	Yes ☐ No ☒			
Path 2	Yes ☒ No ☐ <i>If yes for Path 2, complete the next section</i>			
Path 2 outcome <i>Countries may be different for Coastal State and Port State.</i>	Flag country	Coastal score	Port score	Risk outcome
	Ecuador	2.63	2.11	Downgraded to medium risk

Species name	Shortfin scad / Picudillo – <i>Decapterus macrosoma</i>			
Path 1	Yes ☐ No ☒			
Confirm all KDEs are provided	Yes ☐ No ☒			
Path 2	Yes ☒ No ☐ <i>If yes for Path 2, complete the next section</i>			
Path 2 outcome <i>Countries may be different for Coastal State and Port State.</i>	Flag country	Coastal score	Port score	Risk outcome
	Ecuador	2.63	2.11	Downgraded to medium risk

Species name	Frigate tuna / Botella – <i>Auxis spp</i>			
Path 1	Yes ☐ No ☒			
Confirm all KDEs are provided	Yes ☒ No ☒			
Path 2	Yes ☒ No ☐ <i>If yes for Path 2, complete the next section</i>			
Path 2 outcome <i>Countries may be different for Coastal State and Port State.</i>	Flag country	Coastal score	Port score	Risk outcome
	Ecuador	2.63	2.11	Downgraded to medium risk

Species name	Pacific thread herring / Pinchagua – <i>Opisthonema libertate</i>			
Path 1	Yes ☐ No ☒			

Confirm all KDEs are provided		Yes ☐ No ☒		
Path 2	Yes ☒ No ☐ <i>If yes for Path 2, complete the next section</i>			
Path 2 outcome <i>Countries may be different for Coastal State and Port State.</i>	Flag country Ecuador	Coastal score 2.63	Port score 2.11	Risk outcome Downgraded to medium risk