

Target 75 Sector Update: Octopus





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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 FishStatJ 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.

The Octopus Sector

The Octopus Sector comprises all octopus species (family Octopodidae). Today, almost all of the world's octopus supply comes from wild fisheries. Octopus farming is a growing activity that should be considered in the future, but at the moment it is still insignificant at a global scale (less than 1 percent). The majority of production is from artisanal pot and trap fisheries spread out across large areas and involving many vessels and fishers, including small vessels with outboard motors carrying two or three fishermen up to vessels of 15m or more carrying five or six fishers. Other fishing methods include spear, hook and line, Devon-spinners and fyke nets. Octopuses are mostly traded fresh/chilled or frozen; only small volumes are traded prepared or preserved.

Global Supply and Patterns of Trade

- FAO reports total global production of 420,000 tonnes (rounded to nearest thousand tonne).
- The top 22 producing countries produce 411,000 tonnes, 98 percent of global production (see Figure 1).
- According to the International Trade Center, approximately 372,000 tonnes of octopus (89 percent of global production) was internationally traded in 2014 ([International Trade Center, 2014](#)). The top importers include the EU (39 percent of total imports), South Korea (30 percent), Japan (18 percent), and the US (6 percent).
- The bulk exports from the top two producers (China and Vietnam) go to South Korea (ITC, 2014), though we believe significant amounts of production remain in the domestic market in each of those countries as well.
- Approximately 25 percent of global production is destined for markets engaged in sustainability, with a further 38 percent going to countries with some engagement efforts underway (Figure 2).

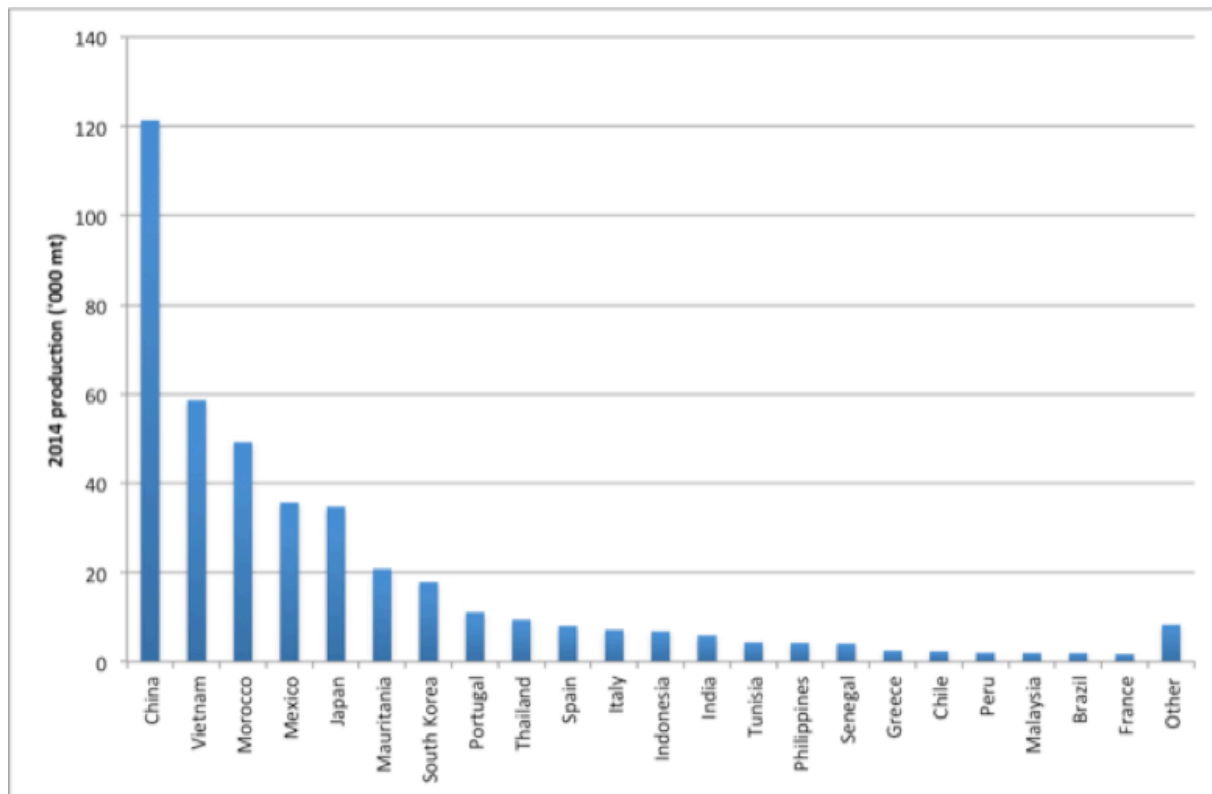


Figure 1. Top 22 octopus-producing countries, 2014 production and trade patterns

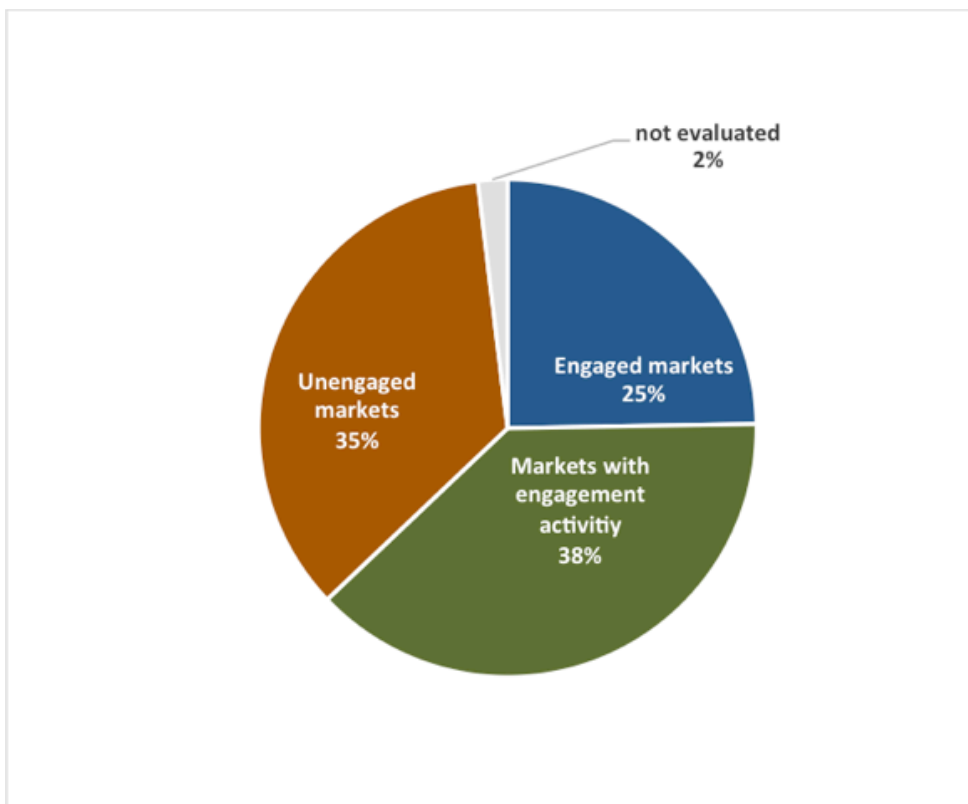


Figure 2. Global octopus production by end-market level of engagement

Improvement Progress to Date

Based on 2014 data, 40 tonnes, or 0.01 percent of the global production, are considered sustainable or improving (see Annex: Table 1).

- MSC Certified Fisheries
 - [Western Asturias Octopus Traps Fishery of Artisanal Cofradias](#)
- MSC Full Assessment
 - There are no octopus fisheries undergoing MSC full assessment
- FIPs with A-C rated progress/AIPs
 - There are no ongoing octopus FIPs

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 participants have already identified as of-interest, and those that SFP believes are likely candidates for improvement projects. These fisheries account for 147,000 tonnes of production, 35 percent of the global total (see Annex: Table 2).

- Supply chain roundtables
 - Leading octopus importers into Spain, Portugal and the US are meeting to discuss forming a Global Octopus Supplier Roundtable, and have identified countries where they are interested in trying to mobilize FIPs.
- Other likely candidates for improvement projects
 - There are FIP scoping efforts underway in Mexico for the [Yucatan four-eyed octopus fishery](#) in the Gulf of Mexico by Netuno USA and in the Gulf of California [Bahia de Los Angeles octopus fisheries](#) by Pronatura Noroeste.
 - Mauritania and the FAO are publicly collaborating on entering Mauritania's octopus fishery into the MSC program ([FAO press release](#)). As of this writing, the fishery is involved in a [prospective FIP](#).

Urgent Additions Requiring New Leverage

Between fisheries that are already sustainable or improving and FIPs that we believe the forming supply chain roundtable will be able to mobilize, we account for 35 percent of global production (summed totals from Annex: Tables 1 and 2).

Target 75 can only be achieved by adding Chinese and Vietnamese production (see Annex: Table 3). This will require expanding engagement with domestic Chinese and Vietnamese supply chains, and engaging South Korean and Japanese importers. This approach could also add Japan and South Korea's own production, an additional 12.5% of world production, which could eliminate the necessity for FIPs in some of the smaller volume fisheries noted in Table 2.

Improvement Opportunities and Challenges

Octopus are naturally resilient to fishing pressure — they grow rapidly and reproduce at a young age. Further, the most common fishing methods of fisheries targeting octopus are highly selective and relatively low impact.

There is evidence already that proper management is not only possible, but will have positive impact. The MSC-certified Asturias fishery is a clear example of octopus fisheries being managed sustainably and outlines a management model that can be replicated. In addition, the giant Pacific octopus fishery in Alaska is green-listed by the [Monterey Bay Aquarium's Seafood Watch](#) program, providing an additional model of good management. And finally, improvement efforts in some other small volume octopus fisheries not yet included in the T75 strategy are piloting additional management techniques that may be effective for other octopus fisheries around the world ([Southwest Madagascar octopus prospective FIP](#); [Mexico Bahia de Los Angeles octopus prospective FIP](#)).

Despite these advantages, the identity of individual fisheries is not yet known in most of the countries listed above, but octopus production typically comes from many small fisheries. Supplier engagement will need to mobilize FIPs at national scale (i.e., through exporters collaborating to engage all the local fisheries management units, as done for [blue swimming crab in Indonesia](#) to meet the T75 goal.

Octopuses can be a difficult resource to manage due to their biological characteristics (e.g., high natural mortality, sensitivity to environmental conditions). Typical management measures such as seasonal closures and minimum size limit may not be the most adequate for a sustainable use of some species of this group.

Establishing management for octopus fisheries will be difficult in some regions. The artisanal and geographically distributed nature of the fisheries requires a co-management approach, which in many countries will require investments in basic

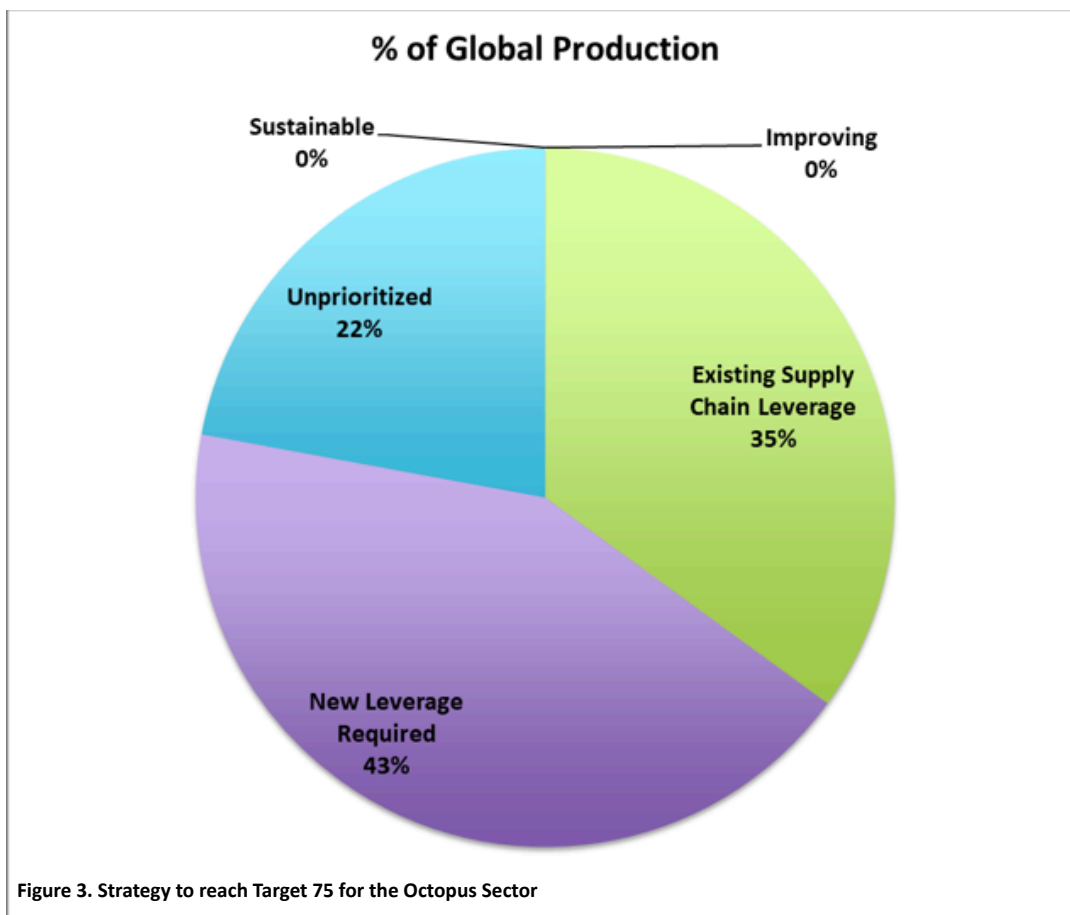
fisheries management such as initiation of data gathering, capacity building, monitoring, assessments, formal identification and licensing of fishers etc.

Finally, there is a relevant volume of octopus caught as bycatch in bottom trawling fisheries known to have significant environmental impacts.

Summary

Little progress has been made on octopus fishery improvement efforts (only 0.01 percent of global production is sustainable), and efforts to engage the international supply chain are just beginning. This makes it hard to define a clear, high confidence route to close the gap to T75. That said, it appears that existing supply chain leverage may be able to influence as much as 35 percent of global production, though reaching this amount will require national FIP strategies.

The key to reaching T75 is engaging Chinese and Vietnamese fisheries, which in turn requires engagement with their domestic markets as well as export markets in Japan and South Korea.



Annex: Progress toward Target 75 goal

The following tables show key figures in gauging the progress of global octopus 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	40	0.01%
Improving: MSC-FA		
Improving: FIPs (rated A-C)		
Total	40	0.01%

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

Production Source	2014 Landings (mt)	% Global Production	Improvement Outlook
Morocco	49,240	11.7%	
Portugal	11,090	2.6%	
Spain (non-MSC-C)	7,990	1.9%	
Italy	7,180	1.7%	
Indonesia	6,830	1.6%	
Senegal	4,060	1%	
Greece	2,470	0.6%	
France	1,670	0.4%	
Mexico	35,640	8.5%	FIP scoping efforts underway by Netuno USA and Pronatura Noroeste
Mauritania	20,800	5%	Fishery has already expressed interest in pursuing MSC certification with assistance from FAO
Total	146,970	35%	

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

Production Source	2014 Harvest (mt)	% Global Production
China, webfoot octopus (East and South China Seas)	121,350	28.9%
Vietnam, wild octopuses nei	58,630	14%
Total	179,980	42.9%