



MarinTrust Standard V2

By-product Fishery Assessment California pilchard (*Sardinops sagax caeruleus*) in FAO 77 Pacific Eastern Central, Central and Southern Baja California and the Gulf of California

MarinTrust Programme

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Table 1 Application details and summary of the assessment outcome

Fishery Under Assessment	Species:	Californian pilchard (<i>Sardinops sagax caeruleus</i>)
	Geographical area:	FAO 77 Pacific Eastern Central
	Country of origin of the product:	South Africa (Flag states: Mexico)
	Stock:	California pilchard in FAO 77 Pacific Eastern Central
Date	07 th February 2024	
Report Code	ZAF03	
Assessor	Ana Elisa Almeida Ayres	
Country of origin of the product - PASS	South Africa (Flag states: Mexico)	
Country of origin of the product - FAIL	N/A	

Application details and summary of the assessment outcome			
Company Name(s): Amawandle Pelagic (Pty) Ltd, St Helena Bay (Lucky Star Ltd)			
Country: South Africa			
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	Lea Lebechnech	0.5	Surveillance 1
Assessment Period		February 2024 – February 2025	

Scope Details	
Main Species	Californian pilchard (<i>Sardinops sagax caeruleus</i>)
Stock	California pilchard in FAO 77 Pacific Eastern Central
Fishery Location	FAO 77 Pacific Eastern Central
Management Authority (Country/ State)	Department of Forestry, Fisheries and the Environment (DFFE), South Africa, Management Council, Secretariat of Agriculture, Livestock, Rural Development, Fisheries and Food SAGARPA, Mexico and National Marine Fisheries Services, NOAA Fisheries, Pacific Fisheries
Gear Type(s)	Purse seine
Outcome of Assessment	
Peer Review Evaluation	Agree with the assessor's determination
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. Californian pilchard (<i>Sardinops sagax caeruleus</i>) is not categorised as Endangered or Critically Endangered on IUCN's Red List and does not appear in CITES appendices; therefore, Californian pilchard (<i>Sardinops sagax caeruleus</i>) is eligible for approval for use as Marin Trust by-product raw material.</p> <p>The stock is subject to a specific research and management regime, therefore it is classified as Category C. Fisheries removals are considered in the stock assessment, the stock is not overfished and overfishing is not occurring, so clauses C1.1 and C1.2 are met.</p> <p>Therefore, Californian pilchard (<i>Sardinops sagax caeruleus</i>) in FAO 77 Pacific Eastern Central 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 internal peer reviewer agrees with the assessor's determination, who correctly classified the southern subpopulation of the stock of California pilchard in FAO 77 Pacific Eastern Central under Category C, as the stock is subject to a specific management regime in place and reference points are defined.</p> <p>Fishery removals are included in the stock assessment and the stock has its biomass above limit reference point, so it passes Clauses C1.1 and C1.2.</p> <p>Therefore, the southern subpopulation of California pilchard in FAO 77 Pacific Eastern Central, is APPROVED for the production of fishmeal and fish oil under the current MarinTrust v 2.0 by-products standards</p>
Notes for On-site Auditor

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 an 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
Californian pilchard	<i>Sardinops sagax caeruleus</i>	FAO 77 Pacific Eastern Central	California pilchard in FAO 77 Pacific Eastern Central	C	LC	No

¹ <https://www.iucnredlist.org/>

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

CATEGORY C SPECIES

In a by-product assessment, Category C species are those which are subject to a species-specific management regime and are usually targeted species in fisheries for human consumption.

Clause C1 should be completed for each Category C species. If there are no Category C species in the fishery under assessment, this section can be deleted. Where a species fails this Clause, it should be assessed as a Category D species instead.

Species Name		California Pilchard (<i>Sardinops sagax caeruleus</i>)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Yes
	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.	Yes
			Clause outcome: Pass
<p>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.</p> <p>Catches graph is the same of the previous year MarinTrust assessment, considering no updates were find online and the authors of the last fishery assessment did not reply to the e-mail requesting updated data. Nevertheless, MSC (2023website provides catches of 261,325 for this species in 2022.</p> <p>Several reports and publications refer to California Pilchard (<i>Sardinops sagax caeruleus</i>) as <i>S.caeruleus</i> or <i>S. sagax</i>. The stock has been assessed using different methodological approaches. Because of the inconsistency in the catch trend and the estimated biomass from Virtual Population Analysis - VPA analysis, one of the main demands that have been presented to this fishery was the inclusion of auxiliary information generated independently from the fishery. INAPESCA has used the Age Structured Assessment Program (ASAP) to reconstruct the biomass trajectory and estimate parameters relevant to make management decisions. A series of CPUE values from scientific cruises, indices of abundance from acoustic surveys, an index of eggs and larvae, an index representing spawning probability, and the proportion of sardines in the diet of seabirds has been uses as auxiliary information for the current assessment (Nevárez Martínez et al. 2022).</p>			

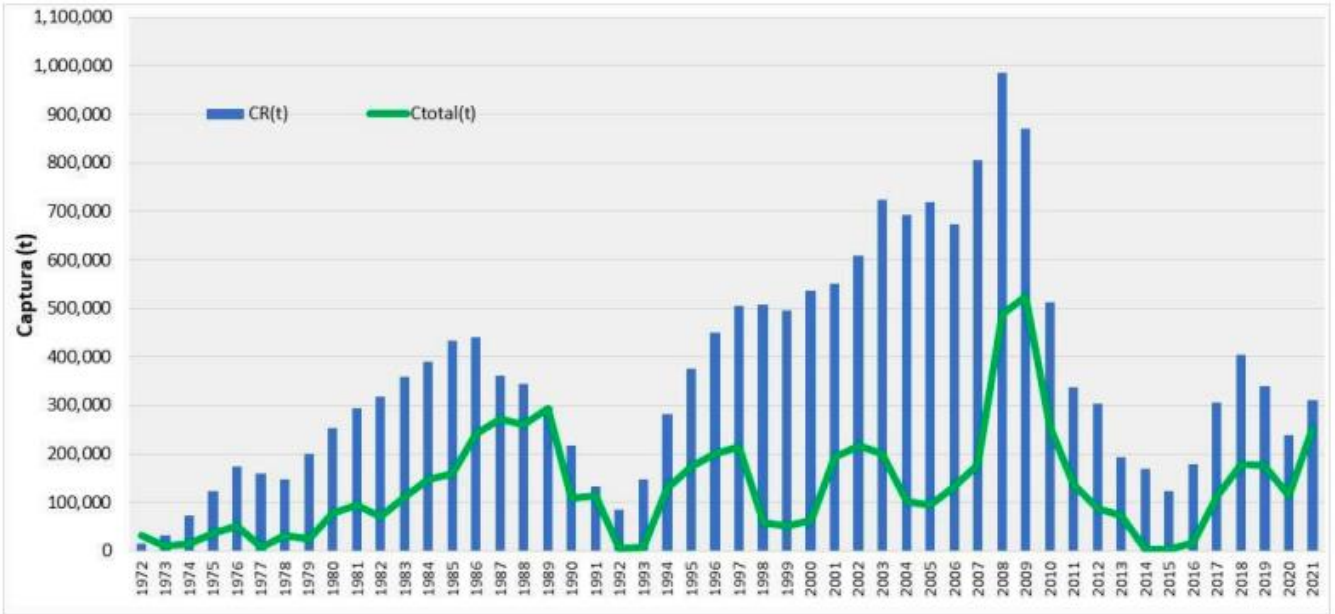


Figure 1. Biologically acceptable catches estimated by asap (blue lines) and their relationship with the actual catch (green line) during the period of time analysed for the Pacific sardine from the gulf of California. Figure has been taken from MSC (2023), which has been taken from Nevárez-Martinez (2022), which is not available online.

Fishery removals of the species in the fishery under assessment are included in the stock assessment process. C.1.1 is met.

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

The Kobe diagram for the evaluation of the California Pilchard stock shows that the stock is not overfished and overfishing is not occurring (Figure 2).

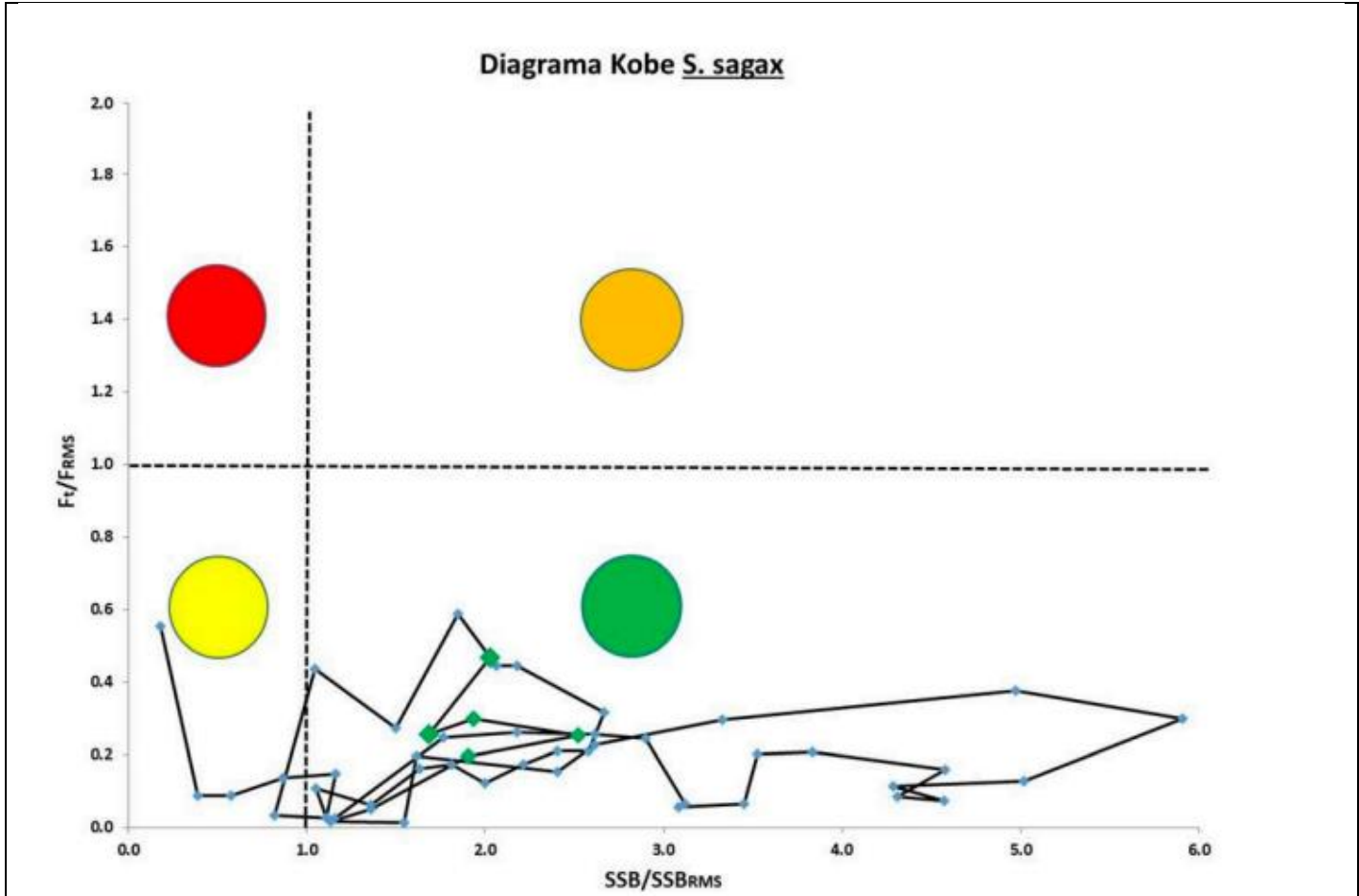


Figure 2. Kobe diagrams showing the evolution and current status of the population of the Pacific sardine in the Gulf of California. Green diamonds indicate the last five years. Figure has been taken from MSC (2023), which has been taken from Nevárez-Martínez (2022), which is not available online.

The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy). C.1.2 is met.

References

MSC. 2023. Small Pelagic Fishery in Sonora, Gulf of California. MSC Fishery Assessment Report. Public Certification Report. Published in June 2023. <https://fisheries.msc.org/en/fisheries/small-pelagics-fishery-in-sonora-gulf-of-california/@@view>

Nevárez-Martínez, M.O. 2022. INFORME TÉCNICO. Evaluación poblacional de la sardina monterrey (*Sardinops sagax*) en el Golfo de California, México, 1971/72 - 2020/21

Links

MarinTrust Standard clause	1.3.2.2
FAO CCRF	7.5.3
GSSI	D.3.04, D5.01