



## MarinTrust Whole fish fishery assessment report

*Peru,  
Anchovy (*Engraulis ringens*)  
FAO 87, from 16° south to southern border*

*Surveillance 1  
WF13*

**Table 1: Whole fish fishery assessment scope**

<b>Fishery name</b>	Anchovy ( <i>Engraulis ringens</i> ) in FAO 87, from 16° south to Peru southern border
<b>MarinTrust report code</b>	WF13
<b>Type 1 species (common name, Latin name)</b>	Anchovy ( <i>Engraulis ringens</i> )
<b>Fishery location</b>	FAO 87, from 16° south to Peru southern border
<b>Gear type(s)</b>	Purse seine (industrial fleet)
<b>Management authority (country/state)</b>	Peru Ministry of Production (PRODUCE)

**Table 2: Applicant and Certification Body details**

<b>Application details</b>			
<b>Applicant(s)</b>	Mollendo (Pesquera Diamante SA), Matarani (TASA), Pisco (Austral Group SAA), Chancay (Austral Group SAA), Ilo (Austral Group SAA), Coishco (Austral Group SAA)		
<b>Applicant country</b>	Peru		
<b>Certification Body details</b>			
<b>Name of Certification Body</b>	NSF / Global Trust Certification Ltd		
<b>Contact Information for CB</b>	<a href="mailto:Fisheries@nsf.org">Fisheries@nsf.org</a>		
<b>Fishery Assessor name</b>	Ana Ayres		
<b>CB Peer Reviewer name</b>	Léa Lebechnech		
<b>Number of assessment days</b>	4	<b>Assessment period</b>	08/2025-08/2026

**Table 3: Assessment outcome**

<b>Assessment outcome</b> (See Table 4 for a summary of assessment determination)		Approve
<b>Approval validity</b>	Valid from: 09/2025	Valid until: 09/2026
<b>CB peer reviewer evaluation</b>		Agree with assessment determination
<b>Fishery Assessment Peer Review Group external peer reviewer evaluation</b>		Agree with assessment determination

**Table 4: Assessment determination**

Assessment determination
Summary of assessment and outcome
<p>Peruvian anchovy (<i>Engraulis ringens</i>) [“anchoveta”, in Spanish] is found throughout the south-eastern Pacific Ocean, ranging from Zorritos (4°30' S) in northern Peru to Chiloé (42°30' S) in southern Chile. Two stocks have been identified in Peruvian waters:</p> <ol style="list-style-type: none"> <li>1. northern-central Peruvian stock, assessed and managed by Peru; and</li> <li>2. southern Peru/northern Chile stock (this fishery), assessed and managed unilaterally by each country. In Chile, it corresponds to the regions of Arica y Parinacota, Tarapacá and Antofagasta (XV–II).</li> </ol> <p>This surveillance covers the industrial purse-seine fishery from 16°S to Peru’s southern border. Governance, roles and management pathways remain unchanged since the previous cycle: IMARPE conducts surveys/analyses and advises; PRODUCE remains the competent authority that sets and enforces seasonal management measures, including a seasonal Límite Máximo de Captura Total Permissible (LMTCP), area/time closures (including juvenile-hotspot closures), minimum size, and in-season adjustments based on IMARPE scientific advice, data collection and technical reports that inform management.</p> <p>2025 surveillance confirms continued application of the precautionary, seasonal limit-based regime. IMARPE’s assessment outputs and decision tables underpin PRODUCE’s seasonal LMTCP. In 2025-I (South), IMARPE reported 195,217 t landed by 10 June (77.8% of the 251,000-t seasonal limit), with routine tracking of removals against the decision rule and juvenile-incidence indicators.</p> <p><b>Environmental context (peer-reviewer-noted):</b> Recent years have shown reductions in biomass, landings and quotas, together with lower primary and secondary productivity, which has contributed to smaller anchovy maximum sizes (from 17–18 cm to ~12–13 cm) in southern Peru and northern Chile. These patterns have been observed during previous environmental fluctuations and do not affect the current assessment outcomes.</p> <p><b>Data status and method note (South, 2024–2025):</b> Public, South-region haul-level species-composition/bycatch datasets suitable to quantify 2024–2025 Type 2 percentages were not available at the time of review, and the client did not provide the requested data. Consequently, bycatch composition could not be formally assessed this cycle. Anchoveta remains confirmed as the sole Type 1 species (≥95% during the surveillance period), while Type 2 species (expected ≤5% combined) are retained provisionally and will be updated by addendum upon receipt of South-specific observer/bycatch datasets from PRODUCE/IMARPE.</p> <p><b>Species considered in this assessment:</b> Based on recent management context and the best available information from adjacent/related fisheries, the following species remain in scope alongside anchoveta: Eastern Pacific bonito – <i>Sarda chiliensis chiliensis</i> (bonito), Chilean jack mackerel – <i>Trachurus murphyi</i> (jurel), chub mackerel – <i>Scomber japonicus</i> (caballa) and carrot/red squat lobster – <i>Pleuroncodes monodon</i> (múnida).</p>

**Categorisation (provisional where noted):**

- Anchoveta – Type 1, Category A (≥95% confirmed for the surveillance period).
- Bonito – Type 2, Category C (provisional).
- Chilean jack mackerel – Type 2, Category C (provisional).
- Chub mackerel – Type 2, Category C (provisional).
- *Pleuroncodes monodon* (múnida) – Type 2, Category D (provisional) (risk-based; no Peru species-specific reference-point regime).

**Conservation status / eligibility:** None of the assessed species is listed as Endangered or Critically Endangered on the IUCN Red List, and none appears in the CITES Appendices; therefore, all listed species remain eligible for approval for use as MarinTrust Whole Fish raw material.

**Legal and management framework:** Peru’s fisheries are governed by the General Fisheries Law (LGP Law N° 25977) and its regulations, including Supreme Decree N° 021-2008-PRODUCE (maximum catch limits per vessel regime for anchoveta/white anchovy destined to indirect human consumption). PRODUCE (through DGSFS) is the competent authority for enforcement. IMARPE undertakes hydroacoustic surveys and biological/environmental monitoring prior to and during seasons and provides decision tables that inform the seasonal LMTCP and in-season measures. Monitoring and control tools include the national observer program (Programa Bitácoras de Pesca – PBP), the Landings Surveillance Program (PVCPDAM), vessel-departure controls, and satellite monitoring (SISESAT), with additional third-party verification at designated landing sites.

**Stock management and status (South):** The fishery continues to be managed through seasonal LMTCP with in-season controls (juvenile-incidence threshold management, temporary closures, restricted areas/access, minimum size). Decision-making is based on IMARPE’s in-season analyses and technical reports. When the season’s LMTCP is reached, the fishery closes. Evidence from the current surveillance period confirms the application of this precautionary framework in the South region and routine tracking of removals against the decision rule.

*Note: Given the absence of new South-specific bycatch composition datasets for 2024–2025, quantitative haul-level bycatch percentages are not reported this cycle. This does not affect the confirmation that anchoveta ≥95% for Type-1 classification during the surveillance period.*

**Type 2 species (management context):** Bonito, jack mackerel and chub mackerel remain subject to active national/regional species-specific regimes (updated 2024 evidence), and *P. monodon* remains risk-assessed (Category D). As per the method note, their percentage contributions are provisional pending South-specific observer/bycatch datasets.

**ETP interactions / habitats / ecosystem:** Onboard observer programs (PBP; SALVAMARES) and compliance systems remain in effect. Interactions of the anchoveta purse-seine fishery with ETP taxa are monitored and mortality rates remain low under established mitigation/management measures. The fishery uses pelagic purse-seine gear and does not have significant negative impacts on physical habitats. Ecosystem information and controls continue to be adequate for the scale and intensity of the fishery.

**Bi-national scientific cooperation:** The peer reviewer highlighted strengthened IMARPE–IFOP coordination under the UNDP-GEF Humboldt II Project. A first joint acoustic survey is scheduled for December 2025, which will deliver the first full-range biomass estimate for anchovy and associated species. The project aims to maintain long-term binational coordination for shared stocks.

**Assessment determination:** The assessor recommends approval of the anchoveta stock in FAO 87 South ( $\geq 16^{\circ}\text{S}$  to the southern border of Peru) for the production of fishmeal and/or fish oil under the current MarinTrust Whole Fish Standard (v3.0). All applicable criteria continue to Pass. The Type 2 species categorisation is provisional this cycle due to data limitations on South-specific bycatch composition (see Table 7 method note) and will be updated by addendum upon receipt of the relevant datasets.

**Evidence cut-off for this surveillance:** June 2025 (with public-portal checks through September 2025)

<p><b>Summary of CB peer review</b></p>	<p>The CB peer reviewer agrees with the global assessment outcome of this report, underlining that only few information has changed since last surveillance and did not change this year’s outcomes.</p> <p>The CB peer reviewer agrees with the species classification of anchoveta as Type 1, Category A (<math>\geq 95\%</math> confirmed for the surveillance period), bonito as Type 2, Category C (provisional), Chilean jack mackerel as Type 2, Category C (provisional), chub mackerel Type 2, Category C (provisional) and <i>Pleuroncodes monodon</i> (múnida) as Type 2, Category D.</p> <p>Furthermore, the clauses related to management requirements have not changed since last surveillance, neither the ETP interactions / habitats / ecosystem clauses.</p>
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<p><b>Summary of external peer review</b> (see Appendix 1 for the full peer review report)</p>	<p>Chilean jack mackerel is not data deficient, all landings in the industrial and artisan fleets are report detailed. Then, carrot squat lobster is an assessed species by Imarpe since 1995 although there is no a dedicated fishery on this specie, so it is a category C specie, not D.</p> <p>I agree with almost all the report. But it is necessary to highlight that biomass and landings (and quotas) have decreased in recent years. Furthermore, changes in the habitat have conducted to a reduction of primary (phytoplankton) and secondary (zooplankton) production, with impact on the normal growth of anchovy, which reduced its maximum size from 17-18 cm to 12-13 both in southern Peru and northern Chile. A bibliographic review shown that this phenomenon has occurred in the past. Also it is necessary to highlight that under the frame of the UNDP-GEF Humboldt II Project both Peru (IMARPE) and Chile (IFOP) have strengthen the cooperation toward a at least compatible management of this shared stock in order to avoid the danger of managing separately a common resource. The first joint acoustic assessment survey has been programmed for December 2025, then also for first time there will be a biomass report of anchovy and other species in all its range of distribution. The ultimate goal of the project is to keep a close coordination between IMARPE and IFOP in the long term to manage shared stocks (not only anchovy) After reading the certification body response I understand red squat lobster is a category D species.</p>
<p><b>Notes for on-site auditor</b></p>	

**Table 5: General results**

Section	Outcome (Pass/Fail)
M1 - Management Framework	Pass
M2 - Surveillance, Control and Enforcement	Pass
E1 - Impacts on ETP Species	Pass
E2 - Impacts on Habitats	Pass
E3 - Ecosystem Impacts	Pass

**Table 6: Species-specific results**

See Table 7 for further details of species categorisation.

Category	Species name (common & Latin name)	Outcome (Pass/Fail/n/a)	
Category A	Anchovy ( <i>Engraulis ringens</i> )	A1	Pass
		A2	Pass
		A3	Pass
		A4	Pass
Category C	Eastern Pacific bonito ( <i>Sarda chiliensis chiliensis</i> )	Pass	
Category C	Chilean jack mackerel ( <i>Trachurus murphyi</i> )	Pass	
Category C	Chub mackerel ( <i>Scomber japonicus</i> )	Pass	
Category D	Carrot/red squat lobster ( <i>Pleuroncodes monodon</i> )	Pass	

## Table 7: Species categorisation table

List of all the species assessed. Type 1 species are assessed against Category A or Category B. Type 1 species must represent 95% of the total annual catch. Type 2 species are assessed against Category C or Category D. Type 2 species may represent a maximum of 5% of the annual catch. Species that comprise less than 0.1% of the catch are not required to be assessed or listed here.

Species name (common & Latin name)	Stock	CITES listed yes/no	IUCN Red list Category	% catch composition	Management (Y/N)	Category (A, B, C or D)
<b>Anchovy/Peruvian anchoveta</b> ( <i>Engraulis ringens</i> )	Peru – FAO area 87 South ( $\geq 16^{\circ}\text{S}$ to Peru southern border)	No	LC [4]	$\geq 95\%$ confirmed	Y	<b>A</b>
<b>Eastern Pacific bonito</b> ( <i>Sarda chiliensis chiliensis</i> )	Peruvian assessment unit (Peru EEZ)	No	LC [6]	$\leq 5\%$ (provisional*)	Y	<b>C</b>
<b>Chilean jack mackerel</b> ( <i>Trachurus murphyi</i> )	South Pacific jack mackerel (SPRFMO) – Peru EEZ interactions	No	DD [8]	$\leq 5\%$ (provisional*)	Y	<b>C</b>
<b>Chub mackerel</b> ( <i>Scomber japonicus</i> )	Peru coastal stock (SE Pacific)	No	LC [10]	$\leq 5\%$ (provisional*)	Y	<b>C</b>
<b>Carrot/red squat lobster</b> ( <i>Pleuroncodes monodon</i> )	Peru–Chile coastal distribution – Peru EEZ interactions	No	Not assessed	$\leq 5\%$ (provisional*; minor incidental)	N	<b>D</b>

### Rationale

**\*Assessment method note:** No new Southern-region species-composition tables for 2024–2025 were publicly available at the time of review for this fishery. The Type 1  $\geq 95\%$  finding for anchoveta is maintained and supported by 2025 official sources [2][3]. The Type 2 species categorisation—bonito, jack mackerel, chub mackerel, and *P. monodon*—is based on 2024 management evidence; their summed % remains expected to be  $\leq 5\%$ .

**Context (not used for quantification):** Historical and adjacent-region materials indicate very low non-anchovy proportions in observed anchoveta trips. Chile (North) industrial data for 2022 reported 94.33% anchoveta, 3.1% jack mackerel, 2.38% chub mackerel, and 0.19% jellyfish [12]. IMARPE South observer material for 2021 reported  $\sim 98.20\%$  anchoveta with minor *Pleuroncodes monodon*, jack mackerel, and chub mackerel components [11]. These sources are cited only as context and are not applied to quantify the 2024–2025 South Peru fishery; Table 7 relies on 2025 official sources [2][3], and Type 2 percentages remain provisional pending South-specific observer/bycatch datasets.

### Peruvian Anchovy /anchoveta (*Engraulis ringens*) — Type 1, Category A

The assessed fishery is the industrial purse-seine fishery in FAO 87 South, from 16°S to the Peru–Chile border [1]. In March 2025, the government’s monthly bulletin reports industrial landings consisting solely of anchoveta—56,500 tonnes of anchoveta and 0 tonne of “other species”—and it states that the month’s industrial landings came entirely from the southern zone [2] (Figure 1). For January–March 2025, the same bulletin shows anchoveta only in the industrial stream, which supports the conclusion that anchoveta exceeded the MarinTrust threshold of ≥95% for the surveillance period [2]. IMARPE’s 2025-I South report records 195,217 tonnes landed by 10 June 2025, which represents 77.8% of the 251,000-tonne seasonal limit, and it reports juvenile incidence of 48.3% by number and 37.5% by weight [3] (Figure 2). Taken together, these sources confirm that anchoveta remains the sole Type 1 species and is assessed under Category A [2][3]. The bulletin table is a monthly industrial-landings summary and not a haul-level bycatch-percentage table; therefore, we use it only to corroborate the ≥95% finding [2]. The species is assessed as Least Concern on the IUCN Red List and it is not listed in the CITES Appendices [4].

#### I.2 Desembarque de anchoveta para CHI aumentó en 6,966.3%



- En marzo de 2025, se registró un volumen utilizado de anchoveta de 56.5 miles de TM, procedente principalmente de la zona sur, lo que representó un aumento significativo de 6,966.3% en comparación con marzo de 2024 (0.8 mil TM). Dicha pesca corresponde en su totalidad a la zona sur, impulsada por la recuperación de la disponibilidad de la anchoveta, lo que ha permitido su normal extracción.
- Entre los puertos que destacaron por sus mayores volúmenes de desembarque figuran Matarani, Pacocha, Ilo y Mollendo.

Gráfico N° 3

#### Desembarque de recursos pesqueros con destino al Consumo Humano Indirecto (CHI)

(Miles de TM y Varación % interanual)

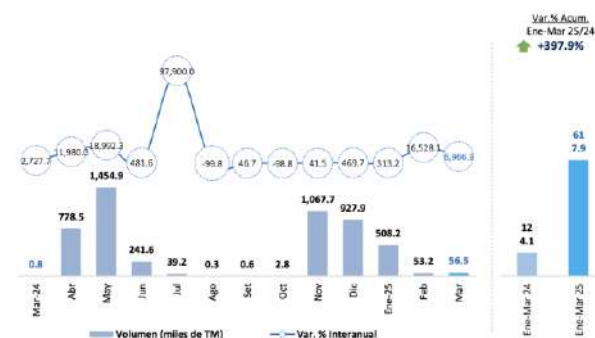


Tabla N° 3

#### Desembarque de recursos hidrobiológicos para CHI

(Miles de TM)

Utilización	Marzo		Var. % 25/24
	2024	2025	
Total CHI	0.8	56.5	6,966.3
Anchoveta	0.8	56.5	6,966.3
Otras Especies	0.0	0.0	-

Figure 1. Industrial landings in March 2025. Source: PRODUCE Monthly Performance — March 2025, Sec. I.2 [2]. The bulletin reports “Anchoveta” 56.5 thousand tonnes and “Other species” 0.0 thousand tonnes, and notes the landings came entirely from the South [2]. Scope note: monthly industrial-landings summary used to corroborate anchovy ≥95%; not a bycatch-percentage table.



“Decenio de la Igualdad de Oportunidades para mujeres y hombres”  
 “Año de la recuperación y consolidación de la economía peruana”

Tabla 1. Desembarques (en toneladas) de anchoveta en la región sur del litoral peruano durante la primera temporada de pesca del 2024 (enero - 10 junio 2024)

Especie/Flota/Puerto	Desembarque (t) Primera Temporada de Pesca 2025 de anchoveta - Región Sur (Al 10/06/2025)					Total (t)	Porcentaje (%)
	Atico	Mollendo	La Planchada	Ilo			
Achoveta	F. Industrial		82 281		93 886	176 167	90.2
	F.Ind. Mad.		2 695		16 355	19 050	9.8
Total (en toneladas)	0	84 976	0	110 241	195 217	100.0	
Porcentaje(%)	0.0	43.5	0.0	56.5	100.0		
LMTCP - Región Sur: 251 000 toneladas				Avance del LMTCP - Región Sur al 10/06/2025: 77,8%			

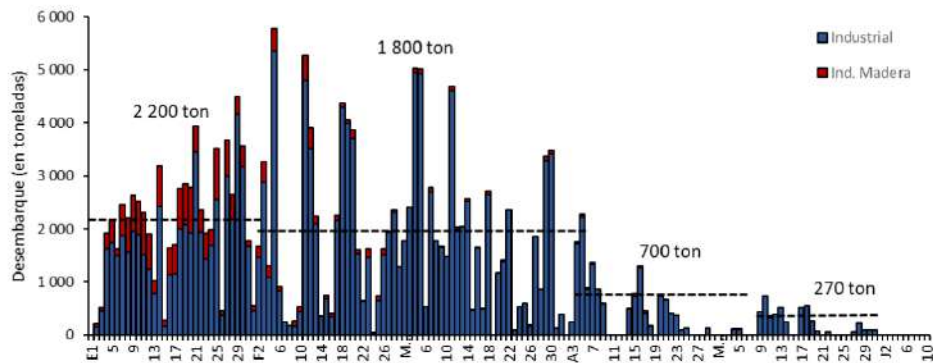


Figura 1. Desembarque (t) diario de anchoveta en la región sur durante la primera temporada de pesca de 2024 (03 de marzo - 10 de junio 2024). Fuente: PRODUCE, Elaborado por: IMARPE.

Figure 2. FAO 87 South landings and LMTCP progress in 2025-I. Source: IMARPE 2025-I South advance report [3]. IMARPE reports 195,217 tonnes landed by 10 June 2025 (77.8% of the 251,000-tonne seasonal limit) and juvenile incidence of 48.3% (number) / 37.5% (weight) [3]. Scope note: describes the assessed South fishery; does not provide a species-composition percentage breakdown.

**Eastern Pacific bonito (*Sarda chiliensis chiliensis*) — Type 2, Category C**

Bonito is provisionally retained as a Type 2 species and assessed under Category C. Bonito occurs as accompanying fauna in the South Peru anchoveta fishery and, based on currently available public evidence, it is expected to remain ≤ 5% of the catch composition; this percentage is provisional pending the release of more recent South-specific observer/bycatch datasets [5]. The review uses updated 2024 management evidence for Peru, which documents an active species-specific regime (fractionated quotas, temporal suspensions, exploratory fishing, a reproductive closure in November, and year-end adjustments) and describes the stock as fully exploited [5]. The species is still not considered as ETP; it is assessed as Least Concern on the IUCN Red List, and it is not listed in the CITES Appendices [6]. For these reasons, bonito is provisionally included as Type 2 and assessed under Category C in this assessment [5][6].

**Chilean jack mackerel (*Trachurus murphyi*) — Type 2, Category C**

Jack mackerel is retained as a Type-2 species and assessed under Category C. The review uses updated 2024 management evidence for Peru, which reports approximately 216 thousand tonnes of landings and multiple measures (quota setting and re-allocation by fleet and hold capacity, phased closures, and the EUREKA operation), and which describes the stock as fully exploited under a species-specific regime implemented nationally and within the SPRFMO framework [7]. Jack mackerel occurs as

accompanying fauna in the South Peru anchoveta fishery and, on current evidence, it is expected to remain  $\leq 5\%$  of the catch composition; this percentage is provisional pending the release of more recent South-specific observer/bycatch datasets [7]. The species is not considered an ETP taxon, it is assessed as Least Concern on the IUCN Red List [8], and it is not listed in the CITES Appendices. For these reasons, jack mackerel is provisionally included as Type 2 and assessed under Category C in this assessment.

**Chub mackerel (*Scomber japonicus*) — Type 2, Category C**

Chub mackerel is retained as a Type 2 species and assessed under Category C. The review uses updated 2024 management evidence for Peru, which records approximately 41.9 thousand tonnes of landings, LMCTP adjustments during the year, and marked seasonality, and confirms a national species-specific management framework [9]. Chub mackerel occurs as accompanying fauna in the South Peru anchoveta fishery and, on current evidence, it is expected to remain  $\leq 5\%$  of the catch composition; this percentage is provisional pending the release of more recent South-specific observer/bycatch datasets [9]. The species is not considered an ETP taxon, it is assessed as Least Concern on the IUCN Red List [10], and it is not listed in the CITES Appendices. Therefore, chub mackerel is provisionally included as Type 2 and assessed under Category C in this assessment.

**Carrot/red squat lobster (*Pleuroncodes monodon*) — Type 2, Category D**

*Pleuroncodes monodon* is retained as a Type 2 species and assessed under Category D. The review incorporates updated 2024 management context for the pelagic assemblage in Peru; however, there remains no Peru-specific species-level management regime with reference points for this crustacean, unlike the pelagic finfish above. The species appears sporadically as minor incidental catch around South Peru anchoveta operations; historical South observer material and regional monitoring indicate low incidence, and these sources are used as context only (percentages are not extrapolated to the 2024–2025 South fishery) [11][12]. On current evidence, the proportion of *P. monodon* in the assessed fishery is expected to remain  $\leq 5\%$  of the catch composition; this percentage is provisional pending the release of more recent South-specific observer/bycatch datasets [1][11][12]. The species is not considered an ETP taxon, it is not evaluated on the IUCN Red List, and it is not listed in the CITES Appendices. Under MarinTrust rules, a Type 2 species without a species-specific management regime is assessed under Category D (risk-based).

**References**

- [1] WF13 – Peru Anchovy Southern Stock Re-Approval. 2024 (Aug). Baseline categorisation, decision tree, and rationale text carried forward in Surveillance 2025.
- [2] Ministerio de la Producción (PRODUCE). 2025. *Reporte Mensual de Desempeño del Sector Pesca y Acuicola — Marzo 2025*. Lima, Perú. Sección I.2 “Desembarque industrial.” Publicado el 25 de abril de 2025.
- [3] IMARPE. 2025. *Informe de Avance de la Primera Temporada de Pesca de Anchoveta en la Región Sur 2025-I*. Lima, Perú: Instituto del Mar del Perú.
- [4] IUCN Red List. *Engraulis ringens* (Peruvian anchoveta)  
— <https://www.iucnredlist.org/species/183775/102904317>(Accessed 18 Sep 2025).

[5] IMARPE. 2024. *Informe sobre el desarrollo de la pesquería de bonito (Sarda chiliensis chiliensis) durante el 2024. Situación actual y perspectivas de explotación para el 2025.*

[6] IUCN Red List. *Sarda chiliensis* (Eastern Pacific bonito)  
— <https://www.iucnredlist.org/species/170352/170089277>(Accessed 18 Sep 2025).

[7] IMARPE. 2024. *Informe sobre el desarrollo de la pesquería de jurel (Trachurus murphyi) durante el 2024. Situación actual y perspectivas de explotación para el 2025.*

[8] IUCN Red List. *Trachurus murphyi* (Chilean jack mackerel)  
— <https://www.iucnredlist.org/species/183965/8207652> (Accessed 18 Sep 2025).

[9] IMARPE. 2024. *Informe sobre el desarrollo de la pesquería de caballa (Scomber japonicus) durante el 2024. Situación actual y perspectivas de explotación para el 2025.*

[10] IUCN Red List. *Scomber japonicus* (Chub mackerel)  
— <https://www.iucnredlist.org/species/170306/170083106>(Accessed 18 Sep 2025).

[11] IMARPE. 2021. *Informe de Avance: Primera Temporada de Pesca de Anchoqueta en la Región Sur 2021 (Bitácoras de pesca/observadores a bordo).*

[12] IFOP. 2023 (Aug). *Programa de investigación y monitoreo del descarte y la captura de pesca incidental en pesquerías pelágicas, 2022–2023.* Valparaíso, Chile: SUBPESCA/IFOP.

[13] IMARPE. 2023. *Bitácora de pesca: Segunda temporada de anchoqueta Zona Norte–Centro 2023.* Instituto del Mar del Perú (IMARPE), Lima, Perú.

## Management requirements

This section, or module, assesses the general management regime applied to the fishery under assessment. It comprises two parts, M1, which evaluates the management framework, and M2, which evaluates surveillance, control and enforcement within the fishery.

- 1.1. All management criteria must be met (pass) for a fishery to pass the Management requirements.
  - 1.1.1. The sub-criteria offer a structured evidence base to demonstrate that the fishery sufficiently meets the management criteria. It is not expected that sub-criteria are assessed independently of the main criterion.

### M1 Management framework

<b>M1.1</b>	<b>M1.1 There is an organisation responsible for managing the fishery.</b>
	M1.1.1 The management and administration organisations within the fishery are clearly identified.
	M1.1.2 The functions and responsibilities of the management organisations include the overall regulation, administration, science and data collection and enforcement roles, and are documented and publicly available.
	M1.1.3 Fishers have access to information and/or training materials through nationally recognised organisations.
<b>Outcome</b>	<i>Pass</i>
<p><b>Rationale</b></p> <p><b>M1.1 There is an organisation responsible for managing the fishery</b>  <b>Rationale:</b> There is no change since the last surveillance. Peru’s fisheries are governed by the General Fisheries Law (LGP, Law N°25977), promulgated on 21 December 1992, which establishes the national management framework [1]. Supreme Decree N°021-2008-PRODUCE approves the regulations of Legislative Decree 1084 (maximum catch limits per vessel), including procedures for managing extraction for indirect human consumption of anchoveta and white anchovy (<i>Engraulis ringens</i>, <i>Anchoa nasus</i>) [2]. The Ministry of Production (PRODUCE) is the highest authority, acting through the Vice-Ministry of Fisheries and Aquaculture, to formulate, implement and supervise fisheries policy and issue binding instruments (e.g., ministerial/supreme decrees) [3]. The Instituto del Mar del Perú (IMARPE) is attached to PRODUCE and provides scientific research, advice and technical support for sustainable use of living aquatic resources [4]. These roles and channels remain those described in the previous assessment and continue to apply to the FAO 87 South industrial purse-seine fishery.</p> <p><b>M1.2 Fishery management organisations are legally empowered to take management actions</b>  <b>Rationale:</b> There is no change since the last surveillance. Under the LGP and implementing regulations, PRODUCE issues legally binding measures such as seasonal catch limits (LMTCP), openings/closures, and juvenile-protection rules for the anchoveta fishery via ministerial/supreme decrees, which are publicly posted in the government portal [1][2][6]. IMARPE provides the scientific basis (e.g., landings, juvenile indices, seasonal progress), and management decisions are adjusted in-season according to that advice [4][5]. This legal empowerment and practice are unchanged since the last surveillance.</p>	

**M1.3 There is an organisation responsible for collecting data and (scientifically) assessing the fishery**

**Rationale:** There is no change since the last surveillance. IMARPE remains the designated scientific body responsible for data collection and assessment, including routine publication of reports, daily/periodic landings, size structures and technical documents that support management (accessible via IMARPE’s public portal) [4][5]. These products inform PRODUCE’s determinations and are consistent with the previous assessment’s description of the science–management pathway.

**M1.4 The fishery management system is based on sustainable fishing principles and a precautionary approach**

**Rationale:** There are no material changes; 2025 sources confirm ongoing application. The system operationalises precaution through seasonal LMTCPs and dynamic, in-season controls (e.g., temporary closures triggered by juvenile incidence), with measures communicated publicly in PRODUCE’s portal and sector bulletins [2][6]. Current-cycle evidence (e.g., IMARPE South 2025-I landings, LMTCP progress, juvenile indices) confirms continued application of these measures in the assessment area [5]. This matches the approach documented in the last surveillance.

**M1.5 Decision-making is clearly defined and transparent; processes and results are publicly available**

**Rationale:** There is no change since the last surveillance. Decision-making and scientific results remain publicly available through PRODUCE publications (ministerial/supreme decrees, monthly sector bulletins) and IMARPE reports/portals [3][4][5][6]. Industry representation (e.g., Sociedad Nacional de Pesquería – SNP) and NGOs (e.g., WWF, SALVAMARES) contribute to dissemination, training and good-practice materials that support transparency and stakeholder engagement; this context is unchanged from the prior assessment [7][8].

**References**

- [1] Ley General de Pesca (LGP), Ley N°25977. Promulgated 21 Dec 1992.
- [2] D.S. N°021-2008-PRODUCE (Regulations of D. Leg. 1084 — maximum catch limits per vessel; regime for extraction for indirect human consumption of anchoveta/white anchovy).
- [3] PRODUCE – Institutional/sector role (Gob1, 2024). Description of ministry and Vice-Ministry functions and policy/issuance remit.
- [4] IMARPE – Institutional role (Gob2, 2024). Description of mission, research/advice functions, and technical responsibilities.
- [5] IMARPE reports/data portal. Public access to daily/biweekly landings, sizes, research reports and technical documents: [https://www.imarpe.gob.pe/imarpe/index2.php?id\\_seccion=reportes](https://www.imarpe.gob.pe/imarpe/index2.php?id_seccion=reportes)
- [6] PRODUCE publications portal. Public access to closures, stock situation reports, hydroacoustic surveys, and LMTCP updates: <https://www.gob.pe/institucion/produce/informes-publicaciones>
- [7] Sociedad Nacional de Pesquería (SNP). Sector representation and training/communication roles (República Sostenible, 2023).
- [8] WWF / SALVAMARES. NGO training and good-practice materials (WWF, 2023; SNP, 2024).

<b>M1.2</b>	<b>M1.2 Fishery management organisations are legally empowered to take management actions.</b>
	M1.2.1 There are legal instruments in place to give authority to the management organisation(s) which can include policies, regulations, acts or other legal mechanisms.
	M1.2.2 Vessels wishing to participate in the fishery must be authorised by the management organisation(s).
	M1.2.3 The management system has a mechanism in place for the resolution of legal disputes.
	M1.2.4 There is evidence of the legal rights of people dependent on fishing for food or livelihood.
<b>Outcome</b>	<i>Pass</i>
<b>Rationale</b>	
<p>There is no change since the last surveillance (legal basis and practice remain in force). Peru’s legal framework empowers PRODUCE to determine management systems, set allowable catches, define seasons/areas, regulate fishing effort and methods, establish minimum sizes, and issue other measures necessary for the preservation and rational exploitation of hydrobiological resources under the General Fisheries Law (LGP, Law Nº 25977) and its subsequent modifications [1][2]. The Regulation of Legislative Decree 1084 (maximum catch limits per vessel, ITQ-style regime for extraction destined to indirect human consumption of anchoveta and white anchovy), approved by Supreme Decree Nº 021-2008-PRODUCE, sets out procedures for implementing the regime in the industrial reduction fishery [3].</p> <p>Changes to access regimes must follow a consultation process established in Supreme Decree Nº 012-2001-PE, which requires (i) written support from industry representing defined capacity thresholds, (ii) information from IMARPE, and (iii) recommendations from an internationally recognised scientific panel before modifying access arrangements [4].</p> <p>The role and authority of IMARPE are defined in Legislative Decree Nº 95, as modified by Urgency Decree Nº 015-2020, which mandates IMARPE to conduct scientific research, provide the scientific basis for rational administration, approve and execute research plans, disseminate results, and represent the State technically at the international level, thereby underpinning PRODUCE’s decisions with scientific advice [5].</p> <p>In practice, PRODUCE communicates binding measures through ministerial and supreme decrees published on the government portal (e.g., seasonal LMTCP settings, temporal/area closures, and juvenile-protection rules), while IMARPE provides season-specific advice (e.g., South 2025-I landings, progress toward LMTCP, and juvenile incidence) to support in-season decision-making [6][7][8]. Independent reviews and stakeholder forums noted in prior evaluations (e.g., audit material on consultation mechanisms and dispute resolution avenues) corroborate that consultation and transparency processes are in place and functioning for fisheries management in Peru [9][10].</p> <p>In conclusion, the combination of the LGP, its implementing regulations, and IMARPE’s statutory mandate still provides clear legal empowerment for PRODUCE to take (and adjust) management actions, with publicly documented decisions and science-based advice. No change to this empowerment has been identified since the last surveillance; current-cycle publications continue to evidence its application in FAO 87 South [1]–[8].</p>	

## References

- [1] Ley General de Pesca (LGP), Ley N° 25977. Promulgated 21 Dec 1992.
- [2] Legislative Decree N° 1027 (2008) — modification to LGP on licensing/management instruments (articles on quotas, seasons/areas, effort, methods, minimum sizes, etc.).
- [3] Supreme Decree N° 021-2008-PRODUCE — Regulation of Legislative Decree 1084 (maximum catch limits per vessel) for extraction destined to indirect human consumption of anchoveta/white anchovy.
- [4] Supreme Decree N° 012-2001-PE — consultation process and required evidence to modify access regimes.
- [5] Legislative Decree N° 95, as modified by Urgency Decree N° 015-2020 — mandate and roles of IMARPE (scientific research and advisory functions).
- [6] PRODUCE publications portal — ministerial/supreme decrees, closures, stock reports, hydroacoustic surveys, LMTCP updates.
- [7] IMARPE. Informe de Avance — Primera Temporada de Anchoveta Región Sur 2025-I (landings, LMTCP progress, juvenile indices).
- [8] PRODUCE. Reporte Mensual de Desempeño del Sector Pesca y Acuícola — Marzo 2025 (Sec. I.2, CHI industrial).
- [9] FishChoice. 2019. Three-Year Audit Template (Peruvian Anchovy industrial purse-seine FIP; consultation/engagement mechanisms).
- [10] FisheryProgress. 2022. Conflict-resolution mechanisms in the artisanal fisheries sector (consultation/engagement context).

M1.3	<b>M1.3 There is an organisation responsible for collecting data and (scientifically) assessing the fishery.</b>
	M1.3.1 The organisation(s) responsible for collecting data and assessing the fishery is/are clearly identified.
	M1.3.2 The management system receives scientific advice regarding stock, non-target species and ecosystem status.
	M1.3.3 Scientific advice is independent from the management organisation(s) and transparent in its formulation through a clearly defined process.
<b>Clause outcome</b>	<i>Pass</i>
<p><b>Rationale</b></p> <p>There is no change since the last surveillance. IMARPE is the specialised technical body attached to PRODUCE that conducts fisheries and ecosystem research and provides scientific advice and technical support to government for the sustainable use of living aquatic resources [1]. IMARPE’s programme includes routine hydroacoustic and oceanographic surveys along the Peruvian coast to estimate biomass, population size structure, reproductive status, and egg-larval production, complemented by remote sensing and in-situ monitoring to address environmental variability in the Humboldt upwelling system; under atypical conditions, IMARPE can direct multi-vessel EUREKA acoustic operations using the industrial fleet as scientific platforms [2].</p> <p>Stock assessment and advice follow a predefined protocol in which (1) survey results inform biomass and size-structure estimates, (2) short-term projections consider exploitation, growth, mortality, and expected environmental conditions, and (3) a decision table supports advice on the seasonal total allowable catch (LMTCP); dynamic juvenile-protection closures have been part of the management toolbox since a 2016 national measure established area closures when juvenile incidence exceeds a tolerance threshold, reducing discards and protecting recruitment [2][3].</p> <p>In the current surveillance cycle, IMARPE’s 2025-I South advance report provides the scientific evidence used in-season (e.g., landings, progress toward the LMTCP, and juvenile incidence), which is communicated to PRODUCE to support management decisions for the assessed area [4]. Public access to IMARPE data and technical products (daily/periodic landings, size compositions, research reports, CPUE and effort indicators, and supporting documents for ministerial resolutions) is maintained through IMARPE’s portals, and stock-assessment advice and reports are also accessible via the national publications site [5][6].</p> <p>In conclusion, the management of Peru’s anchoveta fishery continues to be underpinned by IMARPE’s data collection and scientific assessment functions, with transparent publication of methods, indicators, and seasonal evidence that feed directly into PRODUCE’s decision-making for FAO 87 South [1]–[6].</p>	

## References

[1] IMARPE – Institutional information (Gob2, 2024). Instituto del Mar del Perú: roles and mandate. <https://www.gob.pe/institucion/imarpe/institucional>

[2] Oliveros-Ramos, R., Ñiquen, M., Csirke, J., & Guevara-Carrasco, R. (2021). Management of the Peruvian Anchovy (*Engraulis ringens*) fishery in the context of climate change. In Adaptive management of fisheries in response to climate change (FAO Fisheries and Aquaculture Technical Paper No. 667), pp. 237–244. <https://www.fao.org/3/cb3095en/cb3095en.pdf>

[3] PRODUCE publications portal. Ministerial/supreme decrees (including 2016 dynamic juvenile-closure measure), stock reports, hydroacoustic surveys, and LMTCP updates. <https://www.gob.pe/institucion/produce/informes-publicaciones>

[4] IMARPE. 2025. Informe de Avance — Primera Temporada de Anchoqueta Región Sur 2025-I (landings, LMTCP progress, juvenile indices).

[5] IMARPE data & reports portal. Daily landings, biweekly landings/size reports, research reports, CPUE/effort indicators, and supporting documents. [https://www.imarpe.gob.pe/imarpe/index2.php?id\\_seccion=reportes](https://www.imarpe.gob.pe/imarpe/index2.php?id_seccion=reportes)

[6] IMARPE publications on the national site. Stock-assessment and LMTCP advice catalogue (PRODUCE–IMARPE option). <https://www.gob.pe/institucion/imarpe/informes-publicaciones?sheet=40>

<b>M1.4</b>	<b>M1.4 The fishery management system is based on the principles of sustainable fishing and a precautionary approach.:</b>
	M1.4.1 A policy or long-term management objective for sustainable harvesting based on the best scientific evidence and a precautionary approach is publicly available and implemented for the fishery.
<b>Outcome</b>	<i>Pass</i>
<p><b>Rationale</b></p> <p>There are no material changes since last surveillance; 2025 sources confirm ongoing application. Peru’s General Fisheries Law (LGP, Law N° 25977) establishes sustainability and responsible use as the purpose of fisheries management, balancing food, employment, and environmental protection [1]. The Regulation of Legislative Decree 1084, approved by Supreme Decree N° 021-2008-PRODUCE, frames the maximum catch-limits-per-vessel regime for the industrial reduction fishery (anchoveta/white anchovy) and explicitly links it to sustainable development and biodiversity conservation [2]. Institutional mission statements reinforce this orientation: PRODUCE commits to development “with environmental sustainability,” and IMARPE commits to providing “scientific, truthful and timely advice for the sustainable use” of aquatic resources [3][4].</p> <p>Operationally, IMARPE conducts coastal hydroacoustic surveys and applies a predefined protocol to: (1) estimate biomass and size structure, (2) project short-term population trajectories under alternative harvest and environmental scenarios, and (3) build a decision table to advise the seasonal total allowable catch (LMTCP) [5][6]. The system also uses precautionary, in-season controls: (i) an exploratory fishing window (~15 days post-authorisation) to map distribution and identify juvenile hotspots before full opening, and (ii) juvenile-triggered temporal closures and a “juvenile LMTCP” metric that can end the season before the full LMTCP is reached, thereby protecting recruitment under warming/atypical conditions [6].</p> <p>For the current cycle, public materials show the same precautionary logic in action. PRODUCE’s March-2025 bulletin communicates seasonal status for the industrial stream, and IMARPE’s 2025-I South advance report provides the real-time indicators—landings, progress toward LMTCP, and juvenile incidence—used by management to adjust decisions during the season in FAO 87 South [7][8].</p> <p>In conclusion, the legal purpose (sustainability), the ITQ-style regime for the industrial reduction fishery, IMARPE’s survey-based decision process, and the in-season juvenile safeguards together demonstrate a precautionary, science-based management system that continues to operate as described in the last surveillance and is evidenced again in 2025 [1]–[8].</p>	
<p><b>References</b></p> <p>[1] Ley General de Pesca (LGP), Ley N° 25977. Art. 1 (purpose: sustainable development/responsible use).</p> <p>[2] Supreme Decree N° 021-2008-PRODUCE — Regulation of Legislative Decree 1084 (maximum catch limits per vessel) for extraction to indirect human consumption (anchoveta/A. nasus).</p> <p>[3] PRODUCE – Institutional information (Gob1, 2024). Mission including environmental sustainability: <a href="https://www.gob.pe/institucion/produce/institucional">https://www.gob.pe/institucion/produce/institucional</a></p> <p>[4] IMARPE – Institutional information (Gob2, 2024). Sustainable-use advisory mandate: <a href="https://www.gob.pe/institucion/imarpe/institucional">https://www.gob.pe/institucion/imarpe/institucional</a></p> <p>[5] IMARPE. 2015. Protocolo “Estimación de la Captura Total Permisible del Stock Sur de la</p>	

Anchoveta Peruana.”  
[http://www.imarpe.gob.pe/imarpe/archivos/informes/imarpe/protocolo\\_captu\\_stok\\_ancho\\_sur.pdf](http://www.imarpe.gob.pe/imarpe/archivos/informes/imarpe/protocolo_captu_stok_ancho_sur.pdf)

[6] Oliveros-Ramos, R. et al. (2021). Management of the Peruvian anchovy fishery in the context of climate change. *FAO Tech. Paper* 667, 237–244.  
<https://www.fao.org/3/cb3095en/cb3095en.pdf>

[7] PRODUCE. Reporte Mensual de Desempeño del Sector Pesca y Acuícola — Marzo 2025 (Sec. I.2, CHI industrial).

[8] IMARPE. 2025. Informe de Avance — Primera Temporada de Anchoveta Región Sur 2025-I (landings, LMTCP progress, juvenile indices).

<b>M1.5</b>	<b>M1.5 There is a clearly defined decision-making process which is transparent, with processes and results made publicly available.</b>
	M1.5.1 There is participatory engagement through which fishery stakeholders and other stakeholders can access, provide information, consult with, and respond to, the management systems' decision-making process.
	M1.5.2 The decision-making process is transparent, with results made publicly available.
	M1.5.3 The fishery management system is subject to periodic internal or external review to validate the decision-making process, outcomes and scientific data.
<b>Outcome</b>	<i>Pass</i>
<b>Rationale</b>	
<p>There is no change since the last surveillance. Peru's legal framework explicitly promotes participation in fisheries governance: Article 3 of the General Fisheries Law (LGP, Law N° 25977) encourages the broad participation of Peruvian natural and legal persons in fishing activities and facilitates foreign investment subject to Peruvian law [1]. In practice, transparency and participation are evidenced by multiple channels. Independent audit material for the anchoveta FIP documents that PRODUCE publishes proposed regulations for consultation before they become official, that the Oannes industry network (~30,000 users) facilitates dialogue with government, and that since 2019 technical consultation meetings (every two weeks) bring together SNP, government departments, and industry; the Forum for Sustainable Fisheries and Aquaculture (FPAS) offers an additional public platform for proposals and debate [2]. Further review confirms regular consultation procedures, adoption of regulations following consultation, and an online suggestions platform operated by PRODUCE to receive stakeholder input [3].</p> <p>Third-party reviews also note periodic scientific peer review of IMARPE methods (e.g., international panels in 2009 and by FAO in 2014) and continued recommendations on integrative assessment methods and harvest rules; overall, the scientific support for management is characterised as high [4]. At the report level, IMARPE and PRODUCE departments contribute biological and compliance information to stock assessments and advice, with records of voluntary scientific audits (e.g., 2000, 2008, 2018, 2024) and method review (2015) showing periodic external scrutiny [5]. Regional cooperation under the Humboldt Current System project aims to strengthen data sharing and collaborative assessment for shared resources, further reinforcing transparency and external review pathways [6].</p> <p>Operational transparency is maintained through public portals where legal instruments (ministerial/supreme decrees), seasonal measures (e.g., area/temporal closures, including the juvenile-triggered closures established in Supreme Decree N° 024-2016-PRODUCE), and supporting scientific outputs are posted; vessel e-logbook data feed into oversight and advice processes, and IMARPE provides routine landings, size-composition, and research outputs online [7][8]. For the current cycle, the PRODUCE March-2025 sector bulletin and the IMARPE 2025-I South advance report are publicly available and provide season status (industrial stream), landings, progress to LMTCP, and juvenile incidence, evidencing accessible processes and results for FAO 87 South [9][10].</p> <p>In conclusion, the combination of explicit legal provisions for participation, formal consultation practices, routine publication of scientific and management information, periodic peer review, and current-cycle public reporting demonstrates a clear and transparent decision-making system consistent with MarinTrust v3.01 M1.5.</p>	
<b>References</b>	
[1] Ley General de Pesca (LGP), Ley N° 25977. Art. 3 (participation).	

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[2] FishChoice. 2019. Three-Year Audit Template — Peru Anchovy Industrial Purse Seine FIP (consultations; Oannes; FPAS; biweekly meetings). [https://fisheryprogress.org/sites/default/files/indicators-documents/Peruvian\\_Anchovy\\_IHC\\_FIP\\_Review\\_2019\\_GB2338\\_5.pdf](https://fisheryprogress.org/sites/default/files/indicators-documents/Peruvian_Anchovy_IHC_FIP_Review_2019_GB2338_5.pdf)

[3] Scott, I. 2020. FIP Peru Anchovy Industrial Purse Seine — Component 1.2 (decision-making; online suggestions platform). <https://cedepesca.net/wp-content/uploads/2021/01/200819-FINAL-PERU-C1.2.pdf>

[4] MBA/Seafood Watch. 2023. Expert Review — Peruvian anchoveta (Chile, Peru): notes on IMARPE peer reviews (2009, FAO 2014) and recommendations. <https://www.seafoodwatch.org/globalassets/sfw/pdf/expert-review/2022/100322/seafood-watch-peruvian-anchoveta-chile-peru-27723.pdf>

[5] IMARPE. 2024. Situación de la anchoveta disponible en la región sur del mar peruano durante el 2023 y perspectivas de explotación para la primera temporada de pesca de 2024. <https://cdn.www.gob.pe/uploads/document/file/5990085/5307455-situacion-de-la-anchoveta-disponible-en-la-region-sur-del-mar-peruano.pdf>

[6] GEF. 2024. Humboldt Current System project: data-sharing and collaborative assessment objective. <https://www.thegef.org/projects-operations/projects/9592>

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[8] IMARPE data & reports portal. Daily/periodic landings, size compositions, research/technical reports. [https://www.imarpe.gob.pe/imarpe/index2.php?id\\_seccion=reportes](https://www.imarpe.gob.pe/imarpe/index2.php?id_seccion=reportes)

[9] PRODUCE. 2025. Reporte Mensual de Desempeño del Sector Pesca y Acuícola — Marzo 2025 (Sec. I.2, CHI industrial).

[10] IMARPE. 2025. Informe de Avance — Primera Temporada de Anchoveta Región Sur 2025-I (landings, LMTCP progress, juvenile indices)

## M2 Surveillance, control and enforcement

<b>M2.1</b>	<b>M2.1</b> There is an organisation responsible for monitoring compliance with fishery laws and regulations.
	M2.1.1 There is an organisation responsible for monitoring compliance with specific monitoring, control and surveillance (MCS) mechanisms in place.
	M2.1.2 There are relevant tools or mechanisms used to minimise IUU fishing activity.
	M2.1.3 There is evidence of monitoring and surveillance activity appropriate to the intensity, geography, management control measures and compliance behaviour of the fishery.
<b>Clause Outcome</b>	<i>Pass</i>

<p><b>Rationale</b></p> <p>There are no material changes since the last surveillance. Peru’s Ministry of Production (PRODUCE), through the Directorate-General for Supervision, Inspection and Sanctions (DGSFS), remains responsible for compliance monitoring and enforcement in the FAO 87 South industrial purse-seine fishery. The system integrates (i) mandatory SISESAT/VMS for the industrial fleet, (ii) electronic/radio logbooks, (iii) an inspector mobile app linked to SISESAT for real-time verification (position, speed, heading, distance to coast), and (iv) 24/7 controls at designated landing sites to ensure that only authorised vessels land catch [1][2][3]. Monitoring combines at-sea controls (VMS, observers, e-logs) with port-based verification and continuous landing-site oversight; 2024 assessment materials note up to ~80% trip coverage by observers in the industrial fleet, alongside mandatory VMS, and daily landings tracked publicly via IMARPE/PRODUCE portals [2][5]. A standing legal package continues to strengthen control/traceability and enables rapid management action (e.g., juvenile-triggered closures) under Supreme Decree N° 024-2016-PRODUCE [2][3][4].</p> <p>In conclusion, the defined enforcement authority (PRODUCE/DGSFS), the mandatory VMS/e-logbook controls and inspector tools, and continuous landing-site and at-sea monitoring provide proportionate evidence of compliance oversight and demonstrate that M2.1 (and sub-clauses M2.1.1–M2.1.3) are met for the fishery.</p> <p><b>References</b></p> <p>[1] MarinTrust. 2024. STG-007 Whole Fish Fishery Assessment Criteria v3.01 — M2.1 clauses.</p> <p>[2] WF13 (2024). Re-approval report text — description of SISESAT/VMS, e-logs, inspector app, and continuous landing-site monitoring.</p> <p>[3] PRODUCE. 2016. Supreme Decree N° 024-2016-PRODUCE — control and inspection measures for anchoveta fishery.</p> <p>[4] WF13 (2024). Traceability/anti-IUU and information-sharing measures (e.g., DS 024-2021, Directive 061-2020; continued use to inform LMTCP/closures).</p> <p>[5] WF13 (2024). Monitoring at designated landing sites by third-party operators; daily landings available via IMARPE; example time-series figure.</p>
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<b>M2.2</b>	<b>M2.2 There is a framework of sanctions which are applied when infringements against laws and regulations are discovered.</b>
	M2.2.1 The laws and regulations provide for penalties or sanctions that are adequate in severity to act as an effective deterrent.
	M2.2.2 There is no evidence of systematic non-compliance.
<b>Outcome</b>	<i>Pass</i>
<b>Rationale</b>	
<p>There is no change since the last surveillance. Peru maintains a clearly defined sanctions framework for fisheries infringements. The General Fisheries Law (LGP, Law N° 25977) sets out sanctionable offences and penalties (Arts. 76–83) [1]. The Regulation of the LGP (Supreme Decree N° 012-2001-PE) details procedures and sanction categories (Arts. 126–150) [2]. The Inspection and Sanctions Regulation (Supreme Decree N° 016-2007-PRODUCE) grants inspectors powers to verify compliance and impose administrative measures, including fines, when non-compliance is detected [3]. For the anchoveta fishery, Supreme Decree N° 024-2016-PRODUCE provides additional control and inspection measures (e.g., closures, licence actions) that can be triggered to address non-compliance and protect juveniles [4].</p>	

In practice, applications of sanctions and appeals are published as Directorial/Ministerial Resolutions on the PRODUCE public portal, providing transparency on enforcement actions and outcomes; recent years show entries available via the site’s search, with no evidence of systematic non-compliance identified in those postings for this fishery [5]. This publicly accessible record—combined with the layered legal instruments above—demonstrates that sanctions are defined, enforceable, and applied when infringements occur.

In conclusion, the legal framework and publicly posted enforcement outcomes show that sanctions are in place and used, meeting M2.2 clauses for the assessed fishery.

#### References

[1] Ley General de Pesca (LGP), Ley N° 25977. Arts. 76–83 (sanctions).

[2] Supreme Decree N° 012-2001-PE. Regulation of the General Fisheries Law — Arts. 126–150 (procedures/sanctions).

[3] Supreme Decree N° 016-2007-PRODUCE. Regulation of fishing and aquaculture inspections and sanctions (inspectors’ powers; fines).

[4] Supreme Decree N° 024-2016-PRODUCE. Control and inspection measures for the anchoveta fishery (including juvenile-protection actions).

[5] PRODUCE institutional portal. Publications and searchable resolutions on sanctions/appeals (Directorial/Ministerial Resolutions). <https://www.gob.pe/institucion/produce/institucional>

<b>M2.3</b>	<p><b>M2.3 There is substantial evidence of widespread compliance in the fishery, and no substantial evidence of IUU fishing.</b></p> <p><i>In reaching a determination for M2.3, the assessor should consider if the following is in place:</i></p>
	<p>M2.3.1 The level of compliance is documented and updated routinely, statistically reviewed and available.</p>
	<p>M2.3.2 Fishers provide additional information and cooperate with management/enforcement agencies/organisations to support the effective management of the fishery.</p>
	<p>M2.3.3 The catch recording and reporting system is sufficient for effective traceability of catches per vessel and supports the prevention of IUU fishing.</p>
<b>Clause Outcome</b>	<i>Pass</i>
<p><b>Rationale</b></p> <p>There are no material changes since last surveillance. Instruments remain in force and in use. Peru continues to deploy an integrated compliance system that combines legal instruments, transparency tools, and operational monitoring. Since October 2018, Peru has made industrial VMS (SISESAT) data publicly visible through Global Fishing Watch, increasing transparency and deterrence against IUU activity [2]. Day-to-day control relies on mandatory VMS, electronic/radio logbooks, continuous 24/7 monitoring at designated landing sites, and routine cross-checks by PRODUCE/DGSFS and IMARPE, with observer coverage and electronic verification described in the previous assessment and maintained in practice [1][9].</p> <p>Specific anti-IUU and rapid-response measures remain active. Supreme Decree N° 024-2016-PRODUCE underpins dynamic closures triggered by juvenile incidence, protecting recruitment and reducing discards; vessels must report locations and juvenile percentages, which IMARPE uses to advise temporary closures in near-real time [3][10]. A multisector surveillance protocol (N° 54-2019-MP-FN) sets procedures for joint operations against illegal fishing, while a Constitutional Court decision (0005-2016-PCC/TC) curtailed the use of court rulings to bypass fishery licensing rules—both strengthening compliance pathways [4][5].</p> <p>Traceability and information-sharing have been reinforced: Ministerial Resolution N° 306-2020-PRODUCE (criteria for LMTCP in the direct-human-consumption sub-fishery), D.S. N° 024-2021-PRODUCE (national fisheries traceability system, with gradual extension to small-scale), and Directive N° 061-2020-PRODUCE/DGSFS-PA(PRODUCE→IMARPE information flow on unlawful/undeclared fishing to support IMARPE’s LMTCP advice) remain in effect [6][7][8]. Collectively, these measures align with the fishery’s scale and geography and provide appropriate, credible evidence of compliance performance in FAO 87 South.</p> <p>In conclusion, public VMS transparency, dynamic juvenile-protection controls, inter-agency surveillance protocols, and traceability/information-sharing instruments—together with continuous port monitoring and routine scientific cross-checks—provide sufficient evidence of effective compliance, with no substantial evidence of IUU fishing in the assessed fishery, meeting the M2.3 clauses requirements.</p>	
<p><b>References</b></p> <p>[1] PRODUCE institutional/publications portals. Legal instruments, decrees, closures, stock reports, and public communications used for compliance oversight.</p>	

- [2] Global Fishing Watch (2018–). Peru public sharing of industrial VMS (SISESAT) data (transparency/anti-IUU).
- [3] Supreme Decree N° 024-2016-PRODUCE. Control and inspection measures; juvenile-triggered dynamic closures for anchoveta.
- [4] Protocolo N° 54-2019-MP-FN. Mechanism for inter-agency surveillance operations against illegal marine fishing.
- [5] Tribunal Constitucional (0005-2016-PCC/TC). Decision limiting use of judicial resolutions to obtain/maintain fishery licences.
- [6] Ministerial Resolution N° 306-2020-PRODUCE. Criteria to determine the LMTCP for the DHC sub-fishery.
- [7] Decreto Supremo N° 024-2021-PRODUCE. National traceability system for the fishing industry (progressive implementation).
- [8] Directiva N° 061-2020-PRODUCE/DGSFS-PA. Rules for PRODUCE to supply IMARPE with information on unlawful/undeclared fishing to support LMTCP recommendations.
- [9] WF13 – Peru Anchovy Southern Stock (Aug 2024). Monitoring architecture for industrial purse-seine (VMS, observers, e-logs, 24/7 landing-site controls).
- [10] Oliveros-Ramos, R. et al. (2021). FAO Tech. Paper 667 — Anchoveta management under climate variability; juvenile-closure logic and monitoring.

## Species requirements

This section, or module, comprises of four species categories. Each species in the catch is subject to an assessment against the relevant species category in this section (see clauses 1.2 and 1.3 and Table 6).

Type 1 species can be considered the ‘target’ or ‘main’ species in the fishery under assessment. They make up the bulk of the catch and are subjected to a detailed assessment. Type 1 species must represent 95% of the total annual catch. If a species-specific management regime is in place for a Type 1 species, it shall be assessed under Category A. If there is no species-specific management regime in place for a Type 1 species, it shall be assessed under Category B.

Type 2 Species can be considered the ‘non-target’ species in the fishery under assessment. They comprise a small proportion of the annual catch and are subjected to a relatively high-level assessment. Type 2 species may represent a maximum of 5% of the annual catch. If a species-specific management regime is in place for a Type 2 species, it shall be assessed under Category C. If there is no species-specific management regime in place for a Type 2 species, it shall be assessed under Category D.

Species that comprise less than 0.1% of the catch are not required to be assessed or listed here.

## Category A species - Anchovy (*Engraulis ringens*)

- 2.1. All clauses must be met for a species to pass the Category A assessment.
  - 2.1.1. If a species fails any of the Category A clauses, it should be re-assessed as a Category B species.

### A1 Data collection

<b>A1.1</b>	<b>A1.1 Landings data are collected such that the fishery-wide removals of this species are known.</b>
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**Outcome** *Pass*

#### Rationale

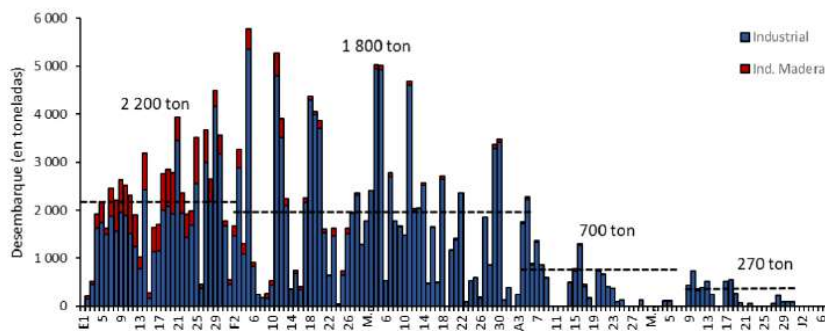
There are no changes regarding that clause since the last surveillance. Anchoveta landings for the South region are recorded at designated landing sites and compiled by the national science body (IMARPE) for assessment and reporting. Daily and periodic landings are made publicly available through IMARPE’s portals, allowing fishery-wide removals to be tracked in near real time [1][2]. For the most recent cycle, IMARPE’s 2025-I South advance report records 195,217 t landed by 10 June 2025 (77.8% of the seasonal limit), evidencing current, aggregated removals for the assessed area [2]. The previous assessment also documents the role of independent third-party operators at landing sites (e.g., SGS) and the integration of these data streams into official statistics, which remains unchanged in practice [3]. In 2023, IMARPE reported 26,137 t of anchovy landed in southern Peru, illustrating continuity of the landings time series used for stock assessment [1].



“Decenio de la Igualdad de Oportunidades para mujeres y hombres”  
 “Año de la recuperación y consolidación de la economía peruana”

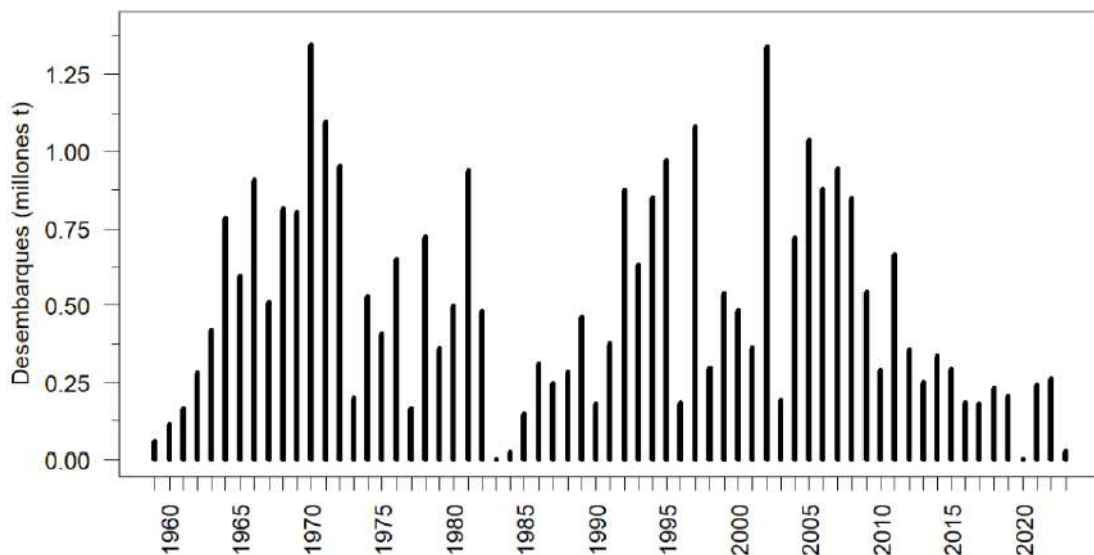
**Tabla 1. Desembarques (en toneladas) de anchoveta en la región sur del litoral peruano durante la primera temporada de pesca del 2024 (enero - 10 junio 2024)**

Especie/Flota/Puerto	Desembarque (t) Primera Temporada de Pesca 2025 de anchoveta - Región Sur (Al 10/06/2025)					
	Atico	Mollendo	La Planchada	Ilo	Total (t)	Porcentaje (%)
Achoyeta	F. Industrial	82 281			93 886	90.2
	F. Ind. Mad.		2 695		16 355	9.8
Total (en toneladas)	0	84 976	0	110 241	195 217	100.0
Porcentaje(%)	0.0	43.5	0.0	56.5	100.0	
LMTCP - Región Sur: 251 000 toneladas		Avance del LMTCP - Región Sur al 10/06/2025: 77,8%				



**Figura 1. Desembarque (t) diario de anchoveta en la región sur durante la primera temporada de pesca de 2024 (03 de marzo - 10 de junio 2024). Fuente: PRODUCE, Elaborado por: IMARPE.**

**Figure A1.1-1. FAO 87 South cumulative landings and LMTCP progress in 2025-I (source: IMARPE, 2025) [2].** IMARPE reports 195,217 t landed by 10 June 2025 (77.8% of the 251,000-t seasonal limit) and juvenile incidence of 48.3% (number) / 37.5% (weight). Scope note: describes the current-cycle evidence of landings/removals for the assessed South fishery; does not provide a species-composition percentage breakdown.



**Figure A1.1-2. Annual landings of anchovy (million tonnes) in the southern region of the Peruvian coast, 1959–2023 (IMARPE, 2024) [1].** Scope note: historical context supporting continuity of the dataset.

In conclusion, public, routinely updated landings datasets compiled by IMARPE—supported by designated landing-site controls—still provide sufficient evidence that fishery-wide removals are known for the FAO 87 South anchoveta fishery.

**References**



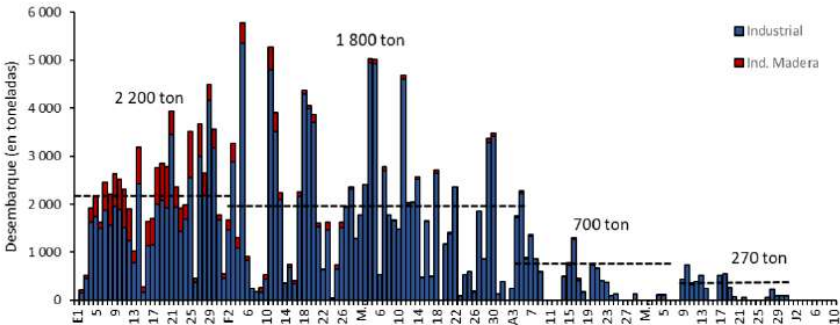
[1] IMARPE. 2024. *Información complementaria sobre perspectivas de explotación para la primera temporada de pesca 2024 de la anchoveta sur del Perú*. <https://cdn.www.gob.pe/uploads/document/file/5990086/5307455-informacion-complementaria-sobre-perspectivas-de-explotacion-para-la-primera-temporada-de-pesca-2024-de-la-anchoveta-sur-del-peru.pdf?v=1709737916>

[2] IMARPE. 2025. *Informe de Avance — Primera Temporada de Anchoveta Región Sur 2025-I* (landings, LMTCP progress, juvenile indices). <https://www.gob.pe/institucion/imarpe/informes-publicaciones/6885672-informe-correspondiente-al-oficio-n-0970-2025-imarpe-pe>

[3] WF13 – *Peru Anchovy Southern Stock Re-Approval* (Aug 2024). Monitoring and data-collection description (designated landing sites; third-party operators).

A1.2	<b>A1.2 Sufficient additional information is collected to enable an indication of stock status to be estimated.</b>
<b>Clause Outcome</b>	Pass
<p><b>Rationale</b></p> <p>There are no changes since the last surveillance. The national science body (IMARPE) maintains a comprehensive data-collection and assessment programme that provides the additional information required to indicate stock status beyond landings alone. Since the early 1980s, IMARPE has conducted hydroacoustic surveys along the anchoveta distribution to estimate biomass and map school distribution; these cruises also collect oceanographic data and undertake on-board biological sampling to derive length/size structure, maturity/reproductive condition, and related parameters [1]. IMARPE complements cruise data with the Programa de Bitácoras/Observers, which deploys onboard observers and coordinates port sampling by third parties, generating continuous length-frequency and biological datasets used in assessments [2][3]. Under anomalous environmental conditions, monitoring is intensified and may include rapid acoustics (e.g., EUREKA operations) and real-time analyses that feed directly into seasonal advice and in-season measures [1][4].</p> <p>In the current assessment cycle, IMARPE’s 2025-I South advance report provides the usual seasonal indicators (e.g., cumulative landings, progress toward the LMTCP, and juvenile incidence), evidencing that the multi-source information pipeline remains active for the assessed area and supports status inference at the stock/season scale [4]. Together, these data streams (acoustic biomass, biological structure, environmental context, observer/port sampling, and in-season indicators) meet the requirement for sufficient additional information to estimate stock status.</p> <p>In conclusion, IMARPE’s survey, observer, and environmental monitoring systems—supplemented by in-season indicators—provide adequate additional information to indicate stock status for the FAO 87 South anchoveta fishery.</p>	
<p><b>References</b></p> <p>[1] IMARPE. 2020. <i>Ecosystem impacts of fishing the low trophic level Peruvian anchovy in the Northern Humboldt Current Ecosystem</i>. <a href="https://cedepesca.net/wp-content/uploads/2021/01/Tam-Ecosystem-impacts-2020.pdf">https://cedepesca.net/wp-content/uploads/2021/01/Tam-Ecosystem-impacts-2020.pdf</a></p> <p>[2] Arias Schreiber, M. &amp; Halliday, A. 2013. Uncommon among the commons? Disentangling the sustainability of the Peruvian anchovy fishery. <i>Ecology and Society</i> 18(2):12. <a href="http://dx.doi.org/10.5751/ES-05319-180212">http://dx.doi.org/10.5751/ES-05319-180212</a></p> <p>[3] Arias Schreiber, M. 2013. <i>Institutions for sustainable fisheries governance – the case of the commercial Peruvian anchovy fishery</i>. PhD Dissertation, University of Bremen. <a href="http://elib.suub.uni-bremen.de/edocs/00103233-1.pdf">http://elib.suub.uni-bremen.de/edocs/00103233-1.pdf</a></p> <p>[4] IMARPE. 2025. <i>Informe de Avance — Primera Temporada de Anchoveta Región Sur 2025-I</i> (seasonal indicators for FAO 87 South). <a href="https://www.gob.pe/institucion/imarpe/informes-publicaciones/6885672-informe-correspondiente-al-oficio-n-0970-2025-imarpe-pe">https://www.gob.pe/institucion/imarpe/informes-publicaciones/6885672-informe-correspondiente-al-oficio-n-0970-2025-imarpe-pe</a></p>	

## A2 Stock assessment

<p><b>A2.1</b></p>	<p><b>A2.1</b> A stock assessment is conducted at least once every 3 years (or every 5 years if there is substantial supporting information that this is sufficient for the long-term sustainable management of the stock) and considers all fishery removals and the biological characteristics of the species.</p>																																																	
<p><b>Outcome</b></p>	<p>Pass</p>																																																	
<p><b>Rationale</b></p> <p>There are no major changes since the last surveillance. No change since the last surveillance. IMARPE conducts regular assessments for the Southern Peruvian anchoveta stock using multiple data streams (acoustic biomass surveys, industrial purse-seine CPUE, catches, and biological size/age structure) that together consider removals and key biological characteristics [1]. For the current cycle, IMARPE issued an Advance Report for 2025-I (South) covering 1 Jan–10 Jun 2025 with cumulative landings, %LMTCP, and juvenile incidence, confirming the assessment pipeline remains active in the assessed area [2].</p> <div style="display: flex; justify-content: space-around; align-items: center;">   </div> <p style="text-align: center;"> “Decenio de la Igualdad de Oportunidades para mujeres y hombres”  “Año de la recuperación y consolidación de la economía peruana” </p> <p><b>Tabla 1. Desembarques (en toneladas) de anchoveta en la región sur del litoral peruano durante la primera temporada de pesca del 2024 (enero - 10 junio 2024)</b></p> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Especie/Flota/Puerto</th> <th colspan="5">Desembarque (t) Primera Temporada de Pesca 2025 de anchoveta - Región Sur (Al 10/06/2025)</th> <th rowspan="2">Total (t)</th> <th rowspan="2">Porcentaje (%)</th> </tr> <tr> <th>Atico</th> <th>Mollendo</th> <th>La Planchada</th> <th>Ilo</th> <th></th> </tr> </thead> <tbody> <tr> <td rowspan="2">Achoyeta</td> <td>F. Industrial</td> <td></td> <td>82 281</td> <td></td> <td>93 886</td> <td>176 167</td> <td>90.2</td> </tr> <tr> <td>F.Ind. Mad.</td> <td></td> <td>2 695</td> <td></td> <td>16 355</td> <td>19 050</td> <td>9.8</td> </tr> <tr> <td><b>Total (en toneladas)</b></td> <td><b>0</b></td> <td><b>84 976</b></td> <td><b>0</b></td> <td><b>110 241</b></td> <td><b>195 217</b></td> <td><b>100.0</b></td> </tr> <tr> <td><b>Porcentaje(%)</b></td> <td><b>0.0</b></td> <td><b>43.5</b></td> <td><b>0.0</b></td> <td><b>56.5</b></td> <td><b>100.0</b></td> <td></td> </tr> <tr> <td colspan="2">LMTCP - Región Sur: 251 000 toneladas</td> <td colspan="5">Avance del LMTCP - Región Sur al 10/06/2025: 77,8%</td> </tr> </tbody> </table> <div style="text-align: center; margin-top: 20px;">  </div> <p><b>Figura 1. Desembarque (t) diario de anchoveta en la región sur durante la primera temporada de pesca de 2024 (03 de marzo - 10 de junio 2024). Fuente: PRODUCE, Elaborado por: IMARPE.</b></p> <p><b>Figure A2.1-1. FAO 87 South cumulative landings and LMTCP progress in 2025-I (source: IMARPE, 2025) [2].</b> IMARPE reports 195,217 t landed by 10 June 2025 (77.8% of the 251,000-t seasonal limit) and juvenile incidence of 48.3% (number) / 37.5% (weight). Scope note: describes the current-cycle</p>		Especie/Flota/Puerto	Desembarque (t) Primera Temporada de Pesca 2025 de anchoveta - Región Sur (Al 10/06/2025)					Total (t)	Porcentaje (%)	Atico	Mollendo	La Planchada	Ilo		Achoyeta	F. Industrial		82 281		93 886	176 167	90.2	F.Ind. Mad.		2 695		16 355	19 050	9.8	<b>Total (en toneladas)</b>	<b>0</b>	<b>84 976</b>	<b>0</b>	<b>110 241</b>	<b>195 217</b>	<b>100.0</b>	<b>Porcentaje(%)</b>	<b>0.0</b>	<b>43.5</b>	<b>0.0</b>	<b>56.5</b>	<b>100.0</b>		LMTCP - Región Sur: 251 000 toneladas		Avance del LMTCP - Región Sur al 10/06/2025: 77,8%				
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evidence of landings/removals for the assessed South fishery; does not provide a species-composition percentage breakdown.

**References**

[1] IMARPE (2024) Situación de la anchoveta disponible en la región sur del mar peruano durante el 2023 y perspectivas de explotación para la primera temporada de pesca de 2024. <https://cdn.www.gob.pe/uploads/document/file/5990085/5307455-situacion-de-la-anchoveta-disponible-en-la-region-sur-del-mar-peruano.pdf>

[2] IMARPE (2025) Informe de Avance — Primera Temporada de Anchoveta Región Sur 2025-I. <https://www.gob.pe/institucion/imarpe/informes-publicaciones/6885672-informe-correspondiente-al-oficio-n-0970-2025-imarpe-pe>

<b>A2.2</b>	<b>A2.2 The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.</b>
<b>Outcome</b>	<i>Pass</i>
<p><b>Rationale</b></p> <p>There are no changes since the last surveillance. IMARPE’s latest public RP assessment for the South stock [1] applied SPICT with acoustic biomass (1985–2023), industrial CPUE (2017–2023), and catches (1959–2023) to estimate MSY-based reference points and status vs <math>B_{msy}</math> and <math>F_{msy}</math> [1]. As of this review, no newer 2025 South RP outputs were published; therefore, 2024 remains the current formal basis [1].</p>	

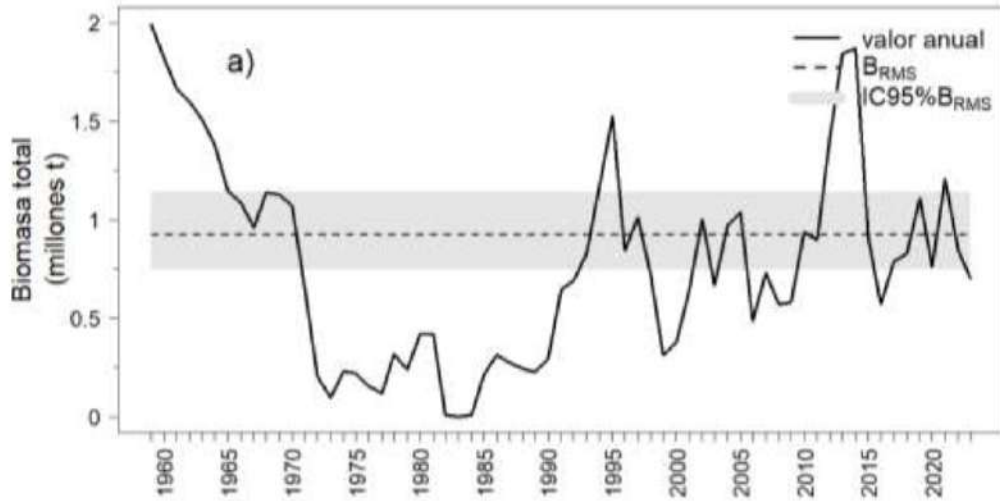


Figura 11. Biomasa de la anchoveta disponible en la región sur del mar peruano desde 1959 a 2023 y relación con su nivel de referencia ( $B_{RMS}$ ) de acuerdo a lo estimado por el Modelo de Producción Excedente.

Tabla 2. Parámetros y cantidades de interés estimados por el MPE implementado para estimar la tendencia en la biomasa de la anchoveta disponible en la región sur del mar peruano.

Parámetro	Valor
$r$	0.756 / año
$K$	2.825 millones t
$n$	0.795
$q_1$	0.977
$q_2$	0.022
$B_{RMS}$	0.922 millones t
$F_{RMS}$	0.951 / año
$RMS$	0.877 millones t

**Figure A2.2-1.** Total biomass of anchoveta in the South region (1959–2023) with reference biomass  $B_{RMS}$  (solid line) and 95% CI (shaded band), estimated by the surplus-production model; accompanying table lists key parameters ( $r$ ,  $K$ ,  $n$ ,  $q_1$ ,  $q_2$ ,  $B_{RMS}$  ( $\approx B_{MSY}$ ),  $F_{RMS}$ ,  $RMS$ ). Source: IMARPE (2024) [1]. Scope note:  $B_{RMS}$  is the model’s biomass at the MSY level (analogous to  $B_{MSY}$  under SPICT terminology).

**References**

[1] IMARPE (2024) Situación de la anchoveta disponible en la región sur del mar peruano durante el 2023 y perspectivas de explotación para la primera temporada de pesca de 2024. <https://cdn.www.gob.pe/uploads/document/file/5990085/5307455-situacion-de-la-anchoveta-disponible-en-la-region-sur-del-mar-peruano.pdf>

<b>A2.3</b>	<b>A2.3 The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.</b>
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<b>Outcome</b>	<i>Pass</i>
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**Rationale**

There are no changes since the last surveillance. IMARPE builds a decision table from assessment outputs (alternative F/E and probability of biomass falling below  $B_{msy}$ ), which PRODUCE uses to set the seasonal LMTCP [1]. For 2025-I (South), cumulative landings reached 195,217 t by 10 June 2025 (77.8% of the 251,000-t limit), evidencing that removals are tracked against the decision rule this season [2].

<i>F<sub>2023</sub></i>	<i>E<sub>2023</sub></i>	<i>Captura 2024 (millones t)</i>	<i>Biomasa remanente 01/01/25 (millones t)</i>	<i>Riesgo (B<sub>2024</sub> &lt; B<sub>2023</sub>) (%)</i>	<i>Riesgo (B<sub>2024</sub> &lt; B<sub>MRS</sub>) (%)</i>
0.00	0.00	0.000	1.212	23	33
0.02	0.02	0.024	1.192	24	34
0.05	0.03	0.047	1.173	25	35
0.07	0.05	0.070	1.154	26	36
0.10	0.06	0.092	1.136	27	37
0.12	0.07	0.114	1.117	28	38
0.15	0.09	0.135	1.100	29	40
0.17	0.10	0.156	1.082	30	41
0.20	0.11	0.177	1.065	31	42
0.22	0.13	0.197	1.047	32	43
0.25	0.14	0.217	1.031	33	44
0.27	0.15	0.237	1.014	35	45
0.29	*0.16	0.256	0.998	36	46
0.32	0.18	0.274	0.982	37	47
0.34	0.19	0.293	0.966	38	48
0.37	0.20	0.311	0.951	39	49
0.39	0.21	0.329	0.936	40	49
0.42	**0.22	0.346	0.921	41	50
0.44	0.23	0.363	0.906	41	51
0.47	0.24	0.380	0.892	42	51
0.49	0.25	0.396	0.878	43	52
0.51	0.27	0.412	0.864	44	53
0.54	0.28	0.428	0.850	45	53
0.56	0.28	0.443	0.837	45	54
0.59	0.29	0.459	0.824	46	54
0.61	0.30	0.473	0.811	47	55
0.64	0.31	0.488	0.798	47	55
0.66	0.32	0.502	0.785	48	55
0.69	0.33	0.516	0.773	48	56
0.71	0.34	0.530	0.761	49	56
0.74	0.35	0.544	0.749	49	56
0.76	0.36	0.557	0.737	50	57
0.78	0.37	0.570	0.726	50	57
0.81	0.37	0.582	0.714	50	57
0.83	0.38	0.595	0.703	51	58
0.86	0.39	0.607	0.692	51	58
0.88	0.40	0.619	0.681	52	58
0.91	0.40	0.631	0.671	52	58
0.93	0.41	0.642	0.660	52	58
0.96	0.42	0.654	0.650	52	59
0.98	0.43	0.665	0.640	53	59
1.00	0.43	0.676	0.630	53	59
1.03	0.44	0.686	0.620	53	59
1.05	0.45	0.697	0.610	53	59
1.08	***0.45	0.707	0.601	54	59

(\*) Nivel de explotación correspondiente al promedio del periodo 2012-2023,  
 (\*\*\*) Nivel de explotación equivalente a aquel capaz de llevar a la biomasa a su nivel de referencia.  
 (\*\*\*) Nivel de explotación correspondiente al 80% del MRS

**Figure A2.3-1.** Decision table used to derive the Southern-stock LMTCP (IMARPE 2024) [1].

**References**

[1] IMARPE (2024) Situación de la anchoveta disponible en la región sur del mar peruano durante el 2023 y perspectivas de explotación para la primera temporada de pesca de 2024. <https://cdn.www.gob.pe/uploads/document/file/5990085/5307455-situacion-de-la-anchoveta-disponible-en-la-region-sur-del-mar-peruano.pdf>

[2] IMARPE (2025) Informe de Avance — Primera Temporada de Anchoqueta Región Sur 2025-I. <a href="https://www.gob.pe/institucion/imarpe/informes-publicaciones/6885672-informe-correspondiente-al-oficio-n-0970-2025-imarpe-pe">https://www.gob.pe/institucion/imarpe/informes-publicaciones/6885672-informe-correspondiente-al-oficio-n-0970-2025-imarpe-pe</a>	
<b>A2.4</b>	<b>A2.4 The assessment is subject to internal or external peer review.</b>
<b>Outcome</b>	Pass
<p><b>Rationale</b></p> <p>There are no changes since the last surveillance. IMARPE prepares the assessment and PRODUCE reviews advice before setting the LMTCP [1]. Methods have received external peer review (international review in 2009 and FAO 2014), with recommendations and an overall conclusion of strong scientific support; IMARPE also notes voluntary scientific audits/method reviews (e.g., 2000, 2008, 2018, 2024) [2][1]. Regional collaboration under the Humboldt Current System project further supports transparency and cross-border dialogue for shared resources [3].</p>	
<p><b>References</b></p> <p>[1] IMARPE (2024) Situación de la anchoqueta disponible en la región sur del mar peruano durante el 2023 y perspectivas de explotación para la primera temporada de pesca de 2024. <a href="https://cdn.www.gob.pe/uploads/document/file/5990085/5307455-situacion-de-la-anchoqueta-disponible-en-la-region-sur-del-mar-peruano.pdf">https://cdn.www.gob.pe/uploads/document/file/5990085/5307455-situacion-de-la-anchoqueta-disponible-en-la-region-sur-del-mar-peruano.pdf</a></p> <p>[2] MBA/Seafood Watch. 2023. Draft Assessment for Expert Review—Peruvian anchoqueta (Chile, Peru). <i>Engraulis ringens</i>. Monterrey Bay Aquarium. Seafood Watch. <a href="https://www.seafoodwatch.org/globalassets/sfw/pdf/expert-review/2022/100322/seafood-watch-peruvian-anchoqueta-chile-peru-27723.pdf">https://www.seafoodwatch.org/globalassets/sfw/pdf/expert-review/2022/100322/seafood-watch-peruvian-anchoqueta-chile-peru-27723.pdf</a></p> <p>[3] GEF. 2024. Catalysing Implementation of a Strategic Action Programme for the Sustainable Management of Shared Living Marine Resources in the Humboldt Current System (HCS). <a href="https://www.thegef.org/projects-operations/projects/9592">https://www.thegef.org/projects-operations/projects/9592</a></p>	

<b>A2.5</b>	<b>A2.5 The assessment is made publicly available.</b>
<b>Outcome</b>	Pass
<p><b>Rationale</b></p> <p>There are no changes since the last surveillance. IMARPE posts assessment documents and seasonal advice on the national publications portal (PRODUCE–IMARPE section), including the series and advance/seasonal reports [1]; the 2025-I South Advance Report is publicly accessible there at <a href="https://www.gob.pe/institucion/imarpe/informes-publicaciones/6885672-informe-correspondiente-al-oficio-n-0970-2025-imarpe-pe">https://www.gob.pe/institucion/imarpe/informes-publicaciones/6885672-informe-correspondiente-al-oficio-n-0970-2025-imarpe-pe</a> [2].</p>	
<p><b>References</b></p> <p>[1] IMARPE (2024) Situación de la anchoqueta disponible en la región sur del mar peruano durante el 2023 y perspectivas de explotación para la primera temporada de pesca de 2024. <a href="https://cdn.www.gob.pe/uploads/document/file/5990085/5307455-situacion-de-la-anchoqueta-disponible-en-la-region-sur-del-mar-peruano.pdf">https://cdn.www.gob.pe/uploads/document/file/5990085/5307455-situacion-de-la-anchoqueta-disponible-en-la-region-sur-del-mar-peruano.pdf</a></p> <p>[2] IMARPE (2025) Informe de Avance — Primera Temporada de Anchoqueta Región Sur 2025-I. <a href="https://www.gob.pe/institucion/imarpe/informes-publicaciones/6885672-informe-correspondiente-al-oficio-n-0970-2025-imarpe-pe">https://www.gob.pe/institucion/imarpe/informes-publicaciones/6885672-informe-correspondiente-al-oficio-n-0970-2025-imarpe-pe</a></p>	

## A3 Harvest strategy

<b>A3.1</b>	<b>A3.1</b> There is a mechanism in place by which total fishing mortality of this species is restricted.
<b>Clause Outcome</b>	<i>Pass</i>
<p><b>Rationale</b></p> <p>No change since the last surveillance. Total fishing mortality is restricted through a seasonal LMTCP set by PRODUCE on the basis of IMARPE’s assessment and decision table, with daily tracking of landings and automatic season closure when the LMTCP is reached (or at the pre-set season end date) [1][2]. In-season juvenile-protection closures (dynamic area bans triggered when the fraction of juveniles exceeds the tolerance) further constrain effective fishing mortality and protect recruitment, as established in Supreme Decree N° 024-2016-PRODUCE [3]. Compliance is supported by a monitoring suite—VMS (SISESAT), electronic/radio logbooks, and observer/port sampling programs—that provides the information needed to enforce the LMTCP and juvenile rules [4][1]. Current-cycle reporting for 2025-I (South) confirms the mechanism is operating: IMARPE publishes cumulative landings, progress toward the LMTCP, and juvenile incidence for the assessed area [2].</p> <p><b>References</b></p> <p>[1] IMARPE (2024) Situación de la anchoveta disponible en la región sur del mar peruano durante el 2023 y perspectivas de explotación para la primera temporada de pesca de 2024. <a href="https://cdn.www.gob.pe/uploads/document/file/5990085/5307455-situacion-de-la-anchoveta-disponible-en-la-region-sur-del-mar-peruano.pdf">https://cdn.www.gob.pe/uploads/document/file/5990085/5307455-situacion-de-la-anchoveta-disponible-en-la-region-sur-del-mar-peruano.pdf</a></p> <p>[2] IMARPE (2025) Informe de Avance — Primera Temporada de Anchoveta Región Sur 2025-I. <a href="https://www.gob.pe/institucion/imarpe/informes-publicaciones/6885672-informe-correspondiente-al-oficio-n-0970-2025-imarpe-pe">https://www.gob.pe/institucion/imarpe/informes-publicaciones/6885672-informe-correspondiente-al-oficio-n-0970-2025-imarpe-pe</a></p> <p>[3] PRODUCE. Supreme Decree N° 024-2016-PRODUCE — control/inspection measures; juvenile-triggered dynamic closures.</p> <p>[4] FishChoice. 2019. <i>Three-Year Audit Template — Peru Anchovy Industrial Purse Seine FIP</i> (VMS, logbooks, observers). <a href="https://fisheryprogress.org/sites/default/files/indicators-documents/Peruvian_Anchovy_IHC_FIP_Review_2019_GB2338_5.pdf#overlay-context=node/3546/actions-progress">https://fisheryprogress.org/sites/default/files/indicators-documents/Peruvian_Anchovy_IHC_FIP_Review_2019_GB2338_5.pdf#overlay-context=node/3546/actions-progress</a></p>	
<b>A3.2</b>	<b>A3.2</b> Total fishery removals of this species do not regularly exceed the level indicated or stated in the stock assessment. Where a specific quantity of removals is recommended, the actual removals may exceed this by up to 10% ONLY if the stock status is above the limit reference point or proxy.
<b>Clause Outcome</b>	<i>Pass</i>
<p><b>Rationale</b></p> <p>No change since the last surveillance. IMARPE’s assessment provides the basis for a seasonal LMTCP, and PRODUCE implements it with real-time monitoring and season closure at the limit, meaning actual removals do not regularly exceed the recommended level [1][2]. For the current season, 2025-I (South) cumulative landings reached 195,217 t by 10 June 2025, which is 77.8% of the 251,000-t LMTCP—clear evidence that removals are being kept within the assessed limit during</p>	

the season [2]. Additional in-season closures for juvenile protection (per S.D. N° 024-2016) and routine publication of measures on the PRODUCE/IMARPE portals provide transparency and enforcement leverage to prevent overshoot [3][4].

**References**

[1] IMARPE (2024) Situación de la anchoveta disponible en la región sur del mar peruano durante el 2023 y perspectivas de explotación para la primera temporada de pesca de 2024. <https://cdn.www.gob.pe/uploads/document/file/5990085/5307455-situacion-de-la-anchoveta-disponible-en-la-region-sur-del-mar-peruano.pdf>

[2] IMARPE. 2025. Informe de Avance — Primera Temporada de Anchoveta Región Sur 2025-I (195,217 t; 77.8% of 251,000 t by 10 Jun 2025).

[3] PRODUCE. Supreme Decree N° 024-2016-PRODUCE — juvenile-triggered closures and control measures.

[4] IMARPE/PRODUCE public portals — publication of seasonal measures, closures, and status updates.

<b>A3.3</b>	<b>A3.3 Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for research or non-target catch of the species in other fisheries are permissible).</b>
<b>Clause Outcome</b>	<i>Pass</i>
<b>Rationale</b>	
<p>No change since the last surveillance. A formal, pre-agreed harvest control rule that algorithmically reduces effort at low biomass is not in place. Responsiveness is achieved through rules that link fishing opportunities to status: (i) the season is not opened by PRODUCE when biomass is below the limit level in IMARPE’s advice; (ii) once opened, the fishery is closed on reaching the seasonal LMTCP, which is set precautionarily (<math>\approx \leq 80\%</math> MSY) from IMARPE’s decision table; and (iii) dynamic area closures are triggered when the fraction of juveniles (by number) exceeds the tolerance (<math>\sim 10\%</math>), to protect recruitment [1][2]. The latest public assessment for the South stock (2024) indicates the stock is above the biomass limit reference point; no newer 2025 reference-point update was available at review, so 2024 remains the formal basis [1]. For the current cycle, IMARPE’s 2025-I (South) report shows 195,217 t landed by 10 June 2025 (77.8% of the 251,000-t limit) and reports juvenile incidence, evidencing the in-season indicators used to adjust or suspend fishing as required [3].</p> <p>In conclusion, although a formal HCR is not in place, the combination of season-opening conditions tied to biomass status, precautionary LMTCPs with hard closures at the limit, and juvenile-triggered dynamic closures constitutes a state-dependent and precautionary strategy that is expected to achieve the stock management objectives.</p>	
<b>References</b>	
<p>[1] IMARPE. 2024. <i>Situación de la anchoveta disponible en la región sur del mar peruano durante el 2023 y perspectivas de explotación para la primera temporada de pesca de 2024</i> (status vs limit; decision table; <math>\sim 80\%</math> MSY rule).</p> <p>[2] PRODUCE. Supreme Decree N° 024-2016-PRODUCE (dynamic closures when juvenile fraction exceeds tolerance; in-season control measures).</p>	

[3] IMARPE. 2025. *Informe de Avance — Primera Temporada de Anchoveta Región Sur 2025-I* (cumulative landings, %LMTCP, juvenile indices)

## A4 Stock status

A4.1	<p><b>A4.1</b> The stock is at or above the target reference point; OR IF NOT: the stock is above the limit reference point or proxy and there is evidence that a fall below the limit reference point would result in fishery closure; OR IF NOT: the stock is estimated to be below the limit reference point or proxy, but fishery removals are prohibited.</p>
Outcome	Pass
<p><b>Rationale</b></p> <p>According to the Surplus Production Model, anchovy biomass available in the southern region of Peru is highly variable but generally fluctuates around <math>B_{MSY} \approx 922,000</math> t and was below <math>B_{MSY}</math> in 2022–2023 (Figure A4.1.1) [1]. There are no changes since last surveillance regarding these reference-point results, which derive from the 2024 assessment summary [1]. There is no formal harvest control rule that pre-sets effort reductions at low biomass; however, management is precautionary in practice: the season is not opened when biomass is below the limit reference point (BLRP/proxy), and the fishery is closed at the LMTCP for the season [1].</p> <p>For 2025 (Zona Sur), the season was authorized with LMTCP-Sur = 251,000 t; by 10 June 2025 cumulative landings reached 195,217 t (77.8% of LMTCP), and the size structure was 7.5–15.5 cm LT (mode 12.0 cm), with juveniles 48.3% in number / 37.5% in weight (Figure A4.1.2) [2]. In March 2025, anchoveta for Indirect Human Consumption (CHI or <i>Consumo Humano Indirecto</i>—i.e. reduction to fishmeal/oil) totalled 56.5 thousand t, all from the southern zone, consistent with normal extraction during Season 1 [3]. Temporal closures continue to protect juveniles when incidence exceeds management thresholds (e.g., 10%) [1].</p> <p>Therefore, the stock is above the limit reference point or proxy, and there is clear evidence that a fall below the limit would result in fishery closure (season not opened and/or early closures once the LMTCP is met). If the stock were estimated to be below the limit reference point or proxy, fishery removals would be prohibited.</p>	

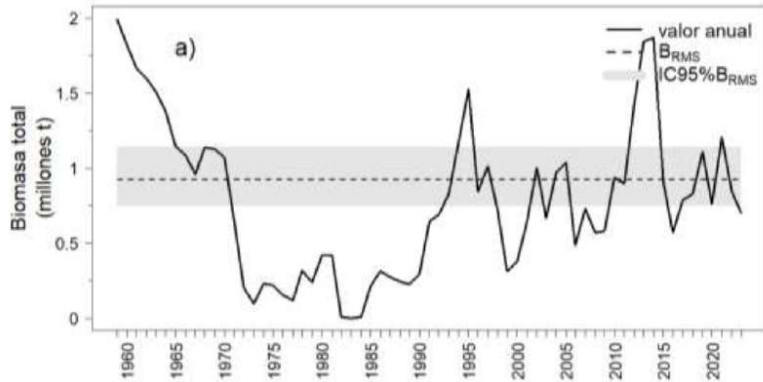


Figura 11. Biomasa de la anchoveta disponible en la región sur del mar peruano desde 1959 a 2023 y relación con su nivel de referencia ( $B_{RMS}$ ) de acuerdo a lo estimado por el Modelo de Producción Excedente.

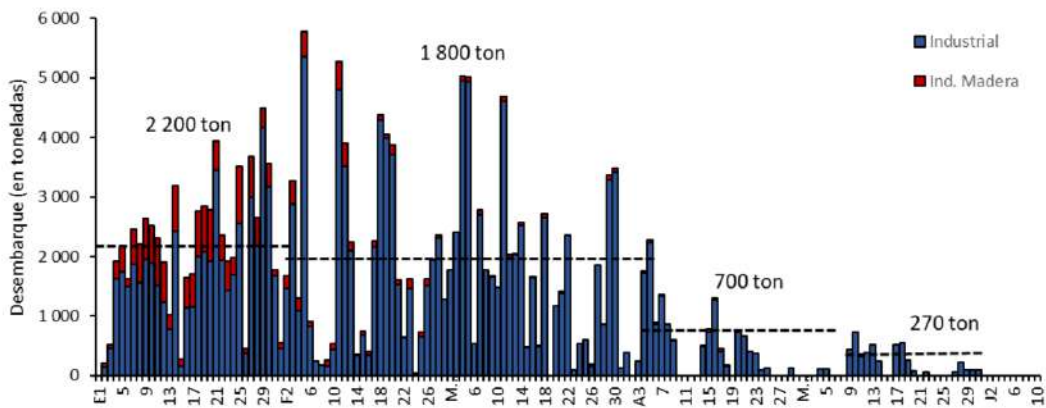
Tabla 2. Parámetros y cantidades de interés estimados por el MPE implementado para estimar la tendencia en la biomasa de la anchoveta disponible en la región sur del mar peruano.

Parámetro	Valor
$r$	0.756 / año
$K$	2.825 millones t
$n$	0.795
$q_1$	0.977
$q_2$	0.022
$B_{RMS}$	0.922 millones t
$F_{RMS}$	0.951 / año
$RMS$	0.877 millones t

Figure A4.1.1. Anchovy biomass available in the southern region of Peru (1959–2023) relative to  $B_{MSY}$  ( $\approx 922,000$  t) as estimated by the Surplus Production Model [1].

**Tabla 1. Desembarques (en toneladas) de anchoveta en la región sur del litoral peruano durante la primera temporada de pesca del 2024 (enero - 10 junio 2024)**

Especie/Flota/Puerto	Desembarque (t) Primera Temporada de Pesca 2025 de anchoveta - Región Sur (Al 10/06/2025)					
	Atico	Mollendo	La Planchada	Ilo	Total (t)	Porcentaje (%)
Achoyeta	F. Industrial		82 281		93 886	90.2
	F.Ind. Mad.		2 695		16 355	9.8
Total (en toneladas)	0	84 976	0	110 241	195 217	100.0
Porcentaje(%)	0.0	43.5	0.0	56.5	100.0	
LMTCP - Región Sur: 251 000 toneladas		Avance del LMTCP - Región Sur al 10/06/2025: 77,8%				



**Figura 1. Desembarque (t) diario de anchoveta en la región sur durante la primera temporada de pesca de 2024 (03 de marzo - 10 de junio 2024). Fuente: PRODUCE, Elaborado por: IMARPE.**

**Figure A4.1.2.** Season 1 of 2025 in the southern region: (left) cumulative landings vs LMTCP (251,000 t) by 10 June 2025; (right) length-frequency showing mode  $\approx 12.0$  cm and the observed juvenile fraction [2].

**References**

- [1] IMARPE. 2024. *Situación de la anchoveta disponible en la región sur del mar peruano durante el 2023 y perspectivas de explotación para la primera temporada de pesca de 2024.*
- [2] IMARPE. 2025. *Informe de avance de la primera temporada de pesca 2025 de anchoveta (E. ringens) en la región sur del mar peruano (01 enero – 10 junio 2025) y perspectivas para la segunda temporada (julio – diciembre 2025)*
- [3] PRODUCE (OGEIEE). 2025. *Reporte mensual de desempeño del sector pesca y acuícola – Marzo 2025.*

## Category B species – N/A

Category B species are assessed using a risk-based approach.

- 1.1. The risk matrix in Table B(a) shall be used when assessing a Category B species when estimates of Fishing mortality (F), Biomass (B) and reference points are available.
- 1.2. The risk matrix in Table B(b) shall be used when assessing a Category B species when no reference points are available.


There is no category B species in this assessment.

<b>B1</b>	<b>B1.1 Commercial fishery removals are prohibited when the stock has been estimated to be below the limit reference point or proxy (small quotas for</b>
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	research or non-target catch of the species in other fisheries are permissible).
<b>Table used B(a) or B(b)</b>	N/A
<b>Outcome</b>	Choose an item.
<b>Rationale</b>	N/A as there is no category B species in this assessment.
<b>References</b>	N/AA

## Category C species – Eastern Pacific bonito

- 1.3. All clauses must be met for a species to pass the Category C assessment.
  - 1.3.1. Where a species fails this Category C clause, it should be assessed as a Category D species instead, except if there is evidence that the species is currently below the limit reference point.

<b>C1.1</b>	<b>C1.1</b> 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.
<b>Outcome</b>	Pass
<p><b>Eastern Pacific bonito (<i>Sarda chiliensis chiliensis</i>) [bonito]</b></p> <p><b>Rationale</b></p> <p>Annual landings of Eastern Pacific bonito are recorded and used in the population assessment (see Figure C1.1.1). The most recent assessment (updated to November 2024) employs a Stock Synthesis integrated model and explicitly includes the full historical catch series (1939–2024), updated with PRODUCE-OGEIEE landings, plus size compositions and CPUE indices (1997–2024) [1]. Therefore, fishery removals from the UoA are included in the stock assessment process. Outcome: Pass.</p>  <p>Figura 3. Desembarque anual de bonito en Perú, registrado desde 1939 al 2024 (datos proyectados a diciembre de 2024). Fuente: Oficina General de Evaluación de Impacto y Estudios Económicos (OGEIEE) de PRODUCE.</p>	

**Figure C1.1.1.** Annual landings of Eastern Pacific bonito in Peru (1939–2024, 2024 projected), showing the recent high-catch period since 2015. Source: [1].

**References**

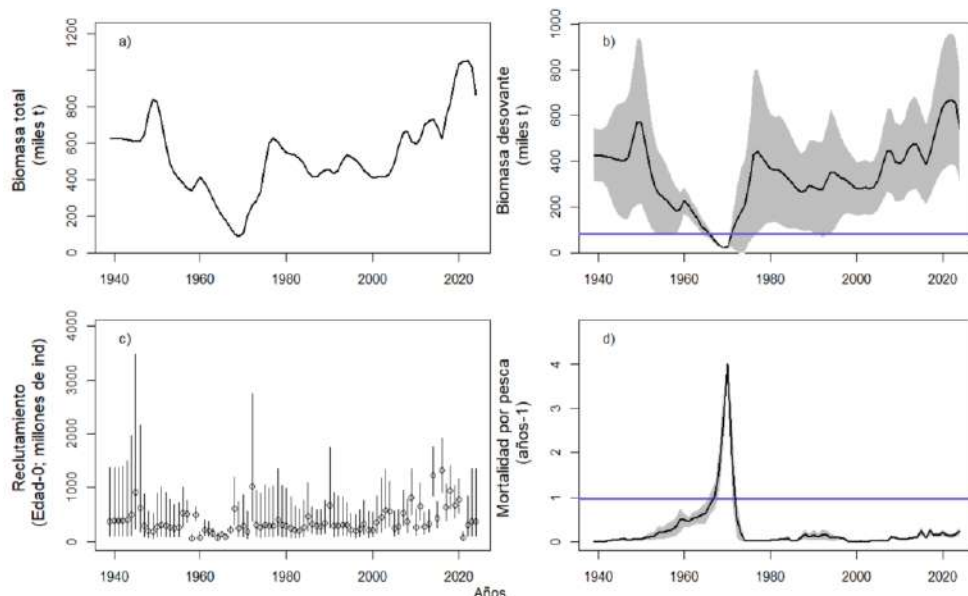
[1] IMARPE. 2024. *Informe sobre el desarrollo de la pesquería de bonito *Sarda chiliensis chiliensis* durante el 2024, situación actual y perspectivas de explotación para el 2025.* <https://cdn.www.gob.pe/uploads/document/file/7446103/6342302-informe-sobre-el-desarrollo-de-la-pesqueria-de-bonito-sarda-chiliensis-chiliensis-durante-el-2024-situacion-actual-y-perspectivas-de-explotacion-para-el-2025.pdf>  
<https://cdn.www.gob.pe/uploads/document/file/5780230/5133561-informe-desarrollo-pesqueria-bonito-durante-el-2023-y-perspectivas-explotacion-2024.pdf?v=1706644360>

<b>C1.2</b>	<b>C1.2</b> 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.
<b>Outcome</b>	Pass

**Eastern Pacific bonito (*Sarda chiliensis chiliensis*) [bonito]**

**Rationale**

The updated assessment (Stock Synthesis, data to November 2024) indicates that spawning biomass (SSB2024) remains above its reference level (SSBMRS), while fishing mortality in 2024 ( $F_{2024} = 0.25 \text{ y}^{-1}$ ) is below the reference ( $F_{MRS} = 0.97 \text{ y}^{-1}$ ) (see Figure C1.2.1 and Table C1.2.1). Although total and spawning biomass show a declining trend since 2022, both the biomass and F-status confirm the stock is above the limit reference point used in management advice [1].



**Figura 18.** Indicadores poblacionales estimados para bonito: a) Biomasa Total anual (miles t); b) Biomasa Desovante anual (BD; miles t); c) Reclutamiento anual (millones de individuos), y d) Tasa de Mortalidad por Pesca anual (F). Las líneas horizontales en color morado expresan los niveles de referencia para SSB y F respectivamente.

**Figure C1.2.1.** Population indicators for the Peruvian Eastern Pacific bonito stock: (a) Total biomass, (b) Spawning biomass, (c) Recruitment, (d) Fishing mortality; horizontal lines denote target/reference levels. Source: [1].

**Table C1.2.1.** Reference points and key quantities from the 2024 assessment (period 1939–2024): MRS = 96 kt; SSB<sub>MRS</sub> = 81 kt; SSB<sub>0</sub> = 426 kt; SSB<sub>2024</sub> (median) = 542 kt; F<sub>MRS</sub> = 0.97 y<sup>-1</sup>; F<sub>2024</sub> = 0.25 y<sup>-1</sup> [1].

**Tabla 4. Puntos de referencia y cantidades poblacionales del stock de bonito peruano.** Se define el MRS (Máximo Rendimiento Sostenible); SSB<sub>MRS</sub> (biomasa desovante al MRS); SSB<sub>0</sub> (biomasa desovante virgen); SSB<sub>2024</sub> (biomasa desovante para 2024) como valores de biomasa en toneladas. F<sub>MRS</sub> (mortalidad por pesca al MRS); F<sub>2024</sub> (mortalidad por pesca de 2024); C<sub>2024</sub> (desembarque proyectado para 2024); e indicadores del estado poblacional. Periodo 1939 - 2024.

Parámetros	Valores	Rango de valores
MRS	96 mil t	71 - 122 mil t
SSB <sub>MRS</sub>	81 mil t	59 - 103 mil t
SSB <sub>0</sub>	426 mil t	310 - 542 mil t
SSB <sub>2024</sub>	542 mil t	290 - 794 mil t
F <sub>MRS</sub>	0.97 año <sup>-1</sup>	0.88 - 1.05 año <sup>-1</sup>
F <sub>2024</sub>	0.25 año <sup>-1</sup>	0.14 - 0.35 año <sup>-1</sup>
C <sub>2024</sub>	116 mil t	
SSB <sub>MRS</sub> /SSB <sub>0</sub>	0.19	
SSB <sub>2024</sub> /SSB <sub>MRS</sub>	6.66	
SSB <sub>2024</sub> /SSB <sub>0</sub>	1.27	
C <sub>2024</sub> /MRS	1.2	
F <sub>2024</sub> /F <sub>MRS</sub>	0.26	

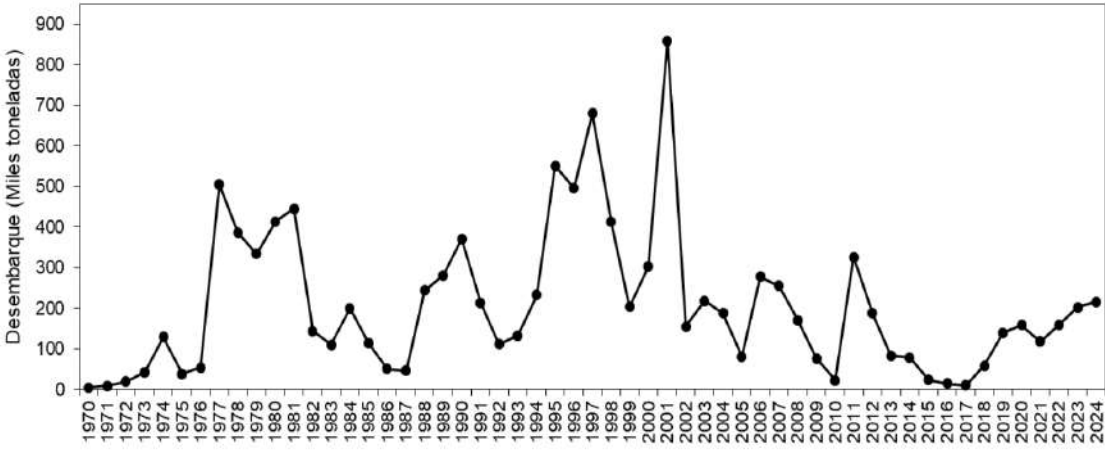
#### References

[1] IMARPE. 2024. *Informe sobre el desarrollo de la pesquería de bonito Sarda chiliensis chiliensis durante el 2024, situación actual y perspectivas de explotación para el 2025.* <https://cdn.www.gob.pe/uploads/document/file/7446103/6342302-informe-sobre-el-desarrollo-de-la-pesqueria-de-bonito-sarda-chiliensis-chiliensis-durante-el-2024-situacion-actual-y-perspectivas-de-explotacion-para-el-2025.pdf>

## Category C species – Chilean jack mackerel

1.3 All clauses must be met for a species to pass the Category C assessment.

1.3.1. Where a species fails this Category C clause, it should be assessed as a Category D species instead, except if there is evidence that the species is currently below the limit reference point.

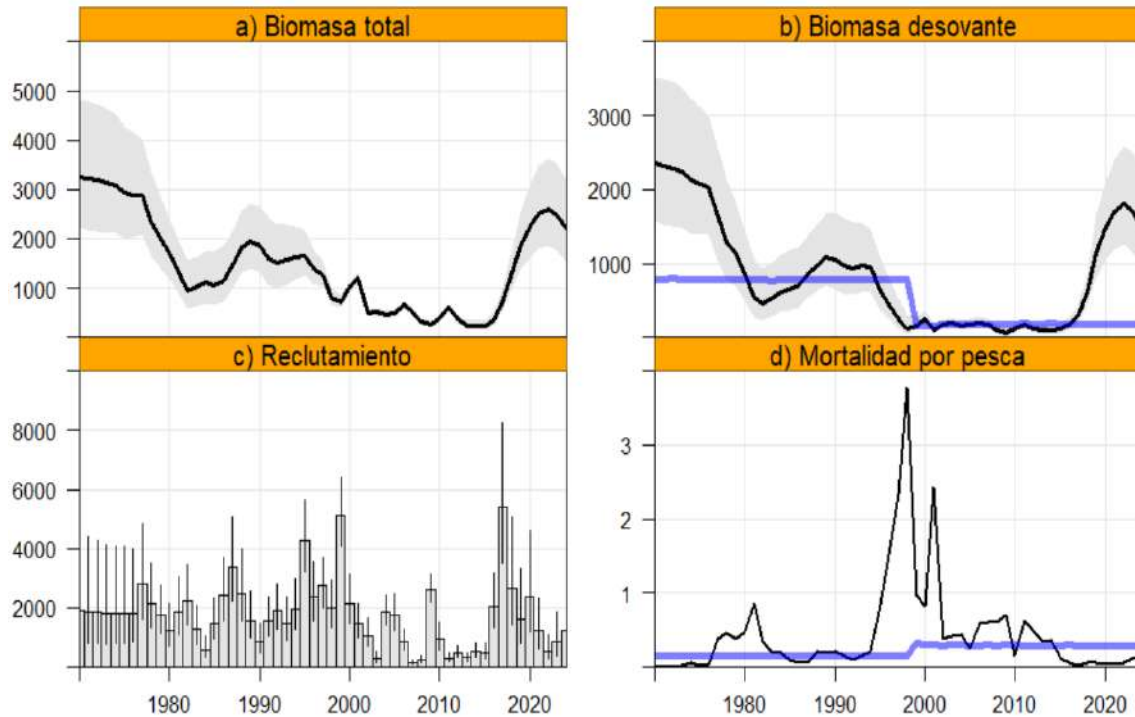
<b>C1.1</b>	<b>C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.</b>
<b>Outcome</b>	<i>Pass</i>
<b>Chilean jack mackerel (<i>Trachurus murphyi</i>) ["jurel"]</b>	
<p><b>Rationale</b></p> <p>The updated JJM assessment (data to Nov 2024) shows that both total biomass (B) and spawning biomass (SSB) have declined since 2022, with 2024 estimates –11.26% (B) and –14.47% (SSB) versus 2023; nevertheless, SSB remains above the level required for MSY (BDMRS) and F is below FMRS (though increasing since 2021) (Figure 11) [1]. Therefore, in its most recent stock assessment the species' biomass is above the limit reference point (or proxy).</p>	
	
<p>Figura 3. Desembarque anual de jurel en las aguas jurisdiccionales del Perú, desde 1970 al 2024. Fuente: PRODUCE.</p>	
<p><b>Figure C1.1.4.</b> Annual landings of Chilean jack mackerel (jurel) in Peru (1970–2024; 2024 projected), compiled from PRODUCE/IMARPE landings and used in the updated JJM assessment. Source: [1].</p>	
<p><b>References</b></p> <p>[1] IMARPE. 2024. <i>Informe sobre el desarrollo de la pesquería de jurel <i>Trachurus murphyi</i> durante el 2024, situación actual y perspectivas de explotación para el 2025.</i> <a href="https://www.gob.pe/institucion/imarpe/informes-publicaciones/6342241-informe-correspondiente-al-oficio-n-0285-2024-imarpe-pe">https://www.gob.pe/institucion/imarpe/informes-publicaciones/6342241-informe-correspondiente-al-oficio-n-0285-2024-imarpe-pe</a></p>	

<b>C1.2</b>	<b>C1.2</b> 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.
<b>Outcome</b>	Pass

**Chilean jack mackerel (*Trachurus murphyi*) [“jurel”]**

**Rationale**

The updated Joint Jack Mackerel (JJM) assessment (data to November 2024) indicates that both total biomass (B) and spawning biomass (SSB) have declined since 2022, with 2024 vs 2023 changes of -11.26% (B) and -14.47% (SSB); however, SSB remains above the management reference level (BD\_MRS) and F is below F\_MRS (although increasing since 2021) (Figure C1.2.2) [1]. Therefore, in its most recent stock assessment the species’ biomass is above the limit reference point (or proxy).



**Figure C1.2.2.** Population indicators for Chilean jack mackerel (1970–2024): (a) Total biomass (kt); (b) Spawning biomass (kt) with uncertainty band; (c) Recruitment (millions); (d) Annual fishing mortality ( $F$ ,  $y^{-1}$ ). Horizontal lines denote the assessment’s reference levels (BD\_MRS, F\_MRS). Source: [1].

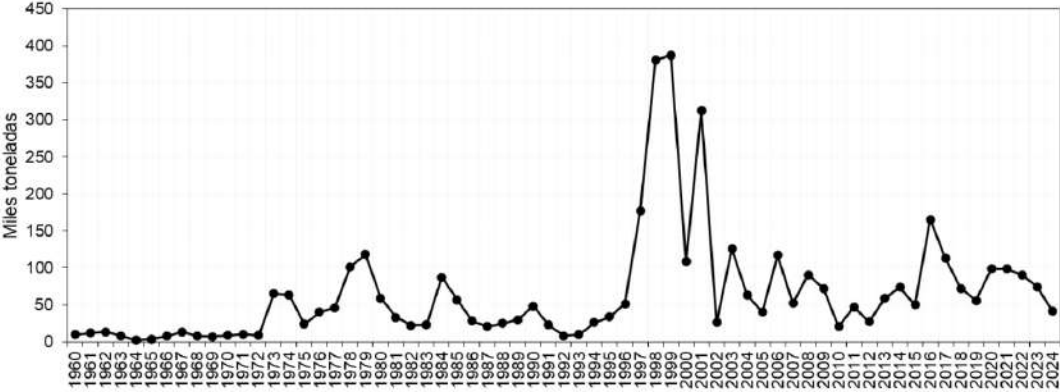
**References**

[1] IMARPE. 2024. *Informe sobre el desarrollo de la pesquería de jurel *Trachurus murphyi* durante el 2024, situación actual y perspectivas de explotación para el 2025.* <https://www.gob.pe/institucion/imarpe/informes-publicaciones/6342241-informe-correspondiente-al-oficio-n-0285-2024-imarpe-pe>

## Category C species – Chub mackerel

1.3 All clauses must be met for a species to pass the Category C assessment.

1.3.1 Where a species fails this Category C clause, it should be assessed as a Category D species instead, except if there is evidence that the species is currently below the limit reference point.

<p><b>C1.1</b></p>	<p><b>C1.1</b> 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.</p>
<p><b>Outcome</b></p>	<p>Pass</p>
<p><b>Chub mackerel (<i>Scomber japonicus</i>) [caballa]</b></p> <p><b>Rationale</b></p> <p>Annual landings of chub mackerel are recorded and used in the assessment (Figure C.1.1.5) [1]. In 2024, PRODUCE set and adjusted seasonal limits, culminating in an LMCTP = 63,000 t distributed by fleet segments (per R.M. cited in the assessment) [1]. Reported landings Jan–Dec 2024 ≈ 41,871 t (industrial 24,330 t; artisanal 17,541 t) [1]. IMARPE applies an integrated stock assessment for caballa that explicitly includes catches 1960–2024, length compositions 2001–2024, an acoustic eco-abundance index 1983–2024, and a standardised CPUE index 2003–2024; therefore, removals from the fishery under assessment are included in the stock assessment process [1].</p>  <p><b>Figura 3. Desembarque anual de caballa en Perú, registrado desde 1960 al 2024 (datos proyectados a diciembre de 2024). Fuente: Oficina General de Evaluación de Impacto y Estudios Económicos (OGEIEE) de PRODUCE.</b></p> <p><b>Figure C1.1.5.</b> Annual landings of chub mackerel in Peru (1960–2024, projected). Source: [1].</p> <p><b>References</b></p> <p>[1] IMARPE. 2024. <i>Informe sobre el desarrollo de la pesquería de caballa <i>Scomber japonicus</i> durante el 2024, situación actual y perspectivas de explotación para el 2025.</i> <a href="https://www.gob.pe/institucion/imarpe/informes-publicaciones/6342270-informe-correspondiente-al-oficio-n-0319-2024-imarpe-pe">https://www.gob.pe/institucion/imarpe/informes-publicaciones/6342270-informe-correspondiente-al-oficio-n-0319-2024-imarpe-pe</a></p>	
<p><b>C1.2</b></p>	<p><b>C1.2</b> 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.</p>

Outcome	Pass
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**Chub mackerel (*Scomber japonicus*) [caballa]**

**Rationale**

The most recent IMARPE assessment of Chub mackerel (data to December 2024) shows B and SSB rising from 2011 to 2020, then declining since 2020–2021; in 2024, B –21% and SSB –19% vs 2023. Nevertheless, SSB remains above the level required for MSY (BD\_MRS) and F remains below F\_MRS (Figure C.1.2.3) [1]. Hence, in its most recent assessment the species’ biomass is above the limit reference point (or proxy).

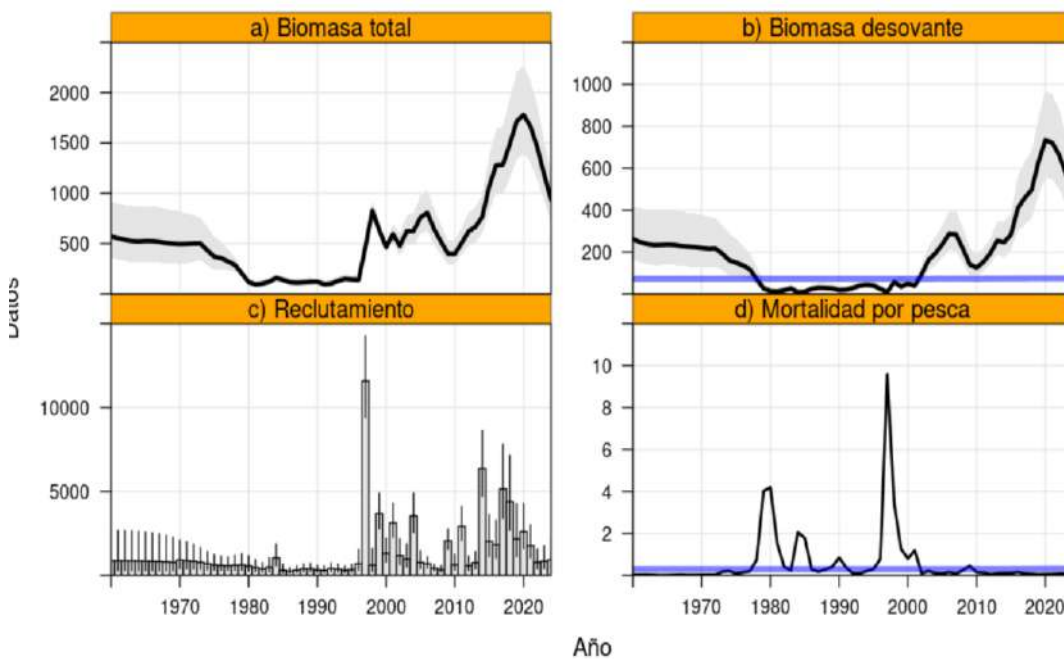


Figura 14. Indicadores poblacionales estimados para la caballa presente en aguas peruanas: a) Biomasa Total anual (miles t); b) Biomasa Desovante anual (miles t); c) Reclutamiento anual (millones individuos), y d) Tasa de Mortalidad por Pesca anual.

**Figure C1.2.3.** Population indicators for chub mackerel (caballa) in Peruvian waters (1960–2024): (a) Total biomass (kt); (b) Spawning biomass (kt) with uncertainty band; (c) Recruitment (millions of individuals); (d) Fishing mortality ( $F, y^{-1}$ ). Blue horizontal lines denote the assessment reference levels (BD\_MRS, F\_MRS). Source: [1].

**References**

[1] IMARPE. 2024. *Informe sobre el desarrollo de la pesquería de caballa *Scomber japonicus* durante el 2024, situación actual y perspectivas de explotación para el 2025..* <https://www.gob.pe/institucion/imarpe/informes-publicaciones/6342270-informe-correspondiente-al-oficio-n-0319-2024-imarpe-pe>

## Category D species

Category D species are assessed against a risk-based approach.

- 1.1. The Productivity-Susceptibility Analysis (PSA) in Table D(a) shall be used when assessing Category D species.
- 1.2. Table D(b) shall be used to calculate the overall PSA risk rating for the Category D species. Should the PSA indicate a high risk, further assessment shall be completed against the requirements in Table D(C).

## Productivity Susceptibility Analysis (PSA) and scores

Table D(a) provides detailed values and scores for the species productivity and susceptibility attributes and attributes, the assessor shall use Table D(a) to the PSA table.

Table D(b) is used to calculate the overall PSA risk rating for the Category D species.

Species name	Carrot/red squat lobster ( <i>Pleuroncodes monodon</i> ) [" <i>múnida</i> "]	
Productivity attributes	Value	Score
Average age at maturity	5-6 <sup>1</sup>	2
Average maximum age	5 <sup>5</sup>	1
Fecundity	1,000-50,000 <sup>2,3,4</sup>	2
Average maximum size	8 <sup>5</sup>	1
Average size at maturity	2.48-2.89 (size at 50% maturity) <sup>5</sup>	1
Reproductive strategy	Demersal spawner	2
Mean Trophic Level (MTL)	2 <sup>6,7,8</sup>	1
Density dependence (to be used when scoring invertebrate species only)	Precautionary (no information found about it)	3
Susceptibility attributes		
Areal overlap (availability): Overlap of the	<10% of the stock	1

<sup>1</sup> Kilada, R and E. Enzo Acuña 2015. Direct age determination by growth band counts of three commercially important crustacean species in Chile. Fish Res. 170; 134-143.

<sup>2</sup> Bustos, H.E. & M.A. Retamal. 1985. Estudio biológico pesquero del langostino colorado *Pleuroncodes monodon* H. Milne Edwards, 1837. Gayana, Zool., 49 (3-4): 151-164.

<sup>3</sup> Palma, S. & P. Arana. 1997. Aspectos reproductivos del langostino colorado (*Pleuroncodes monodon* H. Milne Edwards, 1837) frente a la costa de Concepción, Chile. Invest. Mar., Valparaíso, 25: 203-221.

<sup>4</sup> Roa, R. and F. Tapia. 1998. Spatial differences in growth and sexual maturity inside a large population of the squat lobster *Pleuroncodes monodon*. Mar. Ecol. Prog. Ser.:167:185-196.

<sup>5</sup>

<sup>6</sup> MSC. 2022. Chile Squat Lobsters Camanchaca Demersal Trawl Fishery. Final Draft Report. February 2022. First Reassessment. <https://fisheries.msc.org/en/fisheries/chile-squat-lobsters-and-nylon-shrimp-camanchaca-demersal-trawl-fishery/@assessments>

<sup>7</sup>

fishing effort with a species concentration of the stock		
<b>Encounterability:</b> 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	High, off the coast of Peru, this species mainly exhibits pelagic habits <sup>9</sup>	3
<b>Selectivity of gear type:</b> Potential of the gear to retain species	Retained	3
<b>Post-capture mortality (PCM):</b> The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival	Retained	3
<b>Average productivity score</b>		1.62
<b>Average susceptibility score</b>		2.5
<b>PSA risk rating (from Table D(b))</b>		Pass
<b>Compliance rating</b>		Pass

## Further assessment for Category D species

Should the PSA indicate a high risk, further assessment shall be completed against the requirements D1 and D2 – Table D(c).

<b>D1</b>	<b>D1. The potential impacts of the fishery on this species are considered during the management process, and reasonable measures are taken to minimise these impacts.</b>
<b>Outcome</b>	Choose an item.
<b>Rationale</b>	N/A as the PSA does not indicate a high risk.
<b>References</b>	N/A

<b>D2</b>	<b>D2. There is no substantial evidence that the fishery has a significant negative impact on the species.</b>
<b>Outcome</b>	Choose an item.
<b>Rationale</b>	N/A
<b>References</b>	N/A

## Ecosystem requirements

This section, or module, assesses the impacts that the fishery under assessment may have on key ecosystem components: ETP species, habitat and the wider ecosystem.

- 2.1. All ecosystem criteria must be met (pass) for a fishery to pass the Ecosystem Requirements.
  - 2.1.1. The sub-criteria offer a structured evidence base to demonstrate that the fishery sufficiently meets the ecosystem criteria, it is not expected that sub-criteria are assessed independently of the main criterion.

### E1 Impact on Endangered, Threatened or Protected species (ETP species)

<b>E1.1</b>	<b>E1.1 Information on interactions between the fishery and ETP species is collected.</b>
	E1.1.1 ETP species which may be directly affected by the fishery have been identified.
	E1.1.2 Interactions between the fishery and ETP species are recorded and reported to management organisations.
	E1.1.3 Collection and analysis of ETP information is adequate to provide a reliable indication of the impact the fishery has on ETP species.
<b>Outcome</b>	<i>Pass</i>
<p><b>Rationale</b></p> <p>Peru operates two at-sea schemes that gather ETP interaction data in pelagic purse-seine fisheries: (i) the public observer programme run by IMARPE (Fishing Logbook Programme – PBP, in place since 1996) which documents fleet dynamics, discards/bycatch, resource distribution/structure and interactions with top predators [1]; and (ii) the private SALVAMARES programme (since 2017 under the anchovy FIP in the North-Central region) that trains crews to record ETP events and apply release practices; SNP and IMARPE signed a collaboration agreement in October 2017 for joint activities and workshops on ETP/bycatch [2]. These programmes identify likely ETP taxa (seabirds, marine mammals, sea turtles) and record/report interactions to IMARPE/SNP.</p> <p>In conclusion, there is no change since last surveillance: no new observer datasets specific to the Southern region were available beyond those used in the previous audit. The adequacy conclusion is therefore maintained pending datasets requested from PRODUCE/IMARPE (see Table 7 method note; data cut-off June 2025).</p>	
<p><b>References</b></p> <p>[1] Joo, R., Grados, D., Bouchon, M., &amp; Diaz, E. 2016. Optimum sample size for observers in the Peruvian anchovy fishery. <i>Revista Peruana de Biología</i> 23(2):169–182. <a href="http://www.scielo.org.pe/scielo.php?script=sci_arttext&amp;pid=S1727-99332016000200009">http://www.scielo.org.pe/scielo.php?script=sci_arttext&amp;pid=S1727-99332016000200009</a></p> <p>[2] CeDePesca. 2023. <i>Peruvian Anchovy (Indirect Human Consumption)</i> – SALVAMARES description. <a href="https://cedepesca.net/proyectos/peruvian-anchovy-indirect-human-consumption/">https://cedepesca.net/proyectos/peruvian-anchovy-indirect-human-consumption/</a></p>	
<b>E1.2</b>	<b>E1.2 The fishery has no significant negative impact on ETP species.</b>
	E1.2.1 The information collected in relation to E1.1.3 indicates that the fishery does not have a significant negative impact on ETP species.
<b>Outcome</b>	<i>Pass</i>

### Rationale

Public information specific to the Southern anchovy fishery remains limited; most available datasets refer to Peru’s industrial anchovy fishery as a whole (including the North-Central region) or to the Chilean industrial fleet operating on the same stock unit. In 2023, IMARPE reported increased seabird interactions (e.g., guanay cormorant *Leucocarbo bougainvillorum*, Peruvian booby *Sula variegata*, Peruvian pelican *Pelecanus thagus*, Inca tern *Larosterna inca*, sooty shearwater *Ardenna grisea*) with dead or moribund individuals on hoppers, attributing this mainly to H5N1 effects and the 2023–2024 coastal El Niño which reduced anchovy availability and led weakened birds to attempt feeding on fishing gear [1][2–6]. For Season 2022-II (North-Central), the Fishing Atlas (SNP) reported releases of 1,144 birds, 1,103 sea lions and 82 cetaceans, and no turtle interactions [7]. In the private programme, 70,670 bird and 7,600 mammal interactions were recorded in 2022-II, with >99% indirect interactions and very low mortality (birds 0.14%, mammals 0.17%) (Figure E1.2.1) [8]. For the Chilean industrial fleet in the northern zone (2017–2021; 4,026 observed sets), sea lions dominated interactions, with low mortality (0.16%); in Arica–Parinacota, guanay cormorant accounted for most coastal bird captures and mortality; marine reptiles were ~1% of captures (Figure E1.2.2) [9].

Across sources, mortality rates are low and dominated by non-lethal events. No change since last surveillance: we did not receive newer Southern-region observer/bycatch datasets; therefore, bycatch/ETP conclusions remain provisional consistent with Table 7’s method note. With the evidence available, the fishery is assessed as having no significant negative impact on ETP species.

ESPECIE	Interacción indirecta (No sufrieron daños)			Interacción directa (Sufrieron daños)						Eventos (Sufrieron daños)				Total Individuos	Frecuencia de Ocurrencia
	Se encontraban presentes durante toda la faena, pero no sufrieron ningún daño.			Antes		Durante		Después		Estado en el que quedaron los individuos después de sufrir daños					
				Mientras se extiende el cerco		Cuando se inicia el cierre del cerco y se procede a llevar la red a bordo		Cuando la red se encuentra a bordo y empieza a avanzar la captura hasta que se termina la faena							
	I-M/S	I-P/E	I-A/E	D-A1	D-D1	D-D2	D-Ds1	P-C1	P-C2	P-C3	P-C5				
Albatros de las Galápagos - <i>Phoebastria irrorata</i>	1,401		820			1			1					2,222	32.85%
Cormorán guanay/Guanay - <i>Phalacrocorax bougainvillii</i>	650		85		3				3					738	13.50%
Fragata magnífica - <i>Fregata magnificens</i>	68	49	54											171	5.47%
Gaviota de Sabine - <i>Xema sabini</i>	116													116	1.46%
Gaviota de Franklin - <i>Leucophaea pipixcan</i>	16,143		6,885		8				8					23,044	47.81%
Gaviota dominicana - <i>Larus dominicanus</i>	287	10	260											557	17.15%
Gaviota indet.	22		10											32	0.36%
Gaviota indet. <i>Larus sp.</i>	29													29	2.19%
Gaviota peruana - <i>Larus belcheri</i>	1,365	14	482											1,861	16.42%
Gaviotín común - <i>Sterna hirundo</i>	1		5											6	0.73%
Gaviotín elegante - <i>Sterna elegans</i>	1													1	0.36%
Gaviotín peruano - <i>Sterna lorata</i>	2,162	5	1,770											3,937	6.20%
Golondrina de mar acorallada - <i>Oceanodroma hornbyi</i>	46													46	1.46%
Golondrinas de mar - <i>Hydrobates sp.</i>			14					1						15	2.19%
Págalo pomarino - <i>Stercorarius pomarinus</i>	169		20								1			189	5.47%
Pardela común /gris - <i>Puffinus griseus</i>	1,371		189											1,560	25.55%
Pardela de pata rosada - <i>Puffinus creatopus</i>	3		3											6	0.73%
Pardela indet.	13													13	1.46%
Pelicano peruano - <i>Pelecanus thagus</i>	1,984		942	1	2				1			2		2,929	34.31%
Petrel de mentón blanco - <i>Procellaria aequinoctialis</i>	1													1	0.36%
Petrel indet.	3													3	0.73%
Piquero de pata azul - <i>Sula nebouxi</i>	5,996		3,414		172	1	2		74		21	80		9,585	10.95%
Piquero peruano - <i>Sula variegata</i>	1,659	15	613	3	7		2		10	2				2,299	22.99%
Potayunco - <i>Pelecanoides garnotii</i>	536		2											538	4.74%
Zarcillo - <i>Larosterna inca</i>	13,844	35	6,893											20,772	33.94%
<b>Total de individuos</b>	<b>47,870</b>	<b>128</b>	<b>22,469</b>	<b>4</b>	<b>192</b>	<b>7</b>	<b>5</b>	<b>97</b>	<b>7</b>	<b>22</b>	<b>82</b>	<b>70,670</b>			
Delfín - Delfín indet.	82							6			6			88	2.19%
Delfín común - <i>Delphinus capensis</i>	354		43			4					4			401	4.74%
Delfín nariz de botella - <i>Tursiops truncatus</i>	14		25											39	0.73%
Delfín oscuro - <i>Lagenorhynchus obscurus</i>	70					11			1		10			81	1.46%
Lobo chusco - <i>Otaria byronia</i>	853		5,962		123	7	20		12	76		62		6,965	79.93%
Lobo indeterminado			26											26	1.09%

Figure E1.2.1. Example summary of bird/mammal interactions from the private onboard observer programme in 2022-II(anchovy CHI, Peru): >99% indirect interactions; mortality <0.2%. Source: [8].

Nombre común	Nombre Científico	Captura	Muertos	Mort (%)	CIP	CV <sub>CIP</sub>	MIP	CV <sub>MIP</sub>
Lobo Marino Común	<i>Otaria flavescens</i>	5708	9	0,16	1,42	351,5	0,002	2112,9
Fardela negra	<i>Ardenna grisea</i>	568	390	68,7	0,14	3513,1	0,10	3450,2
Guanay	<i>Phalacrocorax bouganvilli</i>	452	420	92,9	0,11	4125,4	0,10	4407,5
Delfin común	<i>Delphinus delphis</i>	72	23	31,9	0,02	2255,2	0,006	2571,5
Piqueros	<i>Sula variegata</i>	71	59	83,1	0,02	2166,8	0,015	2366,6
Gaviotín morja	<i>Larosterna inca</i>	61	0	0	0,02	6241,9	0	-
Delfin oscuro	<i>Lagenorhynchus obscurus</i>	56	38	67,9	0,01	2611,8	0,009	2701,2
Pelicano peruano	<i>Pelecanus thagus</i>	31	17	54,8	0,008	2154,4	0,004	2268,4
Delfin sin especificar	-	15	0	0	0,004	6345,1	0	-
Pingüino de Humboldt	<i>Spheniscus humboldti</i>	12	1	8,3	0,003	2478,4	0,0002	6345,1
Fardela Blanca	<i>Ardenna creatopus</i>	8	8	100	0,002	6345,1	0,002	6345,1
Gaviota garuma	<i>Leucophaeus modestus</i>	6	6	100	0,001	6345,1	0,001	6345,1
Delfin nariz de botella	<i>Tursiops truncatus</i>	4	4	100	0,001	6345,1	0,001	6345,1
Yeco	<i>Phalacrocorax bouganvilli</i>	4	4	100	0,001	6345,1	0,001	6345,1
Tortuga verde	<i>Chelonia mydas</i>	3	0	0	0,001	3662,4	0	-
Tortuga olivácea	<i>Lepidochelys olivacea</i>	3	0	0	0,001	3662,4	0	-
Gaviota de Franklin	<i>Larus pipixcan</i>	2	2	100	0,000	6345,1	0,0005	6345,1
Tortuga Laúd	<i>Dermochelys coriacea</i>	2	0	0	0,000	4486,1	0	-
Albatro Ceja negra	<i>Thalassarche melanophris</i>	1	1	100	0,0002	6345,1	0,0002	6345,1
Tortuga cabezona	<i>Caretta caretta</i>	1	0	0	0,0002	6345,1	0	-
Lobo fino austral	<i>Arctocephalus australis</i>	1	0	0	0,0002	6345,1	0	-

Mort (%) = Mortalidad = Número de animales muertos/Número de animales capturados  
 Captura Incidental Promedio (CIP) = Número de animales capturados/Número de lances observados  
 Coeficiente de Variación Captura Incidental Promedio (CV<sub>CIP</sub>)  
 Mortalidad Incidental Promedio (MIP) = Número de animales muertos/Número de lances observados  
 Coeficiente de Variación Tasa Mortalidad Incidental (CV<sub>MIP</sub>)

**Figure E1.2.2.** Incidental capture and mortality by species in Chile’s industrial purse-seine fleet operating on anchovy in the northern zone (2017–2021, 4,026 observed sets). Source: [9].

**References**

[1] IMARPE. 2023. *Exploratory anchovy fishing report – North-Central region (03–07 June 2023)*.  
 [2] BirdLife International. 2018. *Leucocarbo bougainvilliorum* (NT).  
 [3] BirdLife International. 2018. *Sula variegata* (LC).  
 [4] BirdLife International. 2018. *Pelecanus thagus* (NT).  
 [5] BirdLife International. 2019. *Ardenna grisea* (NT).  
 [6] BirdLife International. 2018. *Larosterna inca* (NT).  
 [7] Fishing Atlas. 2023. *Anchoveta fishery – Salvamar programme* (releases for Season 2022-II).  
 [8] Report. 2022. *Private onboard observer programme – Peruvian anchovy CHI, North-Central stock, Season 2022-II*.  
 [9] IFOP. 2023. *Programme for discard and incidental catch monitoring in pelagic fisheries, 2022–2023* (industrial purse-seine fleet, northern Chile)

<b>E1.3</b>	<b>E1.3 There is an ETP management strategy in place for the fishery.</b>
	E1.3.1 There are measures applied to the fishery which are designed to manage the impacts of the fishery on ETP species.
	E1.3.2 The measures are considered likely to achieve the objectives of regional, national and international legislation relating to ETP species.
<b>Outcome</b>	<i>Pass</i>
<b>Rationale</b>	
<p>Key measures include: national prohibitions on possession/transport/trade of protected fauna; near-shore spatial restrictions for industrial indirect human consumption ('CHI') fleets (protecting guano-islands habitats); MPAs (Islands, Islets and Points of Guaneras; Paracas; San Fernando); temporal/area measures (juveniles, seasons); and IMARPE's dedicated Top Predators office (abundance, diet, reproduction, at-sea surveys) [1]. Under the anchovy FIP, SALVAMARES provides observer-like ETP recording, on-board mitigation/release training, and release kits; some companies use pingers to deter dolphins (company-level practice, not a fishery-wide requirement) [1]. These measures remain in force and are consistent with national/international ETP objectives. No change since last surveillance.</p>	
<b>References</b>	
<p>[1] FishChoice. 2019. <i>Three-Year Audit Template – Peruvian Anchovy IHC FIP</i> (summary of ETP measures, MPAs, and programme actions). <a href="https://fisheryprogress.org/sites/default/files/indicators-documents/Peruvian Anchovy IHC FIP Review 2019 GB2338 5.pdf#overlay-context=node/3546/actions-progress">https://fisheryprogress.org/sites/default/files/indicators-documents/Peruvian Anchovy IHC FIP Review 2019 GB2338 5.pdf#overlay-context=node/3546/actions-progress</a></p>	

## E2 Impact on the habitat

<b>E2.1</b>	<b>E2.1 Information on interactions between the fishery and marine habitats is collected.</b>
	E2.1.1 Habitats which may be directly affected by the fishery have been identified, including any habitats which may be particularly vulnerable.
	E2.1.2 Information on the scale, location and intensity of fishing activity relative to habitats is collected.
	E2.1.3 Collection and analysis of habitat information is adequate to provide a reliable indication of the impact the fishery has on marine habitats.
<b>Outcome</b>	<i>Pass</i>
<b>Rationale</b>	
<p>No change since last surveillance. The fishery operates in the same area with the same gear (purse seine). Spatial information on fishing activity continues to be collected through VMS, which is mandatory under PRODUCE Decrees No. 10/2010, No. 5/2012 and No. 01/2013 (industrial fleets). The near-shore zone is recognised as important for reproduction and nursery of multiple coastal species; amendments to Law No. 25,977 (LGP) strengthened protections within the first five nautical miles along the coast, where industrial fishing has long been restricted. Physical habitat impacts are primarily associated with bottom-contact gears [1]. By definition, pelagic purse seines do not contact the seabed and therefore do not directly disturb benthic habitats [1]. Given the fishery's gear/area and the continued availability of VMS effort/footprint data, the information collected is adequate to indicate habitat interactions and potential risks.</p>	
<b>References</b>	
<p>[1] ICES. 2006. Report of the Working Group on Ecosystem Effects of Fishing Activities (WGECO). ICES CM 2006/ACE:05. 174 pp. <a href="https://www.ices.dk/sites/pub/CM%20Documents/2006/ACE/WGECO06.pdf">https://www.ices.dk/sites/pub/CM%20Documents/2006/ACE/WGECO06.pdf</a></p>	

E2.2	<b>E2.2 The fishery has no significant impact on marine habitats.</b>
	E2.2.1 The information collected in relation to E2.1.3 indicates that the fishery does not have a significant negative impact on marine habitats.
<b>Outcome</b>	<i>Pass</i>
<p><b>Rationale</b></p> <p>No change since last surveillance. Habitat impacts are linked to seafloor contact by bottom gears [1]. Purse seines are pelagic gears and, under normal operation, do not contact the seabed; consequently, they are not expected to exert direct physical impacts on benthic habitats [1][2]. For contextual evidence from the North-Central anchovy purse-seine fleet, the SALVAMARES programme reported only a low proportion of sets with seabed contact in shallow inlets (~5% of total inlets fished) [3]. This supports the conclusion that the fishery’s impact on habitat is not significant.</p>	
<p><b>References</b></p> <p>[1] ICES. 2006. WGECO Report. <a href="https://www.ices.dk/sites/pub/CM%20Documents/2006/ACE/WGECO06.pdf">https://www.ices.dk/sites/pub/CM%20Documents/2006/ACE/WGECO06.pdf</a></p> <p>[2] Grieve, C., Brady, D.C. &amp; Polet, H. 2014. Best practices for managing, measuring and mitigating the benthic impacts of fishing – Part 1. MSC Science Series 2:18–88. <a href="https://repository.oceanbestpractices.org/bitstream/handle/11329/614/Grieve%20et%20al%202015.pdf?sequence=2">https://repository.oceanbestpractices.org/bitstream/handle/11329/614/Grieve%20et%20al%202015.pdf?sequence=2</a></p> <p>[3] SALVAMARES. 2019. Onboard observer reports. Report No. 3 (2019). <a href="https://cedepesca.net/wp-content/uploads/2020/01/2019-10-16_Report-of-the-Private-Observer-Program-on-board.pdf">https://cedepesca.net/wp-content/uploads/2020/01/2019-10-16_Report-of-the-Private-Observer-Program-on-board.pdf</a></p> <p><a href="https://cedepesca.net/wp-content/uploads/2017/09/2017_PROM-ede-anchoveta-CHI_Manual-de-observadores.pdf">https://cedepesca.net/wp-content/uploads/2017/09/2017_PROM-ede-anchoveta-CHI_Manual-de-observadores.pdf</a></p> <p><a href="https://fisheryprogress.org/sites/default/files/indicators-documents/Anchoveta%20CHI_FisheryProgress_Three_Year_Evaluation_Template_dic_23_4.pdf">https://fisheryprogress.org/sites/default/files/indicators-documents/Anchoveta%20CHI_FisheryProgress_Three_Year_Evaluation_Template_dic_23_4.pdf</a></p>	

<b>E2.3</b>	<b>E2.3 There is a habitat management strategy in place for the fishery.</b>
	<i>In reaching a determination for E2.3, the assessor should consider if the following is in place:</i>
	E2.3.1 There are measures applied to the fishery which are designed to manage the impact of the fishery on marine habitats.
	E2.3.2 The measures are considered likely to prevent the fishery from having a significant negative impact on marine habitats.
<b>Outcome</b>	<i>Pass</i>
<b>Rationale</b>	
<p>No change since last surveillance. Peru has adopted a suite of spatial and gear-use measures to protect coastal habitats within the first five nautical miles, including:</p> <ul style="list-style-type: none"> <li>• Prohibiting large-scale fishing inside 5 nm;</li> <li>• Prohibiting mechanised purse seiners within the first 3 nm; and</li> <li>• Requiring the authority to approve a list of allowable gears that exclude habitat-harmful gears [1].</li> </ul> <p>Additionally, Supreme Decree 012-2001-PE forbids use of the “antifango” device that disturbs the seabed in shallow waters [2]. The country maintains MPAs (Paracas National Reserve; Guano Islands and Capes National Reserve; San Fernando National Reserve). VMS is mandatory (PRODUCE Decrees No. 10/2010, No. 5/2012, No. 01/2013), and electronic/radio logbooks are required under DS 024-2016-PRODUCE [3]. Violations (e.g., entry into MPAs) are prosecuted and results published by PRODUCE. Given that the fishery is epipelagic and bottom contact is limited, these measures are likely to prevent significant habitat impacts.</p>	
<b>References</b>	
<p>[1] OCEANA. 2023. Peru passes important ocean protection law to protect the first five nautical miles at sea.</p> <p>[2] MBA. 2023. Note on the prohibition of the “antifango” device (Supreme Decree 012-2001-PE).</p> <p>[3] PRODUCE. 2016. DS 024-2016-PRODUCE – Measures to strengthen control and monitoring of the anchovy fishery.</p>	

## E3 Impact on the ecosystem

<b>E3.1</b>	<b>E3.1 Information on the potential impacts of the fishery on marine ecosystems is collected.</b>
	E3.1.1 The main elements of the marine ecosystems in the area(s) where the fishery takes place have been identified.
	E3.1.2 The role of the species caught in the fishery within the marine ecosystem is understood, either through research on this specific fishery or inferred from other fisheries.
	E3.1.3 Collection and analysis of ecosystem information is adequate to provide a reliable indication of the impact the fishery has on marine ecosystems.
<b>Outcome</b>	<i>Pass</i>
<b>Rationale</b>	
<p>No change since last surveillance. The ecosystem context of the Northern Humboldt (HCLME) and anchovy’s sensitivity to ENSO-driven variability are well described, including regime shifts among low-trophic-level species (anchovy/sardine) across the system [1]. IMARPE’s ecosystem work documents anchovy’s role as a key prey item for birds, mammals and fishes and integrates environmental monitoring (temperature, plankton) from hydrographic surveys into stock assessment and ecosystem analyses [2][3]. Additional ecosystem relationships were synthesized in CeDePesca’s “<i>fichas de impacto</i>” for bycatch and protected species [4]. Together, these provide identified ecosystem components, functional roles and routine data collection adequate to indicate potential ecosystem impacts.</p>	
<b>References</b>	
<p>[1] Cubillos, L., Serra, R., Fréon, P. 2007. Synchronous fluctuation patterns in Humboldt anchovy fisheries. <i>Aquatic Living Resources</i> 20:69–75. <a href="https://horizon.documentation.ird.fr/exl-doc/pleins_textes/2024-12/010037989.pdf">https://horizon.documentation.ird.fr/exl-doc/pleins_textes/2024-12/010037989.pdf</a></p>	
<p>[2] IMARPE. 2020. <i>Ecosystem impacts of fishing the low trophic level Peruvian anchovy in the Northern Humboldt Current Ecosystem</i>. <a href="https://cedepesca.net/wp-content/uploads/2021/01/Tam-Ecosystem-impacts-2020.pdf">https://cedepesca.net/wp-content/uploads/2021/01/Tam-Ecosystem-impacts-2020.pdf</a></p>	
<p>[3] FishChoice. 2019. <i>Three-Year Audit Template – Peruvian Anchovy IHC FIP</i>.</p>	
<p>[4] CeDePesca. 2017. <i>Fichas de impacto de la pesquería de anchoveta sobre especies de by-catch y protegidas</i>. <a href="https://cedepesca.net/wp-content/uploads/2018/04/CeDePesca_Fichas-de-impacto-de-la-pesquería-de-anchoveta-2017-11-29.pdf">https://cedepesca.net/wp-content/uploads/2018/04/CeDePesca_Fichas-de-impacto-de-la-pesquería-de-anchoveta-2017-11-29.pdf</a></p>	

<b>E3.2</b>	<b>E3.2 There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.</b>
	E3.2.1 The information collected in relation to E3.1.3 indicates that the fishery does not have a significant negative impact on marine ecosystems.
<b>Outcome</b>	<i>Pass</i>
<b>Rationale</b>	
<p>No change since last surveillance. CeDePesca’s 2017 synthesis concluded dietary needs of dependent predators had been met in recent years, indicating no adverse influence on recovery attributable to the anchovy fishery [1]. IMARPE’s HCLME ecosystem modelling indicates that, at the status-quo fishing mortality and depletion level evaluated for the Northern-Central anchovy stock, impacts on other species and trophic groups remain below the thresholds tested (<math>\leq 40\%</math> change for <math>&gt;85\%</math> of groups; no group reduced <math>&gt;70\%</math>), and principal predators/consumers of anchovy are identified (e.g., guano birds, sea lions, pelagics) [2]. Coupled with findings in E1 (low ETP mortality) and E2 (no significant habitat impact for pelagic purse seines), the available evidence indicates no substantial ecosystem-level negative impact from this fishery.</p>	
<b>References</b>	
<p>[1] CeDePesca. 2017. Fichas de impacto de la pesquería de anchoveta sobre especies de by-catch y protegidas. <a href="https://cedepesca.net/wp-content/uploads/2018/04/CeDePesca_Fichas-de-impacto-de-la-pesquer%C3%ADa-de-anchoveta-2017-11-29.pdf">https://cedepesca.net/wp-content/uploads/2018/04/CeDePesca_Fichas-de-impacto-de-la-pesquer%C3%ADa-de-anchoveta-2017-11-29.pdf</a></p> <p>[2] IMARPE. 2020. <i>Ecosystem impacts of fishing the low trophic level Peruvian anchovy in the Northern Humboldt Current Ecosystem.</i> <a href="https://cedepesca.net/wp-content/uploads/2021/01/Tam-Ecosystem-impacts-2020.pdf">https://cedepesca.net/wp-content/uploads/2021/01/Tam-Ecosystem-impacts-2020.pdf</a></p>	

<b>E3.3</b>	<b>E3.3 There is an ecosystem management strategy in place for the fishery.</b>
	E3.3.1 There are measures applied to the fishery which are designed to manage the impacts of the fishery on marine ecosystems.
	E3.3.2 The measures are considered likely to prevent the fishery from having a significant negative impact on marine ecosystems.
<b>Outcome</b>	<i>Pass</i>
<b>Rationale</b>	
<p>No change since last surveillance. Ecosystem-relevant safeguards include: coastal MPAs around guano-bird and marine-mammal habitats; near-shore restrictions that limit industrial activity in sensitive areas; and IMARPE’s Top Predators research programme (abundance, diet, reproduction; at-sea surveys of birds/cetaceans) [1]. Within the fishery-specific system, LMTCP settings are responsive to stock status and environmental information via IMARPE’s decision tables; real-time monitoring of juveniles and bycatch supports rapid area closures when thresholds are exceeded, and release/mitigation practices are promoted under the FIP framework [1]. In combination, these measures constitute an ecosystem-oriented strategy likely to prevent significant negative ecosystem impacts.</p>	
<b>References</b>	
<p>[1] FishChoice. 2019. <i>Three-Year Audit Template – Peruvian Anchovy IHC FIP.</i> <a href="https://fisheryprogress.org/sites/default/files/indicators-documents/Peruvian%20Anchovy%20IHC%20FIP%20Review%202019%20GB2338%205.pdf#overlay-context=node/3546/actions-progress">https://fisheryprogress.org/sites/default/files/indicators-documents/Peruvian Anchovy IHC FIP Review 2019 GB2338 5.pdf#overlay-context=node/3546/actions-progress</a></p>	

## Annex 1: External Peer Review report

### Assessment and determination summary

<b>Fishery name</b>	Anchovy ( <i>Engraulis ringens</i> ) in FAO 87, from 16° south to Peru southern border
<b>MarinTrust report code</b>	WF13
<b>Type 1 species (common name, Latin name)</b>	Anchovy ( <i>Engraulis ringens</i> )
<b>Fishery location</b>	FAO 87, from 16° south to Peru southern border
<b>Gear type(s)</b>	Purse seine (industrial fleet)
<b>Management authority (country/state)</b>	Peru Ministry of Production (PRODUCE)
<b>Certification Body recommendation</b>	Approved
<b>FAPRG reviewer recommendation</b>	Agree with CB determination

### Summary of peer review outcomes

<p><b>Summary</b></p> <p><i>Provide any information about the fishery that the reviewers feel is significant to their decision. This summary is used by the Certification Body in the Fishery Assessment Report.</i></p>
<p>Chilean jack mackerel is not data deficient, all landings in the industrial and artisan fleets are reported detailed. Then, carrot squat lobster is an assessed species by Imarpe since 1995 although there is no a dedicated fishery on this specie, so it is a category C specie, not D.</p> <p>I agree with almost all the report. But it is necessary to highlight that biomass and landings (and quotas) have decreased in recent years. Furthermore, changes in the habitat have conducted to a reduction of primary (phytoplankton) and secondary (zooplankton) production, with impact on the normal growth of anchovy, which reduced its maximum size from 17-18 cm to 12-13 both in southern Peru and northern Chile. A bibliographic review shown that this phenomenon has occurred in the past. Also it is necessary to highlight that under the frame of the UNDP-GEF Humboldt II Project both Peru (IMARPE) and Chile (IFOP) have strengthened the cooperation toward a at least compatible management of this shared stock in order to avoid the danger of managing separately a common resource. The first joint acoustic assessment survey has been programmed for December 2025, then also for first time there will be a biomass report of anchovy and other species in all its range of distribution. The ultimate goal of the project is to keep a close coordination between IMARPE and IFOP in the long term to manage shared stocks (not only anchovy) After reading the certification body response I understand red squat lobster is a category D species.</p>

**General comments on the draft report provided to the peer reviewer**

Thank for this information, I have incorporated most of them in the report, except the suggested change to category of carrot squat lobster to C. I still believe it should be assessed under category D as a restriction on the bycatch of this species does not imply on having species-specific management regime in place, which is the main criteria for being assessed under category C, following clauses 1.4.2.2 and 1.4.2.3 of MarinTrust Whole fish fishery assessment criteria Version 3.1(<https://www.marin-trust.com/sites/marintrust/files/2024-04/STG-007%20-%20MarinTrust%20Whole%20fish%20fishery%20assessment%20criteria%20V3.01.pdf>).

1. Has the fishery assessment been fully completed, using the recognised MarinTrust fishery assessment methodology and associated guidance?	Yes
2. Does the Species Categorisation section of the report reflect the best current understanding of the catch composition of the fishery?	See notes
3. Are the scores in the following sections consistent with the MarinTrust requirements (i.e. do the scores reflect the evidence provided)?	Yes
Section M – Management Requirements	See notes
Category A Species	Yes
Category B Species	n/a
Category C Species	Yes
Category D Species	See notes
Section E – Ecosystem Impacts	Yes

## Detailed Peer Review Justification

1. Has the fishery assessment been fully completed, using the recognised MarinTrust fishery assessment methodology and associated guidance?	Yes
scoring agreed	
Certification Body response	
OK	

2. Does the species categorisation section of the report reflect the best current understanding of the catch composition of the fishery?	No
red squat lobster is a C species since it is a species continuously monitored (since 1995) although there is no a dedicated fishery on it. After reading the certification body response I understand red squat lobster is a category D species.	
Certification Body response	
I disagree. The restrictions on the catches of this species and the monitoring of the catches are robust management measures to considered that there is a species-specific management regime in place for being assessed under category C, which is the main criteria for this category according to clauses 1.4.2.2 and 1.4.2.3 of MarinTrust Whole fish fishery assessment criteria Version 3.1( <a href="https://www.marin-trust.com/sites/marintrust/files/2024-04/STG-007%20-%20MarinTrust%20Whole%20fish%20fishery%20assessment%20criteria%20V3.01.pdf">https://www.marin-trust.com/sites/marintrust/files/2024-04/STG-007%20-%20MarinTrust%20Whole%20fish%20fishery%20assessment%20criteria%20V3.01.pdf</a> ).	

3. Is the scoring of the fishery consistent with the MarinTrust requirements, and clearly based on the evidence presented in the assessment report?	Yes
Certification Body response	
OK	

3a. Are the “Category A Species” scores clearly justified?	Yes
Certification Body response	
OK	

3b. Are the “Category B Species” scores clearly justified?	n/a
Certification Body response	
OK	

3c. Are the “Category C Species” scores clearly justified?	Yes
Certification Body response	
OK	

3d. Are the “Category D Species” scores clearly justified?	No
see my notes above regarding red squat lobster	
Certification Body response	

Are the scores in “Section M – Management Requirements” clearly justified?	Yes
Certification Body response	
OK	

Are the scores in “Section E – Ecosystem Impacts” clearly justified?	Yes
Certification Body response	
OK	

Optional: General peer reviewer comments on the draft report	
I agree with most of the content of the report with exception of red squat lobster (it is high abundance specie, the second in importance in the coastal area after anchovy) because there are regulations that permit by catch of non target species of 5% in volume of vessels' holds. However, it is true that there are no specific species-level management regime with reference points for this crustacean. After reading the certification body response I understand red squat lobster is a category D species.	
Certification Body response	
I understand that there is long-term scientific monitoring by IMARPE and regulations for this species. However, I do not agree that this species should be assessed under category C as there is no dedicated stock assessment with formal biomass reference points and I do not believe that a restriction on bycatch of non target species is a robust measure to consider that there is a species-specific management regime in place, which is the main requirement for being assessed under this category according with the following clauses of MarinTrust Whole fish fishery assessment criteria Version 3.1( <a href="https://www.marin-trust.com/sites/marintrust/files/2024-04/STG-007%20-%20MarinTrust%20Whole%20fish%20fishery%20assessment%20criteria%20V3.01.pdf">https://www.marin-trust.com/sites/marintrust/files/2024-04/STG-007%20-%20MarinTrust%20Whole%20fish%20fishery%20assessment%20criteria%20V3.01.pdf</a> ) : "1.4.2.2. If a species-specific management regime is in place for a Type 2 species, it shall be assessed under Category C. 1.4.2.3. If there is no species-specific management regime in place for a Type 2 species, it shall be assessed under Category D."	