MarinTrust Whole fish fishery assessment report

Chile - Trachurus murphyi - Jack mackerel/Jurel - FAO 87, Chilean EEZ Regions XV-X

Reapproval
WF08

Table 1: Whole fish fishery assessment scope

Fishery name	**Chile - *Trachurus murphyi* - Jack mackerel/Jurel - FAO 87, Chilean EEZ Regions XV-X**
MarinTrust report code	**WF08**
Type 1 species	Jack mackerel/*jurel* (*Trachurus murphyi*)
Fishery location	FAO 87, Chilean EEZ Regions XV-X
Gear type(s)	Purse seine
Management authority	South Pacific Regional Fisheries Management Organisation (SPRFMO) and Chilean Undersecretary of Fisheries and Aquaculture (SUBPESCA) (Chile)

Table 2: Applicant and Certification Body details

Application details			
Applicant(s)	Coquimbo (Orizon SA); Industrias Isla Quihua SA (Alimentos Marinos SA); Pesquera Bahia Caldera, Graneros SA (Fiordo Austral); Coronel (Orizon SA); Iquique (Compañia Pesquera Camanchaca SA);Sociedad Pesquera Landes SA; Glaciares SA (Fiordo Austral); Lota Protein; Salmonoil SA (Fiordo Austral); Coronel (Camanchaca Pesca Sur SA); San Vincente; Mejillones (Corpesca SA); Pesquera Fiordo Austral SA; Arica (Corpesca SA); Corral (Blumar SA); Coronel (Blumar SA); Iquique Sur (Corpesca SA); FoodCorp Chile SA		
Applicant country	Chile		
Certification Body details			
Name of Certification Body	NSF / Global Trust Certification Ltd		
Contact Information for CB	Fisheries@nsf.org		
Fishery Assessor name	Ana Elisa Almeida Ayres		
CB Peer Reviewer name	Matthew Jew		
Number of assessment days	4	**Assessment period**	06/2024 – 06/2025

Table 3: Assessment outcome

Assessment outcome (See Table 4 for a summary of assessment determination)		Approved
Approval validity	Valid from: *06/2025*	Valid until*: 06/2026*
CB peer reviewer evaluation		*Agree with assessment determination*
Fishery Assessment Peer Review Group external peer reviewer evaluation		*Agree with assessment determination*

Table 4: Assessment determination

Assessment determination: Summary of assessment and outcome
The purse seine Jack mackerel (Trachurus murphyi) fishery in Chile is considered as monospecific. According to the observer data presented in the latest report of the research and monitoring program on discards and bycatch in Chilean pelagic fisheries, from 2018-2023, Jack mackerel represented ~99.8% of the total estimated catch for the fishery in the north-center (regions III-IV), and south-center (V-X) Chile, followed by Pacific chub mackerel (Scomber japonicus) that reaches about <0.2% of the catches. There is a Total Allowance Catch (TAC) for Jack mackerel stablished by the Chilean Undersecretary of Fisheries and Aquaculture (SUBPESCA), who, as a Commission Member of the South Pacific Regional Fisheries Management Organisation (SPRFMO), adheres to the established regulations supported by the Jack Mackerel Science Working Group of the Commission. Therefore, Jack mackerel was assessed as the only Category A species. The chub mackerel was assessed as a Category D species, and its catch is not regulated. There is a robust management framework for the Jack mackerel fishery in Chile, which is supported by scientific committees at national and international level. Compliance with this framework is monitored and when irregularities are identified sanctions are established. Therefore, the fishery is considered to have an effective management system in place. Dependent and independent fishery survey data are frequently collected to update the stock assessment data annually, revise the established TAC and improve the harvest control Rule or if necessary, set a fishery prohibition of the Jack mackerel stock. The last assessment carried out in 2024 showed that estimated stock biomass of Jack mackerel is well above BMSY and fishing mortality is well below FMSY. The exploitation status of Jack mackerel in the eastern South Pacific is under exploited and no overfishing is happening. In the Productivity-Susceptibility Analysis - PSA, chub mackerel was awarded an average productivity score of 1.29 and an average susceptibility score of 2, and it passed against Table D3, indicating that the species is not vulnerable to this fishery. According to available information, the negative effect of the fishery on ETP species is practically null, since measures are in place to minimize mortality. The jack mackerel fishery does not affect the habitat either, since purse seine do not interact with any physical habitat. Fishery management framework, national and international, consider an ecosystem approach to ensure the long-term conservation and sustainable use of the resources while safeguarding the marine ecosystems. In September 2024, the Chilean Jack mackerel industrial purse seine fishery continued to meet the requirements of the Marine Stewardship Council (MSC) Fisheries Standard and the fishery remains certified. The Year 4 surveillance report was published in September 2024 (available here: https://fisheries.msc.org/en/fisheries/chilean-Jack-mackerel-industrial-purse-seine-fishery/@@assessments) and the fishery is currently ongoing its reassessment. The Jack mackerel fishery in the FAO 87, Chilean EEZ Regions XV-X, passed all the Marin Trust requirements, therefore its approval is recommended to be used as a raw material in Marine Trust certified products.

Summary of CB peer review	The internal peer reviewer agrees with the assessor's determination of PASS for this fishery, noting that the management framework and surveillance, control and enforcement systems continue to meet the requirements of the MarinTrust Standard. The assessor has addressed any and all comments provided during the internal peer review process. Proper categorizations of Category A and D species were made. Thes species pass their respective clauses. The peer reviewer notes that further impacts on ETP, habitats and ecosystem have been evaluated and there is no evidence of significative impact of the fishery on these 3 components. They meet MT requirements. Therefore, the decision for approval under MarinTrust Wholefish v3.0 standard is supported by the CB.
Summary of external peer review (see Appendix 1 for the full peer review report)	This is a well reputed fishery which under the SPRFMO guidande and cooperation of several countries has overcome a difficult situation of overfishing in the 2000 - 2010 period. The country members of SPRFMO agreed an annual maximun increase of 15% of the TAC (total allowable catch) in years when population indexes (i.e. recruitment) shows suitable conditions. However the chilean delegation has proposed (Lima, 2024) to increase to 44% the 2025 TAC compared to 2024. Observations were made about CPUE might causing an artificial increase of the biomass. Finally it was recommend caution and a deep review of currrent knowledge before increasing the agreed 15%. The report is complete and provide a clear view of the current situation of this important fishery: "The last assessment carried out in 2024 (for this monospecific fishery) showed that estimated stock biomass of Jack mackerel is well above BMSY and fishing mortality is well below FMSY. The exploitation status of Jack mackerel in the eastern South Pacific is under exploited and no overfishing is happening". Furthermore "In September 2024, the Chilean Jack mackerel industrial purse seine fishery continued to meet the requirements of the Marine Stewardship Council (MSC) Fisheries Standard and the fishery remains certified"
Notes for on-site auditor	

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	Jack mackerel/*jurel* (*Trachurus murphyi)*	Pass
Category D	Pacific chub mackerel/*caballa* (*Scomber japonicus*)	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)
Jack mackerel/*jurel* (*Trachurus murphyi)*	FAO 87, Chilean EEZ Regions XV-X	No	Data Deficient	97.5%	Yes	A
Pacific chub mackerel/*caballa* (*Scomber japonicus*)	FAO 87, Chilean EEZ Regions XV-X	No	Least Concern	0.19%	No	D

Rationale

The species considered in this assessment are the Jack mackerel/*jurel* (*Trachurus murphyi*) and chub mackerel/*caballa* (*Scomber japonicus*) as in the Marine Trust Year 2 surveillance report published in June 2024.

According to the observer data presented in the latest report of the research and monitoring program on discards and bycatch in Chilean pelagic fisheries, from 2018-2023 (Vega et al 2024), Jack mackerel, the target species, represented ~99.8% of the total estimated catch for the fishery in the north-center (regions III-IV), and south-center (V-X) Chile, followed by chub mackerel that reaches about <0.2% of the catches (Table 1) and (Table 2) (Vega et al 2024).

Table 1. Total catch, average catch and catch of the accompanying fauna species with respect to the target species, Jack mackerel, during the period 2018-2023 in Jack Mackerel artisanal pelagic fishing in the central north zone (in the regions of Atacama -III and Coquimbo - IV). The number of trips demonstrated was n=136.

Nombre común	Captura total (t) 2018-2023	Captura media (t) 2018-2023 para la totalidad de viajes	Capt.especie v/s capt.objetivo
Jurel	5.966,638	43,872	
Caballa	1.066,012	7,840	0,17866
Sardina española	28,400	0,210	0,00476
Agujilla	6,000	0,044	0,00101
Bonito	0,200	0,001	0,00003

Table 2. Total catch, average catch and catch of the accompanying fauna species with respect to the target species, Jack mackerel, during the period 2018-2023 in Jack mackerel industrial pelagic fishing in the central south zone (in the regions of Valparaíso -V

and Los Lagos - X), including international waters. The number of trips demonstrated was n= 660.

Nombre común	Captura total (t) 2016-2022	Captura media (t) 2016-2022 para la totalidad de viajes	Capt.especie v/s capt.objetivo
Jurel	441.295,6803	668,6298	
Caballa	6.369,1913	9,6503	0,0144329
Sierra	341,465	0,5174	0,0007738
Jibia	279,512	0,4235	0,0006339
Pez medusa	113,879	0,1725	0,0002581
Agujilla	76,012	0,1152	0,0001722
Merluza común	50,300	0,0762	0,0001139
Reineta	25,784	0,0391	0,0000584
Medusa	7,230	0,0110	0,0000164
Besugo	1,383	0,0021	0,0000031
Merluza de cola	0,300	0,0005	0,0000007
Bonito	0,280	0,0004	0,0000006
Atún aleta larga	0,150	0,0002	0,0000003
Tiburón pejezorro	0,100	0,0001	0,0000002
Tiburón azulejo	0,076	0,0001	0,0000002
Albacora	0,070	0,0001	0,0000002
Atún listado	0,027	0,0000	0,0000001
Marrajo sardinero	0,024	0,0000	0,0000001
Tiburón marrajo	0,014	0,0000	0,0000000

The Jack Mackerel fishery has a species-specific management plan in place that uses defined reference points. A stock assessment is conducted annually by the Chilean Undersecretary of Fisheries and Aquaculture (SUBPESCA) to establish the annual total allowable catch (TAC). Jack mackerel has been classified as "Data Deficient" in the IUCN Red List (Smith-Vaniz et al. 2023) but is not included in any of the CITES appendices. This species was assessed under **Category A** in this assessment.

Pacific chub mackerel is not an ETP species; it is classified a "Least Concern" species in the IUCN Red List (Collett et al. 2023) and is not included in any of CITES appendices. The species stock status remains unknown and there are no reference points available for the species to allow for the fishery to be managed by any species-specific management system. Pacific chub mackerel was, therefore, assessed under **Category D** in this assessment.

References

Collette, B. B., Nakatsuka, S., & Suzuki, J. (2023). *Scomber japonicus.* The IUCN Red List of Threatened Species 2023: e.T170306A170083106. https://dx.doi.org/10.2305/IUCN.UK.2023-1.RLTS.T170306A170083106.en. Accessed on 27 May 2025.

Vega R., Ossa L., Suárez B., Jiménez M.F., Henríquez S., González A., Ojeda R., Le-Bert J., Simeone A., Anguita C., Hüne, M., Cari I., Zárate P. y D. Devia. 2024. Informe Final. Convenio de Desempeño 2021. Programa de observadores científicos: Programa de investigación y monitoreo del descarte y la captura de pesca incidental en pesquerías pelágicas, año 2023-2024. Subsecretaría de Economía Y EMT/Agosto 2024.

Smith-Vaniz, B., Robertson, R., & Dominici-Arosemena, A. (2010). *Trachurus murphyi.* The IUCN Red List of Threatened Species 2010: e.T183965A8207652. https://dx.doi.org/10.2305/IUCN.UK.2010-3.RLTS.T183965A8207652.en. Accessed on 27 May 2025.

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.

1.6. All management criteria must be met (pass) for a fishery to pass the Management requirements.

1.6.1. 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

M1.1	**M1.1 There is an organisation responsible for managing the fishery.** *In reaching a determination for M1.1, the assessor should consider if the following is in place:*
	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.
Outcome	*Pass*

Rationale

There have been no substantial changes in the aspects of the fishery relevant to Section M1 since the 2024 surveillance; however, the entire section was revisited and updated to align with the revised wording of subclauses in v3.0 of the Standard.

The Ministry of Economy, Development and Tourism (MINECON; *Ministerio de Economía, Fomento y Turismo*) is responsible for promoting development of the fisheries sector, as well as for protecting, conserving, and ensuring the sustainable use of marine resources and the environment.

Chile's institutional structure for governing the fisheries sector centers around three key organizations, with several other institutions providing additional research and enforcement support:

- Undersecretariat of Fisheries and Aquaculture (*Subsecretaría de Pesca y Acuicultura;* SUBPESCA): A public institution under MINECON that establishes policy directives and the regulatory framework (SUBPESCA 2024).

- National Fisheries and Aquaculture Service (*Servicio Nacional de Pesca y Acuicultura*; SERNAPESCA): A public institution under MINECON responsible for enforcing fisheries policy (SERNAPESCA 2024).
- Fisheries Development Institute (*Instituto de Fomento Pesquero*; IFOP): A non-profit, private-law research arm of the institutional framework and the primary source of scientific advice to SUBPESCA (IFOP 2024).

Information and materials related to each organization's activities are publicly available on their respective websites and can be consulted by anyone, including fishers.

References

SERNAPESCA (2024) ¿Qué es SERNAPESCA? http://www.sernapesca.cl/que-es-sernapesca

SUBPESCA (2024). Acerca de la Subsecretaría. https://www.subpesca.cl/portal/616/w3-propertyvalue-538.html

IFOP (2024) Instituto de Fomento Pesquero. Quienes somos. https://www.ifop.cl/quienessomos/nuestra-organizacion/

M1.2	**M1.2 Fishery management organisations are legally empowered to take management actions.** *In reaching a determination for M1.2, the assessor should consider if the following is in place:*	
	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.
Outcome	*Pass*	

Rationale

The General Law of Fishing and Aquaculture (*Ley General de Pesca*; LGPA No. 18,892 – 1989; amended by Law No. 20,657 – 2013) remains in force and still serves as the primary regulatory framework for fisheries management in Chile. The mandates and responsibilities of SUBPESCA *(Subsecretaría de Pesca y Acuicultura;* authorization of

extractive activities, establishment of biological reference points, implementation of catches around MSY, etc.) have not changed since 2024.

The LGPA represents a modification of previous fisheries legislation, emphasizing commitments to the sustainable use and conservation of marine resources and prioritizing scientific information in decision-making processes. The recommendations of the Scientific and Technical Committees (CCT) are mandatory for all stakeholders, ensuring that conservation measures are based on scientific evidence above all other considerations. In compliance to Article 4.2, SUBPESCA is legally empowered to take management actions through the LGPA and its amendments. SUBPESCA is tasked with several key responsibilities.

In accordance with Article 2 No. 10 of LGPA, SUBPESCA provides the authorizations to carry out extractive fishing activities with a specific vessel, conditional on compliance with the obligations established in the respective resolution. As outlined in Article 5, SUBPESCA must establish Biological Reference Points (PBRs) for all targeted stocks. It is also required to develop management plans for fisheries with restricted access, which must be reviewed and updated every five years. Article 9 mandates the implementation of Biologically Acceptable Catches (CBAs) and resource recovery plans. In compliance with SUBPESCA resolution No. 291/2015, all fish stocks must be exploited around the Maximum Sustainable Yield (MSY) level, making the MSY the primary objective when establishing quotas.

The LGPA defines the rights, obligations, and penalties for both industrial and artisanal fishers, granting legal recognition through resolutions and certificates. Industrial fishing rights are administered primarily through Transferable Fishing Licenses (LTP), which are renewable and legally transferable. Artisanal fishers register for indefinite, transferable rights in regional registries.

Additionally, Law 20.249 ensures coastal marine areas for Indigenous communities to preserve traditional resource use. The Registry of Related Activities (RAC) arises in the framework of the implementation of Law 21.370 that promotes gender equality in the fishing and aquaculture sector. This registry includes the number of people dedicated to activities such as smoked, filleting, among others, identifying their specific trade activity and geographic location.

This registry was created under the premise that "*It is the duty of the State to generate the conditions to encourage reduce and/or eliminate job insecurity that mainly afflicts women in the artisanal fishing sector through the mainstreaming of gender approach in the design of public policies by SUBPESCA*", and that "*It is necessary to advance in mechanisms that allow recognizing and valuing the important work in the development of related activities, which have historically been linked to extractive activity*". The RAC is administered by SERNAPESCA, which has the responsibility of delivering trainings and

coordinate registration to the Registry, ensuring the integrity and veracity of the data (SUBPESCA 2023).

To solve disputes between users and the fishing authority, the following mechanisms are available:

- Administrative acts issued by the fisheries management authority can be contested at the administrative level within the Ministry of Economy, Development and Tourism, in accordance with Law No 19.880 (Law of Administrative Procedures). This can be done through remedies such as requests for reconsideration, hierarchical appeals, and review petitions as outlined in the legislation.
- Administrative acts may be challenged at the Office of the Comptroller General at the administrative level.
- Any effects resulting from the administrative acts of the fisheries authority can also be contested in court by filing Protection Resources, seeking corrective measures.

Decisions made through any of these processes are binding on the administrative authority and are considered public.

In December 2023, the government submitted to the Chilean Congress a new project of law - *Nueva Ley de Pesca* (NLP) aiming to replace the existing LGPA with a new "modernized, transparent, and equitable general framework for Chilean fishing" (FAO 2024). The initiative seeks to implement a framework regulation for modern, transparent, sustainable, and equitable fishing activities in Chile, at the same being responsible for responding to the main challenges that the sector has been facing.
This law project was built around five main pillars:

- Sustainable development of fishing activities,
- Equity within the sector,
- Social protection for artisanal fishers,
- A scientific-technical approach, and
- Promotion of human consumption of seafood.

In March 2024, the Chamber of Deputies unanimously approved the general principles of the text (i.e., adoption of the overall regulatory framework), with support from the FAO (FAO 2024). However, at that stage, only these broad principles were included; the detailed review and amendment of specific articles were referred to parliamentary committees for thorough debate and possible modifications.

As of end of End 2024, parliamentary debate and consultations continued. Over 200 amendments were submitted by three deputies. Some sought to eliminate articles restricting bottom trawling, reduce the minimum artisanal quota, or alter the duration and conditions of fishing rights. These proposals largely reflect the wishes of the National Fishing Society (SONAPESCA) and triggered intense debate over industrial influence in drafting the NLP (Mongabay 2024).

According to a FAO analysis, the amended text proposes, among other measures:

- Reducing the share of historical quotas allocated to industrial fishers from 85 % to approximately 50 %, thereby favouring artisanal harvesters;
- Shortening the duration of a transferable fishing license from 20 years to 10 years;
- Introducing a transferable licensing system based on interregional equity and scientific criteria;
- Requiring management plans for all fisheries (instead of only restricted-access fisheries);
- Modernizing resource-allocation rules to enhance transparency (FAO 2024).

As of February 2025, debate was still ongoing. The NLP project remains in intensive discussion in the Chamber of Deputies. Several artisanal fishing organizations emphasized that—even though the stated principles are equity and sustainability—the proposed amendments still favor large industrial groups and do not fully ensure quota redistribution (Ecoceanos 2025).

The main points of disagreement were:

- Restriction of Bottom Trawling: Artisanal fishers and environmental NGOs are calling for strict regulation of destructive fishing methods, whereas certain parliamentary amendments would relax those restrictions.
- Minimum Artisanal Quota: The original draft set a minimum 50 % quota for small-scale fishers; some deputies have proposed lowering that threshold.
- Science-Based Management: Although the law emphasizes the importance of scientific data, many stakeholders worry that insufficient funding and dedicated institutions could lead to biological reference points (BRPs) not being systematically updated or enforced.

As of May 30, 2025, the NLP project has not yet been definitively adopted. Each article continues to be reviewed by the Fisheries Commission of the Chamber of Deputies and will then go to the Senate. No firm timetable for enactment has been announced, but discussions remain active, and the law is not expected to take effect before the second half of 2025.

References

Ecoceanos. (February 6, 2025). New fishing legislation in Chile: The Mother of All Battle

FAO (2024). Servicio de Derecho para el Desarrollo. La FAO presentó su parecer técnico al Proyecto de "Nueva Ley General de Pesca" de Chile. https://www.fao.org/legal-services/news/detail/es/c/1680976/

LGPA (Ley General de Pesca y Acuicultura) (2013). Ley General de Pesca y Acuicultura No. 18.892, 1989, modificada por Ley No. 20.657 de 9 de febrero de 2013. Boletín Oficial de la República de Chile. https://www.subpesca.cl/portal/615/articles-88020_documento.pdf

Ley 20.249, Crea espacios costeros marinos para pueblos originarios.

Ley 19.880, Ley de Procedimiento Administrativo.

Mongabay (2024). Chile: nueva ley de pesca buscará redistribuir las cuotas de pesca entre artesanales e industriales. https://es.mongabay.com/2024/10/chile-nueva-ley-de-pesca-buscara-redistribuir-cuotas-de-pesca-entre-artesanales-industriales/

NLP (2024) Nueva Ley de Pesca. https://www.gob.cl/nuevaleydepesca/

SUBPESCA (Subsecretaría de Pesca y Acuicultura) (2023). MUJERES Y HOMBRES en el Sector Pesquero y Acuicultor de Chile 2023. https://www.subpesca.cl/portal/618/articles-121456_recurso_1.pdf

M1.3	**M1.3 There is an organisation responsible for collecting data and (scientifically) assessing the fishery.** *In reaching a determination for M1.3, the assessor should consider if the following is in place:*	
	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.
Clause outcome	*Pass*	

Rationale

The Fisheries Development Institute (I*nstituto de Fomento Pesquero*; IFOP, 2025), established in 1964 through a joint agreement between the Chilean government, FAO, and the United Nations Development Programme (UNDP), remains the designated technical body for scientific research on fisheries and aquaculture. Under the amendment to the LGPA (Law No. 20.657 of 2013), IFOP continues to provide ongoing support and advice to SUBPESCA on sustainable fishery resource management and marine environment conservation. The institute executes studies according to an annual research program defined by SUBPESCA, overseeing the management of fisheries research and monitoring data. IFOP is responsible for sampling fish stocks, conducting acoustic surveys, and collecting biological data to ensure science-based fisheries management. It also collaborates with Chilean universities and various national and international institutions to strengthen data management and research efforts. All research databases are state-owned, publicly accessible, and adhere to

quality standards established in consultation with the CCT.

The Scientific and Technical Committee (*Comité Científico Técnico de Recursos Demersales Zona Centro Sur*; CCT-RDZCS 2025) serves as an advisory and consultative body to SUBPESCA, established by Law No. 20.657 of 2013 (Paragraph 3, Title XII, LGPA). Its mandate includes providing scientific guidance on managing closed-access fisheries and addressing environmental or conservation issues deemed necessary by the Undersecretariat of Fisheries. As specified in Article 153 of the LGPA, the CCT assesses fishery status, defines biological reference points, and sets catch quota ranges. Additionally, it may advise on developing management and conservation measures and the creation of management plans. For the Jack mackerel fishery, the CCT operates within its own working group under the SPRFMO framework, which oversees scientific guidance for small pelagic species like Jack mackerel in the South Pacific (SPRFMO 2024a).

Under Articles 8 and 9 bis of the LGPA, a Management Plan must be developed for fisheries that are declared fully exploited, under recovery, or in an early development regime. The Jack mackerel (*Trachurus murphyi*) fishery is classified as fully exploited in 2025 and operates under a general access regime at the national level, with no suspension of new-user registration. Instead, access is controlled annually through Total Allowable Catch (TAC) allocations set by SUBPESCA in coordination with the South Pacific Regional Fisheries Management Organisation (SPRFMO)'s international management regime.

In compliance with LGPA requirements, a Management Committee for Jack mackerel was established under Law No. 20.657 of 2013 to develop and implement the Management Plan. Key elements of this plan include bycatch reduction measures (e.g., mandated Discara Reduction Plans introduced via Exempt Resolution No. 16 of 2019) and regular quota adjustments (e.g., Exempt Resolution No. 30-2023 setting the 2023 quota at 716,758 t).

The Management Committee is composed of representatives from artisanal fishing, industrial fishing, processing plants, SERNAPESCA (the National Fisheries Service - *Servicio Nacional de Pesca y Acuicultura*), and SUBPESCA. Its primary functions are to prepare the proposed Management Plan, oversee its implementation, and evaluate and adapt the plan as needed. In November 2023, the committee's Management Plan for Jack mackerel—covering measures from stock assessment to bycatch mitigation—was formally incorporated into SUBPESCA's regulatory framework, aligning both national and SPRFMO obligations.

Meanwhile, SERNAPESCA continues to compile the data necessary for the Fisheries and Aquaculture Statistical Yearbooks (*Anuario Estadístico de Pesca y Acuicultura;* SERNAPESCA, 2024) which include detailed information on Jack mackerel landings and effort. These yearbooks remain publicly accessible and are used to monitor compliance with LGPA mandates and SPRFMO agreements.

References

CCT-RDZCS (Comité Científico Técnico de Recursos Demersales Zona Centro Sur) (2024). Acta de Sesión N° 5–2024 del Comité Científico Técnico de Recursos Demersales Zona Centro Sur (25–26 noviembre 2024). SUBPESCA.

IFOP (Instituto de Fomento Pesquero) (2025). Informe Final Convenio de Desempeño 2024: Evaluación hidroacústica de jurel entre las Regiones de Arica y Parinacota – Valparaíso, año 2024. Subsecretaría de Economía y EMT, enero 2025.

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SPRFMO (South Pacific Regional Fisheries Management Organisation) (2024a). SC12-Doc26-CHL Annual Report of Chile to the SPRFMO of Jack Mackerel Scientific Committee. https://www.sprfmo.int/assets/Meetings/02-SC/12th-SC-2024/Plenary-Documents/SC12-Doc26-CHL-Annual-Report-of-Chile-to-the-SPRFMO-SC-Jack-Mackerel.pdf

M1.4	**M1.4 The fishery management system is based on the principles of sustainable fishing and a precautionary approach.** *In reaching a determination for M1.4, the assessor should consider if the following is in place:* 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.
Outcome	*Pass*

Rationale

The General Law on Fisheries and Aquaculture (Ley General de Pesca No. 18.892 of 1989), as last amended in 2013 (LGPA 2023), continues to prescribe its primary objective in Article 1° B: the conservation and sustainable use of hydrobiological resources through a precautionary, ecosystem-based approach to fisheries regulation, while safeguarding the marine ecosystems in which those resources exist. Although a comprehensive new fisheries law was proposed in late 2023 and remains under parliamentary debate as of mid-2025, no changes to Article 1° B have been enacted;

therefore, the 2013 wording remains fully in force. To achieve this objective within Chile's national fisheries policy, the LGPA establishes several guiding principles for developing and implementing conservation and management measures:

- Long-term management objectives: The law mandates setting multi-year goals for the conservation and management of fisheries and the protection of their ecosystems. These objectives must be evaluated periodically—at least every five years—to verify that implemented measures are meeting established targets and to make adjustments if they are not.
- Precautionary approach: When scientific information is uncertain, unreliable, or incomplete, managers must err on the side of caution. Specifically, a lack of sufficient data must not delay or prevent adopting necessary conservation or management measures. This ensures that resource exploitation does not outpace the ability to monitor stock status and ecosystem impacts.

These two principles remain the foundation for both SUBPESCA's regulatory framework and IFOP's research programs. All current fishery management plans, quota-setting procedures, and environmental safeguards reference Article 1° B of the LGPA (2013) to ensure that decision-making is science-based and precautionary.

As of May 2025, no further amendments to Article 1° B or related guiding principles have been promulgated beyond the 2013 reform. A draft of the New General Fisheries Law (*Nueva Ley de Pesca*; NLP) introduced in December 2023 has passed its general framework stage but remains in detailed parliamentary review. Until that new law is formally enacted—anticipated no earlier than late 2025—the existing LGPA (1989, amended 2013) remains the sole legal basis for Chile's fisheries management.

References

LGPA (Ley General de Pesca y Acuicultura) (2013). Ley General de Pesca y Acuicultura No. 18.892, 1989, modificada por Ley No. 20.657 de 9 de febrero de 2013. Boletín Oficial de la República de Chile. https://www.subpesca.cl/portal/615/articles-88020_documento.pdf

NLP (Nueva Ley de Pesca) (2024). Nueva Ley de Pesca. https://www.gob.cl/nuevaleydepesca/

M1.5	**M1.5**	**There is a clearly defined decision-making process which is transparent, with processes and results made publicly available.** *In reaching a determination for M1.5, the assessor should consider if the following is in place:*
	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.
Outcome	*Pass*

Rationale

There are multiple formal mechanisms to ensure that Jack mackerel stakeholders participation on decision-making process, such as:

1) Fishery Management Committee Membership and Meetings: The Jack Mackerel Management Committee was established under the 2013 amendment to the LGPA (Law No. 20.657). Its membership includes:
   - Artisanal fishers' association representatives
   - Industrial fishing (purse-seine) representatives
   - Processing plant operators
   - Officials from SUBPESCA and SERNAPESCA
   - A designated IFOP scientist (non-voting technical advisor)

Committee meeting agendas and minutes are posted publicly on SUBPESCA's website at least two weeks in advance of each session, enabling any interested stakeholder—artisanal or industrial—to download relevant documents or request to attend as an observer. External stakeholders (e.g., NGOs, academic experts) are invited to submit written comments prior to meetings through a publicly listed email and may request to address the Committee during the "Open Forum" slot on each agenda.

2) CCT-RDZCS (*Comité Científico Técnico de Recursos Demersales Zona Centro Sur*): Under Article 153 of the LGPA, the CCT-RDZCS's membership is appointed via a transparent public selection process that is announced on both SUBPESCA (https://www.subpesca.cl/portal/) and IFOP (https://www.ifop.cl/) portals.
   - Stakeholder Input: Scientific working papers (e.g., annual acoustic survey results, biological sampling analyses) are released by IFOP at least one month before each CCT-PP meeting. Stakeholders can review those data and submit written inquiries or critiques for consideration by the Committee. Members of the fishing industry, NGOs, and academic institutions regularly sit on the CCT-RDZCS working groups—ensuring industry, conservation interests, and scientists jointly interpret stock status.
   - Meeting Participation: All CCT-RDZCS meetings (quarterly in 2024–2025) are live-streamed on SUBPESCA's website. Stakeholders can register in advance to join virtually, pose questions, and comment during designated Q&A periods.

3) National Fisheries Council: The Council meets semi-annually to review high-level policy recommendations. Meeting notices, draft policy papers, and written

submissions from stakeholder groups are made publicly available on the Council's webpage at least 21 days prior to each meeting. Prior to Council sessions, any stakeholder (fisheries co-ops, processors, coastal communities, environmental NGOs) may submit "Letters of Stakeholder Concern" regarding proposed management measures. These letters are summarized (anonymously, if requested) in the Council's official meeting book.

All Jack Mackerel Management Committee minutes (from 2014 onward) are archived under "Fishery Management Committees" in PDF format at www.subpesca.cl . Each entry includes: meeting date, attending members, key deliberations (e.g., TAC recommendations), and voting records. CCT-PP technical reports (including "Biomass Estimate – March 2025" and "Projected Yield – April 2025") are posted under "Scientific Committees".

IFOP publishes raw data files (catch composition, bycatch audits, acoustic survey transects) and summary "Research Bulletins" after each annual field survey at www.ifop.cl**.** These materials are indexed by year and region, allowing any user to download CSV, GIS, or PDF versions.

Each April, SUBPESCA releases a Memorandum called "*Estado de situación de las principales pesquerías chilenas*" that contains a dedicated section on Jack mackerel, detailing biomass trends (1990–current year), catch limits set (TAC) adopted December 2024), compliance rates (%) for artisanal vs. industrial fleets and observed bycatch and discards. This memorandum is freely downloadable from SUBPESCA's "*Publicaciones*" portal on SUBPESCA's website.

TAC Decision Announcement: When the Jack Mackerel Management Committee proposes a new annual TAC, it publishes a "Proposed TAC Rationale" document online. After a 30-day stakeholder comment period, SUBPESCA issues the final TAC via an Exempt Resolution. Both draft and final resolutions are available under "Normativa" on SUBPESCA's website.

Periodic review and the scientific data underpins management decisions:

1) Internal review: LGPA Articles 8 and 9 bis require each FMP to be evaluated every five years. Jack Mackerel FMP was approved in November 2023 and next internal review is due in November 2028.SUBPESCA convenes a "FMP Review Panel"—comprising CCT-PP scientists, IFOP technical staff, and one external auditor (e.g., certified marine management consultant) to assess: 1) whether reference points remain appropriate, given new survey data; 2) the effectiveness of bycatch mitigation (e.g., Discard Reduction Plans); and 3) the socioeconomic impacts on artisanal communities

2) SPRFMO Peer-Review (External Review): Chile submits the "Annual Report of Chile to the SPRFMO Scientific Committee: Jack Mackerel" (SC12-Doc26-CHL, December 2024;

SC13-Doc28-CHL, December 2025). At each SPF Scientific Committee meeting, external experts from other member states (Peru, New Zealand, etc.) critique Chile's stock assessment methodology, acoustic survey protocols, and FMP outcomes. Comments are compiled in the SPRFMO "Peer-Review Summary" documents, which are publicly accessible at https://www.sprfmo.int

3)Annual Audit by SERNAPESCA (Compliance Review): SERNAPESCA conducts an internal audit each June to verify that: 1) observed bycatch levels match those reported by IFOP observers (observed coverage ~8.45 % of trips); 2) logbooks submitted by industrial vessels coincide with TAC limits and spatial closures; and 3) artisanal fleets comply with gear restrictions (e.g., mesh size, no-take areas). Audit summaries are released on SERNAPESCA's "Control and Enforcement" webpage, usually by August 1 of each year.

4)Independent Scientific Evaluation: In March 2025, IFOP commissioned an independent review of its acoustic survey methodology by a coalition of three international universities (University of Bergen, University of Washington, and Universidad de Concepción). The resulting report - "Evaluation of Acoustic Survey Protocols for Jack Mackerel, 2024 Survey" (published May 2025)—is publicly available on IFOP's site. Key findings will inform the 2028 FMP review.

References

CCT-RDZCS (Comité Científico Técnico de Recursos Demersales Zona Centro Sur) (2024). Acta de Sesión N°5–2024 del Comité Científico Técnico de Recursos Demersales Zona Centro Sur (25–26 noviembre 2024). SUBPESCA.

IFOP (Instituto de Fomento Pesquero) (2025). Informe Final Convenio de Desempeño 2024: Evaluación hidroacústica de jurel entre las Regiones de Arica y Parinacota – Valparaíso, año 2024. Subsecretaría de Economía y EMT, enero 2025.

LGPA (Ley General de Pesca y Acuicultura) (2013). Ley General de Pesca y Acuicultura No. 18.892, 1989, modificada por Ley No. 20.657 de 9 de febrero de 2013. Boletín Oficial de la República de Chile. https://www.subpesca.cl/portal/615/articles-88020_documento.pdf

M2 Surveillance, control and enforcement

M2.1	**M2.1**	**There is an organisation responsible for monitoring compliance with fishery laws and regulations.**
	In reaching a determination for M2.1, the assessor should consider if the following is in place:	
	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.
Outcome	*Pass*

Rationale

In 2025, the framework of sanctions which is applied when infringements against laws and regulations are discovered remains in place in Chile. Chile's sanctions framework for the Jack mackerel fishery remains grounded in the General Law on Fisheries and Aquaculture (LGPA No. 18.892, as amended in 2013). Article 108 of the LGPA authorizes SERNAPESCA to impose administrative penalties—including fines (scaled by volume of illegally caught Jack mackerel), captain license suspensions, facility closures, and confiscation of vessels, gear, and catch—when regulations are violated (e.g., exceeding quotas, fishing in closed areas, or using unauthorized gear).

Compliance monitoring and enforcement—both within and beyond the Exclusive Economic Zone (EEZ)—are ensured by multiple entities under the LGPA (Ley General de Pesca y Acuicultura No. 18.892 of 1989, as amended in 2013):

1. SERNAPESCA - Legal Framework (Article 108, Title 9 of LGPA): Violations of the LGPA, its regulations, or fisheries management measures are subject to administrative sanctions, including fines, suspension of vessel captains, closure of facilities, and confiscation of gear and hydrobiological products.
Roles & Activities:

- Audits and Inspections:
    - Conducts field audits of capture fisheries.
    - Oversees surveillance and enforces all fisheries-related legal provisions.
    - Implements programs to prevent and control high-risk diseases in aquaculture.
    - Manages fisheries and aquaculture records and publishes sectoral statistics.
- Provincial Coverage:
    - Operates 46 provincial offices nationwide (including two insular offices) with a staff of approximately 900 personnel.

2. Chilean Navy - Maritime Surveillance:

- Monitors approximately 4,542,990 km² of Chile's EEZ to detect and prevent unauthorized activities that could threaten marine ecosystems or illegally exploit resources.
- Coordinates with SERNAPESCA to intercept vessels operating outside approved regulations or in prohibited zones.

3. Observer Programme:

- Bycatch Reduction & Monitoring:
  - Implements an observer plan to monitor incidental catch (bycatch) in major fisheries (e.g., Jack mackerel, small pelagics, and industrial purse-seine fleets).
  - Observers collect species composition, bycatch quantities, and compliance data.
  - Results inform bycatch-reduction measures and help set limits on incidental catches.
- Coverage Requirements:
  - As of 2024–2025, scientific observers cover approximately 8–9 % of industrial purse-seine trips, with plans to incrementally increase coverage to 12 % by 2026.

4. Vessel Tracking (Vessel Monitoring System – VMS)

- Satellite Monitoring Requirements (Article 64, LGPA):
  - Any vessel ≥ 15 m LOA (length overall) must carry an operational satellite tracking device.
  - Artisanal vessels ≥ 12 m LOA and those < 15 m registered as pelagic purse-seine must also be equipped with VMS.
- Real-Time Oversight:
  - Vessel positions are compared daily against declared landing sites to detect discrepancies or unauthorized transits.
  - Alerts are generated if a vessel deviates from its authorized fishing grounds or exceeds spatial/temporal restrictions.

5. National Supervision Plan (NSP): Each year, SERNAPESCA publishes a National Supervision Plan (NSP) outlining priority compliance areas for fisheries, aquaculture, and foreign trade sectors. The NSP's guiding principles focus on risk-based allocation of inspection resources (SERNAPESCA 2024b) focusing on "Fishing and Landing Zone" inspections in high-traffic ports and combating Illegal Fishing in the Value Chain with targeted inspections at fish-meal plants and export terminals to intercept illicit product flows. Key Inspection Programs include:

- Satellite Monitoring Program (VMS oversight)
- Landing Control Program (in-person and remote checks of offloaded catch for a

continued focus on "Fishing and Landing Zone" inspections in high-traffic ports)
- Weighing System Program (verification of scales at landing sites and processing plants)
- Joint Operations Program collaborative inspections with the Navy, Customs, and environmental authorities)
- Special Control Programs (targeted compliance checks for specific high-risk fisheries or zones)

References

LGPA (Ley General de Pesca y Acuicultura) (2013). Ley General de Pesca y Acuicultura No. 18.892, 1989, modificada por Ley No. 20.657 de 9 de febrero de 2013. Boletín Oficial de la República de Chile. https://www.subpesca.cl/portal/615/articles-88020_documento.pdf

SERNAPESCA (2024). Fiscalización en Pesca y Acuicultura, Informe de Actividades, Servicio Nacional de Pesca y Acuicultura. https://www.sernapesca.cl/app/uploads/2024/03/IFPA_2023_v20240522-1.pdf

M2.2	**M2.2 There is a framework of sanctions which are applied when infringements against laws and regulations are discovered.** *In reaching a determination for M2.2, the assessor should consider if the following is in place:*	
	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.	
Outcome	*Pass*	

Rationale

The General Law on Fisheries and Aquaculture (LGPA No. 18.892 of 1989, as amended in 2013) establishes a clear sanctions framework for Jack mackerel fishery violations. Under Article 108 (Title 9), infractions such as landing in excess of a vessel's Jack mackerel quota, fishing during closed seasons, or using prohibited gear trigger administrative and, in serious cases, criminal penalties. Sanctions include:

- Fines: Scaled according to the volume of illegally landed Jack mackerel.
- License Suspension or Revocation: Temporary or permanent removal of a vessel's fishing license and/or captain's credentials.
- Confiscation of Gear and Catch: Seizure of nets, equipment, and any Jack mackerel caught in violation.

2024–2025 Updates:

- 2024 Seizures:

- ~1,015 t of Jack mackerel was confiscated for illegal landings (–20.7 % vs. 2023).

- Fines & Penalties:
  - Typical fines for quota overages in 2024 ranged USD 50,000–75,000, doubling on repeat infractions beginning February 2025.
  - Captains caught fishing during closed seasons faced 4–6-month suspensions; two repeat offenders had permanent license revocations (early 2025).
- Confiscations & Joint Operations:
  - In Q1 2025, 450 t of Jack mackerel and associated nets were seized from vessels operating in no-take zones.
  - Joint Navy–SERNAPESCA patrols increased 46.9 % from 2022 to 2023, focusing on high-risk Jack mackerel grounds.
- Transparency Enhancements:
  - SUBPESCA's online "Jack Mackerel Sanctions Register" (launched January 2025) lists all vessel infractions, penalty types, and dates, updated monthly.
  - The 2024 Oversight Report (released April 2025) details Jack mackerel-specific figures:
    - 1,015 t seized in 2024
    - 65 vessels fined (USD 3.7 million total)
    - 10 captain license suspensions

In conclusion, Chile's Jack mackerel sanctions framework remains robust in 2025. Administrative penalties (fines, suspensions, confiscations) are applied promptly, with public reporting of court summonses (626 in 2023) and seizure volumes (320 t Jack mackerel in 2023; ~1,015 t in 2024). Recent enhancements—larger repeat-offender fines, permanent license revocations, expanded joint patrols, and a publicly accessible sanctions registry—continue to deter illegal Jack mackerel fishing and foster sustainable compliance.

References

SERNAPESCA (2024). Fiscalización en Pesca y Acuicultura, Informe de Actividades, Servicio Nacional de Pesca y Acuicultura.
https://www.sernapesca.cl/app/uploads/2024/03/IFPA_2023_v20240522-1.pdf

M2.3	**M2.3**	**There is substantial evidence of widespread compliance in the fishery, and no substantial evidence of IUU fishing.** *In reaching a determination for M2.3, the assessor should consider if the following is in place:*
	M2.3.1	The level of compliance is documented and updated routinely, statistically reviewed and available.
	M2.3.2	Fishers provide additional information and cooperate with management/enforcement agencies/organisations to support the effective management of the fishery.

	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.
Outcome	*Pass*

Rationale

There is no substantial change since the previous surveillance. According to SERNAPESCA report "*Fiscalización en Pesca y Acuicultura, Informe de Actividades*" released in 2024, the level of compliance is still documented and updated routinely, statistically reviewed and available. Administrative penalties (fines, suspensions, confiscations) are applied promptly, with public reporting of court summonses and seizure volumes, and SUBPESCA keeps registering online and updating monthly the "Jack Mackerel Sanctions Register" (launched January 2025) list of all vessel infractions, penalty types, and dates.

SERNAPESCA's Report on Oversight Activities in Fishing and Aquaculture 16fulfils the requirements set forth in Article 4º B of the General Law of Fisheries and Aquaculture (LGPA), which mandates: "The Service must, in the month of March each year, prepare a report on the inspection activities and actions carried out in the area of fishing and aquaculture during the previous year. The report must also include the results of these inspection actions and the level of compliance with administration and conservation measures from the previous year. It must be published on the Service's website" (LGPA 2023). By complying with this requirement, SERNAPESCA ensures that the level of compliance is documented, updated, and made publicly available each year.

Additionally, Article 63 of the LGPA requires industrial and artisanal shipowners to report their catches and landings for each vessel to the Service. Hydrobiological resources may only be landed at points or ports authorized by SERNAPESCA. Article 64 A further stipulates that fishing and research vessels operating at sea must have an automatic positioning system. The data generated by this system must be publicly accessible, updated monthly, and published on SERNAPESCA's website (LGPA 2023).

These articles emphasize the legal obligations of fishers to collaborate with SERNAPESCA and comply with various activities required by law. This compliance is essential to demonstrate the legality of their operations and to maintain their fishing permits. In the table shown below information on the TACs set for the Jack mackerel fisheries and the catches by the industrial (top) and artisanal (bottom) fleets operating in the area are given, and compliance with quotas is adequate. Based on the information provided in the report, there is substantial evidence of widespread compliance in the fishery, and no substantial evidence of IUU fishing found in the report (SERNAPESCA, 2024).

References

SERNAPESCA (2024). Fiscalización en Pesca y Acuicultura, Informe de Actividades, Servicio Nacional de Pesca y Acuicultura. https://www.sernapesca.cl/app/uploads/2024/03/IFPA_2023_v20240522-1.pdf

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 a 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

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

A1.1	**A1.1 Landings data are collected such that the fishery-wide removals of this species are known.**
Outcome	*Pass*
Rationale The SPRFMO Secretariat have jack mackerel catch data since 1970. According to the Conservation and Management Measures (CMM) of the SPRFMO Commission, all Members (Australia, Belize, Republic of Chile, People's Republic of China, Cook Islands, Republic of Cuba, Republic of Ecuador, European Union, Kingdom of Denmark in respect of the Faroe Islands, Republic of Korea, New Zealand, Republic of Panama, Republic of Peru, Russian Federation, Chinese Taipei, The United States of America, and Republic of Vanuatu) participating in the jack mackerel fishery must report monthly	

catches within 20 days of the end of the calendar month, when total catches have reached 70% of their catch limit, reports are made every 15 days (SPRFMO 2024).

Between 2013 and 2023, Jack mackerel catches have shown an upward trend, reaching their highest level in 2023 (Figure 1). This increase is largely attributed to the expansion of Chile's allocated quota and its full utilization, along with quota transfers from other SPRFMO members to Chile. By June 2024, a total of 664,179 metric tons of Jack mackerel had been landed within Chile's Exclusive Economic Zone (EEZ), representing 81% of the country's total allowable catch (TAC). It is also worth noting that, since 2020, all Jack mackerel catches have been sourced exclusively from the Chilean EEZ.

Figure 1. Total annual Jack mackerel catch within the Chilean EEZ and the SPRFMO area for the period 2013– June 2024 (SPRFMO, 2024a).

The development of commercial catches of Chilean Jack mackerel is shown by fleet in Figure 2, categorized according to the four groups recognized by the SPRFMO: (1) FarNorth, comprising Ecuador and Peru operating within their respective EEZs; (2) N_Chile, referring to catches from the northern zone of Chile's EEZ; (3) CS_Chile_PS, covering the south-central Chilean fleet operating both inside and beyond the EEZ; and (4) Offshore_Trawl, which includes the international fleet fishing outside Chile's EEZ. While the first three fleets primarily use purse seine gear, the offshore fleet employs midwater trawl nets for its operations.

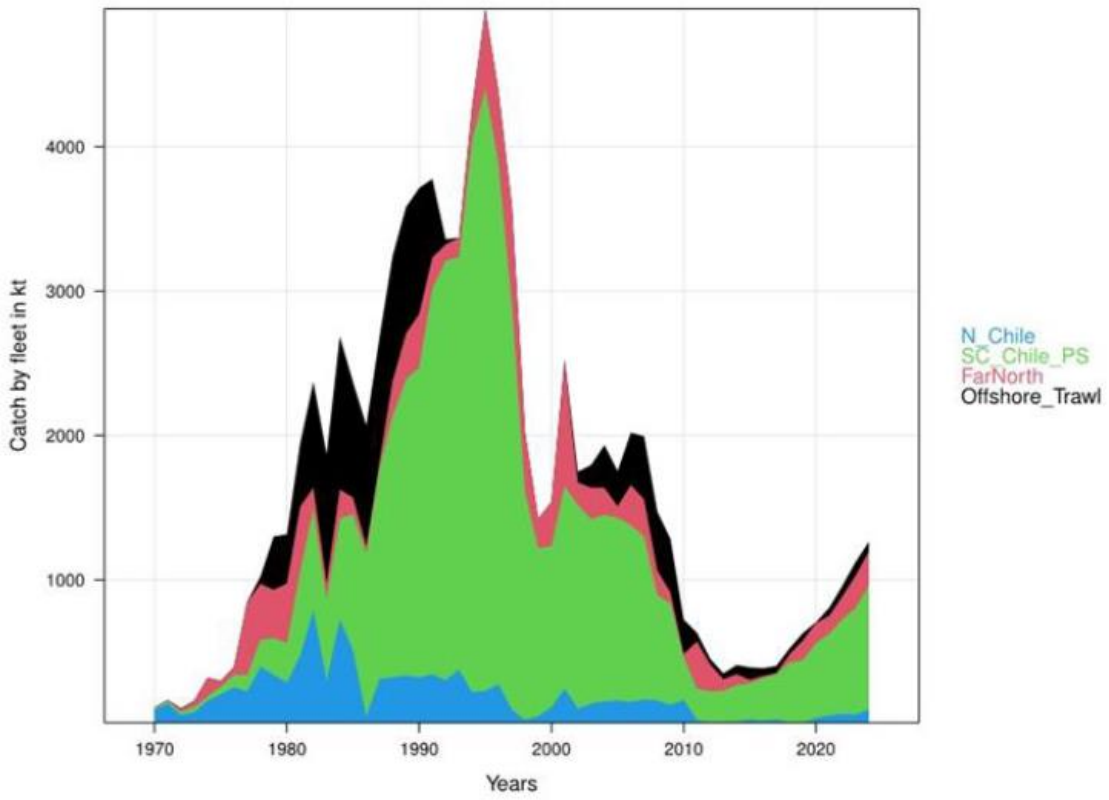

Figure 2. Catch of Chilean Jack mackerel by fleet. Blue represents the northern Chilean fleet, green the south-central Chilean fleet, red the Far north fleet, and black the offshore trawl fleet (Paya, 2024).

References

Paya, I. 2024. Estatus y posibilidades de explotación biológicamente sustentable de jurel nacional, Región de Arica y Parinacota a Región de Los Lagos, año 2025.

SPRFMO (South Pacific Regional Fisheries Management Organisation). (2024a). *SC12-Doc26-CHL Annual Report of Chile to the SPRFMO Scientific Committee of Jack Mackerel.* https://www.sprfmo.int/assets/Meetings/02-SC/12th-SC-2024/Plenary-Documents/SC12-Doc26-CHL-Annual-Report-of-Chile-to-the-SPRFMO-SC-Jack-Mackerel.pdf

A1.2	**A1.2 Sufficient additional information is collected to enable an indication of stock status to be estimated.**
Outcome	*Pass*

Rationale

Stock monitoring is carried out using a combination of fishery-dependent and fishery-independent data collection methods. Fishery-dependent monitoring includes data on fishing effort, catch per unit effort (CPUE), and the size and age composition of catches

from commercial fleets. In parallel, fishery-independent data are gathered through hydroacoustic surveys conducted by research vessels, which estimate spawning stock biomass and abundance, as well as assess habitat distribution. In addition, there is a dedicated program for monitoring discards and bycatch within the central-south industrial purse seine fishery targeting Jack mackerel. All collected information is reviewed and updated as part of the annual stock assessment process to evaluate the current state of the stock and the effectiveness of the harvest strategy (MSC, 2025).

The stock assessment of Jack mackerel is carried out by the IFOP at the end of each year and establishes some advice on precautionary capture quota based on projections of future recruitment. This evaluation is updated twice a year as data are generated from the annual research cruises that carry out hydroacoustic evaluation monitoring program, which allows estimating the abundance and biomass of recruits. The hydroacoustic survey is usually carried out in April and March for the Jack Mackerel fishery (IFOP 2025). The results generated by the IFOP from each stock assessment are presented to the CCT-RDZCS (*Comité Científico Técnico de Recursos Demersales Zona Centro Sur*) of SUBPESCA, who reviews the information an validates the advice. A new TAC is proposed every year based on the updated stock assessment status output and following advice of the CCT-RDZCS.

References

IFOP (Instituto de Fomento Pesquero) (2025). Informe Final Convenio de Desempeño 2024: Evaluación hidroacústica de jurel entre las Regiones de Arica y Parinacota – Valparaíso, año 2024. Subsecretaría de Economía y EMT, enero 2025.

MSC (2025). Chilean jack mackerel industrial purse seine. Public Comment Draft Report (unpublished yet).

A2 Stock assessment

A2.1	**A2.1 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.**
Outcome	*Pass*

Rationale

The stock assessment of Jack mackerel is carried out by the IFOP at the end of each year and establishes some advice on precautionary capture quota based on projections of future recruitment. This evaluation is updated twice a year as data are generated from the annual research cruises that carry out hydroacoustic evaluation monitoring

program, which allows estimating the abundance and biomass of recruits. The hydroacoustic survey is usually carried out in April and March for the Jack Mackerel fishery and report published in January (IFOP 2025). The results generated by the IFOP from each stock assessment are presented to the CCT-RDZCS (*Comité Científico Técnico de Recursos Demersales Zona Centro Sur)* of SUBPESCA, who reviews the information an validates the advice. A new TAC is proposed every year based on the updated stock assessment status output and following advice of the CCT-RDZCS.

SPRFMO conducts stock assessments conducted using the Joint Jack Mackerel (JJM) statistical catch-at-age model, as developed collaboratively by participants in 2010. The JJM assessment models use the following information: fleet, catch-at-age, catch-at-length, landings, CPUE, acoustic and daily egg production method (DEPM) survey data (SPRFMO 2023a). Since its adoption, the JJM model has undergone significant enhancements, most notably the integration of size composition data and the capability to estimate natural mortality across both age and time. These upgrades have increased the model's flexibility, enabling it to incorporate catch data based on either age or size across different fleets, and to explicitly account for shifts in population productivity due to regime changes. The model is structured around four main components: (i) population dynamics, (ii) fishery (or fleet) dynamics, (iii) data observation models, and (iv) parameter estimation methods (MSC, 2025).

References

CCT-RDZCS (Comité Científico Técnico de Recursos Demersales Zona Centro Sur) (2024). Acta de Sesión N° 5–2024 del Comité Científico Técnico de Recursos Demersales Zona Centro Sur (25–26 noviembre 2024). SUBPESCA.

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MSC (2025). Chilean jack mackerel industrial purse seine. Public Comment Draft Report (unpublished yet).

SPRFMO (2023a). SC11-Report. Annex 7. Jack mackerel technical annex. https://www.sprfmo.int/assets/Meetings/02-SC/11thSC-2023/Annex-07-SC11-JM-Technical-Advice-2023_11_03-v2.pdf

A2.2	**A2.2 The assessment provides an estimate of the status of the biological stock relative to a reference point or proxy.**

Outcome	*Pass*

Rationale

Since 2014, the Commission has applied biological reference points outlined in the Harvest Control Rules (HCRs) of Annex K from the COMM02 Report. That same year, during the 2nd meeting of the Scientific Committee, Annex K was modified to incorporate a rule aimed at promoting greater stability in total allowable catches (TACs). This modified version became known as the "adjusted Annex K." In 2022, the 14th SPRFMO Jack Mackerel Workshop (SCW14) reviewed these reference points and introduced a new limit reference point, Blim, which corresponds to a critical threshold of spawning biomass (MSC, 2025).

For the Jack mackerel stock assessment SPRFMO SC calculates equilibrium-based reference points within the JJM model. The model estimates values of MSY and FMSY using a Newton-Raphson minimization routine that finds the value of fishing mortality, given the terminal year relative catches (and selectivities-at-age) by fleet, and the terminal year weights-at-ages for each fleet, that maximizes catch. Since weights-at-age and "effective" selectivity change each year, these values can vary. MSY is thus defined as the maximum amount of catch that allows the remaining stock to generate sufficient recruitment to maintain the population at the same level. BMSY is taken as the long-term average of biomass fished under MSY. Between 2013 and 2021, a provisional BMSY level of 5.5 million tons was initiated based on an analysis executed at SC03. In SCW14, the provisional management reference point for BMSY was revised to a ten-year average of the model-estimated BMSY. A limit reference point Blim (where B refers to spawning biomass) for the single-stock hypothesis was also developed during SCW14. Blim was defined as the spawning biomass level below which recruitment would likely be impaired. As such, there should be no fishing when the current spawning biomass is estimated to be below Blim. For Jack mackerel, Blim was computed from the lowest ratio of historical spawning biomass relative to the most-recently-estimated unfished spawning biomass.

In SCW14, this ratio was estimated to be 8% of the unfished spawning biomass. Data to set and update reference points considering two stock composition hypotheses (one-stock and two-stocks) are used each year, however in the 2023 assessment the working group mentioned that the one-stock model performs better than the two-stock model with respect to retrospective patterns (SPRFMO 2023b, 2023c).

The harvest control rule proposed in 2022, informed by the original Annex K, the adjusted version from the SC2 Report, and discussions from SCW14, is summarized as follows by MSC (2025):

a) If the projected spawning biomass (B) for the following year falls below Blim, then the TAC is set to zero, effectively closing the fishery to targeted Jack mackerel fishing. Blim is calculated as ylim × B_0, where ylim represents the lowest historical ratio of

spawning biomass to unfished biomass. For the 2022 stock assessment, this meant Blim = ylim × B_0,2023.

b) When the biomass is below 80% of BMSY (or its proxy), the trial catch for the upcoming year is determined using the lesser of the current fishing mortality rate (F) or FMSY. If this proposed catch exceeds the replacement yield (the catch level that maintains biomass), the TAC is adjusted down to the replacement yield, ensuring biomass stability.

c) If biomass is above 80% of BMSY, the trial catch is based on FMSY. If the resulting catch is lower than the replacement yield, the TAC will match the trial catch. However, if it exceeds the replacement yield, the TAC is capped at that yield, similar to the approach described in the previous scenario. Additionally, annual TAC changes are limited to a maximum of 15% to promote inter-annual stability.

d) When biomass exceeds BMSY (or its proxy), TAC is directly determined using FMSY, with the same 15% limit on year-to-year TAC variation.

In 2025, the SPRFMO indicated that the total catch of *Trachurus murphyi* in the area to which this CMM applies in accordance with paragraph 1 shall be limited to 1,419,119 tonnes which is higher than 135,295 tonnes in 2024 (SPRFMO CMM 01-2025 report. Members and CNCPs are to share in this total catch in the tonnages set out in Table 1 of the CMM-01-2025 (SPRFMO 2025). Members and CNCPs agree, having regard to the advice of the Scientific Committee, that catches of *Trachurus murphyi* in 2024 throughout the range of the stock should not exceed 1,242,000 tonnes.

References

MSC (2025). Chilean jack mackerel industrial purse seine. Public Comment Draft Report (unpublished yet).

SPRFMO. (2023b). 11 the Scientific Committee Meeting Report. https://www.sprfmo.int/assets/Meetings/02-SC/11th-SC2023/SPRFMO-SC11-Report_rev1-17-Oct-b.pdf

SPRFMO (2023c). SC11-Report. Annex 7. Jack mackerel technical annex. https://www.sprfmo.int/assets/Meetings/02-SC/11thSC-2023/Annex-07-SC11-JM-Technical-Advice-2023_11_03-v2.pdf

A2.3	**A2.3 The assessment provides an indication of the volume of fishery removals which is appropriate for the current stock status.**
Outcome	*Pass*

Rationale

Chile's national management of the Jack mackerel fishery is fully aligned with the guidelines and recommendations set by the South Pacific Regional Fisheries Organization (SPRFMO), which oversees the management of a single Jack mackerel stock throughout the South Pacific. The SPRFMO Scientific Committee is responsible for conducting joint stock assessments, defining management strategies and conservation measures applicable to all member countries, and overseeing fishing activities in the region.

The quota-setting process for Jack mackerel within SPRFMO begins each September with a collaborative stock assessment led by the Scientific Committee. Based on this assessment, the Committee proposes an Acceptable Biological Catch (ABC) for the entire South Pacific stock. This recommendation is then reviewed in November by Chile's National Scientific and Technical Committee on Jack Mackerel (CCT-J), which defines a recommended ABC range. Following this, Chile's Ministry of Economy, Development, and Tourism sets the country's annual total allowable catch for the species, guided by both the CCT-J recommendation and the national allocation established by the SPRFMO Commission. As of the 2024 Commission meeting, Chile's share corresponds to 66% of the total regional quota (CMM 01-2024).

Chile also implements a national Jack Mackerel Management Plan (SUBPESCA 2017), which is supported by a structured operational framework involving stakeholder input, scientific research, ongoing stock monitoring, full assessments, and external peer review. The plan's biological objective is to maintain the spawning biomass and catch levels needed to ensure the fishery recovers and remains sustainable in the medium to long term. This aligns with SPRFMO's overarching goal of managing the stock around the maximum sustainable yield.

The harvest strategy undergoes an annual review to ensure its effectiveness, with updates and adjustments made as needed to reflect new scientific data and management objectives. This evaluation includes a comprehensive stock assessment process involving key stakeholders such as the SPRFMO Scientific Committee, the Jack Mackerel Scientific Technical Committee, stock assessment experts from IFOP, non-governmental organizations, and representatives from the industrial fishing sector. These discussions take place during formal advisory meetings, including the Jack Mackerel Management Committee. The process assesses the current status of the stock in relation to the harvest strategy and provides recommendations on potential revisions to the total allowable catch (TAC) for the upcoming fishing season (MSC, 2025).

References

MSC (2025). Chilean jack mackerel industrial purse seine. Public Comment Draft Report (unpublished yet).

SUBPESCA. (2017). Plan de Manejo para la pesquería de jurel XV a X regiones. https://www.subpesca.cl/portal/616/articles99235_documento.pdf

A2.4	**A2.4 The assessment is subject to internal or external peer review.**
Outcome	*Pass*

Rationale

Before the assessment each Commission Member should perform an internal review of the data to ensure compliance with SPRFMO data submission templates and agreements made in the jack mackerel working group.

The stock assessment data and modeling results are review internally by the jack mackerel working group, who are always looking the best way to improve the assessment. They also invite experts to participate in workshops, review the work involved in the assessment and to provide advice. Then the assessment, including advice on fishery management, is submitted to the SPRFMO Scientific Committee for review at their annual meetings

Chile submits the "Annual Report of Chile to the SPRFMO Scientific Committee: Jack Mackerel" (SPRFMO, 2024a). At each SPF Scientific Committee meeting, external experts from other member states (Peru, New Zealand, etc.) critique Chile's stock assessment methodology, acoustic survey protocols, and FMP outcomes. Comments are compiled in the SPRFMO "Peer-Review Summary" documents, which are publicly accessible at https://www.sprfmo.int

References

SPRFMO (South Pacific Regional Fisheries Management Organisation). (2024a). SC12-Doc26-CHL Annual Report of Chile to the SPRFMO Scientific Committee of Jack Mackerel. https://www.sprfmo.int/assets/Meetings/02-SC/12th-SC-2024/Plenary-Documents/SC12-Doc26-CHL-Annual-Report-of-Chile-to-the-SPRFMO-SC-Jack-Mackerel.pdf

A2.5	**A2.5 The assessment is made publicly available.**
Outcome	*Pass*

Rationale

The SPRFMO have the jack mackerel workshop reports, datasets, modeling description, discussion and conclusions available for consultation on the SPRFMO webpage. Specifically Jack mackerel stock assessments reports since 2014 can be found here:

https://www.sprfmo.int/meetings/scientific-committee/sc-workshops/, and Working Group papers and other relevant annexes can be found within the SPRFMO annual Commission Meeting reports at https://www.sprfmo.int/meetings/comm/ .

References

SPRFMO. 2025. SC workshops https://www.sprfmo.int/meetings/scientific-committee/sc-workshops/

A3 Harvest strategy

A3.1	**A3.1 There is a mechanism in place by which total fishing mortality of this species is restricted.**
Outcome	*Pass*

Rationale

Article 20 of the Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean states that conservation and management measures adopted by the Commission shall include the determination of the total allowable catch or total allowable fishing effort (SPRFMO 2022a). Therefore, the Commission establishes a total allowable catch (annual catch quota) applicable to the entire scope of the fishing resource, meaning that total fishing mortality of the jack mackerel is restricted.

In Chile, from 2001 to 2010, jack mackerel fishing quotas were formally establish based on scientific information provided by the Fisheries Development Institute. Since 2011, management of the jack mackerel fishery at the national level is based entirely on the recommendations issued by the SPRFMO. During 2011 and 2012 the global catch quota was established based on landing history, without a country allocation; from 2013 to the present the SPRFMO quotas were established and divided for each of the member countries of the Commission (SUBPESCA 2017).

References

SUBPESCA. (2017). Plan de Manejo para la pesquería de jurel XV a X regiones. https://www.subpesca.cl/portal/616/articles99235_documento.pdf

SPRFMO. (2022a). Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean. Published by the South Pacific Regional Fisheries Management Organisation (SPRFMO), New Zealand. https://www.sprfmo.int/assets/Basic-Documents/Convention-and-Final-Act/SPRFMO-Convention-2023-update12May2023.pdf

A3.2	**A3.2 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.**
Outcome	*Pass*

Rationale

Since 2013 the jack mackerel catch limits (TAC) has been set at or below the level recommended by the SPRFMO Scientific Committee. In Table 3 advice catch, catch limits (TAC), and reported catch of jack mackerel since 2013 are shown (values are in tons). From 2013 to 2018, the percentage of the quota usage was between 81.2 % to 94.4%, hence fishery removals do not exceed the TAC. Since 2019 up to 2023 the quota was exceeded (Table 3); however, the surplus does not exceed 10% of the recommended TAC and the stock status is above the limit reference point (SPRFMO 2023b).

*Table 3. Summary table regarding catch limits and reported catch, and percentage of quota used. (*Preliminary value) (SPRFMO 2023b)*

Year	Recommended Maximum Catch	Catch limits (TAC)	Reported Catch	% Catch quota used
2013	441,000	438,000	355,539	81.2
2014	440,000	440,000	415,366	94.4
2015	460,000	460,000	395,210	85.9
2016	460,000	460,000	389,101	84.6
2017	493,000	493,000	406,126	82.4
2018	576,000	576,000	527,539	91.6
2019	591,000	591,000	635,569	107.5
2020	680,000	680,000	725,945	106.8
2021	782,000	782,000	802,048	103.3
2022	900,000	900,000	961,428	103.2
2023	1,035,000	1,080,000	1,134,612*	105.05

In 2023, catches of Jack Mackerel did not surpass more than 5% of the established TAC for the different fishing areas of Chile (

Table 4 and

Table 5).

Table 4. Quota Compliance 2023. Details of compliance of the industrial quotas established for 2023 (SERNAPESCA, 2024a).

Cumplimiento de Cuotas 2023

El siguiente es el detalle del cumplimiento de las cuotas industriales establecidas para el año 2023

		Resumen LTP y PEP (industrial) 2023		
Recurso	Unidad de pesquería	Cuota Final (t)	Desembarque total (t)	% consumido 2023
Anchoveta	XV- I - II	580.872	55	0%
Anchoveta	III - IV	8.658	0	0%
Anchoveta	V - X	2.710	1.568	58%
Bacalao de prof.	47°L.S.-57°L.S.	2.046	1.969	96%
Camarón nailon	II-VIII	5.527	3.935	71%
Congrio dorado	Norte Exterior	568	445	78%
Congrio dorado	Sur Exterior	451	311	69%
Jibia (*)	XV- XII			
Jurel	XV - I - II	81.583	81.250	100%
Jurel	III - IV	1.033	0	0%
Jurel	V - IX	553.475	554.642	100%
Jurel	XIV - X	276	1	0%
Langostino amarillo	III-IV	1.024	381	37%
Langostino amarillo	V-VIII	2.610	2.137	82%
Langostino colorado	II-IV	627	51	8%
Langostino colorado	V-VIII	8.188	7.523	92%
Merluza común	IV- 41º 28, 6	26.602	22.834	86%
Merluza de cola	V -X	1.988	1.741	88%
Merluza de cola	XI -XII	10.317	9.199	89%
Merluza de tres aletas	41º28,6 - XII	5.460	2.683	49%
Merluza del sur	Norte Exterior	12.625	11.723	93%
Merluza del sur	Sur Exterior	1.046	674	64%
Sardina común	V -X	1.666	961	58%
Sardina española	XV- I - II	1.485	0	0%
Sardina española	III - IV	610	0	0%

Table 5. Quota Compliance 2023. Details of compliance of the artisinal quotas established for 2023 (SERNAPESCA, 2024a).

Resumen Cuotas Artesanales 2023

		Resumen Cuotas Artesanales 2023		
Recurso	Unidad de pesquería	Cuota Final (t)	Desembarque total (t)	% consumido 2023
Anchoveta	XV, I y II	119.004	100.351	84%
Anchoveta	III y IV	31.127	4.238	14%
Anchoveta	V a X	124.898	101.468	81%
Bacalao de prof.	XV al 47°L.S.	1.822	1.912	105%
Camarón nailon	II a VIII	1.188	1.077	91%
Congrio dorado	X a XII	992	623	63%
Jurel	XV , I y II	5.115	3.948	77%
Jurel	III y IV	27.810	27.632	99%
Jurel	V -IX	17.161	17.937	105%
Jurel	XIV-X	2.305	2.260	98%
Jibia	XV- XII	195.000	107.340	55%
Langostino amarillo	III y IV	381	193	51%
Langostino colorado	II a IV	492	205	42%
Merluza común	IV a X y XIV	13.814	7.507	54%
Merluza del sur	X, XII y XII	5.721	5.364	94%
Sardina española	XV, I y II	3.060	2.562	84%
Sardina española	III - IV	1.300	951	73%
Sardina común	V a X y XIV	205.030	169.589	83%
Sardina austral	X y XI	8.752	3.255	37%

References

SERNAPESCA (2024a). Fiscalización en Pesca y Acuicultura, Informe de Actividades, Servicio Nacional de Pesca y Acuicultura. https://www.sernapesca.cl/app/uploads/2024/03/IFPA_2023_v20240522-1.pdf

SPRFMO. (2023b). 11 th Scientific Committee Meeting Report. https://www.sprfmo.int/assets/Meetings/02-SC/11th-SC2023/SPRFMO-SC11-Report_rev1-17-Oct-b.pdf

A3.3	**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).**
Outcome	*Pass*

Rationale

Since 1991, the General Law of Fisheries and Aquaculture of Chile (LGPA), determines in its Article 3 that it is possible to establish extractive bans (prohibition of capture or extraction in a specific area for conservation reasons) to favour the administration of the hydrobiological resources. Also, Article 110 mentions that those who capture hydrobiological species in the closed period will be penalized (LGPA 2024).

After 1995 catch record in Chile, jack mackerel landings started to be composed by a greater presence of juvenile, which is a sign of overexploitation. Chilean Authorities, with a precautionary approach, adopted national and absolute bans that stopped industrial activity for considerable periods of time in order to avoid further overexploitation that could lead to a collapse of the fishery (SUBPESCA 2017). This shows that when the stock is below its reference limits, the extraction of fishing resources will be subject to extractive bans.

References

LGPA. (2024). Ley General de Pesca y Acuicultura. https://www.subpesca.cl/portal/615/articles-88020_documento.pdf

SUBPESCA. (2017). Plan de Manejo para la pesquería de jurel XV a X regiones. https://www.subpesca.cl/portal/616/articles99235_documento.pdf

A4 Stock status

A4.1	**A4.1 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.**
Outcome	*Pass*

Rationale

The biomass limit reference point - SSBlim for this stock is based on maintaining spawning stock biomass (SSB) above 8% of the expected SSB in the absence of fishing (SSB0). Based on the latest stock assessment performed by Paya (2024):

SSBlim= 2,071 million tons
SSB2024 =17,700 million tons
SSB2024/SSBlim =8.55
SSB2024/SSBMSY= 1.98

The exploitation status of Jack mackerel in the eastern South Pacific in 2023 is under exploited and no overfishing is happening. The stock is above the target reference point.

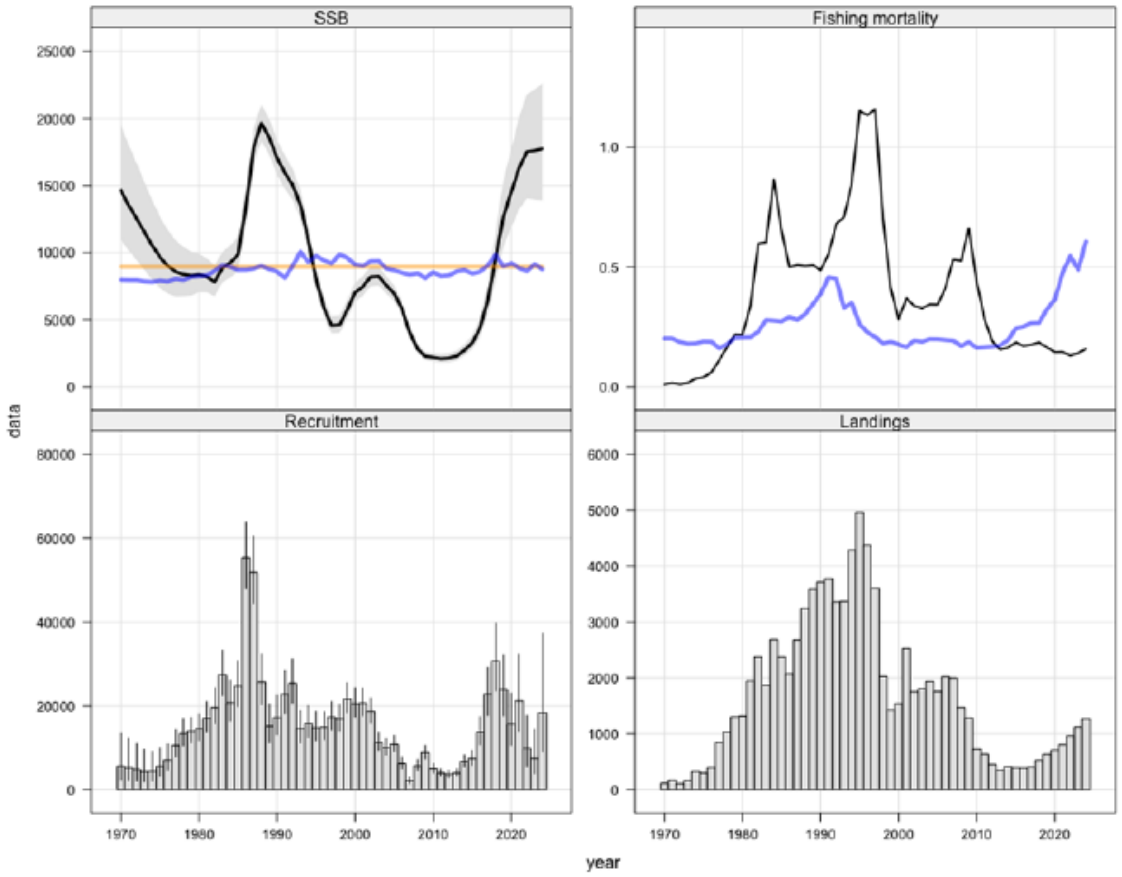

Figure 3. Estimates for spawning biomass (thousands of tonnes; top left), recruitment at age 1 year (millions; bottom left), total fishing mortality (top right) and total catch (thousands of tonnes; bottom right). The blue lines represent the dynamic PBRs based on SSB_MSY (top left) and F_MSY (top right). The yellow line corresponds to the historical average of SSB_MSY (8703 thousand tons) (Paya,2024).

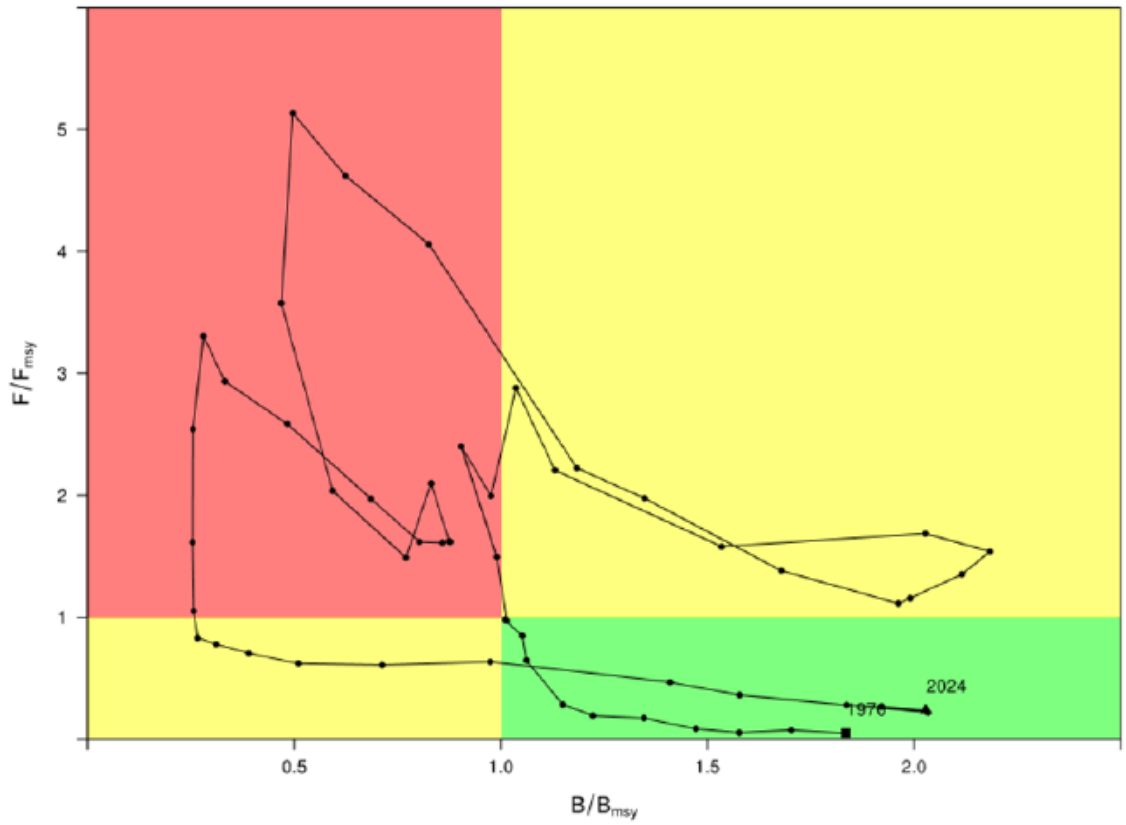

Figure 4. Stock status diagram. F= Fishing Mortality, B= Spawning Biomass, MSY= Maximum Sustainable Yield (Paya, 2024).

References

Paya, I. 2024. Estatus y posibilidades de explotación biológicamente sustentable de jurel nacional, Región de Arica y Parinacota a Región de Los Lagos, año 2025.

Category B species

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

2.2. 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.

2.3. The risk matrix in Table B(b) shall be used when assessing a Category B species when no reference points are available.

B1	
Table used B(a) or B(b)	
Outcome	Choose an item.

Rationale
References

Category C species

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

2.4.1. 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.

C1.1	**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.**
Outcome	Choose an item.
Rationale	
References	

C1.2	**C1.2 The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.**
Outcome	Choose an item.
References	

Category D species

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

2.5. The Productivity-Susceptibility Analysis (PSA) in Table D(a) shall be used when assessing Category D species.

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

2.7. 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.

Chub mackerel (*Scomber japonicus*)

Species name	Chub mackerel (*Scomber japonicus*)	
Productivity attributes	**Value**	**Score**
Average age at maturity	2[1]	1
Average maximum age	7.9[1]	1
Fecundity	135,962 [1]	1
Average maximum size	38.1[1]	1
Average size at maturity	22[1]	1
Reproductive strategy	Broadcast spawner[1]	1
Mean Trophic Level (MTL)	3.4[1]	3
Density dependence (to be used when scoring invertebrate species only)	N/A	N/A
Susceptibility attributes		
Areal overlap (availability): Overlap of the fishing effort with a species concentration of the stock	<10	1
Encounterability: The position of the stock/ species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	High overlap with fishing gear[2]	3
Selectivity of gear type: Potential of the gear to retain species	Individuals < size at maturity are rarely caught [3], however, however at least one undersized individual is captured on nearly every gear deployment, thus a precautionary score is given	3
Post-capture mortality (PCM): The chance that, if captured, a species would be released and that it would be	Retained	3

in a condition permitting subsequent survival		
Average productivity score		1.29
Average susceptibility score		2.50
PSA risk rating (from Table D(b))		Pass
Compliance rating		Pass

References

[1]Fishbase (2025) *Scomber japonicus*, Chub mackerel. https://www.fishbase.se/summary/Scomber-japonicus.html

[2] SPRFMO (2025) 13th Meeting of the Scientific Committee. SC12-DOC26. Annual Report of Chile to the SPRFMO of Jack Mackerel Scientific Committee. https://www.sprfmo.int/assets/Meetings/02-SC/12th-SC-2024/Plenary-Documents/SC12-Doc26-CHL-Annual-Report-of-Chile-to-the-SPRFMO-SC-Jack-Mackerel.pdf

[3] SUBPESCA (2021). Plan de reducción del descarte y captura de pesca incidental para la pesquería artesanal de anchoveta (*Engraulis ringens*), jurel (*Trachurus murphyi*) y su fauna acompañante en las Regiones de Atacama y Coquimbo. https://www.subpesca.cl/portal/615/articles-111941_documento.pdf

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).

D1	**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.**
Outcome	Choose an item.
Rationale	
References	

D2	**D2. There is no substantial evidence that the fishery has a significant negative impact on the species.**
Outcome	Choose an item.
Rationale	
References	

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.

3.1. All ecosystem criteria must be met (pass) for a fishery to pass the Ecosystem

Requirements.

3.1.1. 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)

E1.1	**E1.1 Information on interactions between the fishery and ETP species is collected.** *In reaching a determination for E1.1, the assessor should consider if the following is in place:*
	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.
Outcome	*Pass*

Rationale

Since 2015, a dedicated research initiative has been underway to monitor discards and bycatch in the industrial jack mackerel fishery along the central-southern coast of Chile and in adjacent international waters. As part of this effort, scientific observers have been deployed onboard fishing vessels to gather data on incidental catches, including interactions with seabirds, marine mammals, sea turtles, and other non-target species. Fishermen have also participated by maintaining logbooks and engaging in workshops aimed at identifying ways to minimize discards. Data collected between 2015 and 2018 contributed to the development of the "Plan for the Reduction of Discards and Incidental Catches in the Industrial Fishery of Jack Mackerel and Its Bycatch from Valparaíso to Los Lagos and in International Waters under the SPRFMO Convention." Analysis of this observer data helped identify associated species based on catch rates, mortality, and interaction types, highlighting variability linked to spatial, temporal, and environmental factors as well as species-specific vulnerability (MSC, 2025).

The average of observer coverage on Jack mackerel fishery in different regions of Chile from 2016-2023 has been between 5-15.8% (Table 6) (Vega et al., 2024).

Table 6. Annual observation coverage (%) of catch and incidental mortality in purse-seine fishing activities by fishing

(Vega et al., 2024).

Pesquería	Año									
	2015	2016	2017	2018	2019	2020	2021	2022	2023	Total
Anchoveta Norte / Industrial	-	-	9,9	10,3	10,5	15,6	20,1	26,4	50	11,5
Anchoveta Norte / Artesanal	-	-	2,3	2,4	4,1	3,2	3,5	4	3,8	3,1
Jurel norte / Industrial	-	-	-	-	-	6,7	21,6	20	21	15,8
Anchoveta y Jurel Centro norte/ Artesanal	-	-	-	0,9	5,4	6,4	4,9	6	7,3	5,0
Jurel Centro sur / Industrial	12,8	12,9	16,7	18,3	10,8	10,1	9,3	14,4	17,2	12,2
Sardina común y Anchoveta Centro sur / Industrial	14,8	13,8	20	33,3	-	14,8	-	-	45,5	16,3
Sardina común y Anchoveta Centro Sur / Artesanal	1,4	1,4	1,7	2,2	2,6	0,3	0,6	2,2	1,3	1,4
Sardina austral Sur / Artesanal	-	-	1,9	4,3	6,2	6,8	3,8	-	1,9	4,6

References

MSC (2025). Chilean jack mackerel industrial purse seine. Public Comment Draft Report (unpublished yet).

Vega R., Ossa L., Suárez B., Jiménez M.F., Henríquez S., González A., Ojeda R., Le-Bert J., Simeone A., Anguita C., Hüne, M., Cari I., Zárate P. y D. Devia. 2024. Informe Final. Convenio de Desempeño 2021. Programa de observadores científicos: Programa de investigación y monitoreo del descarte y la captura de pesca incidental en pesquerías pelágicas, año 2023-2024. Subsecretaría de Economía Y EMT/Agosto 2024.

E1.2	**E1.2 The fishery has no significant negative impact on ETP species.** *In reaching a determination for E1.2, the assessor should consider if the following is in place:* 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.
Outcome	*Pass*

Rationale

Incidental catch and associated mortality for non-target species are relatively low in this fishery, largely due to the offshore nature of industrial operations—unlike coastal artisanal fleets—and the proactive efforts of crews to release individuals alive whenever possible. This is facilitated by the use of proper handling protocols and adherence to bycatch reduction plans and best practices mandated for the fleet.

Among the groups affected, marine mammals account for the highest proportion of incidental captures (77%), followed by Procellariiform seabirds such as albatrosses, petrels, and shearwaters (12.1%), and coastal seabirds including gulls, pelicans, and penguins (10.8%) in the Jack mackerel purse-seine industrial fishery operating between

Valparaíso (V) and Los Lagos (X), Chilean administrative regions and international waters of the SPRFMO. Additionally, two leatherback turtles were incidentally caught and safely released alive after net-handling procedures. The only marine mammal recorded as bycatch was the South American sea lion (*Otaria flavescens*). The most frequently caught seabird species were the Dominican gull (Larus dominicanus), Black-browed albatross (*Thalassarche melanophris*), and Peruvian pelican (*Pelecanus thagus*), which together represented 72.1% of all seabird bycatch (Table 7) (SPRFMO, 2024a).

Table 7. Incidental catch and resulting mortality by species in the jack mackerel purse-seine industrial fishery operating between Valparaíso and Los Lagos, Chilean administrative regions (32°10'23'' - 43°44'17'' SL) and international waters of the SPRFMO. Source: data collected by scientific observers onboard from 3,369 fishing sets between January 2015 and December 2023 Source: Vega et al. (2024) in SPRFMO (2024a).

Common name	Scientific name	N° of individuals incidentally caught	N° individuals dead as a result of incidental catch	Mort (%)	AIC	CV_{AIC} (%)	AIM	CV_{AIM} (%)
South american sea lion	*Otaria flavescens*	2,665	15	0.6	0.8	485	0.004	1,771
Dominican gull	*Larus dominicanus*	244	1	0.4	0.1	1,426	0.0003	5,804
Black-browed albatross	*Thalassarche melanophris*	215	1	0.5	0.06	1,441	0.0003	5,804
Peruvian pelican	*Pelecanus thagus*	113	5	4.4	0.03	2,189	0.001	3,849
Unidentified albatross	*Thalassarche* spp.	61	0	0	0.02	2,430	0	-
Sooty shearwater	*Ardenna grisea*	47	2	4.3	0.01	3,001	0.0006	4,104
Grey-headed albatross	*Thalassarche chrysostoma*	36	0	0	0.01	2,496	0	-
Wilson´s storm petrel	*Oceanites oceanicus*	18	1	5.6	0.005	2,578	0.0003	5,804
Pink-footed shearwater	*Ardenna creatopus*	17	17	100	0.005	2,621	0.005	2,621
Humboldt penguin	*Spheniscus humboldti*	14	1	7.1	0.004	5,009	0.0003	5,804
Cape petrel	*Daption capense*	8	0	0	0.002	4,230	0	-
White-chinned petrel	*Procellaria aequinoctialis*	8	1	12.5	0.002	5,130	0.0003	5,804
Southern giant-petrel	*Macronectes giganteus*	8	0	0	0.002	4,230	0	-
Unidentified storm-petrel	Hydrobatidae	1	1	100	0.0003	5,804	0.0003	5,804
Unidentified penguin	*Spheniscus* spp.	1	1	100	0.0003	5,804	0.0003	5,804
Magellanic penguin	*Spheniscus magellanicus*	1	1	100	0.0003	5,804	0.0003	5,804
Wandering albatross	*Diomedea exulans*	1	0	0	0.0003	5,804	0	-
Leatherback sea turtle	*Dermochelys coriacea*	2	0	0	0.0006	4,104	0	-

Mort (%) = Mortality: Number of dead animals / Number of animals of the same species captured
AIC = Average Incidental Catch: Number of animals caught / Number of sets observed
CVAIC = AIC Coefficient of variation
AIM = Average Incidental Mortality: Number of dead animals / Number of sets observed
CVAIM = AIM Coefficient of variation

Scientific observers reported catches of 2,013 animals, grouped into 4 species Jack mackerel, on the industrial fleet operating in northern Chile, in between the regions of

Arica and Parinacota (XV) to Antofagasta (II) from 2017-2023 (Table 8). Marine mammals (3 species) represented 99.9% of incidental catches and only 0.5% of mortality for sea lions. The catches of marine reptiles represented the remaining 0.1% without incidental mortality (verga et al, 2024).

Table 8. Capture and incidental mortality by species in the industrial purse seine fleet that operated on the Jack mackerel resource, in the northern area of Chile, from Arica-Parinacota to Antofagasta. Data from the records of scientific observers on 1,567 commercial fishing trips during the period 2017-2023 (Verga et al 2024).

Nombre común	Nombre Científico	Captura	Muertos	Mort (%)	CIP	CV_{CIP}	MIP	CV_{MIP}
Lobo marino común	*Otaria flavescens*	2.008	11	1	1,281	270,7	0,007	1797,1
Tortuga verde	*Chelonia mydas*	3	0	0	0,002	2.949,7	-	-
Calderón	*Globicephala* spp	1	0	0	0,001	3.958,5	-	-
Lobo fino austral	*Arctocephalus australis*	1	0	0	0,001	3.958,5	-	-

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_{CIP})
Mortalidad Incidental Promedio (MIP) = Número de animales muertos/Número de lances observados
Coeficiente de Variación Tasa Mortalidad Incidental (CV_{MIP})

References

SPRFMO (South Pacific Regional Fisheries Management Organisation). (2024a). *SC12-Doc26-CHL Annual Report of Chile to the SPRFMO Scientific Committee of Jack Mackerel.* https://www.sprfmo.int/assets/Meetings/02-SC/12th-SC-2024/Plenary-Documents/SC12-Doc26-CHL-Annual-Report-of-Chile-to-the-SPRFMO-SC-Jack-Mackerel.pdf

Vega R., Ossa L., Suárez B., Jiménez M.F., Henríquez S., González A., Ojeda R., Le-Bert J., Simeone A., Anguita C., Hüne, M., Cari I., Zárate P. y D. Devia. 2024. Informe Final. Convenio de Desempeño 2021. Programa de observadores científicos: Programa de investigación y monitoreo del descarte y la captura de pesca incidental en pesquerías pelágicas, año 2023-2024. Subsecretaría de Economía Y EMT/Agosto 2024.

E1.3	**E1.3 There is an ETP management strategy in place for the fishery.** *In reaching a determination for E1.3, the assessor should consider if the following is in place:*	
	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.
Outcome	*Pass*	

Rationale

The "Plan for the Reduction of Discards and Incidental Catches in the Industrial Jack Mackerel Fishery and Its Bycatch," covering the regions from Valparaíso to Los Lagos

as well as international waters under the SPRFMO Convention, was put into effect in 2019. This plan builds on research initiatives that have been ongoing since 2015, aimed at monitoring and addressing discards and incidental catch within the industrial jack mackerel fishery.

This Plan was developed considering the following Articles of the General Law on Fisheries and Aquaculture (LGPA 2023):
• Article 7° C, the return to the sea of all bycatch shall be mandatory, under handling protocols approved by the
National Fisheries and Aquaculture Service.
• Article 4 letter c), is mandatory to carry on boats and ships devices or utensils to avoid or minimize by catch.
• Article 4 letter d), is mandatory to carry on boats to release specimens caught incidentally by fishing gear.

Two manuals outlining best practices for the Chilean pelagic fishery were published-one by INPESCA in 2020 and another by CIAM in 2021 (INPESCA, 2020; CIAM, 2021). It includes protocols for mitigating, handling, and releasing birds, marine mammals, and reptiles, as well as procedures such as the Transfer of Surplus Fishing Haul (TEL – *Traspaso de Excedentes del Lance de Pesca*) and the "change of fishing area" rule. The TEL maneuver, which involves transferring surplus catch to another vessel with available capacity, is regulated under Resolution Ex. 862 (25/03/21) by Minecom Subpesca. The "change of fishing area" rule requires vessels to inform the fleet when bycatch is detected so they can seek alternative fishing grounds.

Efforts to disseminate and implement these good practices have shown positive results. Monitoring carried out by INPESCA (2023) on the industrial purse seine fleet targeting jack mackerel in south-central Chile between 2020 and 2022 revealed consistently low levels of incidental catch and associated fauna, a trend possibly linked to the implementation of TEL and the fishing area change protocol. Notably, the proportion of sea lions released alive increased from 44.9% in 2020 to 98.3% in 2022. Additionally, an external review conducted in 2022 by ATF-Chile—in cooperation with companies under *Pescadores Industriales del Biobío* and SONAPESCA—assessed the implementation of good practice protocols in the jack mackerel fishery. It found that 18.2% to 22.2% of crew members were familiar with best practices for reducing incidental bird catches (ATF-Chile, 2022).

References

ATF-Chile. 2022. Revisión de Manual de Buenas Prácticas y Plan de Acción Jurel. Auditoria de vigilancia MSC: Interacción con Aves Marinas.

CIAM. 2021. Manual de Buenas Prácticas y Normas Pesqueras para la Sustentabilidad de los Recursos. https://www.corpesca.cl/wp-content/uploads/2014/08/Manual-de-bunas-pr%C3%A1cticas-y-normas-pesqueras-para-la-sustentabilidad-de-los-recursos.pdf

LGPA. (2023). Ley General de Pesca y Acuicultura.

https://www.subpesca.cl/portal/615/articles-88020_documento.pdf

INPESCA. 2020. Manual de Buenas Prácticas para la Pesquería Industrial de Cerco de jurel en la Zona Centro-Sur de Chile. http://www.inpesca.cl/wp-content/themes/sahifa/landing/Manual-buenas-practicas.pdf

INPESCA. 2023. Informe Técnico. Descripción del descarte de jurel y especies secundarias; y captura y tratamiento de especies en peligro, amenazadas y protegidas (ETP) en la unidad de certificación MSC (pesquería industrial de cerco de jurel centro-sur de chile). https://www.corpesca.cl/wp-content/uploads/2014/08/Manual-de-bunas-pr%C3%A1cticas-y-normas-pesqueras-para-la-sustentabilidad-de-los-recursos.pdf

E2 Impact on the habitat

E2.1	**E2.1 Information on interactions between the fishery and marine habitats is collected.** *In reaching a determination for E2.1, the assessor should consider if the following is in place:*	
	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.
Outcome	*Pass*	

Rationale

The spatial information of the fishing operations is gathered through onboard observers and self reports submitted by the fleet via fishing logbooks. Additionally, research and monitoring programs on discards and incidental catches in pelagic fisheries have been conducted annually as part of the plan to reduce discards and incidental catches in the Jack mackerel Chilean fishery. Spatial-temporal information about the fishery's operations has been collected and published in IFOP reports, providing estimates of the habitats encountered by these fisheries). Thus, the fishing footprint of the vessels is well-documented and shows similar fishing grounds across all fishing seasons.

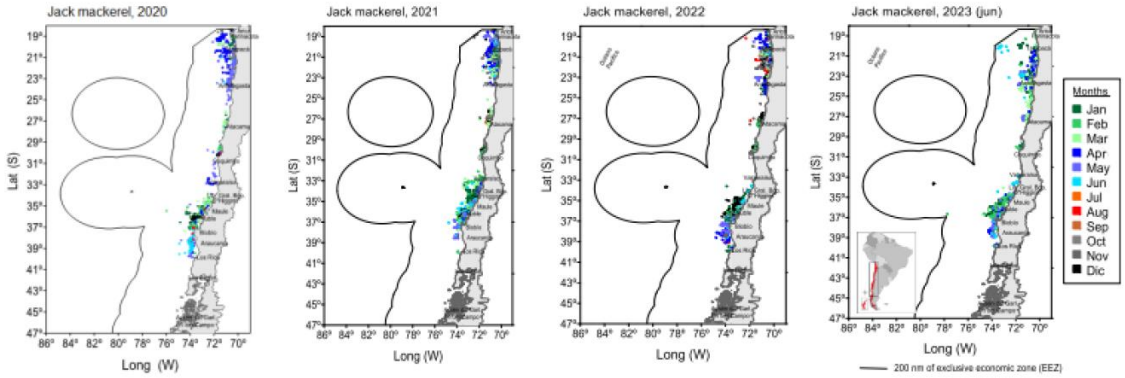

Figure 5. Spatial-temporal distribution of the industrial purse seine fleet targeting Jack mackerel for the 2020-2022 and Jun 2023 period (MSC, 2025).

Recently, Law No. 21.600 of 2023 created the Biodiversity and Protected Areas Service and the National System of Protected Areas. The Law has as an objective the conservation of biological diversity and the protection of the country's natural heritage, through the preservation, restoration and sustainable use of genes, species, and ecosystems. It will depend administratively on the Ministry of the Environment and will have as its main instrument the National System of Protected Areas. The new public service consolidates the powers and responsibilities related to biodiversity conservation, which are currently spread across various public and private entities. The law introduces mechanisms to protect biodiversity not only within protected areas but also beyond them, while also providing increased funding to support conservation efforts.

References

MSC (2025). Chilean jack mackerel industrial purse seine. Public Comment Draft Report (unpublished yet).

Ley núm. 21.600. Crea el servicio de biodiversidad y áreas protegidas y el sistema nacional de áreas protegidas. https://www.diariooficial.interior.gob.cl/publicaciones/2023/09/06/43646/01/2373337.pdf

E2.2	**E2.2 The fishery has no significant impact on marine habitats.** *In reaching a determination for E2.2, the assessor should consider if the following is in place:*
	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.
Outcome	*Pass*
Rationale Purse seine does not interact with any physical habitats (FAO 2024, Sustain 2024,	

Chuenpagdee et al., 2003), therefore, no evidence was found during the assessment about any kind of negative impact on physical habitats by the Jack mackerel fishery activity. The fishing grounds are well defined, and the fishing footprint indicates that the vessels operate in the same areas year after year without moving to new positions. Consequently, the habitats typically affected are those that recover easily, allowing the fishing activity to continue in the same grounds year after year.

References

Chuenpagdee, R.; Morgan, L.E.; Maxwell, S.M.; Norse, E.A.; Pauly, D. (2003). Shifting gears: Assessing collateral impacts of fishing methods in US waters. Front. Ecol. Environ., 1, 517–524

FAO. (2024). Fishing Gear types. Drifting longlines. Technology Fact Sheets. Fisheries and Aquaculture Division [online]. Rome. https://www.fao.org/fishery/en/geartype/233/en

Sustain. (2024). Purse seines. https://www.sustainweb.org/goodcatch/purse_seines/

E2.3	**E2.3 There is a habitat management strategy in place for the fishery.** *In reaching a determination for E2.3, the assessor should consider if the following is in place:*	
	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.
Outcome	*Pass*	

Rationale

Purse seine does not interact with any physical habitats (FAO 2024, Sustain 2024, Chuenpagdee et al., 2003), therefore, there is no need for measures to be in place to minimize and mitigate negative impacts related to the interaction of the fishery with physical habitats. Nevertheless, there are some regulations and management measures in place.

Recently, Law No. 21.600 of 2023 created the Biodiversity and Protected Areas Service and the National System of Protected Areas. The Law has as objective the conservation of biological diversity and the protection of the country's natural heritage, through the preservation, restoration and sustainable use of genes, species, and ecosystems. It will depend administratively on the Ministry of the Environment, and will have as its main instrument the National System of Protected Areas. The new public service consolidates the powers and responsibilities related to biodiversity conservation, which are currently spread across various public and private entities. The law introduces mechanisms to protect biodiversity not only within protected areas but also beyond them, while also providing increased funding to support conservation efforts.

Marine Protected Areas (MPAs) in Chile are established by the Ministry of the Environment. However, for marine parks and reserves, the Undersecretariat for Fisheries and Aquaculture (SUBPESCA) is responsible for providing the technical and legal background needed to support their designation, while the National Fisheries and Aquaculture Service (SERNAPESCA) oversees their management. These areas are governed to ensure the conservation and sustainable use of marine biodiversity, with specific regulations to minimize ecological impacts, as outlined in the General Administration Plan and the General Fisheries and Aquaculture Law (LGPA).

Reforms to the Fisheries Law have further addressed the protection of marine habitats by establishing clear regulatory frameworks. SERNAPESCA has implemented policies that limit certain fishing activities or assign exclusive exploitation rights to artisanal fishers through formal management plans. These initiatives aim to reduce the ecological footprint of fisheries in ecologically sensitive zones.

Notably, SUBPESCA's Resolution No. 451 of 2015 amended the Fisheries Law to designate several seamounts as vulnerable marine ecosystems, recognizing their fragility and banning bottom fishing in these locations. The resolution includes the names and coordinates of the protected seamounts.

Furthermore, Decree D.S. No. 238-04, which updates the Regulation on Marine Parks and Marine Reserves under the LGPA, provides the legal framework for the administration of these areas. It outlines rules regarding conservation, sustainable use, and permissible recreational and administrative activities.

References

Chuenpagdee, R.; Morgan, L.E.; Maxwell, S.M.; Norse, E.A.; Pauly, D. (2003). Shifting gears: Assessing collateral impacts of fishing methods in US waters. Front. Ecol. Environ., 1, 517–524

FAO. (2024). Fishing Gear types. Drifting longlines. Technology Fact Sheets. Fisheries and Aquaculture Division [online]. Rome. https://www.fao.org/fishery/en/geartype/233/en

Ley núm. 21.600. Crea el servicio de biodiversidad y áreas protegidas y el sistema nacional de áreas protegidas. https://www.diariooficial.interior.gob.cl/publicaciones/2023/09/06/43646/01/2373337.pdf

Sustain. (2024). Purse seines. https://www.sustainweb.org/goodcatch/purse_seines/

E3 Impact on the ecosystem

E3.1	**E3.1 Information on the potential impacts of the fishery on marine ecosystems is collected.** *In reaching a determination for E3.1, the assessor should consider if the following is in place:*	
	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.
Outcome	*Pass*	

Rationale

Information on the potential impacts of the Jack mackerel fishery on marine ecosystems has been systematically gathered and analyzed, providing a sound scientific basis for assessing its ecological effects as described by MSC (2025) and summarized below.

The species occupies a central position in the southeastern Pacific trophic web, functioning as both a generalist predator and an important prey item for higher-level predators. It preys on krill, small fish, and zooplankton, thereby transferring energy from lower trophic levels—such as primary producers—to larger predators including albacore tuna (*Thunnus alalunga*), swordfish (*Xiphias gladius*), and various shark species.

Due to its size and ecological versatility, Jack mackerel serves as a key energy conduit in the marine food web (Konchina 1979, Yan et al. 2012, SPRFMO 2014). Its depletion could lead to significant and possibly irreversible changes in the abundance of its predators and prey, disrupting ecosystem balance. Dietary studies have documented shifts over time: between 1977 and 2000, the diet was dominated by krill, whereas more recent data indicate a broader spectrum of prey items, including mollusks and small fish, especially among adult individuals. These changes reflect the species' ability to adjust to varying environmental conditions and prey availability, highlighting its ecological adaptability.

Environmental variability in the central-southern region of Chile also plays a major role in shaping the dynamics of this species. The area is influenced by seasonal coastal upwelling events, driven by the southeast Pacific subtropical anticyclone. During the austral spring and summer, prevailing southerly winds enhance upwelling, while

periods of relaxed or reversed winds lead to downwelling, creating a high-frequency variability in oceanographic conditions. These processes influence nutrient dynamics, primary productivity, and the distribution of marine organisms, including jack mackerel.

Ongoing monitoring through acoustic surveys and scientific studies carried out by IFOP and the SPRFMO has documented changes in jack mackerel distribution related to climatic phenomena such as El Niño and La Niña. These data feed into stock assessments and inform the development of harvest control rules designed to maintain population levels around biological reference points, thereby helping to stabilize not only the target stock but also the broader ecosystem.

In addition to these measures, ecosystem models have highlighted the importance of Jack mackerel in maintaining the integrity of pelagic food webs. The removal of such a central species can alter the flow of biomass and energy, with cascading effects on community structure and function. Ecotrophic modeling exercises suggest that these effects may not be fully reversible even with reduced fishing pressure, especially in highly dynamic upwelling ecosystems like those off the Chilean coast .

In summary, the collection and analysis of ecosystem information related to the Jack mackerel fishery is robust and adequate to reliably indicate the fishery's ecological impact. Research, monitoring, and modeling efforts together provide a comprehensive understanding of the species' ecological role and support adaptive management strategies aimed at preserving the health of marine ecosystems.

References

Konchina, Y. V. (1979). The feeding of the Peruvian jack mackerel, Trachurus symmetricus murphyi. Journal of Ichthyology, 19,52-61

Yan et al. (2012) Yan Y, Zhang CL, Lu H, Wang X, Lai J. Using stable isotopes to analyze feeding habits and trophic position of hairtail (Trichiurus lepturus) from the Beibu Gulf, South China Sea. Oceanologia Et Limnologia Sinica. 2012;43(01):192–200

MSC (2025). Chilean jack mackerel industrial purse seine. Public Comment Draft Report (unpublished yet).

E3.2	**E3.2 There is no substantial evidence that the fishery has a significant negative impact on the marine ecosystem.** *In reaching a determination for E3.2, the assessor should consider if the following is in place:* 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.
Outcome	*Pass*

Rationale No evidence was found that the Jack mackerel fishery is impacting negatively the marine ecosystem. The approval of the previous sections in this assessment demonstrates that the jack mackerel fishery is regulated in different aspects, which allows minimizing the negative impacts that jack mackerel extraction could have on the ecosystem. In addition, the fishery already holds a valid MSC certification, and the assessment do not have any conditions related to Principle 2 (ecosystem) (MSC, 2025).	
References MSC (2025). Chilean jack mackerel industrial purse seine. Public Comment Draft Report (unpublished yet).	

E3.3	**E3.3 There is an ecosystem management strategy in place for the fishery.** *In reaching a determination for E3.3, the assessor should consider if the following is in place:*	
	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.
Outcome	*Pass*	
Rationale Chile has developed an extensive regulatory framework to manage the Jack mackerel fishery, incorporating measures that also contribute - often indirectly - to the protection of marine ecosystems as summarized by MSC (2025) and described below. One of the key strategies involves the implementation of seasonal and spatial closures aimed at safeguarding spawning areas and preventing excessive fishing pressure during vulnerable periods. In addition, Chile has established a network of marine protected areas (MPAs) and specific habitat closures that target ecologically significant regions such as seamounts and other sensitive environments. These zones are intended to minimize the ecological footprint of fishing activities and promote the resilience and sustainability of marine ecosystems over time. To ensure regulatory compliance and collect data on fishing operations, the fishery is monitored using Vessel Monitoring Systems (VMS) and onboard observers. These mechanisms offer real-time information that supports enforcement efforts and helps evaluate the ecological consequences of fishing.		

Scientific research plays a central role in the management approach, with institutions such as the IFOP conducting routine acoustic surveys. These surveys help track the distribution of jack mackerel and assess the environmental conditions of their habitats, providing a solid foundation for science-based decision-making.

Management strategies are also guided by studies used to formulate harvest control rules tailored to the dynamics of the jack mackerel stock. These rules are developed from indirect assessments and are refined through the annual scientific evaluations conducted by the SPRFMO. Such evaluations not only help assess the effectiveness of current measures but also inform future research priorities and policy adjustments to ensure long-term ecological and fishery sustainability.

References

MSC (2025). Chilean jack mackerel industrial purse seine. Public Comment Draft Report (unpublished yet).

Annex 1: External Peer Review report

Assessment and determination summary

Fishery name	**Chile - Trachurus murphyi - Jack mackerel/Jurel - FAO 87, Chilean EEZ Regions XV-X**
MarinTrust report code	**WF08**
Type 1 species (common name, Latin name)	*Jack mackerel/jurel (Trachurus murphyi)*
Fishery location	*FAO 87, Chilean EEZ Regions XV-X*
Gear type(s)	*Purse seine*
Management authority (country/state)	*South Pacific Regional Fisheries Management Organisation (SPRFMO) and Chilean Undersecretary of Fisheries and Aquaculture (SUBPESCA) (Chile)*
Certification Body recommendation	*Approved*
FAPRG reviewer recommendation	Agree with CB determination

Summary of peer review outcomes

Summary
This is a well reputed fishery which under the SPRFMO guidande and cooperation of several countries has overcome a difficult situation of overfishing in the 2000 - 2010 period. The country members of SPRFMO agreed an annual maximun increase of 15% of the TAC (total allowable catch) in years when population indexes (i.e. recruitment) shows suitable conditions. However the chilean delegation has proposed (Lima, 2024) to increase to 44% the 2025 TAC compared to 2024. Observations were made about CPUE might causing an artificial increase of the biomass. Finally it was recommend caution and a deep review of currrent knowledge before increasing the agreed 15%. The report is complete and provide a clear view of the current situation of this important fishery: "The last assessment carried out in 2024 (for this monospecific fishery) showed that estimated stock biomass of Jack mackerel is well above BMSY and fishing mortality is well below FMSY. The exploitation status of Jack mackerel in the eastern South Pacific is under exploited and no overfishing is happening". Furthermore "In September 2024, the Chilean Jack mackerel industrial purse seine fishery continued to meet the requirements of the Marine Stewardship Council (MSC) Fisheries Standard and the fishery remains certified"
General comments on the draft report provided to the peer reviewer
Thanks, no comments.

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?	Yes
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	Yes
Category A Species	Yes
Category B Species	n/a
Category C Species	n/a
Category D Species	Yes
Section E – Ecosystem Impacts	n/a

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?	Yes
scoring agreed	
Certification Body response	
OK	

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

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

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

3c. Are the “Category C Species” scores clearly justified?	n/a
Certification Body response	

3d. Are the “Category D Species” scores clearly justified?	n/a
scoring agreed	
Certification Body response	
OK	

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

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

Optional: General peer reviewer comments on the draft report
In the SPRFMO area both Chile and Peru have progressed much in considering the interactions of the fisheries with ETP species, including logbooks and documentation for save liberation of caught individuals (sea turtles, sea lyons, sea birds, chondrichtyes etc).
Certification Body response
True.