Marine Stewardship Council

Sustainable Whitefish Yearbook 2024

Market data, innovations and insights from communities protecting our ocean

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A Year in Whitefish

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– More than 70% of whitefish products carrying the ecolabel are frozen

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Sustainable whitefish: Leading a global industry

WHITEFISH IS A PIONEER in the MSC program. In markets worldwide, some of the first species to appear with the MSC label at-scale were New Zealand hoki, South African hake and Alaska pollock. Their fisheries, and their versatile and popular catch, are the foundation upon which the MSC program has grown over the past 25 years. They have enabled markets to engage in sourcing independently certified sustainable seafood and allowed consumers to drive ocean health improvement by seeking out the MSC label.

Through case studies and vital data, this report celebrates whitefish fisheries' longstanding track record. They were among the first to gain certification and have maintained a high level of global best practice ever since. Individually, they continue to take a long-term outlook and make robust choices that have ensured our oceans are managed sustainably, jobs are secured, and seafood has been safeguarded for future generations.

The cumulative impact of these efforts has created the conditions for many other fisheries, catching a broader range of species, to seek certification. Seafood brands can now put certification at the heart of their sourcing, fisheries can see a clear business case to enter assessment, and consumers can play an ever-greater role in rewarding certified companies and fisheries.

The numbers are hard to ignore. More than 6,000,000 metric tonnes of whitefish is certified or engaged in 2023, equating to 74% of commercial wild-caught whitefish. Species such as cod, pollock, haddock, hake and saithe are in demand as brands and retailers offer consumers an expanding choice of MSC certified products, from frozen fillets to ready-made meals.

The MSC is proud to partner with some of the world's best-managed whitefish fisheries. Thanks to our partners' hard work and commitment, each part of the whitefish supply chain is more resilient than a quarter of a century ago. Many improvements have taken place and will continue to be made. The active implementation of the MSC's Theory of Change means everyone can play a part in safeguarding the future of our ocean while enjoying seafood.

The rise of MSC certified whitefish

74%
of global whitefish catch is MSC certified

4%
of global whitefish catch is currently in a FIP (basic or comprehensive)

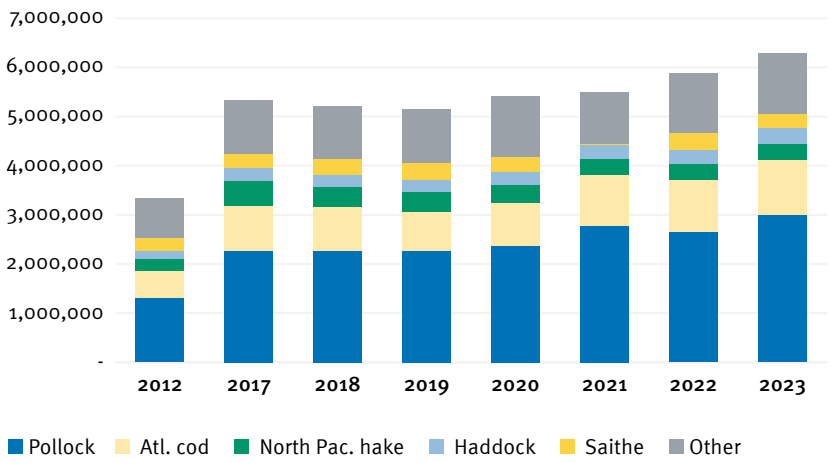
21%
of global whitefish is neither MSC certified, in assessment or in a FIP

Excludes In-transition to MSC and suspended catch

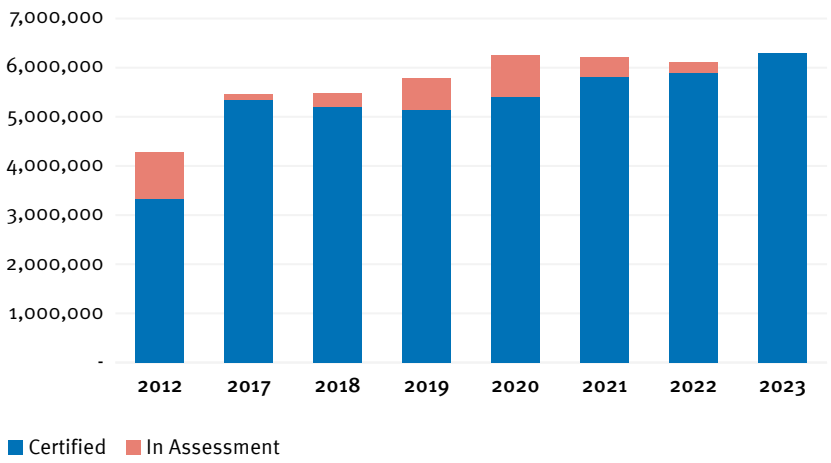
"Sustainability is increasingly important for the consumer. People want to know where and how their fish are caught, and we support that, 100%."

Doug Paulin, CEO of Sealord, New Zealand

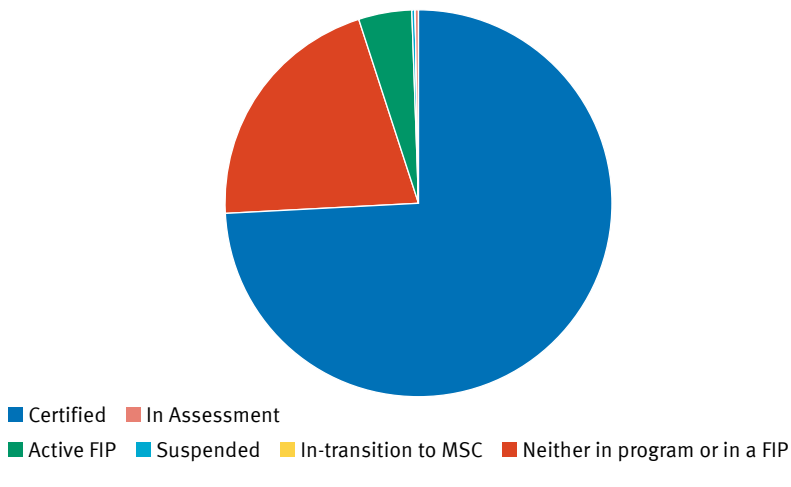
Certified whitefish volumes by year, metric tonnes



Growth of whitefish in the MSC program, metric tonnes

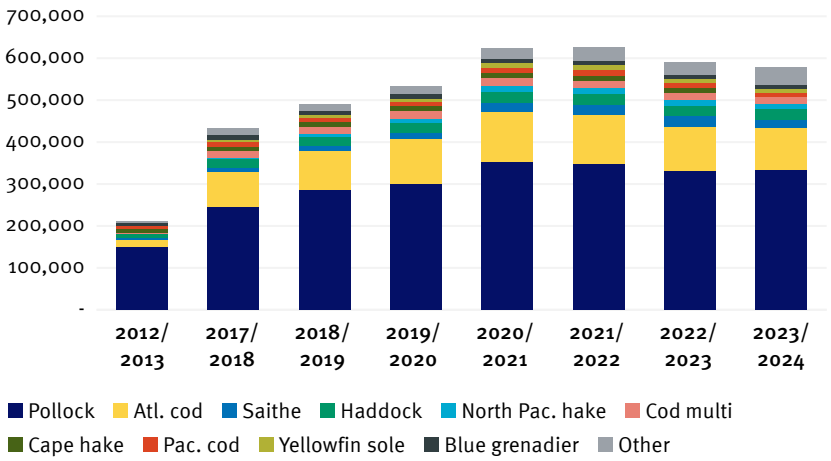


Whitefish catch by status (end of 2023)

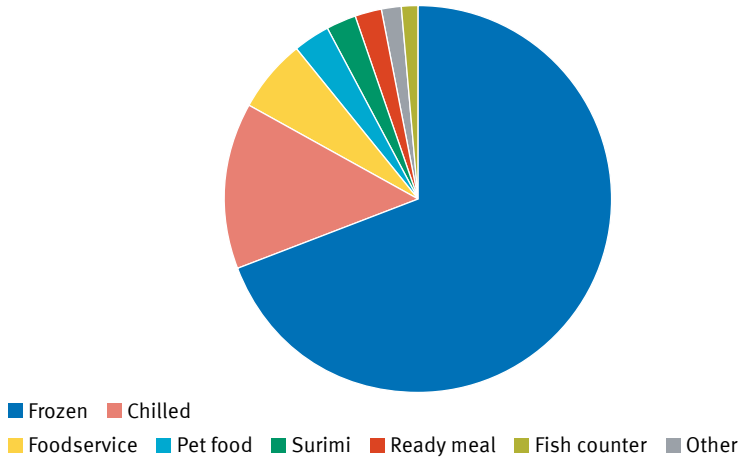


Strong market momentum

MSC labelled whitefish volume by species



MSC labelled whitefish by product type, 2023/2024



Top ten countries by volume

Country	Total whitefish volume (2023/24)
Germany	112,264
France	104,119
United Kingdom	97,584
United States	68,599
Italy	42,164
‹Multiple›	33,884
Poland	18,776
Spain	16,208
Portugal	15,453
Sweden	15,380

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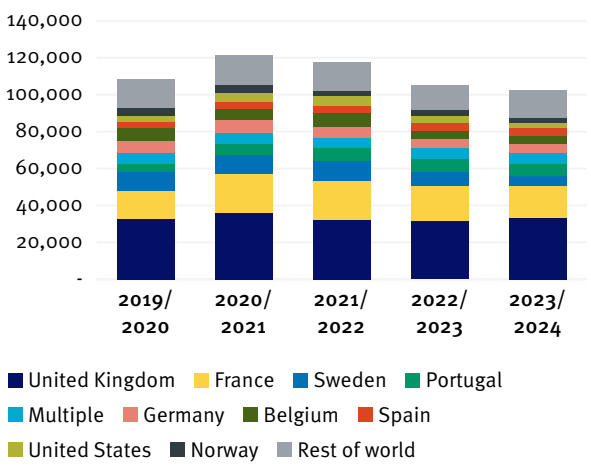
Market and species analysis of global whitefish

381
brands sold MSC labelled Pollock

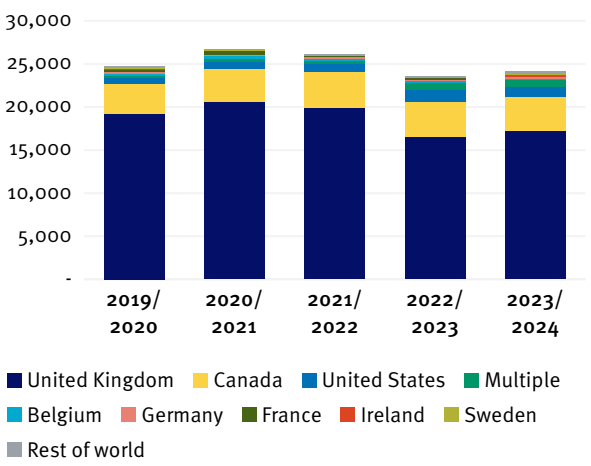
442
brands sold MSC labelled Atl. Cod

155
brands sold MSC labelled Saithe

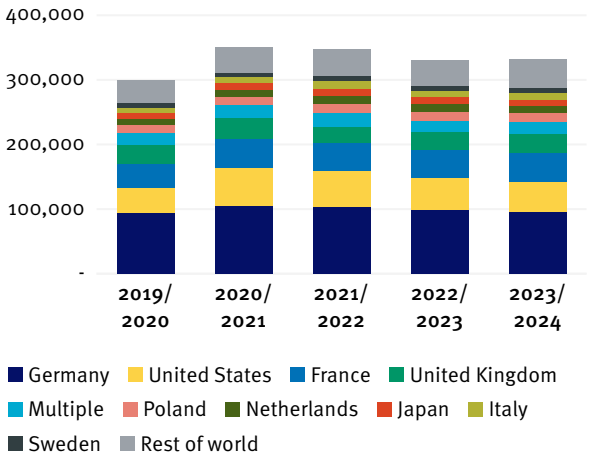
MSC labelled Atlantic cod, metric tonnes



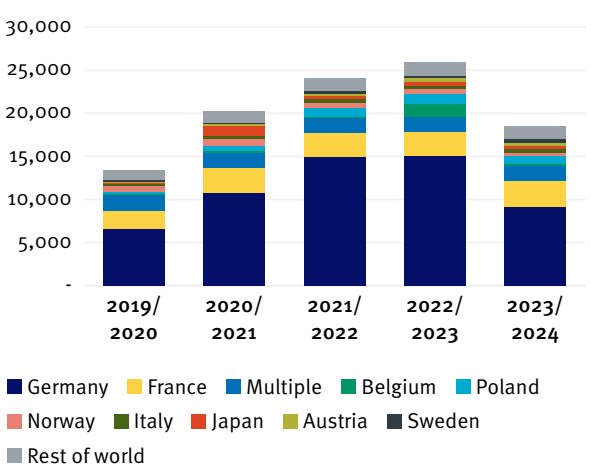
MSC labelled haddock, metric tonnes



MSC labelled pollock, metric tonnes

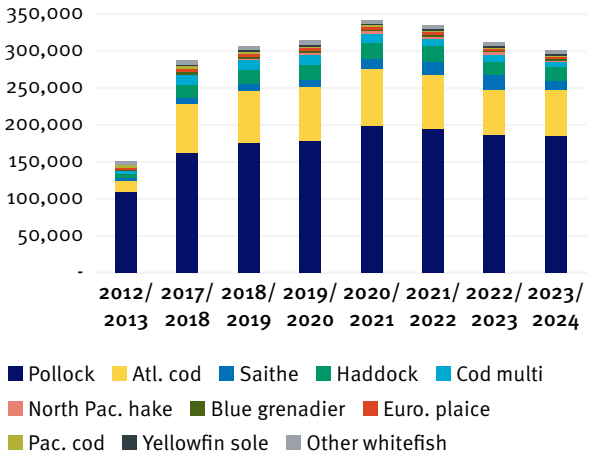


MSC labelled saithe, metric tonnes

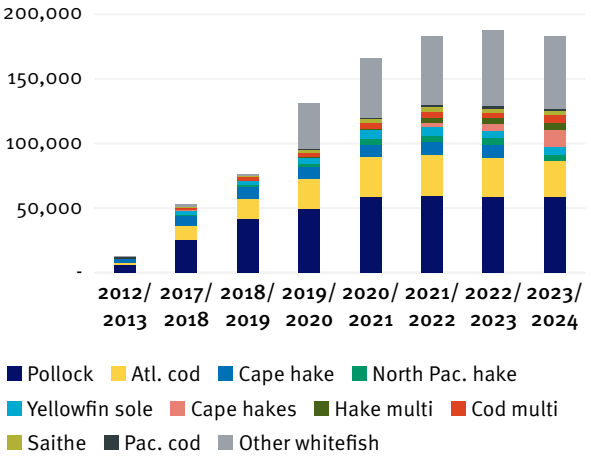


Regional analysis of global whitefish

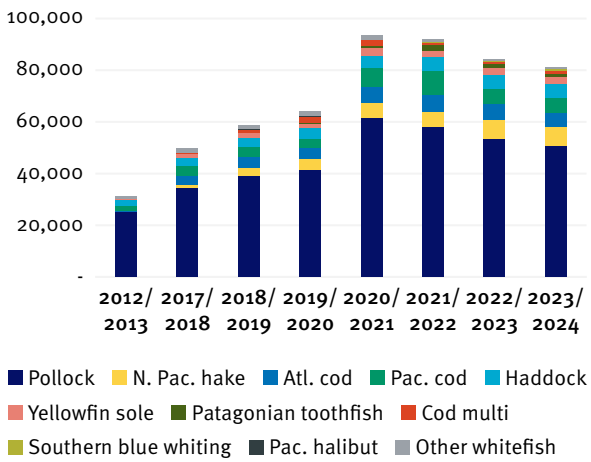
N. Europe & C. Europe labelled volume



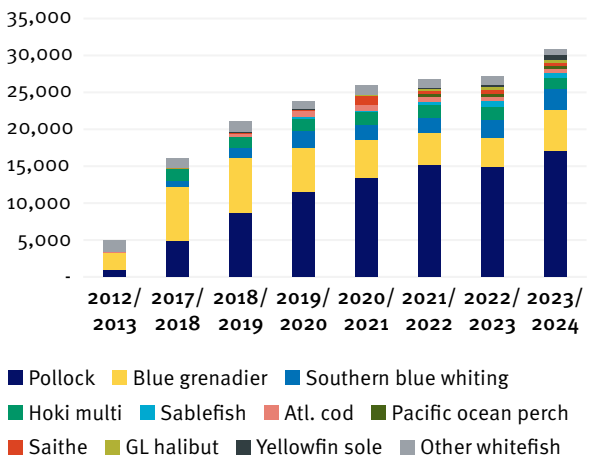
S. Europe & AMESA labelled volume



Americas MSC labelled volume



Asia-Pacific labelled volume



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Navigating a course to 2030

SINCE THE EARLY DAYS of the MSC, whitefish species have been essential in proving that seafood can be sustainable. Today, more than half the volume of seafood certified to the MSC Fisheries Standard, in assessment, or in the (pre-certification) In-Transition to MSC (ITM) Program*, consists of whitefish species.

Sustainably caught cod, pollock, hake, haddock and other significant whitefish play a pivotal role in keeping our oceans healthy and full of marine life. Whitefish is vital to the MSC's vision of engaging one third of the world's wild capture volume by the end of the decade.

Exemplary practice

The longstanding and sustained high levels of management practice by whitefish fisheries have helped create a growing global market for sustainably sourced seafood. In the last three years alone, certified whitefish fisheries have made 136 improvements to the way they fish: benefiting ecosystems and habitats, endangered, threatened and protected species and reducing bycatch.

Looking towards 2030, we can analyse the investments and progress made by these fisheries to help inform and guide further efforts to realise our vision.

Meeting targets

Achieving our 2030 target is ambitious, but critical. It will help to feed a growing global population with healthy, low-carbon protein. The 203 whitefish fisheries engaged with the MSC will contribute to global food security and support those whose livelihoods depend on them.

> **“Our business depends on sustainably sourced seafood, and we all must use our maritime resources carefully. That is why we continue to expand our range of certified sustainable seafood products.”**
>
> Andreas Kremer, Director Communications, Deutsche See, Germany

Meeting our target will also make a significant contribution to the delivery of the United Nations Sustainable Development Goal 14 – Life Below Water. As major seafood species, the whitefish category represents a core component of that goal.

Overcoming challenges

There will be headwinds to face. In the ocean, stocks are shifting more than ever before due to changing ecosystems and climate change. These threats require careful management, especially where there are jurisdictional considerations.

As consumers witness the impact of climate change and overfishing many are concerned that their favourite seafood will have disappeared in 20 years’ time, according to the results of our latest consumer survey.

In market terms, inflation and the cost-of-living crisis have affected both industry and consumers in recent years. Yet, sales of some sectors such as frozen and chilled whitefish have remained resilient. And there have been some “big wins”: only last year McDonald’s China introduced MSC labelled seafood across all of its 5,000 restaurants, following similar commitments in Continental Europe, North America and Japan.

Working together

Meeting the MSC Standard is a result of the hard work of industry and government collaborations to instil the core components of certified fisheries and demonstrate their ongoing commitment to sustainability. The longevity of whitefish fisheries’ engagement in the MSC program and their progress over 25 years demonstrates the value of long-term commitments.

The MSC’s mission is designed to tap into the positive influence of market forces, utilising consumer demand for sustainable products to incentivise increased participation and ocean health. Everyone in the supply chain engaged with the MSC is playing a vital part in whitefish’s contribution to our 2030 goal.

The MSC looks forward to working with valued partners to build on existing successes, identify new market opportunities, meet the challenges of the coming decade, and ensure our oceans remain full of life.

** The ITM pilot is coming to an end and the program will be renamed MSC Improvement Program from 29 October 2024.*

Considerations in sourcing

The Chain of Custody Standard

The MSC Chain of Custody Standard makes sure that seafood with the blue tick comes from fisheries that are MSC certified as fishing sustainably. This system is the best method to prevent fraud and illegal products from entering the supply chain as certified. It helps protect consumers and the efforts of everyone working hard to keep our oceans healthy.

A transparent supply chain is key to delivering the MSC's vision of healthy oceans and providing its consumers with sustainable seafood they can trust. The MSC program offers this assurance through supply chain certification. To achieve this, every company along the supply chain needs to be certified to the MSC Chain of Custody Standard. This ensures an unbroken chain where certified seafood is identifiable, recorded and segregated from non-certified products. This process ensures only certified seafood is sold with the MSC ecolabel.

Climate Change

Impacts from climate change such as ocean warming and acidification can threaten marine ecosystems and associated fisheries. Nevertheless, it is important to understand that while climate change will have a negative effect on some species, it may have a positive effect on others that are more able to adapt to the changing marine environment. However, in both scenarios, there is a risk for sustainability if fisheries management cannot keep pace and adapt by acting when populations are depleted or by regulating and monitoring the harvest impacts on incoming stocks.

For example, during one of the longest known heatwave events, off the Pacific coast of the USA in 2014-2016, the Pacific cod population in the Gulf of Alaska experienced a sudden biomass decline of almost 80%. The heatwave, that lasted 711 days, was so persistent and its effects so extensive across the food web, due to the unusually warm waters, that it earned the nickname 'the Blob'. As a result, the US National Marine Fisheries Service (NMFS) closed a portion of the Pacific cod fishery. The biomass and the fishery have since recovered. Recent studies (Laurel & Rogers, 2020*) have confirmed the biomass decline was the result of negative impacts of warming waters on juveniles, giving a stark warning of the effects of climate change even on well-managed fisheries and healthy populations.

Bycatch

Fish live in ecosystems that support multi-species communities, so wherever there is fishing there is always the possibility of incidental capture of non-target species (commonly called bycatch).

Even in fisheries that target multiple species at the same time, all within regulations, some of the species caught might be subject to additional restrictions and should be avoided. Well-managed fisheries control their impacts on bycatch species, often with stringent data collection requirements, strict catch level limits or move-on rules, to ensure populations of these species are not being incidentally harmed. Endangered, threatened and protected (ETP) species are key components of bycatch that must be avoided to ensure their protection and recovery.

Certified fisheries are assessed to ensure they do not hinder recovery of ETP species. For bycatch that is not protected, fisheries must ensure their interactions are likely to enable the populations to remain sustainable.

Bottom Trawling

Bottom trawling is one of the most common methods of fishing in the world. It uses nets towed along or close to the seafloor and accounts for over a quarter of global wild catch. Like any other eligible gear type, fisheries using bottom trawls can be certified as sustainable providing they meet the requirements of the MSC Fisheries Standard – they must demonstrate that the gear is not causing serious damage or irreversible harm to the structure and function of seafloor habitats.

Fishing gear that makes contact with the seabed can cause damage to slow-growing, fragile species such as seapens, coral, and seagrass, which in some cases can be permanent. This makes participation in the MSC program and the incentives it brings to improve fishing practices – both before certification, and after, in the form of closing conditions – all the more pertinent. Growing the engagement of such a common form of fishing in the MSC program means its practices can be assessed against the high bar of the MSC Fisheries Standard. In this way MSC partners can help ensure seabed ecosystems all over the world are healthy.

The MSC Fisheries Standard also classifies habitats according to their sensitivity and ability to recover from the impact of fishing and requires that fisheries avoid sensitive habitats. In cases where fisheries may have limited interaction with sensitive habitats, they must demonstrate that precautionary measures are in place to ensure their function is not reduced to any significant extent.

** Laurel & Rogers, CJFAS 2020 Loss of spawning habitat and prerecruits of Pacific cod during a Gulf of Alaska heatwave https://doi.org/10.1139/cjfas-2019-0238*

Setting the standard

THE MSC FISHERIES STANDARD brings together more than 25 years of collaboration with scientists, the fishing industry and conservation groups, reflecting internationally accepted fisheries science and management best practice. With 550 fisheries MSC certified as sustainable worldwide, the MSC Standard has become the leading wild-capture fisheries certification scheme.

The three principles of the MSC Standard are:
Principle 1: Sustainability of the stock
Fisheries must operate in a way that allows fishing to continue indefinitely, without over-exploiting the resource.
Principle 2: Ecosystem impacts
Fishing operations must be managed to maintain the structure, productivity, function and diversity of the ecosystem the fishery depends on.
Principle 3: Effective management
All fisheries need to meet all local, national and international laws and have an effective management system in place.

The MSC periodically reviews the Standard to ensure it continues to reflect new science, the evolution and uptake of best practice in fisheries management and the wider challenges facing the ocean.

How are fisheries assessed against our Standard?
There are 25 performance indicators in the Fisheries Standard that sit under the three principles. During an assessment conducted by independent Conformity Assessment Bodies (CABs), a fishery is assigned a score for each performance indicator. To be certified, a fishery must score at least 60 for each performance indicator and average 80 across all performance indicators under each of the three principles.

Score	Performance level
100	State-of-the-art
80-99	Best practice
60-79	Min acceptable practice, improvements required
Less than 60	Fail

Conditions of certification
If a fishery scores between 60 and 79 for any performance indicator, it is required to make improvements to raise the score to 80 or above within five years.

Why choose MSC certified?

KEY TERMS

MSC Chain of Custody Standard: Certification to this standard ensures an unbroken chain where certified seafood is easily identifiable, separated from noncertified products, and can be traced back to another certified business.

MSC CERTIFICATION CREATES significant value at all points of the supply chain from fisheries to fish-loving consumers. It provides a range of assurances and incentives that can vary depending on the part you play in keeping our oceans fished sustainably.

What MSC certification offers different stakeholders.

For fisheries it's about:

- Demonstrating you are a sustainable and well managed fishery, regularly checked by independent certification bodies against the MSC Standard.
- Managing your fishery so it is consistent with a global framework of widely adopted best practice.
- Meeting growing demand for sustainable seafood.

For the supply chain it's about:

- Ensuring a sustainable supply of raw materials to maintain your business and protect jobs.
- Meeting the global seafood market demand for independently assured sustainable products.
- Managing risk in the supply chain to avoid products from illegal, unregulated and unreported (IUU) fishing.

For brands and retailers it's about:

- Showing your customers you understand their values and have taken positive action.
- Managing supply risk and reputational damage – MSC certification ensures stocks are healthy, ecosystem impact is sustainable and fisheries are well managed.
- Having assured supply chains – MSC Chain of Custody certification helps to prevent IUU catch and mislabelling.

For NGOs it's about:

- Driving positive change in the world's fishing industries and influencing the way they're managed.
- Having verification and assurance that brands and suppliers are sourcing sustainable products.
- Having a global tool to support advocacy objectives.

For consumers it's about:

- Having a simple way to purchase certified, sustainable seafood with confidence.
- Playing a collective part in rewarding sustainably managed fisheries that support healthy ecosystems with low levels of non-target catch.
- Ensuring seafood is available for future generations by protecting stocks and safeguarding the livelihoods of fishers and their communities.

Incentivising fisheries to attain higher performance levels

KEY TERMS

Condition of certification: A requirement to achieve outcomes that increase a current performance indicator score to 80 or above (see also best practice score).

Performance indicators (PIs): Twenty-five PIs sit under the three principles of the MSC Fisheries Standard, and fisheries are assigned a score for each.

Principles: Fisheries in assessment are scored against the three core principles of the MSC Fisheries Standard: 1) Sustainability of the stock, 2) Ecosystem impacts, 3) Effective fisheries management.

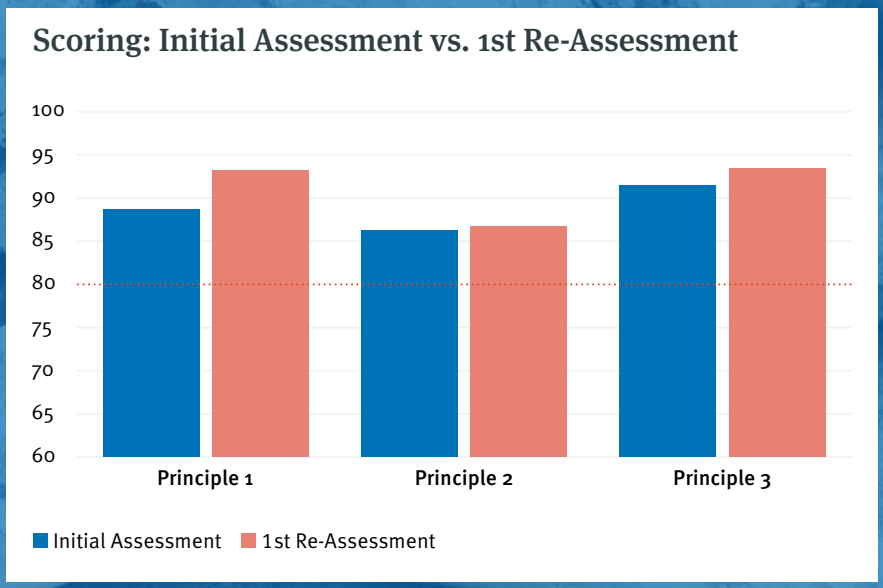
A KEY STRENGTH OF MSC certification is that even after a fishery has achieved certification, it is incentivised to make continual improvements. Fisheries must meet requirements across 25 performance indicators (PI) to achieve certification. However, where any PI meets the MSC's minimum measure of sustainability and still requires work to shift that indicator to a best practice level, a condition is placed on that PI and the fishery must make improvements and close the condition before reassessment – which usually takes place five years after certification.

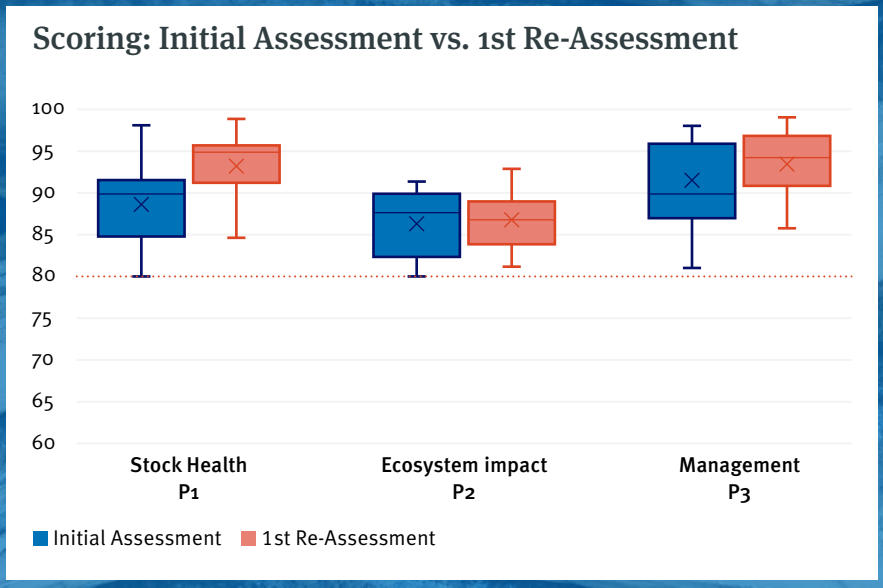
Improved performance

A review of the 39 fisheries that have completed two full five-year assessment cycles shows improvements in their performance for sustainable fishing. Their fishery scoring data between assessments reveals how performance improved over time.

The results are clear: In the case of PIs under Principle 1 (stock health), the fisheries improved their average score by 5.1% to 93.2, achieving 'best-in-class' status. Thus, stock populations of the species targeted not only maintained their robust levels but actually increased.

	Initial Assessment	1st Re-Assessment	% Change
Principle 1	**88.7**	**93.2**	**+5.1%**
Principle 2	**86.2**	**86.7**	**+0.6%**
Principle 3	**91.5**	**93.4**	**+2.1%**





"MSC certification is an important tool for our business, on one side it gives us advantages in some key markets, but equally it is reminder for the industry, government and the research community that we need to have up-to-date science, as those data are critical to achieve and maintain the MSC fishery certification".

Hanus Hansen, CEO of JFK, Faroe Islands

2,225

improvements made by MSC certified fisheries up to 31 March 2023

A further analysis took fishery size into account. A larger fishery could have greater impact on the ocean than a smaller one; there will be more fish caught, greater influence on stocks, and greater interaction between gear and the environment. Hence the impact of bigger fisheries is more significant when evaluating sustainability. This second analysis calculated a weighted average of the fisheries' scores with fishery volume determining the weight.

	Initial Assessment	1st Re-Assessment	% Change
Principle 1	**89.1**	**95**	**+6.7%**
Principle 2	**85.7**	**87.8**	**+2.5%**
Principle 3	**92.4**	**94.4**	**+2.2%**

The results show these fisheries have made notable improvement over two certification cycles. Their average Principle 1 scores increased by nearly 7%, while Principle 2 and Principle 3 scores gained more than 2%.

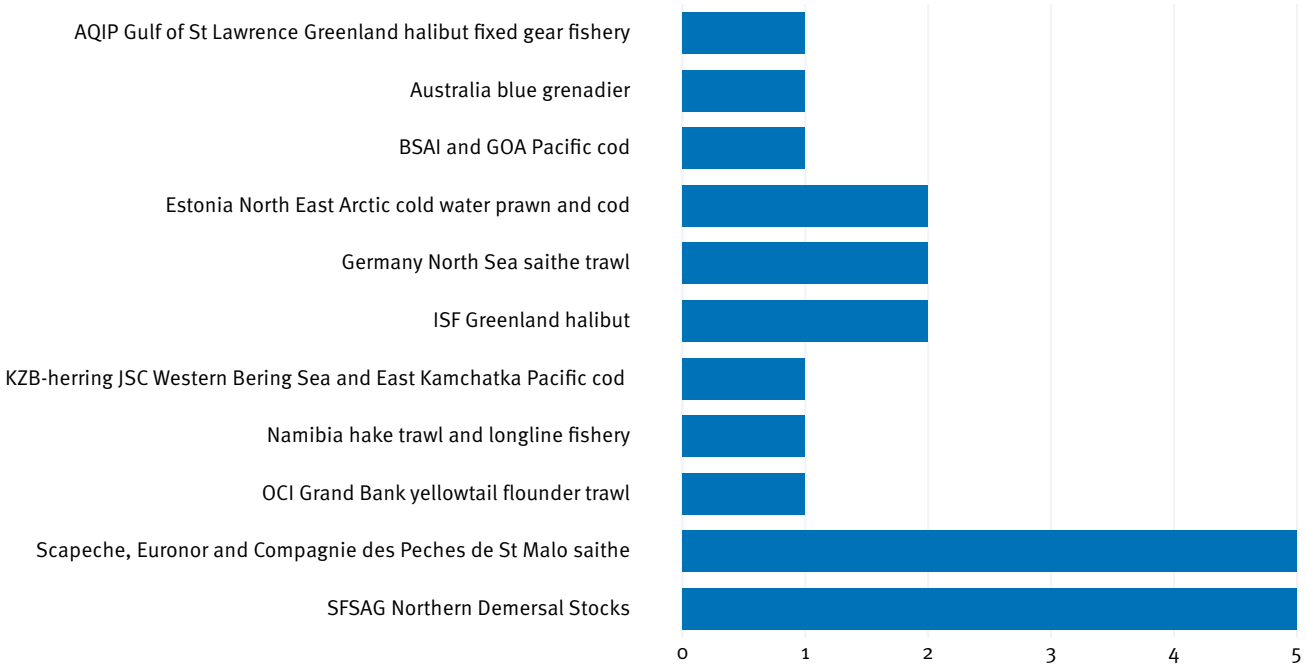
As well as conditions and improvements, certified fisheries also undergo annual audits by independent assessors to ensure they are making progress on closing their conditions.

This analysis shows that the MSC program creates incentives that make a big impact on the water for these whitefish fisheries, especially in mitigating their effects on the marine environment and in sustaining the populations of their target species.

List of closed conditions

THE CHART BELOW SHOWS the number of improvements in 2023 made by whitefish fisheries since gaining MSC certification. This demonstrates that the requirement to improve Performance Indicator scores (that are between 60- 79) has led to significant improvements in the sustainability of fisheries, and thus the knock-on effect of delivering positive environmental impacts through certification.

Number of improvements per fishery 2023



“Having more certified fisheries helps us develop and diversify our portfolio and manage risks from climate change.”

Oliver Spring, Group Sustainability Manager at Nomad Foods, the owner of the Birds Eye, Findus and Iglo brands

Impact on the Water

– How MSC certification leads to higher levels of sustainability
– The increasing role of new technology in whitefish fisheries
– Engaged communities delivering change

Case study: Signalling seabird safety

Fishery: Chile Austral hake *(Merluccius australis)* industrial trawl and longline
Gear type: demersal and midwater trawl
Tonnage: 12,736 tonnes (2023)
First certified: September 2019

KEY TERMS

Bycatch species: Unwanted catch that includes undersized or surplus fish for which fisheries do not have a quota, endangered, threatened and protected species, and other unwanted marine species.

Conformity Assessment Body (CAB): Third-party certification body accredited to carry out assessments against the MSC Fisheries Standard.

THE CHILEAN AUSTRAL HAKE fishery operates in the southernmost areas of the Chilean coast, a highly diverse location with a variety of wildlife. As a result, Non-Governmental Organisations (NGOs) were particularly active during the fishery's final assessment period, when a report is prepared prior to certification.

During this time, Birdlife International raised concerns about the net sonde cables, used by some fisheries to transmit catch data from the net, and their impact on albatross mortality.

Birdlife International recommended that a condition be set to evaluate the fishery's effect on this seabird and to explore a robust mitigation strategy. In response, the Chilean Austral hake fishery voluntarily proposed

“The consumer market is primarily influenced by price, which is often determined by supply, itself affected by sustainability developments. Customers expect transparency regarding certification and a clear theory of change towards more sustainable fishery practices and aquaculture.”

Adam Smith, Category Trading Manager at Iceland, UK

74.3%

of global whitefish catch is MSC certified

6 million+

metric tonnes of certified whitefish is in the MSC program

using bird-scaring lines and snatch blocks to prevent harm to seabirds.

Agreement between Birdlife International and the Conformity Assessment Body (CAB) could not be reached, leading Birdlife International to raise an objection to certification. An independent adjudicator was appointed by the MSC to facilitate further consultations between Birdlife International, the CAB, and the Chilean Austral hake fishery, aiming to find a suitable resolution for all parties. These discussions were successful, resulting in satisfactory changes agreed upon by both the fishery and Birdlife International. This led to even greater knowledge of the fishery’s impact on seabirds and the proposal of a joint effort to improve mitigation measures in this fishery.

This outcome highlights how the MSC certification process plays a vital role in encouraging stakeholder input, fostering dialogue, and facilitating agreements that lead to better management and sustainability in the seafood industry.

Case study: Making a healthy return

Fishery: Ocean Choice International (OCI) Grand Bank yellowtail flounder trawl
Gear type: Bottom trawls
Tonnage: 10,064 tonnes
First certified: October 2010

KEY TERMS

Fish stock: The community from which catches are taken in a fishery. The term implies that a particular population is a biologically distinct unit.

Performance indicators (PIs): Twenty-five PIs sit under the three principles of the MSC Fisheries Standard, and fisheries are assigned a score for each.

THE OCI GRAND BANK yellowtail flounder trawl fishery is more proof that there is a way back from overfishing through sound management practices. The fishery was at a low point in the early 1990's but, through a rebuilding plan, the yellowtail flounder population grew back to healthy levels. Since the late 1990s, the fishery has maintained the stock well above biologically sustainable levels, with the biomass fluctuating around 1.7 times BMSY, and obtained MSC certification in 2010.

The fishery has also worked to minimise its impact on the surrounding environment. In May 2013, two of its vessels, *Aqviq* and *Ocean Breaker*, were fitted with 'flying doors' and elevated sweeps – innovations that help lift the gear off the seabed and reduce contact with the seafloor as it is towed by the ship.

The data from the Trackwell Ltd. Systems installed on the ships confirms that the swept area decreased by almost two-thirds after this modification. From 2000-2011, this was 2.9% of the Grand Bank at less than 100-metres deep. But since the new gear was implemented the average swept area has decreased to 1.0%. It also resulted in the fishery's ecosystem information scores increasing from 80 to 90.

Ocean Choice International

Case study: A community endeavour

Fishery: Cedar Lake Walleye and Northern Pike Fisheries
Gear type: Bottom set gillnets
Tonnage: 356 tonnes (2023)
First certified: November 2022

KEY TERMS

Fish stock: The community from which catches are taken in a fishery. The term implies that a particular population is a biologically distinct unit.

SITUATED 460 KILOMETRES northwest of Winnipeg in a remote area of Manitoba, Cedar Lake became the third Canadian freshwater fishery to achieve MSC certification in November 2022. Along with one other Manitoban lake, these two fisheries are the world's only sources of MSC certified Northern pike.

While small in scale, inland fisheries like Cedar Lake are often the largest source of income for Indigenous communities in Manitoba, where fishing has a deep cultural significance, and practices have been passed down through generations. In addition to generating direct employment, they often support transportation and recreation sectors, as well as help safeguard local food security and health. In Cedar Lake alone, the fishery provides jobs for approximately 90 fishers, helpers, and fish shed workers from the Chemawawin Cree Nation and the Metis community of Easterville.

The Cedar Lake MSC certification is the culmination of a multi-year collaboration between the harvesters of Cedar Lake Fisheries Inc., the Chemawawin Cree Nation, Indigenous Services Canada, and the province of Manitoba.

Following a collapse of the fishery in 1996, fishers initiated a voluntary closure from 1998 to 2003 to allow all fish stocks time to recover. Years of additional improvements, including a collaborative stock monitoring program that engages fishers in the collection of fisheries data essential to science-based management of the lake, finally enabled the fishery to enter MSC assessment.

Maintaining sustainable management of the fishery will help provide greater food security in these remote areas, secure broader access to domestic and international markets for sustainably sourced seafood and ensure access to fishery resources for recreational users and commercial tourism operators, who also contribute to Northern economic prosperity.

"MSC certification will support not only the long-term health of our lake but also our community because credible sustainable management is what buyers demand."

Floyd George, President of Cedar Lake Fisheries Inc.

Case study: Scrutiny nets rewards

Fishery: The Norway Greenland Halibut fishery
Gear type: Demersal trawl, Longline, Gillnet, Danish seine
Tonnage: 14,532 (2020)
Certified: January 2023

KEY TERMS

Condition of certification: A requirement to achieve outcomes that increase a current performance indicator score to 80 or above (see also Best practice score).

Conformity Assessment Body (CAB): Third-party certification body accredited to carry out assessments against the MSC Fisheries Standard.

Unit of Assessment (UoA): The target stock(s) combined with the fishing method/gear and practice (including vessel type/s) pursuing that stock, and any fleets, or groups of vessels, or individual fishing operators or other eligible fishers that are included in an MSC fishery assessment.

FOLLOWING OVER A YEAR OF assessment by an independent auditor, the Norway Greenland halibut fishery obtained certification at the beginning of 2023. The fishery client, Norges Fiskarlag (the Norwegian Fishermen's Association), is also the fishery client for several other MSC certified fisheries, including the Norway beaked redfish fishery that was certified at the same time.

Norges Fiskarlag was formed in 1926 and comprises three different fishermen's associations. Membership is voluntary, and the organisation represents boat owners, crew members, and quota holders. The crew section of the organisation negotiates a collective bargaining agreement, vital in a country where fishermen are designated as self-employed.

The vessels process the fish on board, heading and gutting it and then freezing it – or keeping it chilled for fresh markets. All sales are done via sales organisations, either through auctions or direct negotiation between the buyer and the vessel.

"It is increasingly important that we can demonstrate sustainability and traceability in our fisheries management for markets around the world."

Tor Bjørklund Larsen, Senior Advisor at the fishery client, Norwegian Fishermen's Association (NFA) (Norges Fiskarlag)

Historically, smoked Greenland halibut was a delicacy in German cuisine, and its fatty but firm flesh makes it ideal for baking. Today the primary market is East Asia, where Greenland halibut is also considered a delicacy, but some makes its way to Central Europe. The MSC certified portion represents almost the entire fishery.

Selected conditions and improvements

The fishery is a relatively high-performing one with regards to sustainability; it was certified with three conditions placed against it and one recommendation.

Stock status

The independent auditor determined the stock to be healthy, and 2020 saw very good growth at 500,000 metric tonnes fishable biomass, while the following year saw the fishable biomass increase to 560,000 metric tonnes. The trend of high recruitment has continued for over a decade, meaning that it is highly likely that fishing pressure is not too high.

However, two conditions were placed on the fishery by the Conformity Assessment Body (CAB) regarding harvest strategies.

Although the CAB said that the fishery's harvest strategy is responsive to the state of the stock and based on the precautionary principle, to reach a score of 80, the minimum for 'Best practice', the CAB set a condition to ensure all the elements of the harvest strategy, particularly Harvest Control Rules (HCRs), must aim towards keeping the stock consistent with Maximum Sustainable Yield (MSY) levels.

The other condition is related to the HCR specifically. The Total Allowable Catch (TAC) is the primary tool for implementing the HCR, and quotas have kept exploitation to appropriate levels. To close the condition, an adaptive system must be implemented with specific rules that ensure the exploitation rate is adjusted as the target reference point is reached. The fishery remains on track to deliver these improvements.

Environment

The fishery utilises four different gear types, all of which have resulted in very low bycatch: Greenland halibut represents over 95% of the catch composition of each.

In the case of the demersal trawl Unit of Assessment (UoA), the halibut formed 99.5% of the catch in 2020. ETP species in the area include basking sharks, spurdogs, porbeagles, and silky sharks. While the gillnet UoA has some interaction with spurdogs and porbeagles, it's very minimal.

Seabirds are very common in the region, but the CAB found that mortality from fishing activity is rare.

The CAB placed a condition on Habitats Management for the demersal trawl gear type. While this part of the fishery clearly complies with regulations, in order to reach a PI score of 80 the condition requires the fishery to study and, as necessary, implement voluntary measures taken by other fisheries to avoid damage to Vulnerable Marine Ecosystems (VMEs).

Examples of these voluntary measures include gear modifications and move-on rules aimed at protecting corals and sponges.

Management

The Norway Greenland halibut fishery's management is truly best in class, reaching a score of 98.1 on Principle 3. In 1975, Norway signed an agreement with the USSR on joint management of haddock and cod stocks, with Greenland halibut later being added.

The 2008 Marine Resources Act forms the regulatory backbone of Norwegian fishery and authorises the government to set rules annually related to gear, area closures, bycatch, etc., with a precautionary approach being the overarching principle. The Norwegian Coast Guard is responsible for enforcement.

Finally, the management system is reviewed in several ways, including biannual regulatory meetings where scientists and other stakeholders, including NGOs, provide feedback.

The science of fisheries management is reviewed in the reports of the International Council for the Exploration of the Seas (ICES), the scientific body conducting research and providing independent advice on fisheries management.

Case study: Sustaining Iceland's French connection

Fishery: ISF Iceland Lumpfish
Gear type: gillnets
Tonnage: 4,335 tonnes (2023)
First certified: December 2014

KEY TERMS

Bycatch species: Unwanted catch that includes undersized or surplus fish for which fisheries do not have a quota, endangered, threatened and protected species, and other unwanted marine species.

Conformity Assessment Body (CAB): Third-party certification body accredited to carry out assessments against the MSC Fisheries Standard.

IN 2014 THE LUMPFISH FISHERY in Iceland was the first of its kind to become MSC certified. Three years later, however, certification was suspended after the annual audit revealed a higher level of bycatch than when initially certified. The fishery withdrew from the MSC program in 2018 to work on fixing the issue.

The Icelandic Sustainable Fisheries (ISF) and its members, together with the national small boat owner association, the Marine and Fresh Water Research Institute, the management authority and the Ministry of Industries and Innovation, looked for ways to reduce the fishery's interactions with other marine life, such as black guillemots and harbour seals.

Several measures were introduced to minimise bycatch, including closing certain fishing areas, implementing hunting bans and increasing observer capacity. Additionally, digital logbook registration via apps and tablets is now mandatory across Iceland's fishing sector bringing an exceptional level of transparency to fishing operations.

ISF, the fishery client group, has been instrumental in driving efforts towards lasting solutions. The successful implementation of new management measures for lumpfish was confirmed by the Conformity Assessment Body (CAB) when an assessment completed in 2020 found the fishery complies with the MSC Fisheries Standard's requirements for minimising environmental impact.

Market forces in France, where Iceland lumpfish is commonly sold, were key to maintaining an interest in sourcing certified sustainable products from this fishery. Together, stakeholders and the management authorities were able to deliver the necessary improvements to ensure the fishery protects the health of the ocean and once again provides certified sustainable seafood to consumers.

Case study: A long line of success

Fishery: BSAI and GOA Pacific cod
Gear type: Longlines, Trolling lines, Pots, Bottom trawls
Tonnage: 145,786 tonnes
First certified: November 2007

KEY TERMS

Best practice score: **A score of 80 or higher against a performance indicator in the MSC Fisheries Standard that results in a pass without requiring additional improvements.**

Performance indicators (PIs): **Twenty-five PIs sit under the three principles of the MSC Fisheries Standard (see Principles), and fisheries are assigned a score for each.**

Principles: **Fisheries in assessment are scored against the three core principles of the MSC Fisheries Standard: 1) Sustainability of the stock, 2) Ecosystem impacts, 3) Effective fisheries management.**

Fish stock: **The community from which catches are taken in a fishery. The term implies that a particular population is a biologically distinct unit.**

Maximum Sustainable Yield (MSY): **The largest catch that fishers can take from a fish stock each year without affecting future years.**

IN FEBRUARY 2006, THE FREEZER longline segment of the Bering Sea and Aleutian Islands (BSAI) Pacific cod fishery became the 13th fishery in the MSC program to be certified. The freezer longliners in the BSAI were the only part of the fishery to be included within the Unit of Assessment. In 2010, fishermen utilizing jig, trawl, and pot gear types as well as those operating in the Gulf of Alaska (GOA) were added to the certificate. Most of the catch is caught by longline and trawl, followed by pot and jig. Marine heatwaves in the GOA, driven by climate change, have affected pacific cod distribution. The population fell, and, as a precaution, NOAA Fisheries closed a portion of the fishery in 2020. The stock quickly rebounded and that portion re-opened, demonstrating that dynamic fishery management can be effective.

Innovation is another hallmark of the fishery: Bristol Wave Seafoods, a subsidiary of the Bristol Bay Native Corporation, a large longline quota holder (30%), has a vessel called *Blue North* that utilizes a Humane Harvest catch system. This includes a 'moon pool' for crew, allowing them to work in a protected area that is not exposed to outdoor elements. Additionally, fish are electrically stunned prior to on-board processing to improve animal welfare.

MSC certified whitefish fisheries have made

136

improvements in the last 3 years

20,000+

products sold with the blue MSC label

78

countries where MSC labelled products are available

376

The number of UoCs that are certified that target whitefish in the MSC program

Pollock

is the most MSC certified labelled whitefish product in the program

Selected conditions and improvements:
With almost two decades meeting the MSC bar for global best practice, the fishery has consistently demonstrated improvement, transitioning to new versions of the MSC Fisheries Standard and addressing improvement actions (or conditions). The fishery has only been assigned three conditions in the past decade and has Principle 1, 2, and 3 scores above or near 90, showing high performance in environmental fishery sustainability.

The fishery currently has one open condition on performance indicator 1.1.1 related to stock health in the smaller, GOA section of the fishery. This requires the fishery to fulfil a rebuilding plan to demonstrate the stock can achieve maximum sustainable yield (BMSY) after facing climate change induced stock health challenges.

In March 2023, the Alaska Board of Fisheries accepted a proposal from the fishery in which a recent stock assessment was used to demonstrate that the stock would again increase to BMSY levels. Thus, the CAB determined the re-building condition is on target.

Case study: Top marks for MSC stalwart

Fishery: BSAI and GOA Alaska pollock
Gear type: Midwater trawls
Tonnage: 1,392,316 tonnes
First certified: May 2005

KEY TERMS

Maximum Sustainable Yield (MSY): The largest catch that fishers can take from a fish stock each year without affecting future years.

Principles: Fisheries in assessment are scored against the three core principles of the MSC Fisheries Standard: 1) Sustainability of the stock, 2) Ecosystem impacts, 3) Effective fisheries management.

Fish stock: The community from which catches are taken in a fishery. The term implies that a particular population is a biologically distinct unit.

Best practice score: A score of 80 or higher against a performance indicator in the MSC Fisheries Standard that results in a pass without requiring additional improvements.

THE BSAI AND GOA Alaska pollock fishery is a prime example of how industrial-scale fishing can be sustainable. It's the largest fishery in the US and currently the largest certified fishery in the MSC program. With nearly 1.4 million metric tonnes landed in 2023 worth over $1.4 billion USD in first wholesale value, the fishery and associated supply chain provides nearly 30,000 jobs across the United States. In 2005, it became the 11th fishery to achieve MSC certification and has since been re-certified three times. Across the course of nearly two decades, the Alaska pollock fishery continues to demonstrate that it goes above and beyond the high bar of the MSC Fisheries Standard. It closed its last condition in 2013 and has not had one since. Furthermore, it is the highest-scoring large-scale fishery in the MSC program.

The fishery's Principle 1 score is 100, indicating the fishery's stock management is considered state of the art. Principle 2 and 3 scores are also very high. This is the result of a data-rich fishery that has a rigorous and tested assessment model that considers uncertainties and their magnitude. With 100 percent on-board observer coverage and a biomass far above BMSY, catch limits have been far below the Allowable Biological Catch for the past two decades and data on bycatch and broader ecosystem interactions are widely and transparently available. Overall, the management regime provides an excellent example of fisheries management operating at the peak of the MSC global best practice bar for sustainability.

Case study: Taking a modern approach

Fishery: Barents Sea cod, haddock and saithe fishery
Gear type: demersal trawl
Tonnage: 96,277 tonnes (2023)
First certified: November 2010

KEY TERMS

Bycatch: Unwanted catch that includes undersized or surplus fish that fisheries do not have a quota for, as well as endangered, threatened and protected species, and other unwanted marine species.

Condition of Certification: Set by an independent assessor, a fishery must implement a plan of action to make improvements that will bring it up to global best practice.

Fish stock: The community from which catches are taken in a fishery. The term implies that a particular population is a biologically distinct unit.

THE NORTHEAST ARCTIC COD STOCK in the Barents Sea is considered the most important in the world, with fisheries dating back for centuries. It is critical that fishing activity in this area is operated sustainably. The Barents Sea cod, haddock and saithe fishery, operated by Norebo, achieved MSC certification in 2010. It was the first major Atlantic cod fishery starting full assessment with the MSC and a huge step towards documenting and demonstrating sustainability for fisheries in the important Barents Sea ecosystem.

The Barents Sea is located north of Norway, where relatively warmer Atlantic water mixes with colder Arctic water. Where these currents meet forms a nutrient rich and highly productive ecosystem, characterised by a rich benthic ‘(bottom habitat) of species.

This fishery uses demersal or bottom trawls. Vessels tow a cone-shaped net to hold the catch, with lateral wings extending forward from the opening. Mesh sizes are regulated to ensure juveniles escape. A grid is deployed in the net to further reduce unwanted bycatch.

In the initial certification the fishery’s potential impacts on the habitat led to a number of conditions. These were placed to increase confidence that the impact was highly unlikely to reduce structure and function of the stock to a point where there would be serious or irreversible harm to its long-term health.

The fishery modernised its gear – making it lighter – and regulations have been strengthened closing the most vulnerable areas where no trawling is allowed to take place. Beyond this, on a voluntary basis, the fishery committed to stay out of areas where potential interaction with sensitive benthic habitats could occur. Electronic monitoring of vessel activity as well as at sea controls ensure vessels comply with regulations and additional voluntary measures.

Case study: In it for the long haul

Fishery: Namibia hake trawl and longline fishery
Gear type: demersal trawl and demersal longline
Tonnage: 101.511 tonnes (2023)
First certified: November 2020

KEY TERMS

Bycatch species: Unwanted catch that includes undersized or surplus fish for which fisheries do not have a quota, endangered, threatened and protected species, and other unwanted marine species.

Condition of certification: A requirement to achieve outcomes that increase a current performance indicator score to 80 or above (see also Best practice score).

Harvest Control Rules (HCRs): Measures that require catch to be adjusted in response to stock changes.

Performance indicators (PIs): Twenty-five PIs sit under the three principles of the MSC Fisheries Standard (see Principles), and fisheries are assigned a score for each.

ONCE KNOWN FOR BEING OVERFISHED, Namibia's hake industry has undergone a significant transformation. After three decades of collaboration between the government and private sector, devoted to improving the biodiversity of the region's oceans, the Namibian hake trawl and longline fishery met the MSC's Fisheries Standard in 2020 – the first in the country to achieve this certification and only the second fishery in Africa.

Namibia's engagement with the MSC goes back as far as 2010. Since then, improvements in the fishery, a rise in demand for sustainable products, alongside growing interest in MSC certified hake from international food companies such as Nomad Foods (owner of the Birds Eye, Findus and Iglo brands), led the fishery to seek MSC certification.

The fishery catches two species of hake. They are very hard to differentiate at sea – examination of gill and otolith morphology, fin ray and vertebrae counts are required. As such, the two species are managed

“Namibian wild caught and MSC certified Cape Hake is a genuine gem of a product. The certification really enables us to produce and supply high-end value-added products to all corners of the globe and the demand for our fish is ever increasing.”

Jürgen Sander, Managing Director, Seawork Fish Processors (Pty) Ltd, Namibia

396

The number of UoCs that are either certified or suspended that target whitefish in the MSC program

together and a single Total Allowable Catch (TAC) is set. However, stock assessments are done per species, which is factored into the management model.

The fishery has some open conditions, one of which is related to stock structure. To close this condition, the fishery must continue strengthening communication with South Africa with regards to the *M. Paradoxes* stock. This will ensure both Namibia and South Africa contribute to the sustainable management of stock.

Five of the ten conditions are related to secondary species, endangered, threatened and protected (ETP) species, and marine habitat. Strong progress has been made in seabird bycatch reduction, with further work underway to demonstrate that the fishery’s direct effects are highly unlikely to hinder the recovery of affected seabird populations.

These improvements show how MSC certification not only recognises a fishery’s core sustainability, but also drives improvements over time. The certification of this fishery is a testament to the ongoing work involved with managing Namibian hake. It is now managed in a way that ensures the long-term health and biodiversity of the oceans, while still allowing the fishing industry to maximise the resource’s value for current and future generations.

Whitefish Insights

– Consumer insights on ocean health and the impact of the MSC label
– Our partners share their thoughts on fishing for a healthier future

Shutterstock

Consumer insights: Trends in sustainable seafood consumption

The MSC and Globescan partnered to conduct the largest global survey of seafood consumers*

27,000
consumers

23
countries

** Globescan 2024 Global Seafood Consumer Perceptions Survey*

91%
of all consumers worry about the state of the world's oceans

64%
feel that the choices they make about eating seafood make a difference to ocean health

67%
are willing to take action to protect fish/seafood in the future

50%
of all consumers now recognise the MSC label

58%
say seeing the MSC ecolabel would make them more likely to purchase a product

40%
of seafood consumers understand the label (unprompted)

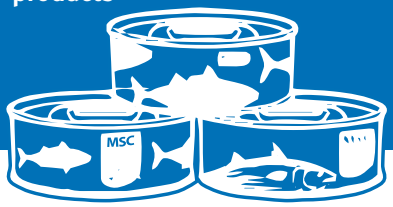
3 in 4
seafood consumers trust the label – higher than most other ecolabels tested

74%
say that brand sustainability claims need to be clearly labelled by an independent organisation

42%
notice ecolabelled products

52%
are prepared to pay more for certified seafood

45%
are excited by ecolabelled products



Over to you...

The MSC is keen to hear from its stakeholders and partners. Your hard-won insights play an important part in reminding us of our priorities and helping us fulfil our mission to end overfishing and secure seafood for the future.

"It's in my interest to fish within sustainable levels. This has to do with the science. With haddock you are only taking out a safe level. You are not scratching the surface of what is there."

Andrew Bremner, Haddock fisher & skipper, Scotland

"Cod and haddock are important species for New England Seafood and we are committed to sourcing and supplying them from sustainably managed fisheries. Our commitment not only meets the minimum sourcing requirements of our customers but also aligns with the growing importance consumers place on sustainability in their purchasing decisions."

Dominic Collins, Group Procurement Director, New England Seafood International

"The Alaska pollock fishery is the world's largest whitefish fishery. We have been supplying this high-quality protein source to the world for over 60 years, and MSC certification is the driving force behind this."

Kenji Funaki, Director, Managing Executive Officer, Maruha Nichiro Corporation, Japan

"There is no way around sustainability. Only sustainably caught white fish will allow us to move on with the core of our business: serving valuable fish meals, both now and for future generations. Nevertheless, we always strive to improve the status quo and there are still plenty of things to do even better."

Felix Ahlers, Management Board Chairman, FROSTA AG

"As a company we are in the seafood business for the long-term and as a renewable resource it can only be done successfully if done sustainably."

Carey Bonnell, Vice President of Sustainability & Engagement, Ocean Choice International, Canada

"The white-meat fish value chain, which spans the entire world from fisheries to processing and sales and marketing, is the greatest strength of Nissui Group's global strategy. Ensuring the sustainability of marine resources, which is the source of value creation, is extremely important."

Masahide Asai, Director and Executive Officer, Nissui Corporation, Japan

Whitefish Essentials

– Gear types, how fishers catch whitefish
– Key whitefish species, from cod to hoki
– Glossary of terms
– Annex, listing the whitefish species in the MSC

Whitefish key species

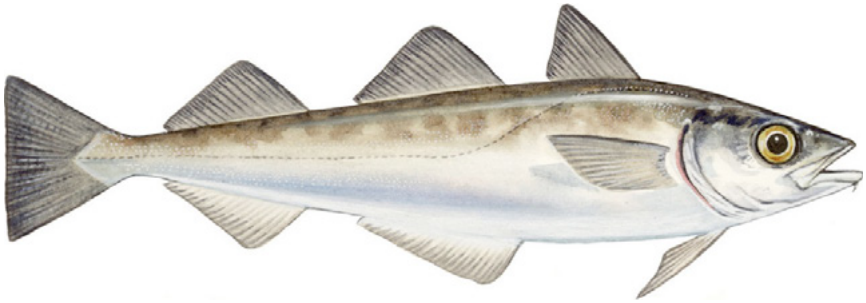
Whitefish is a fisheries term for several species of demersal fish found throughout the world's oceans. Rich in high-quality protein, they often act as a staple ingredient around which meals are created. Some of the key commercial species of whitefish are listed below.

COD

Gadus morhua, Gadus macrocephalus

Volume MSC certified catch:
1,336,271 tonnes

Cod is a saltwater fish found across the colder waters of the northern Atlantic and Pacific oceans. The two most common species are Atlantic cod and Pacific cod. Averaging 100cm in length they weigh between 5kg and 12kg. One reason why cod are among the most plentiful whitefish species is that a large female can produce up to five million eggs in her lifetime. If only two reach maturity the population can remain stable.



POLLOCK

Gadus chalcogrammus

Volume of MSC certified catch:
2,991,096 tonnes

Pollock are midwater to bottom-dwelling fish distributed across the northern Pacific with high concentrations in the Bering Sea. Pollock fisheries are the highest volume fisheries in the program. A moderately long-lived species pollock can live for 15 years and grow to around 100cm. They have high reproductive capacity, reaching maturity at around four years. Females can produce up to two million eggs over several weeks.

SAITHE

Pollachius virens

Volume of MSC certified catch:
302,583 tonnes

Saithe is a member of the pollock family. Ranging from the north Atlantic to the north Pacific, saithe occur in both inshore and offshore waters. They usually enter coastal waters in spring and return to deeper waters in winter. In the western Atlantic this fish is called Atlantic pollock. Saithe are long-lived, with an average lifespan of 25 years, and can reach 130cm in length but are usually between 55cm to 120cm when caught.

HADDOCK

Melanogrammus aeglefinus

Volume of MSC certified catch:
315,672 tonnes

Haddock is a saltwater fish found in the North Atlantic and associated seas. Haddock can be found at depths ranging from 10m to 450m. Haddock range in size from 38cm to 69cm in length and can weigh from 0.9kg to 1.8kg. Growth rates of haddock have increased over the past 40 years. Today's haddock are reaching their adult size much earlier than previously noted, which scientists believe is a response to exploitation.

HOKI

Macruronus novaezelandiae

Volume of MSC certified catch:
106,898 tonnes

Found in the South Pacific and South Atlantic, hoki are a fast-growing fish that can live for 25 years and grow up to 1.3m in length. Mainly found between 200m and 600m, this deep-water species can dwell at depths of 1,000m. During spawning hoki form dense schools, with each female capable of releasing more than one million eggs. Hoki is also known regionally as blue hake, blue grenadier and whiptail.

HAKE

Merluccius merluccius

Volume of MSC certified catch: 585,867 tonnes

A total of 12 hake species makes up the family of *Merlucciidae*. Found in the Atlantic and Pacific oceans, hake favour water at least 100m deep but can also be found at depths several times that. The shore caught record for hake is 1.6kg, while the boat caught record exceeds 11kg. They are semi-pelagic nocturnal predators that travel up the water column at night to prey, returning to the ocean floor during the day.

REDFISH

Sebastes spp

Volume of MSC certified catch: 96,521 tonnes

Of the genus *Sebastes,* redfish are widely distributed in the Atlantic and Pacific Oceans. There are different species in the MSC program, including *Sebastes mentella*. There are also 10 species of rockfish from the genus *Sebastes* in the MSC program, and two species of *Sebastolobus* (the thornyheads). *Sebastes* vary in size, ranging from 13cm to over 100cm. Long-lived, some species have a lifespan exceeding 100 years.

HALIBUT

Hippoglossus hippoglossus, Hippoglossus stenolepis, Reinhardtius hippoglossoides

Volume of MSC certified catch: 96,240 metric tonnes

Greenland, Atlantic, and Pacific halibut can be found in the Arctic, north Atlantic and north Pacific oceans, respectively. Greenland halibut is the smallest, growing to about 1.3m, Pacific halibut to 2.7m and Atlantic halibut to 4.7m. Greenland halibut are primarily caught by trawl, with Pacific and Atlantic halibut primarily caught by longline fisheries.

Fish paintings © Scandanavian Fishing Year Book / Halibut © Lilaya Butenko, Shutterstock

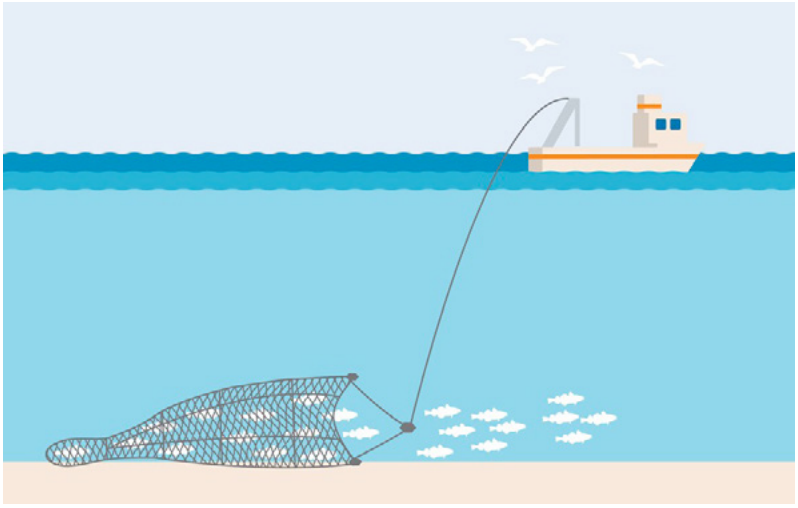
Gear types

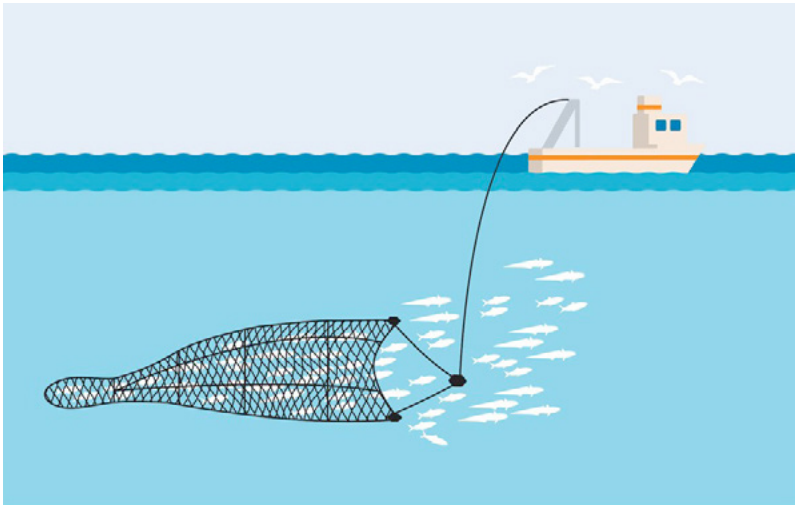
Whitefish can be caught using various gear types and methods. The type used depends on the size of the fish and depth at which it swims, the size of the fishery and its location. Every assessment against the MSC Fisheries Standard considers the gear type used and its impact on the marine environment.

DEMERSAL TRAWL

Proportion of global whitefish catch: 1,628,462 tonnes

Trawls include different types of fishing gear that use a cone-like net, held open by boards or a metal beam, with a closed end to hold the catch. These devices often contact the seabed, typically with rollers or other devices to keep the net near but away from the bottom. Demersal trawls use nets of precise size mesh to selectively catch fish and avoid other marine species.





MID-WATER TRAWL

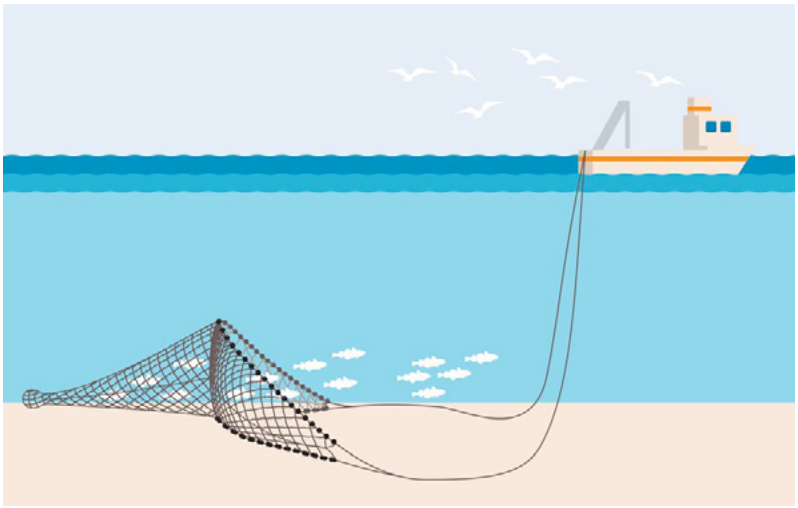
Proportion of global whitefish catch: 3,297,727 tonnes

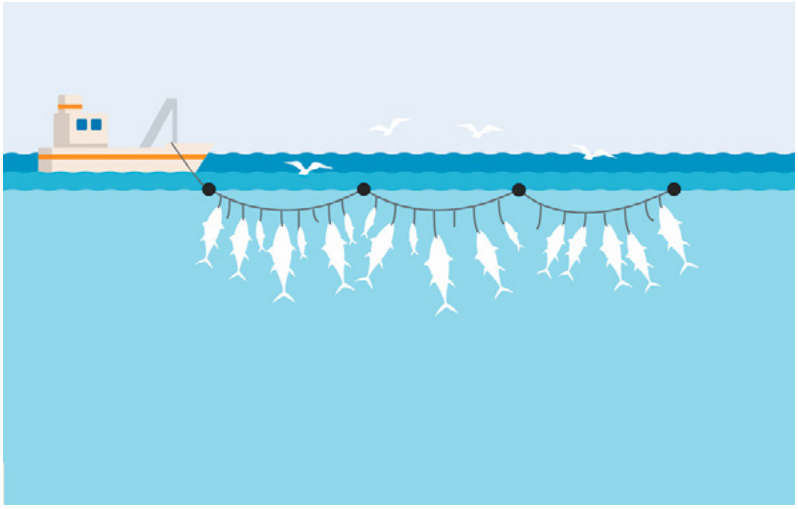
A mid-water, or pelagic, trawl is deployed in the middle of the water column and makes little to no contact with the bottom. Acoustic technology is used to locate the position and depth of the target fish, the type of sediment and other features of the bottom, and the path of the fishery operations are adjusted accordingly to help minimise the impact on bottom habitat.

DANISH SEINE

Proportion of global whitefish catch: 266,976 tonnes

Danish seine nets have one end of a weighted rope attached to an anchor and another to a buoy. The rope is deployed, sinking to the bottom, and the vessel sweeps in a large circle towing the other end of the Danish seine net back round to the anchor buoy. Once a full circle has been made, the gear is towed until the ropes come together capturing the fish.





LONGLINE

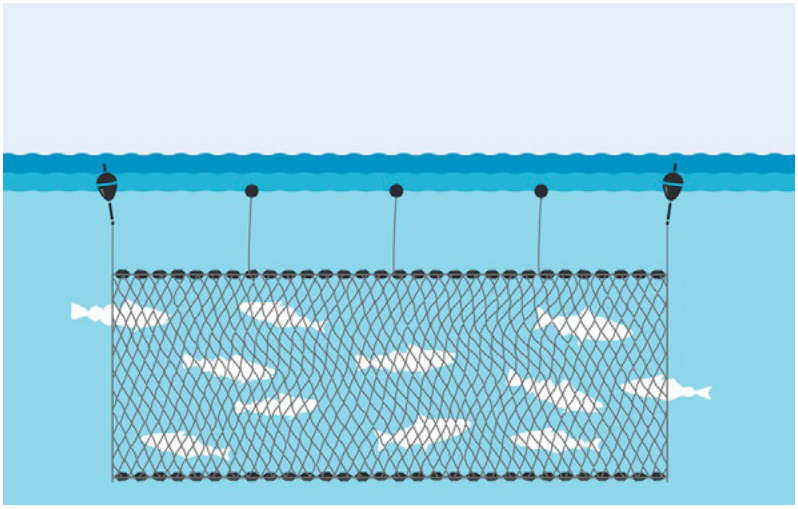
Proportion of global whitefish catch: 733,455 tonnes

A boat sets a line with baited hooks attached at regular intervals and with anchors at both ends to keep the line in place. The line is floated at precise heights above the bottom depending upon the species being targeted. The length of line can vary from several hundred metres to several kilometres. This gear method is typically used to catch cod.

GILLNETS

Proportion of global whitefish catch: 262,684 tonnes

A highly selective 'curtain' of netting where fish get caught according to their size ensuring that captured fish are mature enough to have reproduced. There are two types of gillnets, 'set' and 'drift'. Set gillnet are anchored, either to poles fixed to the seabed or an anchor system, whereas drift gillnets are suspended using weights and floats.



Annex

To complement the content of this yearbook, the annex provides a full list of whitefish species included in the MSC program. This section serves as a valuable resource, showing the diverse range of certified whitefish species.

Common name	*Scientific name*	Common name	*Scientific name*
Acadian redfish	*Sebastes fasciatus*	**Mackerel icefish**	*Champsocephalus gunnari*
Alaska (Walleye) pollock	*Gadus chalcogrammus*	**Megrim**	*Lepidorhombus whiffiagonis*
American yellow perch	*Perca flavescens*	**North Pacific hake**	*Merluccius productus*
Antarctic toothfish	*Dissostichus mawsoni*	**Northern pike**	*Esox lucius*
Argentine hake	*Merluccius hubbsi*	**Northern rockfish**	*Sebastes polyspinis*
Arrowtooth flounder	*Atheresthes stomias*	**Orange roughy**	*Hoplostethus atlanticus*
Atlantic cod	*Gadus morhua*	**Pacific cod**	*Gadus macrocephalus*
Atlantic halibut	*Hippoglossus hippoglossus*	**Pacific halibut**	*Hippoglossus stenolepis*
Beaked redfish	*Sebastes mentella*	**Pacific Ocean perch**	*Sebastes alutus*
Blue grenadier	*Macruronus novaezelandiae*	**Patagonian grenadier**	*Macruronus magellanicus*
Blue ling	*Molva dypterygia*	**Patagonian toothfish**	*Dissostichus eleginoides*
Bocaccio rockfish	*Sebastes paucispinis*	**Petrale sole**	*Eopsetta jordani*
Canary rockfish	*Sebastes pinniger*	**Pikeperch**	*Sander lucioperca*
Chilipepper rockfish	*Sebastes goodei*	**Pink cusk-eel**	*Genypterus blacodes*
Common sole	*Solea solea*	**Rex sole**	*Glyptocephalus zachirus*
Darkblotched rockfish	*Sebastes crameri*	**Rock sole**	*Lepidopsetta bilineata*
Deep-water Cape hake	*Merluccius paradoxus*	**Sablefish**	*Anoplopoma fimbria*
Dover sole	*Microstomus pacificus*	**Saithe**	*Pollachius virens*
Dusty rockfish	*Sebastes variabilis*	**Shallow-water Cape hake**	*Merluccius capensis*
English sole	*Pleuronectes vetulus*	**Shortspine thornyhead**	*Sebastolobus alascanus*
European flounder	*Platichthys flesus*	**South Pacific hake**	*Merluccius gayi*
European hake	*Merluccius merluccius*	**Southern blue whiting**	*Micromesistius australis*
European perch	*Perca fluviatilis*	**Southern hake**	*Merluccius australis*
European plaice	*Pleuronectes platessa*	**Splitnose rockfish**	*Sebastes diploproa*
Flathead sole	*Hippoglossoides elassodon*	**Turbot**	*Scophthalmus maximus*
Golden redfish	*Sebastes norvegicus*	**Tusk (Cusk)**	*Brosme brosme*
Greenland halibut	*Reinhardtius hippoglossoides*	**Walleye**	*Sander vitreus*
Haddock	*Melanogrammus aeglefinus*	**Whiting**	*Merlangius merlangus*
Kamchatka flounder	*Atheresthes evermanni*	**Widow rockfish**	*Sebastes entomelas*
Lemon sole	*Microstomus kitt*	**Witch flounder**	*Glyptocephalus cynoglossus*
Ling	*Molva molva*	**Yellowfin sole**	*Limanda aspera*
Lingcod	*Ophiodon elongatus*	**Yellowtail flounder**	*Limanda ferruginea*
Longspine thornyhead	*Sebastolobus altivelis*	**Yellowtail rockfish**	*Sebastes flavidu*

Glossary

Best practice score: A score of 80 or higher against a performance indicator in the MSC Fisheries Standard that results in a pass without requiring additional improvements.

Bycatch species: Unwanted catch that includes undersized or surplus fish for which fisheries do not have a quota, endangered, threatened and protected species, and other unwanted marine species.

Bottom Trawling: See page 39

Condition of certification: A requirement to achieve outcomes that increase a current performance indicator score to 80 or above (see also **Best practice score**).

Conformity Assessment Body (CAB): Third-party certification body accredited to carry out assessments against the MSC Fisheries Standard.

Conditional pass: Awarded to fisheries that achieve MSC certification but are required to make improvements to ensure all performance indicators meet global best practice (a score of 80 or above) within the five-year duration of a certificate.

Fish stock: The community from which catches are taken in a fishery. The term implies that a particular population is a biologically distinct unit.

Gear types: See page 39

Harvest Control Rules (HCRs): Measures that require catch to be adjusted in response to stock changes.

Harvest Strategy (HS): The combination of monitoring, stock assessment, harvest control rules and management actions taken by a fishery to ensure the target stock remains healthy and sustainable.

Maximum Sustainable Yield (MSY): The largest catch that fishers can take from a fish stock each year without affecting future years.

MSC Chain of Custody Standard: Certification to this standard ensures an unbroken chain where certified seafood is easily identifiable, separated from noncertified products, and can be traced back to another certified business.

Performance indicators (PIs): Twenty-five PIs sit under the three principles of the MSC Fisheries Standard, and fisheries are assigned a score for each.

Principles: Fisheries in assessment are scored against the three core principles of the MSC Fisheries Standard: 1) Sustainability of the stock, 2) Ecosystem impacts, 3) Effective fisheries management.

Total Allowable Catch (TAC): Catch limits that establish the total amount of fish that can be taken from a stock.

Unit of Assessment (UoA): The target stock(s) combined with the fishing method/gear and practice (including vessel type/s) pursuing that stock, and any fleets, or groups of vessels, or individual fishing operators or other eligible fishers that are included in an MSC fishery assessment.

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