

Target 75 Sector Update: Squid





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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). Such trade data provide some insights to the likely influence key markets have, but is combined with 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.

Squid Sector

The squid sector comprises all squid species (families: Gonatidae, Loliginidae, Ommastrephidae, Onychoteuthidae). Squids are mostly traded fresh/chilled or frozen, although some small volumes are also traded dried, prepared or preserved. Most production comes from industrial fisheries using a wide variety of fishing gears including jigs, hook and line, purse seine, mid-water, and bottom trawling operating within exclusive economic zones (EEZs) and in international waters. An important artisanal component operates in a number of EEZs ranging from small vessels with outboard motors carrying two or three fishers to vessels of 15 meters or more carrying five or six fishers.

Global Supply and Patterns of Trade

- FAO reports total global production of more than 3.7 million tonnes. For countries that are known to capture squids but where there is no reported catch at the family level (e.g., Cambodia, Madagascar, Mozambique, Somalia), we have used landings data at the lowest taxa reported (typically “cephalopods nei”) or estimated squid production based on other sources (e.g., for India, Vietnam).
- More than 95 percent of global production comes from only 18 countries (see Figure 1).
- Imports – Of the 1.26 million tonnes in traded volume in 2014 ([International Trade Center, 2014](#)), China imported the most with 31 percent of total imports, followed by the EU at 25 percent, Thailand at 11 percent, and both South Korea and the US, each with 6 percent of total imports.
- Exports – Of the total traded volume in 2014 ([International Trade Center, 2014](#)), China leads again with 22 percent of total global exports, followed by Peru at 13 percent, the US with 8 percent, Spain at 6 percent, North Korea at 5 percent, India and Taiwan with 5 percent each, Chile and Argentina with 4 percent each, and Indonesia with 3 percent.
- Approximately 8 percent of global production goes to markets engaged in sustainability, with a further 47 percent going to countries with some engagement efforts underway (Figure 2).

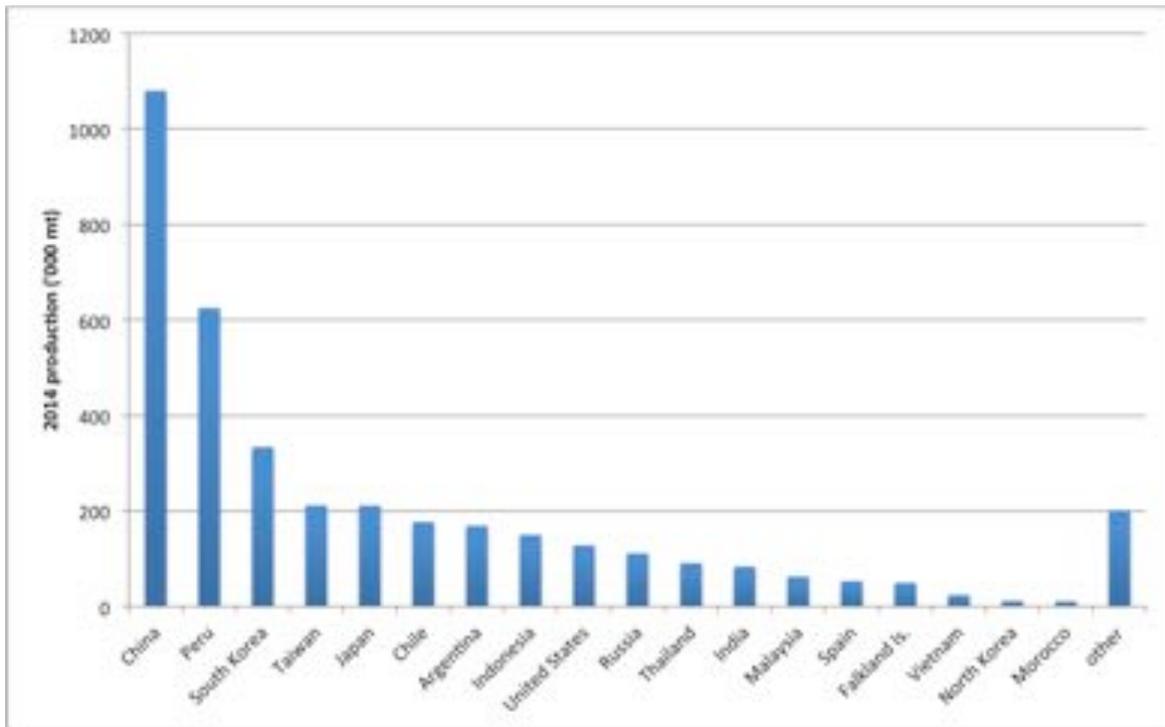


Figure 1. Top 18 squid-producing countries, 2014 production

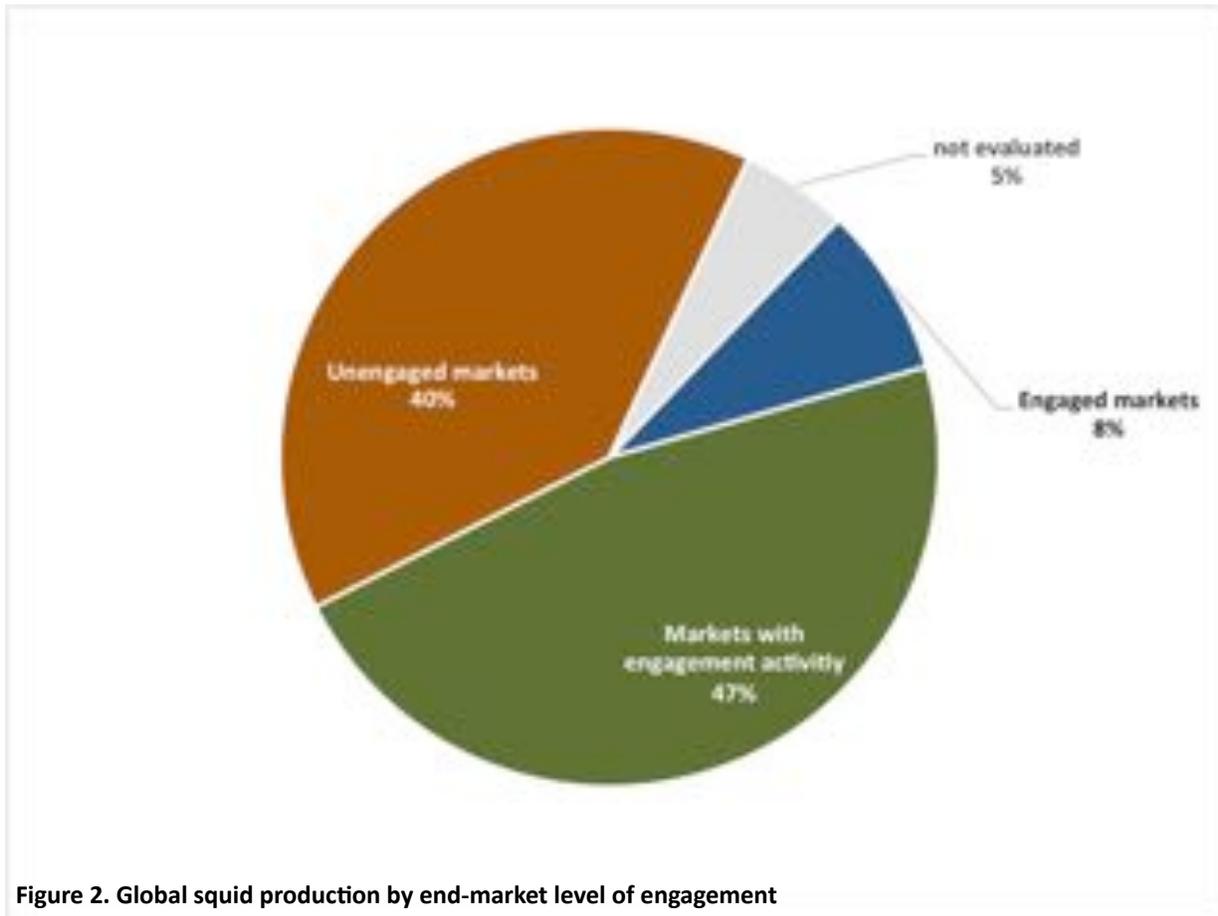


Figure 2. Global squid production by end-market level of engagement

Improvement Progress to Date

Based on 2014 production data, 12,040 tonnes, or 0.3 percent of the global production, are currently considered sustainable or improving (see Annex: Table 1), using publicly available information on MSC status and FIP progress ratings reviewed in early October 2017.

- MSC-certified fisheries
 - There are no MSC-certified squid fisheries at this time.
- MSC Full Assessment
 - [US Northeast Longfin Inshore Squid Bottom Trawl Fishery](#)
- FIPs with A–C-rated progress/AIPs
 - There are no squid FIPs with A–C progress at this time.

Closing the Gap to Target 75

Existing Supply Chain Leverage and Interest

The primary target fisheries for improvement are those in FIPs not making good progress, major fisheries in which existing SR participants have market leverage to deliver improvements, and those fisheries that SFP believes are likely candidates for improvement projects. Together, these fisheries account for more than 2.1 million tonnes of production, representing nearly 57 percent of the global total (see Annex: Table 2).

- FIPs with D–E-rated progress
 - [Auckland Islands Arrow Squid](#) – E progress
 - [New Zealand EEZ Squid](#) – E progress
- Supply Chain Roundtables
 - The South American Squid SR and the Asia-Pacific Squid SR merged into one group—the [Global Squid SR](#)—in March 2017. Though the name of the SR suggests global coverage of squid fisheries, current participant leverage does not encompass all of the fisheries necessary to achieve the Target 75 goal. Current SR participants have expressed interest in starting FIPs in China (mitre squid and Japanese flying squid) and Peru (jumbo flying squid). Additional fisheries of interest that may be covered by this SR include Argentine shortfin squid, Patagonian squid, and jumbo flying squid in South America, and Japanese flying squid and common squids in Asia.

Urgent Additions Requiring New Supply Chain Engagement

Target 75 can only be achieved by expanding improvement efforts to Chinese fleets operating in international waters off South America where they target Argentine shortfin squid off the Atlantic coast and jumbo flying squid in the Pacific. In addition, the engagement of the South Korean market will also cover another 3 percent of global production caught in international waters off South America (jumbo flying squid and Argentine shortfin squid). See Annex: Table 3 for the respective volumes of these fisheries.

Improvement Opportunities and Challenges

A number of factors favor improvement in sustainable squid fishing. Unlike some species, squid grow rapidly and typically have an annual life cycle, reproducing and dying at the end of one year. This makes squid stocks resilient to fishing when, for example, compared to fish. Also, the most common fishing methods used in squid fisheries—apart from bottom trawling—are known to have relatively low environmental impacts.

Near real-time fisheries data collection has been demonstrated to be an effective complement to scientific surveys helping to improve stock assessment methodology and, therefore, should be a key element of the management strategies for squid fisheries, as seen, for example, in the Japanese flying squid fishery within the Japanese EEZ; the Argentine shortfin squid in the Southwest Atlantic; and in the Patagonian squid fishery in the Falklands management zones in the Southwest Atlantic.

Monterey Bay Aquarium's assessment of Japan's [Japanese Flying Squid](#) fishery shows that squid fisheries can operate sustainably, thus this fishery should serve as a model for similar improvement efforts.

As improvement efforts progress, cooperation between different jurisdictions will be key. The three biggest stocks worldwide (jumbo flying squid, Japanese flying squid, and Argentine shortfin squid) will require international cooperation and/or agreements to develop management structures and implement management measures to ensure the long-term sustainability of the different fisheries operating on each of those stocks. For management relying upon an RFMO-type model, ongoing political disagreements between neighbor countries are likely to remain an obstacle, especially in the Southwest Atlantic.

Given the importance of the near real-time data collection from fishing fleets stated above, three areas are likely to need addressing to enable key sustainability improvements: investment in various at-sea data collection and transmission technologies and monitoring capacity; investment in the technical capacity of scientific institutions to optimally analyze and use these

data; and development of the ability of regulatory authorities to be responsive to the fishery and stock abundance in near real-time.

Summary

With less than 1 percent of global production recognized as sustainable or improving, a great deal of progress is left to be made in large-scale squid fisheries. Efforts to engage the international supply chain are still just beginning, which makes it hard to define a clear, high confidence route to close the gap to T75.

That said, there are, fortunately, a number of fisheries making incremental improvements that are not yet publicly recorded under FIPs. It is possible that existing supply chain leverage and interest may be able to influence more than 57 percent of global production. The key to reaching T75 is engaging Chinese and South Korean fisheries operating in the international waters off South America. The industry can accomplish this through demand from some markets already engaged in sustainability, engaging the markets where those products end up, as well as creating demand for sustainable products from new markets.

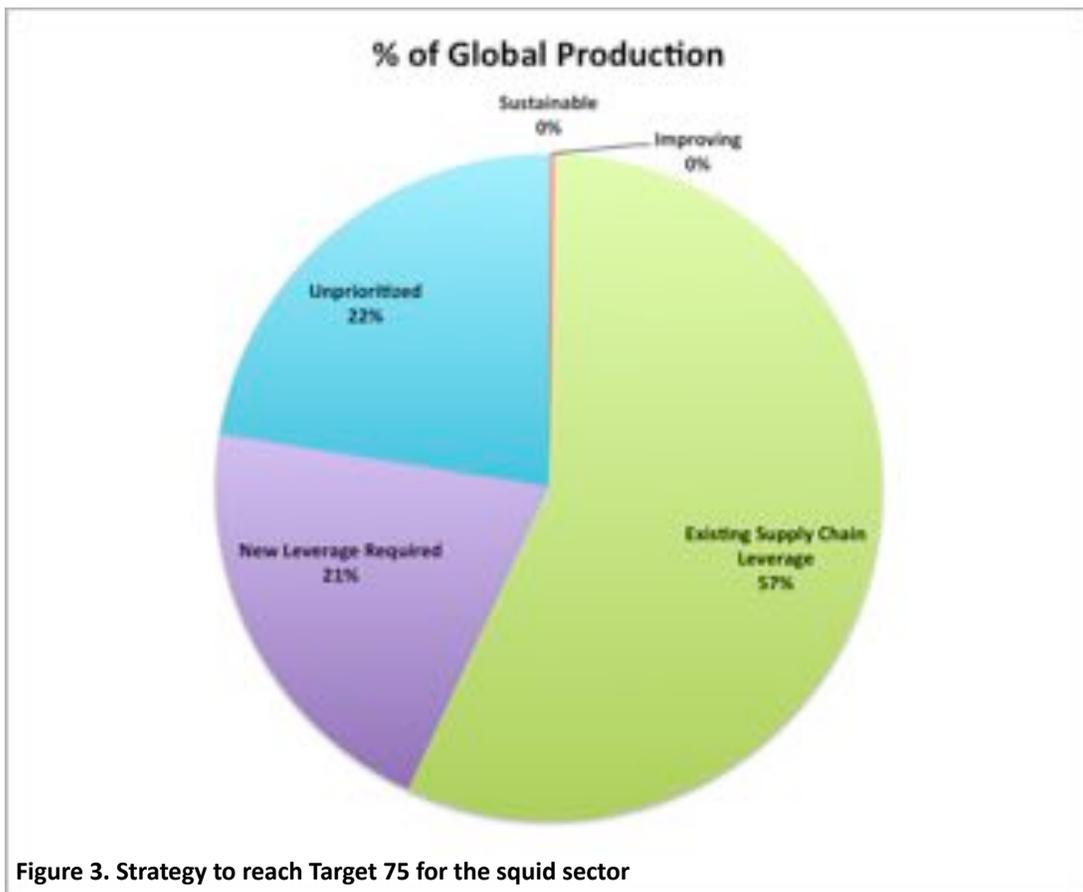


Figure 3. Strategy to reach Target 75 for the squid sector

Annex: Progress toward Target 75 goal for Squid Sector

The following tables show key figures in gauging the progress of global squid 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 or FS Green	N/A	N/A
Improving: MSC FA	12,040	0.3
Improving: FIPs (rated A-C)	N/A	N/A
Total	12,040	0.3%

Table 2. Target squid fisheries with existing supply chain leverage and interest

Production Source	2014 Landings (mt)	% Global Production	Improvement Outlook
Auckland Islands Arrow Squid FIP	7,400	0.2	E progress rating due to lack of Stage 4 achievement (change in fishing practice or policy) to date. This FIP has stalled over an inability to develop a stock assessment; proposals to advance this issue exist and may be activated this year.
New Zealand EEZ Squid FIP	7,650	0.2	E progress rating due to lack of Stage 4 achievement (change in fishing practice or policy) to date. This FIP has stalled over an inability to develop a stock assessment; proposals to advance this issue exist and may be activated this year.

Production Source	2014 Landings (mt)	% Global Production	Improvement Outlook
Spain, Argentine shortfin squid (FAO 41)	33,460	0.9	
Falkland Islands, Patagonian squid	43,110	1.1	
Falkland Islands, Argentine shortfin squid	6,150	0.2	
China, mitre squid	140,620	3.7	Prospective FIP designed by China Blue, industry partners seeking additional funding. While the FIP is focused on the domestic industry, the project is being used to engage Chinese industry in squid sustainability outside of China as well.
China, squids nei	271,110	7.2	FIP scoping for Japanese flying squid fishery in the East China and Yellow Seas underway by Ocean Outcomes on behalf of Sea Farms Limited and Panapesca.
Japan, Japanese flying squid (East China Sea and East/Japan Sea)	173,110	4.6	
Indonesia, common squids nei (FAO 71)	112,050	2.9	
Indonesia, common squids nei (FAO 57)	37,790	1.0	
Thailand, common squids nei (FAO 71)	70,780	1.9	
Thailand, common squids nei (FAO 57)	14,330	0.4	
Argentina, Argentine shortfin squid	168,730	4.4	
Chile, jumbo flying squid	176,600	4.7	
Peru, jumbo flying squid	612,440	16.2	FIP catalyzation underway by SR participants

Production Source	2014 Landings (mt)	% Global Production	Improvement Outlook
India, squids nei (FAO 51, 57)	83,220	2.2	
South Korea, Japanese flying squid (East China Sea and East/Japan Sea)	163,890	4.3	
Ecuador, jumbo flying squid (Eastern Pacific)	18,150	0.5	
Total	2,140,590	56.6%	

Table 3. Additional fisheries that must be engaged to close the gap to T75

Production Source	2014 Harvest (mt)	% Global Production
China, Argentine shortfin squid (FAO 41)	336,000	8.9
China, jumbo flying squid (FAO 87)	332,520	8.8
South Korea, Argentine shortfin squid (FAO 41)	103,340	2.7
South Korea, jumbo flying squid (FAO 87)	7,200	0.2
Total	779,060	20.6%