

## **Target 75 Sector Report: Reduction Fisheries**



## Target 75 Sector Report: Reduction Fisheries

SFP's [Target 75 \(T75\) initiative](#) has set a goal to see that 75 percent of the world's seafood production is considered sustainable or making regular, verifiable improvements by 2020. To simplify achieving and measuring progress toward this goal, SFP has divided the world's fisheries and farmed seafood production into various "sectors," defined by groups of species. While the sectors as a whole do not cover the entirety of the global seafood industry (e.g., some high-volume species groups such as carp, milk fish, and some shellfish are not included), those included represent a substantial proportion of the commercial seafood production of importance to markets currently demanding sustainability.

For the purposes of this analysis, we define a fishery as "sustainable" if it is Marine Stewardship Council (MSC) certified or green-listed in SFP's Metrics tool. We define a fishery as "improving" if it is certified by one of the following programs: IFFO RS, ASMI RFM, Iceland Responsible Fisheries, Fair Trade USA; if it is under full assessment in the MSC program; or if it is in a fishery improvement project (FIP) that is making good progress (i.e., with a progress rating of A, B, or C using SFP's FIP evaluation tool).

In this report, SFP provides information on the current status of the sector in terms of volumes coming from sustainable and improving fisheries, and, most importantly, we map out a path to close the gap to Target 75. We base the analysis on a blend of data and expert opinion on priority fisheries. SFP obtained production volumes and additional information relevant to this analysis from the FAO FishStat database, relevant countries' national statistics, and the respective certification programs' websites and certification reports (e.g., MSC, ASMI RFM). Trade data provide a guide to how much of the production goes to markets that are highly engaged in sustainability (e.g., EU, US), markets with activities that engage in improvements (e.g., Brazil, China, Indonesia, Japan), and markets with little evidence of engagement in sustainability or immediate plans to engage in improvements (e.g., Nigeria, Vietnam). While such trade data provide some insights into the likely influence key markets have, we have also looked at expert opinion and information on the structure of production in each country, in order to determine whether a fishery is a candidate to contribute to the Target 75 initiative's goal.

## Reduction Fisheries Sector

The Reduction Fisheries Sector includes two main sub-groups of global supply, which are differentiated by the end markets:

- The Atlantic/Pacific reduction fisheries sub-group is comprised of fisheries where there is evidence that the main use is for reduction purposes and that the respective stocks/fisheries are or have recently been sourced by a major fish feed company supplying the American, Australian, and European markets. This subgroup consists mainly of small pelagic species such as anchoveta, sandeel, or sardine, but also includes species from a couple of other biological groups, for example: blue whiting, a cod-like species (Gadidae family), and Antarctic krill, a crustacean. Overall, this sub-group is comprised of 20 species and 39 stocks/fisheries. In the future, this sub-group will expand to cover additional fisheries that are used for reduction purposes in more localized areas.
- The Asian reduction fisheries sub-group includes multispecies trawl fisheries and directed small pelagics fisheries, which are used as feed in the Asian shrimp farming industry, but also supply the surimi market and other direct human consumption (e.g. fish sauce, dried fish). The volumes of fishmeal generated by local fisheries in Asia can be substantial; exact figures are hard to calculate, but SFP estimates that the annual catch of fish used for reduction may be several million tonnes. The most recent estimates available on catches of Asian fisheries are from 2012 (FAO 2012).

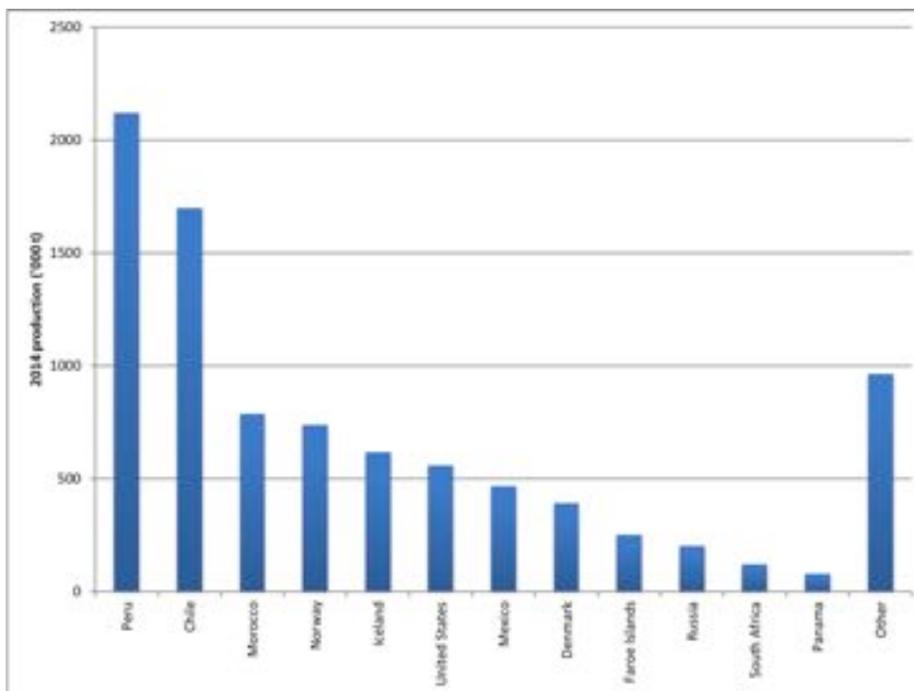
We propose a single strategy for closing the gap to T75 for all reduction fisheries, but for the initial analyses, we grouped American, European, and African fisheries together (Atlantic/Pacific reduction fisheries) and all Asian sources into another group (Asian reduction fisheries). The rationale for splitting the global sector into two sub-sectors is that almost all Atlantic/Pacific reduction fisheries are for small pelagics, and are quite similar in terms of trophic level, gear, ecology and management, as well as engagement in FIPs. In contrast, levels of FIP engagement in Asia are much lower, and only 50 percent of Asian sourcing comes from small pelagic fisheries, while the remainder comes from multispecies trawl fisheries (sometimes described as “trash fish”), which face fisheries management and sustainability challenges that are unique among sources of fishmeal and fish oil.

Each grouping produces approximately 9 million tonnes of raw material, for a total global production of 18 million tonnes. Each grouping is therefore vitally important to

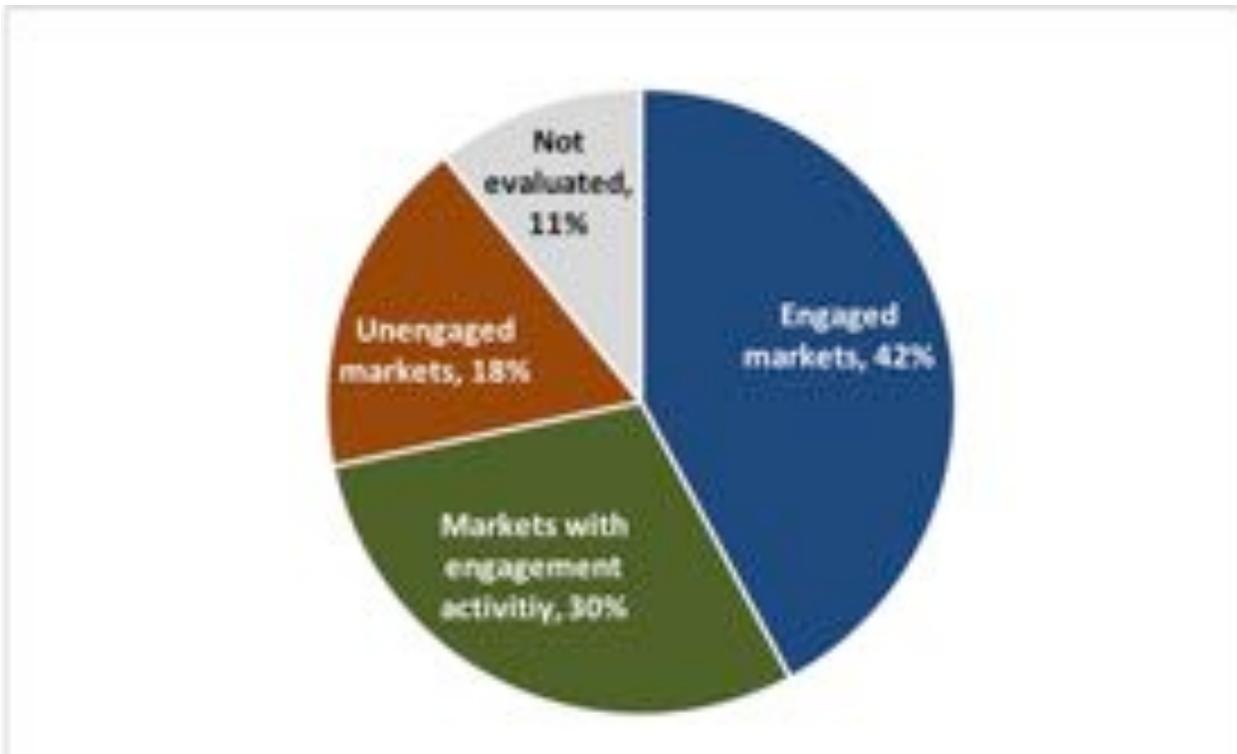
global supplies of fishmeal and fish oil, and progress must be made and maintained in both groups to achieve T75. Hence, the current status of sourcing, patterns of global production and trade, and the general potential for mobilizing new FIPs based on level of market engagement are first described separately in sub-sections for Atlantic/Pacific reduction fisheries and Asian reduction fisheries.

*Global Supply and Patterns of Trade – Atlantic/Pacific Reduction Fisheries*

- Based on a variety of sources, SFP has calculated the 2014 Atlantic/Pacific reduction fishery production to be 9,007,000 tonnes (rounded to the nearest thousand tonnes).
- The top 12 producing countries land 8,041,000 tonnes, 90 percent of production from this sub-sector (45 percent of global production in the sector) (Figure 1).
- Approximately 42 percent of global production sells in markets (including domestic markets) engaged in sustainability, with a further 30 percent selling to markets with some engagement efforts underway (Figure 2).
- Out of the total traded volume from this sector overall in 2014 ([International Trade Center, 2014](#) data compiled by California Environmental Associates as part of the OSMI initiative) (3.53 million tonnes), the EU imported 34 percent, China 30 percent, and Japan 7 percent. The United States (9<sup>th</sup> top importer) only represented 2 percent of the global imports of fishmeal and fish oil products.



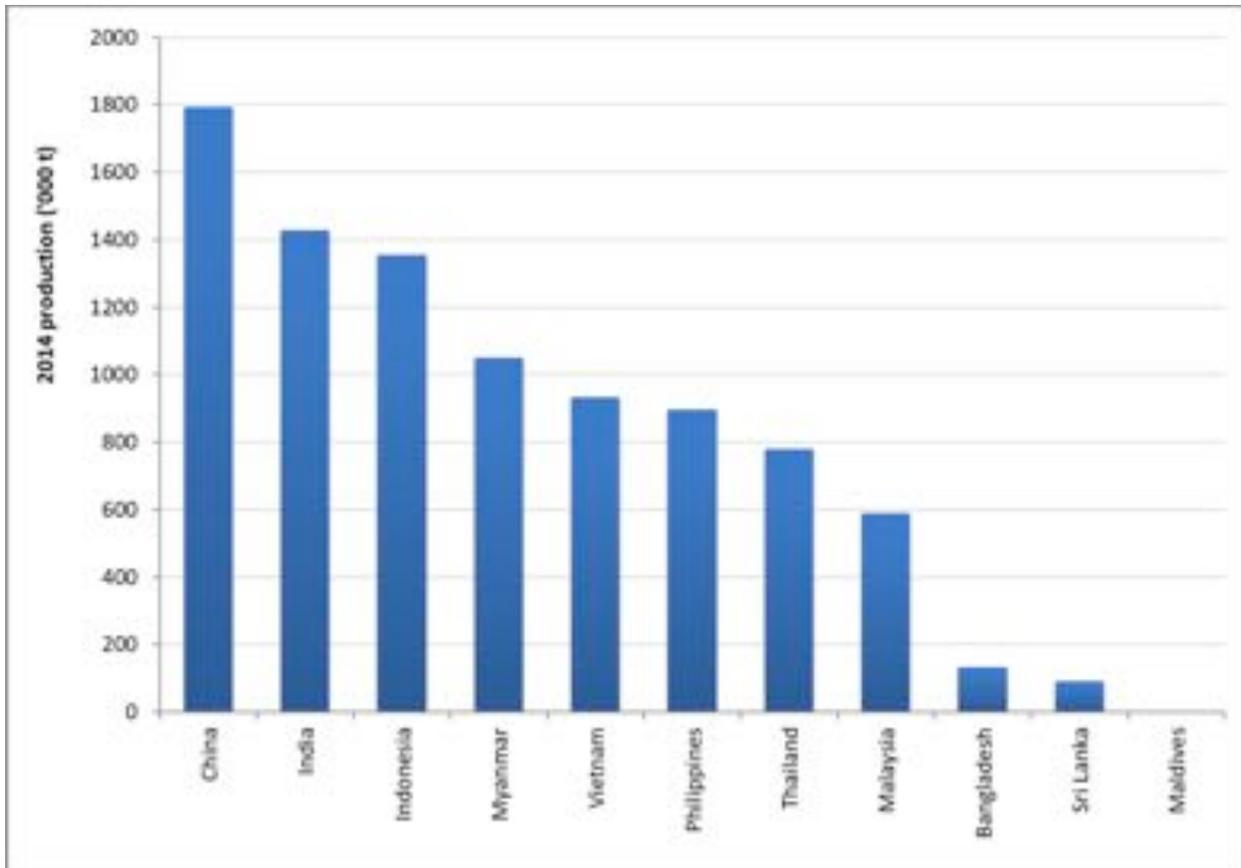
**Figure 1:** Top 12 Atlantic/Pacific reduction fishery-producing countries, 2014 production and trade patterns



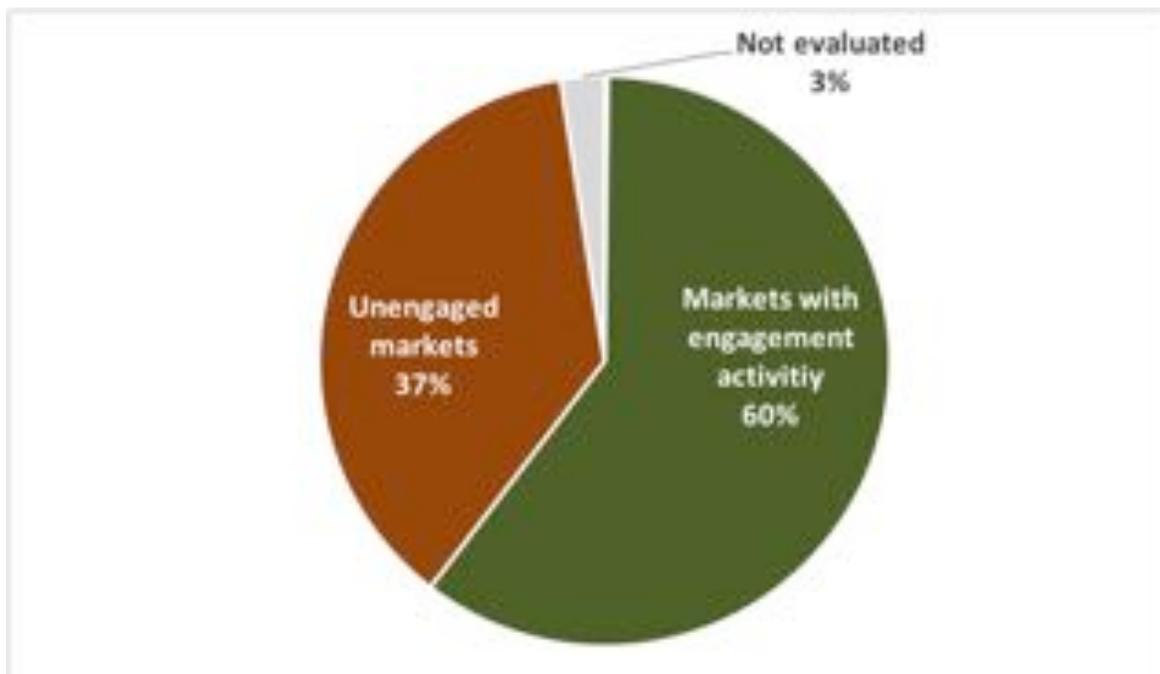
**Figure 2:** Atlantic/Pacific reduction fishery production by end-market level of engagement

#### *Global Supply and Patterns of Trade – Asian Reduction Fisheries*

- FAO reports 2012 total production from this grouping of 9,050,000 tonnes (rounded to the nearest thousand tonnes).
- Eleven countries generate 100 percent of the global production in this sub-sector (Figure 3). The majority of production in all countries (except Myanmar and Vietnam) is used in domestic farming industries. This means that international trade and markets of farmed seafood products have limited ability to engage and influence the production of fishmeal and fish oil.
- For many of the countries (e.g., Indonesia), and in particular for directed small pelagics fisheries, part of the production is also for human consumption.
- Approximately 60 percent of global production sells in markets with engagement activity, with a further 37 percent going to unengaged markets (Figure 4).



**Figure 3:** Asian reduction fishery-producing countries, 2012 production and 2014 trade patterns



**Figure 4:** Asian reduction fishery production by end-market level of engagement

### **Improvement Progress to Date**

Currently, 7.4 million tonnes, or 41 percent of global production, are considered sustainable or improving (see Annex: Table 1). Of this volume, 99 percent is under the Atlantic/Pacific reduction fishery sub-sector (81.8 percent of that sub-sector's total production). Engagement in Asia is lower because of the complexity of the fisheries, a lack of transparency, and insufficient governance.

- MSC Certified Fisheries
  - [Aker Biomarine Antarctic krill](#)
  - [Small Pelagics Fishery in Sonora, Gulf of California](#)
  - [PFA, DPPO, KFO, SPSG & Compagnie des Peches St Malo Northeast Atlantic blue whiting pelagic trawl](#)
  - [Faroese Pelagic Organization North East Atlantic blue whiting](#)
  - [Southern Gulf of California thread herring](#)
  - [LFPO pelagic trawl sprat](#)
  - [DFPO and DPPO North Sea, Skagerrak and Kattegat sandeel, sprat and Norway pout \(Danish segment\)](#)
  - [ISF Iceland Capelin](#)
  
- MSC Full Assessment
  - [Omega Protein Corporation U.S. Gulf of Mexico menhaden purse seine](#)
  - [Omega Protein Corporation U.S. Atlantic menhaden purse seine](#)
  - [Deris S.A.-Pesca Chile Antarctic krill](#) (no catch volume known at this time, thus is not yet accounted for in Table 1)
  - [DFPO and DPPO North Sea, Skagerrak and Kattegat sandeel, sprat and Norway pout \(Swedish segment\)](#)
  
- Other Certifications considered to represent ongoing improvements (the following are all [IFFO-RS](#) certifications)
  - European sprat – Baltic Sea (Denmark)
  - Lesser sand-eel – North Sea (Norway, Denmark)
  - Norway pout – North Sea (Norway)
  - European sprat – North Sea (Norway)
  - Capelin – Icelandic–(Faroe Islands, Iceland)
  - Blue whiting [*Micromesistius poutassou*] – NE Atlantic and adjacent waters (Norway, Faroe Islands, Iceland, Denmark, United Kingdom)

- Thread Herring [*Opisthonema medirastre*, *O. liberatate* & *O. bulleri*] - Eastern Central Pacific FAO 77 (Mexico)
- Anchoveta – Southern Peru/Northern Chile (Chile, Peru)
- Araucanian herring – Chilean region V-X (Chile)
- Anchoveta – Chilean regions V-X (Chile)
- Anchoveta – Peruvian northern-central stock (Peru)
- Capelin – Barents Sea (Norway)
- Boarfish – NE Atlantic (Denmark, UK)
- South African anchovy (South Africa)
- South Africa redeye herring (South Africa)
- FIPs with A-C rated progress/AIPs
  - [Panama small pelagics](#) – A progress rating
  - [Morocco Sardine](#) – B progress rating
  - [Lower Mekong Ben Tre Trawl](#) – C progress rating

### ***Closing the Gap to Target 75***

#### *Existing Supply Chain Leverage and Interest*

The primary target fisheries for improvement are those that existing supply chain roundtable (SR) participants have already identified as of-interest and those that SFP believes are likely candidates for improvement projects. These fisheries account for 2.6 million tonnes of production, 15 percent of the global total (see Annex: Table 2).

- Supply Chain Roundtables
  - The Asian Reduction Fisheries SR addresses the improvements required in the typically tropical, multispecies/multi-gear fisheries in Asia. The specific fisheries of recent interest involve those supplying fishmeal in Thailand and Vietnam. There are fisheries with similar issues in the region (e.g., China, Philippines, Vietnam, Thailand, Indonesia, Malaysia, Myanmar, Brunei, Cambodia, Bangladesh, and India) where similar initiatives are being explored.
  - The European Sustainable Fishmeal SR focuses on monitoring the sustainability status of stocks used for fishmeal and fish oil production in globally significant reduction fisheries. The vast majority of production that is of interest to this SR is already sustainable or improving; their role is to shift volume from the improving to the sustainable category, and to ensure no

- production is removed from these categories. This SR may have some leverage to catalyze a FIP in the Chilean jack mackerel fishery.
- The Latin American Reduction Fisheries SR focuses on monitoring sustainability status and performance of fisheries used for fishmeal and fish oil production in Latin America. Much of this production is already sustainable or improving; their role is to shift volume from the improving to the sustainable category, and to ensure no production is removed from these categories.
  - Other Likely Candidates for Improvement Projects
    - Vietnam [Lower Mekong Delta Kien Giang multispecies trawl](#) – FIP inactive
    - Thailand [Andaman Sea multispecies trawl](#) – FIP in development
    - Thailand [Gulf of Thailand multispecies trawl](#) – FIP in Development
    - Indian Oil Sardine:
      - [Maharashtra and Goa States \(Omega Fishmeal and Oil, CPF India\)](#) – FIP in development
      - [Indian Fish Meal and Fish Oil Exporters Association](#) – FIP in development
      - Kerala State [Indian Oil Sardine FIP \(WWF\)](#) – FIP inactive

#### *Urgent Additions Requiring New Supply Chain Leverage*

Between fisheries that are already sustainable or improving and FIPs that we believe the existing supply chain roundtables will be able to catalyze, we account for only 56 percent of global production (summed totals from Tables 1 and 2).

Target 75 can only be achieved by expanding improvement efforts in Asian reduction fisheries, but the path to close the gap to T75 is not yet clear. Few data are available for these fisheries, thus identifying and characterizing them is a priority. Asian small pelagic fisheries provide material for both human consumption and fishmeal/oil. The extent to which these fisheries are being utilized for fishmeal/oil has not been precisely determined, and it is a matter of urgency that we map the current activities and understand where the priorities lie for fishery improvement. Table 3 (see Annex) contains a list of the higher-volume multispecies trawl and small pelagic fisheries that must be investigated to identify the most likely candidates to contribute to improvement in the Reduction Fisheries Sector. Please note, none of these fisheries has been prioritized for the T75 strategy at this time – this is merely a list we are considering for future inclusion.

## ***Improvement Opportunities and Challenges***

The [Seafood Task Force](#): Formed in 2014, the Seafood Task Force is an industry-led, multi-stakeholder effort to address environmental and social issues in Thailand’s seafood supply chain. The Task Force currently has 30 commercial members representing all parts of the seafood supply chain, plus 12 formal external stakeholders representing environmental and social NGOs, certification standards, and service providers. The membership and activities encompass characteristics of AIPs, FIPs, and a supplier roundtable.

In addition to the development of FIPs by the Thai Sustainable Fisheries Roundtable, the Royal Thai Government has been actively working to improve fisheries management to avoid an EU “red card” since 2015. See this [news article](#), for example.

Expansion of the definition of the Atlantic/Pacific reduction fisheries sub-group to include fisheries generating material for localized markets or smaller feed manufacturers would enable tracking of additional fishery improvement projects:

- The [Mauritanian Small Pelagics FIP](#) has been operating since August 2017 but is not currently accounted for in this strategy because the fishery volume was not included in the original baseline.
- Most of the important producers in Ecuador are currently scoping a FIP for the small pelagics fishery in that country. The FIP is likely to cover a substantial production volume, but at this time the species composition and harvest volumes are not clear and are not included in the original baseline.

There are currently no third-party certifications designed to accommodate the complex multispecies fisheries common throughout Asia. Both [IFFO RS](#) and [MSC](#) are working on new standards.

Asia faces persistent challenges that include data deficiency, weak governance, and severe environmental impacts. For most of these fisheries, the information on the amount of catches, species captured, size composition, main fishing grounds, and effort are scarce and not systematically collected.

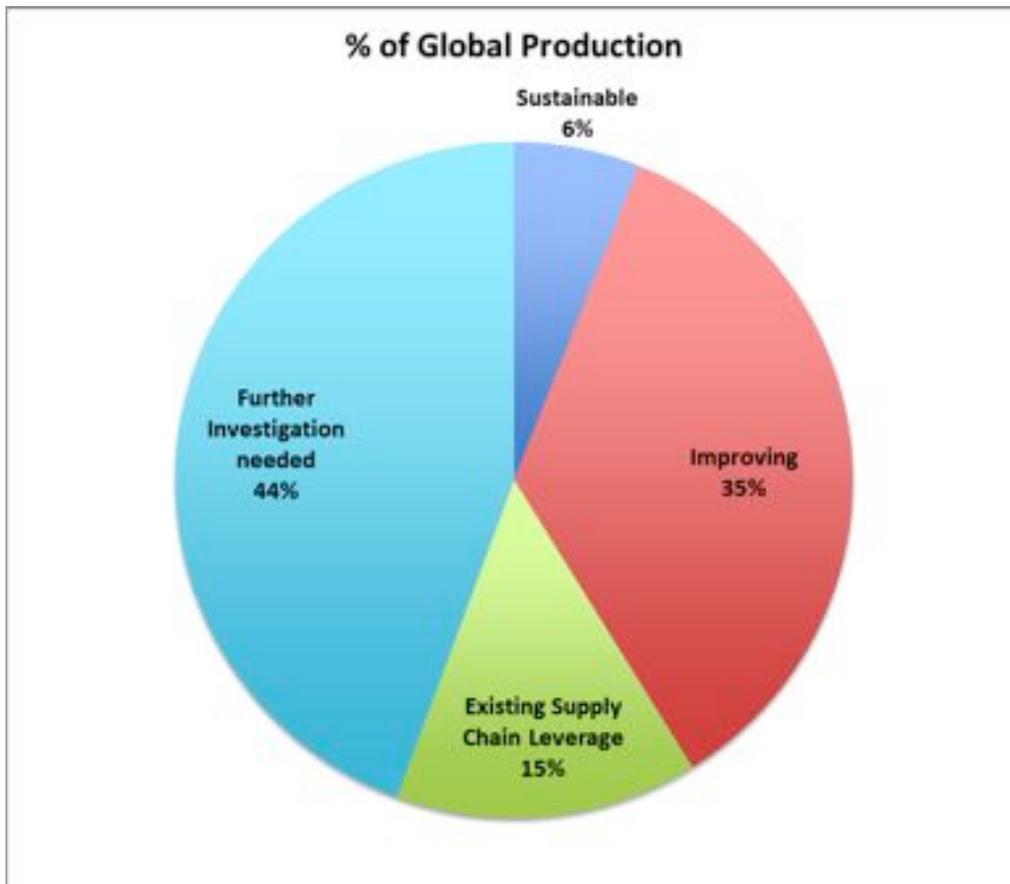
Several of the fisheries in Asia have featured abuses of human rights — for example, see this [news article](#) — and there is a clear necessity to address both labor issues and ecological sustainability within the same improvement projects.

**Summary**

As of this writing, 41 percent of the global production in reduction fisheries is considered sustainable or improving. The vast majority of this volume is under the Atlantic/Pacific reduction fishery sub-sector, which, if considered by itself, would have met the T75 goal already.

An additional 15 percent of global production has been identified for further improvement efforts using existing supply chain leverage.

While Target 75 can only be achieved by expanding improvement efforts in Asian reduction fisheries, the path to close the gap to T75 is not yet clear. Higher-volume multispecies trawl and small pelagic fisheries must be investigated to identify the most likely candidates to contribute to improvement in this sector.



**Figure 5: Strategy to pursue Target 75 for the Reduction Fisheries Sector**

## Annex: Progress toward Target 75 goal

The following tables show key figures in gauging the progress of global reduction fisheries production toward the Target 75 goal. The table format will be reprised in future reports with updated figures.

**Table 1: Volume considered sustainable or improving**

T75 Category	Volume (mt)	% of Global Production
Sustainable: MSC-C	1087,260	6.0%
Improving: MSC-FA	573,550	3.2%
Improving: Other Certifications	4,777,810	26.5%
Improving: FIPs (rated A-C)	995,970	5.5%
<b>Total</b>	<b>7,434,590</b>	<b>41.1%</b>

**Table 2: Target reduction fisheries using existing supply chain leverage and interest**

Production Source	2014 Landings (mt)	% Global Production	Improvement Outlook
Indian oil sardine (West Indian coast)	544,680	3.0%	Multiple FIP catalyzation efforts underway; previous FIP inactive
Vietnam, multispecies trawl (provinces other than Ben Tre and Kien Giang)	472,450	2.6%	
Chilean jack mackerel (domestic and international fleets)	410,340	2.3%	

Vietnam, Lower Mekong Delta Kien Giang multispecies trawl	400,000	2.2%	FIP inactive, adequate supply chain pressure may be able to rejuvenate
Thailand, multispecies trawl (FAO 71 - South China Sea)	299,630	1.7%	FIP in development by Thai Sustainable Fisheries Roundtable
Thailand, Andaman Sea, multispecies trawl (FAO 57)	215,570	1.2%	FIP in development by WWF-Thailand and Thai Sustainable Fisheries Roundtable
Thailand, small pelagics (FAO 71 - South China Sea)	145,210	0.8%	FIP in development by Thai Sustainable Fisheries Roundtable
Thailand, small pelagics (FAO 57 - Bay of Bengal)	119,980	0.7%	
<b>Total</b>	<b>2,607,860</b>	<b>14.5%</b>	

**Table 3: Additional fisheries for examination and consideration**

<b>Production Source</b>	<b>2014 Harvest (mt)</b>	<b>% Global Production</b>
China, multispecies trawl (FAO 71 - South China Sea)	1,280,000	7.1%
Myanmar, multispecies trawl (FAO 57 - Bay of Bengal)	968,600	5.4%
Indonesia, small pelagics (FAO 71 - Sulu-Sulawesi and Timor-Arafura Seas)	930,000	5.2%
Philippines, small pelagics (FAO 71 - South China Sea)	818,900	4.5%
China, small pelagics (FAO 71 - South China Sea)	513,300	2.8%
India, small pelagics (FAO 57 - Bay of Bengal)	485,900	2.7%
India, multispecies trawl ((FAO 57 - Bay of Bengal)	396,800	2.2%
Malaysia, multispecies trawl (FAO 57 - Bay of Bengal)	201,000	1.1%
Malaysia, small pelagics (FAO 57 - Bay of Bengal)	176,000	1.0%
Indonesia, small pelagics (FAO 57 - Bay of Bengal)	174,000	1.0%