2024 | MANAGEMENT AND STOCK STATUS SUSTAINABILITY OVERVIEW

Sustainable Fisheries™ PARTNERSHIP

75

14 LIFE BELOW WATER

REDUCTION FISHERIES

REDUCTION FISHERIES

2024 Management and stock status sustainability overview

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DISCLAIMER

The current overview was mostly prepared with information available from FishSource.org™, a program of Sustainable Fisheries Partnership (SFP). The findings summarized in the report are based on information that the authors accessed from FishSource in February 2025. SFP updates FishSource regularly, and the report may not capture the most recent data for all the stocks. Always check FishSource.org for the most updated information SFP has for any given stock and fishery. Given the large number of existing fisheries for a given sector, this report evaluates the strategically most important stocks worldwide at the time (based on criteria such as the volume of catch or interest for SFP partners, for example). Note that the current scoring and ranking categories provided in the report do not consider the environmental impacts of the fisheries (i.e., they are based solely on the quality of management/degree of fishers' compliance and the status of the stock). However, the main environmental issues are considered at a high resolution, based on information already captured in the respective narrative "Environment and Biodiversity" sections of FishSource.org, and in other sources of information.

SUMMARY

- This report represents the **15th edition** of SFP's global sustainability overview of key Pacific and Atlantic fish stocks used for reduction purposes.
- The list of evaluated fisheries remains largely consistent with previous editions. However, unlike 2023, the 2024 sustainability overview was conducted in a single evaluation phase.
- **The overview covers a total 22 stocks (and 26 fisheries) that are mostly used for reduction purposes, with a primary focus on European and American fisheries**. Besides the fisheries that have generally been covered, four small Indian small pelagic fisheries have also been included. The information reflects the status of these fisheries as of February 2025.
- **Only two fisheries have improved their sustainability category** compared to last year. These were Chilean jack mackerel – SE Pacific and Sandeels nei – Dogger Bank.
    - **Chilean jack mackerel – SE Pacific** (high seas and Chilean waters) is the only stock in this overview rated as very well-managed (A). Management continues to get stronger and is currently very robust, while stock condition has also improved. Biomass is now at historically high levels.
    - **Sandeels nei – Dogger Bank** is now considered to be in better condition, with biomass well above the target reference level.
- While most of the remaining fisheries evaluated have maintained their overall performance in terms of stock status and management, **both the number of poorly managed fisheries and the associated production volume have increased.**
- **This trend is primarily driven by declining sustainability ratings in several South American and European fisheries (APPENDIX I)**. In some cases, the decline is due to deteriorating stock conditions (e.g., European sprat – North Sea, Skagerrak, and Kattegat), while in others it results from persistent or emerging management challenges (e.g., Anchoveta – Chile Atacama (III) to Coquimbo (IV)).
- Regardless of the underlying causes, the reality is that most of the evaluated fisheries (16 out of 26) are currently facing significant issues, whether related to stock condition, unsustainable exploitation levels, or weaknesses in the management system (e.g., lack of transparency, insufficient data, IUU activity, or ineffective management strategies).
    - **Currently, more than half of the production covered in this overview comes from poorly managed or data-deficient fisheries (Figure 1).** This is primarily due to ongoing management challenges in some of the world's largest fisheries — such as Northeast Atlantic blue whiting — as well as a considerable decline in catches from other major, but reasonably managed, fisheries like the North-central Peruvian anchoveta.

- Similar to previous editions, the current overview also sheds light on the potential environmental impacts of reduction fisheries. This year, the focus is on small pelagic fisheries off the coast of India.
- Assessments of four fisheries in India revealed **major challenges, including limited data collection** (e.g., lack of onboard observer programs) and **minimal research on impacts to non-target species** (including protected species) and the broader ecosystem. As a result, the environmental impacts of these fisheries remain largely unknown.
- **Management measures to reduce bycatch and mitigate wider ecosystem impacts** are either also **lacking or poorly documented**, with little evidence of their effectiveness.
- **This situation underscores the urgent need for continued and stronger industry engagement with regulators and key stakeholders.** Strengthening data collection, research, and management systems is critical to ensuring the long-term sustainability of these fisheries.
- Important recommended specific actions include:
    - Advancing the development, agreement, and implementation of effective joint management strategies for transboundary stocks (e.g., European pilchard – NW Africa Southern, Anchoveta – Southern Peru/Northern Chile).
    - Establishing long-term, ecosystem-based management objectives that safeguard both target stocks and associated food web dynamics.
    - Ensuring that agreed regulations — such as catch limits — are effectively implemented and enforced.
    - Developing transparent, robust data collection systems and conducting regular, science-based stock assessments.
    - Developing data collection programs and improving research on the broader impacts on the environment.

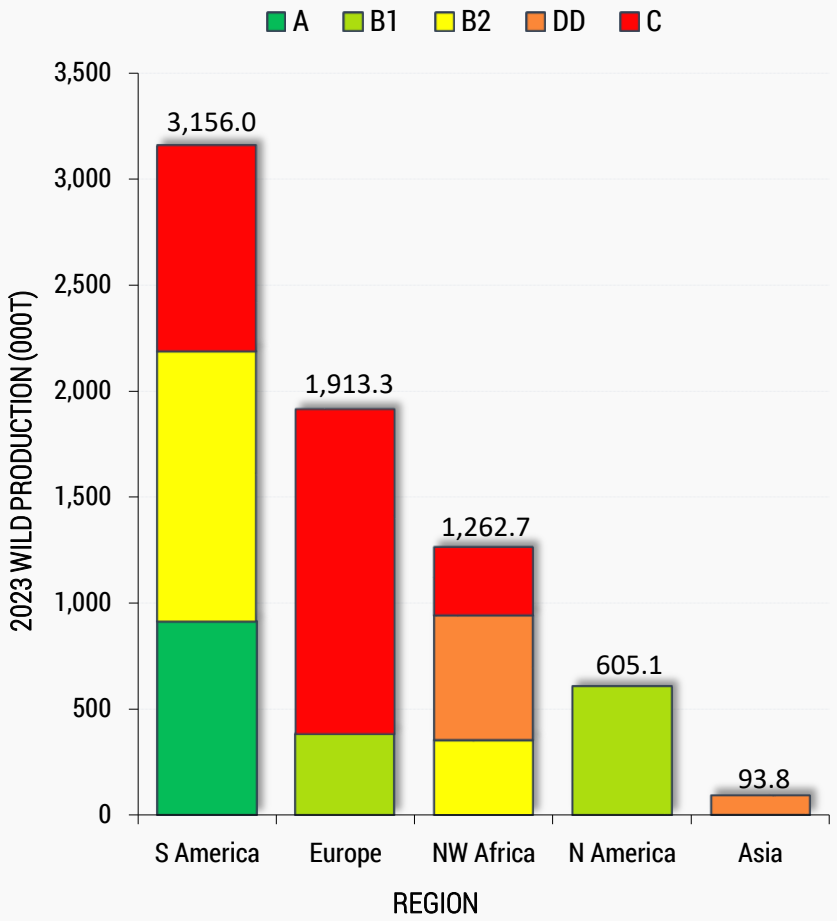

Figure 1 | Reported wild production by SFP sustainability category for each of the regions with stocks in the current (2024) overview.

BACKGROUND

Sustainable Fisheries Partnership (SFP) uses a sectoral approach to make actionable information available to the supply chain, to leverage market forces to achieve improvements in fisheries. Seafood sectors may be defined in terms of the shared biological characteristics of harvested species, as well as their role in defined markets (for instance, blue whiting and anchovy share few biological characteristics, but they are both important in the same fishmeal and fish oil markets). In 2017, SFP announced a new sector-based initiative, called Target 75 (SFP, 2017), which aims to get 75 percent of the world's seafood produced sustainably, or demonstrating improvement toward sustainability. Reduction fisheries is one of the strategic seafood sectors covered by this initiative.

Since 2008, analyses of FishSource[2] data (in the form of sector reports) have been performed for the most strategic seafood sectors. These overviews assess the management sustainability performance of individual stocks and aggregate data to reflect the sustainability status of the overall sector. This information can provide useful guidance to those parts of the fishing and seafood industries that need to incorporate sustainability criteria into procurement policies. This report focuses on the reduction fisheries sector, with emphasis on fisheries from the Atlantic and eastern Pacific oceans.

This 2024 SFP Reduction Fisheries Management and stock status sustainability overview assesses 26 fisheries targeting 22 different stocks — primarily forage species — and evaluates the sustainability of their management systems. As with previous editions, the analysis is limited to a specific subset of the global catch used for reduction purposes; fisheries using only fish trimmings are excluded from this assessment. The current report continues to focus mainly on European and American fisheries. However, this year, it also includes four small pelagic fisheries from India. All data reflects the status of these fisheries as of February 2025.

Fisheries in Southeast Asia — spanning the Indian and western Pacific oceans — also make a significant contribution to the global supply of marine ingredients, often involving a wide variety of species and fishing practices. However, consistent with previous editions, these additional Asian fisheries are not extensively covered in this report.

[2] FishSource is a publicly available online resource about the status of fisheries, fish stocks, and aquaculture. FishSource compiles and summarizes publicly available scientific and technical information and presents it in an easily interpretable form. For more information visit https://www.fishsource.org/about

ASSESSMENT CRITERIA AND FISHERIES INCLUDED

1.1 SOURCES OF INFORMATION AND ASSESSMENT CRITERIA

Our overview is based on information from FishSource.org, SFP's online information resource about the status of fish stocks and fisheries (SFP, 2024b). FishSource scores consist of a suite of criteria to assess key aspects of management and stock status of fisheries and fish stocks (Cannon, 2006). **Table 1**, below, provides a brief explanation of the five FishSource scoring criteria (full details of the FishSource scoring methodology can be found at: https://www.fishsource.org/how/scores).

Table 1 | Current rationale for each of the five FishSource management quality and stock health scoring criteria.

Score/Criterion		Rationale	Rationale (description)
Management quality	Management strategy (1): Is management precautionary?	$F_{at\ low\ biomass}$ / F_{target} OR $F_{current}$ / F_{target}	How does the adopted limit and/or target reference point for fishing mortality rate compare to the stock's fishing mortality rate at low biomass, as an index of whether the management strategy is precautionary? The higher the ratio, the lower the score.
	Managers' compliance (2): Do fishery managers follow scientific advice?	Set TAC / Advised TAC	How does the adopted total allowable catch (TAC) level compare to the scientific advice on measures needed to meet stock management objectives, as an index of whether fishery managers follow scientific advice? The higher the ratio, the lower the score.
	Fishers' compliance (3): Do fishers comply?	Catches / Set TAC	How did the catch level in the most current year for which data are available compare to the adopted TAC level, as an index of whether harvest control rules were met? The higher the ratio, the lower the score.
Stock health	Current health (4): Is the stock biomass healthy?	$B_{current}$ / B_{target}	How does stock biomass in the most current year for which data are available compare to the biomass level that is predicted to support maximum sustainable yields, or similar biological reference point, as an index of whether the stock biomass is healthy? The higher the ratio, the higher the score.
	Future health (5): Will the stock be healthy in the future?	$F_{current}$ / F_{target}	How does the fishing mortality rate in the most current year for which data are available compare to the rate that is predicted to support maximum sustainable yields, or similar biological reference point, as an index of whether the stock will be healthy in the future? The higher the ratio, the lower the score.

For profiles assessed using the FishSource quantitative criteria, FishSource scores each criterion on a scale of 0 to 10, with 0 being the lowest and 10 being the highest possible score. Preserving comparability with quantitative scores, qualitative scores are obtained by using the cut-off points as used in applications of the Marine Stewardship Council (MSC) fishery assessment method, where "<6" indicates a high risk and a negative assessment finding, "≥6" indicates a medium risk and that improvements are required, and "≥8" indicates a low risk and that the fishery meets the criterion conditions. In addition, a data-deficient (DD) score also indicates a potentially higher risk, given insufficient and/or out-of-date information on either the management, stock condition, or fishing pressure of the fishery in analysis.

The scores are based on the most recently available public data as of February 2025 and generally represent a snapshot of the position in 2024 concerning management quality and stock status indicators, and in 2023[3] for catch statistics.

To create simple and accessible assessments of the stocks, FishSource scores are used to place fisheries into one of five ranked sustainability categories (A, B1, B2, DD, and C) (**Table 2**). The categorization is based on the quality of management ("Management strategy," "Managers' compliance," and "Fishers' compliance" scores) and the status of the target stock ("Current health" and "Future health" scores). Neither the scores nor the categories represent a complete evaluation of sustainability issues (e.g., ecosystem and biodiversity issues) or an endorsement of the overall sustainability of these fisheries.

Table 2 | Criteria for the five SFP management and stock status sustainability categories used in this 2024 fisheries overview

Categories	Criteria
Category A: Very well-managed fisheries	Score 8 or above across all FishSource scores
Category B1: Reasonably managed fisheries with stock in good condition	Score 6 or above across all FishSource scores, and score 8 or above in terms of biomass (i.e., current health of the stock)
Category B2: Reasonably managed fisheries	Score 6 or above across all FishSource scores
Category DD: Fisheries with high uncertainty in terms of their stock status or management	Score 6 or above across all FishSource scores, except that at least one FishSource score is data-deficient (DD)[4]
Category C: Poorly managed fisheries	At least one FishSource score below 6

[3] Although catch data for 2024 is already available for some fisheries, for most fisheries it is only available up to 2023; thus, we have used the 2022 catch across all fisheries.

[4] A data-deficient (DD) score is determined when there is high uncertainty or lack of information that prevents a given score to be determined for that specific criterion. For more information, please consult https://www.fishsource.org/faq. The definition of the category DD was slightly amended in 2020 to better differentiate fisheries with high uncertainty in stock condition or management from those with moderate uncertainty.

1.2 FISHERIES INCLUDED IN THE CURRENT OVERVIEW

As in previous editions, this 2024 overview focuses solely on stocks that are used mainly for fishmeal and fish oil, regardless of the taxonomic group. The proportion of any given species/stock being utilized for fishmeal and fish oil will be a function of market demand and can change with time.

The current overview does not include smaller stocks of the NE Atlantic and SE Pacific (e.g., Sandeels nei – Northern and Central North Sea, Sandeels nei – Viking and Bergen Banks, Falkland sprat – Aysén Region), as available in the previous report. These are minor stocks and only represent a small fraction (<2% in volume) of the global production that is used for reduction purposes. However, this year, it also includes four small pelagic fisheries from India.

Unlike the two most recent editions, the 2024 sustainability overview is conducted in a single evaluation phase. This year, it covers a total 22 stocks (26 fisheries) that are mostly used for reduction purposes, with a primary focus on European and American fisheries. Compared to 2023, it also includes four small Indian small pelagic fisheries (**Figure 1**). The information reflects the status of these fisheries as of February 2025.

MANAGEMENT QUALITY AND STOCK HEALTH – Main Findings

Table 3 | Current FishSource scores (Management Quality and Stock Health), SFP management and stock status sustainability category (A, B1, B2, DD, C), and 2023 catch ('000 t) data for the 22 main stocks (26 fisheries) used for reduction purposes and assessed in the 2024 overview.

Stock / nested jurisdiction [1, 2]	Management			Stock Status		Sust. category	Latest Catch [3]	% of total	Changes from last year
	Management strategy	Managers' compliance	Fishers' compliance	Current health	Future health				
Chilean jack mackerel - SE Pacific (high seas)	≥ 8	10.0	9.2	10.0	10.0	A	95.3	1%	B1 to A
Chilean jack mackerel - SE Pacific (Chile)	≥ 8	10.0	≥ 8	10.0	10.0	A	816.8	12%	B1 to A
Gulf menhaden - Gulf of Mexico	≥ 6	≥ 8	≥ 6	10.0	10.0	B1	436.5	6%	-
European sprat - Baltic Sea	≥ 6	9.8	10.0	10.0	7.9	B1	265.9	4%	-
Sandeels nei - Dogger Bank area	≥ 6	10.0	10.0	10.0	≥ 6	B1	88.7	1%	B2 to B1
Atlantic menhaden - NW Atlantic	≥ 8	≥ 6	10.0	9.1	8.6	B1	168.6	2%	-
Norway pout - North Sea, Skagerrak and Kattegat	≥ 6	10.0	10.0	8.7	≥ 6	B1	27.4	0%	-
European pilchard - NW Africa central [3]	≥ 6	≥ 6	≥ 8	7.4	≥ 6	B2	354.0	5%	B1 to B2
Anchoveta - Peruvian Northern-Central	≥ 6	≥ 6	≥ 6	≥ 6	≥ 6	B2	1,272.8	18%	-
Capelin - Icelandic	≥ 6	10.0	10.0	≥ 6	≥ 6	B2	0.0	0%	-
Chilean jack mackerel - SE Pacific (Peru)	< 6	≥ 6	9.0	10.0	9.6	C	201.0	3%	-
Capelin - Barents Sea	≥ 8	10.0	10.0	≥ 8	< 6	C	60.7	1%	A to C
Sandeels nei - Central Eastern North Sea	≥ 6	10.0	10.0	7.9	< 6	C	18.8	0%	B1 to C
Anchoveta - Southern Peru/Northern Chile (Peru)	< 6	10.0	10.0	7.0	10.0	C	26.1	0%	-
European pilchard - NW Africa southern (Mauritania)	≥ 6	≥ 6	< 6	6.8	≥ 6	C	320.0	5%	-
Blue whiting - NE Atlantic	≥ 6	< 6	≥ 6	10.0	5.6	C	1,359.6	20%	-
Anchoveta - Chile Valparaíso (V) - Los Lagos (X)	< 6	< 6	≥ 8	10.0	9.4	C	187.1	3%	-
Anchoveta - Southern Peru/Northern Chile (Chile)	< 6	< 6	10.0	7.5	10.0	C	131.0	2%	-

Stock / nested jurisdiction (1, 2)	Management			Stock Status		Sust. category	Latest Catch (3)	% of total	Changes from last year
	Management strategy	Managers' compliance	Fishers' compliance	Current health	Future health				
Araucanian herring - Central-South Chile	< 6	< 6	≥ 6	7.5	9.1	C	410.4	6%	-
Anchoveta - Chile Atacama (III) -Coquimbo (IV)	< 6	0.0	10.0	5.9	7.8	C	15.7	0%	B1 to C
European sprat - North Sea, Skagerrak and Kattegat	< 6	10.0	10.0	4.7	≥ 6	C	92.2	1%	B1 to C
European pilchard - NW Africa southern (Morocco)	≥ 6	≥ 6	DD	6.8	≥ 6	DD	588.7	8%	B1 to DD
Indian mackerel - Maharashtra	≥ 6	≥ 6	DD	DD	DD	DD	43.6	1%	-
Indian mackerel - Goa	≥ 6	≥ 6	DD	DD	DD	DD	37.9	1%	-
Indian oil sardine - Maharashtra	≥ 6	≥ 6	DD	DD	DD	DD	8.1	0%	-
Indian oil sardine - Goa	≥ 6	≥ 6	DD	DD	DD	DD	4.3	0%	-

NOTES: (1) Shading in stock name: light gray means no change from 2023; light green means rise in sustainability category; light orange means a drop in the sustainability category. (2) Stocks and respective fisheries are ordered according to the SFP stock status and management performance category, from A (the highest) to C (the lowest). The criteria for the five stock status and management performance categories used in this 2024 reduction fisheries overview are presented in **Table 2** (3) With the exception of European pilchard - NW Africa southern (for which species catches by country are only available until 2019), catches mentioned here are for the year 2023 and are measured in thousand tonnes. (4) Chilean jack mackerel in the Southeast Pacific (CJM-SEP) and European pilchard in Northwest Africa (PIL-NWAfr) are transboundary stocks managed by different jurisdictions, each with varying levels of management performance. The scores provided herein reflect the management performance within each jurisdiction or management unit. Further details regarding the specific management quality scores for each unit can be accessed on the respective FishSource pages for Chilean jack mackerel - SE Pacific and European pilchard - NW Africa southern. Notably, scores for Ecuadorian waters are omitted for CJM-SEP, as Ecuador primarily has residual catches of this species and transfers its quotas to Chile within the SPRFMO (SPRFMO n.d.) framework. Similarly, scores for Senegalese waters are not included for PIL-NWAfr, as catches from Senegal, although increasing in recent years, remain residual according to the FAO (FAO 2024).

Figure 1 | Fisheries included in the evaluations of the 2024 reduction fisheries overview, and the respective SFP sustainability category.

Table 4 | Changes in SFP management and stock status sustainability categories across the stocks evaluated in the 2024 overview.

Stock	Change in category	Notes
Chilean jack mackerel - SE Pacific (high seas)	B1 to A	This is a **well-managed stock**, currently at **very healthy levels and with sustainable exploitation rates**. Since 2010, biomass has steadily increased to well above the MSY target, while fishing mortality remains below target levels. The management framework includes TAC limits, a recovery plan, and observer programs, ensuring science-based decision making. The **South Pacific Regional Fisheries Management Organization (SPRFMO) applies a precautionary approach** through joint stock assessments, combining data and expertise from all countries fishing within the assessment area. The fishery is managed under an internationally agreed catch limit for the high seas. **Chilean and Ecuadorian waters are now included in the Convention area**, and Peru has recently proposed opening its waters for inclusion as well.
Chilean jack mackerel - SE Pacific (Chile)	B1 to A	This is a **well-managed stock**, currently at **very healthy levels and with sustainable exploitation rates**. Since 2010, biomass has steadily increased to well above the MSY target, while fishing mortality remains below target levels. The management framework includes TAC limits, a recovery plan, and observer programs, ensuring science-based decision making. The **South Pacific Regional Fisheries Management Organization (SPRFMO) applies a precautionary approach** through joint stock assessments, combining data and expertise from all countries fishing within the assessment area. The fishery is managed under an internationally agreed catch limit for the high seas. Chile is a member of the SPRFMO and adheres to the agreed regulations for managing this stock within its distribution, including Chilean waters. **Management is therefore considered solid, aligning with broader stock conservation goals and the conservation and management measures established at the stock level.**
Sandeels nei - Dogger Bank area	B2 to B1	The **latest assessment indicates an improvement in stock condition. Spawning stock biomass** (SSB) has been rising since 2019 and **is now 1.7 times above the target**. Exploitation rates remain within sustainable limits. Management is considered strong, with policymakers following scientific advice and fishers generally complying with catch limits.

Stock	Change in category	Notes
European pilchard - NW Africa central	B1 to B2	The stock outlook has become more pessimistic. The l**atest assessments indicate a decline in biomass over the past few years, with levels now falling below the target reference point**. As a result, **the stock has shifted from being classified as "not fully exploited" to "fully exploited"** in the latest FAO assessment. Scientists recommend reducing catch limits and implementing additional measures to protect the stock, such as closed areas and seasons, fleet capacity restrictions, and other conservation efforts.
Capelin - Barents Sea	A to C	Compared to the previous year, **the perception of the stock is now more pessimistic**. While the spawning biomass in spring 2024 was well above the reference point used in the harvest control rule ($B_{escapement}$), the maturing biomass in fall 2024 was estimated at less than half of the previous year's value. Furthermore, **projections indicate a sharp decline in spawning biomass by spring 2025. Even under a zero-catch scenario, there is less than a 95% probability that its SSB will remain above $B_{escapement}$ (200,000 tonnes) in 2025.**
Sandeels nei - Central Eastern North Sea	B1 to C	Management of this stock is generally considered adequate, with specific measures in place and catch limits set in line with scientific advice. However, **despite the relatively low fishing mortality levels, the stock's current outlook is pessimistic**. Spawning stock biomass has declined sharply since 2020, likely due to changing environmental conditions and low recruitment, and is now hovering around target levels. This downward trend is expected to continue in the short-term, with **biomass projected to fall below the limit reference point in early 2025 and decline further through 2026, even under a zero-catch scenario**.

Stock	Change in category	Notes
Anchoveta - Chile Atacama (III) -Coquimbo (IV)	B1 to C	Like other small pelagic fisheries in Chile, this fishery operates under a management plan that allows in-season adjustments to total allowable catches (TACs) based on updated scientific evidence. **However, this approach has failed to reduce catch limits when stock declines are observed.** Another challenge is the "remnants law," which permits unused TAC to roll over into the next season, further increasing catch limits. **As a result, in recent years TACs have been set above the in-season revised scientifically advised levels, undermining key management measures and increasing the risk of overfishing.** **The stock condition has been deteriorating in the last couple of years**, with spawning biomass now estimated just below the limit reference point.
European sprat - North Sea, Skagerrak and Kattegat	B1 to C	**This stock has deteriorated significantly since last year. Spawning stock biomass dropped** from 236,000 tonnes in 2023 to 84,000 tonnes in 2024 **and is now around 80% of the limit reference point**. **Management remains weak compared to other fisheries in the North Sea,** with no multi-year plan in place, despite scientific recommendations. Additionally, ICES has raised concerns that the current interannual quota transfers may not follow a precautionary approach. **Fishing mortality has increased substantially in the last year, reaching its highest recorded level and exceeding the long-term average.**
European pilchard - NW Africa southern (Morocco)	B1 to DD	**Both stock condition and management performance have worsened**. Recent assessments indicate a sharp decline in biomass, now significantly below the target reference point (B/B_{target} = 71%). As a result, **the stock has been reclassified from "not fully exploited" to "overexploited" in the latest FAO assessment**. Scientists attribute this decline to excessive fishing pressure combined with unfavorable environmental conditions. As with the NW Africa central stock, scientific advice calls for reducing exploitation rates, restricting fleet capacity, and implementing stronger conservation measures, such as spatial and temporal closures and minimum size limits. **In recent years, catch data has only been publicly reported at the stock level**, with no breakdown by fleet (flag country and gear). This **lack of transparency makes it impossible to assess compliance with recommended and established catch limits in the southern zone of Morocco**.

Notes: (1) European pilchard – NW Africa southern stock and Chilean jack mackerel in the Southeast Pacific (CJM-SEP) are transboundary stocks, managed by different jurisdictions, each demonstrating varying levels of management performance. This table exclusively lists the jurisdictions or management units in which there was a change in sustainability category.

Table 5 | SFP management and stock status sustainability category C or DD stocks in the 2024 overview, and the reasons for FishSource scores below 6, data-deficient, or not scored.

Stock	Management strategy	Managers' compliance	Fishers' compliance	Current health	Future health	Comments
Chilean jack mackerel - SE Pacific (Peru)	< 6	≥ 6	9.0	10.0	9.6	At the broader stock level, Chilean jack mackerel is considered well-managed, with healthy stock levels and sustainable exploitation rates. The management framework includes TAC limits, a recovery plan, and observer programs, ensuring science-based decision making. Since 2010, biomass has steadily increased to well above the MSY target, while fishing mortality remains below target levels. In line with scientific recommendations, all SPRFMO members agreed on a total allowable catch (TAC) for 2024 that covers the entire distribution of the stock. However, **Peru — whose waters remain outside the convention area and are assessed independently — continues to set its own catch limits, exceeding the designated TAC for non-convention waters**. For 2024, Peru established a TAC of 204,000 tonnes, nearly double the 106,703 tonnes allocated under SPRFMO agreements. **This persisting divergence raises some concerns about the stock's overall management** and the effectiveness of coordinated conservation efforts across its full range.
Anchoveta - Chile Valparaíso (V) - Los Lagos (X)	< 6	< 6	≥ 8	10.0	9.4	This stock is harvested within a mixed fishery that also targets and captures Araucanian herring. Despite the presence of a management plan that incorporates provisions for adjusting catch limits, or total allowable catches (TACs), in response to in-season changes, **the current management approach has proven ineffective at adjusting catch limits when supported by scientific evidence indicating a decline in the stock's condition**. This persisting issue has resulted in certain measures anticipated in the management plan not being adequately implemented, potentially undermining the long-term sustainability of the fishery. **Other management challenges** are also likely to pose risks to the long-term sustainability of this mixed fishery. These include: the **joint imputation scheme** – implemented in 2018 to discourage discards, but flagged by scientists as a concern, as it may result in substantial quota overruns; and the **"remnants law" – which allows unused TAC from one season to be carried over and caught at the start of the following year**. These issues suggest that key measures within the management plan are not being properly implemented, increasing the risk of overfishing and threatening the fishery's long-term sustainability.

Stock	Management strategy	Managers' compliance	Fishers' compliance	Current health	Future health	Comments
Capelin - Barents Sea	≥ 8	10.0	10.0	≥ 8	< 6	**Compared to the previous year, the perception of the stock is now more pessimistic**. While the spawning biomass in spring 2024 was well above the reference point used in the harvest control rule ($B_{escapement}$), the maturing biomass in fall 2024 was estimated at less than half of the previous year's value. Furthermore, **projections indicate a sharp decline in spawning biomass by spring 2025**. Even under a zero-catch scenario, there is less than a 95% probability that its SSB will remain above $B_{escapement}$ (200,000 tonnes) in 2025.
Sandeels nei - Central Eastern North sea	≥ 6	10.0	10.0	7.9	< 6	Management of this stock is generally considered adequate, with specific measures in place and catch limits set in line with scientific advice. However, despite the relatively low fishing mortality levels, **the stock's current outlook is pessimistic. Spawning stock biomass has declined sharply since 2020**, likely due to changing environmental conditions and low recruitment, and is now hovering around target levels. This **downward trend is expected to continue in the short-term, with biomass projected to fall below the limit reference point in early 2025 and decline further through 2026, even under a zero-catch scenario**.
Anchoveta - Southern Peru/Northern Chile (Peru)	< 6	10.0	10.0	7.0	10.0	This stock is distributed across both Chilean and Peruvian waters but continues to be managed independently by each country. The **absence of formal coordination between the two countries has led to the unilateral setting of total allowable catches (TACs) by Chile and Peru**. Collectively, these unilateral TACs have consistently exceeded the recommended overall TAC for this stock. **Since 2021, the combined unilateral quotas of both nations have averaged 2.3 times the advised catch limit.** In addition, catches have been consistently well below the respective TACs, which supports the perception by some scientists that biomass is overestimated, and that both the recommended and defined catch limits are unrealistic. There is some indication that discussions are underway to address this issue, as evidenced by initiatives like the GEF-UNDP-Humboldt Project. However, as of now, no concrete measures have been implemented to establish effective joint management of the fishery.
European pilchard - NW Africa southern (Mauritania)	≥ 6	≥ 6	< 6	6.8	≥ 6	**The same concerns and potential critical management issues persist in this fishery.** There is still no national TAC for sardine or small pelagics in Mauritania. There has been some improvement in monitoring, control, and surveillance (MCS) capabilities to reduce illegal, unreported, and unregulated (IUU) fishing in Mauritania. **However, a body of evidence suggests that IUU activity in Mauritania still warrants concern.**

Stock	Management strategy	Managers' compliance	Fishers' compliance	Current health	Future health	Comments
Blue whiting - NE Atlantic	≥ 6	< 6	≥ 6	10.0	5.6	Despite some recent efforts to improve management, including the establishment of a multilateral agreement on total allowable catch (TAC), **deviations from the long-term management strategy persist. Coastal states continue to set unilateral quotas that disregard the overall advised TAC**. As a result, **over the last ten years the combined unilateral quotas and catches for blue whiting have consistently surpassed the recommendations of the International Council for the Exploration of the Sea (ICES) and the levels outlined in the long-term management plan**. In 2023, total catches exceeded the recommendation by the Northeast Atlantic Fisheries Commission (NEAFC) recommendation under the agreed management plan by 28%, highlighting the ongoing failure to effectively control harvest levels. **Additionally, transparency in the quota allocation process remains limited**. In recent years, Russia's unilaterally set quota has not been publicly disclosed and is not factored into the overall advised TAC. **Since 2014, fishing mortality has consistently exceeded the target reference point and is now at a historical high** – 61% above the level that would achieve maximum sustainable yield (F_{msy}). Scientists from ICES have cautioned that continued failure to adhere to advised catches could heighten the risk of the stock falling below the biomass limit reference, potentially resulting in long-term loss of catch.
Anchoveta - Southern Peru/Northern Chile (Chile)	< 6	< 6	10.0	7.5	10.0	**This stock** is distributed across both Chilean and Peruvian waters but **continues to be managed independently by each country. The absence of formal coordination between the two countries has led to the unilateral setting of total allowable catches (TACs) by Chile and Peru.** Collectively, these unilateral TACs have consistently exceeded the recommended overall TAC for this stock. **Since 2021, the combined unilateral quotas of both nations have averaged 2.3 times the advised catch limit.** In addition, catches have been consistently well below the respective TACs, which supports the perception by some scientists that biomass is overestimated, and that both the recommended and defined catch limits are unrealistic. There is some indication that discussions are underway to address this issue, as evidenced by initiatives like the GEF-UNDP-Humboldt Project. However, as of now, no concrete measures have been implemented to establish effective joint

Stock	Management strategy	Managers' compliance	Fishers' compliance	Current health	Future health	Comments
						management of the fishery. **In Chile, the current management system has failed to lower catch limits when updated scientific data suggests an in-season TAC reduction**. In both 2023 and 2024, the final unilateral TAC for the Chilean stock significantly exceeded the lower bound of the advised allowable biological catch (ABC) range.
Araucanian herring - Central-South Chile	< 6	< 6	≥ 6	7.5	9.1	This stock is part of a mixed fishery that also targets anchoveta. Although a management plan is in place, allowing for in-season adjustments to total allowable catches (TACs) based on stock conditions, **it has failed to effectively reduce catch limits when scientific evidence indicates a decline. In recent years, this has led to final TACs significantly exceeding the recommended range of the advised biological catch (ABC) during the fishing season**. Other management challenges are also likely to pose risks to the long-term sustainability of this mixed fishery. These include: **the joint imputation scheme – implemented in 2018 to discourage discards, but flagged by scientists as a concern**, as it may result in substantial quota overruns; and **the "remnants law" – which allows unused TAC from one season to be carried over and caught at the start of the following year.** These issues suggest that key measures within the management plan are not being properly implemented, increasing the risk of overfishing and threatening the fishery's long-term sustainability.
Anchoveta - Chile Atacama (III) - Coquimbo (IV)	< 6	0.0	10.0	5.95	7.8	Like other small pelagic fisheries in Chile, this fishery operates under a **management plan that allows in-season adjustments to total allowable catches (TACs)** based on updated scientific evidence. However, **this approach has failed to reduce catch limits when stock declines are observed**. **Another challenge is the "remnants law,"** which permits unused TAC to roll over into the next season, further increasing catch limits. As a result, **in recent years TACs have been set above the in-season revised scientifically advised levels**, undermining key management measures and increasing the risk of overfishing. The stock condition has been deteriorating in the last couple of years, with **spawning biomass now estimated just below the limit reference point.**
European sprat - North Sea, Skagerrak and Kattegat	< 6	10.0	10.0	4.7	≥ 6	**This stock has deteriorated significantly since last year. Spawning stock biomass** dropped from 236,000 tonnes in 2023 to 84,000 tonnes in 2024 and **is now around 80% of the limit reference point**. Management remains weak compared to other fisheries in the North Sea, with **no multi-year plan in place despite scientific recommendations**. Additionally, **ICES has raised concerns that the current interannual quota transfers may not follow a precautionary approach**. Fishing

Stock	Management strategy	Managers' compliance	Fishers' compliance	Current health	Future health	Comments
						mortality has increased substantially in the last year, reaching its highest recorded level and exceeding the long-term average.
European pilchard - NW Africa southern (Morocco)	≥ 6	≥ 6	DD	6.8	≥ 6	**Both stock condition and management performance have worsened. Recent assessments indicate a sharp decline in biomass,** now significantly below the target reference point (B/B_{target} = 71%). As a result, the **stock has been reclassified from "not fully exploited" to "overexploited" in the latest FAO assessment**. Scientists attribute this decline to excessive fishing pressure combined with unfavorable environmental conditions. As with the NW Africa central stock, scientific advice calls for reducing exploitation rates, restricting fleet capacity, and implementing stronger conservation measures, such as spatial and temporal closures and minimum size limits. **In recent years, catch data has only been publicly reported at the stock level, with no breakdown by fleet (flag country and gear).** This **lack of transparency** makes it **impossible to assess compliance** with recommended and established catch limits in the southern zone of Morocco.
Indian mackerel - Maharashtra	≥ 6	≥ 6	DD	DD	DD	Like the Indian oil sardine, **the specific status of the Indian mackerel stocks and their exploitation levels against reference points remain unknown. Rapid stock assessments (RSAs) are conducted** by India's Central Marine Fisheries Research Institute (CMFRI), **but their reliability cannot be fully assessed due to limited information on the assessment data and process.** Additionally, these assessments are not conducted at the stock level, as the geographical limits of Indian mackerel stocks in India are not clearly understood. **As a result, the stock's current and future health remain uncertain and are considered data-deficient.** **There is no known formal management plan for this stock,** nor a harvest control rule, reference points, or catch limits or TACs. Within India's 12-mile territorial waters, fisheries are managed under the Marine Fishing Regulation Acts (MFRA) of maritime states, which include restrictions on certain gears, mesh size regulations, minimum landing size, seasonal closures (e.g., the monsoon fishing ban), and designated no-trawling zones. State authorities are responsible for vessel inspections and coastal patrols. **While illegal, unreported, and unregulated (IUU) fishing has been recognized as a broader issue in Indian fisheries, there is no recent data on compliance for this**

Stock	Management strategy	Managers' compliance	Fishers' compliance	Current health	Future health	Comments
						fishery. Furthermore, since no official catch limits exist, no specific compliance information is reported. **Information on the fishery's environmental impacts is limited. While** legislation such as the Wildlife (Protection) Act of 1972 exists to protect vulnerable marine species like sharks and tunas, no specific bycatch mitigation measures or regulations for endangered, threatened, and protected (ETP) species are known. Marine protected areas (MPAs) are in place to safeguard habitats and ecosystems, but their enforcement and compliance remain uncertain.
Indian mackerel - Goa	≥ 6	≥ 6	DD	DD	DD	Like the Indian oil sardine, **the specific status of the Indian mackerel stocks and their exploitation levels against reference points remain unknown. Rapid stock assessments (RSAs) are conducted by India's Central Marine Fisheries Research Institute (CMFRI), but their reliability cannot be fully assessed due to limited information** on the assessment data and process. Additionally, these assessments are not conducted at the stock level, as the geographical limits of Indian mackerel stocks in India are not clearly understood. **As a result, the stock's current and future health remain uncertain and are considered data-deficient.** **There is no known formal management plan for this stock**, nor a harvest control rule, reference points, or catch limits or TACs. Within India's 12-mile territorial waters, fisheries are managed under the Marine Fishing Regulation Acts (MFRA) of maritime states, which include restrictions on certain gears, mesh size regulations, minimum landing size, seasonal closures (e.g., the monsoon fishing ban), and designated no-trawling zones. State authorities are responsible for vessel inspections and coastal patrols. **While illegal, unreported, and unregulated (IUU) fishing has been recognized as a broader issue in Indian fisheries, there is no recent data on compliance for this fishery.** Furthermore, since no official catch limits exist, no specific compliance information is reported. **Information on the fishery's environmental impacts is limited.** While legislation such as the Wildlife (Protection) Act of 1972 exists to protect vulnerable marine species like sharks and tunas, no specific bycatch mitigation measures or regulations for endangered, threatened, and protected (ETP) species are known. Marine protected areas (MPAs) are in place to safeguard habitats and ecosystems, but their enforcement and compliance remain uncertain.

Stock	Management strategy	Managers' compliance	Fishers' compliance	Current health	Future health	Comments
Indian oil sardine - Maharashtra	≥ 6	≥ 6	DD	DD	DD	**The status of this stock and its exploitation levels against reference points remain unknown.** India's Central Marine Fisheries Research Institute (CMFRI) conducts **rapid stock assessments (RSAs), but their reliability is uncertain due to limited transparency on data and methods**. These assessments also do not account for stock structure, as the geographical limits of oil sardine stocks in India are not well defined. **As a result, the stock's condition remains uncertain and data deficient.** **There is no formal management plan for this stock**. Within India's 12-mile territorial waters, fisheries are regulated by state-level Marine Fishing Regulation Acts (MFRA), which impose gear restrictions, mesh size regulations, minimum landing sizes, seasonal closures (e.g., monsoon fishing bans), and no-trawling zones. State authorities oversee enforcement through vessel inspections and coastal patrols. **Illegal, unreported, and unregulated (IUU) fishing is a recognized issue in Indian fisheries, but no recent compliance data is available for this fishery.** Additionally, with no official catch limits in place, specific compliance reporting is not required. **Environmental impact data is also limited.** While the Wildlife (Protection) Act of 1972 provides legal protection for some marine species, there are no known bycatch mitigation measures for endangered, threatened, or protected (ETP) species. Marine protected areas (MPAs) aim to safeguard habitats and ecosystems, but enforcement and compliance remain uncertain.
Indian oil sardine - Goa	≥ 6	≥ 6	DD	DD	DD	**The status of this stock and its exploitation levels against reference points remain unknown**. India's Central Marine Fisheries Research Institute (CMFRI) conducts rapid stock assessments (RSAs), but their reliability is uncertain due to limited transparency on data and methods. **These assessments also do not account for stock structure, as the geographical limits of oil sardine stocks in India are not well defined. As a result, the stock's condition remains uncertain and data deficient.** **There is no formal management plan for this stock.** Within India's 12-mile territorial waters, fisheries are regulated by state-level Marine Fishing Regulation Acts (MFRA), which impose gear restrictions, mesh size regulations, minimum landing sizes, seasonal closures (e.g., monsoon fishing bans), and no-trawling zones. State authorities oversee enforcement through vessel inspections and coastal patrols.

Stock	Management strategy	Managers' compliance	Fishers' compliance	Current health	Future health	Comments
						Illegal, unreported, and unregulated (IUU) fishing is a recognized issue in Indian fisheries, but no recent compliance data is available for this fishery. Additionally, with no official catch limits in place, specific compliance reporting is not required. **Environmental impact data is also limited**. While the Wildlife (Protection) Act of 1972 provides legal protection for some marine species, there are no known bycatch mitigation measures for endangered, threatened, or protected (ETP) species. Marine protected areas (MPAs) aim to safeguard habitats and ecosystems, but enforcement and compliance remain uncertain.

Notes: (1) Chilean jack mackerel in the Southeast Pacific (CJM-SEP) and European pilchard in Northwest Africa (PIL-NWAfr) are transboundary stocks managed by different jurisdictions, each exhibiting varying levels of management performance. The scores and respective notes provided herein regard only the management performance of the jurisdictions or management units that are performing inadequately.

BEYOND THE CATCH: UNDERSTANDING THE POTENTIAL ENVIRONMENTAL IMPACTS OF REDUCTION FISHERIES OFF INDIAN WATERS

The impact of any fishery, and consequently its sustainability, extends beyond the target stock to encompass the environment and ecosystem in which the fishery takes place (e.g., Hall 1999, Kaiser et al. 2002, Kraus & Diekmann 2018). Until recently, fisheries targeting small pelagic species (including those used for marine ingredients) were generally perceived as having a relatively low impact on their habitats and the broader ecosystem (Fulton Fish Market, 2023).

However, research in certain regions has revealed the importance of considering the impacts of these fisheries, particularly in light of the trophic role played by many of the targeted small pelagic species in their respective trophic chains (e.g., anchoveta off the Southeast Pacific coast: Pauly, 1987; Espinoza & Bertrand, 2008; oil sardine and mackerel in India: Pikitch et al., 2012).

The FishSource Environmental and Biodiversity scoring system was developed to better capture the full range of impacts a fishery may have across bycatch, ETP (endangered, threatened, and protected species), habitat, and ecosystem. See Environmental and Biodiversity Method for FishSource for more information.

Last year, the reduction fisheries report included a section on the Environmental and Biodiversity evaluations (based on FishSource scores) for South American reduction fisheries, specifically Peruvian and Chilean small pelagic fisheries. This year, we shifted the focus to India, where FishSource has also conducted such evaluations for Maharashtra and Goa reduction fisheries (**Table 6**).

FishSource analysis indicated low scores for ETP and Bycatch impacts for Indian oil sardine and Indian mackerel resources in both regions (Maharashtra and Goa). These weak results are in part due to the low observer coverage and lack of mandatory logbooks in the respective regions. Additionally, management measures in these regions were limited, with little data on their effectiveness.

Scores for habitat were Good for all fisheries examined. In general, the gear used to harvest schooling pelagic species, such as oil sardine and mackerel, tends to have little if no bottom contact and thus a potential low impact in benthic habitats.

Ecosystem scores, which measure if the fisheries are mitigating impacts in the broader ecosystem (e.g., in the trophic food chains), were also low for all fisheries examined. This is due to a general lack of information on the potential fishery impacts. Similar to other small fisheries, the impact on the ecosystems may be high given that both oil sardine and mackerel are important forage in the region.

Although these findings are based on only a few fisheries off Indian waters and should be interpreted with caution, similar challenges in data collection and the effect of mitigation measures likely exist across the region. Many fisheries suffer from severe data gaps,

limiting understanding of their broader ecosystem impacts. For example, the environmental impacts of several small pelagic fisheries off the Philippines remain largely unknown (e.g., SFP 2021a-c).

Effective and sustainable management requires a clear understanding of these broader ecosystem impacts to protect the health of marine species and habitats. Expanding data collection (e.g., implementing regular monitoring programs for bycatch and ETP species), research on the ecological effects of small pelagic fisheries in the region and gradually adopting an ecosystem-based approach to fisheries management, is, therefore, crucial to ensuring the long-term sustainability of these and other fishery resources in the region (Garcia et al 2003, de Moor 2023).

Table 6 | FishSource Environmental and Biodiversity (E&B) scores by issue for Indian reduction fisheries considered in the current overview.

Stock	BYC	ETP	HAB	ECO	Overall category	Overall notes on scoring
Indian oil sardine - Maharashtra	4.0	3.0	9.3	4.0	C	Oil sardine and Mackerel are both caught in the same fishery in Maharashtra. However, data regarding bycatch and its effects on ETP (endangered, threatened, or protected) species is limited due to no observer coverage. Consequently, the impact of the fishery on bycatch species remains unknown and the limited management measures are untested. The fishery is not expected to interact with the seabed habitat. Ecosystem impacts may be high as both oil sardine and mackerel are important forage in the region. However, there is limited data to show the impact of the fishery on the ecosystem.
Indian mackerel - Maharashtra	4.0	3.0	9.3	4.0	C	
Indian oil sardine - Goa	4.0	3.0	9.3	4.0	C	As in Maharashtra, oil sardine and mackerel in Goa have no at-sea observer coverage and no requirement for logbooks. Consequently, the impact of the fishery on bycatch species remains unknown and the limited management measures are untested. The fishery is not expected to interact with the seabed habitat. Ecosystem impacts may be high as both oil sardine and mackerel are important forage in the region. However, there is limited data to show the impact of the fishery on the ecosystem.
Indian mackerel - Goa	4.0	3.0	9.3	4.0	C	

THE GLOBAL ROUNDTABLE ON MARINE INGREDIENTS: 2024 ACTIVITY HIGHLIGHTS

Launched in 2021, the Global Roundtable on Marine Ingredients is a sector-wide, multi-stakeholder initiative to drive environmental and social improvements in key fisheries globally. The Roundtable currently has 14 members, including leading feed manufacturers, certification standards, and other major users of marine ingredients.

In 2024, much of the activity of the Global Roundtable was focused on West Africa. In October 2023, the Roundtable published a human rights impact assessment (HRIA) focused on small pelagic fisheries in Senegal and Mauritania. Overall, the HRIA identified a number of actual and potential human rights impacts associated with small pelagic fisheries in Mauritania and Senegal, including the rights to a healthy environment and adequate standard of living and labor rights.

In Mauritania and Senegal, the report found that small-scale fishers and supply chains have been displaced, and food security undermined by the growth of the fishmeal and fish oil (FMFO) sector. The HRIA also highlighted that a responsible small pelagics industry has much potential to positively impact human rights of the local population; bringing stability to the fisheries in this region can support economic growth and provide stable employment for local populations in a place where it is sorely needed.

In 2024, the FAO published a report from a December 2023 workshop in Ghana co-funded by the Roundtable and the Icelandic Ocean Cluster. The report highlights both challenges and opportunities in improving the region's small pelagic fisheries. The Roundtable and its members have been working to support the current Mauritania small pelagics FIP, and in December a representative of the Roundtable traveled to Mauritania to participate in the FIP Steering Committee meetings with key FIP and government stakeholders. Shortly thereafter, the Roundtable sent a letter to the Director-General for Maritime Affairs and Fisheries for the European Commission echoing concerns about the status of regional fisheries, as highlighted by the FAO's Fishery Committee for the Eastern Central Atlantic (also reflected in this current report), and supporting calls for improved management and prioritizing regional fisheries for human consumption.

In 2025, the Roundtable will continue supporting improvements in West Africa and will also be reforming a working group to support improvements in India.

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APPENDIX I | Time series (2014–2024) of SFP sustainability categories and most recent catch data for the fisheries frequently included in the Reduction Fisheries Overview.

Region	Stock-fishery name	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	Latest catches
Europe	Blue whiting - NE Atlantic	A	C	C	B1	B1	B1	C	C	B1	C	C	1,359.6
	Capelin - Barents Sea	B2	C	C	C	B2	B2	C	C	B1	A	C	60.7
	Capelin - Icelandic	C	B2	B2	B2	B2	C	C	B2	B2	B2	B2	0.0
	European sprat - Baltic Sea	B1				B1	B1	B1	B1	B1	B1	B1	265.9
	European sprat - North Sea, Skagerrak and Kattegat	B1	B1	B1	C	C	B1	B1	B1	B2	B1	C	92.2
	Norway pout - North Sea, Skagerrak and Kattegat	B1	C	B1	B1	B1	B1	B1	B1	B1	B1	B1	27.4
	Sandeels nei - Central Eastern North Sea	C	B1	B1	B1	B1	B1	B1	B1	B1	B1	C	18.8
	Sandeels nei - Dogger Bank area	B2	C	B1	B1	B1	C	C	C	C	B2	B1	88.7
North America	Atlantic menhaden - NW Atlantic	C	B1	B2	B2	B2	B2	B1	B1	B1	B1	B1	168.6
	Gulf menhaden - Gulf of Mexico	B1	B1	B1	B1	B1	B1	B1	B1	B1	B1	B1	436.5
Northwest Africa	European pilchard - NW Africa central	C	C	B2	B2	B2	B1	B1	B1	B1	B1	B2	354.0
	European pilchard - NW Africa southern (Mauritania) [1]	C	C	B1	B1	C	C	C	C	C	C	C	320.0
	European pilchard - NW Africa southern (Morocco) [1]	C	C	B1	B1	B1	B2	B2	B1	B1	B1	DD	588.7
South America	Anchoveta - Chile Atacama (III) -Coquimbo (IV)		B2	B2	B1				B1	B1	B1	C	15.7
	Anchoveta - Chile Valparaíso (V) - Los Lagos (X)	C	C	C	C	C	B2	B1	B1	B1	C	C	187.1
	Anchoveta - Peruvian Northern-Central [2]	B1	B2	B2	B2	B2	B2		B2	B2	B2	B2	1,272.8
	Anchoveta - Southern Peru/Northern Chile (Chile) [3]	C	C	C	C	B2	B2	B2	B1	C	C	C	131.0
	Anchoveta - Southern Peru/Northern Chile (Peru) [3]	C	C	C	C	B2	B2	B2	B1	C	C	C	26.1
	Araucanian herring - Central-South Chile	B1	B1	C	B2	B1	B1	B2	B2	B1	C	C	410.4
	Chilean jack mackerel - SE Pacific (Chile) [3]	C	C	C	B2	B1	B2	B1	B1	B1	B1	A	816.8
	Chilean jack mackerel - SE Pacific (high seas) [3]	C	C	C	B2	B1	B2	B1	B1	B1	B1	A	95.3
	Chilean jack mackerel - SE Pacific (Peru) [3]	C	C	C	B2	B1	B2	B1	B1	B1	C	C	201.0

Notes: (1) Until 2018, this fishery was evaluated at the stock level. (2) In 2020, this fishery was not scored (NS) on FishSource criteria 4 and 5 due to unclear stock assessment processes and an ongoing legal dispute over the results at the time. (3) Until 2023, this fishery was evaluated at the stock level. (4) With the exception of European pilchard - NW Africa southern (for which species catches by country are only available until 2019), catches mentioned here are for the year 2023 and are measured in thousand tonnes.

APPENDIX II | Information about existing improvement (Active FIPs) and certification programs, for all of the key fisheries assumed to be mainly used for reduction purposes (See table notes for more details on fisheries and attributes included)

Status as of March 2025

Stock	Active FIPs [2]				Certifications			
	FIP name	FIP start (year)	FIP type	FIP progress rating	MarinTrust [3]	MSC [4]	Date 1st MSC certification	# of MSC fisheries [5]
Anchoveta Chile Valparaíso (V) - Los Lagos (X)	Chile Central-South Araucanian herring and anchovy (Regions V-X) – purse seine	2024	Cp	C	Yes	-	-	-
Anchoveta - Peruvian Northern-Central	Peruvian anchovy - industrial purse-seine	2017	Cp	A	Yes	-	-	-
Anchoveta - Peruvian Northern-Central	Peruvian anchovy - small scale purse-seine	2017	Cp	Inactive	- [6]	-	-	-
Anchoveta - Southern Peru/Northern Chile	-	-		-	Yes	-	-	-
Araucanian herring - Central-South Chile	Chile Central-South Araucanian herring and anchovy (Regions V-X) – purse seine	2024	Cp	C	Yes	-	-	-
Capelin - Icelandic	-	-		-	Yes	Cert	Apr-17	2
European sprat - Baltic Sea	-	-		-	Yes	Sus, Wdrn [8]	May-17	4
European sprat - North Sea, Skagerrak and Kattegat	-	-	-	-	Yes	Cert, FA, Wdrn	Feb-18	3
Gulf menhaden - Gulf of Mexico	-	-		-	Yes	Cert	Oct-19	1
Sandeels nei - Central Eastern North Sea	-	-		-	Yes	Cert, Wdrn	Mar-17	2
Sandeels nei - Dogger Bank area	-	-		-	-	FA	Mar-17	1
Anchoveta - Chile Atacama (III) -Coquimbo (IV)	-	-	-	-	Yes	-	-	-
Atlantic menhaden - NW Atlantic	-	-	-	-	Yes	Cert	Sep-19	1

Stock	Active FIPs [2]				Certifications			
	FIP name	FIP start (year)	FIP type	FIP progress rating	MarinTrust [3]	MSC [4]	Date 1st MSC certification	# of MSC fisheries [5]
Blue whiting - NE Atlantic	NE Atlantic Blue Whiting FIP	2021	Bs	D	IP	Sus, Wdrn [9]	Jun-16	5
Capelin - Barents Sea	-	-		-	Yes	-	-	-
Chilean jack mackerel - SE Pacific	-	-		-	Yes	Cert	Apr-19	2
European pilchard - NW Africa central	Morocco sardine - pelagic trawl and seine	2014	Cp	Inactive [10]	Yes [7]	-	-	-
European pilchard - NW Africa southern (Morocco)	Morocco sardine - pelagic trawl and seine	2014	Cp	Inactive [10]	Yes [7]	-	-	-
European pilchard - NW Africa southern (Mauritania)	Mauritania small pelagics - purse seine	2017	Cp	A	IP	-	-	-
Norway pout - North Sea, Skagerrak and Kattegat	-	-		-	Yes	Cert	Mar-17	1
Antarctic krill - Atlantic Southern Ocean	-	-	-	-	-	Cert, Wdrn	Jun-10	4
Bonga shad - NW Africa	Mauritania small pelagics - purse seine	2017	Cp	A	IP	-	-	-
European anchovy - South Africa/SE Atlantic	-	-	.	-	Yes	-	-	-
European anchovy - NW Africa	Morocco anchovy - purse seine	2019	Cp	D	Yes [7]	-	-	-
Madeiran Sardinella - NW Africa	Mauritania small pelagics - purse seine	2017	Cp	A	IP	-	-	-
Round sardinella - NW Africa	Mauritania small pelagics - purse seine	2017	Cp	A	IP	-	-	-
South Africa redeye herring - South Africa/SE Atlantic	-	-		-	Yes	-	-	-
Sandeels nei - Central and Southern North Sea	-	-		-	-	FA	Mar-17	1
Boarfish - NE Atlantic	-	-	-	-	Yes	-	-	-
Falkland sprat - Los Lagos Region	-	-		-	Yes	-	-	-

Stock	Active FIPs [2]				Certifications			
	FIP name	FIP start (year)	FIP type	FIP progress rating	MarinTrust [3]	MSC [4]	Date 1st MSC certification	# of MSC fisheries [5]
Falkland sprat - Aysén Region	-	-		-	-	-	-	-
Frigate and bullet tunas Ecuador	Ecuador small pelagics	2018	Bs	B	IP	-	-	-
Japanese sardine/red-eye round herring - Northern and central Gulf of California	-	-		-	Yes	-	-	-
Middling thread herring - Sinaloa and Nayarit	-	-		-	Yes	Cert	Oct-16	1
Pacific anchoveta - Ecuador	Ecuador small pelagics	2018	Bs	B	IP	-	-	-
Pacific anchoveta – Mexico Pacific	-	-		-	Yes	-	-	-
Pacific anchoveta - Pacific Panama	Panama small pelagics	2011	Cp	Completed	IP	-	-	-
Pacific chub mackerel - Ecuador	Ecuador small pelagics	2018	Bs	B	IP	-	-	-
Pacific chub mackerel – Gulf of California	-	-		-	Yes	-	-	-
Pacific jack mackerel – Central Eastern Pacific (Mexico)	-	-		-	Yes	-	-	-
Pacific thread herring - Sonora	-	-		-	Yes	Cert, Wdrn	Jul-11	2
Thread herrings nei - Panama	Panama small pelagics	2011	Cp	Completed	IP	-	-	-
Pacific anchoveta - Ecuador	Ecuador small pelagics	2018	Bs	B	IP	-	-	-
Slender thread herring - Sinaloa and Nayarit	-	-		-	Yes	Cert	Oct-16	1
South American pilchard - Gulf of California	-				Yes	Cert	Jul-11	1
South American pilchard - Pacific Baja California	-	-		-	Yes	-	-	-
Australian pilchard - Great Australian Bight	-	-	-	-	-	Wdrn	Nov-18	1

Stock	Active FIPs (2)				Certifications			
	FIP name	FIP start (year)	FIP type	FIP progress rating	MarinTrust (3)	MSC (4)	Date 1st MSC certification	# of MSC fisheries (5)
Bali sardinella - Southern Java to Western of Timor Sea	-	-	-	-	-	-	-	-
Indian oil sardine - Andhra Pradesh	-	-		-	-	-	-	-
Indian oil sardine - Goa	Indian Oil Sardine	2018	Bs	C	-	-	-	-
Indian oil sardine - Karnataka	Small Pelagic Purse Seine Fisheries, Karnataka State	2024	-	C	-	-	-	-
Indian oil sardine - Kerala	-	-		-	-	-	-	-
Indian oil sardine - Maharashtra	Indian Oil Sardine	2018	Bs	C	-	-	-	-
Indian oil sardine - Tamil Nadu	-	-		-	-	-	-	-
Pacific sardine - Japanese Pacific	Japan Hokkaido Japanese sardine - purse seine	2022	Bs	Unrated (11)	-	-	-	-
Miscellaneous marine species – Gulf of Thailand (12)	Gulf of Thailand Mixed-Trawl Fishery	2020	Bs	Unrated	IP	-	-	-
Miscellaneous marine species – Vietnam (12)	Vietnam mixed species - trawl	2021	Bs	B	-	-	-	-

Notes: (1) This list includes all key stocks and fisheries known to be mainly used for reduction purposes (whole fish) that are associated with one or more active fishery improvement projects (FIPs), or the certification programs considered, and not just the stocks considered in the current overview. (2) For more information on the currently active FIPs, please visit the Improvement Projects section in FishSource (SFP 2025a), or the respective FIP public reports in Fishery Progress (FishChoice, 2025) or MarinTrust Improver Program (MarinTrust, 2024b). FIP type: Bs = Basic and Cp = Comprehensive (3) Yes = Approved Whole Fish (main species); IP = Accepted FIPs under the MarinTrust Improver Programme (MarinTrust, 2025b). (4) MSC Status: Cert = Certified; FA = Full Assessment; Sus = Suspended; Wdrn = Withdrawn (MSC, 2024). (5) Refers to the number of fisheries that are in the MSC program and that overlap with the stock (source: SFP, 2025b; MSC, 2025). (6) In Peru, the artisanal fishery for anchoveta must be used for human direct consumption only; thus, it is outside of the scope of MarinTrust and the current overview. The FIP associated to the small-scale fleet recently became inactive due to a lack of funding, which has impacted progress (7) Certified by MarinTrust as a "by-product" fishery (for more information visit the MarinTrust website) (MarinTrust, 2024a). (8) In late 2020, all the Baltic fisheries were either suspended or withdrawn due to the uncertainty of the stock health with regard to the MSC's "key Low Trophic Level" criteria. (9) In late 2020, all the NE Atlantic blue whiting fisheries in the MSC program were suspended due to coastal states failing to set quotas in line with the advised levels. A FIP was launched in October 2021 (MarinTrust, 2024b). (10) The Morocco sardine - pelagic trawl and seine FIP is now considered Inactive due to failing to meet reporting requirements (SFP, 2025a). (11) The Japan Hokkaido Japanese sardine - purse seine FIP is currently considered as Completed on the respective FisheryProgress page, given it has met all its original objectives (FishChoice, 2024). (12) These are mixed species fisheries that cover multiple stocks of fish and invertebrates and are assessed and managed as a whole.

Sustainable Fisheries PARTNERSHIP

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