



Sustainable Seafood: A Global Benchmark

INTRODUCTION

The Seafood Certification & Ratings Collaboration brings together five global programs – Aquaculture Stewardship Council, Fair Trade USA, Marine Stewardship Council, Monterey Bay Aquarium Seafood Watch, and Sustainable Fisheries Partnership – working to help seafood buyers make more sustainable choices and guide seafood producers along a clear path toward environmental sustainability and social responsibility. Through the Collaboration, we aim to coordinate our tools, consolidate our data, and increase our impact.

Certification and ratings programs play complementary roles to drive improvement and meet a range of market needs. Ratings focus on assessing as many seafood sources as possible in key markets to provide information on the full spectrum from low to high performance. This information can be used to identify opportunities for producers to pursue improvement projects and certifications, as well as help businesses evaluate sourcing options. Certifications directly engage with fisheries and farms and require them to address social and environmental challenges to reach a verified level of performance. Certifications also engage with the supply chain to verify the sustainability and origin of certified products.

A prerequisite for increasing our impact is understanding the progress certifications and ratings have made to date. Since the Collaboration launched in 2015, one of our objectives has been to consolidate our programs' data for the purpose of developing a global analysis of the sustainable seafood landscape. We envision this as a series of annual analyses, giving seafood buyers, mid-chain suppliers, producers, and other stakeholders a means to track progress toward worldwide sustainability. This initial edition is intended as a benchmark, illustrating the current level of performance and identifying the improvements needed going forward. We plan to supplement this analysis with a second edition later this year, highlighting further progress and challenges in key seafood sectors, followed by an online tool that will make global production, demand, and engagement data more accessible.

Our analysis begins with an overview of the major components of worldwide seafood production. It then overlays the reach of certification and ratings programs that are members of this Collaboration, describing:

- The share of global production that has already been certified or rated;
- The proportion engaged in assessment or improvement and, thus, on the path toward sustainability; and
- The remaining proportion representing fisheries and farms not yet engaged in our ratings or certification programs.

This analysis is then broken down for wild capture fisheries and aquaculture, exploring the current status of each production method, followed by additional details on the reach of each Collaboration member organization.

This report also includes snapshots of the current market demand for sustainable seafood, the global livelihoods impacted by the seafood industry, and improvement priorities for wild fisheries. Continuing to build demand for sustainable products, addressing social responsibility, and using the leverage of buyers to support fisheries and aquaculture to improve their performance are three priorities for further action in the sustainable seafood movement.

The Collaboration member organizations provided the data on certification and rating programs and their reach. This analysis focuses on the impact of Collaboration member programs and does not include information on the reach of other certification or rating systems. We are grateful to MRAG Americas for its work to consolidate this information with the Food and Agriculture Organization of the United Nations fishery and aquaculture statistics and contribute to this analysis. Additional information on the methodology, data sources, and limitations of this analysis is available in the technical appendix at the end.

What this analysis finds is that the sustainable seafood movement has made significant progress during its first two decades. Production in regions of the world with more mature and robust management regimes is largely certified, rated, or engaged along the path toward environmental sustainability and social responsibility. This is no small accomplishment, given that these same regions had no certified or rated fisheries or farms as recently as 2000. It is a credit to the seafood industry at all levels from producer to end buyer for making sound but not easy decisions to forego immediate-term revenue in favor of long-term viability, as well as to the many sustainability NGOs – including but extending far beyond those participating in this Collaboration – who have worked to support businesses committed to improvement.

Much of the progress to date has been driven by European and North American market interest. While this demand will sustain continued engagement of some farms and fisheries globally, more work is needed to engage markets in other regions of the world. Accelerating market progress in Asia, Latin America, and Africa is critical, not only because farms and fisheries there account for the largest share of global seafood production, but also because they account for the largest share of seafood industry livelihoods. While critical work has begun in these regions, industry and NGO efforts to promote the demand for sustainable seafood must intensify to improve a greater share of seafood production.

To engage these and other markets on the path toward environmental sustainability and social responsibility will be a significant task. Overcoming the challenges ahead will require continued and expanded engagement by seafood businesses, as well as creativity, tenacity, and collaboration by the many NGOs that share our commitment to a future where all the world's seafood is fished and farmed sustainably.



STATUS OF GLOBAL SEAFOOD

SUSTAINABILITY STATUS OF GLOBAL SEAFOOD PRODUCTION

Globally, approximately 200 million metric tons of seafood was produced in 2016, the most recent year for which data is available. About 45 percent, or 90 million metric tons, is wild caught while 40 percent, or 80 million metric tons, is farmed. The remainder, 15 percent or 30 million metric tons, is seaweed and aquatic plants.

WILD 45%

90,921,223 metric tons



FARMED 40%

80,068,829 metric tons



SEAWEED & AQUATIC PLANTS 15%

30,139,389 metric tons



Annual production has been steadily increasing for the past 65 years. From the 1950s through the 1980s, production growth was driven by increased fishing and processing technology. Wild fisheries have biological and ecological limits to their production. Since the 1990s, wild seafood production has been largely stable with, until recently, an increasing trend in the proportion of overexploited stocks. The dramatic rise in aquaculture production has been sustaining more recent seafood production growth. A fluctuating (20-35 percent) but significant proportion of wild production is used to make fishmeal and fish oil, important feed ingredients for animal and fish farming.



SUSTAINABILITY STATUS OF GLOBAL SEAFOOD PRODUCTION (CONTINUED)

25 percent of global production is certified or rated sustainable by Collaboration members

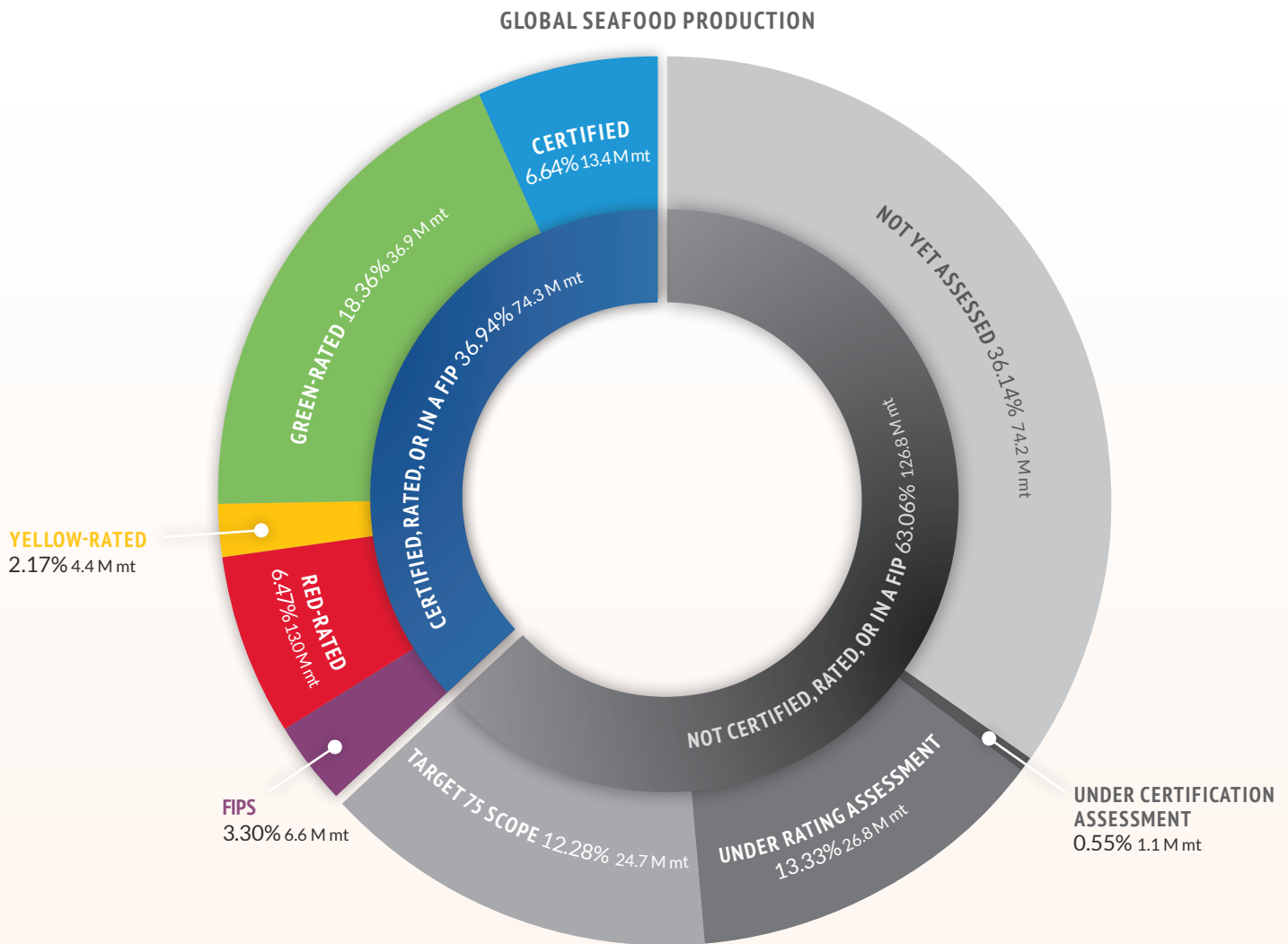
Of total global production, one-third is rated or certified by members of the Collaboration. One-quarter of global production is certified or green-rated, indicating a high level of environmental sustainability.

75 percent of global production is not yet sustainable or status unknown

An additional 9 percent of global production is rated red or yellow, indicating that improvements are needed to achieve sustainability. Three percent of global production is currently engaged in a public fishery improvement project, but 63 percent of global seafood production remains unassessed or not yet engaged in improvements by members of the Collaboration.

Priorities for assessment and improvement

As a Collaboration, we are working to prioritize fisheries and aquaculture in that remaining 63 percent for assessment and improvement based on where there is high environmental or social risk and where there is market support for improvements. Nearly 14 percent of global production is undergoing assessment for ratings by Monterey Bay Aquarium Seafood Watch or undergoing assessment for certification by the Aquaculture Stewardship Council or Marine Stewardship Council. In addition, 12 percent of global seafood production is prioritized for improvement in Sustainable Fisheries Partnership's Target 75 initiative. Target 75 is an effort to mobilize improvements in fisheries and aquaculture so that 75 percent of global production in key sectors is sustainable or making regular, verified improvements by 2020.



FAO fishery and aquaculture statistics for 2016 from FishStatJ (2018).

Certified and under assessment volumes provided by ASC, MSC and FTUSA; Ratings and under assessment volumes provided by MBA SFW; FIP and T75 scope volumes provided by SFP; Not yet assessed volumes from FishStatJ.

SUSTAINABILITY STATUS OF WILD SEAFOOD

14 percent of wild production is certified or rated sustainable by Collaboration members

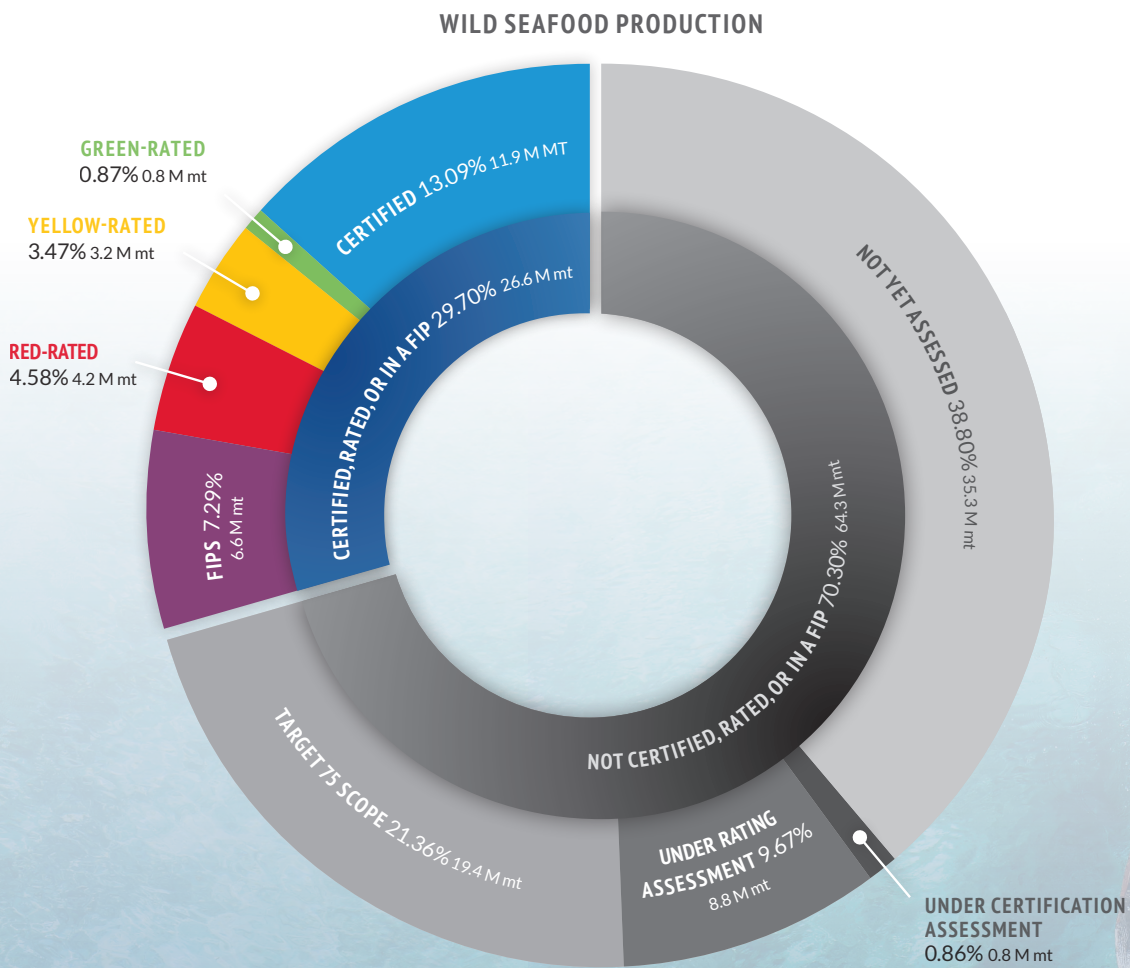
Looking more specifically at wild seafood, 22 percent is rated or certified by members of the Collaboration. Approximately 14 percent of wild production is certified or green-rated, indicating a high level of environmental sustainability. Tuna and whitefish are the majority of the green-rated wild seafood. Certified seafood includes whitefish (pollock and cod), tuna, and demersal fishes, among others.

86 percent of wild production is not yet sustainable or status unknown

An additional 8 percent of wild production is rated red or yellow, indicating that improvements are needed to achieve sustainability. Yellow-rated wild seafood includes some tuna, squid, octopus, and forage fish. Some tuna, squid, and octopus are also red-rated along with whitefish. Seven percent of wild production is currently engaged in a public fishery improvement project, but 71 percent of wild seafood production remains unassessed or not yet engaged in improvements by members of the Collaboration.

Priorities for assessment and improvement

As a Collaboration, we are working to prioritize fisheries in that remaining 71 percent for assessment and improvement based on where there is high environmental or social risk and where there is market support for improvements. Eleven percent of wild production is undergoing assessment for ratings by Monterey Bay Aquarium Seafood Watch or undergoing assessment for certification by the Marine Stewardship Council. In addition, 21 percent of wild seafood production is prioritized for improvement in Sustainable Fisheries Partnership's Target 75 initiative.



Certified and under assessment volumes provided by MSC and FTUSA; Ratings and under assessment volumes provided by MBA SFW; FIP and T75 scope volumes provided by SFP; Not yet assessed volumes from FishStatJ.

SUSTAINABILITY STATUS OF FARMED SEAFOOD

34 percent of farmed production is certified or rated sustainable by Collaboration members

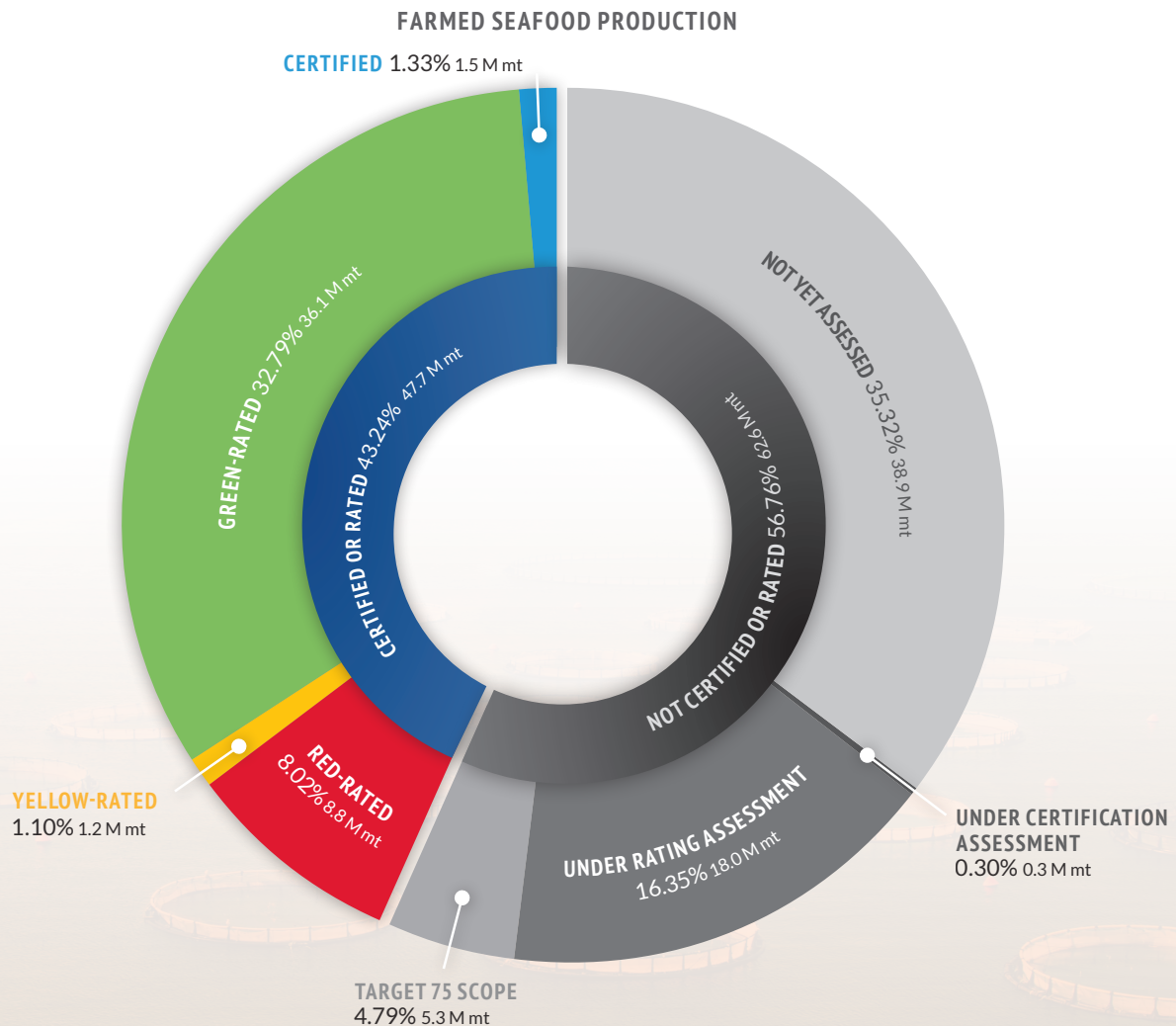
Looking more specifically at farmed seafood (including seaweed), 43 percent is rated or certified by members of the Collaboration. Approximately 34 percent of farmed production is certified or green-rated, indicating a high level of environmental sustainability (and social responsibility for the certified products). Seaweed and bivalves are the majority of the green-rated farmed seafood. Certified seafood includes best-performing salmon, trout, pangasius, and tilapia.

66 percent of farmed production is not yet sustainable or status unknown

An additional 9 percent of farmed production is rated red or yellow, indicating that improvements are needed to achieve sustainability. Yellow-rated farmed seafood includes some shrimp, crustaceans, salmon, and trout. Some farmed salmon and shrimp are red-rated, along with tilapia. Nearly 57 percent of farmed seafood production remains unassessed or not yet engaged in improvements by members of the Collaboration, including significant volumes of Asian carp and milkfish.

Priorities for assessment and improvement

As a Collaboration, we are working to prioritize fisheries in that remaining 57 percent for assessment and improvement based on where there is high environmental or social risk and where there is market support for improvements. Nearly 17 percent of farmed production is undergoing assessment for ratings by Monterey Bay Aquarium Seafood Watch or undergoing assessment for certification by the Aquaculture Stewardship Council. In addition, nearly 5 percent of farmed seafood production is prioritized for improvement in Sustainable Fisheries Partnership's Target 75 initiative.



Certified and under assessment volumes provided by ASC; Ratings and under assessment volumes provided by MBA SFW; T75 scope volumes provided by SFP; Not yet assessed volumes from FishStatJ.

CURRENT REACH OF COLLABORATION MEMBER PROGRAMS

As shown above, one-third of global seafood production is currently certified or rated by members of the Certification & Ratings Collaboration. The following infographic provides additional detail on the scope of each program's engagement.



AQUACULTURE STEWARDSHIP COUNCIL

Aquaculture certification, environmental and social issues, certifies individual farms or groups of farms

> **832 FARM SITES** in 39 countries producing 1.6 M metric tons of certified seafood.

> More than **16,000 PRODUCTS** carrying the ASC logo in 75 countries.

> In a recent survey, **49 PERCENT** of ASC-certified farms report that they have improved working conditions and 46 percent report they have reduced their impact on the environment since achieving certification.

> More than **1,800 BUSINESSES** certified to the chain of custody standard in over 70 countries.



FAIR TRADE USA

Wild capture certification, environmental and social issues, certifies small- to medium-scale fishermen

> **9 FISHERIES** in five countries producing 5,000 metric tons of certified seafood.

> Certified fisheries have generated over **\$1.25 M IN COMMUNITY DEVELOPMENT FUNDS** for local environmental, educational, and other community projects.



MARINE STEWARDSHIP COUNCIL

Wild capture certification, environmental and forced/child labor issues, certifies groups defined by stocks, gears, and vessels

> **470+ FISHERIES** certified in 53 countries producing 12.5 M metric tons of certified seafood.

> More than **35,000 PRODUCTS** carrying the MSC logo in 112 countries representing more than 900,000 metric tons of labeled products.

> More than **1,400 IMPROVEMENTS** delivered by MSC-certified fisheries.

> More than **4,500 BUSINESSES** certified to the chain of custody standard in over 90 countries encompassing 32,000 restaurant outlets and 7,000 wet fish counters.



MONTEREY BAY AQUARIUM SEAFOOD WATCH PROGRAM

Wild capture and aquaculture ratings, environmental issues, rates specific fisheries and regional aquaculture

> **2,152 FISHERY AND AQUACULTURE RECOMMENDATIONS**, representing 394 species and 67 M metric tons of seafood.

> More than **25,400 BUSINESS LOCATIONS** worldwide use SFW recommendations to inform purchasing decisions.

> Recommendations cover **33 PERCENT OF THE VOLUME OF GLOBAL WILD AND FARMED PRODUCTION** and 85 percent of the seafood by volume available on the U.S. and Canadian markets.



SUSTAINABLE FISHERIES PARTNERSHIP FISHSOURCE

Wild capture and aquaculture ratings, environmental issues, rates specific fisheries and aquaculture zones

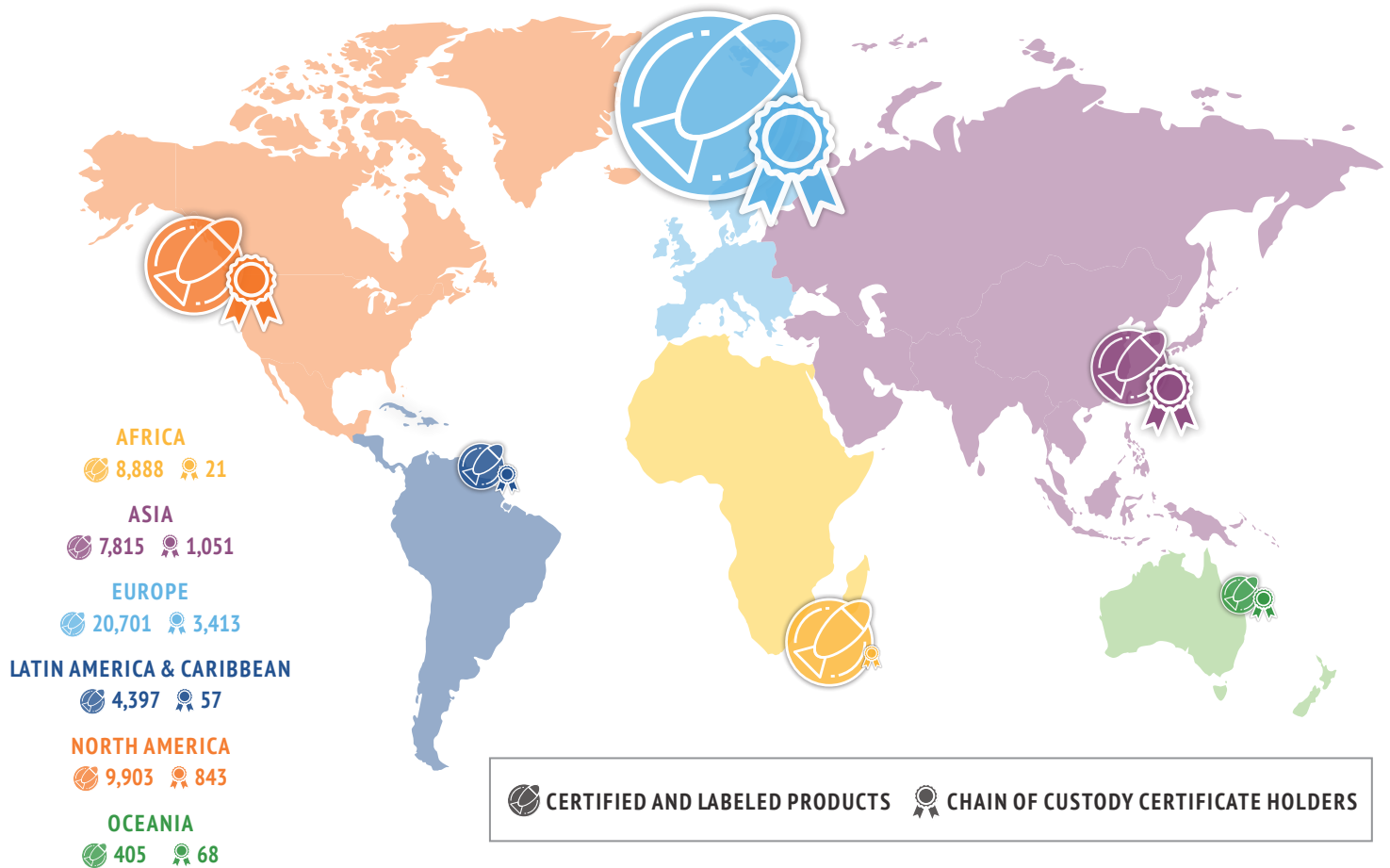
> **3,600 FISHERIES** with profiles in FishSource.

> **49 AQUACULTURE PROFILES** at the species/province level since being added to FishSource in 2018.

GROWING GLOBAL DEMAND FOR SUSTAINABLE SEAFOOD

Over the past 20 years, demand for sustainable seafood products has grown across the world – creating the incentive for much of the progress toward sustainable practice reflected on the previous pages. Products certified by the Aquaculture Stewardship Council, Marine Stewardship Council, and Fair Trade USA are sold in 147 countries, while more than 5,400 companies around the world hold chain of custody certificates. Europe is home to the biggest concentration of both certified, labeled products and chain of custody certificate holders.

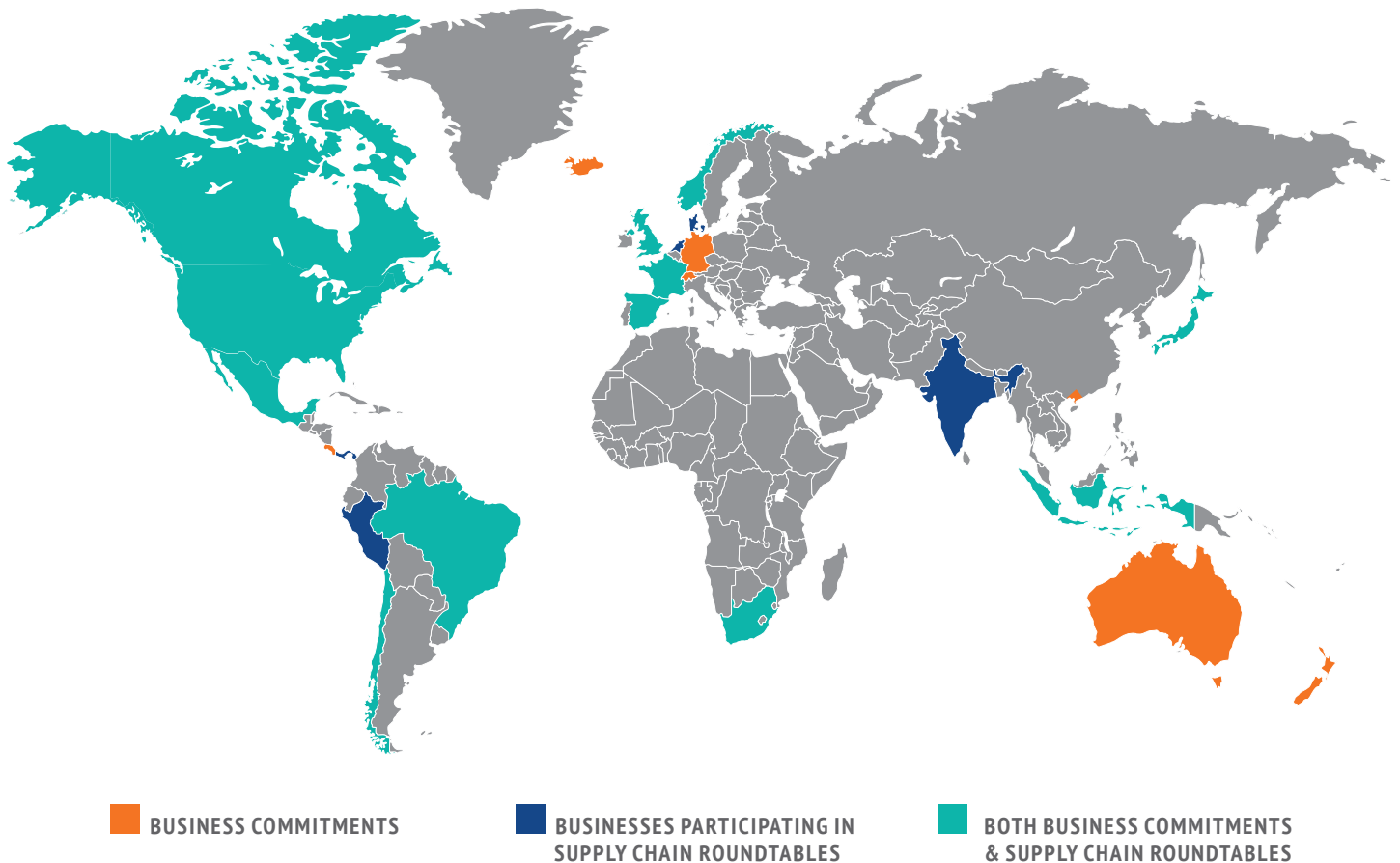
DISTRIBUTION OF CERTIFIED AND LABELED PRODUCTS AND CHAIN OF CUSTODY CERTIFICATE HOLDERS



Companies in Northern Europe and North America began making commitments to sustainable seafood in the early 2000s, and these commitments have expanded globally over time. Building on these efforts to increase demand for sustainable seafood by companies in critical markets is essential. Increased demand would provide the support and incentives fisheries and farms supplying these markets need to make improvements. Critical markets that purchase large volumes of key species prioritized for improvement include Japan, China, and South Korea in Asia as well as Latin America, Africa, and Southern Europe.

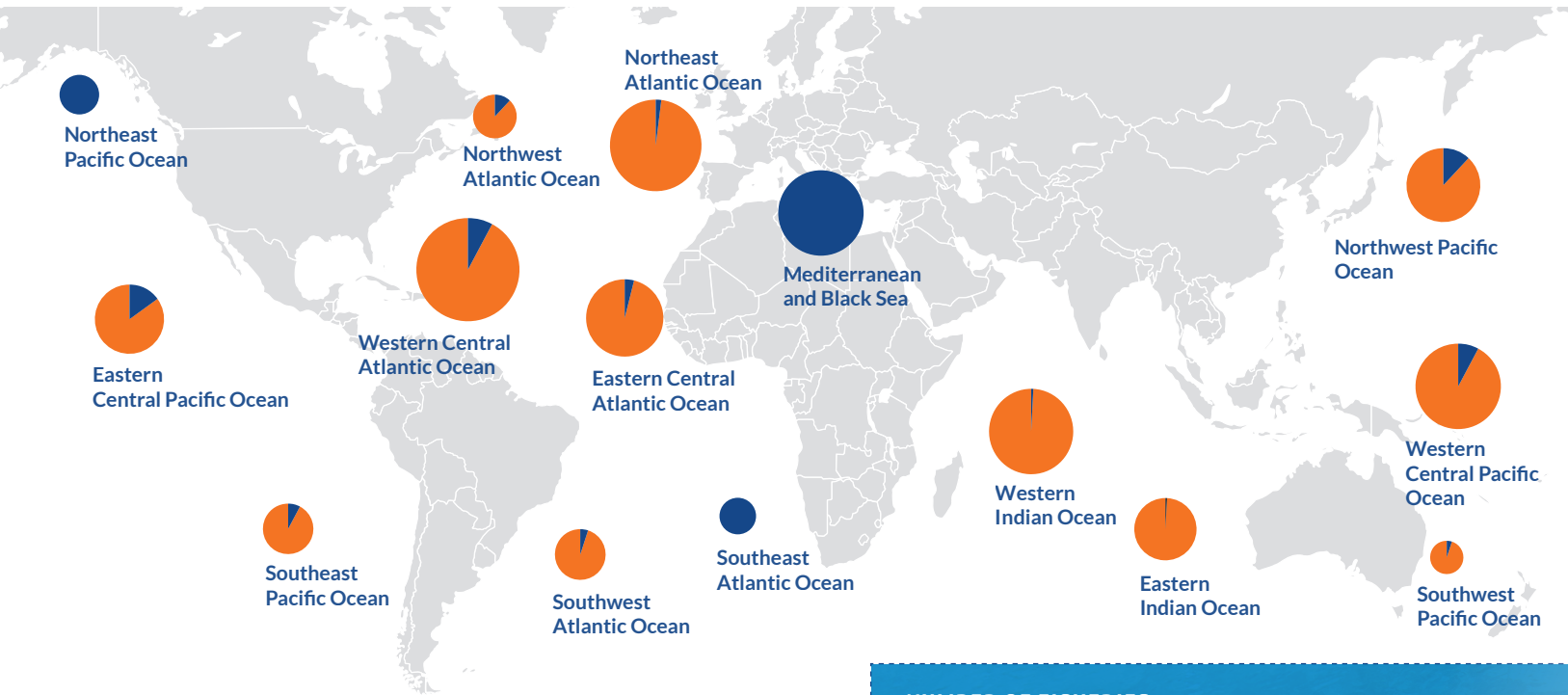
Seafood supply chains have responded to the demands of their customers to make improvements needed to expand the supply of sustainable seafood. There are currently 134 supply chain companies participating in roundtables focused on fisheries or aquaculture areas that need improvement. Supply chain roundtables are forums for processors, importers, and others that buy directly from a specific seafood sector to work together in a precompetitive context to support seafood sources to make improvements.

DISTRIBUTION OF BUSINESS COMMITMENTS AND BUSINESSES PARTICIPATING IN SUPPLY CHAIN ROUNDTABLES



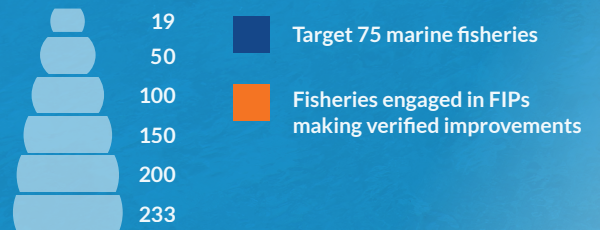
Number of certified and labeled products and chain of custody certificate holders provided by MSC, ASC, and FTUSA; business commitments and businesses in supply chain roundtables provided by MBA SFW and SFP.

FISHERY IMPROVEMENT PRIORITIES



While significant progress has been made by some wild fisheries in improving their sustainability over the past two decades, more work is needed to ensure global fisheries remain healthy and productive for the future. This chart shows the number of marine fisheries in each FAO region that are 1) making verified improvements in a public fishery improvement project; or 2) are prioritized for improvement by SFP, because they are not yet certified by a member of this Collaboration or engaged in a FIP.

NUMBER OF FISHERIES

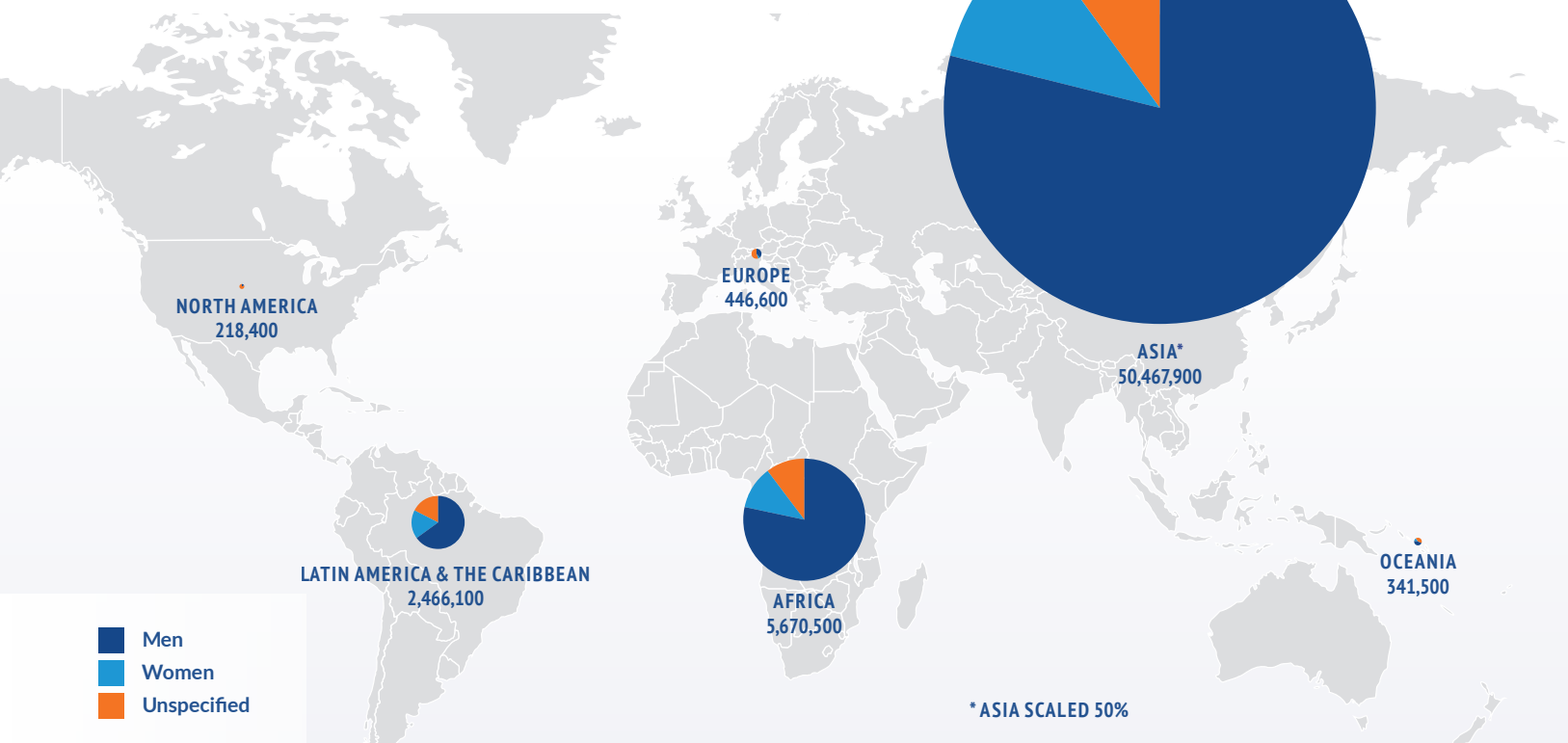


2,380 marine fisheries are currently priorities for improvement through Sustainable Fisheries Partnership's Target 75 initiative. Seven percent of wild fisheries are engaged in public fishery improvement projects, multi-stakeholder efforts that use the power of the private sector to help fisheries make the improvements needed to move toward sustainability. There are currently 101 active fishery improvement projects around the world. Eighty-five of these FIPs, covering 165 fisheries, are making verified improvements.

The seafood industry must use its leverage to get fisheries that are currently red- or yellow-rated by Monterey Bay Aquarium Seafood Watch or Target 75 priorities into credible fishery improvement projects. And they must actively support fisheries already in improvement projects to make regular progress toward their sustainability objectives.

Data on fisheries within the T75 scope and fisheries engaged in FIPs demonstrating improvements provided by SFP.

SOCIAL RESPONSIBILITY IN FISHERIES AND AQUACULTURE: 60 MILLION LIVELIHOODS AT STAKE



Globally, wild and farmed seafood production employs nearly 60 million people – almost 85 percent in Asia alone.

Environmental and social challenges within fisheries and aquaculture are often linked. Addressing environmental challenges can help ensure livelihoods are sustainable over the long term, while maintaining a critical source of food. Addressing social challenges can lead to environmental gains as producers are able to invest in stewardship of the resources they rely on. It is essential for the sustainable seafood movement to address social challenges directly – especially labor and human rights abuses, but also the full range of social issues that impact fisheries and aquaculture, including gender equity.

Within the Certification & Ratings Collaboration, both the Aquaculture Stewardship Council and Fair Trade USA include rigorous social content within their standards and the Marine Stewardship Council requires all MSC-certified fisheries to detail the measures they have in place to mitigate the presence of forced or child labor. Sustainable Fisheries Partnership has added socioeconomic indicators to a few of its FishSource profiles. SFP and Monterey Bay Aquarium Seafood Watch contributed to the development of the [Seafood Slavery Risk Tool](#).

FAO 2018 fishery and aquaculture statistics.

APPENDIX: DATA AND METHODOLOGY

Seafood production charts were generated using global production data for farmed and capture fisheries (for 2016) from FAO publicly available statistics. Seafood production refers to the defined species groupings¹ as recognized by FAO in the State of World Fisheries and Aquaculture Reports.

Proportions of seafood attributed to certification, ratings, improvements, in assessment, and priorities were based on analyses conducted by individual programs. Data attributed to these analyses were isolated from total global production; additional analyses aligned common efforts across the programs to recognize comparable efforts and reduce overlaps across datasets. Certified, rated, FIP, and under assessment volumes were removed from the T75 scope where we identified common fisheries across the datasets. Additional overlaps between FIP, rated, and under assessment volumes were further isolated. Priority volumes were assigned to certified fisheries, fisheries under assessment for certification, and FIPs. Data from the various programs do not represent the same year of data, but the most current available from each program within a few years' span (2014-2018).

Global demand for sustainable seafood tracks the global distribution of certified, consumer-facing products, chain of custody clients, business commitments and supply chain roundtables. Relevant data was provided by the individual programs. These data represent a current snapshot of activity as provided in 2018.

Fishery improvement priorities tracks global distribution of active improvement projects against defined priorities of the Sustainable Fisheries Partnership Target-75 initiative by major fishing area. These data represent a current snapshot of activity as provided in August 2018.

Livelihoods dependent on fisheries and aquaculture by gender and region are compiled annually by the FAO in the State of World Fisheries and Aquaculture reports. The data is from 2016, the most recent year available.

Data sources:

- Fisheries and aquaculture software. FishStatJ-software for fishery statistical time series. In: FAO Fisheries and Aquaculture Department [online]. Rome. Updated 21 July 2016.
- FAO. 2018. The State of World Fisheries and Aquaculture 2018 - Meeting the sustainable development goals. Rome. License: CC BY-NC-SA 3.0 IGO.
- Data on Target 75 priorities, fishery improvement projects, and business commitments and supply chain roundtables provided by Sustainable Fisheries Partnership.
- Data on certified fisheries, fisheries in assessment, certified products and chain of custody clients provided by the Marine Stewardship Council, Aquaculture Stewardship Council and Fair Trade USA.
- Data on rated fisheries, fisheries under ratings assessment, business commitments and supply chain roundtables provided by Monterey Bay Aquarium Seafood Watch Program.

1. For capture fisheries, "fish" includes fish, crustaceans, molluscs and other aquatic animals, but excludes aquatic mammals, reptiles, seaweeds and other aquatic plants. Global aquaculture production includes aquatic plants and seaweeds.