

CERTIFIED SUSTAINABLE SEAFOOD

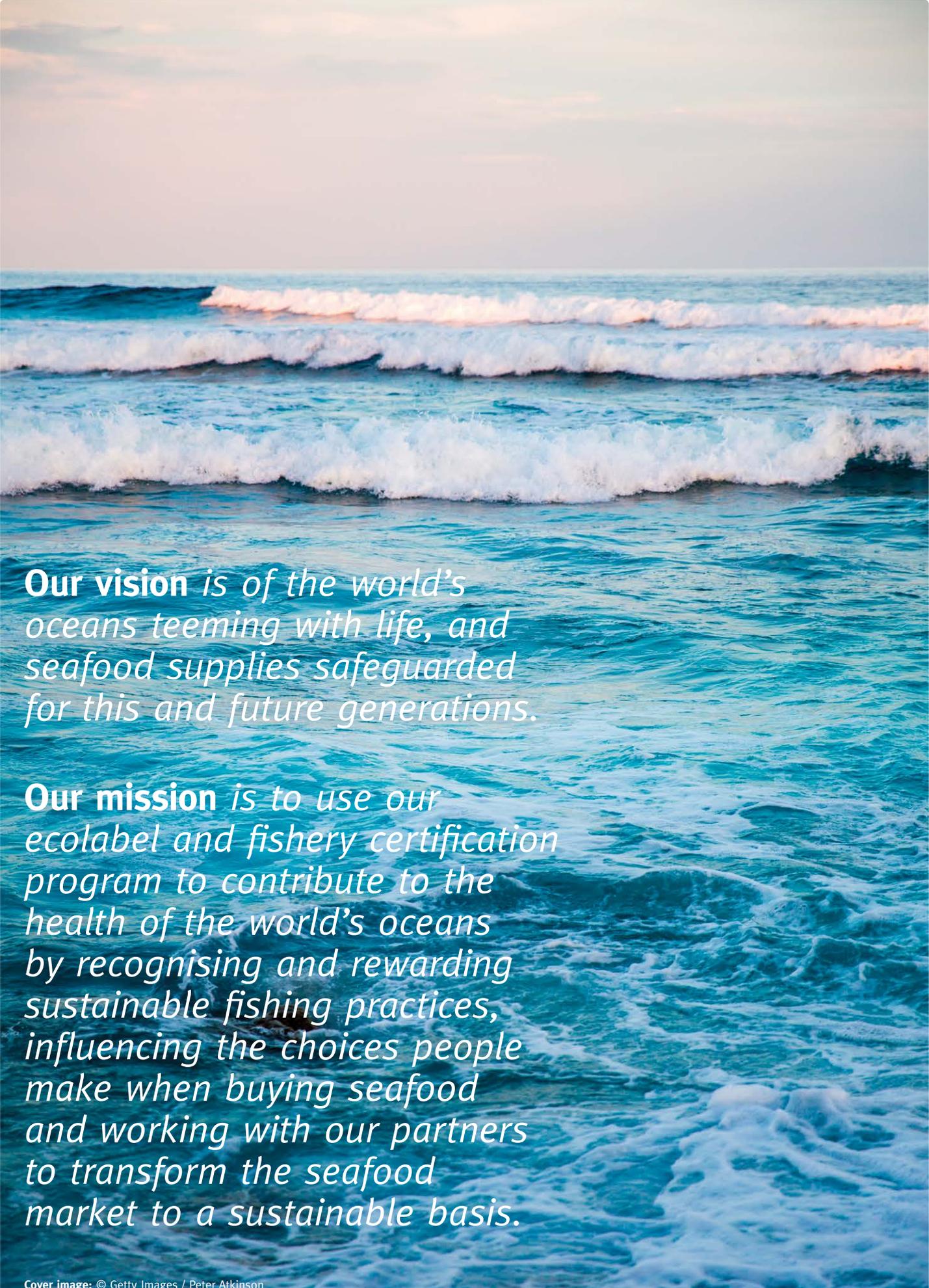


Marine Stewardship Council

Global Impacts Report 2014

Monitoring and Evaluation (1999-2013)





Our vision *is of the world's oceans teeming with life, and seafood supplies safeguarded for this and future generations.*

Our mission *is to use our ecolabel and fishery certification program to contribute to the health of the world's oceans by recognising and rewarding sustainable fishing practices, influencing the choices people make when buying seafood and working with our partners to transform the seafood market to a sustainable basis.*

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Foreword

The Marine Stewardship Council (MSC) believes in the critical importance of science-based, data-driven monitoring and evaluation of its program. I am therefore very pleased to present our second Monitoring and Evaluation (M&E) report, the Global Impacts Report 2014. The publication is a formal, quantitative evaluation of the MSC's performance. It has been produced by the MSC's dedicated M&E team.



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This report presents the most up-to-date indicators for both program performance and program strategy. It also highlights some of the great improvements made by fisheries in the MSC program. The indicators were developed through public consultation and were designed to show whether the program is meeting its sustainability and strategic objectives.

Our first report, published in 2013, demonstrated that almost all fisheries in the MSC program had made significant improvements to their operations. The current report shows that this trend is continuing.

Improvements are seen in target stock sustainability and management, as well as of the impact of fisheries on other ecosystem components such as non-target species and habitats. In total, 322 fisheries, representing 10 per cent of global wild capture, are currently certified or in assessment. These fisheries are amongst the leaders in supplying sustainable seafood to consumers.

Although there are still many fisheries that are yet to be certified, a significant proportion of these are improving their performance and could be certified in the future. Some are involved in Fishery Improvement Projects, multi-stakeholder initiatives designed to support a fishery to achieve sustainability goals. The MSC this year has produced a new Benchmarking and Monitoring Tool (BMT) to help small scale and developing world fisheries improve their practices in a structured way which will help them to ultimately reach the MSC standard.

The MSC's M&E program follows the ISEAL Impacts Code of Good Practice for Assessing the Impacts of Social and Environmental Standards. We are proud to announce that this year the M&E program successfully passed an independent review of the ISEAL Impact Code, which was formally approved by the ISEAL Membership Committee.

It is important to recognise that although the MSC provides a pathway to seafood sustainability, it does not itself cause improvements to happen in fisheries. Sustainability is delivered by the fishery with support from supply chains, retailers, environmental NGOs, funders and governments.

These stakeholders also contribute to consultations on the MSC standards. This year the MSC has completed a review of its Fishery Standard and is consulting on a review of its Chain of Custody (CoC) standard. I congratulate and thank all those who have contributed to individual fisheries and the MSC program. Their strong support will ensure that we have sustainable fisheries now and for future generations.

Dr David Agnew, Director of Standards

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Executive summary

In 2011, the MSC established its M&E program and began to develop comprehensive databases sourced from fishery and CoC certifications, as well as additional MSC data.

These databases form the foundation of indicators published for the first time in the Global Impacts Report 2013. This series provides information about the MSC program in terms of its impact, growth, geographical expansion, and the benefits to the environment and fisheries management of achieving and maintaining MSC standards for sustainability and traceability. In addition, the reports aim to provide the scientific foundation for a transparent, impartial

and consistent evaluation of the MSC's effectiveness in delivering its mission and vision. In this 2014 edition of the Global Impacts Report, we have included case studies of fisheries that have made 'on the water' improvements. We have also added overviews of stakeholder engagement in our Ocean of Voices section (pages 38-39), and produced a visualisation of our theory of change, which represents how the MSC achieves its long-term goals (pages 36-37).



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Key findings from this report include:

- Across all 31 MSC Performance Indicators (PI), the proportion of fisheries that meet or exceed the MSC's required best practice, reaching a score of 80 (on a scale of 60-100), has been generally increasing over the last five years
- Around 50 per cent of action plans for improvement have been completed by the time of the third surveillance audit. The rate of completion of action plans has increased over the last year, suggesting that improvements take less time to be completed
- The average number of improvement action plans raised at the time of certification decreases at each certification cycle, showing that the longer the fisheries stay in the program, the fewer improvements are needed towards best practice in fisheries sustainability
- There are now 224 certified fisheries, with 98 more in assessment. Almost 1 250 (1 244) action plans have been created and 575 have been completed since 1999, delivering improvements across 125 individual fisheries
- The proportion of fisheries in the MSC program that are maintained at or above maximum sustainable yield levels has increased (from 80 per cent in 2009 to 94 per cent in 2013) due to two factors: an increase in the number of healthy fisheries in the program and an improvement in the stock status of certified fisheries due to the implementation of stock rebuilding measures and strategies
- Nine action plans to improve non-target species status had been completed by 2013, including improvements in data collection, development of comprehensive analysis of retained species, improvement in management to avoid irreversible harm and changes in gear selectivity
- The proportion of fisheries in the MSC program with habitat and ecosystem impacts at or above best practice has increased from 71 per cent in 2009 to 82 per cent in 2013, meaning the proportion of fisheries with very low impacts has risen
- No certified fisheries cause serious or irreversible harm to Endangered, Threatened and Protected (ETP) species and the proportion of those with scores at or above best practice has increased from 73 per cent in 2009 to 88 per cent in 2013, mostly due to improvements in data collection and research of potential impacts of fishing, and changes in fishing operations and gear to avoid unacceptable impacts
- Most action plans for improvement relate to effective harvest control rules (42 per cent of fisheries). A high number of action plans are also for improvement in information on Endangered, Threatened and Protected species (30 per cent of fisheries) and improvements in impact of fisheries on seabed habitats (36 per cent of fisheries).
- MSC certification continues to gain importance as a market-based tool as shown by an increase in the number of certified fisheries (236 per cent), CoC certificates (207 per cent), and ecolabelled products in the market (811 per cent) between 2009 and 2013
- MSC-certified fish represents 9 per cent of the global wild-capture. CoC certification is held by companies in 64 countries and ecolabelled products are available in 102 countries. Globally 45 per cent of countries have MSC-ecolabelled products available
- Whilst developing world fisheries represent 7 per cent of those in the program, four new fisheries have entered assessment in 2013. The MSC has introduced several projects to improve accessibility including the BMT, capacity building toolkit and data-limited assessment methods
- The MSC's CoC program provides a high level of integrity and assurance in labelling seafood products. DNA testing conducted in 2013 (N = 320 samples) from 15 different countries in 17¹ different species indicated more than 99 per cent were found to be correctly labelled, based on both population and species-level tests.

¹ 15 unique species and 2 species groups

Introduction

The Marine Stewardship Council (MSC)

Around the world, more than 350 million people rely on fishing for their livelihoods and one billion depend on seafood as their main source of protein (FAO, 2012). A global sustainable approach to fishing is required to safeguard our fish stocks for future generations. If fishing is carried out unsustainably it will have major implications for our marine environment and the long-term health of fish stocks worldwide. Sensitive habitats, endangered species and the marine food chain need to be maintained to keep the oceans healthy and productive. When fisheries are poorly managed, environmental impacts may go unchecked and fish stocks can lose productivity. The impacts of fishing are complex, hard to measure and vary from one fishery to another, however, environmental sustainability can, and is, being achieved by many fisheries through the implementation of good management practices. The MSC's mission is to encourage more fisheries to implement best practices and to become sustainable, and to reward these fisheries, when certified, with the ability to use the MSC ecolabel.

The MSC was created in 1997 when two global organisations, WWF and Unilever, came together with the common vision of improving the sustainability of the world's fisheries. Together they founded the MSC – an international non-profit organisation set up to help transform the seafood market to a sustainable basis.

Between 1997 and 1999, the MSC consulted over 200 scientists, environmentalists and stakeholders to establish a worldwide certification system for fisheries using environmentally sustainable practices. Currently, the MSC runs the only certification and ecolabelling program for wild-capture fisheries consistent with the ISEAL Code of Good Practice for Setting Social and Environmental Standards and the United Nations Food and Agricultural Organization Guidelines for the Ecolabelling of Fish and Fishery Products from Marine Capture Fisheries (FAO, 2009).

The MSC works with fishers, seafood companies, scientists, conservation groups and the public to promote fisheries best practices through its certification program and seafood ecolabel. When any buyer chooses to purchase MSC-ecolabelled fish, certified fisheries are rewarded for their sustainable practices through market preference. The MSC and its partners encourage processors, suppliers, retailers, and consumers to give priority to purchasing seafood from MSC-certified fisheries and to demonstrate this through use of the MSC ecolabel.

How things looked at the start

There's a place off the coast of Newfoundland in Canada, known historically for its bountiful seas and tales of fish so plentiful, a scoop through the water with a fishing basket was enough to catch a few cod. Word of this abundance got around and by the 1950s factory fishing had arrived. By 1968, the cod catch peaked with an annual catch of 810 000 tonnes, three times the annual catch in previous years. In the early 1990s, the fishery collapsed, and the story of the Grand Banks in Newfoundland is now a cautionary tale.

How things look now

It wasn't just cod affected by overfishing in the Newfoundland Grand Banks. The story of the yellowtail flounder, however, is quite different. In 1994, a fishing moratorium on this species went into effect. Three years later, that moratorium made way for a conservative quota of 4 000 tonnes. As stocks returned to previous healthy levels, in 2010 the quota was back to its prior peak of 17 000 tonnes, due to a new emphasis on sustainable management. Ocean Choice International (OCI) owns over 90 per cent of the Grand Banks yellowtail flounder quota and was instrumental in supporting its recovery. The company sought recognition through MSC certification, which has provided a growing customer base as more companies look to sell products bearing the ecolabel.

The MSC experience as a standard setter

In 2013, the MSC published a paper in ICES Journal of Marine Science to discuss the challenges that the MSC has faced in keeping up with developments in the science and management of fisheries, managing stakeholder expectations and designing a program that balances credibility, accessibility and improvement to move the world's fisheries towards sustainability. For full text see: Agnew, D. J., Gutiérrez, N. L., Stern-Pirlot, A., and Hoggarth, D. D. 2014. The MSC experience: developing an operational certification standard and a market incentive to improve fishery sustainability. – ICES Journal of Marine Science, 71: 216–225.

The MSC Standard

The MSC’s standard recognises and rewards sustainable fishing practices

The MSC’s standard for sustainable fishing is comprised of three core Principles:



Principle 1
Health of the target fish stock



Principle 2
Limited impact of the fishery on the environment



Principle 3
Effective management of the fishery

These benchmarks correspond to levels of quality and certainty of fisheries management practices and their likelihood to deliver sustainability. They were derived from the experiences of fisheries managers, scientists, and other stakeholders worldwide. Based on this standard, the MSC assessment process reviews 31 specific indicators about a fishery’s performance and management to determine its sustainability. These Performance Indicators (PIs) are grouped under each of the MSC’s three main Principles described above.

Each of the 31 PIs (shown in Appendix 1) are scored on a 1-100 scale, with the 60, 80 and 100 levels defining key sustainability benchmarks. The final overall score will result in a pass – which requires

that the average score for each Principle is greater than or equal to 80, and that each Performance Indicator is greater than 60; anything below this level results in a fail. A fishery can pass with some indicators less than 80, in which case the fishery receives a ‘condition’ requiring improvements so that the score can be raised to an 80 level, normally within five years. The fishery must implement an agreed action plan that will deliver these improvements with time-bound milestones. Assessing a fishery’s sustainability is complex, but the concept is simple – fishing operations should be at levels that ensure long-term fish populations, while the ecosystems on which they depend remain healthy and productive for today’s and future generations’ needs.

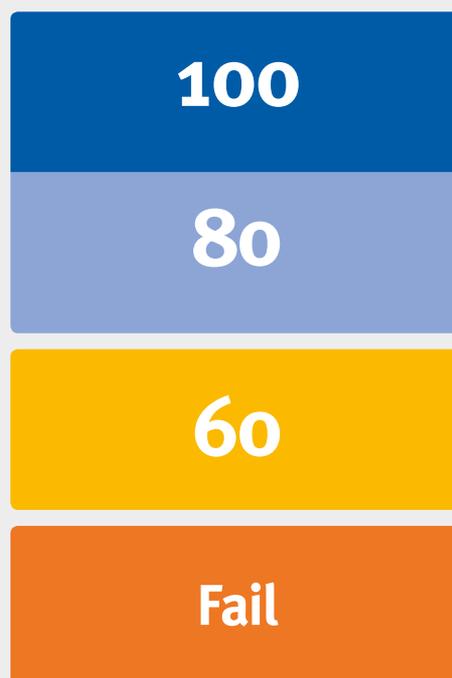
A ‘fishery’ in the MSC program is named after the client’s group and may include one or more ‘Units of Certification’ (UoC) defined by the target fish species and stock, the geographic area of operations, the fishing method, gear and/or vessel type. Each UoC within a fishery, including the whole fishery, can either pass or fail MSC assessment. Fisheries with multiple UoCs can either pass or fail the MSC assessment. Only seafood from approved UoCs can carry the blue MSC ecolabel.

Figure 1 – Key sustainability benchmarks

A score of 100 represents the performance expected from a ‘near perfect’ fisheries management system; one that has high levels of certainty about a fishery’s performance and a very low risk that current operations will result in detrimental impacts to the target stocks, non-target species and supporting ecosystem.

A score of 80 conforms to the sustainability outcomes expected from fisheries management systems performing at ‘global best practice’ levels and confers increased certainty about the fishery’s long-term sustainability.

A score of 60 represents the ‘minimum acceptable limit’ for sustainability practice that is established in the MSC’s fisheries standard. This limit provides assurance that the basic biological and ecological processes of all components impacted by the fishery are not compromised now or into the future.



Independent and objective assessments

The MSC adheres to the most rigorous international standards applicable to certification programs, including the use of third parties to assess fisheries against the standard and decide whether to award certification.

Whilst the MSC sets the standard, the assessments are done by independent, accredited Conformity Assessment Bodies (CABs). These companies are held accountable and monitored by a separate organisation, Accreditation Services International (ASI).

To ensure rigour and objectivity, the assessment process is highly transparent and is open to the scrutiny of anyone with an interest in the fishery. Relevant parties are notified of the assessment and invited to provide information and comments. The assessment is undertaken by a team of highly-qualified and independent scientists who are hired by the CAB. The assessment results are described in a series of reports produced by the CAB and the scientific team. Once certified, a fishery is subject to annual surveillance audits, and undergoes a full re-assessment every five years.

Complementing the MSC standard for sustainable fisheries is the Chain of Custody standard. This standard ensures that, as MSC-certified fish travels through the supply chain from the fishery to the point of sale, it does not become substituted for non-MSC-certified fish. Every link in the supply chain must be independently certified against the MSC's CoC standard. MSC takes integrity of the supply chain very seriously, so that consumers can trust the MSC ecolabel and be sure that the fish that they buy really does come from MSC-certified fisheries.

Supporting this thorough evaluation process, random inspections of seafood products bearing the MSC ecolabel are undertaken using DNA testing. This proves both that the fish actually comes from a certified fishery and that the species is, in fact, the one it claims to be on the label. In 2013, the MSC DNA testing program involved 320 samples from retail packed products, fresh fish counters and catering restaurants in 15 different countries. Results showed that, overall, the mislabelling rate for MSC-certified products was less than one per cent, or just three mislabelled samples.

MSC Sustainability and Strategy Outcome Objectives

Sustainability outcome objectives – based on fishery health and the MSC's core aim:

- 1.1. The MSC program should encourage fisheries to make such improvements as necessary to meet the MSC's sustainability standard.
- 1.2. The MSC system should be accessible to all fisheries worldwide.

Strategy outcome objectives – how the program is working to deliver the sustainability outcome objectives:

- 2.1. The MSC program should be rigorous, credible, effective and efficient and the supply chain have high integrity.
- 2.2. The MSC program should grow the demand for and supply of MSC-certified fish to reward sustainable fishing practices.

The MSC Monitoring and Evaluation Program

The M&E program aims to achieve a clear understanding of the environmental and organisational impacts of the MSC's certification and ecolabelling program.

In order to assess how well the MSC is achieving its aims, the M&E program collects empirical data that can be evaluated against the MSC's sustainability and strategy outcome objectives.

The indicators were developed in consultation with stakeholders and measure the quantity and quality of short, medium and long-term effects of the MSC program on certified fisheries, target resources, associated ecosystems and other areas of strategic activities.

The Global Impacts Report uses graphic icons to represent each of the 22 indicators. These are grouped as either 'environmental' or 'program', depending on their related outcome objective (see grey box page 8).

The 2014 edition of the Global Impact Report includes an update of the 22 MSC M&E indicators that provide specific measurements to determine whether the MSC's sustainability and strategy outcome objectives are being achieved. An MSC-certified fishery case study has been included within each environmental indicator (4-13), which explains the real improvements that the fishery has made while engaged with the MSC program. In addition to the number of fisheries currently in the program, trend in tonnage of MSC-certified landings with respect to FAO wild capture information has been included within indicator 14.

The organisational and environmental impacts of the MSC are closely related to the participatory nature of the program. Therefore, this new report includes an overview of stakeholder participation in policy development and fishery assessment, as well as social media engagement and discussion within the scientific community. To provide a clearer overview of the MSC's long-term goals, outcomes and impacts, we also present the MSC theory of change as an infographic.

Environmental indicators

The environmental indicators relate to the MSC sustainability outcome objectives and track the scores of the MSC certification program's Performance Indicators through fishery assessment and successive surveillance audits, examining the underlying reasons given for changes in scores and trends. Positive trends in scores are indicative of improvements in fishing practices with potential environmental impacts on the target species, non-target species and associated habitat and ecosystems. These environmental indicators use primarily MSC fishery assessment data that is authored by third party Conformance Assessment Bodies (CABs).

Environmental indicators are grouped against the MSC's three core Principles of sustainable fishery assessment:



Principle 1
Health of the target fish stock



Principle 2
Limited impact of the fishery on the environment



Principle 3
Effective management of the fishery

Program indicators

The program indicators relate to the MSC's strategy outcome objectives and measure the performance, impact and reach of the program. These indicators consider the number of fisheries engaged with the MSC and how well each part of the sustainability assessment, certification process and ecolabelling scheme is performing. The program indicators also measure consumer awareness of the MSC.

Program indicators are grouped under essential MSC assessment components:



Fisheries



Chain of Custody



Certification process



Ecolabelling



Consumer awareness

Indicator key

Environmental indicators

Tier 1

 Environmental Indicator

Tier 2

 All Principles

Tier 3



 Principle 1

Tier 3



 Principle 2

Tier 3



 Principle 3

Tier 3


Program indicators

Tier 1

 Program Indicator

Tier 2

 Fisheries

Tier 3



 Chain of Custody

Tier 3



 Certification process

Tier 3



 Ecolabelling

Tier 3



 Consumer Awareness

Tier 3


How to interpret the Global Impacts Report

- When a fishery is assessed against the MSC standard requirements, a 'fishery', named after the client's name, is scored against its defined UoC. A 'fishery' may have multiple UoCs in varying combinations of target fish species and stock, geographical area of operations, and fishing method, gear and/or vessel type. As a result, each UoC carries its own scores for each PI. To deal with the duplication of a fishery's scores due to multiple UoCs for indicators 4 to 13, the definition of a 'fishery*' is based on the assumption that PI scores relating to Principle 1 are represented by client x stock only, Principle 2 are represented by client x gear only and Principle 3 represented by the client only. An asterisk (*) on 'fishery*' is used to indicate where this methodology has been applied; for more details see MSC Global Impacts 2013, Appendix 2. Thus the sample size of fisheries* is different in analyses of Principles 1, 2 and 3.
- The construction of the indicators 4-13 is based on the scores that are delivered in fishery assessments. From 2000 to 2008, fisheries were assessed by third party certifiers against the published MSC Principles and Criteria using specific Performance Indicators (PIs) that each certifier defined itself. In 2008 the MSC collated information from all earlier assessments and published a single set of Performance Indicators and scoring guidelines (at the 60, 80 and 100 levels – see earlier section) that all certifiers were to use. Most certifications since 2008 have used these default indicators – called the '2008 Default Assessment Tree' and published at the time of the Fishery Assessment Methodology (FAM). Appendix 1 presents the Default Assessment Tree.
- Fisheries certified prior to the publication of the 2008 Default Assessment Tree used different PIs. In producing this report, we 'mapped' the older PIs against those in the 2008 Default Assessment Tree. Some PIs were difficult to match and were therefore excluded from the analysis. This resulted in a slightly different sample of fisheries* being available for analysis for each PI, and consequently a different sample size for many of the indicators in this report. For more information on mapping methodology see MSC Global Impacts 2013, Appendix 2.
- 'Fishery' in all other indicators (excluding indicators 4-13) represents the MSC defined number of fisheries by their UoC.
- All X-axes labelled 'Year' represent calendar years not financial years.
- It is important to note that conclusions on improvements are related to increasing trends in PI scores assigned by Conformity Assessment Bodies (CABs) to each specific fishery during the assessment process. These are associated with the completion of the action plans for improvement that are required whenever a PI does not meet the best practice score of 80. Previous studies (MRAG 2011; Martin et al. 2012) show the presence of a statistically robust link between changes in scores and the underlying improvements 'on the water'. In addition, the participatory nature of the assessment, which includes external certifiers, independent peer reviewers, regular stakeholder engagement, fourth party accreditation and the objections procedure, assures a rigorous, robust, and consistent scoring process.

1. Average principle scores of MSC fisheries



Description

The MSC fisheries standard identifies 31 Performance Indicators (PIs) over three Principles: (1) healthy fish stocks; (2) limited environmental impacts of fishing; and (3) effective management systems. Each PI is assessed based on a scoring system where 60 is the minimum acceptable sustainable standard, 80 is global best practice, and 100 is near-perfect performance.

Outcome

The average scores for Principle 1 have been declining since 1999 and stabilised at 85 since 2010, just above global best practice. Average scores for Principle 2 have shown the opposite trend, and scores for Principle 3 have been stable but decreased slightly in 2012 and 2013. These trends are primarily due to changes in the MSC requirements since the start of the program. However, overall scores across all three Principles for fisheries assessed under the Fishery Assessment Methodology (FAM) have remained constant since its implementation in 2010.

Definition

Average scores for Principles 1, 2 and 3 of MSC-certified fisheries.

Source

MSC scoring data

Relevance

Sustainability Objective 1.1

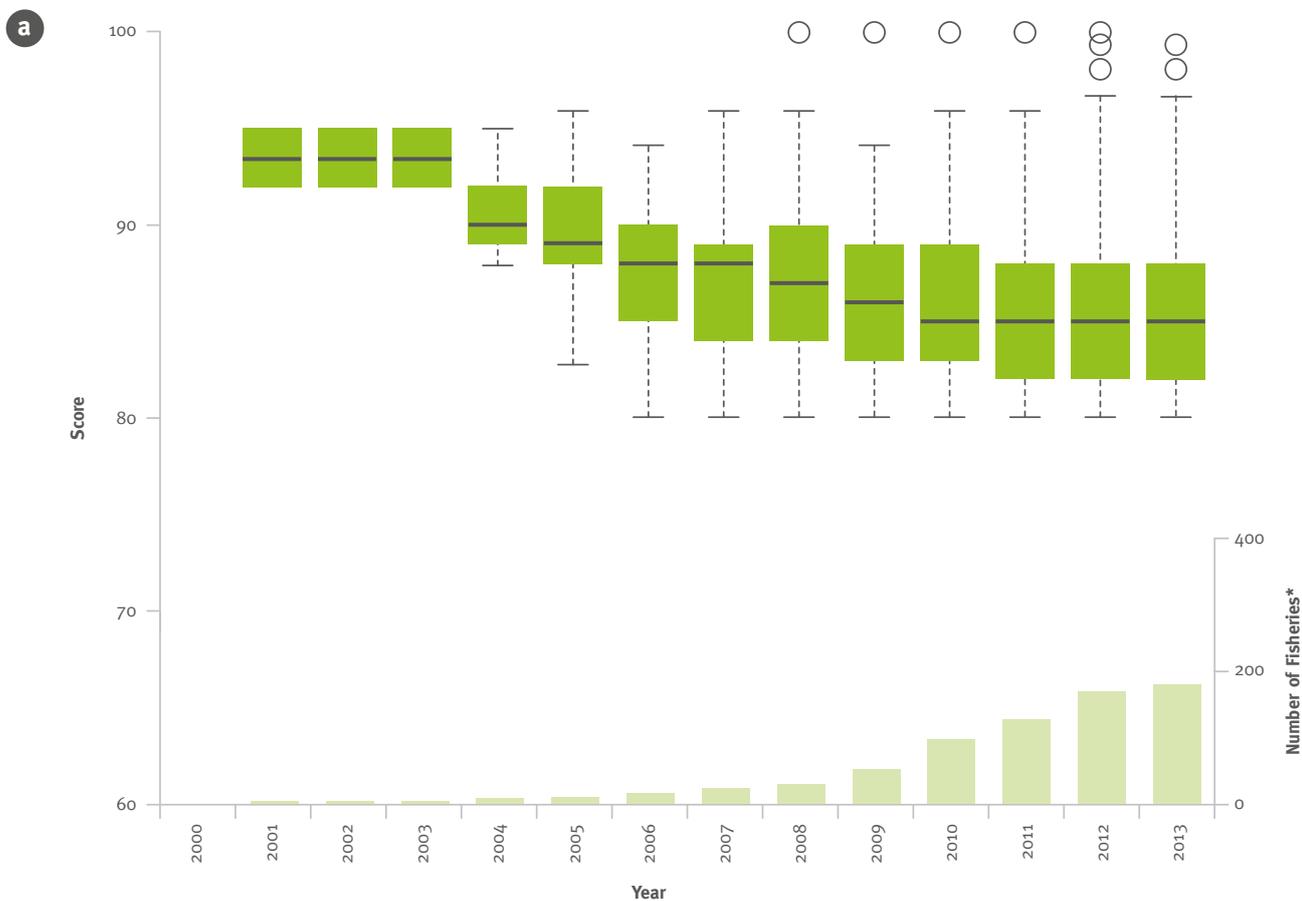
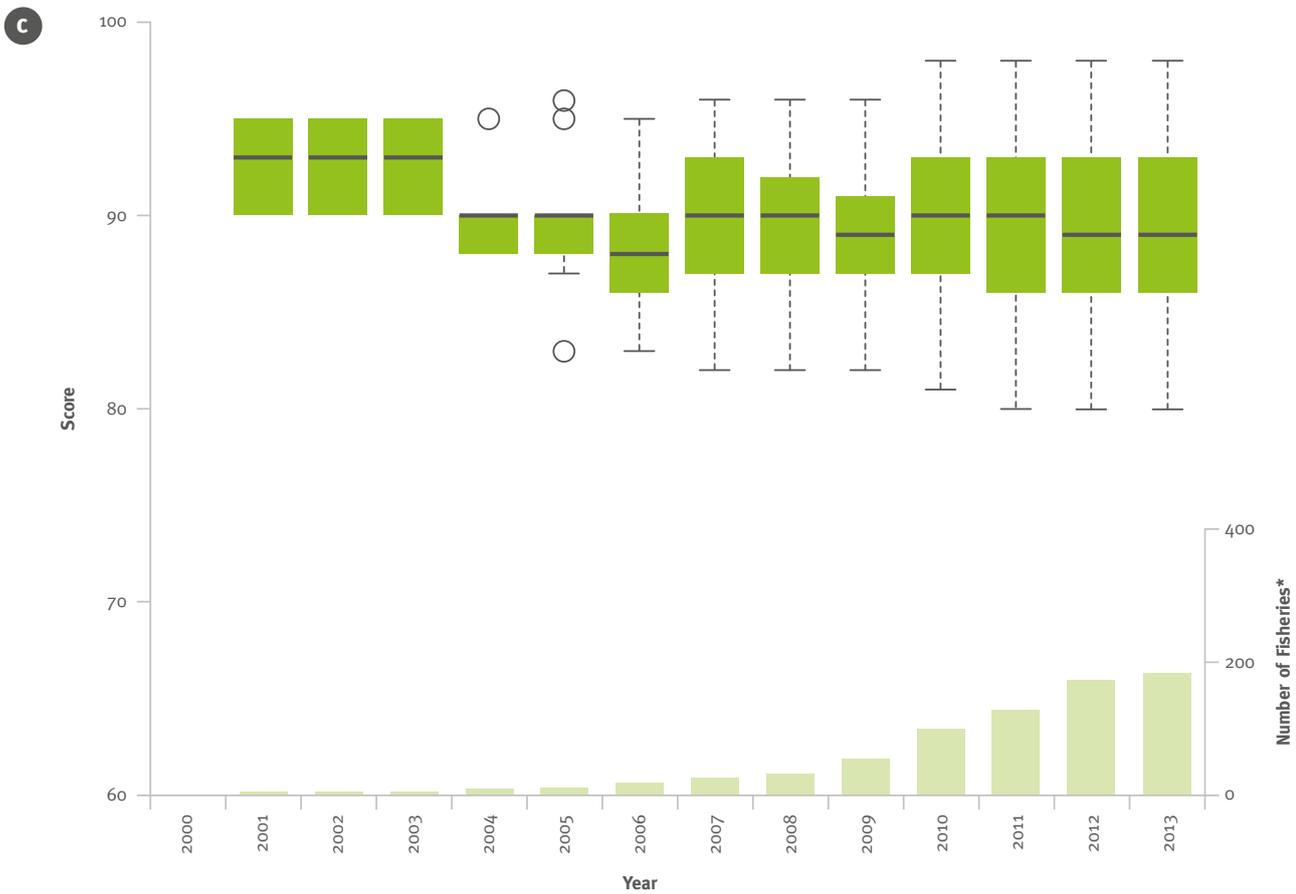
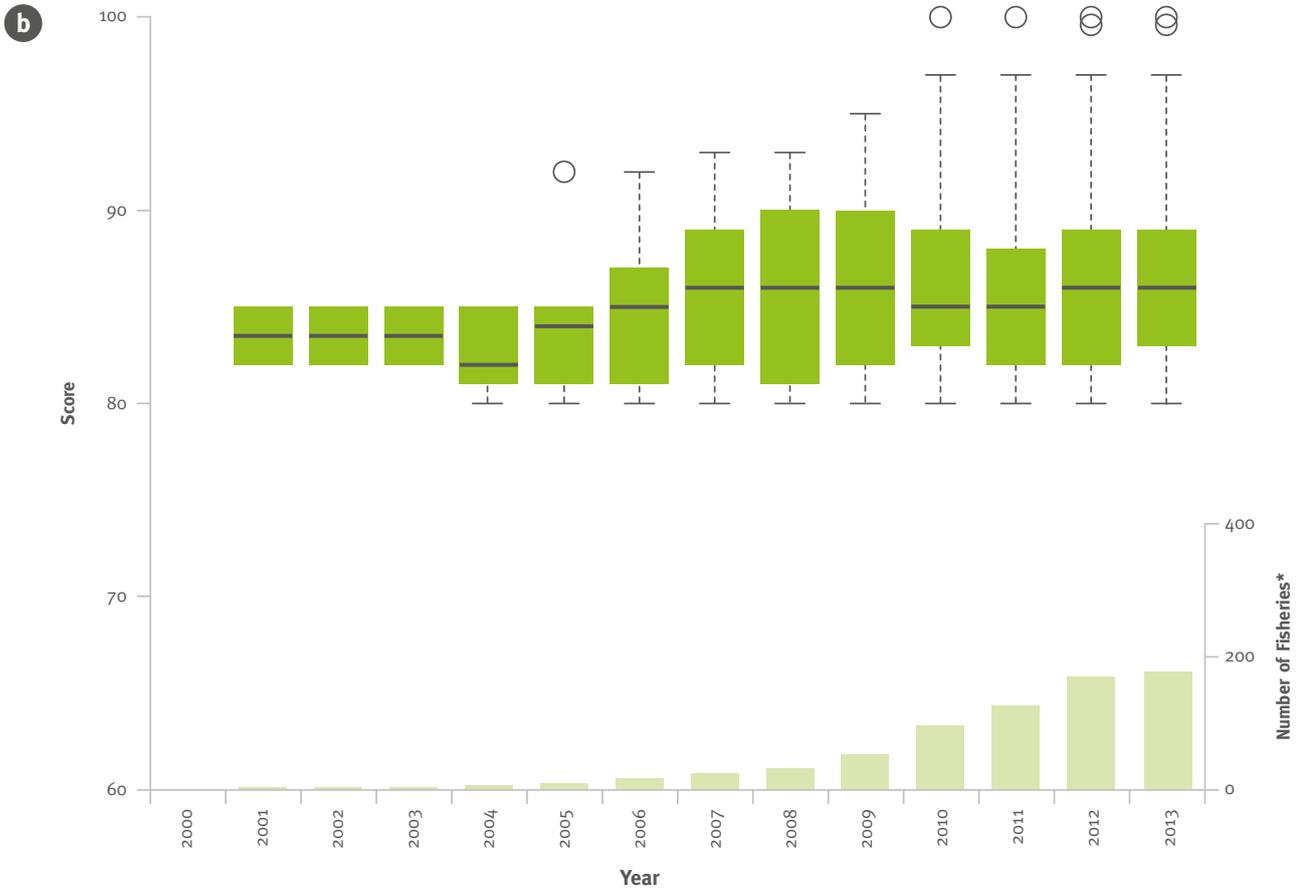


Figure 1.1 Median, quartiles, maximum and minimum scores of certified fisheries (at time of certification) for (a) Principle 1: health of stock status; (b) Principle 2: limited environmental impacts; and (c) Principle 3: comprehensive governance and fishery management. Pale green bars represent the number of fisheries* scored by Principle and by year.



2. Action plans for improvement



Description

A critical aspect of the MSC program is to allow fisheries that meet the standard to be certified provided they commit to improvement action plans that result in best practice performance. When a fishery achieves a score between 60 and 80 for any individual Performance Indicator (PI), it is required to improve performance to a score of 80 (best practice) within the 5-year certification cycle. Through this process, the MSC program incentivises positive changes in global fisheries.

This indicator tracks the **number of action plans developed** for each PI since the introduction of the FAM in 2010. Note that fisheries are re-certified every five years and may attract new improvement action plans at any point during their certification if performance drops below a score of 80, or if the requirements of the standard change. This indicator reports the number of action plans developed at **first certification only**.

Outcome

The PI generating the highest number of improvement action plans is related to the implementation of effective harvest control rules (50 action plans). Harvest control rules define how fishing effort is adjusted in response to the size of the stock. This result suggests that fully implemented harvest control rules are still not in place for some fisheries, even though at the start of the assessment they are required to have rules to restrict catch if the stock departs from management targets. In contrast, the PI with the lowest number is related to legal and/or customary frameworks (2 action plans) suggesting fisheries entering the MSC program mostly already have approximate laws for fisheries management and governance. Across all three Principles, Principle 2 has the most requirements for action plans, with 562 applied to 147 fisheries across 14 PIs, suggesting fisheries will make most improvements related to non-target species, habitats and ecosystems. Although the number of fisheries with 2 or 3 certification cycles is still low, the average number of conditions in subsequent re-assessment has decreased substantially (Figure 2.2). This suggests that the longer the fisheries stay in the program, the fewer improvements are needed towards best practice in fisheries sustainability.

Definition

Number of fisheries on which action plans for improvements were completed on first certification, sorted by Performance Indicator (PI).

Source

MSC scoring data

Relevance

Sustainability Objective 1.1

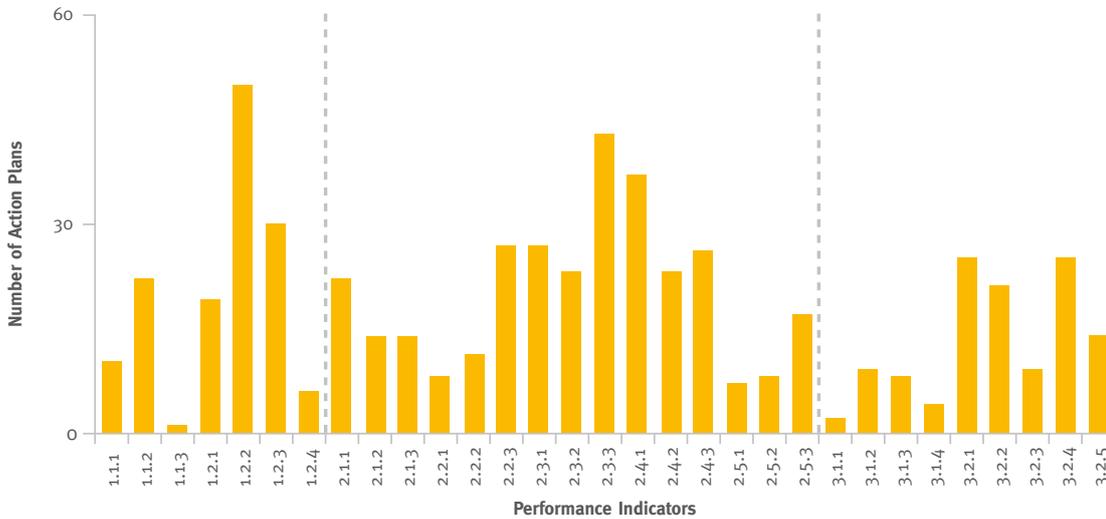


Figure 2.1 Number of action plans for improvements developed for each Performance Indicator (Appendix 1). Only fisheries assessed against the default assessment tree since 2008 were used for this analysis. Dashed lines separate each Principle. Number of total fisheries included in this analysis = 124. Number of fisheries with action plans in Principle 1 = 89; in Principle 2 = 95; and in Principle 3 = 70.

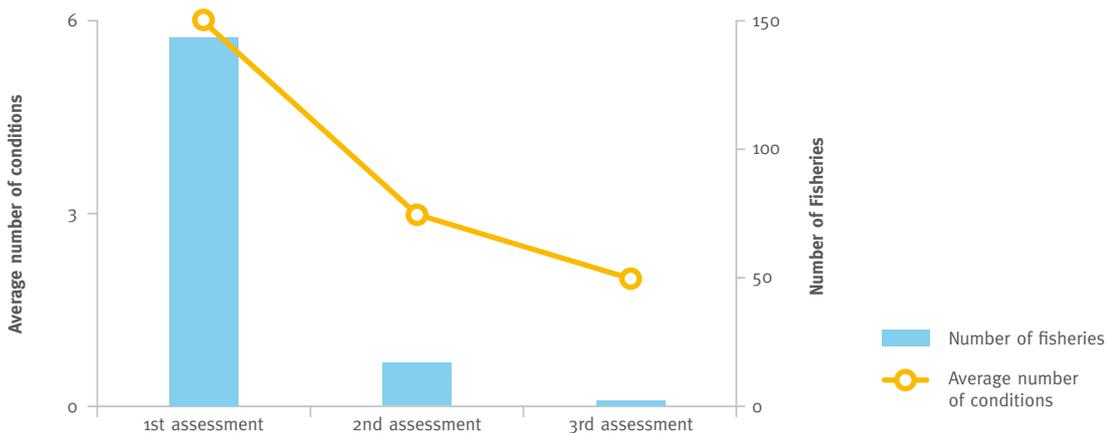


Figure 2.2 Average number of action plans for improvements developed for fisheries using the default assessment tree (2008-2013) grouped by assessment number 1st, 2nd or 3rd. Number of total fisheries N = 161. Number of fisheries with action plans in 1st assessment = 143; in 2nd assessment = 16; and in 3rd assessment = 2.

3. Annual improvements through completed action plans



Description

Action plans are required to improve performance against the MSC Principles and Criteria and may include a reduction in uncertainty, improvement in processes or outcomes and/or reduction in management risks. Although the MSC is not prescriptive on the actions to be taken to generate the required improvements, the standard requires clear and defined time-bound milestones for each action and the increase in score to 'best practice' levels as a result. The rate and speed by which action plans are completed gives an indication on how fast fisheries can cope with changes in outcomes, management and governance to achieve a level of best practice. This indicator tracks the proportion of action plans completed annually within the five year term of a certificate.

Outcome

As expected, fisheries certified between 2000 and 2009 had completed all their improvement action plans by the end of 2013 (Figure 3.1). A high proportion (more than 50 per cent) of action plans were completed in the third to fourth year after the initial certification and the rate of completion has shown some increase in recent years (Figure 3.2). However, fisheries certified in 2010 had completed a higher number of action plans by the third annual surveillance audit than in previous years. Some fisheries certified in 2009 have been suspended due to non-compliance with improvement milestones. Therefore, a number of conditions remain open due to these exceptional circumstances.

Definition

Number of action plans completed each year and their rates of completion grouped by year of certification.

Source

MSC scoring data

Relevance

Sustainability Objective 1.1

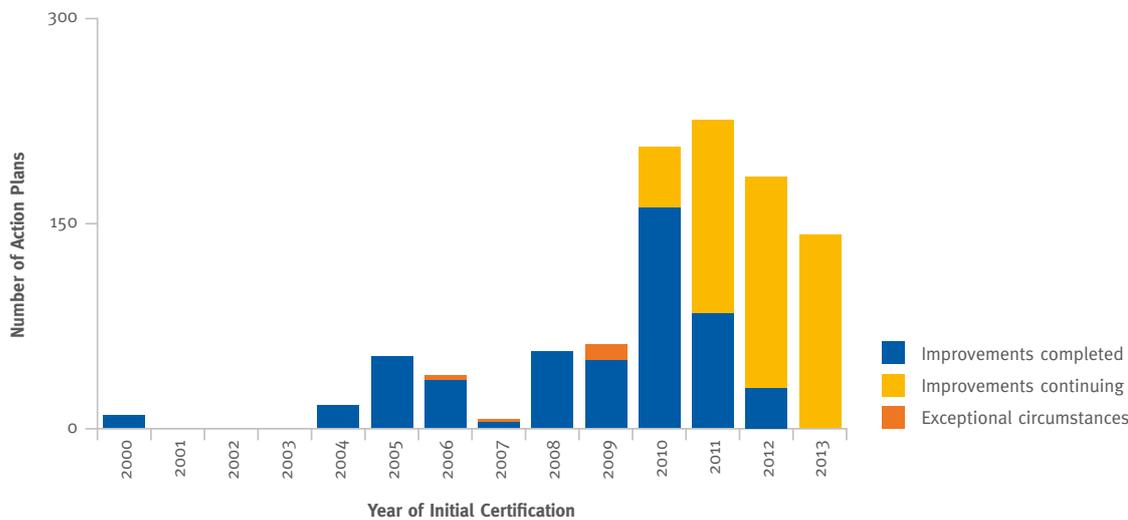


Figure 3.1 Number of action plans for improvement that had been completed by the end of 2013, grouped by fisheries certified within the same year. Only action plans completed within the first certification cycle were included in this analysis (N = 184).

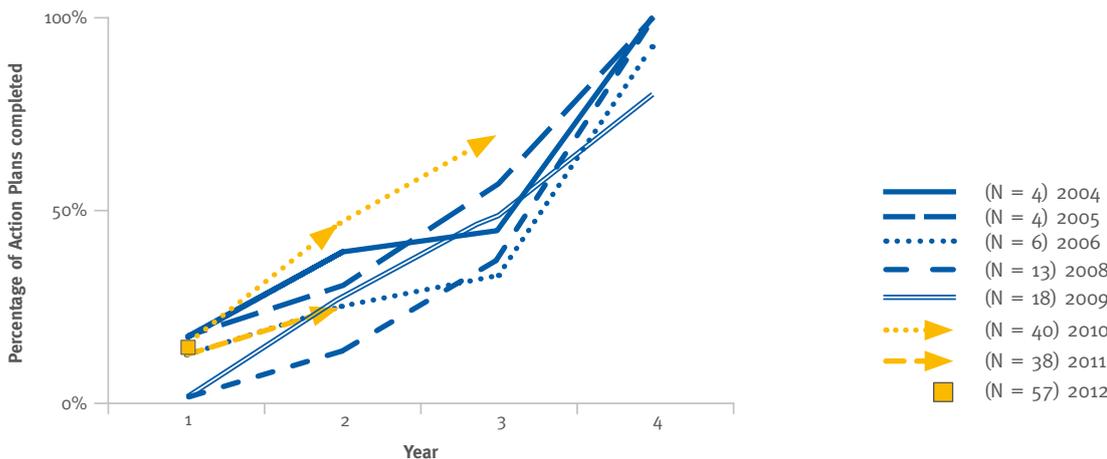


Figure 3.2 Rate of completion of action plans by fisheries in the four years following the initial certification, grouped by fisheries certified within the same year. Yellow lines represent fisheries still within the five year period of certification, and for which completion of the action plan is not yet required. The number of fisheries in each group is represented in brackets after the legend date. Data from 2007 are not presented in this figure due to the very small number of fisheries certified in this year (N = 3).

4. Target stock status



Description

In order to be considered sustainable, a fishery resource must be extracted no faster than the level at which it can replenish itself, according to the MSC's standard. Under international agreements and many national laws, fish stocks should be managed at the level that can support Maximum Sustainable Yield (MSY) (Gutiérrez et al. 2012). For a fishery to be MSC-certified, the fish stock should be at or around MSY-based reference points or a proxy similar in intent and outcome to receive a score of 80. Fisheries targeting populations below MSY levels can be certified as long as they are still within biological limits (above the level where recruitment could be compromised) and they commit to, and demonstrate, stock recovery within a specified timeframe. This represents the MSC's minimum acceptable level of sustainability performance. These fisheries will receive a score

between 60 and 80, and are required to develop an improvement action plan to bring stock status up to MSY levels. A completed action plan means that the stock health has improved within a pre-defined period of time. If a fishery is performing at a higher level than MSY, it will attract a score higher than 80, up to 100.

Outcome

The proportion of fisheries in the MSC program that are maintained at or above MSY levels is increasing (from 80 per cent in 2009 to 94 per cent in 2013), and this is due to two factors: an increase in the number of healthy fish stocks in the program and an improvement in the status of fisheries in the program, due to completed action plans (for 28 certified fisheries by 2013). Action plans included stock rebuilding measures and strategies that have allowed the target stock to recover above MSY levels.

Definition

Number and proportion of MSC-certified fisheries at or above Maximum Sustainable Yield (MSY) levels, and those which are within biological limits and improving their status towards MSY levels.

Source

MSC scoring data

Relevance

Sustainability Objective 1.1

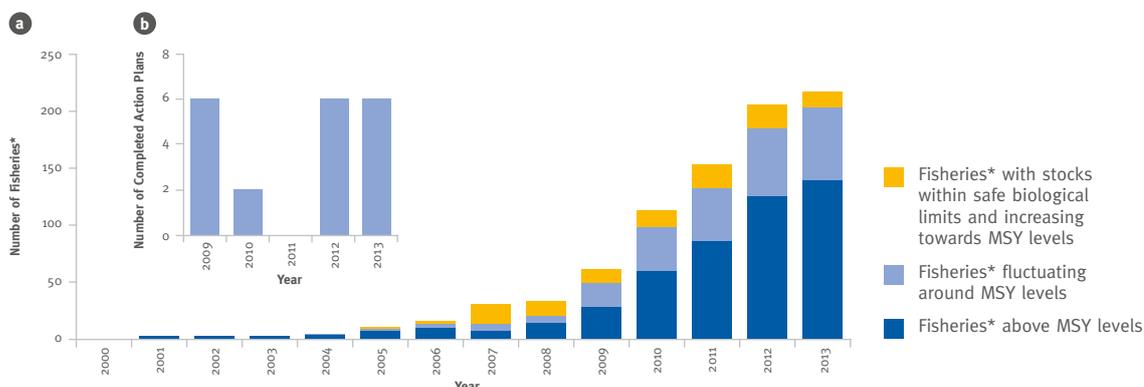


Figure 4.1

(a) Number and proportion of MSC fisheries* with stock status scores at or above 90 (above MSY levels), between 80 and 90 (fluctuating around MSY levels), and below 80 (stocks within safe biological limits and increasing towards MSY levels) by year; (b) Number of action plans for the improvement of target stock status that were completed by year (N₂₀₁₃ = 217; not all fisheries could be mapped against the 2008 default assessment tree. See Appendix 2 – Technical methodology in Global Impacts Report 2013¹).

New Zealand hoki fishery

Background

In 2001, New Zealand hoki (*Macruronus novaezelandiae*) was the first large-scale whitefish fishery to achieve MSC certification. The fishery was subsequently re-certified in 2007 and 2012. The fishery is currently subject to extensive research, individual transferable quotas (ITQ) and an integrated approach to management between industry and government (co-management). Hoki is managed as two stocks: the eastern stock and the western stock. Hoki is a fast growing fish living for 20-25 years and can grow to over a metre in length. It is caught using bottom trawls except during winter spawning season where pelagic trawls (mid-water) are used.

Actions needed

During the first five-year certification cycle, improvements had been made on spatially explicit, stock-specific management. Between 1995 and 2001, the western stock declined due to low recruitment. New improvement action plans on stock rebuilding and better definition of limit and target reference points were therefore introduced. These included a determination of desired rate of recovery towards

the target, a development of a rebuilding strategy and implementation of management strategy evaluation to monitor the recovery under different fishery scenarios.

Improvements achieved

In 2006, the industry implemented a formal stock rebuilding plan for the western stock which was updated annually to monitor progress. The Fisheries Management Plan was finalised and adopted, including reference points and desired rates of recovery in case the fishery falls below target. Catch limits were reduced through the New Zealand Quota Management System (QMS) and the spawning stock biomass has increased substantially. The western stock is considered to be fully rebuilt and both stocks are now considered to be within sustainable limits² (above BMSY). There are currently no improvements needed on stock status (score of 90) and this fishery has completed all its action plans. Since the first certification in 2001, the populations of both New Zealand hoki stocks have more than doubled².



Hoki (*Macruronus novaezelandiae*)

© Scandinavian Fishing Year Book

Other fisheries with improved stock status³

AAFA and WFOA North Pacific albacore tuna, Pelagic Freezer Trawler Association North Sea herring, Gulf of Alaska pollock, South West handline mackerel, DFPO Denmark North Sea plaice, Atlantic deep sea red crab, SPSP Ltd North Sea herring, SPFPO Swedish North Sea herring, SPSP Ltd western component of North East Atlantic mackerel, Stornoway nephrops trawl, DFPO Denmark North Sea sole, British Columbia pink and sockeye salmon, Norway North Sea and Skagerrak herring, CVO North Sea plaice and sole; and 6 other fisheries.

1 MSC, 2013. Marine Stewardship Council: Global Impacts Report 2013. MSC, London, UK. 56pp ISSN 2052-8876
 2 Ministry for Primary Industries. 2013. Fisheries Assessment Plenary May 2013. Stock Assessments and Yield Estimates Volume 1: Introductory sections to jack mackerel. Compiled by the Fisheries Science Group, Ministry for Primary Industries, Wellington, New Zealand. 1357p
 3 Note: some of these fisheries are not currently engaged in the MSC program but have made improvements in stock status while certified

5. Target stock management



Description

Comprehensive and precautionary management is needed for a fishery to be responsive to the status of the target stock, and usually entails robust and effective harvest strategies and harvest control rules. A harvest strategy sets out the management actions necessary to achieve defined biological and economic objectives. A harvest control rule is a set of rules that define how the amount of fishing will be adjusted in response to the size of the stock. This indicator tracks management harvest strategies and harvest control rules and tools. Fisheries needing improvements in these areas must still meet the MSC's minimum acceptable level for sustainability, and must additionally develop action plans for improvement resulting in comprehensive and precautionary management.

Outcome

The proportion of fisheries with comprehensive harvest strategies and harvest control rules and tools increased from 70 per cent in 2010 to 77 per cent in 2013, due to new fisheries entering the program as well as the completion of 38 target stock management action plans by fisheries. The requirement in the MSC standard related to comprehensive and precautionary target stock management has led to fisheries developing action plans for improvement of their harvest control rules or harvest strategies. By the end of 2013, 38 stock management action plans had been completed by 37 fisheries (Figure 5.1b). These improvements have led to clearly defined harvest strategies being put in place, new management arrangements and collaboration with fishery assessment scientists, and clear evidence that the harvest control rules are appropriate and responsive to the state of the stocks.

Definition

Number and proportion of MSC-certified fisheries with comprehensive and precautionary target stock management, and those improving it.

Source

MSC scoring data

Relevance

Sustainability Objective 1.1

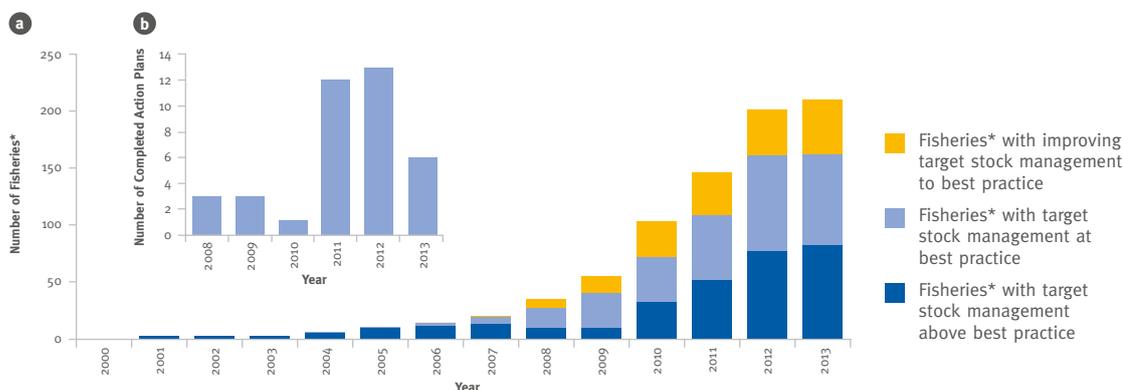


Figure 5.1

(a) Number and proportion of MSC fisheries* with scores at or above 90 for both PIs 1.2.1 and 1.2.2 (with target stock management above best practice), between 80 and 90 (with target stock management at best practice) and below 80 (with improving target stock management to best practice) by year; (b) Number of action plans for the improvement of target species management completed per year. (N₂₀₁₃ = 210; not all fisheries could be mapped against the 2008 default assessment tree).

Canadian Scotia-Fundy haddock fishery

Background

The Canadian Scotia-Fundy haddock (*Melanogrammus aeglefinus*) fishery was certified in 2010. Vessels fish for haddock in Northwest Atlantic Fisheries Organization (NAFO) areas 4X5Y and 5Z primarily using otter trawls and bottom longlines with a few using handlines and gillnets. Haddock is a member of the Gadidae family (cod), found in the northwest and northeast Atlantic Ocean. Haddock live close to the sea bed on pebble-gravel, broken ground and sand and are most common at 40 m to 150 m depths. Haddock mainly prey upon bottom dwelling invertebrates although adults will occasionally consume fish eggs and small fishes such as herring.

Actions needed

Even though the fishery had information to support the definition of fishing mortality consistent with maximum sustainable levels, evidence that a change in stock status would result in a reduced quota was missing. Therefore, the certification team concluded that well defined and effective harvest control rules consistent with the harvest strategy should be

developed to ensure the long term health of the fish stock¹. To complete the improvement action plan, the fishery was asked to ensure that the harvest control rule was well-defined, pre-agreed and formalised.

Improvements achieved

The fishery client, the Groundfish Enterprise Allocation Council, defined harvest objectives, strategies, and control rules in their Integrated Fishery Management Plan (IFMP). The adjusted IFMP summary for the Scotia-Fundy Sector Maritimes Region (2012) defines harvest strategy and harvest control rules relating to setting the Total Allowable Catch (TAC) by following pre-determined reference points and risk tolerances. In addition, the IFMP outlines a productivity strategy aiming at “mitigating decline and, when possible, to promote positive biomass change over a three year period when a stock is below its upper reference point”².



Haddock (*Melanogrammus aeglefinus*)

1 MoodyMarine, 2010. Public Comment Draft Report The Canada Scotia – Fundy Fishery for Haddock (*Melanogrammus aeglefinus*) in NAFO Sea Areas 5Zjm, 4X5Y. Version 3. 229 p. Accessed at: www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-west-atlantic/canadian_scotia_fundy_haddock/assessment-downloads-1/01.06.2010%20Canada%20Scotia%20Fundy%20haddock%20PCDR.pdf

2 SCS 2012. Scotia-Fundy haddock fishery. 2012 MSC Surveillance Visit Report Certificate Number: F-SCS-0026. Accessed at: www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-west-atlantic/canadian_scotia_fundy_haddock/assessment-downloads-1/20130103_SR_HAD28.pdf

3 Note: some of these fisheries are not currently engaged in the MSC program but have made improvements in stock management while certified

Other fisheries with improved stock management³

BSAI pollock, Lake Hjälmaren pikeperch, Canada Scotian Shelf Northern prawn trawl, Barents Sea cod and haddock, Denmark blue shell mussel, Lakes and Coorong, South Australia, IPSP western mackerel, South Georgia icefish pelagic trawl, North Eastern IFCA sea bass, Western Australian rock lobster, South Brittany sardine purse seine, ISF Icelandic haddock, Pacific hake mid-water trawl; Cornwall sardine, UK; and 9 other fisheries.

6. Information on the target stock



Description

Information is vital when it comes to assessing the health of a fish stock and to provide evidence of the effectiveness of the harvest strategy. The MSC standard requires detailed and accurate information on stock structure and productivity, fleet composition and all fishery removals as well as a peer-reviewed stock assessments that take uncertainty into account. This indicator tracks fisheries with comprehensive information and assessment of target stock, highlighting also those fisheries that have action plans for improving such information.

Outcome

88 per cent of fisheries have high-quality information on the target stock and their assessments include main uncertainties and a peer-review process, with only 12 per cent of fisheries needing improvements. 145 improvement action plans of information, monitoring and assessment of stock status have been completed since 2006 with 40 completed in 2013. Improvements included the establishment of observer or tagging programs and other monitoring systems in support of the harvest strategy and harvest control rules. Improvements in the information needed for stock assessment have been generated through better logbook data, electronic monitoring, community-based data collection programs and external peer-review of data and methods.

Definition

Number and proportion of MSC-certified fisheries with comprehensive information on stock assessment and harvest strategy, and those that are improving their information.

Source

MSC scoring data

Relevance

Sustainability
Objective 1.1

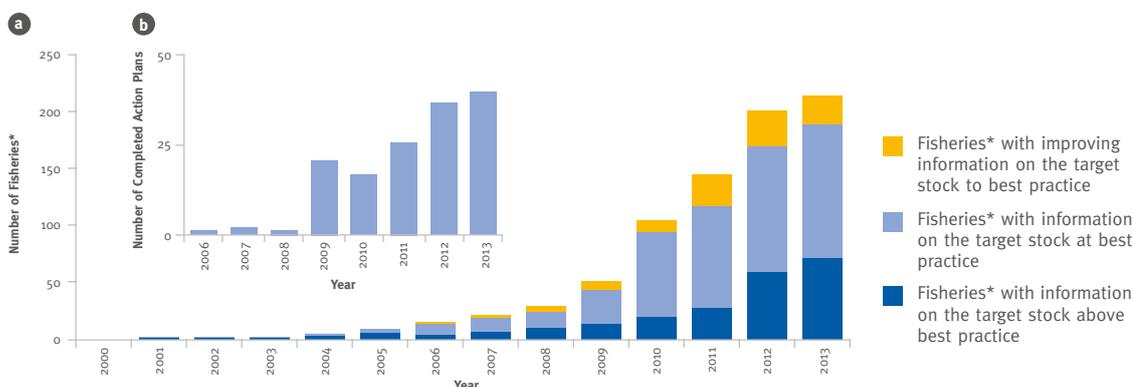


Figure 6.1
(a) Number and proportion of MSC fisheries* with scores at or above 90 for both Pls 1.2.3 and 1.2.4 (with information above best practice), between 80 and 90 (with information at best practice) and below 80 (with information meeting the minimum acceptable limit and improving towards best practice) by year; (b) Number of action plans for the improvement of target species information and assessment completed by year. (N₂₀₁₃ = 214; not all fisheries could be mapped against the 2008 default assessment tree.)

Oregon pink shrimp fishery

Background

The Oregon pink shrimp (*Pandalus jordani*) fishery was first certified in 2007 and re-certified in 2012. This fishery is one of the most valuable fisheries in Oregon. It is operated by independent fishers and their families, and employs otter trawls with mandatory bycatch reduction devices. As a result, it is considered one of the lowest bycatch shrimp trawl fisheries in the world. Populations vary widely from year to year given the biology of the species and annual landings have averaged at 11 800 metric tons over the last 31 years. Seasonal closures minimise interference with their reproductive season, thus avoiding taking immature shrimp.

Actions needed

The fishery underwent a pre-assessment in 2004, which revealed a number of issues that needed improvement. It was subsequently certified in 2007 with a number of improvement action plans, including formalising reporting of landings, discards and incidental mortality of juvenile and adult shrimp. At re-assessment in 2011, further actions were identified, including definition of limit and

target reference points consistent with maximum sustainable yield (MSY) and fishery specific management of which the fishery continues to make improvements to complete their action plan.

Improvements achieved

By 2009, the fishery increased the use of logbooks to 78 per cent of the total fishing trips for catch data and to 68 per cent for discards data. The fishery has maintained an annual monitoring and reporting program in order to be able to model the stock dynamics periodically and detect any sustained, fishery-related declines in stock status. A specific management approach considering the life history cycle and population dynamics of this species has been developed. This includes reduction in fishing effort whenever there is in-season evidence that spawning biomass may be low and adjustments based on prevailing environmental conditions. This fishery is considered to be well managed and the catch per unit of effort has increased by almost 130 per cent since the stock was initially certified in 2007 as a result of reduced fishing effort and favourable environmental conditions¹.



© Jon Blanchard

The F/V Carter Jon fishing for Oregon pink shrimp off of Port Orford, Oregon

Other fisheries with improved target stock information²

Astrid Fiske North Sea herring, Netherlands blue shell mussel, Western Australian rock lobster, Norway North Sea saithe, Gulf of Alaska flatfish, DFPO Denmark North Sea & Skagerrak saithe, CVO North Sea plaice and sole, Barents Sea cod and haddock, Ross Sea toothfish longline, Eastern Canada offshore lobster; and 35 other fisheries.

¹ ODFW 2014. *The Population Dynamics of Oregon Ocean Shrimp (Pandalus jordani) and Recommendations for Management Using Target and Limit Reference Points or Suitable Proxies*. Information reports No 2014-08.
² Note: some of these fisheries are not currently engaged in the MSC program but have made improvements in information on target stock while certified

7. Status of non-target species



Description

As part of any fishing operation, the fishery may catch species other than the target species, which are either retained or discarded (here called bycatch). It is important that fishing does not pose a risk of serious or irreversible harm to these retained or bycatch species, and does not hinder their recovery when depleted. This indicator tracks the number of fisheries meeting the MSC requirements for non-target species to be within biological limits (i.e. above the point where recruitment could be compromised) or, if they are not, for the fishery to have demonstrably effective management or mitigation measures that do not hinder recovery of those species. Such measures might be a switch to more selective gears, excluder devices or streamer lines to minimise seabird mortality. An action plan requires the fishery to make specific changes to its operation to reduce impacts

or to undertake additional research to confirm that its actions are not irreversibly harming non-target species.

Outcome

The proportion of fisheries with non-target species below biological limits has declined from 26 per cent in 2012 to 22 per cent in 2013. These fisheries are required to implement improvement action plans to avoid irreversible harm to these species. Nine action plans to improve non-target species status had been completed by 2013, including improvements in data collection, development of comprehensive analysis of retained species, improvement in management to avoid irreversible harm, and changes in gear selectivity. Many more improvements were generated for non-target species status but could not be mapped against the FAM due to changes in number and nature of performance indicators. See Appendix 2 – Technical methodology in Global Impacts Report 2013¹.

Definition

Number and proportion of MSC-certified fisheries with non-target species above biological limits, and those with measures to improve their status.

Source

MSC scoring data

Relevance

Sustainability Objective 1.1

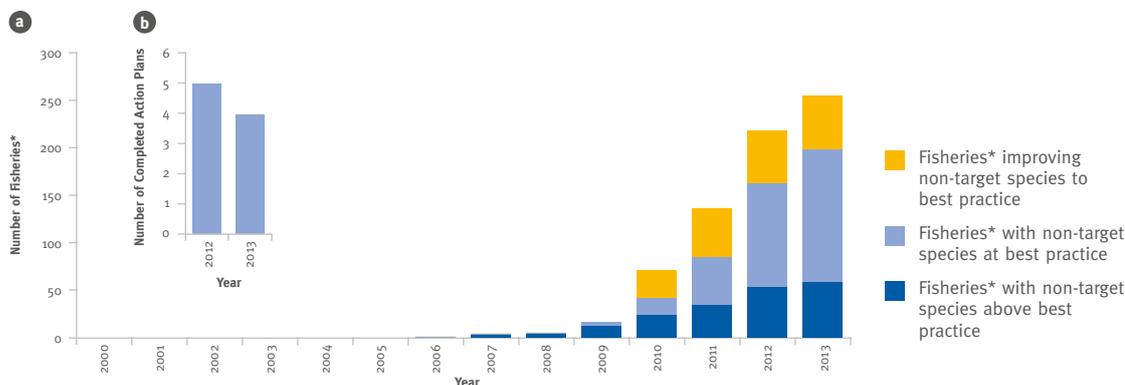


Figure 7.1
(a) Number and proportion of MSC fisheries* with scores at or above 90 for both Pls 2.1.1 and 2.2.1 (with non-target species status above best practice levels), between 80 and 90 (with non-target species status at best practice) and below 80 (with non-target species status above minimum acceptable limits, and improving to best practice) by year; (b) Number of action plans for the improvement of non-target species status completed by year. (N₂₀₁₃ = 255; not all fisheries could be mapped against the 2008 default assessment tree.)

South Africa hake fishery

Background

The South African hake (*Merluccius paradoxus* and *M. capensis*) fishery is one of South Africa's oldest commercial fisheries. Momentum from the industry and support from the South African Government and NGOs helped the hake fishery certification in 2004, re-certification in 2010, and the process towards third certification. The offshore trawl fishery mostly targets deepwater *M. paradoxus*, whereas shallow water *M. capensis* is the target of the inshore trawl fishery. The two species overlap in their depth distribution, and are both found from the Namibian border on the west coast and then eastwards to the Agulhas Bank on South Africa's east coast. Growth in both species is slow, and individuals can reach 140 cm in length². Hake are piscivorous as adults, feeding at night, whereas they aggregate near the bottom during the day, which is when they are mostly caught.

Actions needed

The first certification cycle identified data deficiencies in stock structure, impacts of trawling on benthic habitats and impacts on seabird populations. In addition it identified a need for stronger management measures for bycatch species such as kingklip and monk. As a

response, the fishery implemented action plans that resulted in substantial improvements in these areas. The review of the impacts on seabird populations indicated that a significant number of seabirds were killed when birds struck trawl cables, which triggered additional actions for the fishery to implement effective mitigation measures to reduce these interactions.

Improvements achieved

Since the fishery was first certified as sustainable by the MSC in 2004, the fishery has implemented changes to secure the long-term future of the fishing economy and environment. To minimise impacts on the seafloor, the industry has 'ring-fenced' existing fishing grounds to reduce the amount of habitat affected. The fishery has introduced precautionary bycatch management measures for monk (catch limits) and kingklip (catch limits and seasonal closures). Working with BirdLife South Africa's Albatross Task Force and with support from the government, the fishery implemented the use of bird scaring lines (tori lines) and conducted scientific research into the effectiveness of this measure. A recent study using observer data shows a 90 per cent reduction in seabird mortalities, including up to a 99 per cent reduction in albatross deaths since 2004³.



© Bronwyn Maree

South African hake fishery bird scaring lines (tori lines)

Other fisheries with improved status of non-target species

Aker Biomarine Antarctic krill, Canada sablefish, Canada Scotia-Fundy haddock, DFPO Denmark Eastern Baltic cod, DFPO Denmark North Sea plaice, DFPO Denmark North Sea sole, OCI Grand Bank yellowtail flounder trawl and Osprey Trawlers North Sea twin-rigged plaice.

¹ MSC, 2013. Marine Stewardship Council: Global Impacts Report 2013. MSC, London, UK. 56pp ISSN 2052-8876
² <http://fishbase.sinica.edu.tw/summary/SpeciesSummary.php?id=1828>
³ Maree, B. A., Wanless, R. M., Fairweather, T. P., Sullivan, B. J. and Yates, O. (2014), Significant reductions in mortality of threatened seabirds in a South African trawl fishery. *Animal Conservation*. doi: 10.1111/acv.12126

8. Status of Endangered, Threatened and Protected species (ETP)



Description

Fishing gear can accidentally capture Endangered, Threatened and Protected (ETP) species, such as marine mammals, seabirds and turtles. This could be a serious threat to their recovery and conservation. The MSC standard therefore requires that fishing does not pose a risk of serious or irreversible harm to ETP species and does not hinder their recovery. This indicator tracks the number of fisheries that meet best practice, and those that are improving to that level. For a fishery to score 80 on this Performance Indicator (PI), the effects of the fishing operations should be known and be *highly likely*¹ to be within limits of national and international requirements for protection of ETP species, and direct and indirect effects to be highly unlikely to lead to unacceptable impacts on these species. An action plan for improvement for

this PI could require that the fishery makes changes to its operations to minimise impacts on ETP species or, if the impact of the fishery is currently uncertain, to undertake research to confirm that the impacts are highly unlikely to cause serious or irreversible harm.

Outcome

No certified fisheries cause serious or irreversible harm to ETP species and the proportion of those with scores at or above best practice has increased from 73 per cent in 2009 to 88 per cent in 2013. 21 action plans for improvement on ETP species have been closed since 2008, by improving data collection and research on ETP species, developing comprehensive analysis of potential impacts of fishing, and implementing changes in fishing operations and gear to avoid unacceptable impacts.

Definition

Number and proportion of MSC-certified fisheries with ETP species above biological limits, and those with measures to improve their status.

Source

MSC scoring data

Relevance

Sustainability Objective 1.1

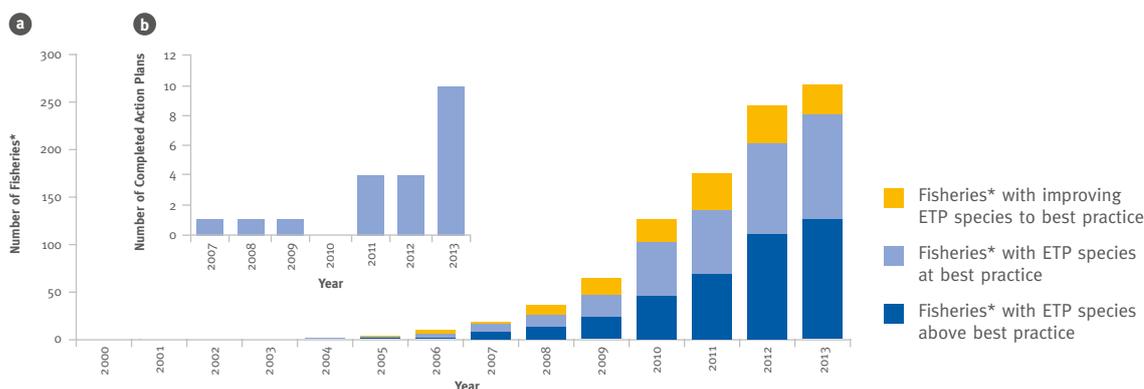


Figure 8.1 (a) Number and proportion of MSC fisheries* with ETP scores at or above 90 (with ETP species status above best practice), between 80 and 90 (with ETP species status at best practice), and below 80 (with ETP species status above minimum acceptable limits, and improving to best practice) by year; (b) Number of action plans for the improvement of ETP species status completed by year. (N₂₀₁₃ = 268; not all fisheries could be mapped against the 2008 default assessment tree.)

The DFPO Denmark North Sea and Skagerrak saithe fishery

Background

The DFPO Denmark North Sea and Skagerrak saithe (*Pollachius virens*) fishery was pre-assessed in 2009 and fully certified in 2011. Saithe in the North Sea are mainly taken in a directed trawl fishery in deep water near the Northern Shelf edge and the Norwegian deeps. All certified Danish vessels, covering demersal trawl, Danish seine and set nets have signed up to the DFPO Code of Conduct addressing sustainability and minimising environmental impacts. Large saithe gradually migrate at around 3 years of age from the coastal areas to the northern part of the North Sea, mainly along the shelf edge, where the feeding grounds of the adult part of the stock are situated. Fish mature at between 4 and 6 years of age, and spawning takes place from January to March.

Actions needed

Several elements in the status and management of ETP species have been highlighted as needing improvement. A strategy was needed to monitor, manage and reduce the impacts of the fishery on ETP species. In particular, the fishery has to demonstrate a commitment to minimise landings of common

skate and spurdog (also known as spiny dogfish) in line with the European Commission Regulations as well as improve recording and monitoring of harbour porpoises and seabirds.

Improvements achieved

Regarding ETP species, the DFPO fishery has created an operational expansion of its current Code of Conduct to include a requirement on recording all interactions with ETP species by the fleet. To minimise landings of skate and spurdog the fishery has undertaken intense communication with DFPO members. Danish Fisheries Directorate has issued an official notice to remind fishers of the skate and spurdog landing ban. Since these actions were taken by the DFPO, landings of common skate have been reduced to very low levels (5 kg recorded from the North Sea and 626 kg from the Skagerrak in 2011) and landings of spurdog have declined from 15 to 20 tons in 2008/09 to less than 1 ton in 2012². In addition, DFPO has committed to raise awareness with their members by distributing ETP identification manuals allowing identification and release of common skate alive as well as to ensure adherence of zero spurdog Total Allowable Catch (TAC) by their fleet.



Saithe (*Pollachius virens*)

© Scandinavian Fishing Year Book

Other fisheries with improved status of ETP species

Eastern Canada offshore lobster, Ekofish Group North Sea twin rigged otter trawl plaice, Hastings fleet Dover sole, Norway North Sea and Skagerrak herring, PNA Western and Central Pacific skipjack tuna, Portugal sardine purse seine, Scapêche and Compagnie des Pêches Saint Malo saithe, UK Fisheries/DFPU/Doggerbank Group saithe, Vietnam Ben Tre clam hand gathered, Western Australian rock lobster; and 8 other fisheries.

¹ 'Highly likely' (Principle 2) means greater than or equal to the 70th percentile in the distribution.
² Food Certification International. 2012. MSC Surveillance Report 2012. Accessed at: www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/dfpo-denmark-saithe/assessment-downloads-1/20120322_SR.pdf

9. Status of habitats and ecosystems



Description

Healthy marine habitats, particularly benthic ones, are important for maintaining populations of fish and other organisms but can be sensitive to change and disruption caused by certain types of fishing. Areas fished with bottom contact gears will have differing levels of impact on benthic habitat structure, depending on the biophysical environment. Fishing may also affect ecological processes at a large scale, modifying the interactions among species and flows of energy through an ecosystem. The habitat and ecosystem components of the MSC standard consider the broad ecological community and ecosystem in which the fishery operates and require no serious or irreversible harm results from fishing. When impacts are less certain, or improvements are needed, the fishery will receive a score between 60 and 80 and will be required to develop an action plan for improvement. These include making changes to fishery operations or undertaking additional research

to be confirmed as meeting the MSC's requirement of best practice. A completed action plan means there has been an improvement in habitat and/or ecosystem impact mitigation and/or in information related to such impacts. For *key low trophic level species*¹ that play a critical role in their wider ecosystem, the MSC requires more precautionary management to maintain higher stocks, protecting the needs of other species in the ecosystem. This is not scored in the ecosystem impacts area of the default assessment tree, but in relation to the target species (indicator 4).

Outcome

The proportion of fisheries in the MSC program with habitat and ecosystem impacts at or above best practice has increased from 71 per cent in 2009 to 82 per cent in 2013, meaning the proportion of fisheries with very low impacts has risen. The 29 completed action plans have improved monitoring and reporting of habitat impacts, increased the research on gear impacts, and resulted in the mitigation of impacts through changes in gear use and the creation of closed or reduced impact areas of seabed.

Definition

Number and proportion of MSC-certified fisheries with significant habitat and ecosystem impact, and those which are making improvements to minimise levels of habitat or ecosystem impact.

Source

MSC scoring data

Relevance

Sustainability Objective 1.1

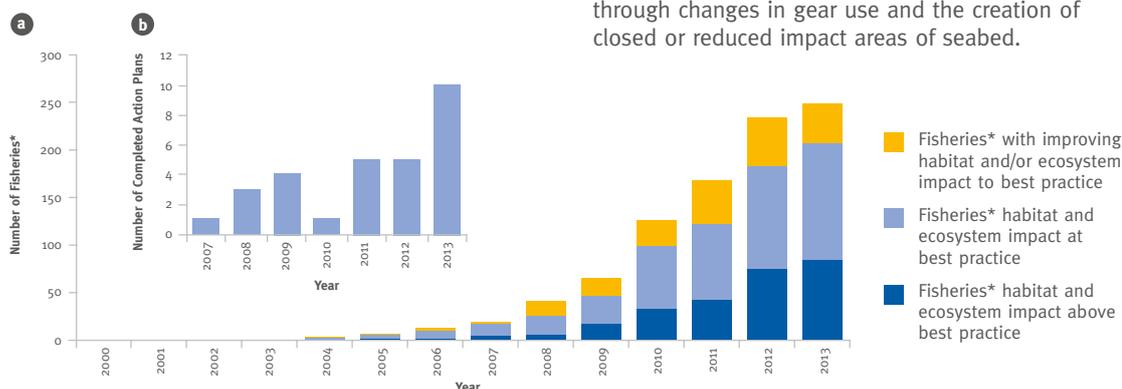


Figure 9.1 (a) Number and proportion of MSC fisheries* with habitat and ecosystem outcome scores at or above 90 (with habitat and ecosystem impact above best practice), between 80 and 90 (with habitat and ecosystem impact at best practice), and below 80 (impacts on habitat and/or ecosystem improving towards best practice) by year; (b) Number of action plans for the improvement of habitat and ecosystem status completed by year. (N₂₀₁₃ = 249; not all fisheries could be mapped against the 2008 default assessment tree).

Pacific hake mid-water trawl fishery

Background

The Pacific hake (*Merluccius productus*) mid-water trawl fishery certificate, awarded in 2009, covers approximately 75 vessels which operate offshore within the limits of the US and Canadian Pacific Economic Exclusive Zones. The fishery targets offshore Pacific hake inhabiting the epi-mesopelagic (between the sunlight and twilight zone) of the continental shelf. Annual migrations of large schools occur between southern spawning grounds off the southern coast of California, and northern feeding grounds that have extended as far as Alaska. Pacific hake can grow up to 91 cm and can live up to 16 years.

Actions needed

The MSC assessment identified multiple improvements that needed to be made including greater understanding of life history characteristics for assessment, understanding of the effects of environment on hake abundance, development of an effective precautionary harvest strategy, and the acquisition of information on discards and fishery

impacts on ecosystems and habitats². Specifically for habitats and ecosystems, the fishery needed to provide evidence of how fishery affects biological diversity and productivity within the fishing areas.

Improvements achieved

The fishery has examined how its operation affects biological diversity and ecosystem productivity. The Pacific Fishery Management Council's Essential Fish habitat (EFH) Review Committee reported that effects of the fishery on habitat are generally limited to prey and groundfish removal, occasional unintentional bottom contact and gear loss³. No unacceptable impacts were indicated from current information of habitats status being degraded such that the fishery would be considered unsustainable.



Pacific Hake (*Merluccius productus*)

¹ Species such as anchovy or krill that form the same ecosystems, and on which a very large number of predators depend.
² TAVEL certification INC, 2009. Pacific Hake (*Merluccius productus*) Mid-Water Trawl Fishery US (WOC) Pacific EEZ and Canadian Pacific EEZ Waters PUBLIC CERTIFICATION REPORT. Accessed at: www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/pacific-hake-mid-water-trawl/assessment-downloads-1/13.10.2009-pacific-hake-pcr.pdf IFC, 2012. Surveillance Report
³ PACIFIC HAKE MIDWATER TRAWL FISHERY- USA EEZ Waters Certificate No.: MML-F-092 & Canadian EEZ Waters Certificate No.: MML-F-091. Accessed at: www.msc.org/track-a-fishery/fisheries-in-the-program/certified/pacific/pacific-hake-mid-water-trawl/assessment-downloads-1/20130128_SR_HAK95.pdf

Other fisheries with improved status of habitats and ecosystems⁴

Alaska Pacific cod – Gulf of Alaska, Australia mackerel icefish, Canada Pacific halibut (British Columbia), Canada Scotian Shelf Northern prawn trawl, Eastern Canada offshore scallop, New Zealand hoki, Ross Sea toothfish longline, South Africa hake trawl, Vietnam Ben Tre clam hand gathered; and 8 other fisheries.

⁴ Note: some of these fisheries are not currently engaged in the MSC program but have made improvements in status of habitat and ecosystems while certified

10. Management of non-target and Endangered, Threatened and Protected species (ETP), habitat and ecosystem impacts



Description

Fishing activities inevitably impact a variety of species, habitats and ecosystems. The MSC standard requires that fishing operations should allow for the maintenance of the structure, productivity, function and diversity of the ecosystem (including habitat and associated dependent and ecologically related species) on which the fishery depends. This indicator tracks the number of fisheries where there are effective strategies in place to manage retained, bycatch, and Endangered, Threatened and Protected (ETP) species, habitat and ecosystems. These strategies should be designed to ensure the fishery does not pose a risk of serious or irreversible harm to any component of the ecosystem.

Outcome

The proportion of fisheries in the MSC program requiring improvements to their ecosystem management approaches slightly increased after 2008 with the implementation of the fishery assessment methodology which introduced habitat and ecosystem components in addition to non-target species components. This is partly due to new fisheries with more improvements required in such areas entering the program. In 2013, 75 per cent of fisheries* have management of non-target and ETP species, habitats and ecosystem at or above best practice. Thirty-one improvement action plans have been completed since 2006 with 18 completed in 2012 and 2013. These resulted in improvements in stock assessments for non-target species, information and monitoring of ETP species, bycatch mitigation measures and implementation of management plans at the government level.

Definition

Number and proportion of MSC-certified fisheries with comprehensive management of impacts in all components of the ecosystem, and the number of fisheries improving some aspect of their management of impacts in all components of the ecosystem.

Source

MSC scoring data

Relevance

Sustainability Objective 1.1

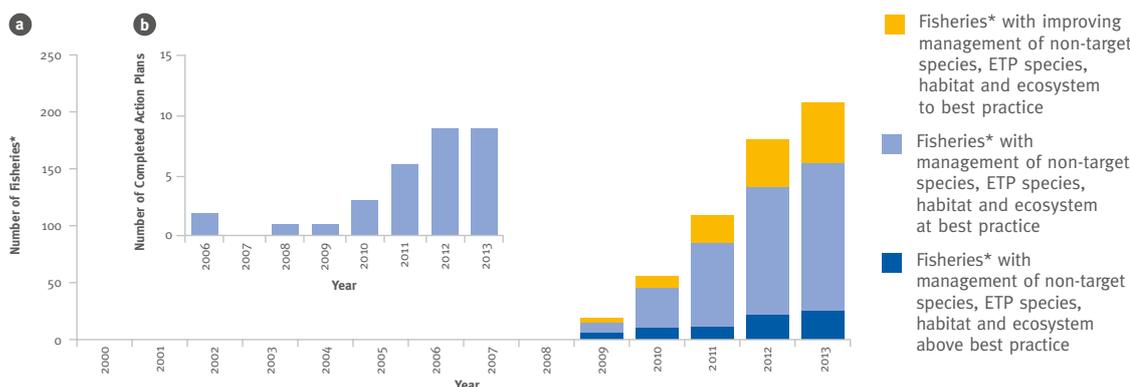


Figure 10.1 (a) Number and proportion of MSC fisheries* with all management scores for non-target species, ETP species, habitat and ecosystem scores at or above 90 (above best practice), between 80 and 90 (at best practice), and below 80 (improving towards best practice) by year; (b) Number of action plans for the improvement of non-target species, ETP species, habitat and ecosystem management completed by year. (N₂₀₁₃ = 208; not all fisheries could be mapped against the 2008 default assessment tree).

The Fiji albacore tuna fishery

Background

The pre-assessment of the Fiji albacore tuna (*Thunnus alalunga*) fishery conducted in 2007 set the path for its certification in 2012. Fishing methods include longlines with baited hooks suspended in the water column around 300 to 400 m. Albacore tuna is a highly migratory pelagic fish species found throughout the world's tropical and sub-tropical oceans, comprising a discrete stock in the South Pacific Ocean. The species is an opportunistic carnivore which feeds on a wide variety of small fish, planktonic crustaceans and squid. The fish reach the size of first maturity (about 80 cm fork length) at approximately five years of age and growth attenuates in subsequent years. The maximum recorded length is about 120 cm fork length.

Actions needed

Shark bycatch was identified as a potential issue during the 2007 pre-assessment of this fishery, although limited quantitative information precluded the development of appropriate minimisation strategies. The fishery was therefore certified in 2012 with conditions to

provide evidence that effective management measures are in place to ensure the fishery does not hinder the recovery and rebuilding of the blue, short-finned mako, silky and oceanic whitetip sharks.

Improvements achieved

The Fiji Tuna Boat Owners Association, in collaboration with the Fiji Ministry of Fisheries, have initiated a strategy and implementation plan to reduce the bycatch of sharks during fishing. The strategy includes the prohibition of wire traces, deep-set fishing, the use of small circular hooks, and the recommended release of live sharks. Landing Oceanic whitetip sharks is already banned and a ban on landing silky sharks has come into place in August 2014¹. Vessels are also required to complete the South Pacific Regional Longline logsheet to report catches of the major shark species to monitor fishery interactions. Finally, the Fiji national observer program has increased its coverage of longline vessels from 3 per cent to 8.5 per cent in 2012² which will inform the effectiveness of the mitigation measures implemented.



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Fijian fishery boat

Other fisheries with improved management of non-target and ETP species, habitat and ecosystem impacts

Alaska pollock – Bering Sea and Aleutian Islands, Alaska pollock – Gulf of Alaska, Canada Scotian Shelf Northern prawn trawl, Eastern Canada offshore lobster, Irish Pelagic Sustainability Group (IPSG) western mackerel pelagic trawl, New Zealand EEZ southern blue whiting pelagic trawl, OCI Grand Bank yellowtail flounder trawl, Osprey Trawlers North Sea twin-rigged plaice, PNA Western and Central Pacific skipjack tuna, SFSAG North Sea haddock; and 10 other fisheries.

¹ WCPFC 2013. Conservation and management measures for silky sharks. Commission Tenth Regular Session, Cairns, Australia. Accessed at: www.wcpfc.int/doc/cmm-2013-08/conservation-and-management-measure-silky-sharks

² WCPFC. 2013. Annual Report to the Western and Central Pacific Fisheries Commission. Part 1: Information on Fisheries, Research and Statistics 2012. WCPFC Scientific Committee, Ninth Regular Session, 6-14 August 2013, Pohnpei, Federated States of Micronesia. WCPFC-SC9-AR/CCM-07 Rev 1.

11. Information on non-target and Endangered, Threatened and Protected species (ETP), habitat and ecosystem



Description

In the past decade, the requirements for ecosystem-based management of marine resources have grown considerably. Yet, our knowledge of ecosystem attributes remains limited and affects the predictability of sustainable fisheries management. Lack of adequate information on ecosystem components (i.e., non-target and ETP species, habitat and ecosystem) often leads to uncertain assessments of impact. The first hurdle for managers, therefore, is to ensure that all relevant information is available for assessment and information gaps are identified. The MSC standard requires all certified fisheries to have adequate knowledge and understanding of these components to enable best practice management of fishery impacts. This indicator shows the number and proportion of MSC-certified fisheries with comprehensive understanding of the non-target species, ETP species, habitats and ecosystem structure and functioning. Fisheries where information quality, fishery impacts, understanding

and/or monitoring of any of these components are not clearly understood or not at best practice will have to fulfil an action plan for improvement.

Outcome

In order to reflect the trend towards ecosystem-based management of fisheries, the MSC added a PI to the 2008 default assessment tree which requires certified fisheries to have adequate information on the structure and functioning of their associated ecosystem and to monitor all impacts. Since then, more than 81 fisheries have improved information on non-target and ETP species, habitats, and ecosystem structure and function. Although these improvements resulted in a higher proportion of fisheries performing at best practice level, the proportion of fisheries above best practice has not increased in the last three years, reflecting the difficulty of acquiring high quality information on the ecosystem impacts of fishing.

Definition

Number and proportion of MSC-certified fisheries with comprehensive information on non-target species and ETP species as well as information on habitat and ecosystems, and those that are improving their information.

Source

MSC scoring data

Relevance

Sustainability Objective 1.1

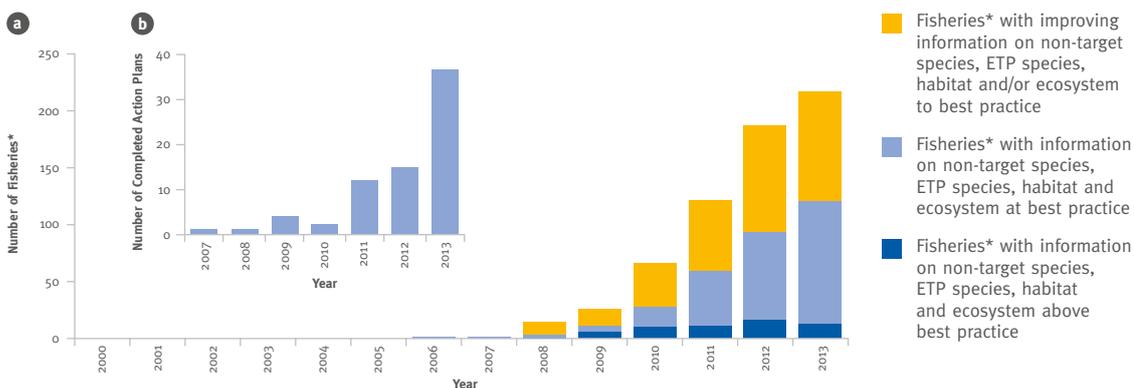


Figure 11.1
(a) Number and proportion of MSC fisheries* with all information scores for non-target species, ETP species, habitat and ecosystem scores at or above 90 (with information above best practice), between 80 and 90 (with information at best practice), and below 80 (with information meeting minimum acceptable limits and improving towards best practice) by year; (b) Number of action plans for the improvement of non-target species, ETP species, habitat and ecosystem information completed by year (N₂₀₁₃ = 217 fishery* units; not all fisheries could be mapped against the 2008 default assessment tree).

OCI Grand Bank yellowtail flounder fishery

Background

The Ocean Choice International Grand Bank yellowtail flounder (*Limanda ferruginea*) trawl was certified in 2010 for NAFO area 3LNO managed by NAFO and Fisheries and Ocean Canada. Four vessels are licenced to operate in the fishery all using bottom otter trawl. When localised bycatch is high, the fishery uses alternative fishing grounds and sorting grids, with 10cm spacing to exclude cod, to reduce bycatch. In 2013 the fishery landed over 8 000 metric tons of flounder. Flounder are found only in the western North Atlantic and are distinguishable by their yellow tails.

Actions needed

As part of the initial assessment a need for more detailed information on the function of the key elements of the ecosystem was identified. In order to understand impacts of gear on habitat it was recommended that the client undertake and independent, peer-reviewed analysis of the seabed and the impacts of the demersal otter trawl on the Grand Bank.

Improvements achieved

In 2012 and 2013 the client commissioned two independent reports to investigate these issues¹. These reports have developed a greater understanding of the Grand Banks habitat and the benthic impacts from demersal otter trawling. The quantitative analysis of fishing activity in space and time over the last 11 years was excellent and provides a better understanding of the potential for physical impacts to occur. As a result of the study the knowledge of benthic habitat and ecosystems in the area of the fishery is improving and efforts to gather and monitor information pertaining to the habitat and ecosystem continue. It was also verified that the fishery occurs almost exclusively on a predominantly sandy seabed, with small quantities of mud.



Fishery Vessel Aquiv

© Ocean Choice International

Other fisheries with improved information on non-target and ETP species, habitat and ecosystem

Australia Northern prawn, CVO North Sea plaice and sole, DFPO Denmark North Sea sole, Eastern Canada offshore scallop, Germany North Sea saithe trawl, Mexico Baja California red rock lobster, Eastern Canada offshore lobster, Ozernaya River sockeye salmon, Portugal sardine purse seine, Scapêche and Compagnie des Pêches Saint Malo saithe; and 36 other fisheries.

¹ IFC, 2013. Report for OCI Grand Bank yellowtail flounder. Accessed at: www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-west-atlantic/oci-grand-bank-yellowtail-flounder/assessment-downloads-1/20131211_SR_FLO92.pdf

12. Governance and policy



Description

Effective governance and fishery policy are essential components of fishery management and are required for ensuring that a fishery is sustainable now and in the future. This indicator tracks the performance of a fishery's governance arrangements, legal status, the use of positive incentives and the avoidance of negative incentives for sustainability, such as some subsidies, as well as long-term objectives of the management system.

Outcome

The proportion of fisheries in the MSC program with effective governance and policy has increased from 83 per cent in 2009 to 94 per cent in 2013. The proportion of fisheries being required to make improvements in these areas has dropped to 6 per cent in 2013. A total of 28 action plans relating to governance and policy have been completed, resulting in improvements to long-term management plans, improvements in the incentives for sustainable behaviour, and promotion of better consultation mechanisms and co-management.

Definition

Number and proportion of MSC-certified fisheries with high performance across all MSC governance and policy requirements, and those making improvements in governance and policy.

Source

MSC scoring data

Relevance

Sustainability Objective 1.1

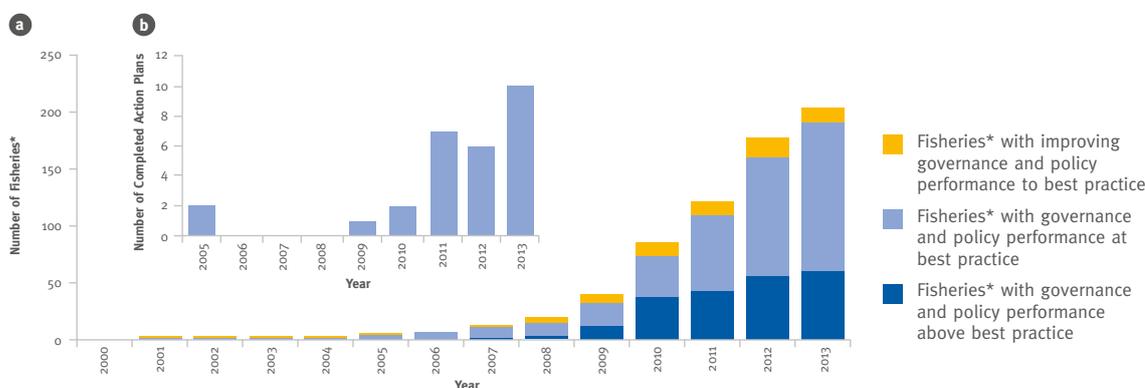


Figure 12.1

a) Number and proportion of MSC fisheries* with all governance scores at or above 90 (with governance above best practice), between 80 and 90 (with governance at best practice), and below 80 (with governance performance improving towards best practice) by year; (b) Number of action plans for the improvement of governance completed by year. (N₂₀₁₃ = 204; not all fisheries could be mapped against the 2008 default assessment tree).

Barents Sea cod and haddock fishery

Background

Certified in 2010, the Barents Sea cod (*Gadus morhua*) and Barents Sea haddock (*Melanogrammus aeglefinus*) 16 fishing vessels (today 17) operate in ICES areas I & II using demersal otter trawl. The spawning and nursery grounds are protected by permanent closures. The use of large 130mm mesh sizes and deployment of rockhopper or light footrope gear keeps bycatch relatively low within demersal fishing grounds.

Actions needed

The initial assessment reported a lack of adequate practical application of some international agreements including the 1992 Convention on Biological Diversity. The fishery was requested to work with national authorities to identify robust mechanisms to address risk and uncertainty in management and decision-making, and to influence future drafts of relevant legislation¹.

Improvements achieved

Ocean Trawlers have engaged with both Russian authorities and NGOs to present their views on sustainable fisheries management. In the three years since certification the fishery has attended many conferences, seminars and events to promote better long-term objectives. In the first year a round table meeting arranged by WWF Russia and the Russian Ministry of Economic Development was devoted to the development of an integrated management system of Russian seas². One aim focused on the creation of a clearer link to the principles of sustainable development and precautionary approach in the existing and future federal acts and regulations. Most recently (May 2013) the fishery co-organised with WWF a workshop to produce a resolution urging Russian authorities to amend the fishery law and other regulations with clear reference to application of precautionary and ecosystem approaches in fisheries management. This was addressed to the Russian Government, Russian Parliament (the State Duma) and Russian fishery management authorities².



© Ocean Trawlers

Trawler Kapitan Gromtsev

1 FCI, 2010. MSC SUSTAINABLE FISHERIES CERTIFICATION The Barents Sea Cod & Haddock Fisheries Public Certification Report 188p. Accessed at www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/barents-sea-cod-and-haddock/assessment-downloads-1/Public_Certification_Report_-_Final_-_BSCH.pdf
 2 FCI, 2013. MSC SUSTAINABLE FISHERIES CERTIFICATION Off-Site Surveillance Visit – Report for Barents Sea cod and Barents Sea haddock Fishery 27p. Accessed at www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/barents-sea-cod-and-haddock/assessment-downloads-1/20131209_SR_V2_COD10.pdf
 3 Note: some of these fisheries are not currently engaged in the MSC program but have made improvements in stock management while certified

Other fisheries with improved governance and policy³

Dutch rod and line sea bass, British Columbia pink salmon, Clearwater Seafoods Banquereau and Grand Bank Arctic surf clam, Eastern Canada offshore lobster, Eastern Canada offshore scallop, North West Atlantic Canada harpoon swordfish, OCI Grand Bank yellowtail flounder trawl, Osprey Trawlers North Sea twin-rigged plaice, Ross Sea toothfish longline, Spencer Gulf King prawn; and 6 other fisheries.

13. Fishery specific management



Description

Effective fishery-specific management objectives are essential not only for maintaining healthy stocks but also for implementing corrective measures when stocks are reduced. Key aspects of these objectives include effective decision-making processes, monitoring, control and surveillance mechanisms, the development of comprehensive research plans and a system for monitoring, evaluating and reviewing the performance of fishery-specific management. The MSC standard requires all these components to be in place for a fishery to become certified without an action plan for improvements.

Outcome

The proportion of fisheries with effective fishery-specific management has remained at around 69 per cent between 2010 and 2013. This is primarily due to the introduction of the default assessment tree in 2008, and its more stringent requirement for performance against four PIs that assess the fishery-specific objectives, decision-making processes, research planning and management performance evaluation. 104 action plans for improvements have been completed since 2005, with 31 completed in 2013. Improvements made include the introduction of regular internal and external reviews of management plans, formalisation of fishery-specific objectives at national and international levels, strengthening of compliance and enforcement systems, and development of scientific surveys and research plans.

Definition

Number and proportion of MSC-certified fisheries with comprehensive fishery-specific management systems and those improving their fishery-specific management systems.

Source

MSC scoring data

Relevance

Sustainability
Objective 1.1

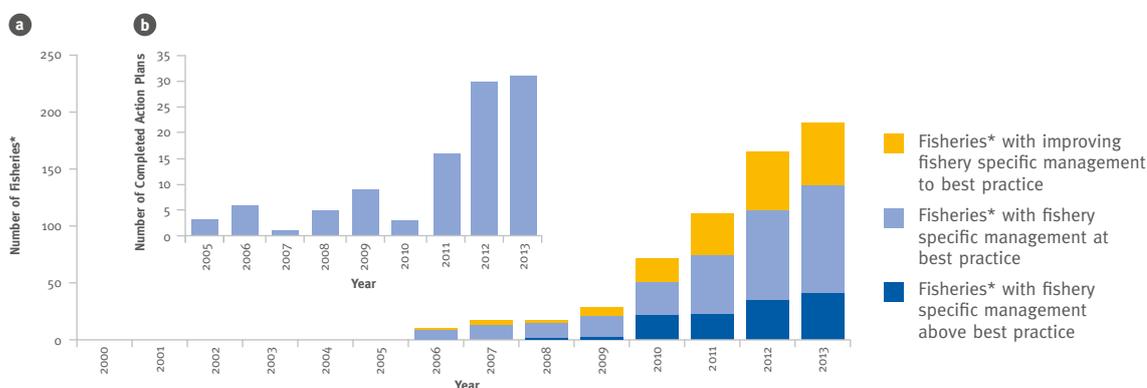


Figure 13.1

(a) Number and proportion of MSC fisheries* with all fishery specific management scores at or above 90 (with fishery specific management above best practice), between 80 and 90 (with fishery specific management at best practice), and below 80 (meeting the minimum acceptable level and improving to best practice) by year; (b) Number of fishery specific management action plans completed by year. (N₂₀₁₃ = 203; not all fisheries could be mapped against the 2008 default assessment tree).

Cornwall sardine fishery

Background

The Cornish sardine (*Sardina pilchardus*) fishery was certified in 2010. The fishery uses ring nets and small legal drift nets, operating in traditional areas within six miles off the coast of Cornwall. Sardines can be found throughout the North Atlantic eastern continental margin from Senegal to the British Isles and in the Mediterranean and adjacent seas. They are commercially exploited across their distribution range, with the most important fisheries occurring in upwelling areas. Sardine is a pelagic fish that forms large schools in depths of 10 m to 100 m. Schools of juvenile sardines tend to be separated from adults and are found closer to shore, typically associated with estuaries and rivers.

Actions needed

The Cornish Sardine is classified as a non-pressure stock and therefore not considered a priority for management. Some regulations are in place such as a restricted number of fishing licenses, minimum landing sizes, and limits to mesh sizes, but no Total Allowable Catches (TACs) or quotas are set for this

fishery. Thus, conditions for certification included explicit elaboration of short and long-term fishery-specific objectives that are consistent with achieving the MSC standard, developing and incorporating harvest control rules, and implementing a research plan including fishing surveys¹.

Improvements achieved

The fishery has made substantial progress on the design and implementation of research plans, which are now agreed by all stakeholders. The Cornish Sardine Management Association (CSMA) has agreed to develop a policy document establishing harvest control rules that all members have to comply with, which in turn requires monitoring of catch and bycatch data². Furthermore, CSMA has agreed to contribute to the implementation of a regional survey aimed at determining the age structure and distribution of sardine in the Southern Celtic Sea and Western English Channel and at locating the nursery grounds and distribution of eggs and larvae². This improved research plan and information will greatly contribute to a less uncertain management of Cornwall sardine.



Cornish Sardine fishing boat

¹ MRAG Americas, Inc., 2010. MSC Public Certification Report for Cornwall Sardine Fishery 131p. Accessed by: www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/cornwall-sardine/assessment-downloads/25_06.2010-cornish-sardine-public-certification-report.pdf

² MacAlister Elliot and Partners LTD, 2013. SURVEILLANCE VISIT REPORT FOR THE CORNWALL SARDINE FISHERY (SARDINA PILCHARDUS) CERTIFICATE CODE: MEP-F-014 SURVEILLANCE YEAR 3 43p. Accessed by: www.msc.org/track-a-fishery/fisheries-in-the-program/certified/north-east-atlantic/cornwall-sardine/assessment-downloads/20130820_SR_SAR031.pdf

Other fisheries with improved governance and policy

Canada northern and striped shrimp, Gulf of California Mexico sardine, Mexico Baja California red rock lobster, New Zealand albacore tuna troll, North Menai Strait mussel, Oregon Dungeness crab, SSMO Shetland inshore brown & velvet crab and scallop, South Brittany sardine purse seine, South Georgia Patagonian toothfish longline, US North Pacific sablefish; and 39 other fisheries.

14. Number and landings of fisheries in the MSC program



Description

This indicator reveals trends in the number of fisheries and their total landings currently certified and in assessment, and those that have exited the program and are suspended. The number of fisheries in assessment refers to fisheries at different stages of the assessment process, not pre-assessments or those that have dropped out. Calculating the number of fisheries in the MSC program in a given year is surprisingly complex. Certified fisheries may withdraw voluntarily at any time if they no longer wish to be certified or be reassessed. A number of certified fisheries may combine their certificates if they are able to. For example, four similar fisheries could become a single fishery with a unique fishery certificate. Certified fisheries may also be suspended at any time if they no longer meet the requirements of the standard. Suspended certificates may be re-instated if a fishery comes back into compliance with the

requirements, but only if the certificate is still within the five years term. All these events are taken into account when calculating the indicator presented here.

Outcome

The total number of MSC-certified fisheries by the end of 2013 was 224, with 98 more in different stages of the assessment process and total certified landings equivalent to 8 200 000 tonnes. In the last five years, the number of MSC-certified fisheries has shown a three-fold increase, currently corresponding to about 9 per cent of the global wild-capture. In 2013, 29 new fisheries were certified and 41 fisheries entered the MSC program. A greater variety of species was introduced to the market with these new certifications, which is helping commercial partners reach their commitments to source from MSC-certified sustainable fisheries.

Definition
Number and tonnage of fisheries engaged in the MSC program by year.

Source
MSC certificate data

Relevance
Sustainability
Objective 1.2 and 2.1

Figure 14.1
Number of fisheries becoming certified, being recertified, entering assessment and reassessment, being withdrawn and failing assessment in each year.

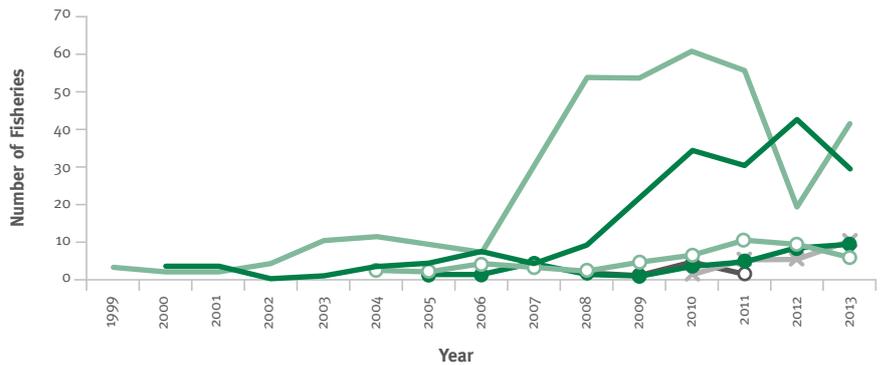
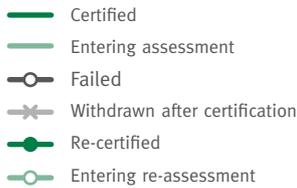


Figure 14.2
Cumulative number of certified fisheries, fisheries entering assessment, failing assessment and withdrawn from the program each year.

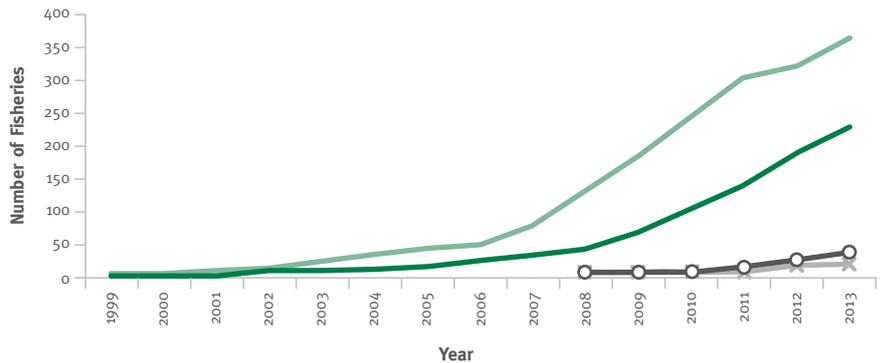
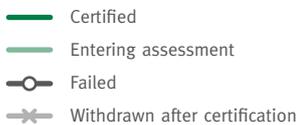
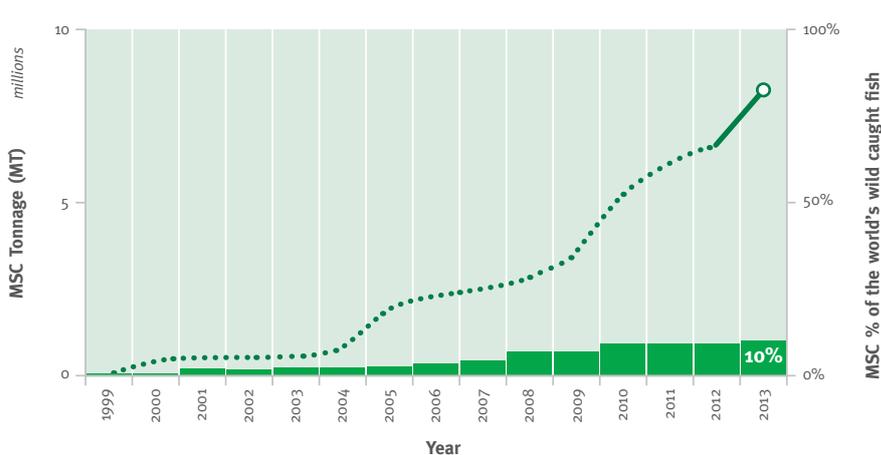
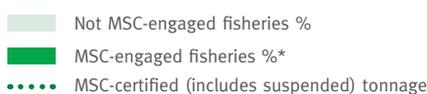


Figure 14.3
Trends in total landings (in tons) of MSC-certified fisheries and their combined percentage with respect to the global FAO landing estimates of wild capture. Dotted line represents the retrospective estimate of MSC landings.



*MSC-engaged fisheries include certified, suspended and in-assessment fisheries tonnages.

15. Program uptake in fisheries from developing countries



Description

Fishing plays a key role in developing world countries, providing the basis for economic activity, food security and livelihoods. The MSC aims to ensure that fisheries in Africa, Asia, Oceania, Latin America and the Caribbean also remain healthy, productive and profitable to the millions that rely on them. The MSC's Developing World Fisheries Program seeks to raise awareness and increase certification of fisheries from developing countries.

Outcome

Fisheries from developing countries account for 7 per cent of the total of MSC-certified fisheries. Although this number remains relatively low, three new fisheries from Latin America and Asia have entered assessment in 2013 and more are expected to enter assessment due to a continued development of accessibility tools.

Benchmarking and Tracking tool

The Benchmarking and Tracking Tool (BMT) is a new accessibility tool designed for use by pre-MSC fisheries which are making improvements towards sustainability in preparation for certification, also referred to as Fisheries Improvement Projects (FIPs). FIPs provide an important route towards certification for fisheries that are not immediately certifiable and which need to make information and management improvements before they can become certified.

The BMT allows users to benchmark current fishery status using a BMT index. This index is a measure of the current status of a pre-MSC fishery in relation to MSC's fishery performance indicators. In addition to benchmarking current status of a pre-MSC fishery or FIP, the BMT can be used to estimate expected increases in BMT index over time. This is based on the completion of milestones outlined in fisheries improvement action plans therefore tracking actual progress made by the fishery over the period of implementation of the action plan.

The tool will also provide a transparent mechanism for fisheries making improvements to communicate their progress with their stakeholders. A beta version of the BMT was released in 2013.

Definition

Number of developing country fisheries engaged in the MSC program; total and by region.

Source

MSC certificate data

Relevance

Sustainability Objective 1.2

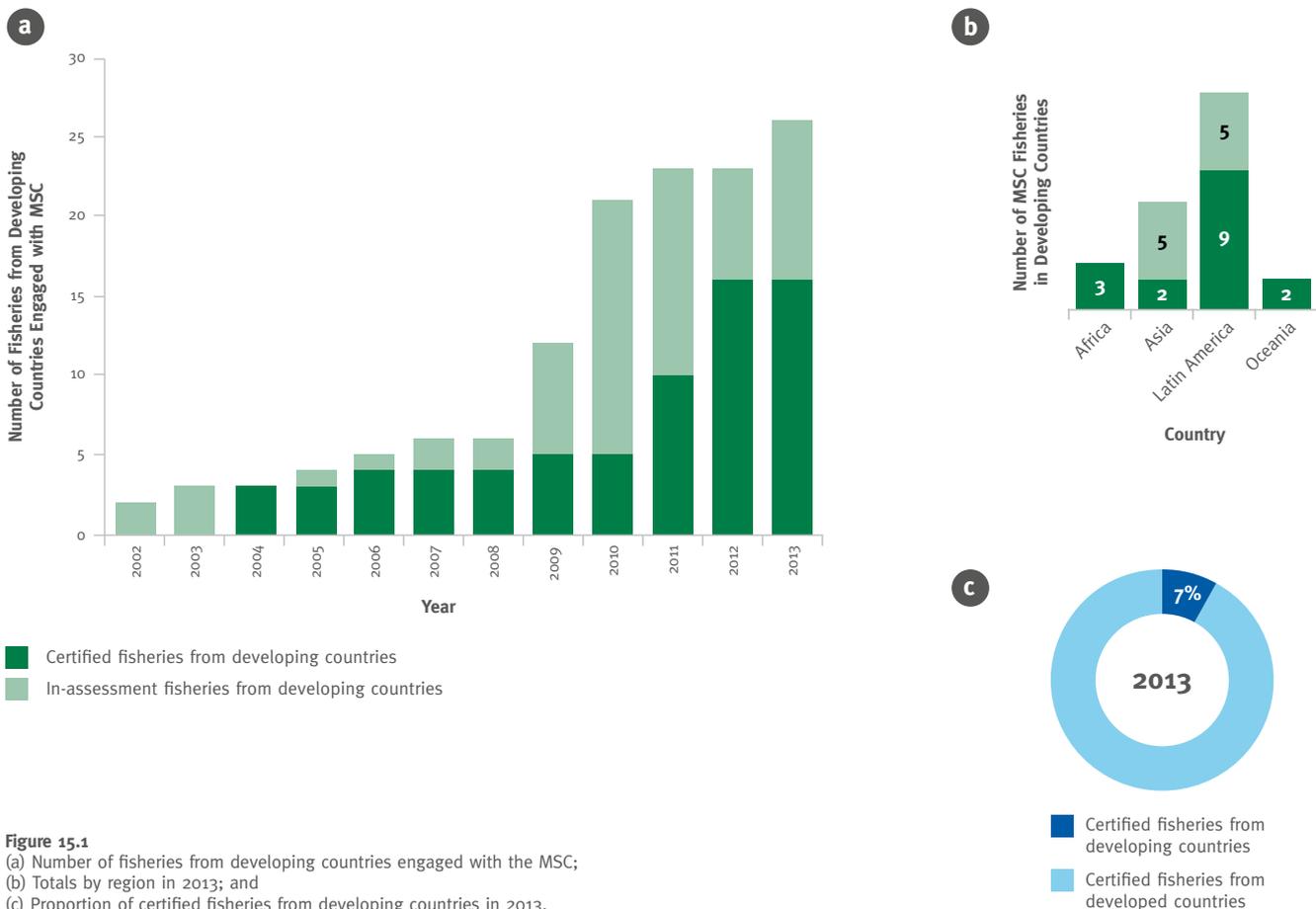


Figure 15.1
 (a) Number of fisheries from developing countries engaged with the MSC;
 (b) Totals by region in 2013; and
 (c) Proportion of certified fisheries from developing countries in 2013.

16. DNA testing of MSC-certified fish

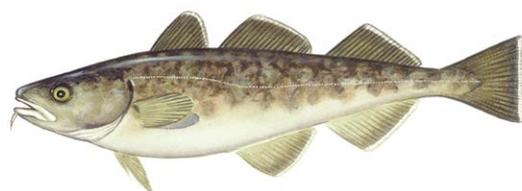


Introduction

MSC-certified fish can only be sold with the MSC ecolabel if every company in the supply chain carries a Chain of Custody (CoC) certificate. MSC CoC certificate holders are regularly audited by independent auditors (Conformity Assessment Bodies). Each CoC-certified company must ensure that all MSC products they handle are fully traceable from raw material input through to point of sale to their customer. The MSC monitors the integrity of the supply chain through tracing individual products back to the certified fishery that they originated from. Since 2009 the MSC has been using DNA testing to help monitor the effectiveness of the chain of custody program.

In December 2013, the MSC completed the fourth round of DNA testing on products sold to consumers as MSC certified. The sampling of products for DNA testing was first carried out in 2009, then in 2011, 2012 and most recently in 2013. In each round different products were sampled and additional DNA tests were used. In 2011, 196 products were tested and 98 per cent were found to be correctly identified. In 2012, 381 products were tested and 99 per cent were found to be correctly identified. **In 2013, 320 products were tested and 99 per cent were found to be correctly identified.**

Cases of misidentification are referred to the Conformance Assessment Bodies (CABs) for further investigation.



Pacific Cod

© Scandinavian Fishing Year Book

Methodology

As in 2012, two methods were used in the MSC testing process in 2013. The first method extracted the entire DNA sequence (called DNA sequencing), while the second looked for a perfect match of a particular part of the DNA sequence (this is called single-nucleotide polymorphism, or 'SNP').

DNA tests can be applied at different levels, as outlined below:

- **Species level tests:** These tests can validate the species (or in some cases, the genus) of a seafood sample. However, in most cases species level tests cannot distinguish between MSC and non-MSC-certified samples of the same species; therefore the MSC has also been developing population level tests where feasible.
- **Population level tests:** These tests can identify a fish at the level of its population or stock, and can therefore link a sample of fish to a specific geographical location (often referred to as a catch area). Population level tests are only relevant for the MSC where there are genetic differences between the stock covered by an MSC-certified fishery, and the stock not covered by an MSC-certified fishery area.

For the 2013 DNA testing, the MSC used the following set of DNA tests:

Species level tests

- **Hake species:** *Merluccius capensis*, *Merluccius paradoxus* or *Merluccius productus*
- **Plaice:** *Pleuronectes platessa*
- **Walleye pollock:** *Gadus/ Theragra chalcogrammus*
- **Sole Species:** *Lepidopsetta bilineata/ polyxystra*
- **Saithe:** *Pollachius virens*
- **Hoki (to genus):** *Macruronus spp.*
- **Pacific salmon species:** *Oncorhynchus spp.*
- **Pacific cod:** *Gadus macrocephalus*
- **NEW Haddock:** *Melanogrammus stenolepis*
- **NEW Halibut:** *Hippoglossus stenolepis*
- **NEW Skipjack and albacore tuna:** *Katsuwonus pelamis*, *Thunnus alalunga*

Population level tests

- **Atlantic cod:** *Gadus morhua* – population of origin

Relevance
Sustainability
Objective 2.1

Results from 2013 testing

320

samples collected

15 countries

where samples were collected

3

products mislabelled

More than
99%

of tested products were correctly labelled

In 2013, 320 samples from retail packed products, fresh fish counters, and catering restaurants' products were taken in 15 different markets. Of these, only 3 samples (less than 1 per cent) were found mislabelled. As a result, those supply chains were immediately investigated, and evidence of companies substituting MSC-certified with non-certified resulted in suspension of their certificate.

On-going investment in supply chain oversight and support for partners

The MSC continues to expand its supply chain monitoring and investment in the following ways:

- On-going commitment to DNA testing both of MSC-certified products in the market place and within the supply chains.
- Supporting research and development to expand the range of species and population level tests available. This includes collaboration between the MSC and CSIRO in Australia to determine the potential to test geographic origin.
- The MSC is piloting an online transaction database which will increase transparency of the flow of MSC products across the supply chain. The data will allow verification of purchase and sale transactions between buyers and sellers, and will be used to increase the effectiveness of CoC audits.
- Continuing the use of product trace-backs and supply chain reconciliations (comparing purchase and sales volumes across an entire supply chain) to monitor high risk areas and investigate concerns raised.



17. Conformity Assessment Bodies (CABs) involved in MSC fishery assessments



Description

Under the MSC program, fisheries and businesses can become certified if they meet the MSC standards for sustainable fishing and chain of custody. To maintain impartiality, the MSC operates a third-party certification program. This means that the MSC itself does not issue certificates; these are issued by Conformity Assessment Bodies (CABs) which are independently accredited by Accreditation Services International (ASI). All CABs are regularly audited by ASI to ensure that they comply with MSC requirements. This ensures the MSC program remains robust, credible and meets best practice guidelines for standard-setting organisations as set out by ISEAL and FAO.

Outcome

The number of assessments and the geographical scope of the MSC program have increased substantially since 2007. This has led to an increase in the number of MSC-accredited CABs from 5 in 2007 to 23 in 2013, 10 of which are accredited to certify fisheries. While many CABs have assessed only one or two fisheries per year there are a number (4) of CABs that have assessed and certified at least three fisheries per year. The growing number of CABs has fostered competition, increasing the rigour and robustness of the assessment as well as the geographical representation of certifiers.

Definition

Number of Conformity Assessment Bodies involved in MSC fishery certifications per year.

Source

MSC scoring data

Relevance

Sustainability Objective 2.1

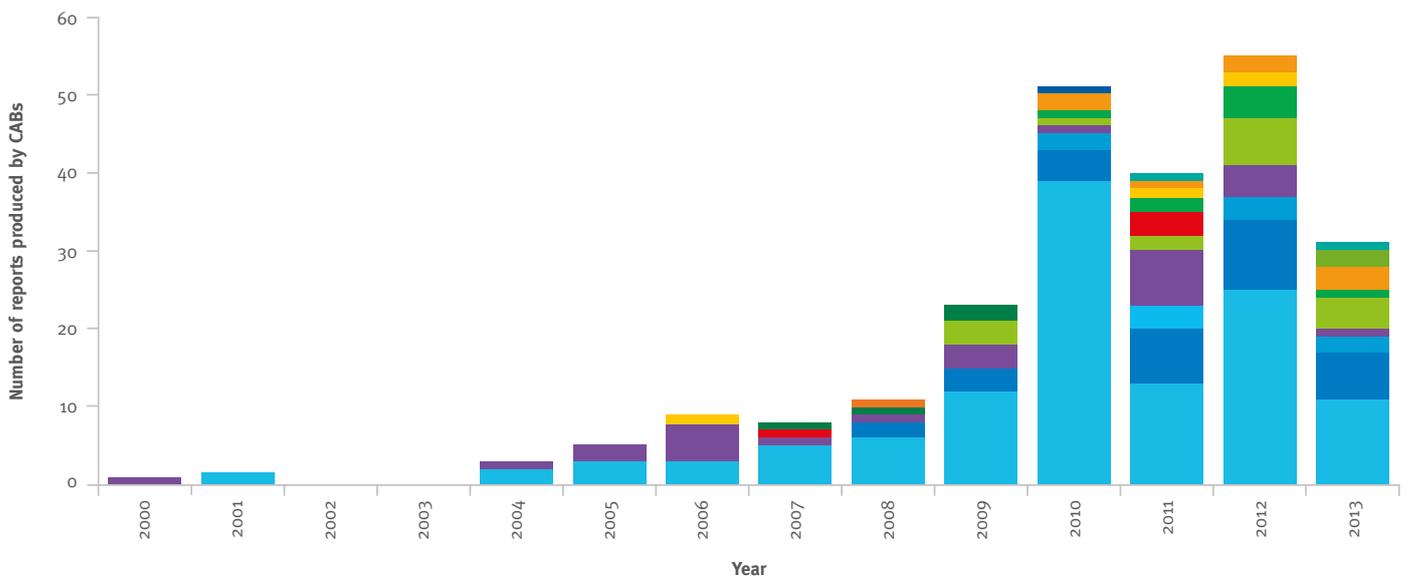


Figure 17.1
Number of public certification reports produced by CABs per year. Bar colours represent individual CABs. For reasons of confidentiality the individual CABs are not identified on this figure.

18. Objections to MSC certification



Description

The MSC certification process allows stakeholders to file an objection to the final report produced by the Conformity Assessment Body (CAB). The objective of the MSC's Objections Procedure is to provide a structured framework by which specific concerns about certification decisions can be formally reviewed and resolved.

Outcome

The proportion of fisheries receiving objections has been stable, other than for 2003 when the only certified fishery received an objection (rate =1). Since that time fewer than 20 per cent of fisheries gaining certification each year have received objections.

Definition

Number of accepted objections, expressed as a proportion of the number of fisheries certified.

Source

MSC certification database

Relevance

Sustainability Objective 2.1

MSC Objections Procedure

The MSC Objections Procedure is a key component of the fishery assessment process. It is intended to provide a robust dispute resolution mechanism and produce an outcome that all parties in a fishery certification would consider fair and impartial.

The two objectives of the process:

- a) To provide for an independent review of the CAB's decisions to make sure that the decisions are not arbitrary or unreasonable, and
- b) To provide an orderly, structured procedure in which parties' concerns about certification decisions can be transparently addressed and resolved.

The MSC is committed to review and improve the Objections Procedure, previously reviewed in 2007, 2009 and 2011. The 2014 review focused on the accepted notices of objection (NoO), received between February 2011 and August 2013. It considered trends and patterns in objections made against CAB decisions. A second part of this review considered the survey responses from past objection participants on their levels of satisfaction with the procedure and how this could be improved. The responses provided recommendations for changes to the procedure.

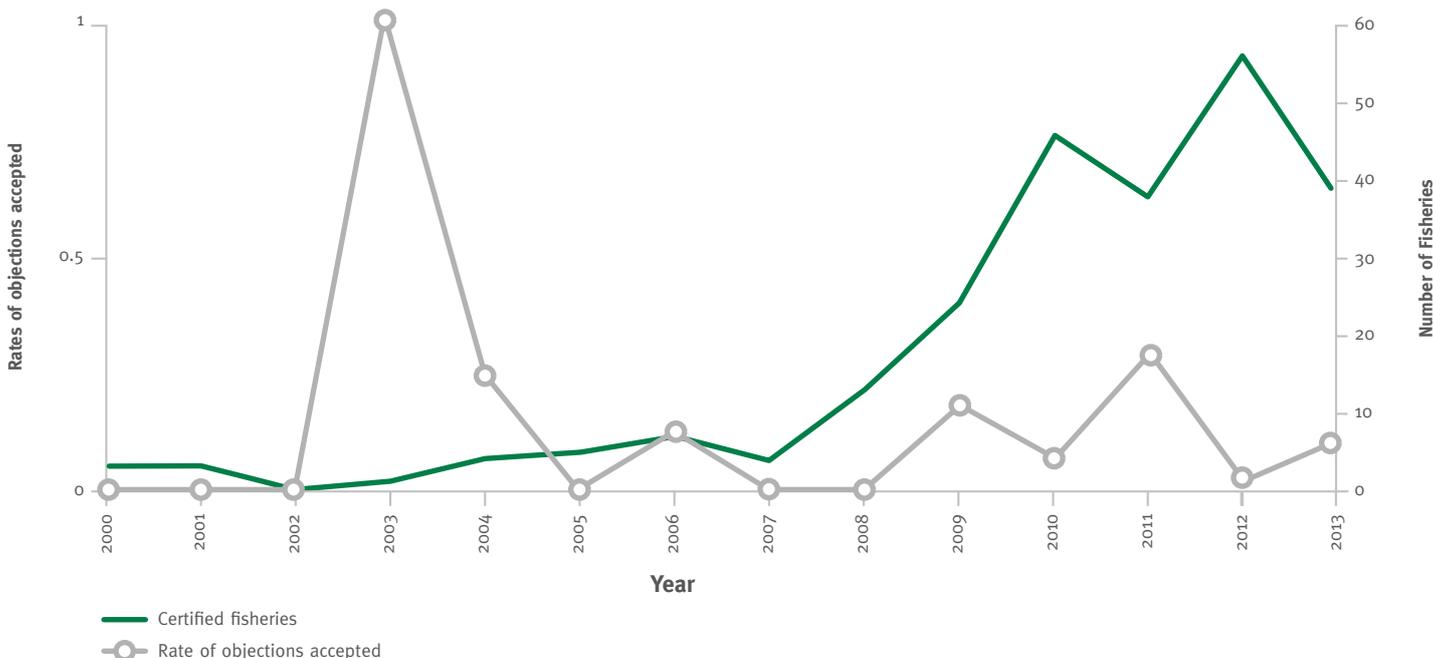


Figure 18.1 The proportion of fisheries that received an objection each year, expressed as a proportion of the total number of fisheries certified in that year. The number of fisheries certified in any particular year is also given.

19. Extent of the Chain of Custody program



Description

The MSC Chain of Custody (CoC) standard ensures that the MSC ecolabel is only displayed on seafood from an MSC-certified sustainable fishery. The standard requires that organisations handling MSC-certified seafood have a management system capable of maintaining records that allow any product or batch of products sold as certified to be traced from its sales invoice to a certified source. It therefore ensures that there is no possibility of substitution of certified products with uncertified products within the traceability standard. Use of the MSC ecolabel on seafood products is permitted only where there has been independent verification that the product originated from a certified fishery.

A certificate for each company in the supply chain provides this verification. However, the number of certificates does not equate to the number of sites covered by certification, as a single group certificate may represent many sites. Since 2012, clients that take ownership of Aquaculture Stewardship Council certified products are assessed against the MSC CoC standard.

Outcome

In the last 12 months, the number of MSC Chain of Custody certificates has increased from 2 300 to 2 549, a growth of 11 per cent. The US, Germany, UK, China and Netherlands continue to have the largest number of certifications (more than 200 each), representing the global nature of the seafood industry, with a mixture of processing and supply chain companies through to retailers and consumer-facing outlets. Growth in 2013 has continued in both emerging and established countries, particularly in Iceland (71 per cent), Russia (47 per cent) and Spain (36 per cent).

Definition

Number of Chain of Custody certificates by country and year.

Source

MSC certificate database

Relevance

Sustainability Objective 2.2

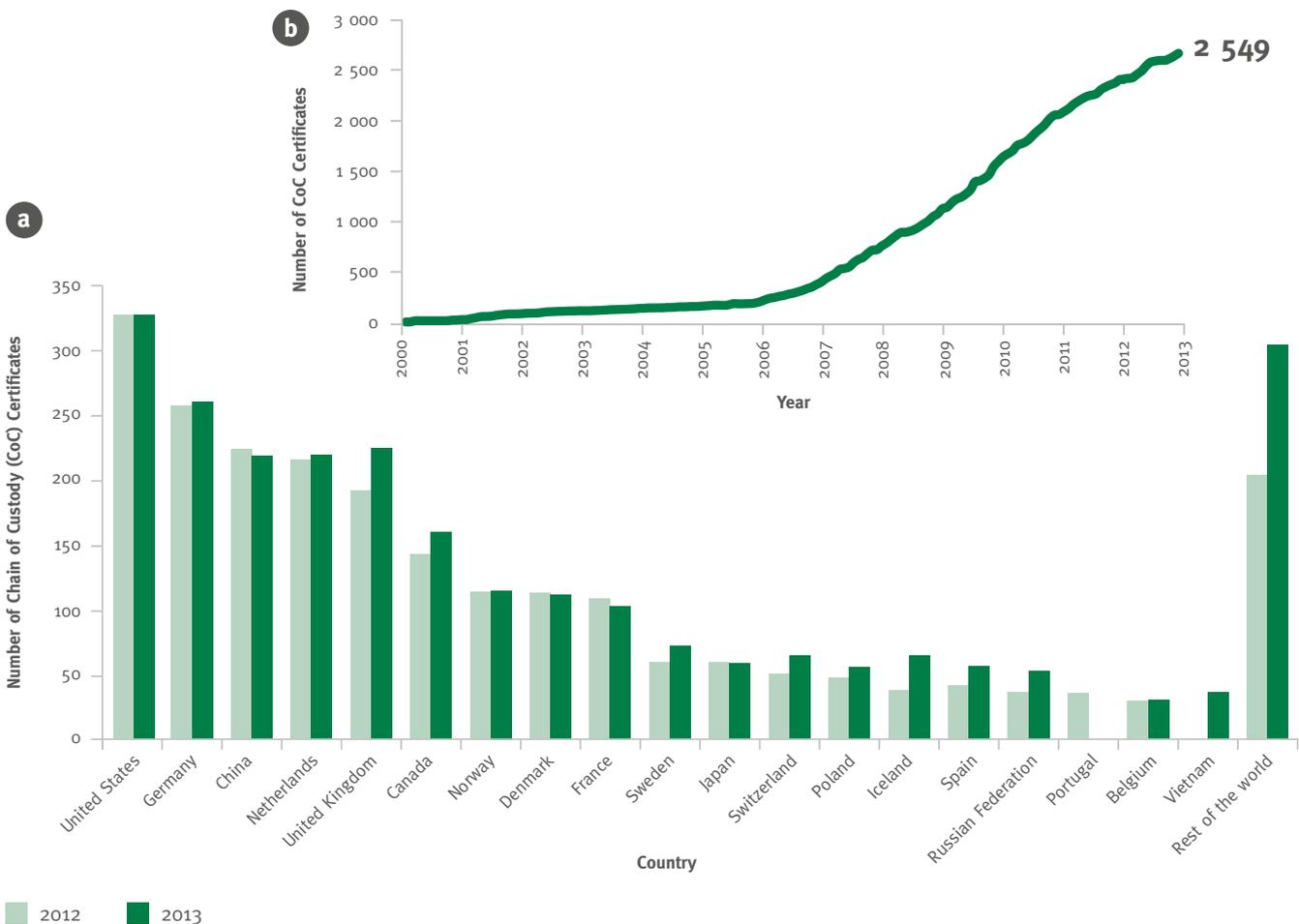


Figure 19.1
 (a) Total Chain of Custody (CoC) certificates by country in 2012 and 2013; and (b) the total number of Chain of Custody certificates by year.

20. MSC-ecolabelled products in the market



Description

The MSC is considered a 'B to C' program, i.e. one that operates by 'businesses' targeting and selling a product to 'consumers', rather than a 'B to B' program, in which businesses target other businesses. The MSC uses a consumer-facing ecolabel to allow identification of MSC products by consumers. However, not all MSC-certified product ends up being sold with the MSC ecolabel.

The MSC also licences independent use of its ecolabel not on products, but as promotional material for companies. As a certification mark and trademark, strict rules govern the display of the MSC ecolabel: only organisations that have signed a formal written agreement with the MSC – the Ecolabel Licence Agreement (ELA) – may display the MSC ecolabel on a seafood product or menu item and associated promotional materials.

Outcome

Since 2007, with the support and active engagement of many partners, the MSC has experienced a period of robust growth. The number of MSC licence holders has grown linearly to the current 1 133 licensees. The number of MSC-ecolabelled products has grown over thirty-fold from January 2007 to December 2013 (growing 21 per cent in the last year). At the end of 2013, there were 22 336 MSC-ecolabelled products on sale in 102 countries globally, including new products being sold in Republic of Korea, Argentina and Vietnam among others. In 2013, there has been a strong growth in the number of ecolabelled products in all of our top markets: the top 10 countries have more than 1,000 ecolabelled products on sale and increasing on average by 288 new products per country per year.

Definition

Number of MSC Ecolabel Licence Agreements (ELAs) by country and trends in number of ecolabelled products.

Source

MSCI data

Relevance

Sustainability Objective 2.2

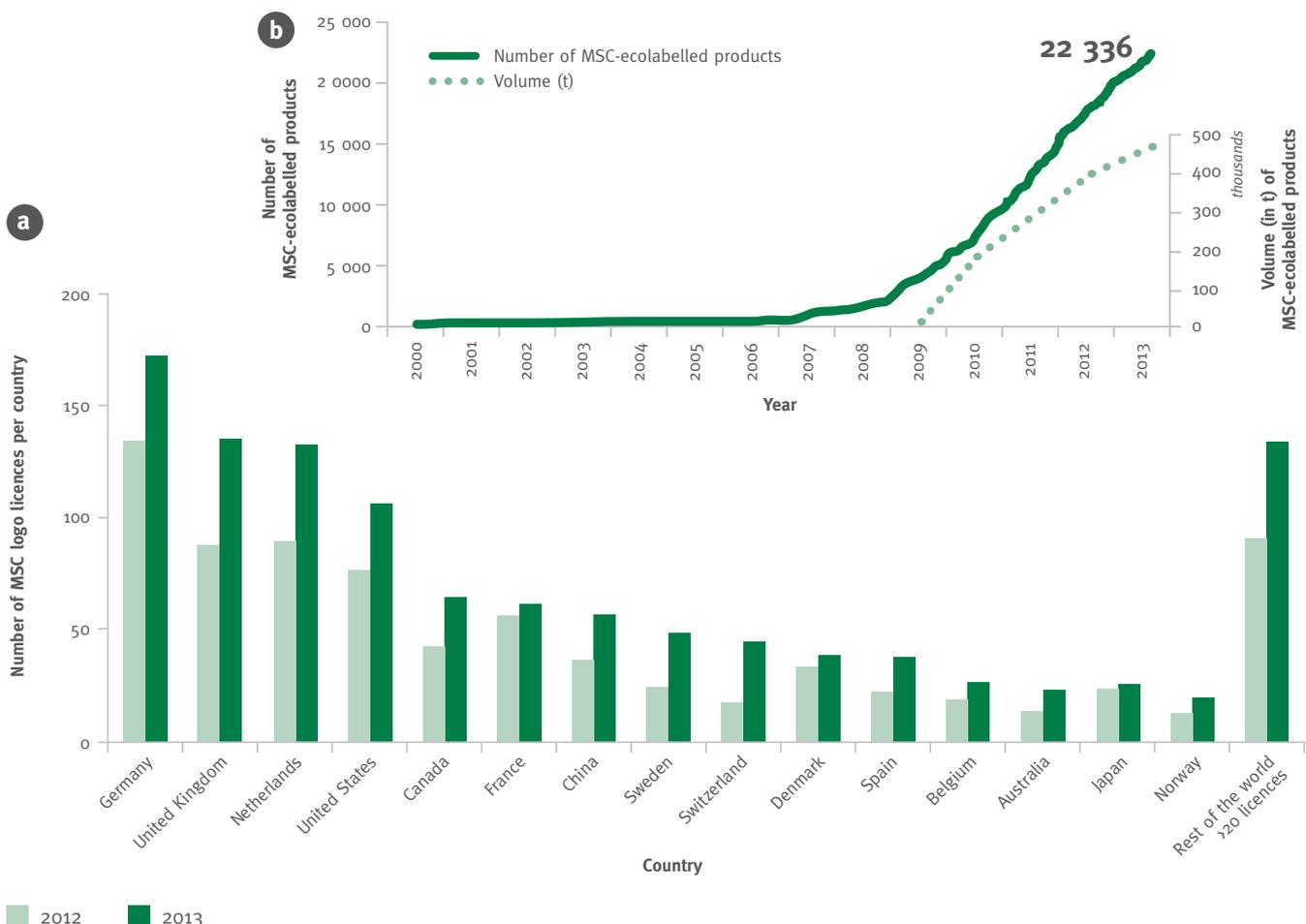


Figure 20.1
 (a) The number of MSC logo licenses by country in 2012 and 2013; and
 (b) the total number and volume (t) of MSC-ecolabelled products by year

21. Consumer recognition and recall of the MSC ecolabel



Description

In general, consumers respond positively to environmental claims – and ecolabelling is an effective and credible way to communicate a product’s sustainable credentials. However, the success of ecolabelling schemes depends partly on consumer recognition of the ecolabel and their appreciation of its meaning. The MSC reaches out to consumers by joining forces with brands and retailers to help promote MSC-ecolabelled products and certified fisheries in store. This indicator measures recognition of the MSC ecolabel by consumer familiarity with the debranded ecolabel (recognition: “Have you seen this logo before?” when presented with a debranded ecolabel as shown in the figure on the right) and recall of the MSC ecolabel by consumer awareness of what the MSC logo stands for (recall: “What does it mean to you?”).

Outcome

In 2014, an average of 36 per cent of consumers in surveyed countries who bought fish at least once every two months recognised the MSC debranded ecolabel for sustainable and well managed fisheries. When shown the MSC ecolabel without text, between 20 and 58 per cent of respondents depending on the country surveyed said they had seen it before (recognition), and of those surveyed on average 11 per cent were able to accurately describe what the MSC ecolabel stands for (recall). All previously surveyed countries in 2012 have shown an increase in consumer recognition. Australia, Sweden and USA show a substantial percentage change (at least 7 per cent increase each) in consumer recognition of the MSC ecolabel between 2012 and 2014. See Appendix 2 -Technical methodology in Global Impacts Report 2013¹.

Definition

Proportion of seafood consumers recognising the debranded MSC ecolabel and proportion recalling information about the MSC after seeing the debranded MSC ecolabel.



Source

Independent surveyor’s data (Albemarle Marketing Research)

Relevance

Strategy Outcome Objectives 2.2

¹ MSC, 2013. *Marine Stewardship Council: Global Impacts Report 2013*. MSC, London, UK. 56pp ISSN 2052-8876

Recognition of the debranded MSC ecolabel (%)

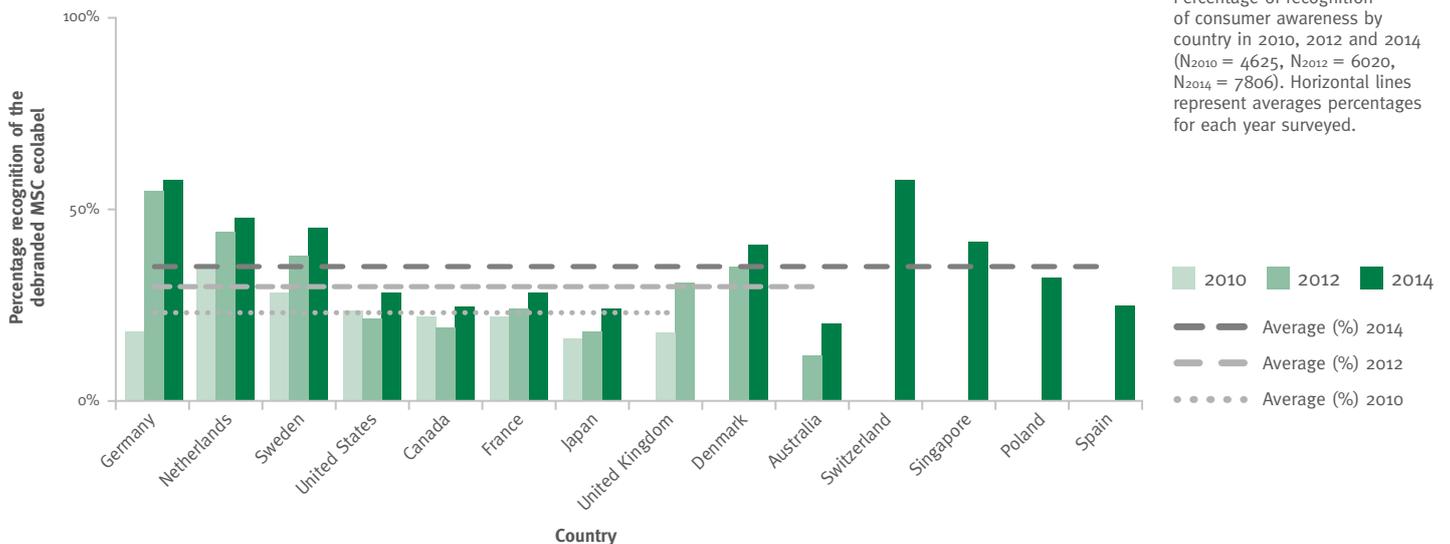


Figure 21.1 Percentage of recognition of consumer awareness by country in 2010, 2012 and 2014 (N₂₀₁₀ = 4625, N₂₀₁₂ = 6020, N₂₀₁₄ = 7806). Horizontal lines represent average percentages for each year surveyed.

Recall of the debranded MSC ecolabel (%)

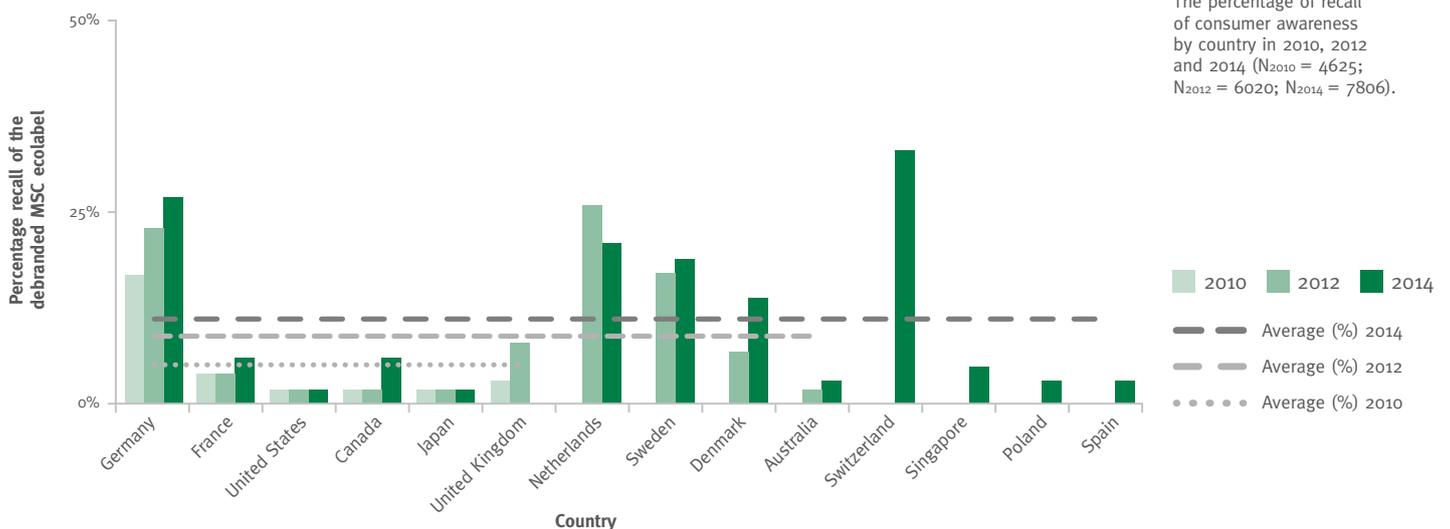


Figure 21.2 The percentage of recall of consumer awareness by country in 2010, 2012 and 2014 (N₂₀₁₀ = 4625; N₂₀₁₂ = 6020; N₂₀₁₄ = 7806).

22. Consumer purchasing of MSC-ecolabelled products



Description

Significant fishery and commercial commitments in recent years have greatly contributed to the visibility of the MSC ecolabel in stores. Increased media coverage and joint-marketing partnerships around the world have also boosted consumer awareness and understanding of the MSC ecolabel on packaging. This indicator shows purchasing attitudes towards the MSC ecolabel by measuring consumers' understanding and awareness of the MSC.

Outcome

In 2014, an average of 40 per cent of seafood consumers across all countries surveyed have purchased¹ MSC products at least once or twice before. New countries surveyed in 2014 include Switzerland, Singapore, Spain and Poland. In Switzerland and Germany, 62 per cent of surveyed individuals confirmed they have bought MSC-ecolabelled products before. Between 2012 and 2014, Sweden had a substantial increase of 13 per cent in the number of seafood consumers having purchased¹ MSC-ecolabelled products. Additionally, Australia and Denmark also saw an increase in purchasing behaviour¹ of 7 per cent and 8 per cent respectively. Whilst this is a study of consumer attitudes rather than actual behaviour, the trends clearly demonstrate a growing number of consumers worldwide choosing to recognise and reward sustainable fishing practices and who are willing to play their part in helping to safeguard fish supplies for this and future generations. See Appendix 2 -Technical methodology in Global Impacts Report 2013².

Definition

Proportion of seafood consumers who buy products with the MSC ecolabel.

Source

Independent surveyor's data (Albemarle Marketing Research)

Relevance

Strategy Outcome Objectives 2.2

Purchasing Behaviour (%)

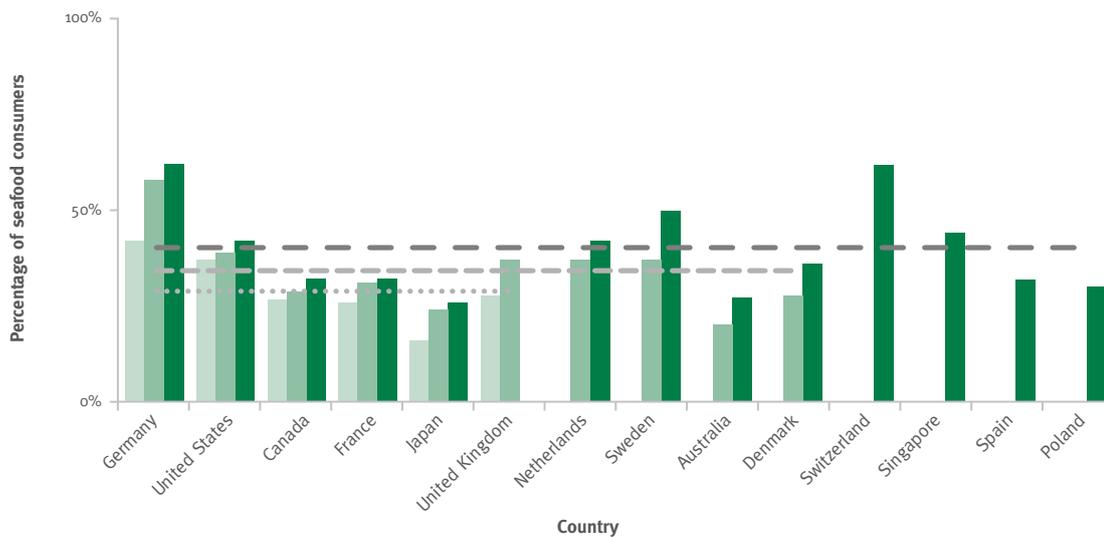


Figure 21.2

Percentage of seafood consumers having purchased MSC-ecolabelled products¹, at least once or twice before, by country in 2010, 2012 and 2014. The horizontal lines represent the average purchasing behaviour by year (N₂₀₁₀ = 3516, N₂₀₁₂ = 5977, N₂₀₁₄ = 7806).

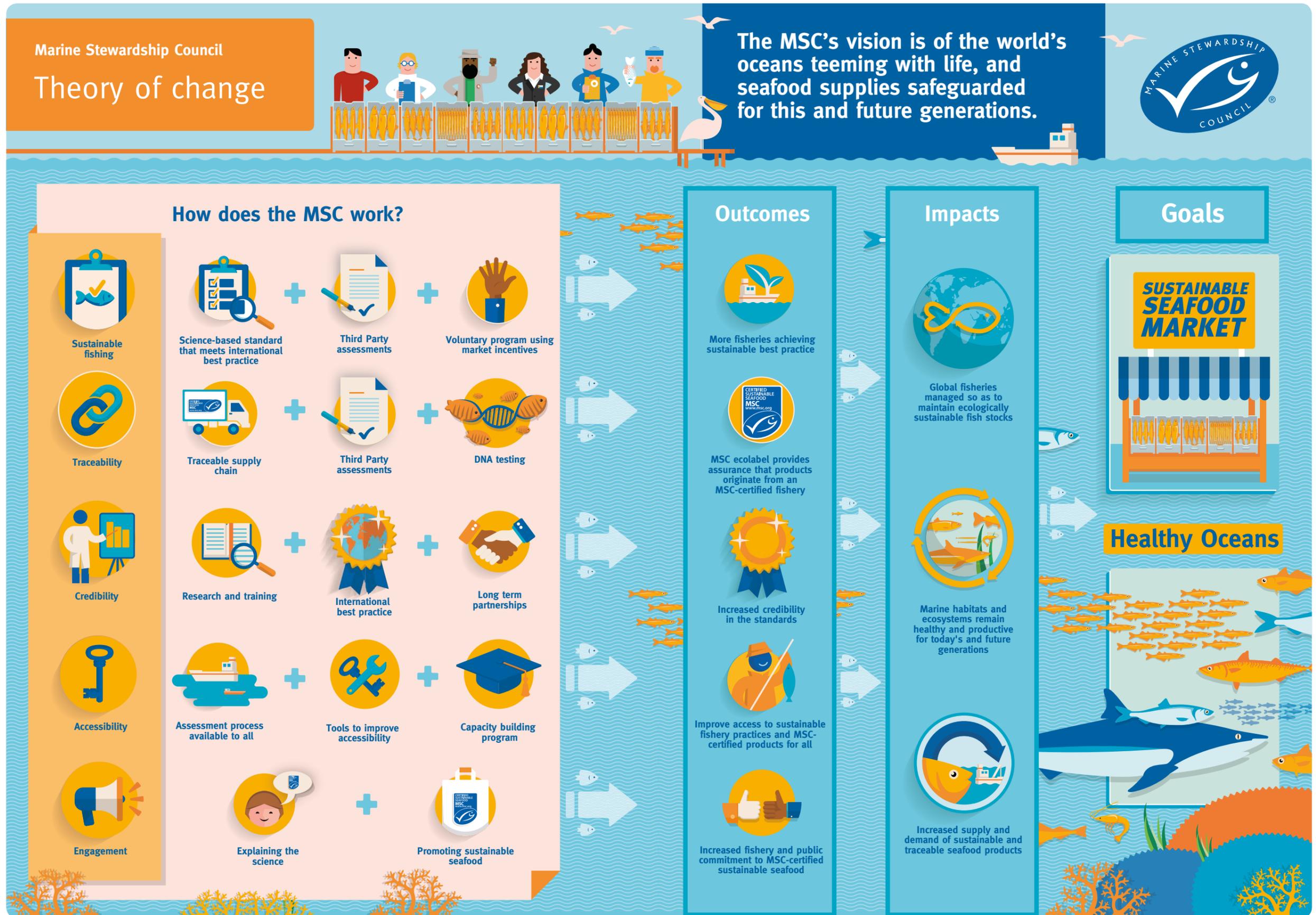
- 2010
- 2012
- 2014
- Average purchasing behaviour (%) 2014
- Average purchasing behaviour (%) 2012
- ... Average purchasing behaviour (%) 2010



¹ Current consumer purchasing behaviour were shown by interviewees responding "Yes" in response to the following question. Question: 'Do you currently buy products that carry the MSC ecolabel?' – If respondents replied "Yes every time I buy fish" or "I've brought it once or twice before" they were included as interviewees currently buying MSC-ecolabelled products"
² MSC, 2013. Marine Stewardship Council: Global Impacts Report 2013. MSC, London, UK. 56pp ISSN 2052-8876

Theory of change

The MSC's mission is to use its certification and ecolabel program to contribute to the health of the world's oceans by recognising and rewarding sustainable fishing practices, influencing the choices people make when buying seafood, and working with our partners to transform the seafood market to a sustainable basis. We work collaboratively with the fishing industry, seafood business sector, governments, scientific communities, environmental groups, and others to give retailers, restaurants, and consumers an opportunity to choose and reward sustainable fishing through their seafood purchasing choices. This infographic is a visualisation of MSC long term goals and impacts.



Marine Stewardship Council
Theory of change

The MSC's vision is of the world's oceans teeming with life, and seafood supplies safeguarded for this and future generations.



How does the MSC work?



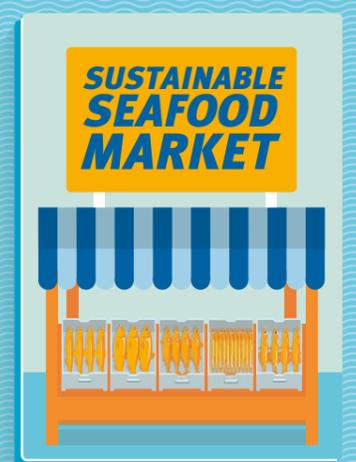
Outcomes

- More fisheries achieving sustainable best practice
- MSC ecolabel provides assurance that products originate from an MSC-certified fishery
- Increased credibility in the standards
- Improve access to sustainable fishery practices and MSC-certified products for all
- Increased fishery and public commitment to MSC-certified sustainable seafood

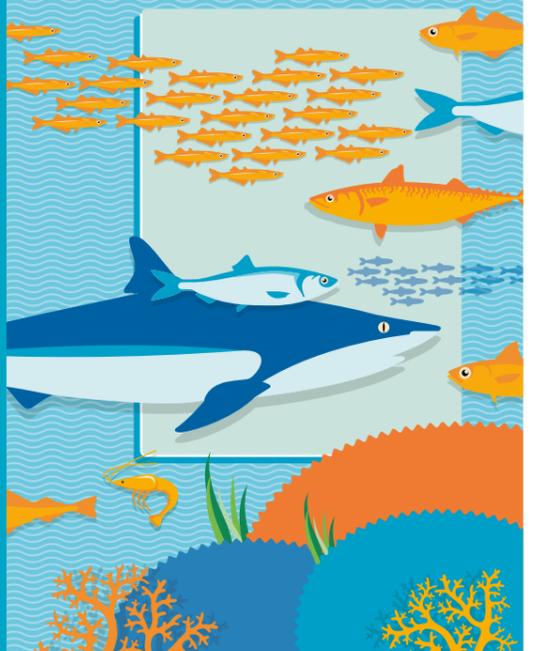
Impacts

- Global fisheries managed so as to maintain ecologically sustainable fish stocks
- Marine habitats and ecosystems remain healthy and productive for today's and future generations
- Increased supply and demand of sustainable and traceable seafood products

Goals



Healthy Oceans



Ocean of voices

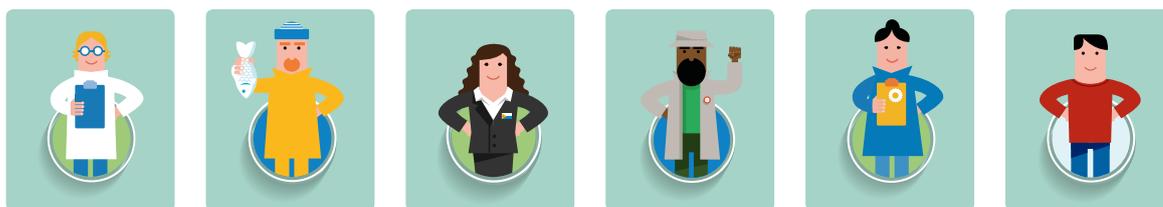
MSC Voices – Improving MSC standard and assessments

Why are stakeholders important?

The MSC is a multi-stakeholder organisation and provides opportunities for industry, retailers, scientists, governments, and NGOs to be directly involved in shaping the program. In fact, the MSC’s standard, processes, and assessments are strengthened by feedback, comments, and advice given by stakeholders from around the world.

Their knowledge and experience is critical to improve the MSC standards through the policy cycle and to make sure fisheries assessments are well-informed, consistent with the rigorous MSC standard and that issues that are important to them are taken into consideration.

Who are MSC stakeholders and how are they making a difference?



Engagement in fishery assessment

Stakeholders’ input helps to ensure that fishery assessments are well-informed and comprehensive, that assessment outcomes are consistent with the rigorous MSC standard and that issues important to stakeholders are taken into consideration in the assessment. Every fishery that goes through MSC assessment will have the public comment draft assessment report (PCDR) published online for anyone to comment on, reinforcing MSC’s transparent and rigorous assessment process. The assessors (CABs) take all comments into consideration and adjust the final report as necessary. To investigate stakeholders’ contribution and impact on MSC fishery assessments, all comments received for 57 fisheries assessed between January 2012 and June 2013 were analysed (Figure 23.1). From 339 comments received, 100 made an influential impact with 25 comments leading to a reduced in score for a performance indicator; 14 resulting in new action plans for improvement; 24 resulting in improved assessment rationales; 21 resulting in changed and improved background information; 8 resulting in changed action plans; 3 resulting in changed assessment team; 1 resulting in changed condition of timelines; 1 resulting in reduced a score and caused a new action plan; and 4 resulting in an increased score.

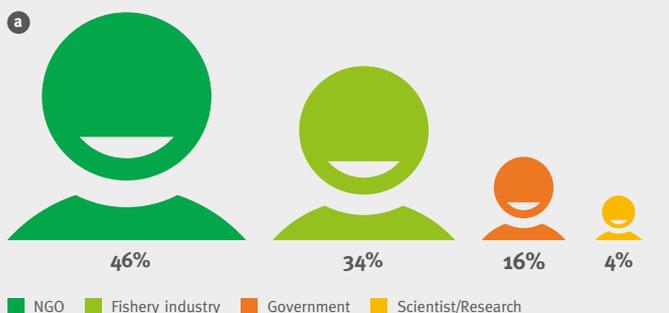


Figure 23.1
 (a) Proportion of stakeholders by overarching group commenting on the fishery assessments (excluding site audit comments, N=56); (b) Proportion of comments by overarching stakeholder groups on fishery assessments (comments N=339; fisheries analysed N=57)

Engagement in Fishery Standard Review

By reviewing its fisheries standard, the MSC ensures it reflects the most up-to-date understandings of fishery science and management, and encompasses the expert knowledge of the MSC’s diverse global stakeholder network. The MSC follows guidelines set by the United Nations Food and Agriculture Organization and the ISEAL Alliance (International Social and Environmental Accreditation and Labelling) that require a balance of interests to be reflected in the development or revision of MSC processes. This means that stakeholders have the opportunity to contribute to the advancement of MSC policies and procedures that relate to the MSC fishery assessment process, CoC and other aspects of the MSC program. The Fishery Standard Review, which occurs every 5 years, has been a two year process starting in late 2012, and involving several rounds of consultations. In addition to information online (improvements.msc.org), the MSC held workshops in the USA, UK and Chile, ensuring a broad and balanced geographical representation. Most comments came from NGOs (37 per cent) and the fishery industry (44 per cent), with lower proportions from MSC partners (certifiers, accreditation body, ISEAL), governments and scientists/researchers (Figure 23.2).

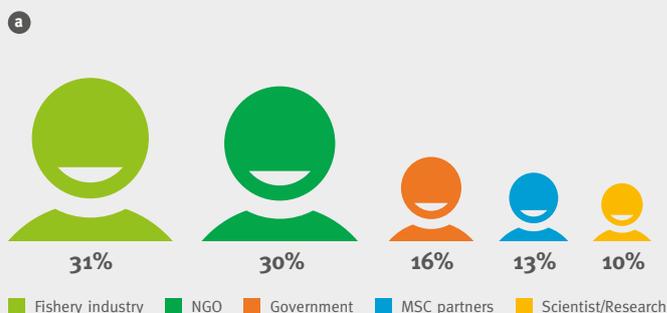


Figure 23.2
 a) Proportion of stakeholders by overarching group commenting on the MSC’s Fishery Standard Review (N=70); (b) Proportion of comments by overarching stakeholder groups on fishery standard review (excluding face-to-face consultation workshops; N comments=119; N=32)

Scientific Voices

The MSC is committed to being the world’s leading certification program for sustainable wild-capture seafood by delivering a robust, effective and accessible program that keeps up with the latest scientific knowledge and industry practices. Therefore, recognition of the MSC program by the scientific community is a critical aspect to maintain the credibility of our program. In this respect, the number of scientific, peer-reviewed publications citing the MSC, both from independent institutions and from the MSC itself, has increased three-fold in the last 5 years (Figure 23.3).

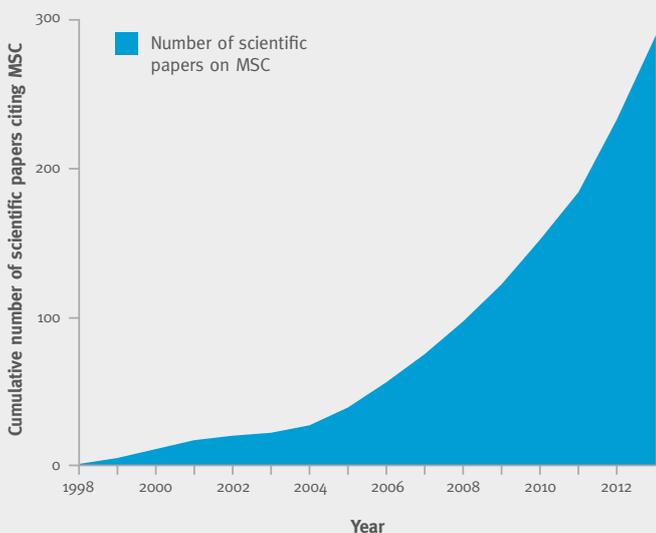


Figure 23.3 Cumulative number of peer-reviewed papers citing the MSC from 1998 to 2013. Data was obtained from ISI Web of Science by searching for “Marine Stewardship Council” and validated by analysing each individual paper.

Global Voices

Public Awareness and commitment through social media

The MSC strives to increase public awareness and commitment to seafood sustainability. Social media is an important outlet to engage with the public and transmit the MSC’s vision and mission. The MSC’s representation in social media platforms has increased by 194 per cent in only one year, demonstrating an expanded public awareness of the MSC as an agent of change towards sustainable fishing practices (Figure 23.4).

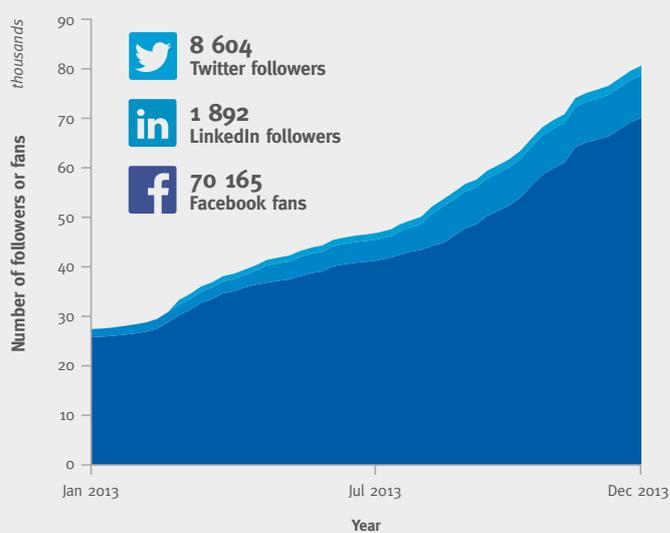


Figure 23.4 Trends in the total number of social media followers and fans.

How to get involved?

Improve the MSC

- Comment on a fishery assessment (reports available online)
- Comment on our MSC standards Policy Cycle improvements.msc.org

Get involved in the MSC program

- Get your fishery certified
- Get Chain of Custody certification
- Attend MSC webinars, training and conferences
- Work and collaborate in the science behind the MSC Standards and Impacts

Global voice for the future

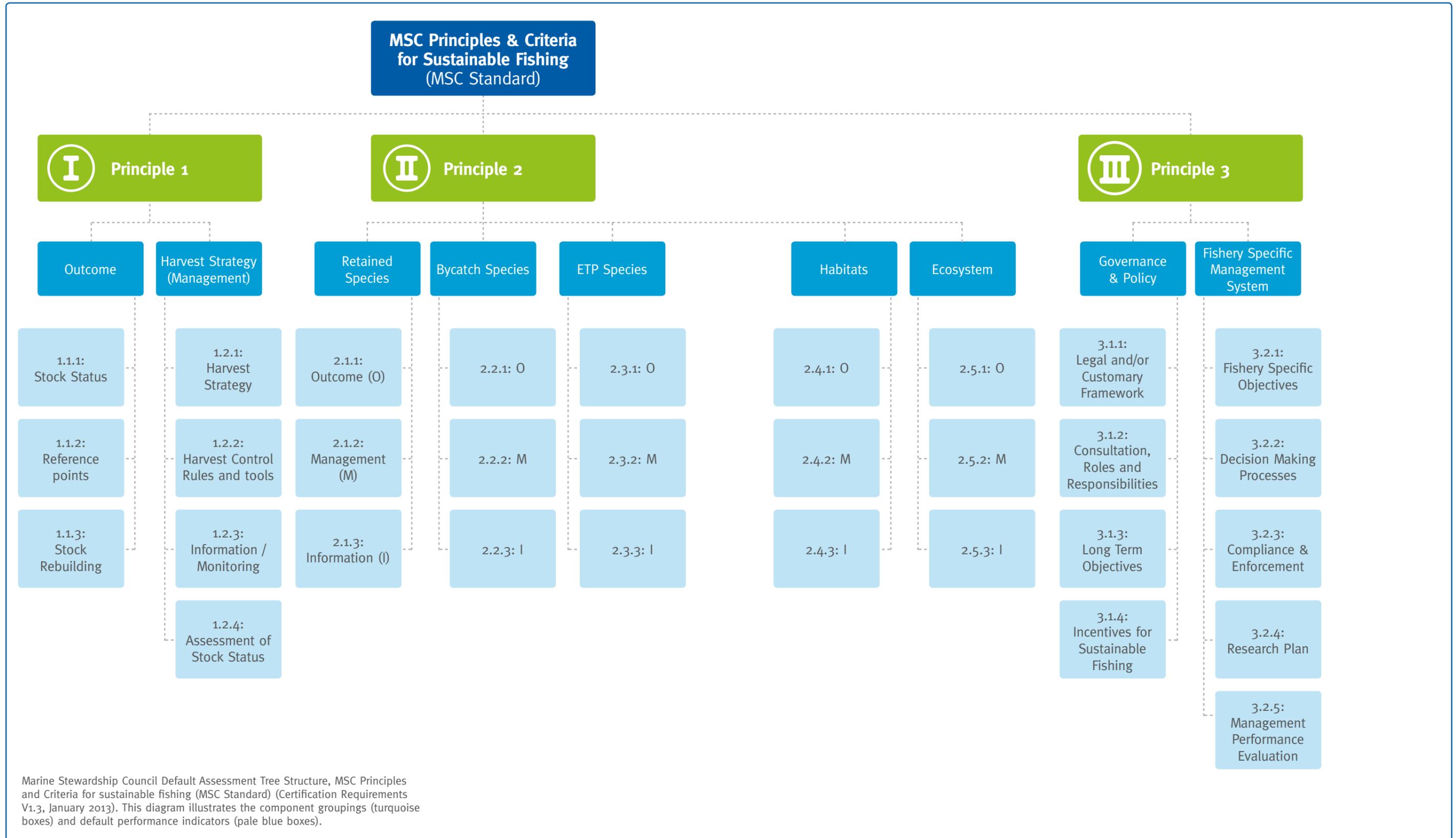
- Look for the MSC ecolabel in stores and restaurants – if it’s not there, ask for it!
- Tell people about the MSC and its mission to sustain the supply of seafood for future generation
- Follow us on Twitter, Facebook, LinkedIn



- @MSCecolabel
- /MSCecolabel
- /marine-stewardship-council

Appendix 1

MSC Principles and Criteria for Sustainable Fishing (MSC Standard)



Appendix 2

Technical methodology update

The MSC M&E team are continually improving our internal data systems. Last year we migrated servers, a process that required the rebuilding of existing methods of analysis of the MSC indicators. Due to the migration and other improvements some of our indicators numbers have small variations from those reported in the 2013 report. We are confident the new results are accurate.

Indicator construction

As in the previous Global Impacts Report 2013 the indicator methodology is the same. For further details refer to the Global Impacts Report 2013 indicator's technical methodology and the technical methodology appendix.

New technical construction

Figure 3.1 Average number of action plans for improvements developed for fisheries.

The average number of action plans for improvements developed for all fisheries grouped by assessment number 1st, 2nd, 3rd using the default assessment tree (2008-2013).

Figure 14.3 Trends in tonnages of fisheries engaged with the MSC.

The certified tonnages were originally reported every five years starting from the time the fishery was certified (although sometimes more frequently). Therefore, to estimate the total tonnage of MSC-certified fisheries over time it is assumed the tonnage remains constant in between these years. Since 2012, tonnages have been reported annually so values are accurate rather than estimates. Certified tonnage is represented by a solid line for actual tonnage and a dashed line for estimated tonnage. The tonnage of MSC-certified fish is then compared with the FAO global capture wild caught fish totals (data from FAO 2012) over time to estimate the proportion of MSC engaged wild capture fish caught out of total wild fish capture globally.

Improvements

Fishery scores reporting date

Indicators 4-13 are based on the fishery scores given at each certification reports. The date of publication is used to aggregate the fishery scores by year. However some fisheries may have two reports in one year, for example a 1st surveillance report in January 2012 and 2nd surveillance report in December 2012, which would mean they are over-represented in particular years. To represent fisheries equally in all years following their public certification report we have made sure that they are represented only once in each year. This report scoring smoothing has caused very minor changes.

Figure 20.1 (a) MSC-ecolabelled products market the value for the volume (in t) of MSC-ecolabelled products was incorrect for 2013 and has been corrected.

Appendix 3

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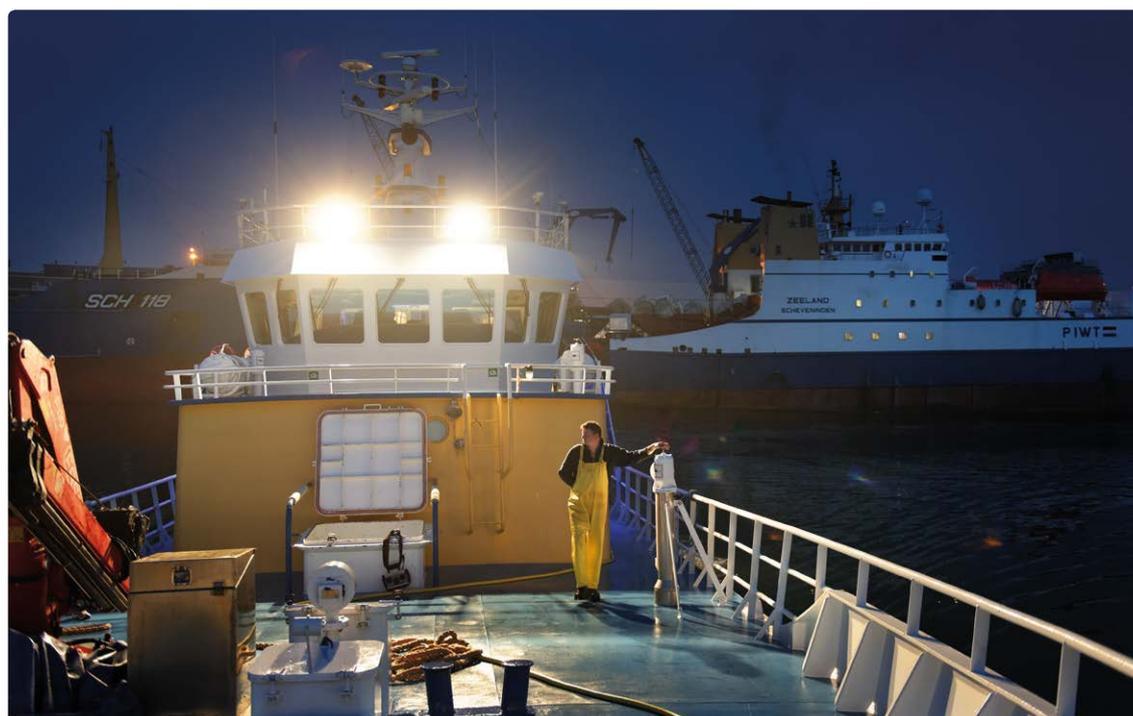
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Participation in the MSC's certification program changes over time; all details within this document are accurate at time of publication.

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Salvador – Brazil

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