



By-Product assessment report

BP113

Valofish Tunisia

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

Issued April 2025 – Effective April 2025

Report code	BP113	Date of issue	March 2026
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1. Application details		
Applicant	Valofish Tunisia	
Applicant country	Tunisia	
2. Certification Body details		
Name of Certification Body (CB)	LRQA	
Contact information for CB	mt-ca@lrqa.com	
Assessor name	Blanca Gonzalez	
CB internal peer reviewer name	Phoebe Schouten	
Internal peer review evaluation	Agree with evaluation	
Number of Assessment days	.5	
Comments on the assessment	<p>The byproduct species listed in this report are not considered ETP species under the Marin Trust definition, thereby fulfilling this requirement for the assessment.</p> <p>All of them are caught by flagged vessels from India, Indonesia, Tanzania, Seychelles, being India and Tanzania considered high risk; thus, all species and stocks require a Step 3 assessment. Additional information was requested from the applicant, and the provided data included the fishing areas, which were necessary for the Category C assessment.</p> <p>All the fisheries passed the Category C assessment, and traceability information allowed these fisheries to be downgraded to medium risk, approving these byproducts, but they should be sourced with caution.</p>	
3. Approval validity	Valid from 03/2026	Valid until 03/2027
4. Assessment cycle	Re-Approval	

5. Scope Extension Assessment (June 2026)	
Extension of the Scope	<p>For the scope extension, the following flag state fisheries were added:</p> <ul style="list-style-type: none"> • France, Kenya, Oman, Seychelles, South Korea and Spain for skipjack, yellowfin and bigeye tunas in FAO 51. • Senegal for skipjack, yellowfin and bigeye tunas in FAO 34. • Oman for Indian oil sardine in FAO 51 • Italy and Tunisia for round sardinella in FAO 37 • Tunisia for European pilchard in FAO 37
Name of Certification Body (CB)	LRQA
Contact information for CB	mt-ca@lrqa.com
Assessor name	Blanca Gonzalez
CB internal peer reviewer name	Ayana Sabu
Internal peer review evaluation	Agree with evaluation

<p>Comments on the assessment</p>	<p>The first three fisheries regarding skipjack, yellowfin and bigeye tunas, as well as the Indian oil sardine, are caught by medium-risk flag-state vessels; therefore, Step 3 is not required, and these byproducts are approved, but they should be sourced with caution.</p> <p>Although Italy is a medium-risk flag state, Tunisia is high-risk; thus, the round sardinella and European pilchard fisheries in the Mediterranean and Black Sea (FAO 37) required a Step 3 assessment. Given the large size of the area, and according to the General Fisheries Commission for the Mediterranean (GFCM) 3 geographic subarea (GSA) stocks for round sardinella and 12 GSA stocks for European pilchard were available and therefore assessed for Category C.</p> <p>All 3 GSA round sardinella stocks passed the Category C Assessment, and the client's traceability data allowed these fisheries to be downgraded to medium risk, approving these byproducts, but they should be sourced with caution.</p> <p>When providing traceability information, the client noted that round sardinella catches from Italy-flagged vessels occur specifically in the Adriatic Sea (GSAs 17 and 18), while catches from Tunisian-flagged vessels are reported to occur exclusively within Tunisian territorial waters and Exclusive Economic Zones (GSAs 12 and 13). These stocks do not have a specific assessment by the GFCM, but the Adriatic Sea stocks passed the Category C assessment, given evidence that catches can be considered negligible, and traceability information allowed these fisheries to be downgraded to medium risk, thereby approving these byproducts, though they should be sourced with caution. Tunisian stocks fail Category C assessment because catches are not negligible; therefore, these byproducts are NOT APPROVED.</p>
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	<p>For European pilchard eight of the GSAs stocks (1,3,5,7,9 and 10, 12 and 13, 20,26) passed the Category C assessment, and the client's traceability data allowed these fisheries to be downgraded to medium risk approving these byproducts, but they should be sourced with caution. Traceability data indicate that Tunisian-flagged vessels catching European pilchard operate exclusively within Tunisian territorial waters and the Exclusive Economic Zones (GSA 12 and 13).</p> <p>The remaining four GSAs stocks (GSAs 4,6,16,22) failed the Category C assessment because biomass was below Blim. Therefore, these byproducts are NOT APPROVED.</p> <p>Despite the client mentioning very specific fishing areas, all available stock assessments from FAO 37 were included in the report, since the provided Catch Certificates, as physical evidence, do not specify subareas and only indicate FAO 37 as the fishing area.</p>	
Approval validity	Valid from 03/2026	Valid until 03/2027
Approval validity (Scope extension June 2026)	Valid from 06/2026	Valid until 03/2027

6. By-product assessment outcomes			
By-product species name <i>Common and Latin names</i>	Flag country(ies)	Fishing Areas <i>Only applicable to Step 3 assessed species</i>	MarinTrust approval status
Skipjack tuna - <i>Katsuwonus pelamis</i>	India, Indonesia, Tanzania, Seychelles	FAO 51 -Western Indian Ocean FAO 57 - Eastern Indian Ocean	Approved source with caution

Yellowfin tuna - <i>Thunnus albacares</i>	India, Indonesia, Tanzania, Seychelles	FAO 51 -Western Indian Ocean FAO 57 - Eastern Indian Ocean	Approved source with caution
Bigeye tuna - <i>Thunnus obesus</i>	India, Indonesia, Tanzania, Seychelles	FAO 51 -Western Indian Ocean FAO 57 - Eastern Indian Ocean	Approved source with caution
7. By-product assessment outcomes - Scope Extension (June 2026)			
Skipjack tuna - <i>Katsuwonus pelamis</i>	France, Kenya, Oman, Seychelles, South Korea, Spain	FAO 51 -Western Indian Ocean	Approved source with caution
Yellowfin tuna - <i>Thunnus albacares</i>	France, Kenya, Oman, Seychelles, South Korea, Spain	FAO 51 -Western Indian Ocean	Approved source with caution
Bigeye tuna - <i>Thunnus obesus</i>	France, Kenya, Oman, Seychelles, South Korea, Spain	FAO 51 -Western Indian Ocean	Approved source with caution
Skipjack tuna - <i>Katsuwonus pelamis</i>	Senegal	FAO 34 – Eastern Central Atlantic	Approved source with caution
Yellowfin tuna - <i>Thunnus albacares</i>	Senegal	FAO 34 – Eastern Central Atlantic	Approved source with caution
Bigeye tuna - <i>Thunnus obesus</i>	Senegal	FAO 34 – Eastern Central Atlantic	Approved source with caution
Indian oil sardine – <i>Sardinella longiceps</i>	Oman	FAO 51 - Western Indian Ocean	Approved source with caution
Round sardinella – <i>Sardinella aurita</i>	Italy, Tunisia	FAO 37 - Mediterranean and Black Sea GSAs 4, 24 and 27, 26 and 27, 17 and 18	Approved source with caution
Round sardinella – <i>Sardinella aurita</i>	Italy, Tunisia	FAO 37 - Mediterranean and Black Sea GSAs 12 and 13	Not approved

European pilchard – <i>Sardina pilchardus</i>	Tunisia	FAO 37 - Mediterranean and Black Sea GSAs 1,3,5,7,9 and 10, 12 and 13, 20,26	Approved source with caution
European pilchard – <i>Sardina pilchardus</i>	Tunisia	FAO 37 - Mediterranean and Black Sea GSAs 4,6,16,22	Not approved

Guidance for on-site auditor

For the audit, the auditor will check how the facility manages by-products deemed medium risk. Any by-products downrated from high to medium risk will require additional due diligence checks.

It is important that facilities check all raw materials from and verify their suppliers especially if there is a perceived risk of sourcing from known or suspected IUU fishing activity. This requires checking supplier records or procedures in place to understand how the supplier can ensure there is no IUU in the raw material they provide. For raw materials risk rated medium, additional or more frequent checks may be required until the facility is certain that the raw materials are not from IUU fishing activity.

The audit requirements are covered in clause 2.11.3 of the MarinTrust Global Standard for Responsible Supply of Marine Ingredients (the MarinTrust Standard) and associated interpretation guidance.

Approved by-products

- No further checks are required beyond those included in the MarinTrust Standard.

Additional checks of Approved Source with Caution by-products

- Review supplier records or procedures in place.

Additional checks of by-products Approved Source with Caution via Step 3 assessment

- In addition to checks for medium risk Approved Source with Caution by-products, by-products that have had risk downgraded from high to medium at Step 3 (use **Appendix 1** to identify these by-product species), confirm that the relevant traceability information continues to be collected for this by-product. During the audit, a traceability check on any by-products downgraded from high to medium risk shall be included as part of the required traceability checks (Section 4).

Guidance for the applicant/certificate holder

The applicant/certificate holder is responsible for ensuring the relevant actions are taken to comply with the MarinTrust Standard.

The certificate holder is responsible for communicating any changes to the by-products sourced by submitting a scope extension request through the MarinTrust online Application Portal.

Appendix 1 – assessment outcomes

Step 2 Assessment Outcomes

By-product species name <i>Common and Latin names</i>	Flag country(ies)	IUCN Red List <i>Select IUCN red list category from dropdown</i>	CITES Appendices <i>Select CITES appendix status from dropdown</i>	Step 2 risk status <i>Low risk/ Medium risk/ High risk</i>	Step 3 required <i>Yes / No</i>
Skipjack tuna - Katsuwonus <i>pelamis</i>	India, Indonesia, Tanzania, Seychelles	Least concern	Not listed	High Risk	Yes
Yellowfin tuna - Thunnus <i>albacares</i>	India, Indonesia, Tanzania, Seychelles	Least concern	Not listed	High Risk	Yes
Bigeye tuna - Thunnus <i>obesus</i>	India, Indonesia, Tanzania, Seychelles	Vulnerable	Not listed	High Risk	Yes
Skipjack tuna - Katsuwonus <i>pelamis</i>	France, Kenya, Oman, Seychelles, South Korea, Spain	Least concern	Not listed	Medium Risk	No
Yellowfin tuna - Thunnus <i>albacares</i>	France, Kenya, Oman, Seychelles, South Korea, Spain	Least concern	Not listed	Medium Risk	No

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Bigeye tuna - <i>Thunnus obesus</i>	France, Kenya, Oman, Seychelles, South Korea, Spain	Vulnerable	Not listed	Medium Risk	No
Skipjack tuna - Katsuwonus <i>pelamis</i>	Senegal	Least concern	Not listed	Medium Risk	No
Yellowfin tuna - <i>Thunnus albacares</i>	Senegal	Least concern	Not listed	Medium Risk	No
Bigeye tuna - <i>Thunnus obesus</i>	Senegal	Vulnerable	Not listed	Medium Risk	No
Indian oil sardine – <i>Sardinella</i> <i>longiceps</i>	Oman	Least concern	Not listed	Medium Risk	No
Round sardinella – <i>Sardinella aurita</i>	Italy, Tunisia	Least concern	Not listed	High Risk	Yes
European pilchard – <i>Sardina</i> <i>pilchardus</i>	Tunisia	Near threatened (Europe) Least Concern (global)	Not listed	High Risk	Yes

Step 3 Assessment Outcomes

By-product species name <i>Common and Latin names</i>	Flag country(ies)	Fishing Area	Stock name <i>(If applicable e.g. Eastern Pacific stock)</i>	Category C Assessment Outcome <i>Pass/Fail</i>	Traceability information <i>Path 1 – Yes OR Path 2 – Yes/No OR MT Approved Whole Fish</i>	Step 3 Risk Outcome <i>Risk downgraded to Medium Risk/ Remains High Risk</i>
Skipjack tuna - <i>Katsuwonus pelamis</i>	India, Indonesia, Tanzania, Seychelles	FAO 51 -Western Indian Ocean FAO 57 - Eastern Indian Ocean	Indian Ocean Stock	Pass	Path 2 -Yes	Risk downgraded to Medium Risk
Yellowfin tuna - <i>Thunnus albacares</i>	India, Indonesia, Tanzania, Seychelles	FAO 51 -Western Indian Ocean FAO 57 - Eastern Indian Ocean	Indian Ocean Stock	Pass	Path 2 -Yes	Risk downgraded to Medium Risk
Bigeye tuna - <i>Thunnus obesus</i>	India, Indonesia, Tanzania, Seychelles	FAO 51 -Western Indian Ocean FAO 57 - Eastern Indian Ocean	Indian Ocean Stock	Pass	Path 2 -Yes	Risk downgraded to Medium Risk

Round sardinella – <i>Sardinella aurita</i>	Italy, Tunisia	FAO 37 - Mediterranean and Black Sea	Geographic subarea 4 (Algeria) Geographic subareas 24 and 27 (Lebanon) Geographic subareas 26 and 27 (Egypt and Palestine) Geographic subareas 17 and 18 (Adriatic Sea)	Pass	Path 2 -Yes	Risk downgraded to Medium Risk
Round sardinella – <i>Sardinella aurita</i>	Italy, Tunisia	FAO 37 - Mediterranean and Black Sea	Geographic subareas 12 and 13 (Tunisia)	Fail	Path 2 -Yes	Remains High Risk

European pilchard – <i>Sardina pilchardus</i>	Tunisia	FAO 37 - Mediterranean and Black Sea	<p>Geographical Subarea 1 (Spain)</p> <p>Geographical Subarea 3 (Southern Alboran Sea)</p> <p>Geographical subarea 5 (Balearic Island)</p> <p>Geographical subarea 7 (Gulf of Lion)</p> <p>Geographical subareas 9 and 10 (Ligurian Sea and northern Tyrrhenian Sea)</p> <p>Geographical subareas 12 and 13 (Tunisia)</p>	Pass	Path 2 -Yes	Risk downgraded to Medium Risk
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			Geographical subarea 20 (Greece)			
			Geographical subarea 26 (Egypt)			
European pilchard – <i>Sardina pilchardus</i>	Tunisia	FAO 37 - Mediterranean and Black Sea	Geographical subarea 4 (Algeria) Geographical subarea 6 (Northern Spain) Geographical subarea 16 (Southern Sicily) Geographical subarea 22 (Greece)	Fail	Path 2 -Yes	Remains High Risk
<p>Comments on Step 3 Assessment: Traceability information indicates that round sardinella catches from Italy-flagged vessels originate specifically from the Adriatic Sea. In contrast, catches of round sardinella and European pilchard from Tunisian-flagged vessels are reported to occur exclusively within Tunisian territorial waters and Exclusive Economic Zones.</p>						



Appendix 2 – detailed assessment outcomes (step 2 and step 3 if applicable)

Step 2 outcomes

Flag state	Risk rating	Flag score	Port score	General score	Flag State is contracting party or cooperating non-contracting party to all relevant RFMOs	'Carded' under EU Carding system	Flag state party to PSMA	Flag state mandatory vessel tracking for commercial seagoing fleet	WGI Governance rank
India	High	2.75	3	3.47	1	1		5	50.94%
Indonesia	Medium	3.33	2.56	2.47	1	1	1	1	59.43%
Tanzania	High	1.83	2.78	2.3	2	1	5	1	30.19%
Seychelles	Medium	1.79	2.39	1.57	1	1	1	1	62.26%
France	Medium	3.17	2.39	1.67	1	1	1	1	85.38%

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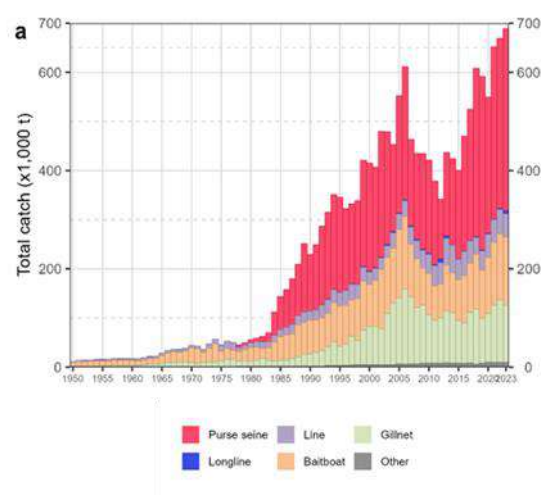
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Kenya	Medium	1.63	1.83	2.63	1	1	1	1	39.15%
Oman	Medium	1.92	1.6	2.03	1	1	1	1	65.57%
Korea (Rep. South)	Medium	3.67	3.11	1.97	1	1	1	1	83.96%
Spain	Medium	3.21	3.39	2.03	1	1	1	1	75.94%
Senegal	Medium	2.38	2.72	2.4	1	1	1	1	41.04%
Italy	Medium	2.54	2.17	1.73	1	1	1	1	68.87%
Tunisia	High	2.54	2.89	2.23	1	1	5	1	37.26%

Step 3 outcomes

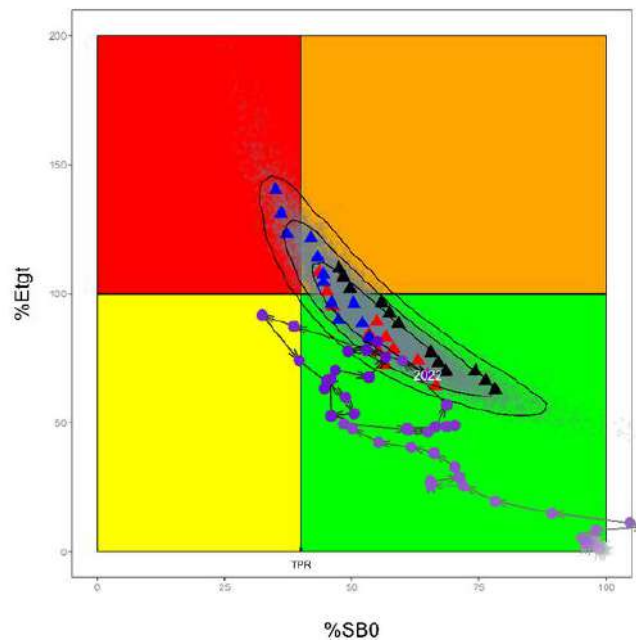
Category C assessment

Species name		Skipjack tuna - <i>Katsuwonus pelamis</i>	
Fishing area and stock		FAO 51 - Western Indian Ocean FAP 57 - Eastern Indian Ocean Indian Ocean Stock	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
			Clause outcome: Pass
<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>The clause is met considering that:</p> <p>The most recent assessment was conducted in 2023 by the Indian Ocean Tuna Commission (IOTC) using a Stock Synthesis model, which uses four types of data: catch, size frequency, tagging, and CPUE indices (IOTC 2024); thus, the stock assessment process includes removals of the species.</p>			
			
<p>Skipjack tuna annual time series of cumulative nominal catches (metric tonnes; t) by fishery in the Indian Ocean from 1950 to 2023 (IOTC 2024).</p>			

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 clause is met considering that:

The latest stock assessment indicates that the skipjack tuna stock's current spawning biomass is estimated at 53% of unexploited levels, well above the adopted target reference point of 40% SB_0 , and the current exploitation rate is below the target rate with a 70% probability. Spawning biomass remains above SB_{MSY} , and fishing mortality is below F_{MSY} with a 98.4% probability. Historically, biomass has remained well above the reference limit of 20% SB_0 . Therefore, the stock is considered neither overfished nor subject to overfishing (IOTC 2024).



Skipjack tuna Indian Ocean stock assessment Kobe plot of the 2023 uncertainty grid. Left - current stock status, relative to SB_0 and F (x-axis) and $F40\%B_0$ (y-axis) reference points for the final model grid.. TPR indicates 40% B_0 ; Triangles represent MPD estimates from individual models (black, models based on PL index; red, models based on PSL index; blue, models based on both PSL and ABBI index). Grey dots represent uncertainty from individual models. The arrowed line represents the historical stock trajectory for model PSL. Contours represent 50, 80, and 90% confidence regions (IOTC 2024).

References

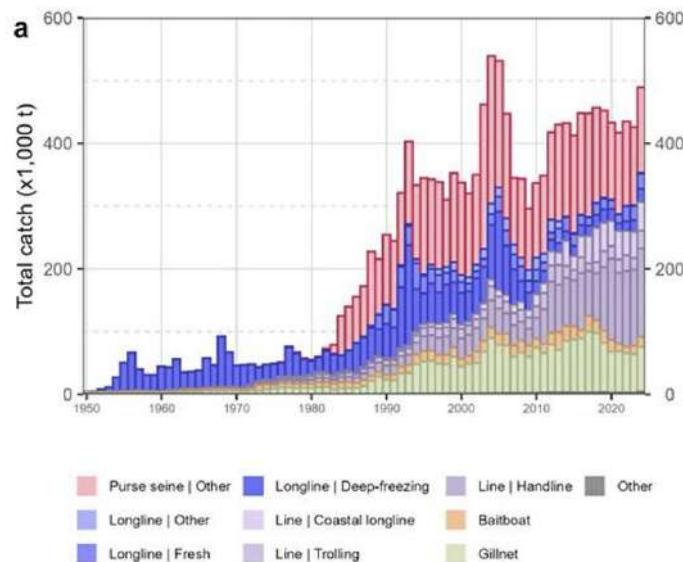
IOTC. 2024. Indian Ocean Tuna Commission. Indian Ocean Skipjack Tuna Stock Status: Executive Summary. https://iotc.org/sites/default/files/content/Stock_status/2024/English/IOTC-2024-SC27-ES03_SKJE.pdf

Species name		Yellowfin tuna - <i>Thunnus albacares</i>	
Fishing area and stock		FAO 51 – Western Indian Ocean FAO 57 – Eastern Indian Ocean Indian Ocean stock	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
Clause outcome:			Pass

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.

The clause is met considering that:

The most recent assessment was conducted in 2024 by the Indian Ocean Tuna Commission (IOTC) using a Stock Synthesis III (SS3) model, which uses four types of data: catch, size frequency, tagging, and CPUE indices (IOTC 2025); thus, the stock assessment process includes removals of the species.

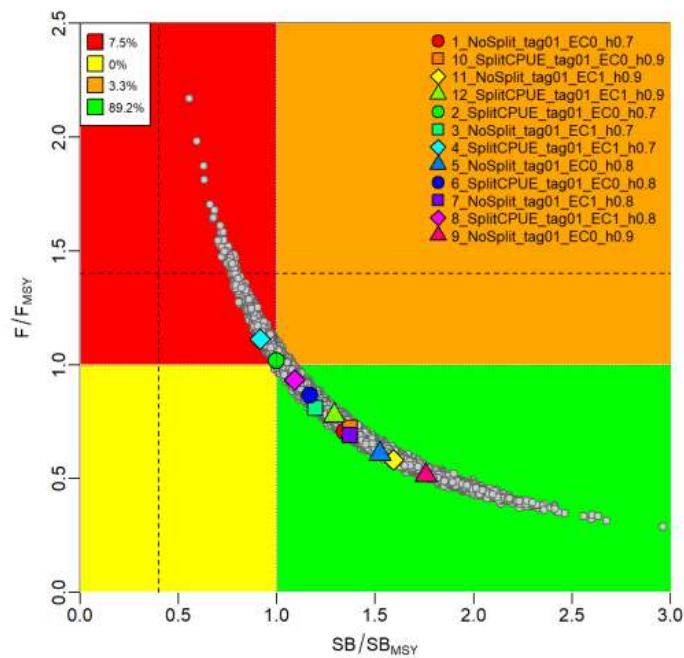


Yellowfin tuna annual time series of cumulative nominal catches (metric tonnes; t) by fishery in the Indian Ocean from 1950 to 2024 (IOTC 2025).

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

The clause is met considering that:

The latest stock assessment indicates that spawning biomass in 2023 was 32% above the level that supports the maximum sustainable yield ($SB_{2023}/SB_{MSY} = 1.32$), and current fishing mortality is 25% below F_{MSY} ($F_{2023}/F_{MSY} = 0.75$). The stock is considered to be not overfished and not subject to overfishing, since the probability of the stock being in the green Kobe quadrant in 2023 is 89% (IOTC 2025).



Yellowfin tuna in the Indian Ocean assessment Kobe plot: current (2023) stock status, relative to SB_{MSY} (x-axis) and F_{MSY} (y-axis) reference points for the final model options. Coloured symbols represent Maximum posterior density (MPD) estimates from individual models. Grey dots represent the statistical uncertainty from individual models (20,000 replicates from each). The dashed lines represent limit reference points for IO yellowfin tuna ($SB_{lim} = 0.4 SB_{MSY}$ and $F_{lim} = 1.4 F_{MSY}$) (IOTC 2025).

References

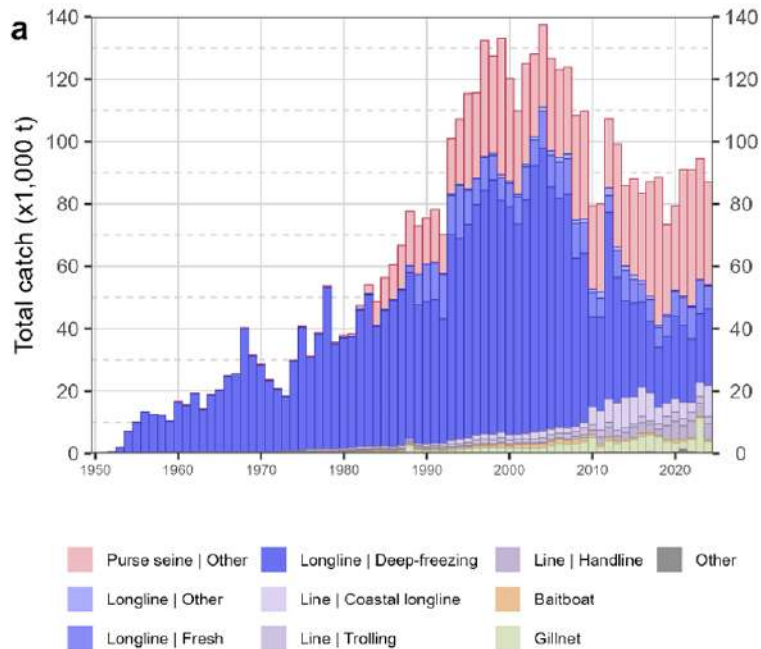
IOTC (2025). Indian Ocean Yellowfin Tuna Stock Status: Executive Summary. https://iotc.org/sites/default/files/content/Stock_status/2025/English/IOTC-2025-SC28-ES04_YFTE.pdf

Species name	Bigeye tuna - <i>Thunnus obesus</i>		
Fishing area and stock	FAO 51 and 57 - Indian Ocean		
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
		Clause outcome:	Pass

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.

The clause is met considering that:

The most recent assessment was conducted in 2025 by the Indian Ocean Tuna Commission (IOTC), using a Stock Synthesis (SS3) to provide scientific advice. The reported stock status is based on a grid of 36 model configurations designed to capture the uncertainty on stock recruitment relationship, longline selectivity, natural mortality and catchability dynamics (IOTC 2025).

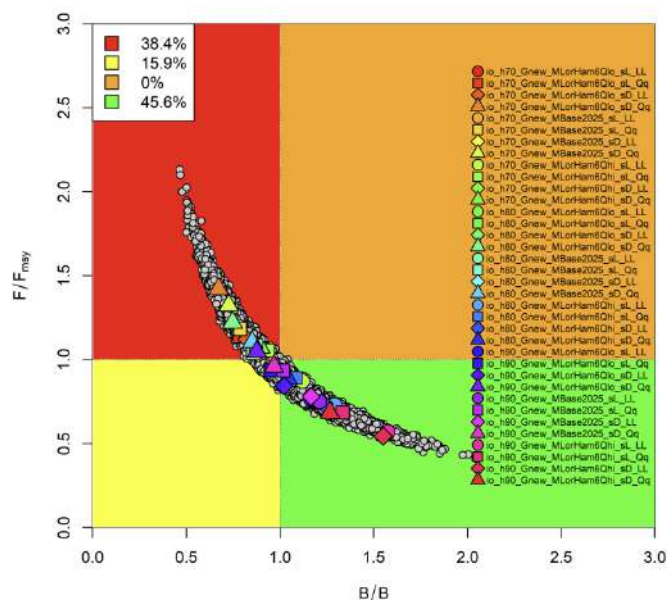


Skipjack tuna annual time series of cumulative nominal catches (metric tonnes; t) by fishery in the Indian Ocean from 1950 to 2024 (IOTC 2025).

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

The clause is met considering that:

The most recent stock assessment indicates that the bigeye tuna spawning biomass is close to the maximum sustainable yield (SB_{MSY}), with a value of 0.98, with an uncertainty range of 0.71–1.25 SB_{MSY} , indicating that the stock is near the target reference point. Although the stock is formally classified as overfished due to the probability that biomass may be slightly below SB_{MSY} , the estimated biomass remains well above the established limit reference ($SB_{lim} \approx 0.5 SB_{MSY}$). Therefore, given that the current biomass is close to SB_{MSY} , it can be inferred that the stock is above the limit reference point, indicating a low risk of the stock being in a severely depleted state. On the weight-of-evidence available in 2025, the bigeye tuna stock is determined to be overfished and not subject to overfishing.



Bigeye tuna: SS3 Aggregated Indian Ocean assessment Kobe plot. The coloured points represent stock status estimates from the 36 model options. Coloured symbols represent Maximum Posterior Density (MPD) estimates from individual models which varied in terms of steepness (h), natural mortality (M), selectivity on the LL2+LL3 fleets (sL vs sD), and gear creep applied to the LL CPUE indices (LL vs Qq , where Qq represents 0.5% of effort creep adjustment on the indices). (IOTC 2025).

References

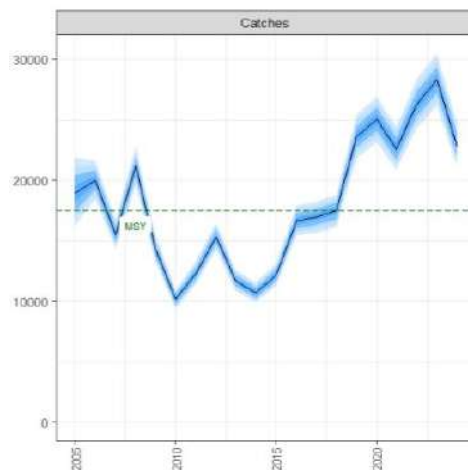
IOTC (2025). Indian Ocean Bigeye Tuna Stock Status: Executive Summary. https://iotc.org/sites/default/files/content/Stock_status/2025/English/IOTC-2025-SC28-ES02_BETE.pdf

Species name	Round sardinella – <i>Sardinella aurita</i>		
Fishing area and stock	FAO 37 - Mediterranean and Black Sea Geographic subarea 4 (Algeria)		
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
		Clause outcome:	Pass

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.

The clause is met considering that:

The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates the Geographic subarea 4 (Algeria). The assessment was based on a Stochastic production model in Continuous Time (SPiCT), and an additional assessment using the Length-Based Spawning Potential Ratio (LBSPR) was also conducted. In both cases, fisheries removals were used to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).

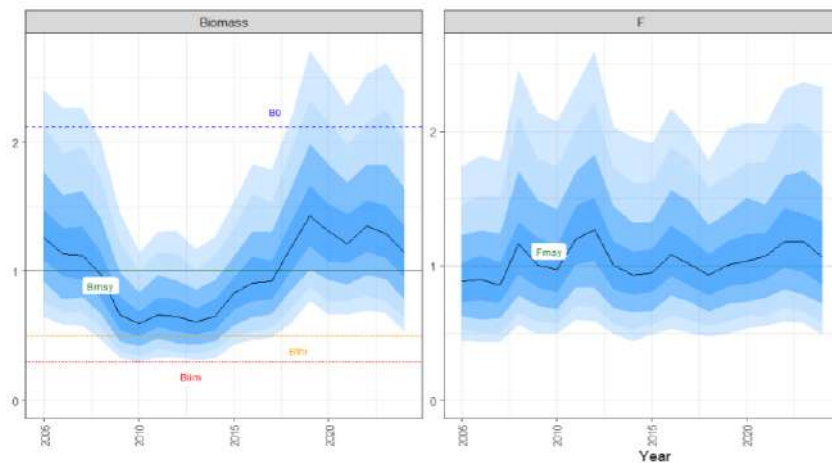


Round sardinella (*Sardinella aurita*) catches in GSA 4 (FAO 2025).

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

The clause is met considering that:

Given the limited availability of the survey index time series, the lack of knowledge of the fishery's history, and the model's poor forecasting ability, the WG considered the assessment acceptable on a qualitative basis. The estimated stock trajectories indicate that biomass is above both the limit and target reference points. Current fishing mortality is estimated to be above the reference point; therefore, the stock is considered possibly overexploited, with advice to reduce fishing mortality (FAO 2025).



Round sardinella (*Sardinella aurita*) in GS 4. Summary of assessment results, showing the estimated stock trajectories for biomass as a ratio to Bmsy and fishing mortality (F) as a ratio to Fmsy catches. Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals. (FAO 2025).

References

FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

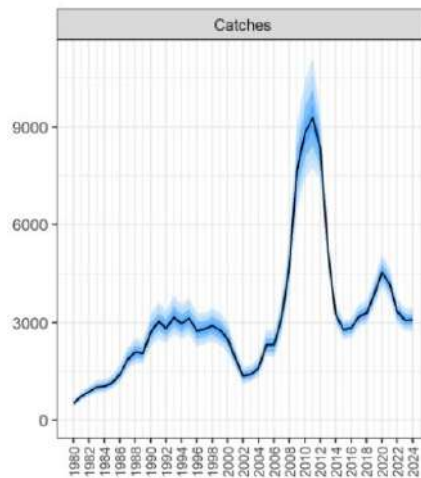
Species name	Round sardinella – <i>Sardinella aurita</i>
Fishing area and stock	FAO 37 - Mediterranean and Black Sea Geographic subareas 24 and 27 (Lebanon)
Category C Stock Status - Minimum Requirements	

C1	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
Clause outcome:			Pass

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.

The clause is met considering that:

The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates the Geographic subareas 24 and 27 (Lebanon). The assessment was based on a surplus production in Continuous Time (SPiCT), which used fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).



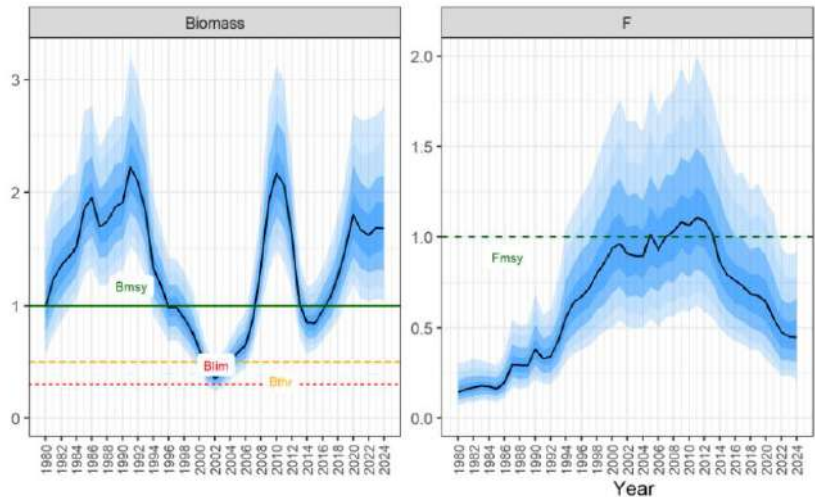
Round sardinella (*Sardinella aurita*) catches in GSAs 24 and GSA 27 (FAO 2025).

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

The clause is met considering that:

In the 2025 stock assessment, the round sardinella (*Sardinella aurita*) is considered to have a biomass above the limit reference point ($B/B_{lim} = 5.59$) and the target reference point ($B/B_{msy} = 1.68$). The assessment indicates that current fishing mortality is below the reference point

($F/F_{msy}=0.45$), therefore, the stock is considered sustainably exploited, and not increasing fishing mortality is recommended (FAO 2025).



Round sardinella (*Sardinella aurita*) in GSAs 24 and GSA 27. Summary of assessment results, showing the estimated stock trajectories for biomass as a ratio to B_{msy} and fishing mortality (F) as a ratio to F_{msy} . Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals (FAO 2025).

References

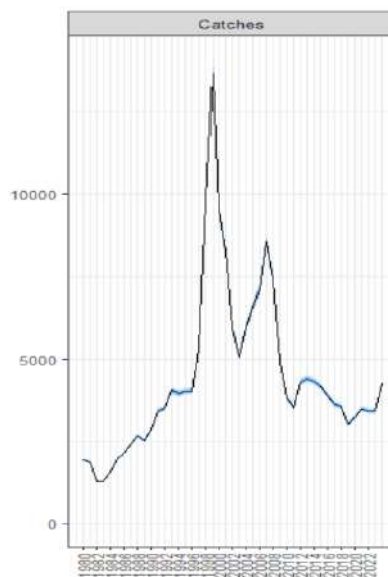
FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

Species name		Round sardinella – <i>Sardinella aurita</i>	
Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographic subareas 26 and 27 (Egypt and Palestine)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
Clause outcome:			Pass

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.

The clause is met considering that:

The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates the geographic subareas 26 and 27 (Egypt and Palestine). Assessment was based on a surplus production in Continuous Time (SPiCT), which used fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).

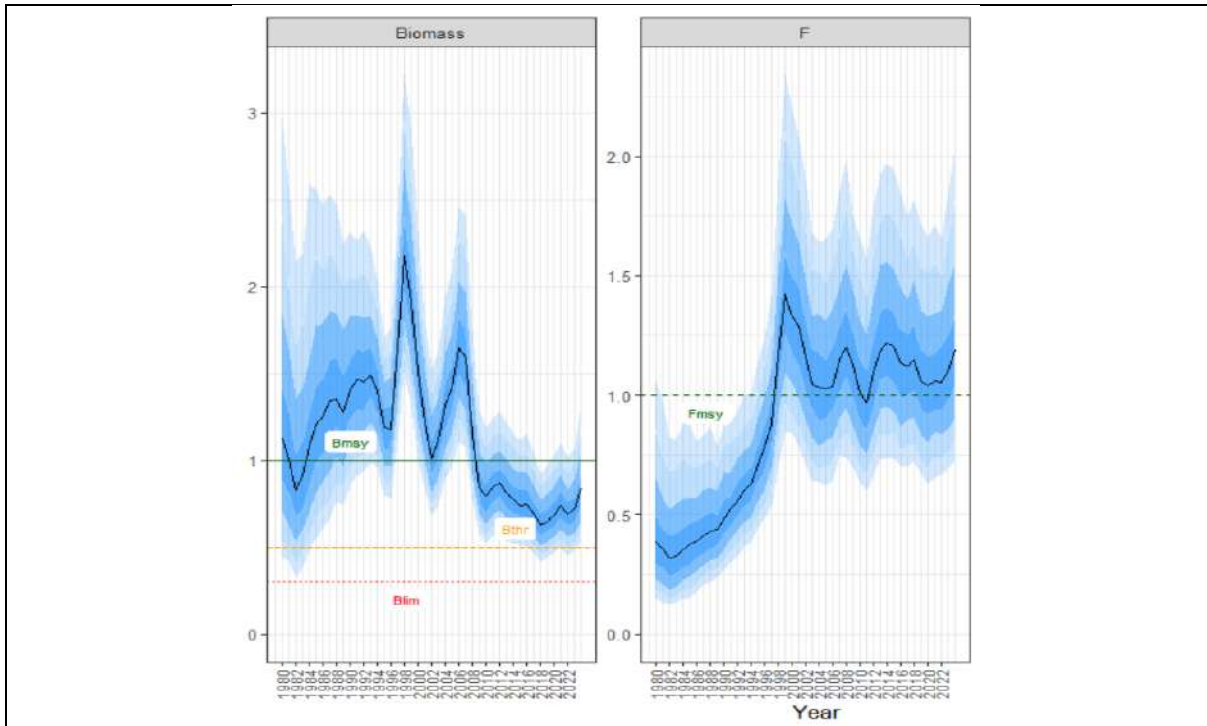


Round sardinella (*Sardinella aurita*) catches in GSAs 26 and GSA 27 (FAO 2025).

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

The clause is met considering that:

In the 2025 stock assessment, the round sardinella (*Sardinella aurita*) is considered to have a biomass above the limit reference point ($B/B_{lim} = 2.85$) but below the target reference point ($B/B_{msy} = 0.86$). Assessment indicates that current fishing mortality is above the reference point ($F/F_{msy} = 1.15$), therefore, the stock is considered with an increased risk of being overexploited and in overexploitation, and reducing fishing mortality is recommended (FAO 2025).



Round sardinella (*Sardinella aurita*) in GSAs 26 and GSA 27. Summary of assessment results, showing the estimated stock trajectories for biomass as a ratio to Bmsy and fishing mortality (F) as a ratio to Fmsy. Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals (FAO 2025).

References

FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

Species name		Round sardinella – <i>Sardinella aurita</i>	
Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographic subareas 17 and 18 (Adriatic Sea)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass

Clause outcome: Pass

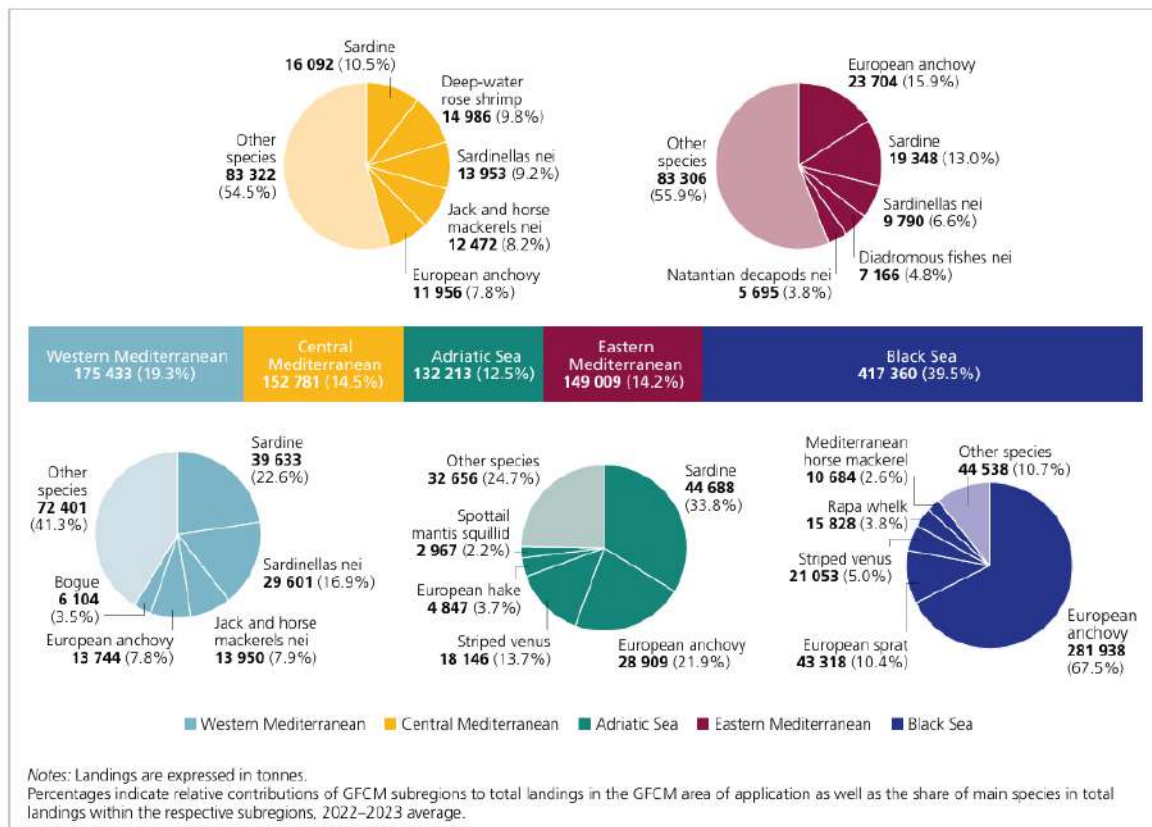
C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.

The clause is met considering that:

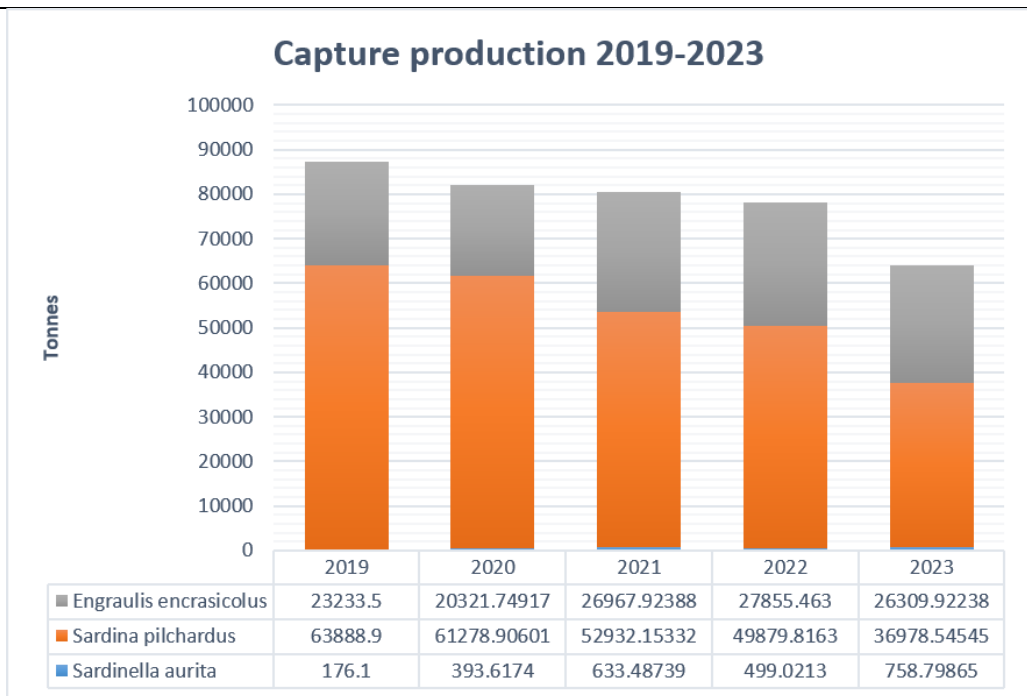
The General Fisheries Commission for the Mediterranean (GFCM) assessments of Adriatic small pelagic stocks focus primarily on European anchovy (*Engraulis encrasicolus*) and European sardine (*Sardina pilchardus*), which are the dominant species and collectively represent approximately 55.7% of total landings (FAO 2025).

Round sardinella (*Sardinella aurita*) does not represent a significant component of Adriatic landings; therefore, it is likely included within the aggregated “other species” category in capture statistics. Consequently, no stock assessment has been conducted specifically for round sardinella in GFCM Geographical Subareas (GSAs) 17 and 18.

Data extracted from the GFCM Capture Production Database (FAO 2026) indicate that round sardinella catches during 2019–2023 were negligible compared with the main small pelagic species harvested in the Adriatic Sea.



Total annual landings of main species by GFCM subregion, 2022–2023 average (FAO 2025).



Small pelagic capture production in the Adriatic Sea from 2019–2023. The graph was created for illustrative purposes for this report using the last five years of data obtained from the GFCM Capture Production Database (FAO 2026).

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 clause is met considering that:

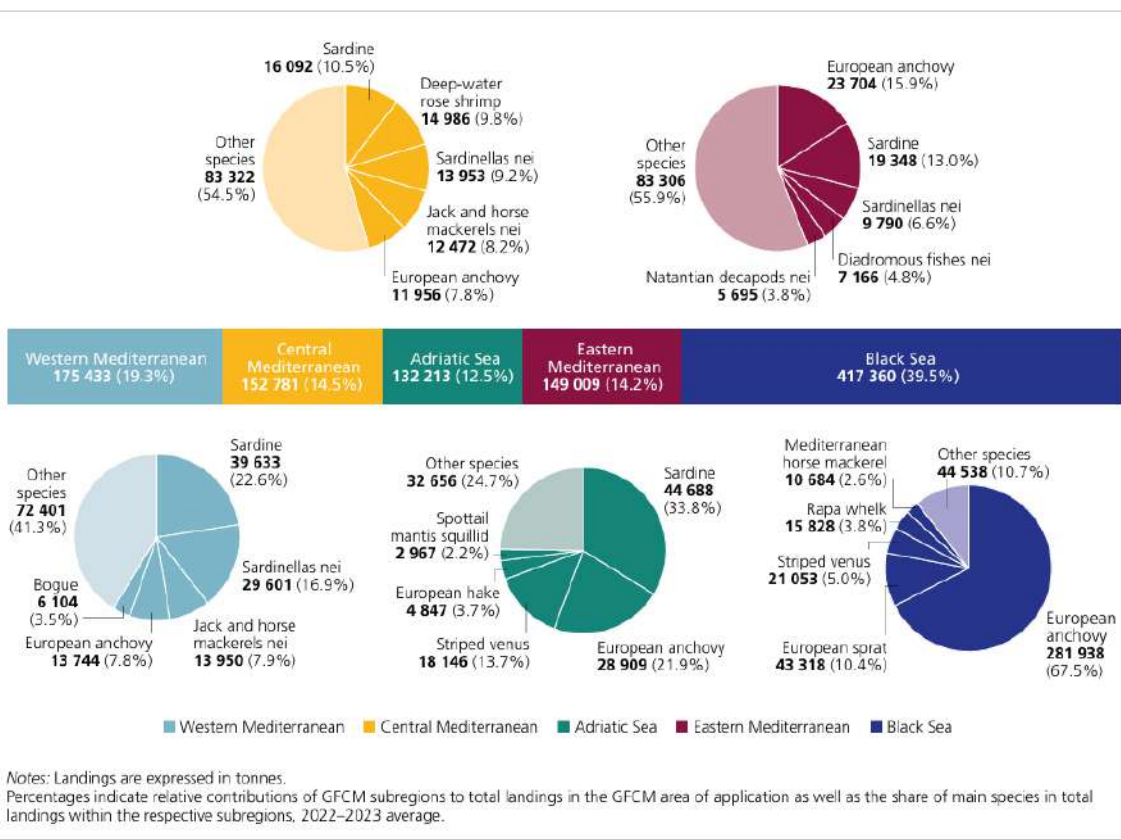
Data extracted from the GFCM Capture Production Database (FAO 2026) indicate that round sardinella catches during 2019–2023 were negligible compared with the main small pelagic species harvested in the Adriatic Sea.

References

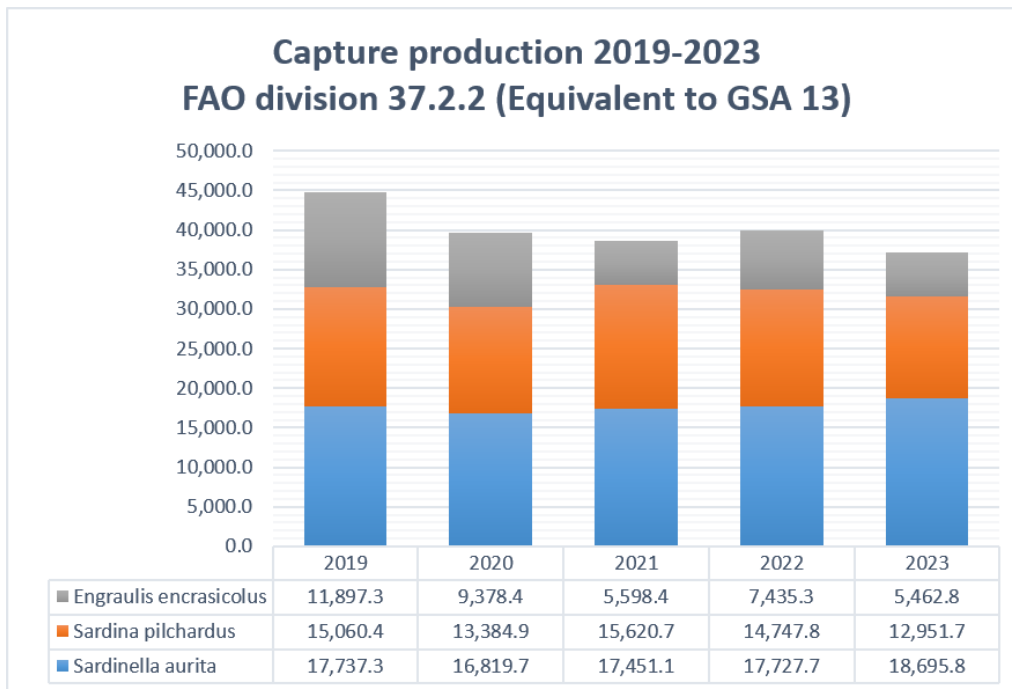
FAO. 2025. The State of Mediterranean and Black Sea Fisheries 2025. General Fisheries Commission for the Mediterranean. Rome. <https://openknowledge.fao.org/items/a4b60529-906f-4c6b-a671-c91f9f827564>

FAO.2026. General Fisheries Commission for the Mediterranean. GFCM capture production (1970-2023).<https://www.fao.org/gfcm/data/capture-production/en/>

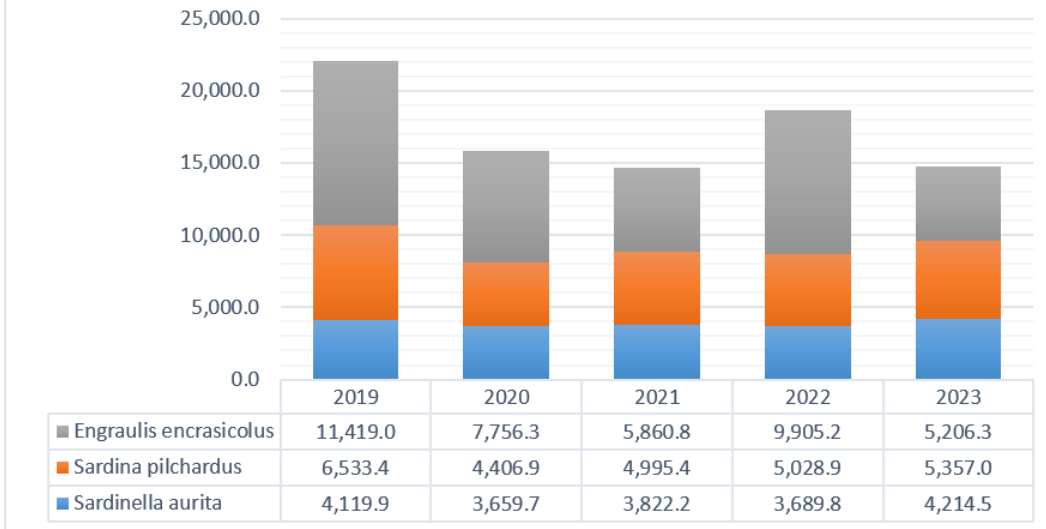
Species name		Round sardinella – <i>Sardinella aurita</i>
Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographic subareas 12 and 13 (Tunisia)
C1	Category C Stock Status - Minimum Requirements	
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.
	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.
		Clause outcome:
Fail		
<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>The clause is NOT met considering that:</p> <p>Round sardinella (<i>Sardinella aurita</i>) occurs in Tunisian waters (GSAs 12 and 13); however, no stock assessment by the General Fisheries Commission for the Mediterranean (GFCM) has been conducted specifically for round sardinella in GSAs 12 and 13, despite catch data indicating that catches are not negligible (FAO 2026).</p> <p>Round sardinella (<i>Sardinella aurita</i>) is included in the Sardinella nei category and represents 9.2% of the landings in the Central Mediterranean region, where GSAs 12 and 13 are part (FAO 2025). Data extracted from the GFCM Capture Production Database (FAO 2026) indicate that round sardinella catches during 2019–2023 were similar in the FAO divisions 37.1.3 and 37.2.2 (which are equivalent to GSAs 12 and 13, respectively) when compared with the other small pelagic species harvested in the region.</p>		



Total annual landings of main species by GFCM subregion, 2022–2023 average (FAO 2025).



Capture production 2019-2023 FAO division 37.1.3 (Equivalent to GSA 12)



Small pelagic capture production from 2019-2023 in FAO division 37.1.3 and 37.2.2, which are equivalent to GSA 12 and 13, respectively. The graph was created for illustrative purposes for this report using the last five years of data obtained from the GFCM Capture Production Database (FAO 2026).

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 clause is NOT met considering that:

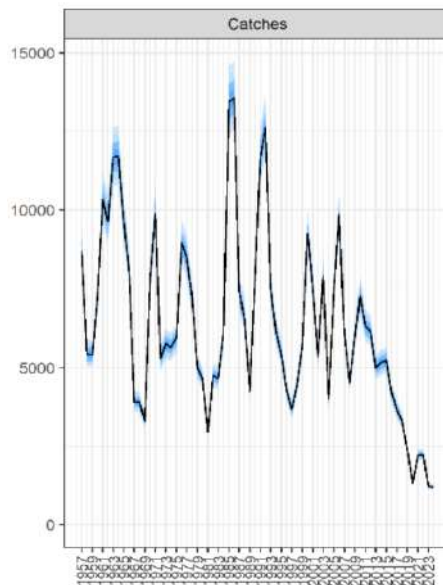
Round sardinella (*Sardinella aurita*) occurs in Tunisian waters (GSAs 12 and 13); however, no stock assessment by the General Fisheries Commission for the Mediterranean (GFCM) has been conducted specifically for round sardinella in GSAs 12 and 13, despite catch data indicating that catches are not negligible (FAO 2026).

References

FAO. 2025. The State of Mediterranean and Black Sea Fisheries 2025. General Fisheries Commission for the Mediterranean. Rome. <https://openknowledge.fao.org/items/a4b60529-906f-4c6b-a671-c91f9f827564>

FAO.2026. General Fisheries Commission for the Mediterranean. GFCM capture production (1970-2023).<https://www.fao.org/gfcm/data/capture-production/en/>

Species name		European pilchard – <i>Sardina pilchardus</i>	
Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographical Subarea 1 (Spain)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
Clause outcome:			Pass
<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>The clause is met considering that:</p> <p>The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates one stock from the geographic subarea 1 (Spain). Assessment was based on a Stochastic production model in Continuous Time (SPiCT), which uses fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).</p>			

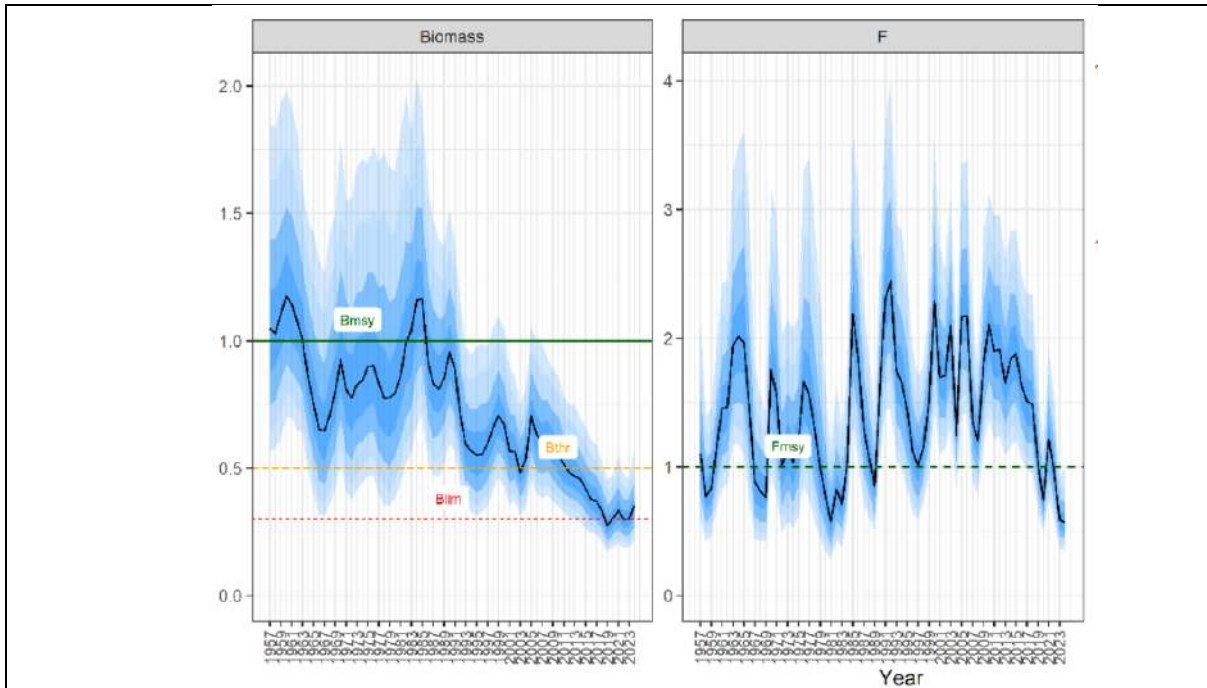


European pilchard (*Sardina pilchardus*) catches in the GSA 1 (FAO 2025).

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

The clause is met considering that:

In the 2025 stock assessment, the European pilchard (*Sardina pilchardus*) is considered to have a biomass above the limit reference point ($B/B_{lim} = 1.18$), but below the target reference point ($B/B_{MSY} = 0.35$). Assessment indicates that current fishing mortality is below the reference point ($F/F_{msy} = 0.57$), therefore, the stock status is considered rebuilding and in sustainable exploitation, with advice not to increase fishing mortality (FAO 2025).



European pilchard (*Sardina pilchardus*) in GSA 1. Summary of assessment results, showing the estimated stock trajectories for biomass as ratio to Bmsy, fishing mortality (F) as ratio to Fmsy and total catches. Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals (FAO 2025).

References

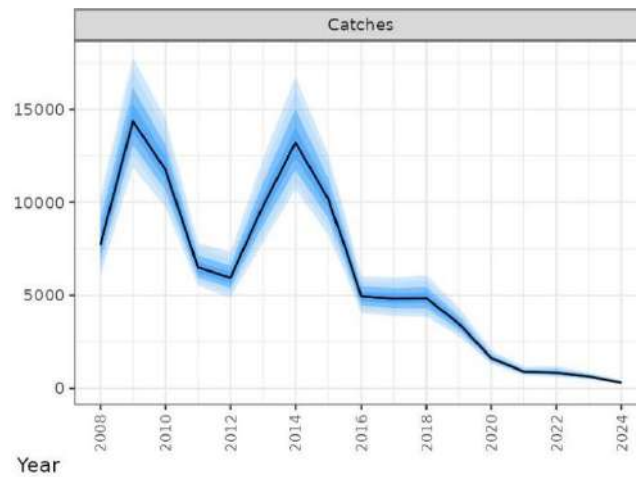
FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

Species name		European pilchard – <i>Sardina pilchardus</i>	
Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographical subarea 3 (Southern Alboran Sea)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
Clause outcome:			Pass

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.

The clause is met considering that:

The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates one stock from the Geographical subarea 3 (Southern Alboran Sea). The assessment was based on a Surplus Production in Continuous Time (SPiCT) model, which uses fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).

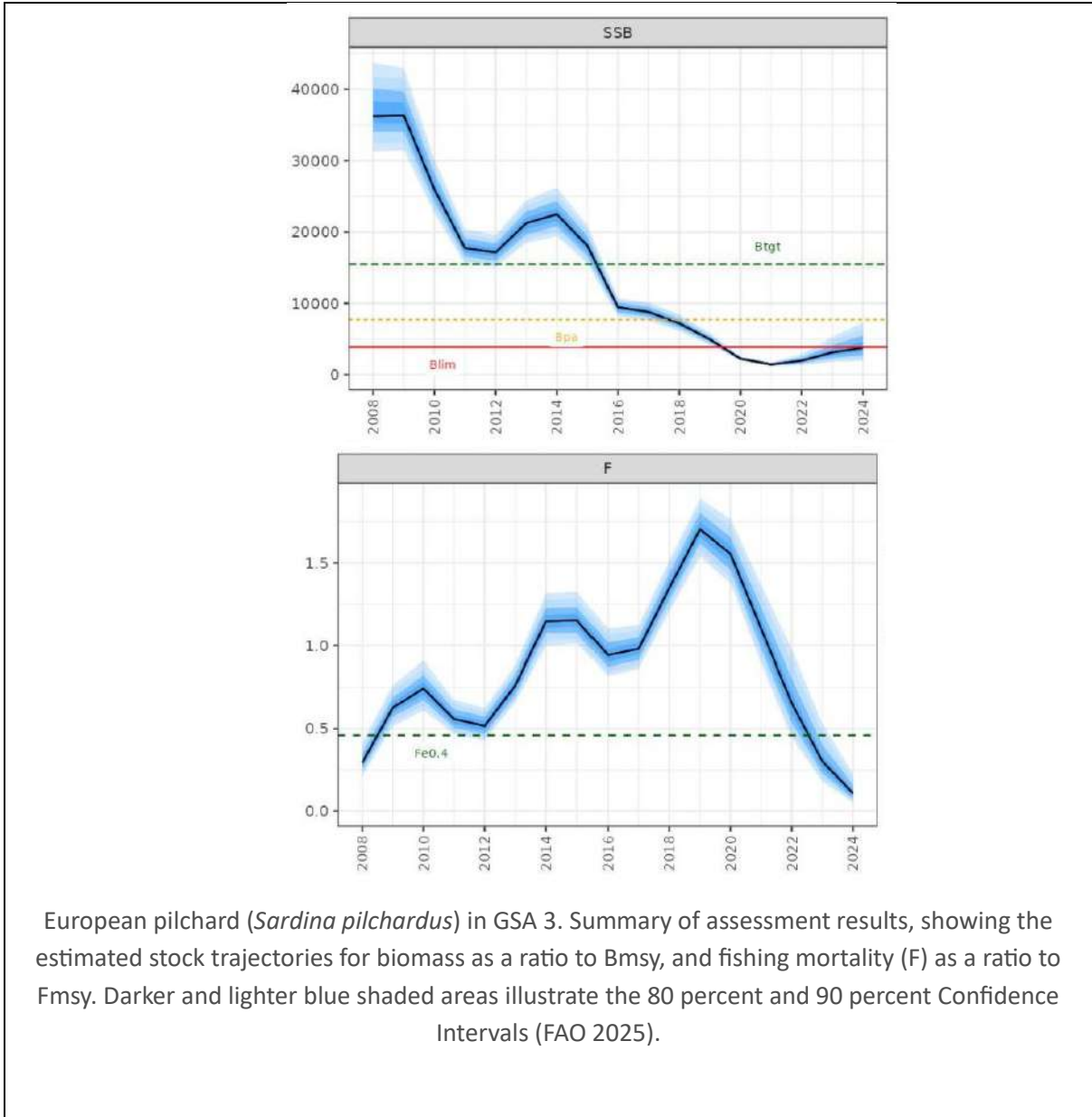


European pilchard (*Sardina pilchardus*) catches in the GSA 3 (FAO 2025).

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

The clause is met considering that:

In the 2025 stock assessment, the European pilchard (*Sardina pilchardus*) is considered to have a biomass above the limit reference point ($B/B_{lim} = 1.04$), but below the target reference point ($B/B_{msy} = 0.31$). Assessment indicates that current fishing mortality is below the reference point ($F/F_{msy} = 0.23$) therefore, the stock status is considered rebuilding and in sustainable exploitation, with advice not to increase fishing mortality (FAO 2025).



References

FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

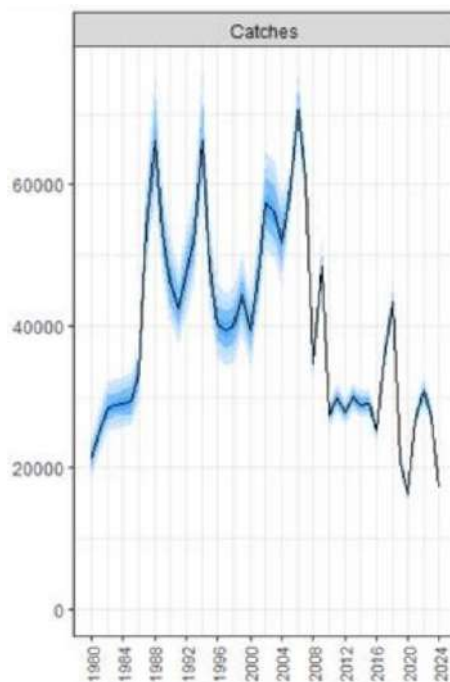
Species name	European pilchard – <i>Sardina pilchardus</i>
Fishing area and stock	FAO 37 - Mediterranean and Black Sea Geographical subarea 4 (Algeria)
Category C Stock Status - Minimum Requirements	

C1	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Fail
Clause outcome:			Fail

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.

The clause is met considering that:

The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates one stock from the Geographical subarea 4 (Algeria). The assessment was based on a Stochastic production model in Continuous Time (SPiCT) model, which uses fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).

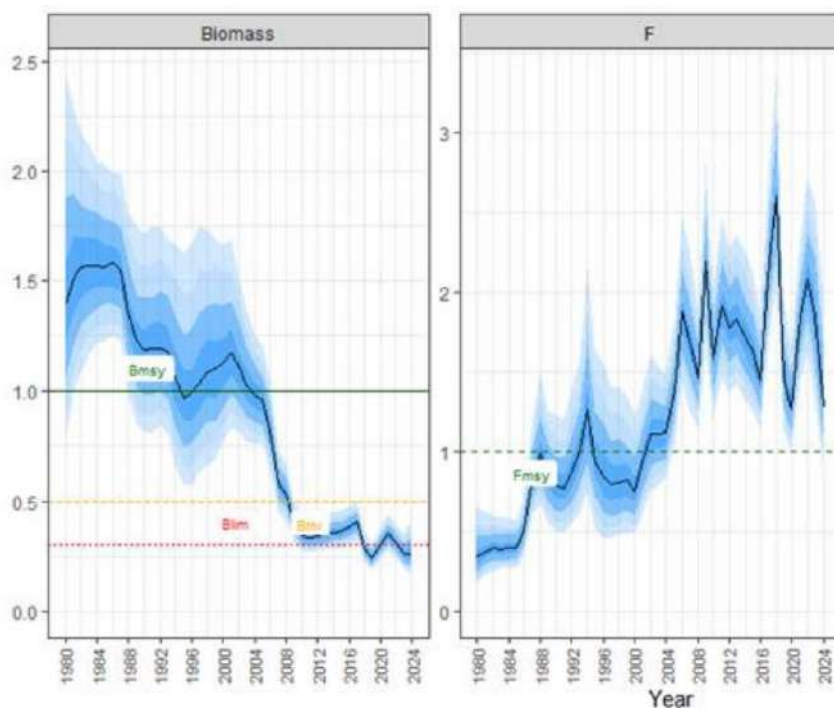


European pilchard (*Sardina pilchardus*) catches in the GSA 4 (FAO 2025).

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

The clause is NOT met considering that:

In the 2025 stock assessment, the WG accepted the assessment on a qualitative basis; however, they expect to update the model next year with newly available data. The estimated stock trajectories indicate that biomass is below both the limit and target reference points. Current fishing mortality is estimated to be above the reference point; therefore, the stock is considered possibly overexploited, with advice to reduce fishing mortality (FAO 2025).

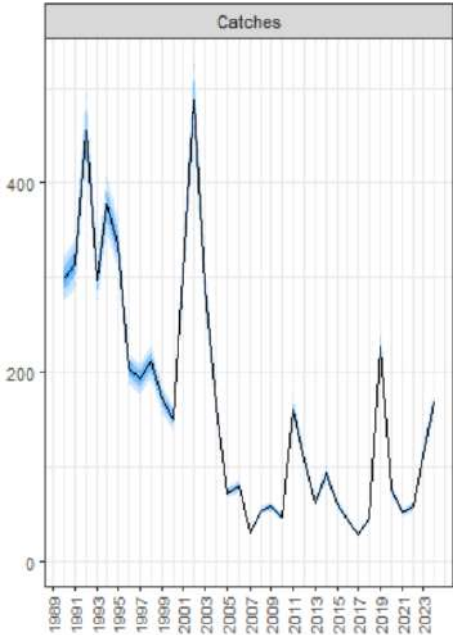


European pilchard (*Sardina pilchardus*) in GSA 4. Summary of assessment results, showing the estimated stock trajectories for stock biomass and fishing mortality (F) relative to the reference points. Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals (FAO 2025).

References

FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

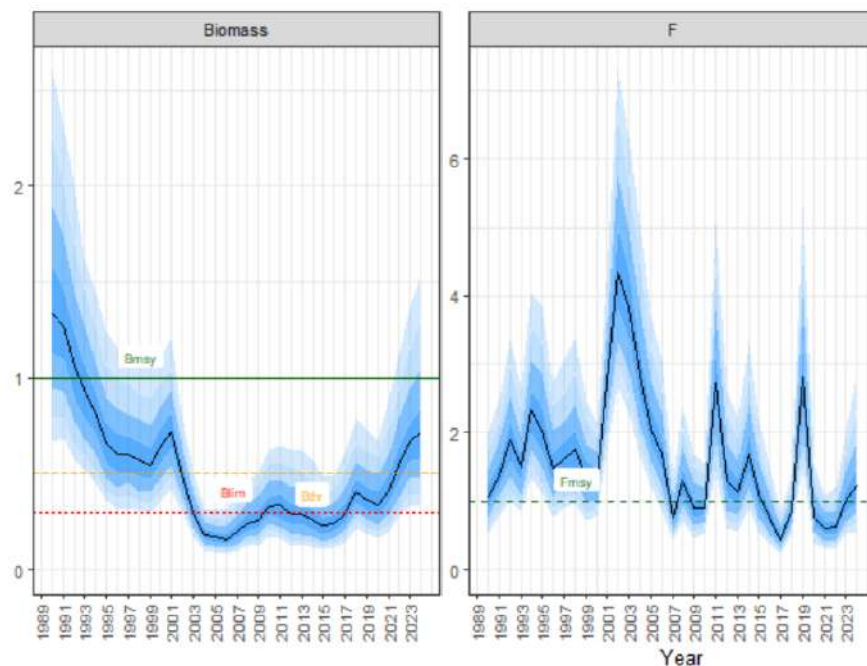
Species name	European pilchard – <i>Sardina pilchardus</i>
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Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographical subarea 5 (Balearic Island)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
			Clause outcome: Pass
<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>The clause is met considering that:</p> <p>The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates one stock from the Geographical subarea 5 (Balearic Island). The assessment was based on a Stochastic Production model in Continuous Time (SPiCT) model, which uses fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).</p>			
			
<p>European pilchard (<i>Sardina pilchardus</i>) catches in the GSA 5 (FAO 2025).</p>			

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 clause is met considering that:

In the 2025 stock assessment, the European pilchard (*Sardina pilchardus*) is considered to have a biomass above the limit reference point ($B/B_{lim} = 2.38$), but below the target reference point ($B/B_{msy} = 0.71$). The assessment indicates that current fishing mortality is above the reference point ($F/F_{msy} = 1.21$), therefore, the stock status is considered with an increasing risk of being overexploited and in overexploitation (FAO 2025).



European pilchard (*Sardina pilchardus*) in GSA 5. Summary of assessment results, showing the estimated stock trajectories for biomass as a ratio to B_{msy} and fishing mortality (F) as a ratio to F_{msy} . Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals (FAO 2025).

References

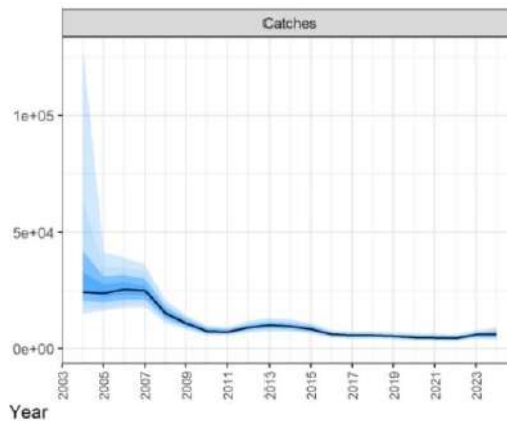
FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

Species name	European pilchard – <i>Sardina pilchardus</i>		
Fishing area and stock	FAO 37 - Mediterranean and Black Sea Geographical subarea 6 (Northern Spain)		
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Fail
		Clause outcome:	Fail

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.

The clause is met considering that:

The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates one stock from the Geographical subarea 6 (Northern Spain). The assessment was based on a Statistical-Catch-at-Age (a4a) model, and a Stochastic production model in Continuous Time (SPiCT) model was also tested on a complementary basis. Both models use fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).



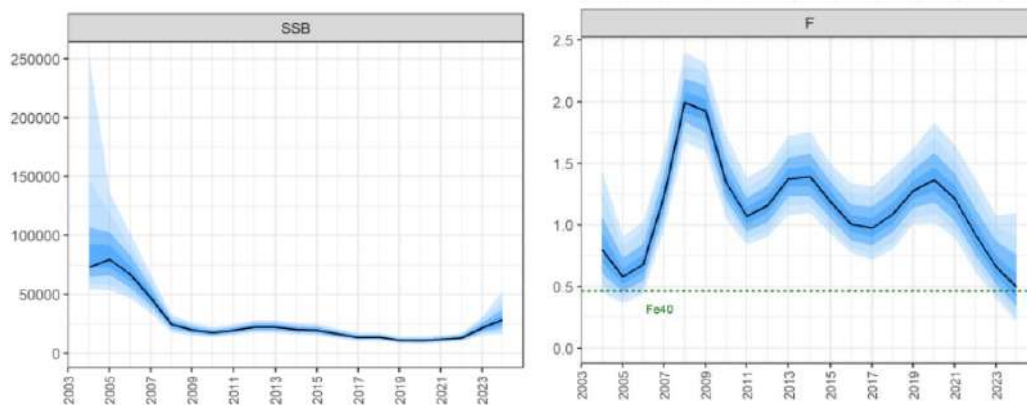
European pilchard (*Sardina pilchardus*) catches in the GSA 6 (FAO 2025).

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

The clause is NOT met considering that:

In the 2025 stock assessment, the results from the a4a assessment indicate that Fbar was above the fishing mortality reference point (Fe40) in 2024. In addition, the SPiCT assessment showed that, despite an increasing trend in stock biomass in recent years, biomass remains below Blim and is low relative to the estimated biomass reference point (BMSY); therefore, the stock is considered in overexploitation, and reducing fishing mortality was recommended.

This additional information provided by the SPiCT assessment reinforces the advice to reduce fishing mortality. Attempts were made to estimate biomass reference points using the a4a framework; however, due to technical difficulties and limited understanding among national experts regarding the approach used to derive these reference points, it was agreed to postpone the provision of biomass reference points until WGSASP 2026 (FAO 2025).



European pilchard (*Sardina pilchardus*) in GSA 6 Summary of assessment results, showing the estimated stock trajectories for stock biomass of mature females and fishing mortality (F) relative to the reference points. Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals (FAO 2025).

References

FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

Species name		European pilchard – <i>Sardina pilchardus</i>
Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographical subarea 7 (Gulf of Lion)
C1	Category C Stock Status - Minimum Requirements	
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.
		Pass

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

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.

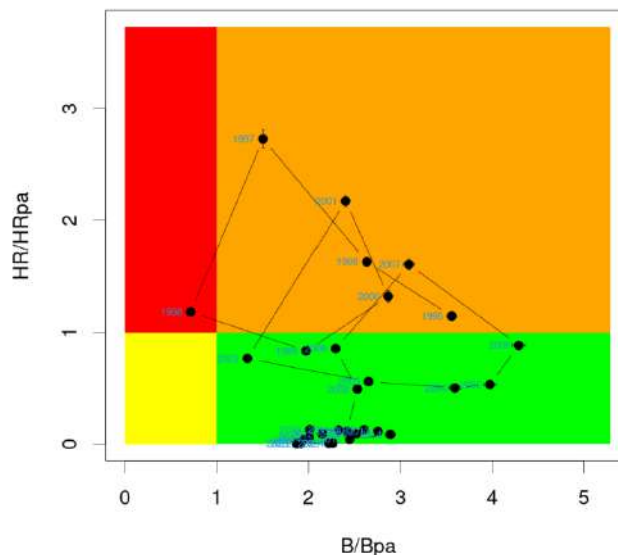
The clause is met considering that:

The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates one stock from the Geographical subarea 7 (Gulf of Lion). The assessment was based on a 2-stage biomass model, which uses fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).

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

The clause is met considering that:

In the 2025 stock assessment, the European pilchard (*Sardina pilchardus*) is considered to have a biomass above the limit reference point ($B/B_{lim} = 2.71$) and above the target reference point ($B/B_{MSY} = 2.26$). Assessment indicates that current fishing mortality is extremely low, with a harvest rate of 0.001; therefore, the stock status is considered sustainably exploited (FAO 2025).

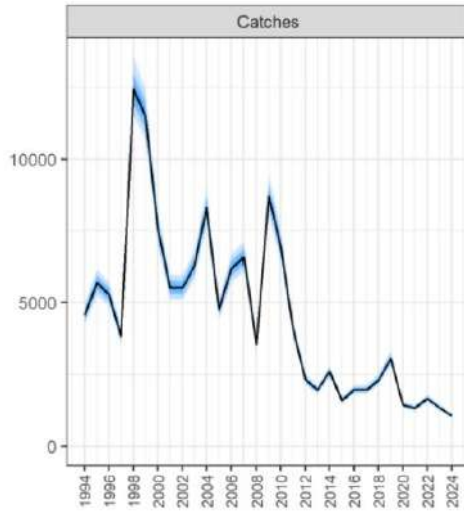


European pilchard (*Sardina pilchardus*) in GSA 7. Summary of assessment results, showing the estimated stock trajectories for spawning stock biomass (SSB) and Harvest Rate (HR) relative to the reference points. (FAO 2025).

References

FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

Species name		European pilchard – <i>Sardina pilchardus</i>	
Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographical subareas 9 and 10 (Ligurian Sea and northern Tyrrhenian Sea)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
Clause outcome:			Pass
C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.			
The clause is met considering that:			
The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates one stock from the Geographical subareas 9 and 10 (Ligurian Sea and northern Tyrrhenian Sea). The assessment was based on a Stochastic Production model in Continuous Time (SPiCT) model, which uses fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).			

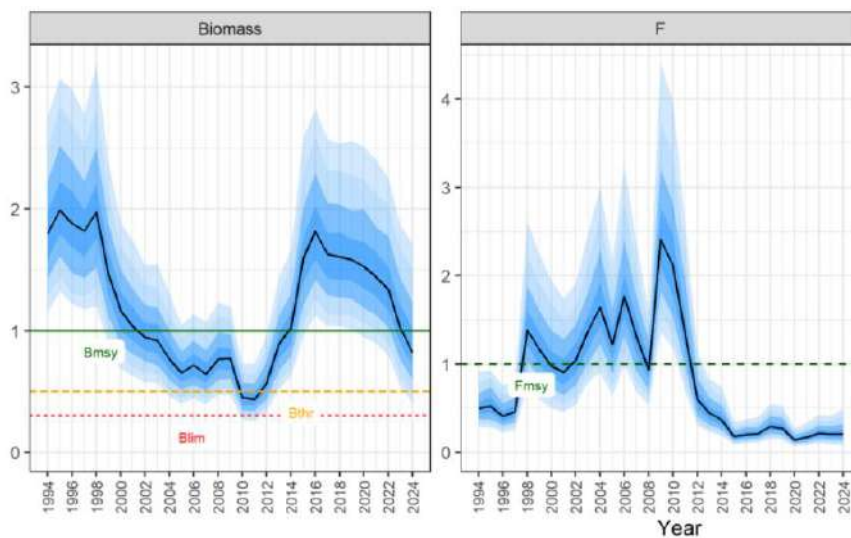


European pilchard (*Sardina pilchardus*) catches in GSAs 9 and 10 (FAO 2025).

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

The clause is met considering that:

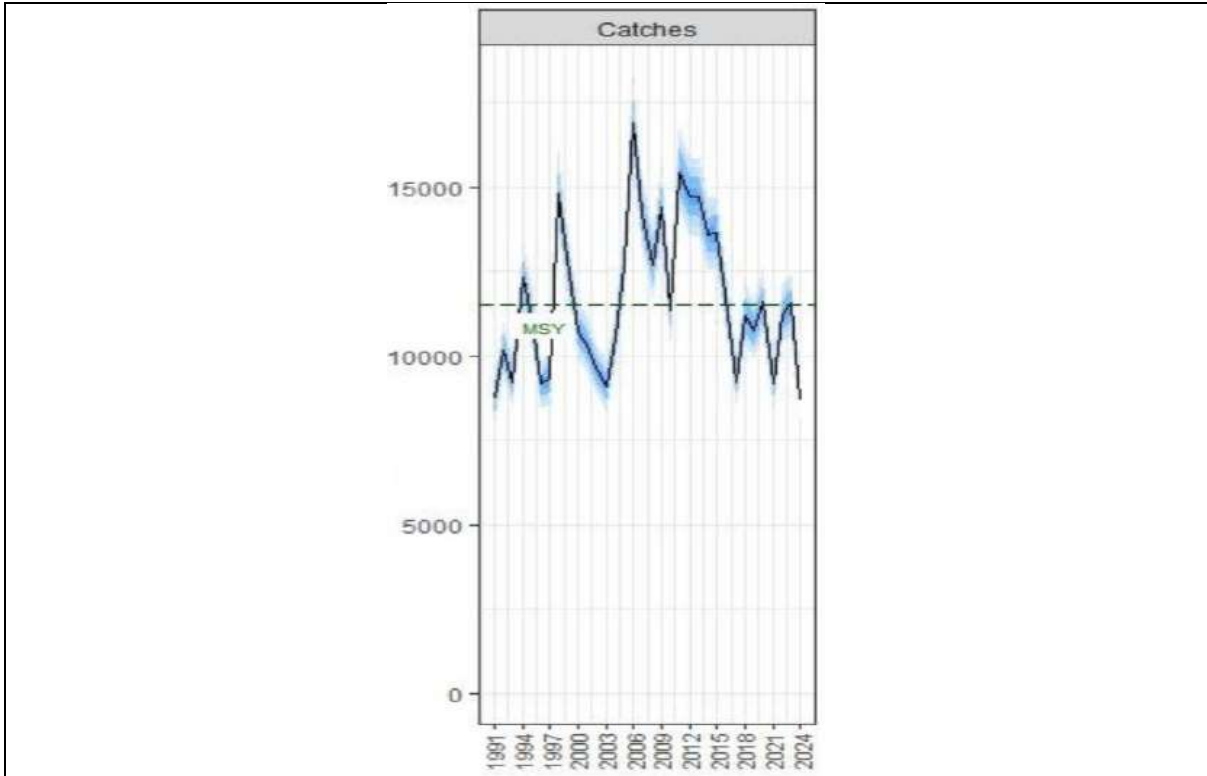
In the 2025 stock assessment, the European pilchard (*Sardina pilchardus*) is considered to have a biomass above the limit reference point ($B/B_{lim} = 2.75$) but below the target reference point ($B/B_{MSY} = 0.82$). Assessment indicates that current fishing mortality is below the reference point ($F/F_{msy}=0.21$), therefore, the stock status is considered in sustainable exploitation and biomass around the target reference point (FAO 2025).



European pilchard (*Sardina pilchardus*) in GSAs 9 and 10. Summary of assessment results, showing the estimated stock trajectories for biomass as a ratio to Bmsy, and fishing mortality (F) as a ratio to Fmsy. Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals (FAO 2025).

References
 FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

Species name		European pilchard – <i>Sardina pilchardus</i>	
Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographical subareas 12 and 13 (Tunisia)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
Clause outcome:			Pass
<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>The clause is met considering that:</p> <p>The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates one stock from the Geographical subareas 12 and 13 (Tunisia). The assessment was based on a Stochastic production model in Continuous Time (SPiCT) model, which uses fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).</p>			

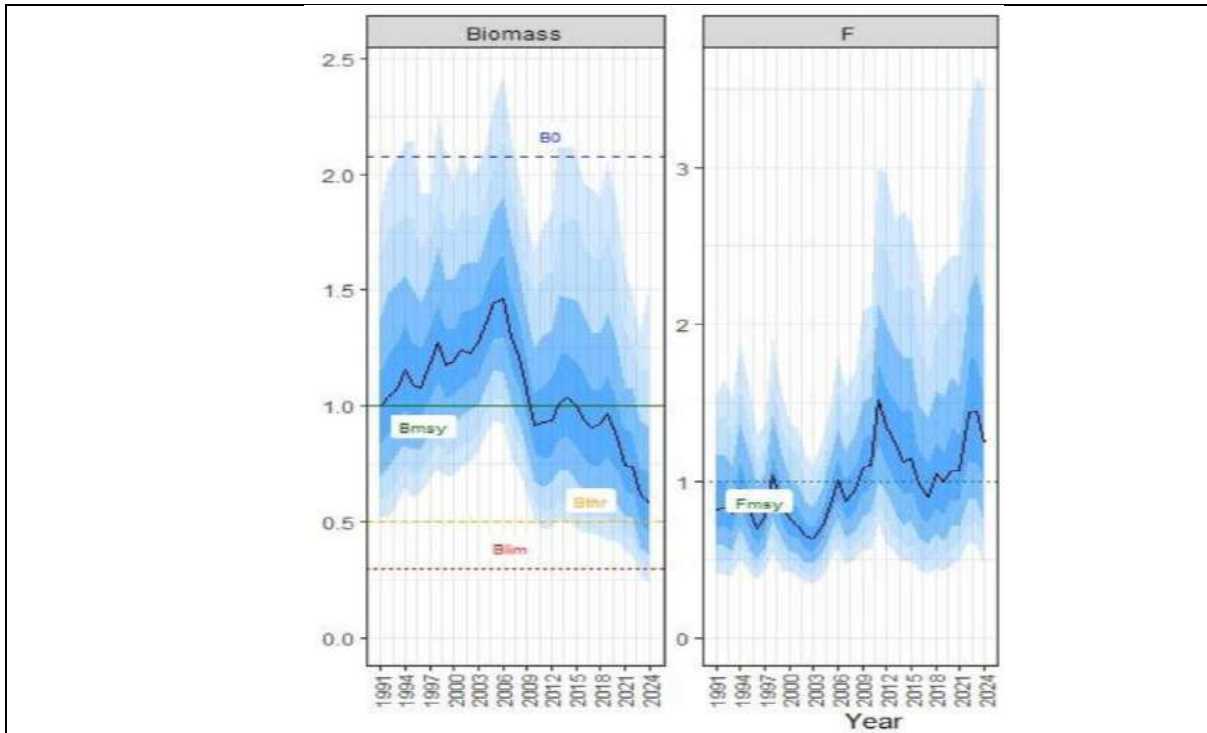


European pilchard (*Sardina pilchardus*) catches in the GSAs 12 and 13 (FAO 2025).

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

The clause is met considering that:

In the 2025 stock assessment, the WG considered the assessment accepted on a qualitative basis. The estimated stock trajectories indicate that biomass is above the limit reference point but below the target reference point. Current fishing mortality is estimated to be above the reference point; therefore, the stock is considered possibly overexploited, with advice to reduce fishing mortality (FAO 2025).



European pilchard (*Sardina pilchardus*) in GSAs 12 and 13. Summary of assessment results, showing the estimated stock trajectories for biomass as a ratio to Bmsy, and fishing mortality (F) as a ratio to Fmsy . Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals (FAO 2025).

References

FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

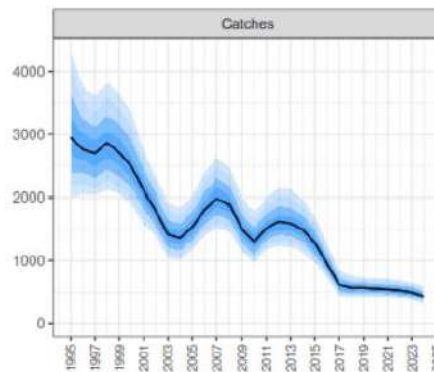
Species name		European pilchard – <i>Sardina pilchardus</i>	
Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographical subarea 16 (Southern Sicily)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Fail

Clause outcome: Fail

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.

The clause is met considering that:

The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates one stock from the geographical subarea 16 (Southern Sicily). The assessment was based on a Stochastic production model in Continuous Time (SPiCT) model, which uses fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).

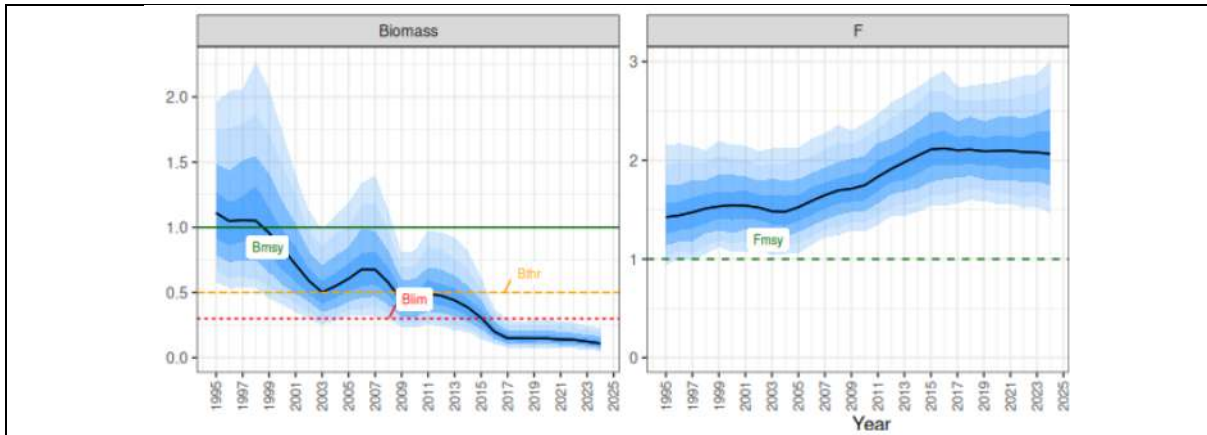


European pilchard (*Sardina pilchardus*) catches in the GSA 16 (FAO 2025).

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

The clause is NOT met considering that:

In the 2025 stock assessment, the WG considered the assessment accepted on a qualitative basis. The estimated stock trajectories indicate that biomass is below the limit reference and target reference point. Current fishing mortality is estimated to be above the reference point; therefore, the stock is considered possibly overexploited, with advice to reduce fishing mortality (FAO 2025).



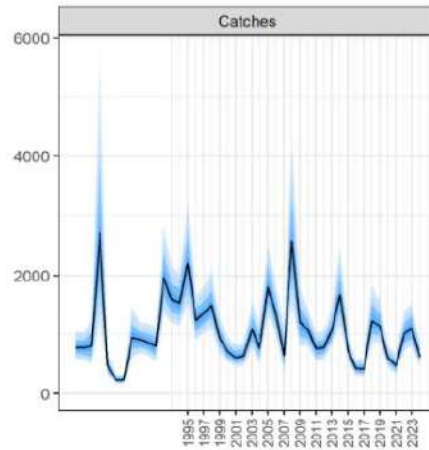
European pilchard (*Sardina pilchardus*) in GSA 16. Summary of assessment results, showing the estimated stock trajectories for biomass as a ratio to Bmsy, and fishing mortality (F) as a ratio to Fmsy. Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals (FAO 2025).

References

FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

Species name		European pilchard – <i>Sardina pilchardus</i>	
Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographical subarea 20 (Greece)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
Clause outcome:			Pass
C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.			
The clause is met considering that:			
The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates one stock from the Geographical subarea 20 (Greece).			

The assessment was based on a Stochastic Production model in Continuous Time (SPiCT) model, which uses fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).

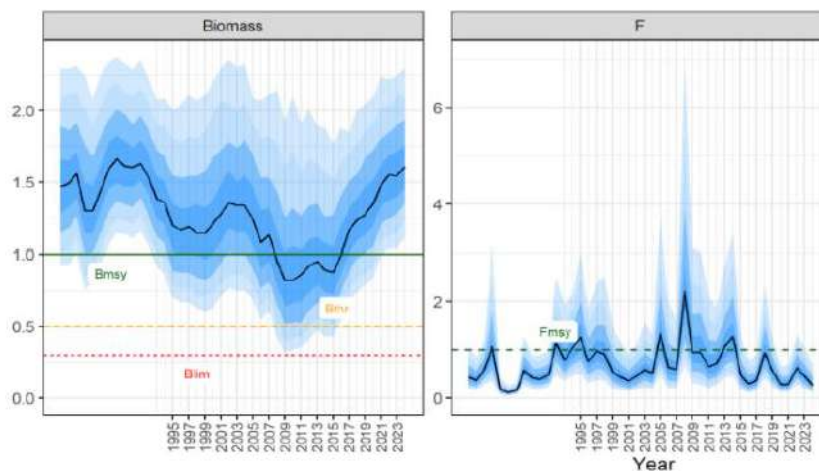


European pilchard (*Sardina pilchardus*) catches in GSA 20 (FAO 2025).

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

The clause is met considering that:

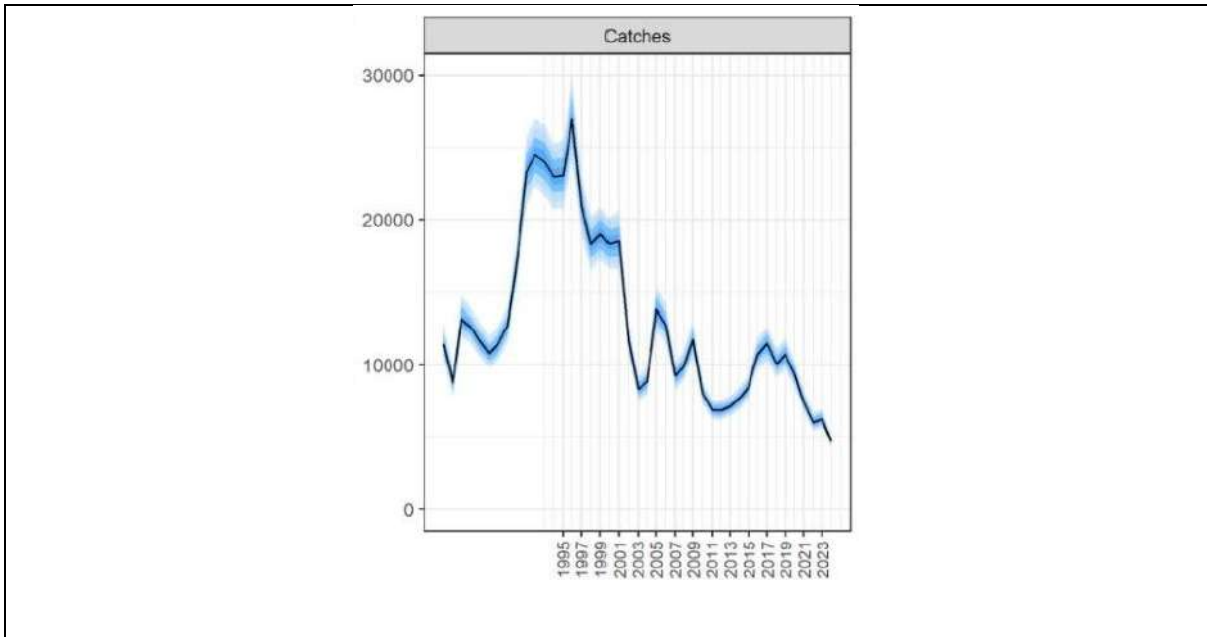
In the 2025 stock assessment, the European pilchard (*Sardina pilchardus*) is considered to have a biomass above the limit reference point ($B/B_{lim} = 5.36$) and the target reference point ($B/B_{msy} = 1.61$). The assessment indicates that current fishing mortality is below the reference point ($F/F_{msy} = 0.21$), therefore, the stock status is considered in sustainable exploitation, and not increasing fishing mortality is recommended (FAO 2025).



European pilchard (*Sardina pilchardus*) in GSA 20. Summary of assessment results, showing the estimated stock trajectories for biomass as a ratio to Bmsy, and fishing mortality (F) as a ratio to Fmsy. Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals (FAO 2025).

References
 FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

Species name		European pilchard – <i>Sardina pilchardus</i>	
Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographical subarea 22 (Greece)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Fail
Clause outcome:			Fail
<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>The clause is met considering that:</p> <p>The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates one stock from the Geographical subarea 22 (Greece). The assessment was based on a Stochastic Production model in Continuous Time (SPiCT) model, which uses fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).</p>			

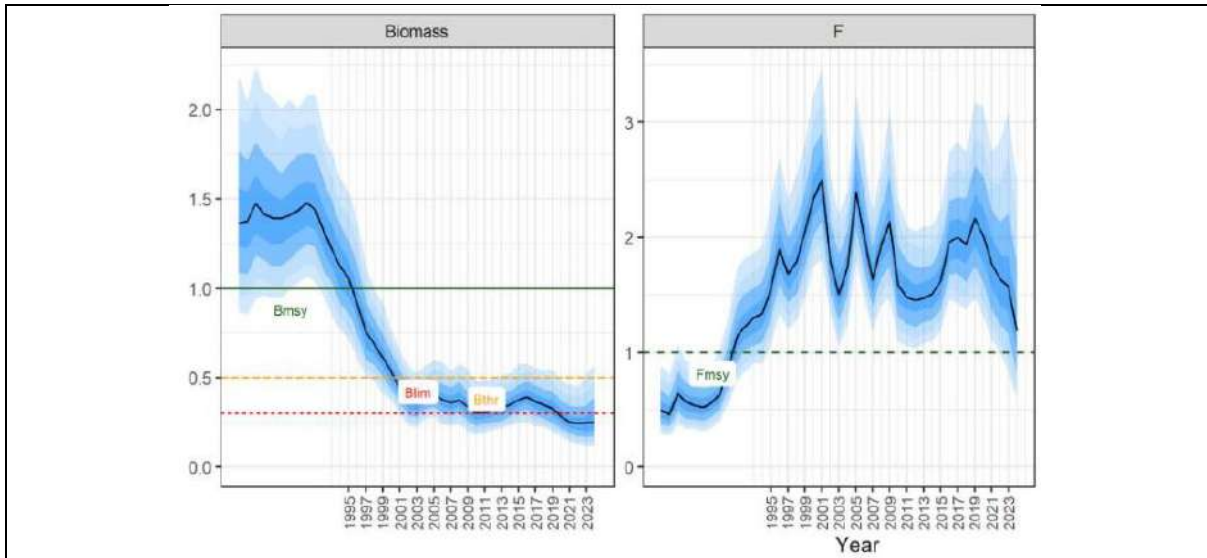


European pilchard (*Sardina pilchardus*) catches in GSA 22 (FAO 2025).

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

The clause is NOT met considering that:

In the 2025 stock assessment, the European pilchard (*Sardina pilchardus*) is considered to have a biomass below the limit reference point ($B/B_{lim} = 0.83$) and the target reference point ($B/B_{msy} = 0.25$). Assessment indicates that current fishing mortality is above the reference point ($F/F_{msy} = 1.19$), therefore, the stock status is considered depleted and in overexploitation, and the implementation of a recovery plan is recommended (FAO 2025).



European pilchard (*Sardina pilchardus*) in GSA 22. Summary of assessment results, showing the estimated stock trajectories for biomass as a ratio to Bmsy, and fishing mortality (F) as a ratio to Fmsy. Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals (FAO 2025).

References

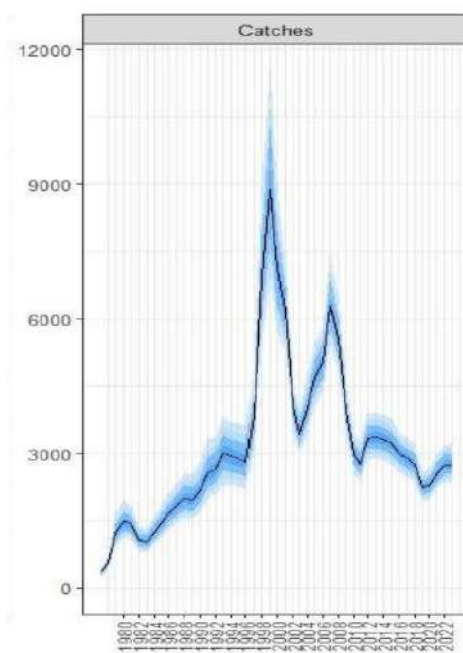
FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

Species name		European pilchard – <i>Sardina pilchardus</i>	
Fishing area and stock		FAO 37 - Mediterranean and Black Sea Geographical subarea 26 (Egypt)	
C1	Category C Stock Status - Minimum Requirements		
	C1.1	Fishery removals of the species in the fishery under assessment are included in the stock assessment process, OR are considered by scientific authorities to be negligible.	Pass
	C1.2	The species is considered, in its most recent stock assessment, to have a biomass above the limit reference point (or proxy), OR removals by the fishery under assessment are considered by scientific authorities to be negligible.	Pass
Clause outcome:			Pass

C1.1 Fishery removals of the species in the fishery under assessment are included in the stock assessment process OR are considered by scientific authorities to be negligible.

The clause is met considering that:

The most recent stock assessment was conducted in 2025 by the Working Group on Stock Assessment of Small Pelagic Species (WGSASP) of the General Fisheries Commission for the Mediterranean. The assessment evaluates one stock from the Geographical subarea 26 (Egypt). Assessment was based on a Stochastic Production model in Continuous Time (SPiCT) model, which uses fisheries removals to estimate fishing mortality, biomass trends, and stock status relative to reference points (FAO 2025).

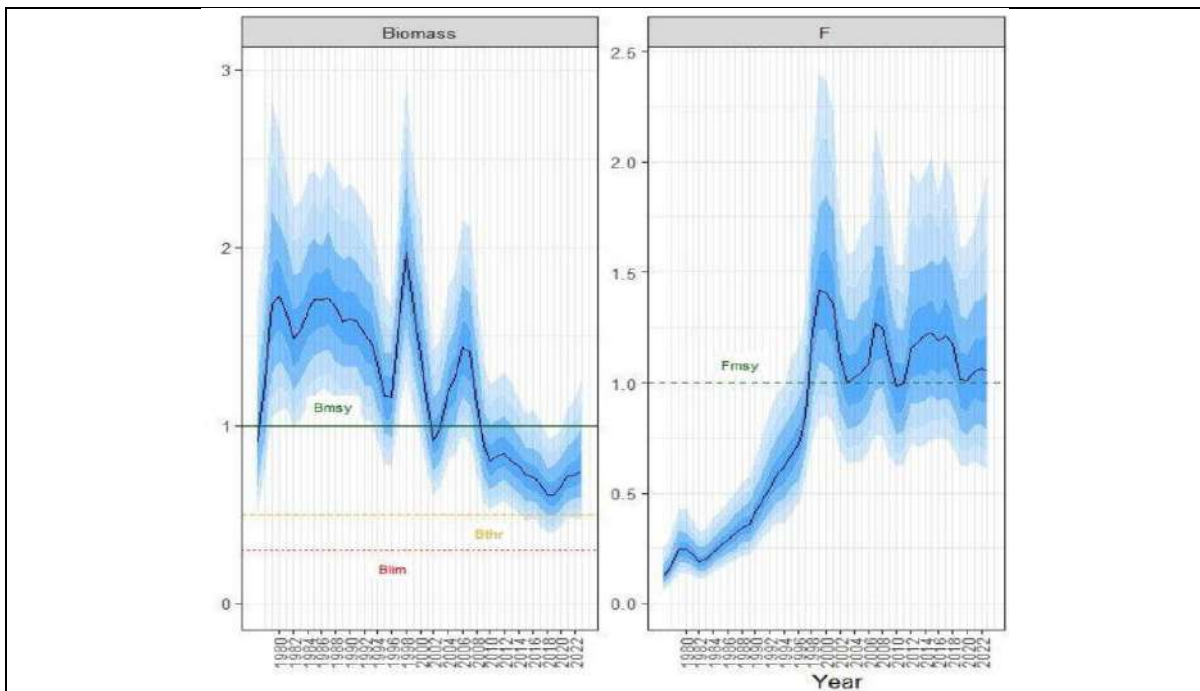


European pilchard (*Sardina pilchardus*) catches in GSA 26 (FAO 2025).

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

The clause is met considering that:

In the 2025 stock assessment, the European pilchard (*Sardina pilchardus*) is considered to have a biomass above the limit reference point ($B/B_{lim} = 2.56$) and below the target reference point ($B/B_{msy} = 0.77$). The assessment indicates that current fishing mortality is above the reference point ($F/F_{msy} = 1.27$), therefore, the stock status is considered with an increased risk of being overexploited and in overexploitation; thus, reducing fishing mortality is recommended (FAO 2025).



European pilchard (*Sardina pilchardus*) in GSA 26. Summary of assessment results, showing the estimated stock trajectories for biomass as a ratio to Bmsy, and fishing mortality (F) as a ratio to Fmsy. Darker and lighter blue shaded areas illustrate the 80 percent and 90 percent Confidence Intervals (FAO 2025).

References

FAO. 2025. General Fisheries Commission for the Mediterranean. Scientific Advisory Committee on fisheries. Working Group on Stock Assessment of Small Pelagic (WGSASP). Report. Rome, Italy 8-13 December 2025. <https://www.fao.org/gfcm/technical-meetings/detail/en/c/1682194/>

Traceability information

Information provided for Step 3 Path 1 or Path 2

Applicant indicated that all catch is taken in the high seas. Catch taken by Indian-flagged vessels is landed in India. Catch taken by Tanzania-flagged vessels is landed in Seychelles.

Species name		Skipjack tuna - <i>Katsuwonus pelamis</i> FAO 51, 57		
Path 1		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Confirm all KDEs are provided		Yes <input type="checkbox"/> No <input type="checkbox"/>		
Path 2	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <i>If yes for Path 2, complete the next section</i>			
Path 2 outcome <i>Countries may be different for Coastal State and Port State.</i>	Flag country	Coastal score	Port score	Risk outcome
	India	Medium	Medium	Downgraded to medium risk
	Tanzania	Medium	Medium	Downgraded to medium risk

Species name		Yellowfin tuna - <i>Thunnus albacares</i> FAO 51, 57		
Path 1		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Confirm all KDEs are provided		Yes <input type="checkbox"/> No <input type="checkbox"/>		
Path 2	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <i>If yes for Path 2, complete the next section</i>			
Path 2 outcome <i>Countries may be different for Coastal State and Port State.</i>	Flag country	Coastal score	Port score	Risk outcome
	India	Medium	Medium	Downgraded to medium risk
	Tanzania	Medium	Medium	Downgraded to medium risk

Species name		Bigeye tuna - <i>Thunnus obesus</i> FAO 51, 57		
Path 1		Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Confirm all KDEs are provided		Yes <input type="checkbox"/> No <input type="checkbox"/>		
Path 2	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <i>If yes for Path 2, complete the next section</i>			
Path 2 outcome <i>Countries may be different for Coastal State and Port State.</i>	Flag country	Coastal score	Port score	Risk outcome
	India	Medium	Medium	Downgraded to medium risk
	Tanzania	Medium	Medium	Downgraded to medium risk

Species name	Round sardinella (<i>Sardinella aurita</i>) FAO 37			
Path 1	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>			
Confirm all KDEs are provided	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Path 2	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <i>If yes for Path 2, complete the next section</i>			
Path 2 outcome <i>Countries may be different for Coastal State and Port State.</i>	Flag country	Coastal score	Port score	Risk outcome
	Italy	Low	Medium	Downgraded to medium risk
	Tunisia	Medium	Medium	Downgraded to medium risk

Species name	European pilchard (<i>Sardina pilchardus</i>) FAO 37			
Path 1	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Confirm all KDEs are provided	Yes <input type="checkbox"/> No <input type="checkbox"/>			
Path 2	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> <i>If yes for Path 2, complete the next section</i>			
Path 2 outcome <i>Countries may be different for Coastal State and Port State.</i>	Flag country	Coastal score	Port score	Risk outcome
	Tunisia	Medium	Medium	Downgraded to medium risk