



MarinTrust Standard V2

By-product Fishery Assessment Pacific chub mackerel (*Scomber japonicus*) in FAO 87, Chile EEZ Regions I, II and XV

MarinTrust Programme

Unit C, Printworks

22 Amelia Street

London

SE17 3BZ

E: standards@marin-trust.com

T: +44 2039 780 819

Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Pacific chub mackerel (<i>Scomber japonicus</i>) ["caballa", in Spanish]
	Geographical area:	FAO 87, northern Chilean EEZ Regions I, II, XV (Tarapacá, Antofagasta and Arica y Parinacota)
	Country of origin of the product:	Chile
	Stock:	Pacific chub mackerel in northern Chile (18-28°S)
Date	10 November 2023	
Report Code	CHL01	
Assessor	Ana Elisa Almeida Ayres	
Country of origin of the product - PASS	Pass (Chile)	
Country of origin of the product - FAIL	N/A	

Application details and summary of the assessment outcome			
Company Name(s): Iquique Compañía Pesquera Camanchaca SA			
Country: Chile			
Email address:		Applicant Code:	
Certification Body Details			
Name of Certification Body:		Global Certification Trust/NSF	
Assessor	Peer Reviewer	Assessment Days	Initial/Surveillance/ Re-approval
Ana Elisa Almeida Ayres	Matthew Jew	0.5	Initial
Assessment Period	November 2023 – November 2024		

Scope Details	
Main Species	Pacific chub mackerel (<i>Scomber japonicus</i>) [“caballa”, in Spanish]
Stock	Pacific chub mackerel Pacific chub mackerel in northern Chile (18-28°S)
Fishery Location	FAO 87, Northern Chilean EEZ Regions I, II, XV (Tarapacá, Antofagasta and Arica y Parinacota)
Management Authority (Country/ State)	Chile Undersecretary for Fisheries and Aquaculture (SUBPESCA)
Gear Type(s)	Purse seine
Outcome of Assessment	
Peer Review Evaluation	Agree with assessor’s recommendation
Recommendation	Approved

Table 2. Assessment Determination

Assessment Determination
<p>If any species is categorised as Endangered or Critically Endangered on Union for Conservation of Nature's Red List of Threatened Species - IUCN’s Red List, or if it appears in the Convention on International Trade in Endangered Species of Wild Fauna and Flora - CITES appendices, it cannot be approved for use as MarinTrust raw material. Pacific chub mackerel (<i>Scomber japonicus</i>) [“caballa”, in Spanish] is not categorised as Endangered or Critically Endangered on IUCN’s Red List and does not appear in CITES appendices; therefore, Pacific chub mackerel (<i>Scomber japonicus</i>) is eligible for approval for use as Marin Trust by-product raw material.</p> <p>Initially the client requested an assessment for <i>Scomber japonicus/colias</i>, however <i>Scomber colias</i>'s distribution does not include the coast of Chile (Froese and Pauly, 2023), thus this assessment focused on <i>Scomber japonicus</i>. There are two different stocks of Pacific chub mackerel in Chile: the northern stock 18-28°S and central-southern stock 34-40°S (Cerna and Plaza, 2014). The area covered by this assessment, Northern Chilean EEZ Regions I, II, XV (Tarapacá, Antofagasta and Arica y Parinacota), includes the northern stock. <i>Scomber japonicus</i> is not under any management regimen, thus it was assessed under Category D.</p> <p>The stock was awarded a Productivity score of 1.29 and a Susceptibility score of 2.50, leading to a “Pass” rating against Table D3 of the Productivity-Susceptibility Analysis – PSA.</p> <p>Therefore, Pacific chub mackerel (<i>Scomber japonicus</i>) in FAO 87, Northern Chilean EEZ Regions I, II, XV (Tarapacá, Antofagasta and Arica y Parinacota) is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v2.3 by-products standard.</p>
Fishery Assessment Peer Review Comments
<p>The assessor correctly classified Pacific chub mackerel in Northern Chilean EEZ Regions I, II, XV as Category D, the stock is NOT subject to a specific management regime and reference points are NOT defined.</p> <p>The assessor correctly assigned values and scores on table D1. The given average attribute scores result in a passing score on Table D3.</p> <p>Pacific chub mackerel in Northern Chilean EEZ Regions I, II, XV should be approved under the MarinTrust Standard v.2.3.</p>
Notes for On-site Auditor
N/A

Species Categorisation

NB: If any species is categorised as Endangered or Critically Endangered on the IUCN Red List, or if it appears in CITES Appendix 1, it **cannot** be approved for use as a MarinTrust raw material.

IUCN Red list Category

By-product material from a species listed by IUCN (the International Union for Conservation of Nature) under the Red List for the following categories shall immediately fail the assessment;

- EXTINCT (E) AND EXTINCT IN THE WILD (EW)
- CRITICALLY ENDANGERED (CR) facing an extremely high risk of extinction in the wild.
- ENDANGERED (EN) facing a very high risk of extinction in the wild.

By-product material may be used from the following categories provided that all clauses in the MarinTrust standard are passed.

- VULNERABLE (VU) facing a high risk of extinction in the wild.
- NEAR THREATENED (NT) does not qualify for above now, but is close or is likely to qualify for, a threatened category in the near future.
- LEAST CONCERN (LC) Widespread and abundant.
- DATA DEFICIENT (DD) and NOT EVALUATED (NE)

Table 3 Species Categorisation Table

Common name	Latin name	Stock	Management	Category	IUCN Red List Category ¹	CITES Appendix 1 ²
Pacific chub mackerel ["caballa", in Spanish]	<i>Scomber japonicus</i>	Pacific chub mackerel in Northern Chile (18-28°S)	Chile Undersecretary for Fisheries and Aquaculture (SUBPESCA)	D	LC	No

¹ <https://www.iucnredlist.org/>

² <https://cites.org/eng/app/appendices.php>

CATEGORY D SPECIES

Category D species are those which are not subject to a species-specific management regime. In the case of mixed trawl fisheries, Category D species may make up the majority of landings. The comparative lack of scientific information on the status of the population of the species means that a risk-assessment style approach must be taken.

D1	Species Name	Pacific chub mackerel (<i>Scomber japonicus</i>) [<i>“caballa”</i> , in Spanish]	
	Productivity Attribute	Value	Score
	Average age at maturity (years)	2 ³	1
	Average maximum age (years)	7.9 ³	1
	Fecundity (eggs/spawning)	100,000-400,000 ³	1
	Average maximum size (cm)	64 ³	1
	Average size at maturity (cm)	22 ³	1
	Reproductive strategy	Broadcast spawner ³	1
	Mean trophic level	3.4 ³	3
	Average Productivity Score		1.29
	Susceptibility Attribute	Value	Score
	Availability (area overlap)	<10	1
	Encounterability (the position of the stock/species within the water column relative to the fishing gear)	High	3
	Selectivity of gear type	Precautionary	3
	Post-capture mortality	Retained	3
	Average Susceptibility Score		2.5
	PSA Risk Rating (From Table D3)		PASS
	Compliance rating		PASS
	<p>Further justification for susceptibility scoring (where relevant) <i>For susceptibility attributes, please provide a brief rationale for scoring of parameters where there may be uncertainty affecting your decision</i></p> <p>Pacific chub mackerel (<i>Scomber japonicus</i>) is found in Indo-Pacific: anti-tropical, absent from the Indian Ocean except for South Africa, KZN to Western Cape³.</p>		



Computer Generated **Native** Distribution Map for *Scomber japonicus* (Chub mackerel), with modelled year 2050 native range map based on IPCC RCP8.5 emissions scenario

Currently known distribution: Indo-Pacific: anti-tropical, absent from the Indian Ocean except for South Africa, KZN to Western Cape (58304).

Reports from Atlantic incl. Mediterranean are *Scomber colias*, and from Red Sea and northern Indian Ocean are *Scomber australasicus* (Ref. 27328).

Native Range | Year 2050 Native Range | Suitable Habitat | Point Map



Note: Distribution range colours indicate degree of suitability of habitat which can be interpreted as probabilities of occurrence.

<p>Relative probabilities of occurrence</p> <ul style="list-style-type: none"> 0.80 - 1.00 0.60 - 0.79 0.40 - 0.59 0.20 - 0.39 0.01 - 0.19 	<p>Explore:</p> <ul style="list-style-type: none"> Native range map Suitable habitat map Point map Show mapping parameters Create your own map 	<p>Download native range data:</p> <ul style="list-style-type: none"> csv format NetCDF (view in Godiva) About AquaMaps 	<p>More species info:</p> <ul style="list-style-type: none"> List of countries List of FAO areas List of ecosystems Comments & Corrections 	<p>Session no. 64</p> <p>-Close window-</p> <p>Please use -Close window-link just above to exit instead of the browser's X button.</p>
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Figure 1. Distribution of Pacific chub mackerel (*Scomber japonicus*).⁴

References

¹Froese, R. and D. Pauly. Editors. 2023. FishBase. World Wide Web electronic publication. <https://fishbase.mnhn.fr/summary/SpeciesSummary.php?ID=54736&AT=Cavala-de-reino>

²Cerna, F., & Plaza, G. 2014. Life history parameters of chub mackerel (*Scomber japonicus*) from two areas off Chile. Bulletin of Marine Science, 90(3), 833-848. <https://doi.org/10.5343/bms.2013.1077>

³Froese, R. and D. Pauly. Editors. 2023. FishBase. World Wide Web electronic publication. <https://www.fishbase.se/summary/117>

⁴AquaMaps. 2019. Computer generated distribution maps for *Scomber japonicus* (Chub mackerel), with modelled year 2050 native range map based on IPCC RCP8.5 emissions scenario. https://www.aquamaps.org/receive.php?type_of_map=regular&map=cached

Standard clauses 1.3.2.2

Table D2 - Productivity / Susceptibility attributes and scores.

Productivity attributes	High productivity (Low risk, score = 1)	Medium productivity (medium risk, score = 2)	Low productivity (high risk, score = 3)
Average age at maturity	<5 years	5-15 years	>15 years
Average maximum age	<10 years	10-25 years	>25 years
Fecundity	>20,000 eggs per year	100-20,000 eggs per year	<100 eggs per year
Average maximum size	<100 cm	100-300 cm	>300 cm
Average size at maturity	<40 cm	40-200 cm	>200 cm
Reproductive strategy	Broadcast spawner	Demersal egg layer	Live bearer
Mean Trophic Level	<2.75	2.75-3.25	>3.25

Susceptibility attributes	Low susceptibility (Low risk, score = 1)	Medium susceptibility (medium risk, score = 2)	High susceptibility (high risk, score = 3)
Areal overlap (availability) Overlap of the fishing effort with the species range	<10% overlap	10-30% overlap	>30% overlap
Encounterability The position of the stock/species within the water column relative to the fishing gear, and the position of the stock/species within the habitat relative to the position of the gear	Low overlap with fishing gear (low encounterability).	Medium overlap with fishing gear.	High overlap with fishing gear (high encounterability). Default score for target species
Selectivity of gear type Potential of the gear to retain species	a Individuals < size at maturity are rarely caught	a Individuals < size at maturity are regularly caught.	a Individuals < size at maturity are frequently caught
	b Individuals < size at maturity can escape or avoid gear.	b Individuals < half the size at maturity can escape or avoid gear.	b Individuals < half the size at maturity are retained by gear.
Post-capture mortality (PCM) The chance that, if captured, a species would be released and that it would be in a condition permitting subsequent survival	Evidence of majority released post-capture and survival.	Evidence of some released post-capture and survival.	Retained species or majority dead when released.

D3		Average Susceptibility Score		
		1 - 1.75	1.76 - 2.24	2.25 - 3
Average Productivity Score	1 - 1.75	PASS	PASS	PASS
	1.76 - 2.24	PASS	PASS	TABLE D4
	2.25 - 3	PASS	TABLE D4	TABLE D4