By-Product assessment report

BP089

Lucomercon SA

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

Issued April 2025 – Effective April 2025

Report code	BP089	Date of issue	December 2025

1. Application details		
Applicant	Lucomercon SA	
Applicant country	Ecuador	
2. Certification Body details		
Name of Certification Body (CB)	LRQA	
Contact information for CB	mt-ca@lrqa.com	
Assessor name	Sam Peacock	
CB internal peer reviewer name	José Peiró Crespo	
Internal peer review evaluation	Agree with evaluation	
Number of Assessment days	1	
Comments on the assessment	This assessment covers nine byproduct species, none of which are ETP according to the MT definition. All nine byproducts are caught by Ecuador-flagged vessels, meaning all require a Step 3 assessment. Eight of the byproducts passed the Category C assessment, and one (dolphinfish) failed due to a lack of recent stock assessment activities. Traceability information was provided by the applicant indicating that all nine byproducts are caught and landed in Ecuador. Therefore, the eight byproducts which passed the Category C assessment can be Approved, source with caution. Dolphinfish is Not Approved.	
3. Approval validity	Valid from 12/2025	Valid until 12/2026
4. Assessment cycle	Initial	

5. By-product assessment outcomes			
By-product species name *Common and Latin names*	**Flag country(ies)**	**Fishing Areas** *Only applicable to Step 3 assessed species*	**MarinTrust approval status**
Opisthonema spp. - Pacific thread herring/pinchagua	Ecuador	FAO 87	Approved source with caution
Coryphaena hippurus - Common dolphinfish	Ecuador	FAO 87	Not approved
Scomber japonicus - Pacific chub mackerel/macarela	Ecuador	FAO 87	Approved source with caution
Thunnus albacares - Yellowfin tuna	Ecuador	FAO 87	Approved source with caution
Katsuwonus pelamis - Skipjack tuna	Ecuador	FAO 87	Approved source with caution
Merluccius gayi - South Pacific hake	Ecuador	FAO 87	Approved source with caution
Auxis rochei - Bullet tuna	Ecuador	FAO 87	Approved source with caution
Etrumeus acuminatus - Sardina redonda	Ecuador	FAO 87	Approved source with caution
Thunnus obesus - Bigeye tuna	Ecuador	FAO 87	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 *Common and Latin names*	Flag country(ies)	IUCN Red List *Select IUCN red list category from dropdown*	CITES Appendices *Select CITES appendix status from dropdown*	Step 2 risk status *Low risk/ Medium risk/ High risk*	Step 3 required *Yes / No*
Opisthonema spp. - Pacific thread herring/pinchagua	Ecuador	Multiple species, all Least Concern	Not listed	High risk	Yes
Coryphaena hippurus - Common dolphinfish	Ecuador	Least Concern	Not listed	High risk	Yes
Scomber japonicus - Pacific chub mackerel/macarela	Ecuador	Least Concern	Not listed	High risk	Yes
Thunnus albacares - Yellowfin tuna	Ecuador	Least Concern	Not listed	High risk	Yes
Katsuwonus pelamis - Skipjack tuna	Ecuador	Least Concern	Not listed	High risk	Yes

Merluccius gayi - South Pacific hake	Ecuador	Data Deficient	Not listed	High risk	Yes
Auxis rochei - Bullet tuna	Ecuador	Least Concern	Not listed	High risk	Yes
Etrumeus acuminatus - Sardina redonda	Ecuador	Least Concern	Not listed	High risk	Yes
Thunnus obesus - Bigeye tuna	Ecuador	Vulnerable	Not listed	High risk	Yes

Step 3 Assessment Outcomes

By-product species name *Common and Latin names*	Flag country(ies)	Fishing Area	Stock name *(If applicable e.g. Eastern Pacific stock)*	Category C Assessment Outcome *Pass/Fail*	Traceability information *Path 1 – Yes OR* *Path 2 – Yes/No OR* *MT Approved Whole Fish*	Step 3 Risk Outcome *Risk downgraded to Medium Risk/ Remains High Risk*
Opisthonema spp. - Pacific thread herring/pinchagua	Ecuador	FAO 87	Ecuadorian thread herring	Pass	Path 2 - Yes	Downgraded to Medium Risk
Coryphaena hippurus - Common dolphinfish	Ecuador	FAO 87	EPO dolphinfish	Fail	Path 2 - Yes	Remains High Risk
Scomber japonicus - Pacific chub mackerel/macarela	Ecuador	FAO 87	Ecuadorian macarela	Pass	Path 2 - Yes	Downgraded to Medium Risk
Thunnus albacares - Yellowfin tuna	Ecuador	FAO 87	EPO yellowfin tuna	Pass	Path 2 - Yes	Downgraded to Medium Risk

Katsuwonus pelamis - Skipjack tuna	Ecuador	FAO 87	EPO Skipjack tuna	Pass	Path 2 - Yes	Downgraded to Medium Risk
Merluccius gayi - South Pacific hake	Ecuador	FAO 87		Pass	Path 2 - Yes	Downgraded to Medium Risk
Auxis rochei - Bullet tuna	Ecuador	FAO 87	Ecuadorian bullet tuna	Pass	Path 2 - Yes	Downgraded to Medium Risk
Etrumeus acuminatus - Sardina redonda	Ecuador	FAO 87	Ecuadorian sardina redonda	Pass	Path 2 - Yes	Downgraded to Medium Risk
Thunnus obesus - Bigeye tuna	Ecuador	FAO 87		Pass	Path 2 - Yes	Downgraded to Medium Risk
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	2.37	1	3	1	1	35.38%

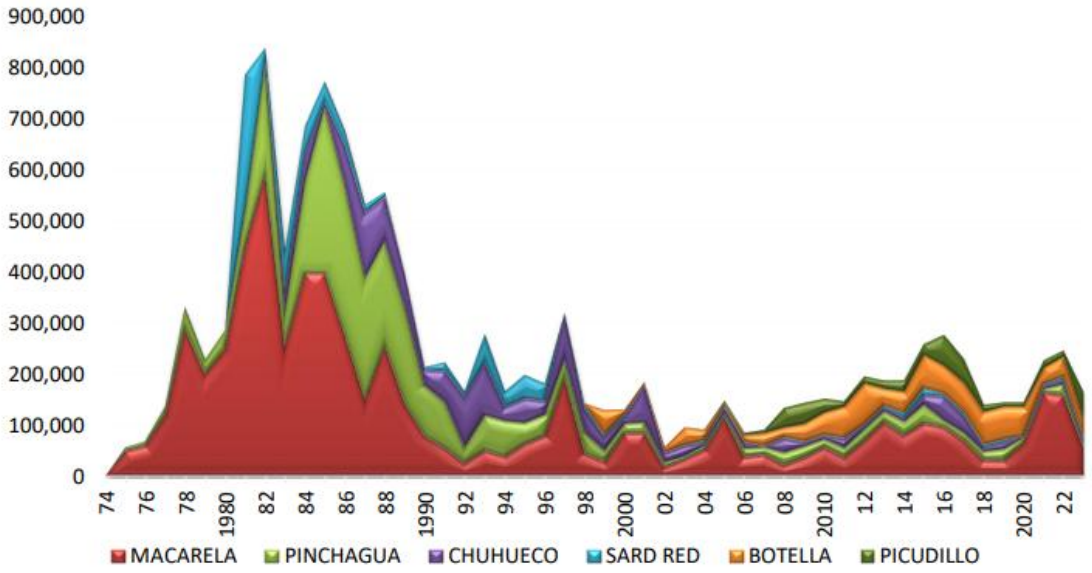
Step 3 outcomes

Category C assessment

Species name		*Opisthonema spp*. - Pacific thread herring/pinchagua	
Fishing area and stock		FAO 87, Ecuadorian waters, Ecuadorian 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.

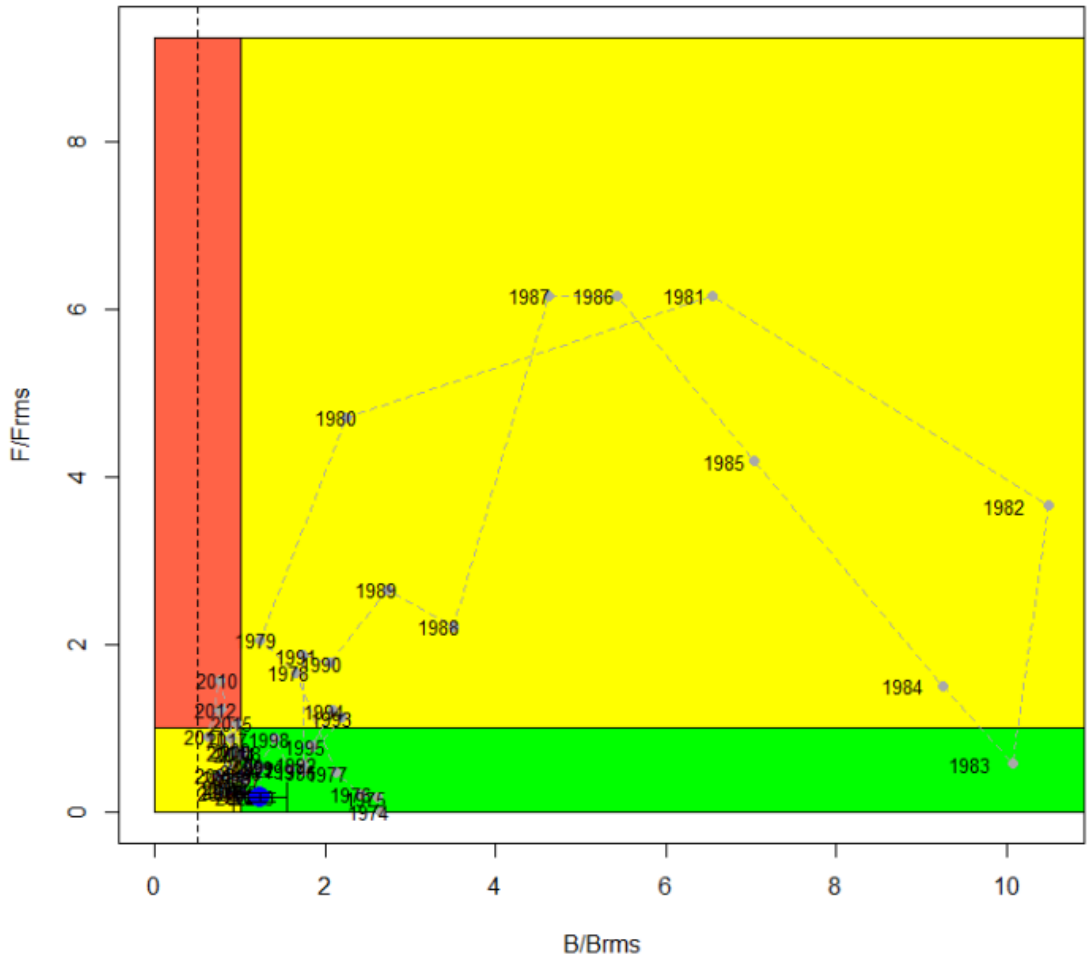
Stock assessments covering all the main species caught in the Ecuadorian small pelagic fishery have been conducted annually since 2019 by the Ecuadorian Instituto Público De Investigación De Acuicultura Y Pesca (IPIAP). Data incorporated into the most recent assessment, conducted in 2024, included catch data from 1975 – 2023; fishery-dependent sampling data collected by the IPIAP, including fishing areas, catch composition, size frequency data, and environmental conditions; CPUE estimates; and the outputs of a semi-regular hydroacoustic cruise survey (IPIAP 2024). C1.1 is met.



Landings in the Ecuadorian small pelagic fishery, 1975 – 2023. Bullet tuna is "Botella" (orange) (IPIAP 2024)

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 biomass target reference point for this stock (B_{MSY}), defined as 40% of the unfished biomass, is estimated to be 70,000t. The 2024 stock assessment concluded that biomass was approximately 86,000t, equivalent to 49% of the unfished level and above the target reference point (IPIAP 2024). The probability that the stock biomass is below B_{MSY} is estimated to be negligible, and therefore so is the probability that biomass is below the limit reference point. C1.2 is met.



Kobe chart for thread herrings in Ecuadorian waters. The blue dot is the most recent estimate of stock status (IPIAP 2024)

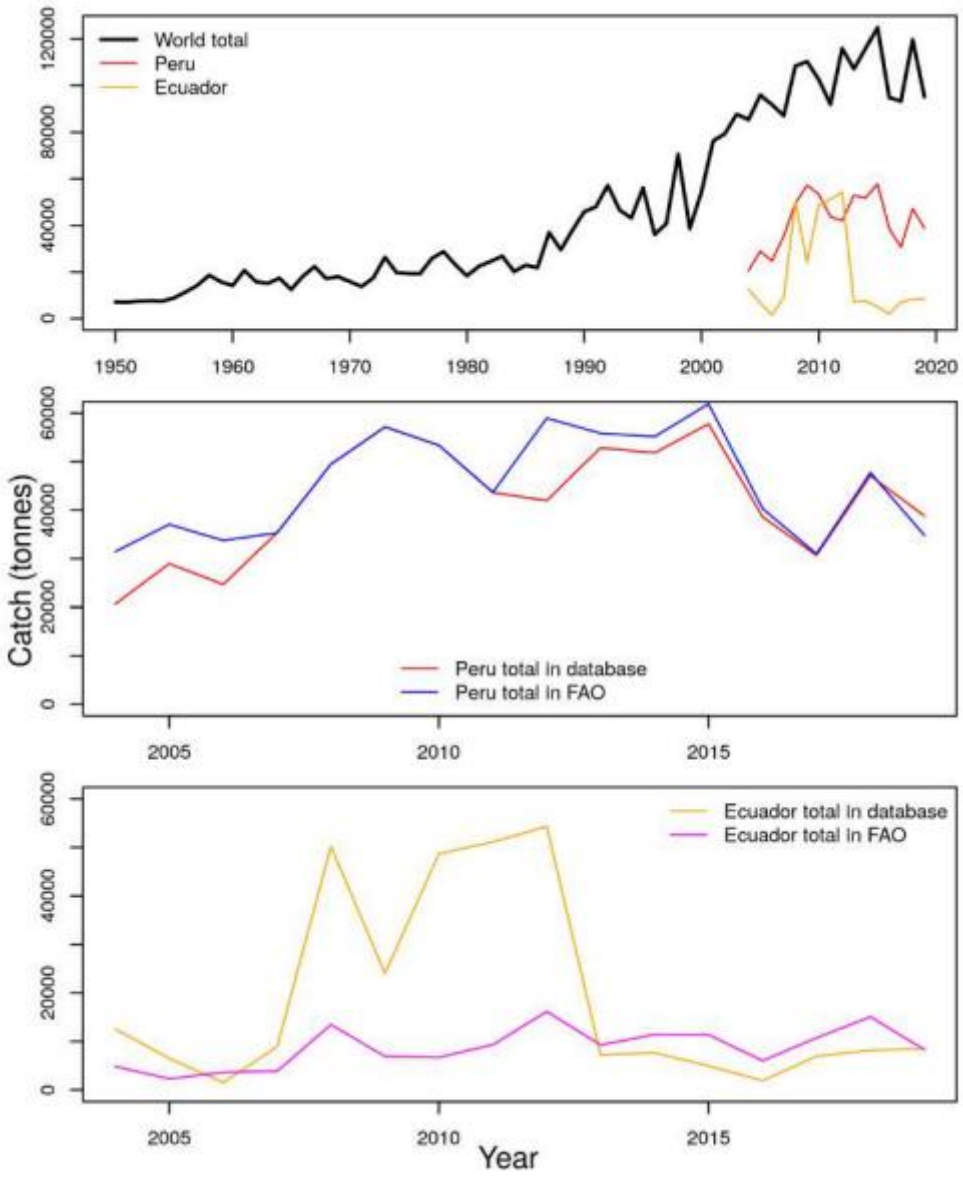
References

IPIAP (2024). Evaluacion Del Stock De Recursos Pelagicos Pequeños Del Ecuador 2023 (*Stock assessment of Ecuador's small pelagic resources 2023*). https://institutopesca.gob.ec/wp-content/uploads/2024/07/Informe_Evaluacion_2024.pdf

Species name		*Coryphaena hippurus* - Common dolphinfish	
Fishing area and stock		FAO 87, Ecuadorian waters, EPO dolphinfish	
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.	FAIL
	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.	FAIL
		Clause outcome:	FAIL

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 stock structure of dolphinfish in the Pacific Ocean is not known, and regular stock assessments are not undertaken (Fishsource 2025). The most recent stock assessment was conducted in 2021, using data up to 2019. The assessment incorporated Ecuadorian and Peruvian catch data; while the unknown stock structure means it is not possible to determine whether this represents all fishery removals from this stock, it does cover those vessels within the scope of the present assessment. However, the fishery is considered “data poor” in both countries, and the stock assessment report notes significant gaps in much of the source data (IATTC 2021). On top of this, the stock assessment is now 4 years old and based on data which are 6+ years old, approaching the limit of what is acceptable within the MT methodology. Overall, C1.1 is not met.



World and country landings of dolphinfish, taken from the 2021 stock assessment report (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 2021 stock assessment provides estimates of biomass up to the end of the assessed time series – i.e. December 2019 (IATTC 2021). No reference points are established for this stock (Fishsource 2025). Due to the age of the most recent stock assessment, and the lack of reference points, it is not possible to determine whether the current stock status is above the limit reference point. C1.2 is not met.

References

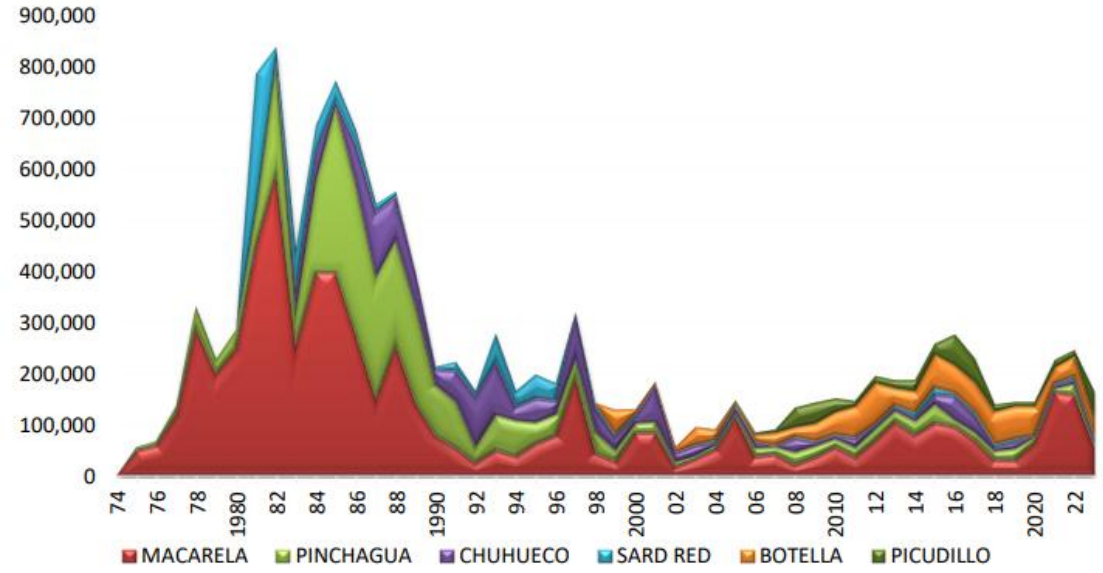
Fishsource (2025). Common dolphinfish in the Eastern Pacific Ocean. https://www.fishsource.org/stock_page/1036

IATTC (2021). Stock Assessment of the dolphinfish (*Coryphaena hippurus*) in the South-East Pacific Ocean. https://www.iattc.org/GetAttachment/76cad98f-5a38-4aa2-b7cb-df4cfd23ef00/SAC-13-INF-O_Evaluacion-del-stock-de-dorado-OPO-Sur.pdf

Species name		*Scomber japonicus* - Pacfic chub mackerel/macarela	
Fishing area and stock		FAO 87, Ecuadorian waters, Ecuadorian macarela	
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.

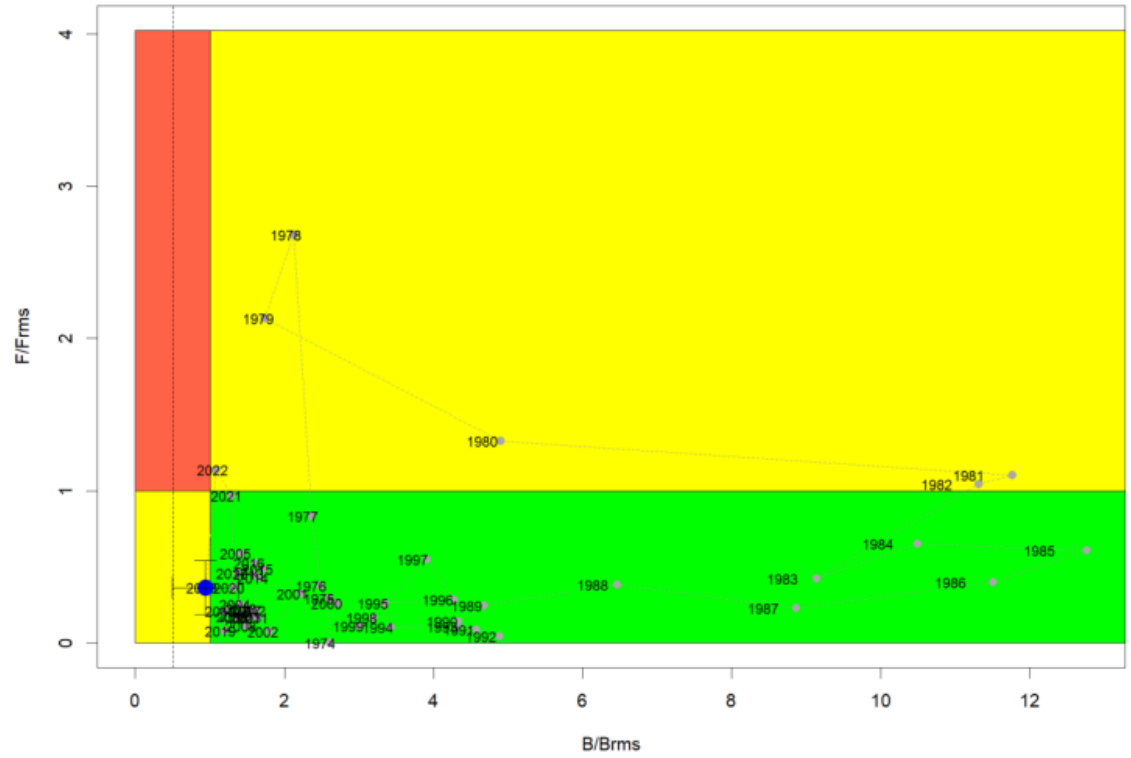
Stock assessments covering all the main species caught in the Ecuadorian small pelagic fishery have been conducted annually since 2019 by the Ecuadorian Instituto Público De Investigación De Acuicultura Y Pesca (IPIAP). Data incorporated into the most recent assessment, conducted in 2024, included catch data from 1975 – 2023; fishery-dependent sampling data collected by the IPIAP, including fishing areas, catch composition, size frequency data, and environmental conditions; CPUE estimates; and the outputs of a semi-regular hydroacoustic cruise survey (IPIAP 2024). C1.1 is met.



Landings in the Ecuadorian small pelagic fishery, 1975 – 2023. Bullet tuna is "Botella" (orange) (IPIAP 2024)

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 biomass target reference point for this stock (B_{MSY}), defined as 40% of the unfished biomass, is estimated to be 374,000t. The 2024 stock assessment concluded that biomass was approximately 352,000t, equivalent to 38% of the unfished level and below the target reference point (IPIAP 2024). Due to uncertainty in the model, the probability that the stock biomass is below B_{MSY} is estimated to be around 61%, but with a low probability that biomass is below the limit reference point. C1.2 is met.



Kobe chart for Pacific chub mackerel in Ecuadorian waters. The blue dot is the most recent estimate of stock status (IPIAP 2024)

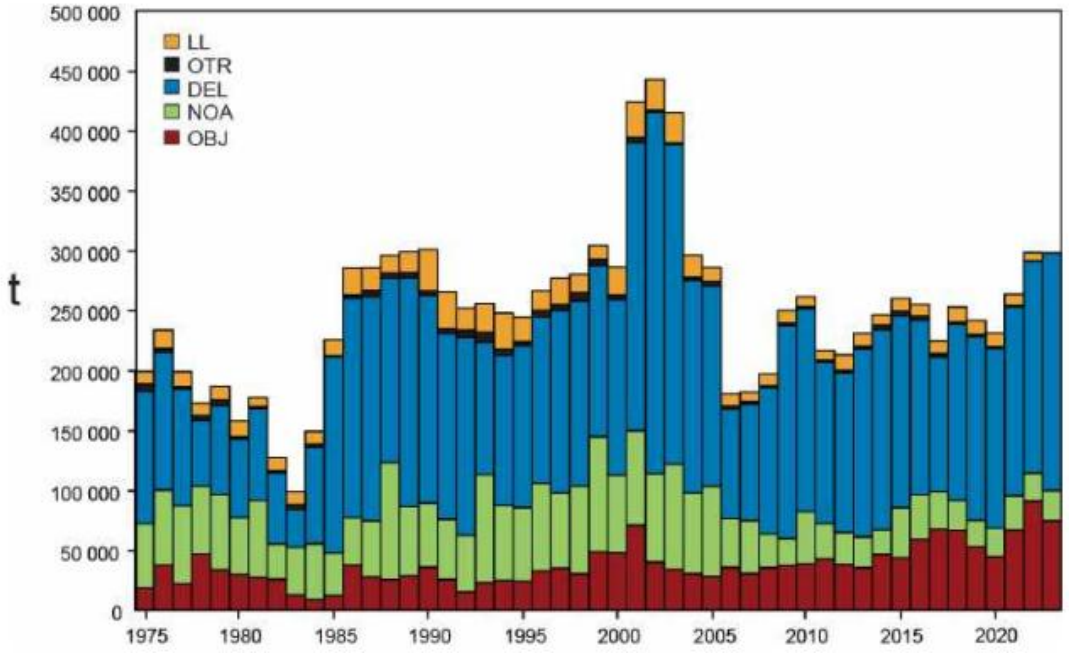
References

IPIAP (2024). Evaluacion Del Stock De Recursos Pelagicos Pequeños Del Ecuador 2023 (*Stock assessment of Ecuador's small pelagic resources 2023*). https://institutopesca.gob.ec/wp-content/uploads/2024/07/Informe_Evaluacion_2024.pdf

Species name		***Thunnus albacares* -Yellowfin Tuna**	
Fishing area and stock		**EPO yellowfin 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.

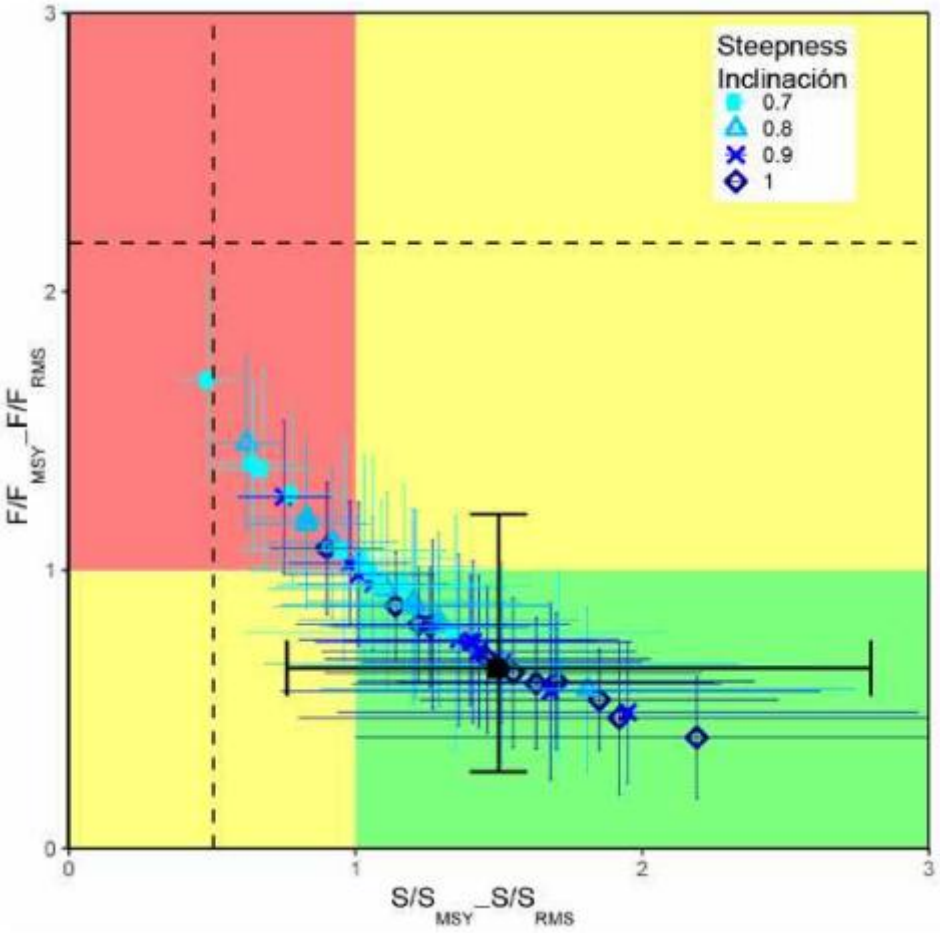
The Eastern Pacific Ocean (EPO) yellowfin tuna stock is managed and assessed by the Inter-American Tropical Tunas Commission (IATTC). A new risk-based approach was introduced to the management of the stock in 2022, with Stock Status Indicators (SSIs) developed using catch and other data collected from the EPO as a whole. This approach continued in 2023 (IATTC 2024). 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). Fishery removals are a key component of the modelling used to generate SSI's, and their development and use is evidence that managers have sought out alternative mechanisms where stock assessment uncertainty is high. The most recent full stock assessment was conducted in 2020.



Total catches of yellowfin tuna in the EPO by set type (IATTC 2024)

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.

In the full stock assessments for this stock, multiple reference models are utilised to create a risk-based understanding of stock status. The most recent results, from 2020, indicated that "the probability of the spawning biomass being below S_{MSY_d} [i.e. the target reference point] is low (12%)" (IATTC 2024), and that the probability of the biomass being below the limit reference point S_{LIMIT} is zero. There was therefore a low probability that biomass is currently below the target reference point and almost no possibility it was below the limit reference point.



Kobe plot for yellowfin tuna in the EPO of estimates of spawning stock size (S) and fishing mortality (F). Coloured panels are separated by the target reference points S_{MSY} and F_{MSY}. Limit reference points are approximately indicated by the dashed lines, although these vary between models. The solid black circle represents all models combined (IATTC 2024).

References

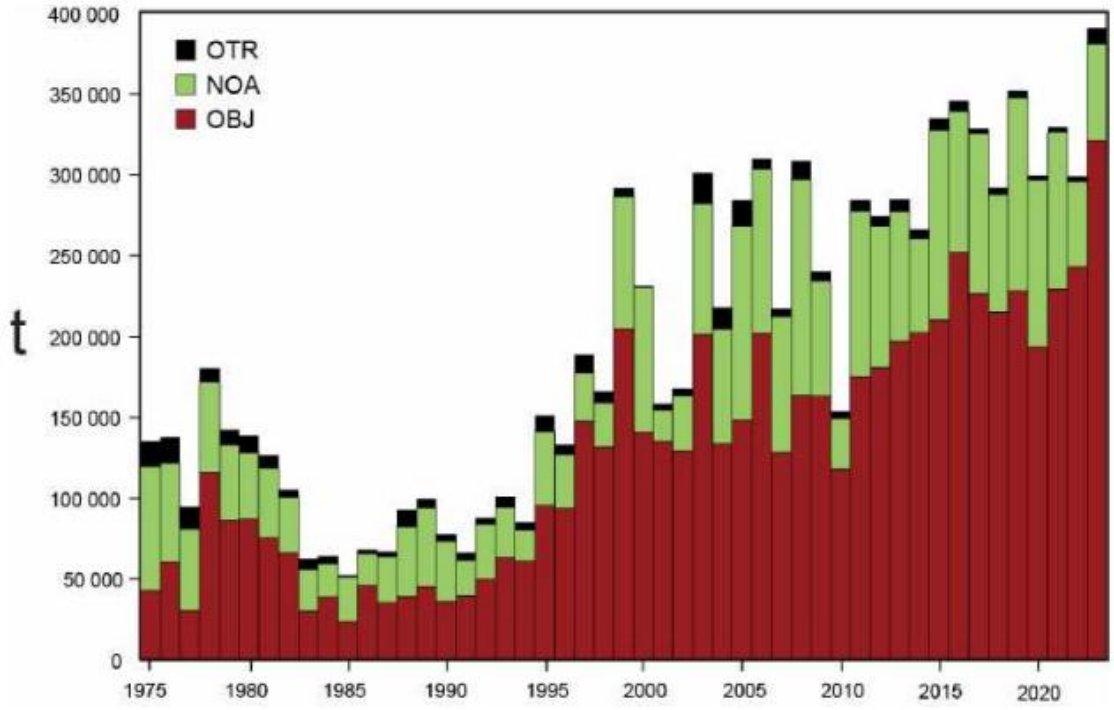
IATTC (2022). Stock Status Indicators (SSIs) for tropical tunas in the Eastern Pacific Ocean. 13th Meeting of the IATTC Scientific Advisory Committee, Document SAC-13-06 Corr. https://www.iattc.org/GetAttachment/22511b5b-ba2b-4126-9ba2-0bffee89f4d5/SAC-13-06%20-%20Stock%20status%20indicators%20(SSIs)%20for%20tropical%20tunas%20in%20the%20EPO

IATTC (2024). The tuna fishery in the Eastern Pacific Ocean in 2023. https://www.iattc.org/GetAttachment/1ed36788-07ce-4bf4-80e4-10c6c3b2b14d/No-22-2024_Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2023.pdf

Species name		*Katsuwonus pelamis* - Skipjack tuna	
Fishing area and stock		EPO skipjack 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.

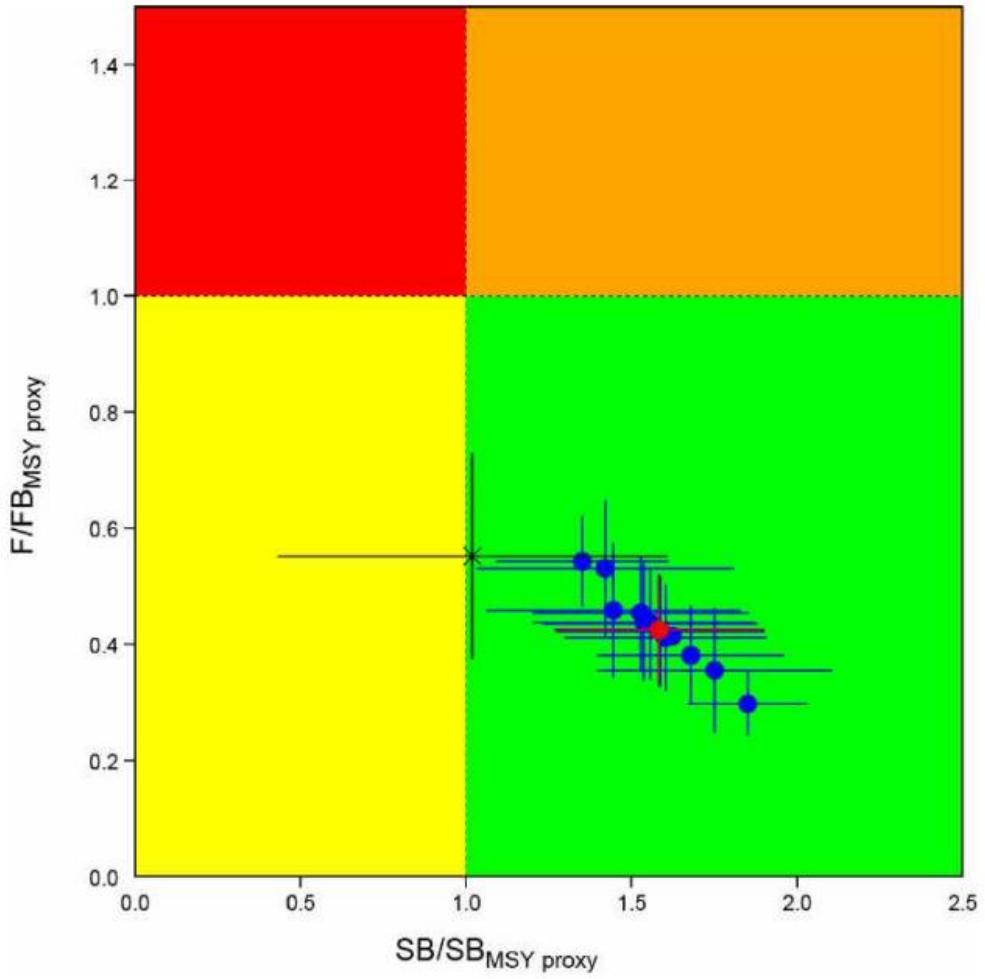
EPO skipjack has historically been subject to "interim" integrated statistical age-structured catch-at-length stock assessments carried out by the IATTC. In 2023, a benchmark stock assessment was conducted using an integrated statistical age-structured catch-at-length model in Stock Synthesis, which is considered by the IATTC to represent "a significant improvement from the initial interim assessment conducted in 2022" (IATTC 2024). The assessment incorporates all available data from across the EPO, including catch data but also size and age frequency data and other sources.



Skipjack catches (retained plus discards) in the EPO, 1975-2023 (IATTC 2024).

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.

MSY-based estimates and reference points cannot be estimated for EPO Skipjack due to the nature of the model used. Instead, the IATTC management process utilises a conservative proxy for target biomass of SBR = 0.3, with the fishing mortality corresponding to that target biomass used as the target reference point for fishing mortality (IATTC 2024). The reference model and most of the sensitivity analyses conducted in 2023 indicated that biomass is above the target reference point and fishing mortality is below the target level. None of the model scenarios concluded that stock biomass is below the limit reference point level.



Kobe plot for skipjack tuna in the EPO (IATTC 2024).

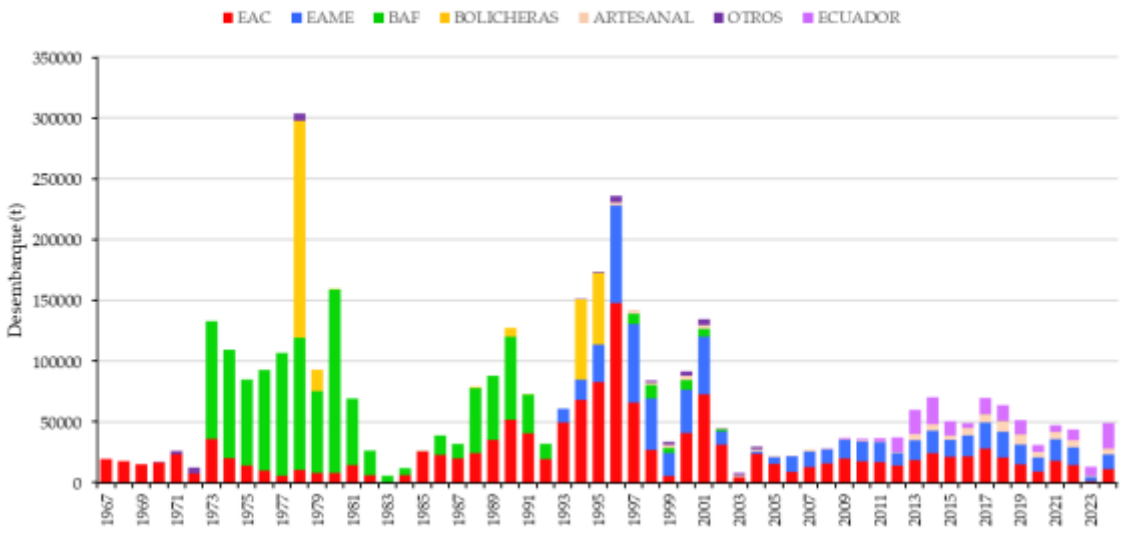
References

IATTC (2024). The tuna fishery in the Eastern Pacific Ocean in 2023. https://www.iattc.org/GetAttachment/1ed36788-07ce-4bf4-80e4-10c6c3b2b14d/No-22-2024_Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2023.pdf

Species name		*Merluccius gayi* - South Pacific hake	
Fishing area and stock		FAO 87, Ecuadorian waters, Peruvian hake	
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.

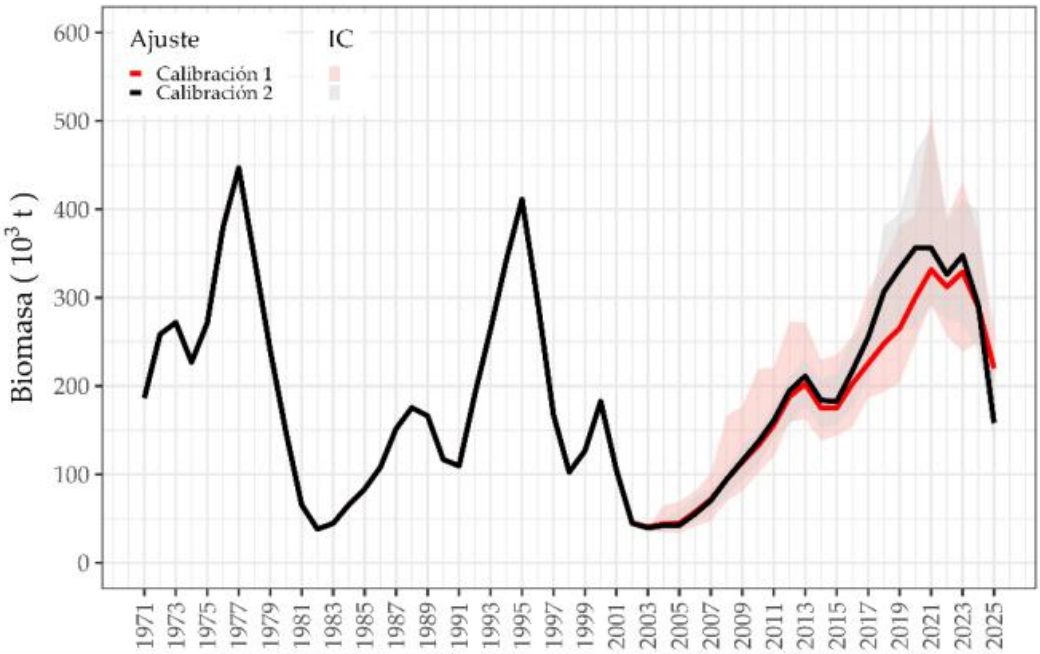
A single South Pacific hake stock is considered to extend through Ecuadorian and Peruvian waters. Regular stock assessments are conducted by the Peruvian Instituto del Mar del Perú (IMARPE). The most recent assessment was conducted in 2025, and incorporated catch data from both countries. C1.1 is met.



Hake landings by fleet type, 1971-2024. As the stock is distributed in Ecuadorian and Peruvian waters, these data include Peruvian landings (IMARPE 2025)

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 current biomass estimates produced by the two possible model calibrations were 158,148t and 219,852t. Although the stock assessment report does not appear to indicate specific biomass target or limit reference points, it states, "while the Peruvian hake shows a reduction in available biomass within the Peruvian Maritime Domain, it remains above biological reference points". C1.2 is met.



Estimated hake biomass under two calibration approaches (IMARPE 2025)

References

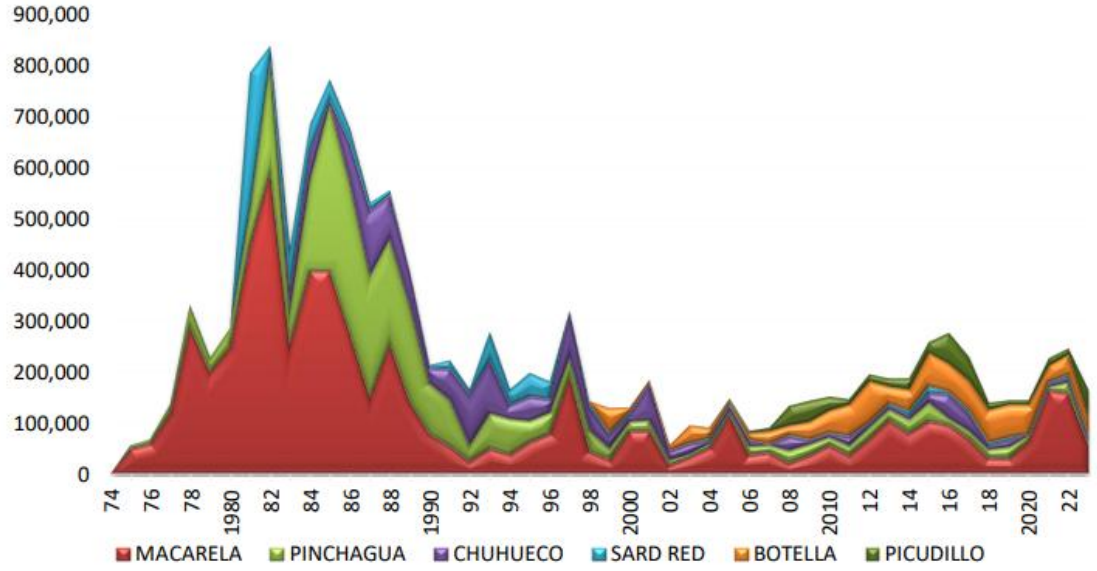
IMARPE (2025). Análisis De La Pesquería, Estado Poblacional Y Proyecciones De Pesca De La Merluza Peruana *Merluccius gayi peruanus* JULIO 2025 – JUNIO 2026 (*Fishery Analysis, Population Status, and Fishing Projections for Peruvian Hake (Merluccius gayi peruanus),, July 2024 – June 2025*). https://cdn.www.gob.pe/uploads/document/file/8581594/7102842-informe-analisis-de-la-pesqueria-estado-poblacional-y-proyecciones-de-pesca-de-la-merluza-peruana-merluccius-gayi-peruanus.pdf

Species name	*Auxis rochei* - Bullet Tuna
Fishing area and stock	FAO 87, Ecuadorian waters, Ecuadorian bullet tuna
	Category C Stock Status - Minimum Requirements

C1	**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.

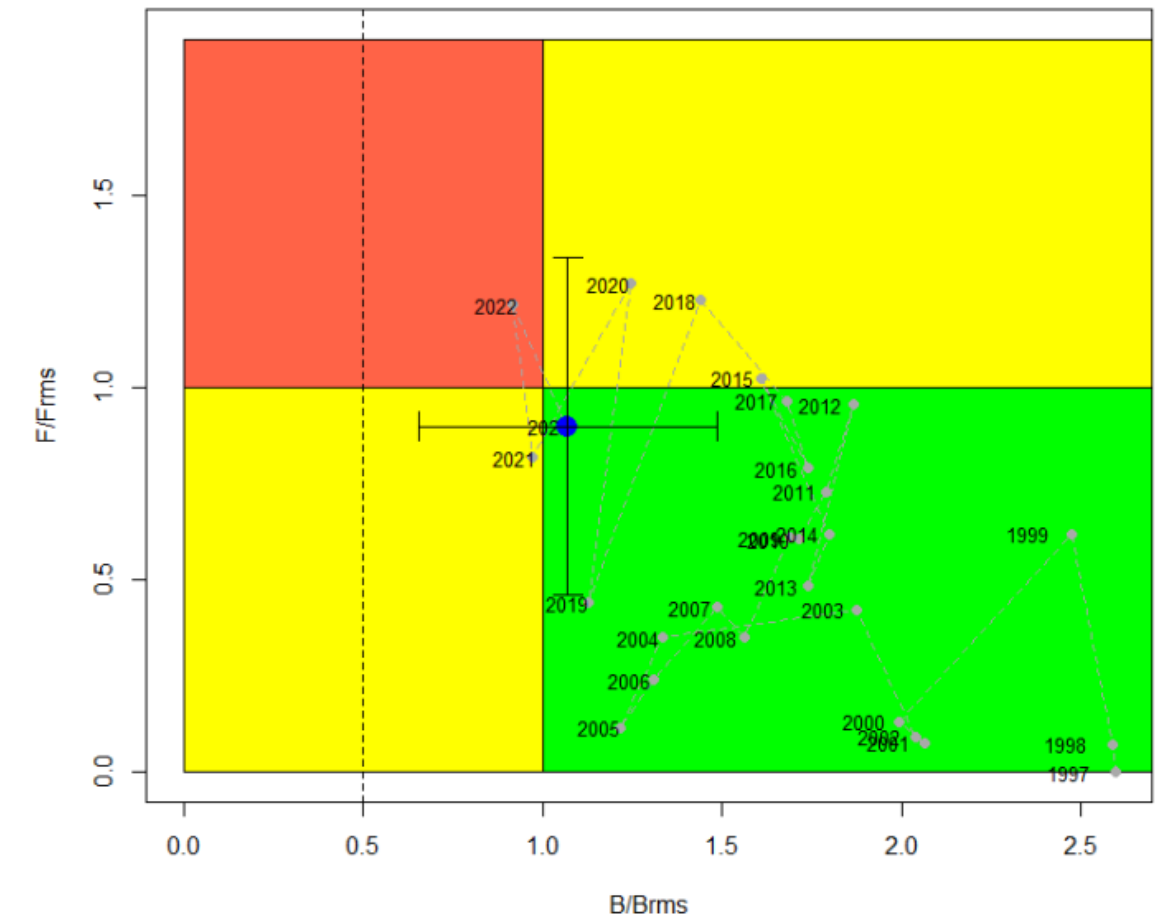
Stock assessments covering all the main species caught in the Ecuadorian small pelagic fishery have been conducted annually since 2019 by the Ecuadorian Instituto Público De Investigación De Acuicultura Y Pesca (IPIAP). Data incorporated into the most recent assessment, conducted in 2024, included catch data from 1975 – 2023; fishery-dependent sampling data collected by the IPIAP, including fishing areas, catch composition, size frequency data, and environmental conditions; CPUE estimates; and the outputs of a semi-regular hydroacoustic cruise survey (IPIAP 2024). C1.1 is met.



Landings in the Ecuadorian small pelagic fishery, 1975 – 2023. Bullet tuna is "Botella" (orange) (IPIAP 2024)

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 biomass target reference point for this stock (B_{MSY}), defined as 40% of the unfished biomass, is estimated to be 69,000t. The 2024 stock assessment concluded that biomass was approximately 74,000t, equivalent to 43% of the unfished level and above the target reference point (IPIAP 2024). Due to uncertainty in the model, the probability that the stock biomass is below B_{MSY} is estimated to be around 37%, but with a very low probability that biomass is below the limit reference point. C1.2 is met.



Kobe chart for bullet tuna in Ecuadorian waters. The blue dot is the most recent estimate of stock status (IPIAP 2024)

References

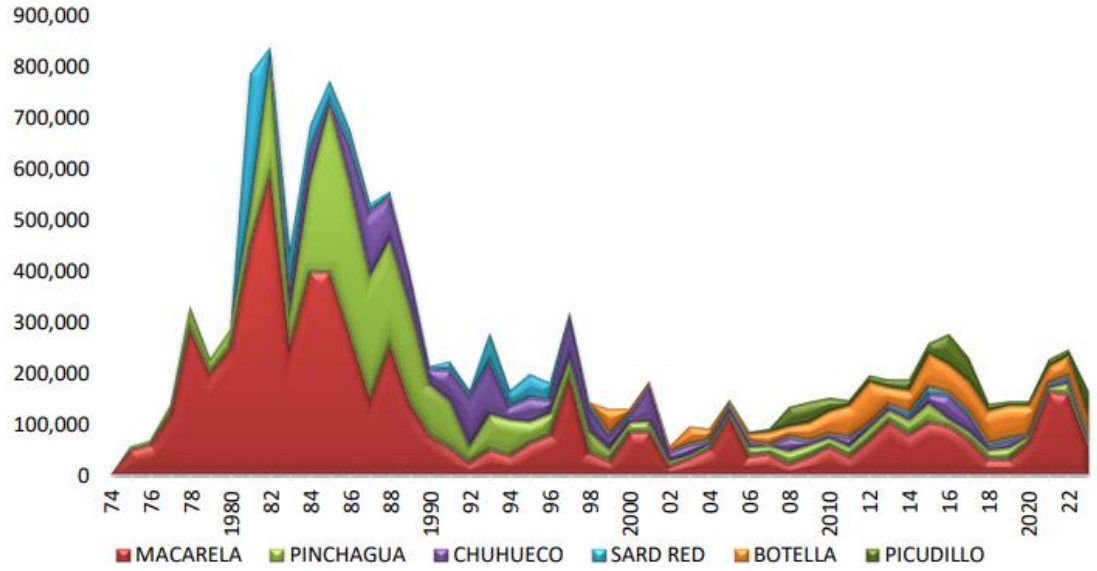
IPIAP (2024). Evaluacion Del Stock De Recursos Pelagicos Pequeños Del Ecuador 2023 (*Stock assessment of Ecuador's small pelagic resources 2023*). https://institutopesca.gob.ec/wp-content/uploads/2024/07/Informe_Evaluacion_2024.pdf

Species name		*Etrumeus acuminatus* - Sardina redonda	
Fishing area and stock		FAO 87, Ecuadorian waters, Ecuadorian sardina redonda	
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	PASS

		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.

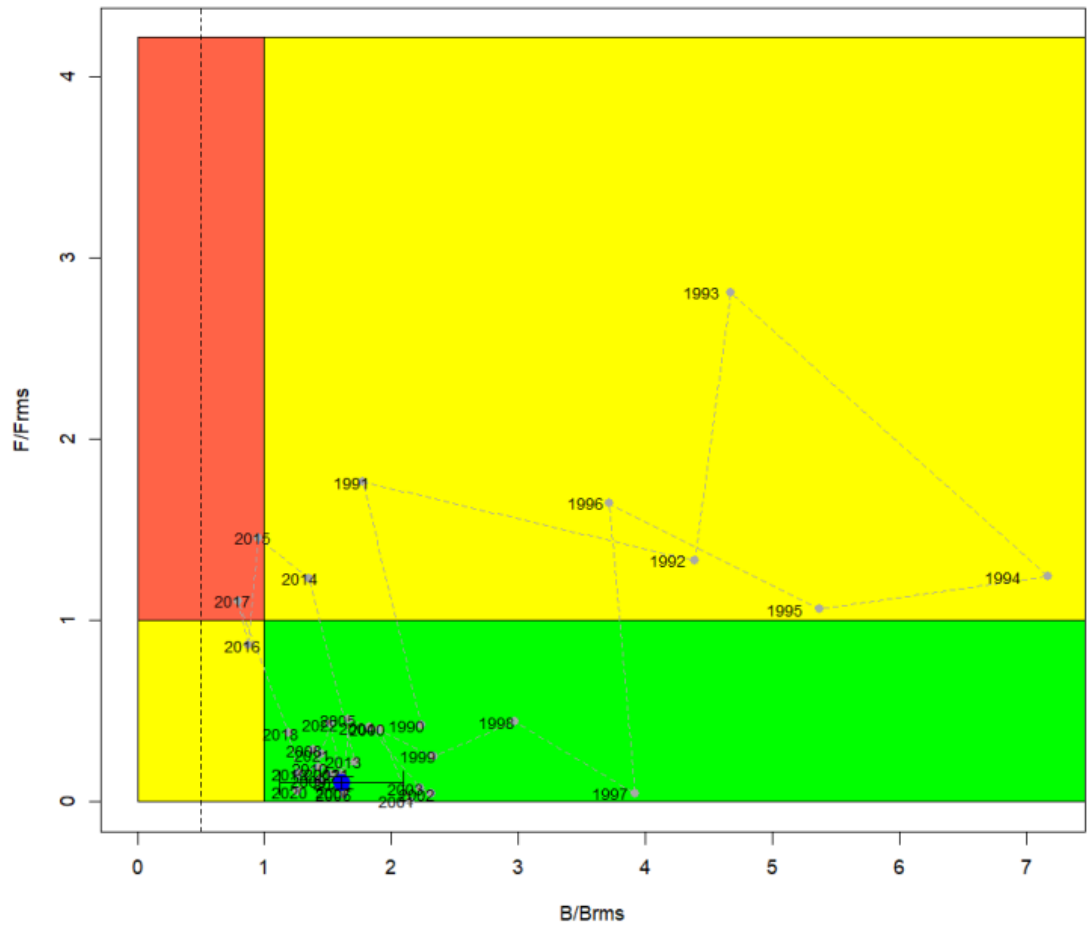
Stock assessments covering all the main species caught in the Ecuadorian small pelagic fishery have been conducted annually since 2019 by the Ecuadorian Instituto Público De Investigación De Acuicultura Y Pesca (IPIAP). Data incorporated into the most recent assessment, conducted in 2024, included catch data from 1975 – 2023; fishery-dependent sampling data collected by the IPIAP, including fishing areas, catch composition, size frequency data, and environmental conditions; CPUE estimates; and the outputs of a semi-regular hydroacoustic cruise survey (IPIAP 2024). C1.1 is met.



Landings in the Ecuadorian small pelagic fishery, 1975 – 2023. Bullet tuna is "Botella" (orange) (IPIAP 2024)

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 biomass target reference point for this stock (B_{MSY}), defined as 40% of the unfished biomass, is estimated to be 11,800t. The 2024 stock assessment concluded that biomass was approximately 19,000t, equivalent to 64% of the unfished level and substantially above the target reference point (IPIAP 2024). The probability that the stock biomass is below B_{MSY} is estimated to be negligible, and therefore so is the probability that biomass is below the limit reference point. C1.2 is met.



Kobe chart for sardina redonda in Ecuadorian waters. The blue dot is the most recent estimate of stock status (IPIAP 2024)

References

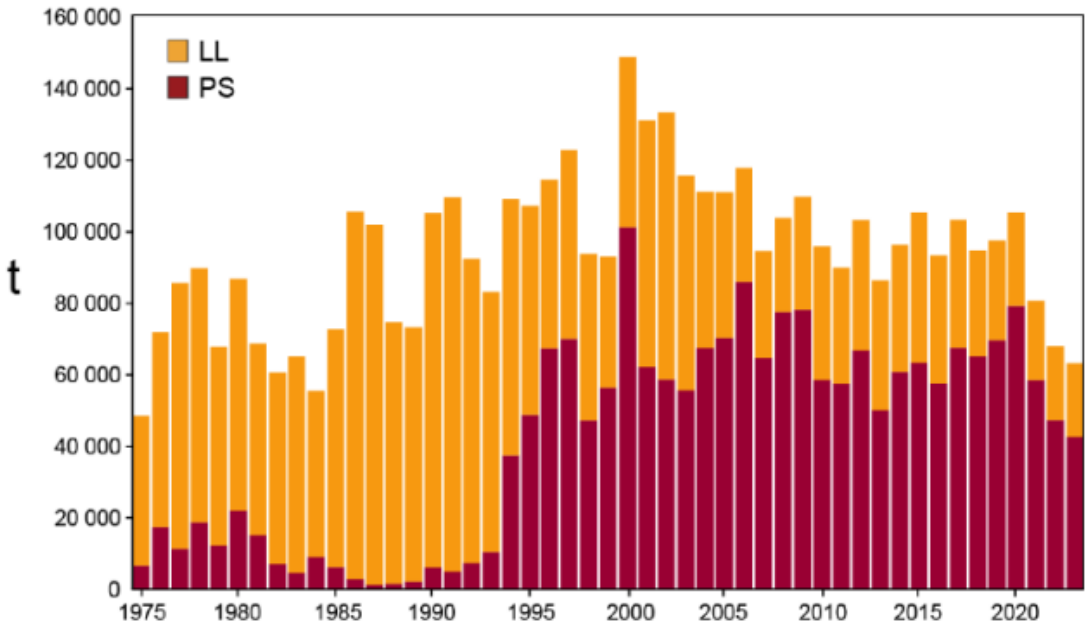
IPIAP (2024). Evaluacion Del Stock De Recursos Pelagicos Pequeños Del Ecuador 2023 (*Stock assessment of Ecuador's small pelagic resources 2023*). https://institutopesca.gob.ec/wp-content/uploads/2024/07/Informe_Evaluacion_2024.pdf

Species name		***Thunnus obesus* - Bigeye tuna**	
Fishing area and stock		**EPO 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 full stock assessment was conducted in 2024. The assessment utilised all international catch data. 33 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. In the case of bigeye, they are incorporated into the annual stock status review (IATTC 2024).

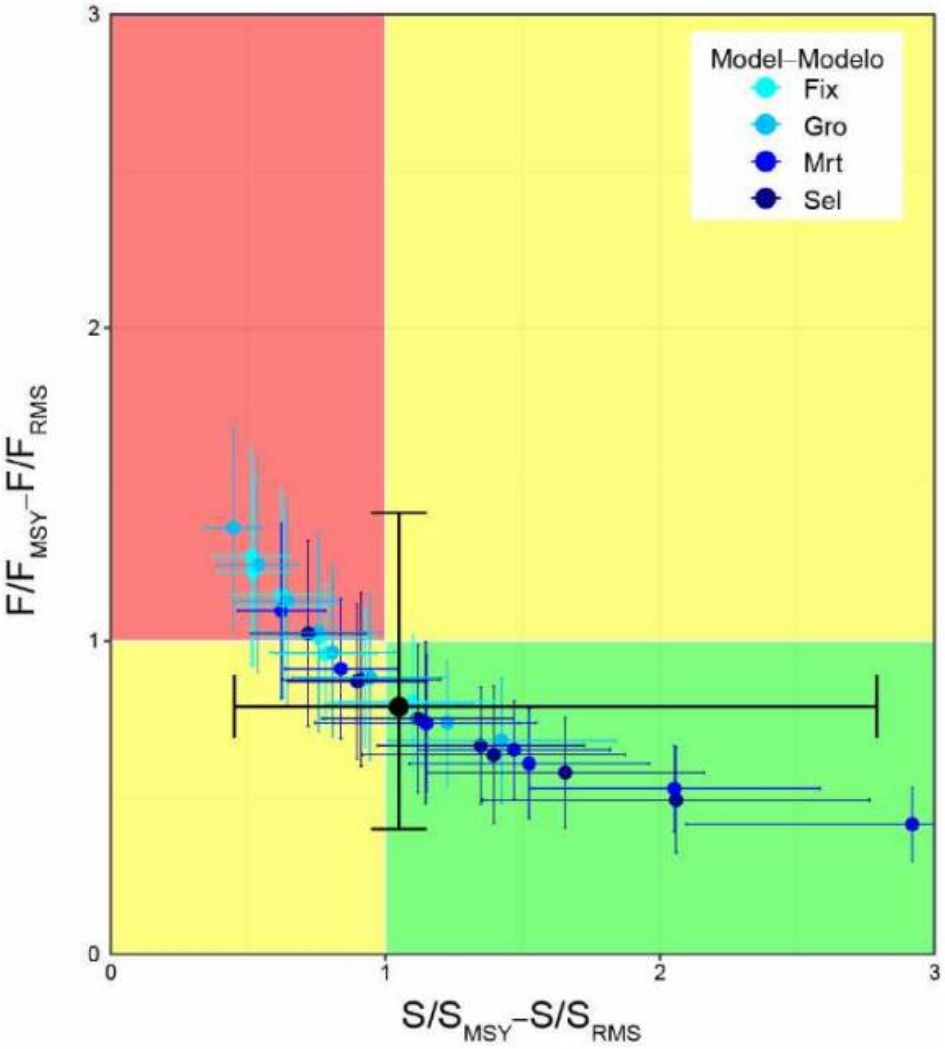


Total EPO bigeye catch by purse seine gears (PS), and retained catches by longline gears (LL), 1975 – 2023. 2020 and 2021 data are preliminary (IATTC 2024)

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 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

were that there is a “46.6% probability that the spawning biomass at the beginning of 2024 is below the target reference point”, and a “0.2% probability that the spawning biomass at the beginning of 2024 is below the limit reference point” (IATTC 2024). Therefore, there was a very low probability of the biomass being below the limit reference point.



Kobe plot of the most recent estimates of spawning biomass (S) and fishing mortality (F) relative to their MSY reference points (SMSY_d and FMSY) from the thirty-three reference models. Each dot is based on the average F over the most recent three years, 2021-2023, and the error bars represent the 95% confidence interval of model estimates. The black dot and error bars represent the medium and 95% confidence interval of combined values, respectively. (IATTC 2024)

References

IATTC (2024). The tuna fishery in the Eastern Pacific Ocean in 2023. https://www.iattc.org/GetAttachment/1ed36788-07ce-4bf4-80e4-10c6c3b2b14d/No-22-2024_Tunas,-stocks-and-ecosystem-in-the-eastern-Pacific-Ocean-in-2023.pdf

Traceability information

The applicant provided traceability information indicating that all byproducts in this report are caught within Ecuadorian waters and landed at Crucita in Ecuador.

<table>
<tr><td colspan="2">Species name</td><td colspan="4">All byproduct species listed in this report</td></tr>
<tr><td colspan="2">Path 1</td><td colspan="4">Yes ☐ No ☒</td></tr>
<tr><td colspan="2">Confirm all KDEs are provided</td><td colspan="4">Yes ☐ No ☐</td></tr>
<tr><td colspan="2">Path 2</td><td colspan="4">Yes ☒ No ☐
If yes for Path 2, complete the next section</td></tr>
<tr><td rowspan="3">Path 2 outcome
Countries may be different for Coastal State and Port State.</td><td>Flag country</td><td>Coastal score</td><td>Port score</td><td colspan="2">Risk outcome</td></tr>
<tr><td>Ecuador</td><td>Medium Risk (Ecuador)</td><td>Medium Risk (Ecuador)</td><td colspan="2">Downgraded to medium risk</td></tr>
<tr><td></td><td></td><td></td><td colspan="2">Choose an item.</td></tr>
</table>