



Asia-Pacific
Economic Cooperation

Trade of Fishery Products and Fisheries Subsidies in APEC

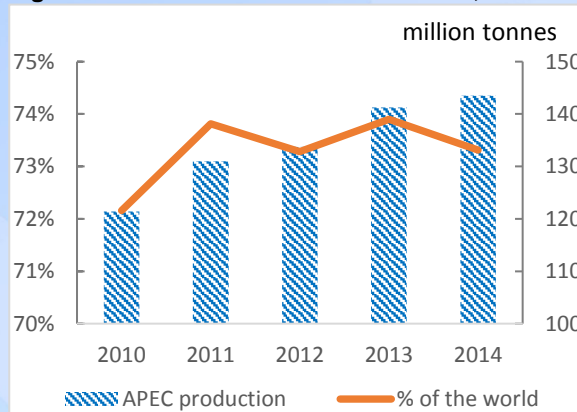
By Huani Zhu and Carlos Kuriyama

The continuous expansion of trade in fishery products has supported the generation of income and employment around the world, especially in many developing economies. According to the Food and Agriculture Organization of the United Nations (FAO) (2016), among the top 25 major fishery producers, 15 are APEC member economies. Recognizing the important role of the ocean on food security and food-related trade, APEC Leaders called for the elimination of fisheries subsidies that contribute to overfishing during the 2014 APEC Ocean-Related Ministerial Meeting. More recently, in September 2016, 13 economies, including eight from APEC, issued a joint statement at the World Trade Organization (WTO) to eliminate harmful fishing subsidies. This Policy Brief reviews the trend of trade of fishery products, as well as various trade measures, including tariffs and non-tariff measures. Finally, the Policy Brief discusses the current situation of fisheries subsidies within the APEC region and their implications on the sustainability of fish stocks.

Trade of Fishery Products in the APEC Region

Within the APEC region, production levels in the fishery sector grew steadily at an average annual growth of 4.3% during 2010-2014. China emerged as a significant producer accounting for more than half of APEC's production and 39% of world production in terms of volume in 2014. The second largest producer, Indonesia, posted the fastest average annual growth among APEC economies (15.7%) between 2010 and 2014. The share of APEC economies in the total world production has consistently been above 70% as shown in Figure 1.

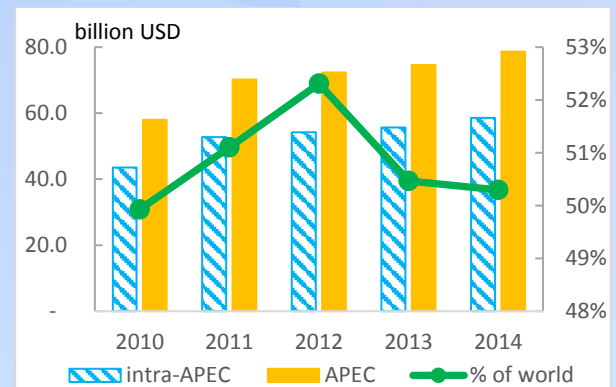
Figure 1: Fisheries Production in APEC, 2010-2014



Source: FAO Fisheries and Aquaculture Statistics. APEC Secretariat, Policy Support Unit calculations

The world trade of fishery products is significant. It reached US\$ 310.4 billion in 2014. APEC accounted for about half of this amount and its fishery exports grew faster than those of the rest of the world (7.9% vs. 7.7%) between 2010 and 2014. Intra-APEC exports constituted around three-quarter of APEC's total exports to the world (Figure 2). APEC's exports were somewhat concentrated in a few economies – the top three exporters (China; Viet Nam; and; the United States) accounted for 48% of total exports in value terms and 44% in volume terms from APEC in 2014.

Figure 2: APEC Exports of Fishery Products, 2010-2014



Source: UN COMTRADE. APEC Secretariat, Policy Support Unit calculations.

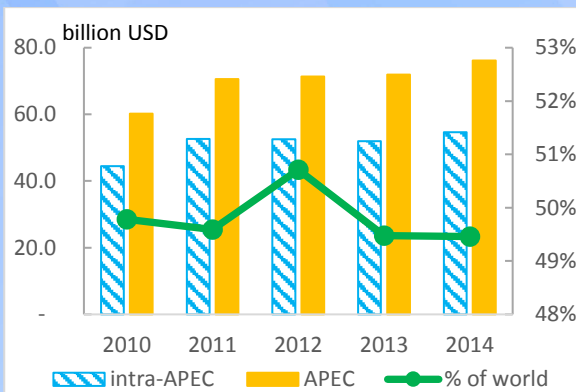
Note: Data for 2015 are not available for four APEC economies. Based on preliminary data, the other 17 APEC economies reported a decline in the exported value of fish and fishery products.

APEC's exports increased more moderately in terms of volume than in terms of value, at an average annual rate of 2.3% per year between 2010 and 2014. The fact that APEC's fishery exports grew more in value than in volume could be explained by two factors: 1) some APEC economies may have been looking to increase their fishery exports of higher value-added products; and 2) an increase in the price of some major species such as tuna, salmon, shrimp, seabass and squid.¹

APEC's imports of fishery products grew by 6.0% per year in value terms between 2010 and 2014, slightly below the growth rates reported by the rest of the world (6.2%) over the same period. As seen in Figure 3, intra-APEC imports constituted a high proportion of APEC's total imports (around 73%). Likewise, imports were concentrated in a few APEC economies. The top three importers (the United States; Japan; and China)

accounted for more than 60% of total imports in value terms and 46% in volume terms by APEC in 2014.

Figure 3: APEC Imports of Fishery Products, 2010-2014



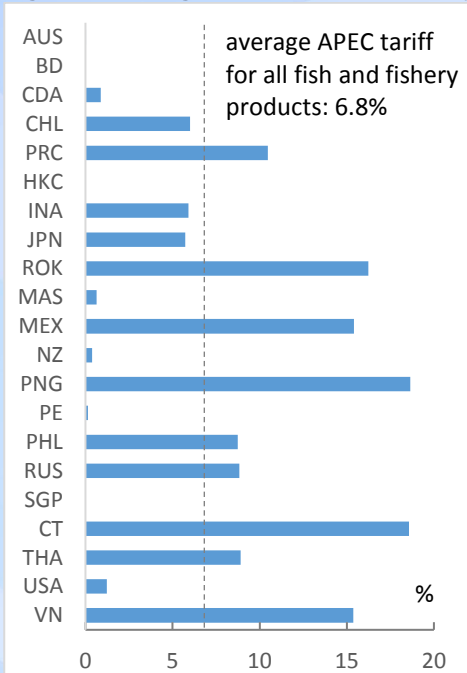
Source: UN COMTRADE. APEC Secretariat, Policy Support Unit calculations

Note: Data for 2015 are not available for four APEC economies. Based on preliminary data, the other 17 APEC economies reported a decline in the imported value of fish and fishery products.

Trade Measures Affecting Fishery Products

The fishery sector is affected by the implementation of trade measures that could unnecessarily affect their trade. For example, the average MFN tariffs for fishery products in the APEC region stands at 6.8%, higher than the average tariff for non-agricultural products (4.6%). In particular, the average tariff for fishery products is much higher in APEC-developing economies (8.4%) than in APEC-industrialized economies (1.7%).² As shown in Figure 4, tariffs vary substantially at the individual economy level.

Figure 4: Average MFN Tariffs for Fishery Products

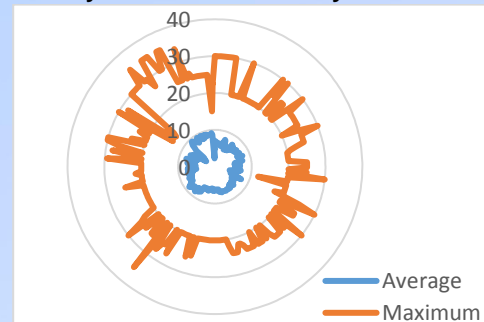


Source: WTO Tariff Database. APEC Secretariat, Policy Support Unit calculations

Note: Tariff data is based on the latest available data for each economy.

A review of the MFN tariffs by APEC economy and individual fishery product reveals wide differences in tariff levels in most fishery products within the APEC region. Figure 5 shows that while the average MFN tariffs of the majority of fishery products are less than 10%, the maximum tariff rates on several fishery products are above 20%. This indicates that further efforts are required to bring tariffs down in this sector.

Figure 5: Average MFN and Maximum Tariffs of Fishery Products in APEC by HS Subheading



Source: WTO Tariff Database. APEC Secretariat, Policy Support Unit calculations

An examination of the tariff structure shows evidence of tariff escalation in the APEC region – economies impose higher tariffs on processed fishery products than on raw fish. As shown in Table 1, tariff escalation was especially evident among APEC-industrialized economies, where tariffs on processed products were more than twice as that on raw products. Critics argued that the presence of tariff escalation resembles a form of protectionism since it deters foreign competition in the fishery processing industries by promoting domestic value added amid higher tariffs on processed fishery products.³

Table 1: Tariff Escalation in APEC

	Raw Products	Processed Fishery Products
APEC	6.5	8.2
APEC-Industrialized	1.4	3.4
APEC-Developing	8.1	9.8

Source: WTO Tariff Database. APEC Secretariat, Policy Support Unit calculations

Note: At the subheading level, products are considered to be processed if they are under HS 2002 Section IV Prepared Foodstuffs. Otherwise, they are classified as raw products.

Besides tariffs, some non-tariff measures (NTMs) also hamper the trade of fishery products and affect the sustainability of fish stocks as well. According to data from the Global Trade Alert, there are currently 36 NTMs affecting the trade of fishery products among APEC economies. While the type of NTMs spans across a wide

range of measures from import bans and quotas to export incentive schemes, most of the NTMs are found in the form of bailout or state aid measures as shown in Table 2.

Table 2: NTMs on Fishery Products in APEC

Type of NTMs	Number of NTMs
Bailout / state aid measure	10
Sub-national government measure	5
Non-tariff barrier (not otherwise specified)	4
Export incentive	3
Import ban	3
Public procurement localization	2
Import quota	1
Technical barrier to trade	1
Import tariff	1
Localization requirement	1
Trade finance	1
Public procurement preference	1
Sanitary and phytosanitary measure	1
Investment measure	1
Export taxes or restriction	1

Source: Global Trade Alert. APEC Secretariat, Policy Support Unit calculations

Some of those NTMs may have a detrimental effect on marine resources as they could encourage overfishing and result in stock depletion. A closer examination of the NTMs reported by the Global Trade Alert found some specific measures that may lead to overfishing, such as tax incentives when companies increase fish exports and government support to purchase vessels, equipment and storage rooms.

Fisheries Subsidies

Subsidies are a big issue in the fishery sector. Whilst some of them could be beneficial by managing fish stocks, others could become detrimental by encouraging overfishing thus affecting the sustainability of the fishery resources.

Subsidies are classified into three broad categories according to their impacts on the fishery resources: 1) Beneficial subsidies that are related to R&D and management of fisheries and marine protected areas (MPAs), which are expected to improve the sustainability of fish stocks. 2) Capacity-enhancing subsidies, including those for boat construction and port renovation, tax exemptions and fuel subsidies, among others, reduce the costs associated to fishing and subsequently tend to encourage fleet overcapacity and overfishing. These subsidies also tend to deplete fish stocks.⁴ 3) Subsidies with ambiguous effects like initiatives to provide fishery assistance, develop rural fishery communities and buyback vessels, whose impact on fish stocks is less clear-cut. Table 3 details a comprehensive list of subsidies under each category.

Table 3: Types of Subsidies by Category

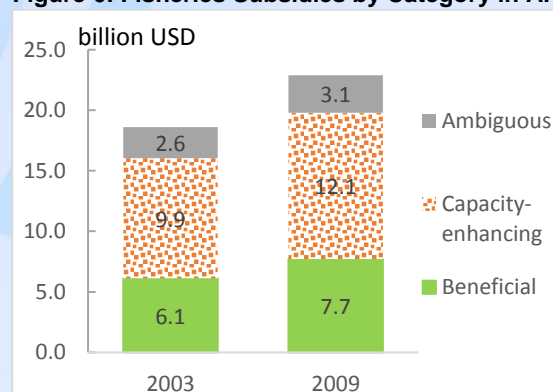
1) Beneficial subsidies	<ul style="list-style-type: none"> • Fisheries management • Fishery research & development • Maintenance of marine protected areas (MPAs)
2) Capacity-enhancing subsidies	<ul style="list-style-type: none"> • Fuel subsidies • Port construction/renovation • Boat modernization • Tax exemption • Fishing access agreements • Marketing support & storage infrastructure • Fishery development and support
3) Ambiguous subsidies	<ul style="list-style-type: none"> • Fishery assistance • Vessel buyback • Rural communities development

Source: Sumaila et al. (2008, 2010, 2013), The Sea Around Us project

According to the Sea Around Us project and Sumaila et al. (2008, 2010, 2013), global fisheries subsidies reached US\$ 35 billion in 2009.⁵ In APEC, total fisheries subsidies were estimated to be around US\$ 22.9 billion, around 65% of global fisheries subsidies. Fisheries subsidies in APEC were equal to around 29% of the landed values of fisheries, slightly lower than the equivalent amount for the world, where fisheries subsidies constituted approximately 30-40% of the landed values.

As shown in Figure 6, all three categories of fisheries subsidies in APEC increased between 2003 and 2009 in nominal values. However, after taking into account inflation, the amount of fisheries subsidies in APEC remained steady in real terms. Subsidies for capacity-enhancing activities constituted the majority of the subsidies in the APEC region. The latest data available shows that 38% of them were used to subsidize fuel, 27% to subsidize the construction and renovation of fishing ports and 15% to subsidize the construction, renewal and modernization of boats in the APEC region.⁶

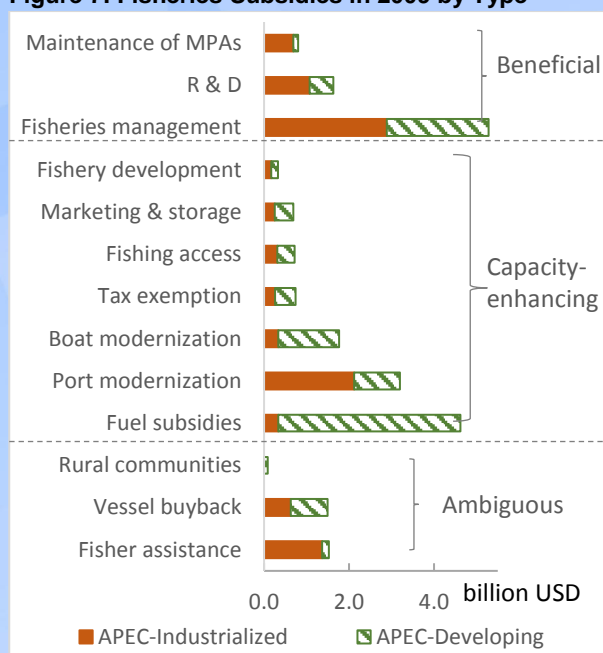
Figure 6: Fisheries Subsidies by Category in APEC



Source: Sumaila et al. (2008, 2010, 2013), The Sea Around Us project. APEC Secretariat, Policy Support Unit calculations

Figure 7 shows the amounts allocated to each type of subsidy in the APEC region. The main type of subsidy was fisheries management, which explained 23% of the total subsidies in 2009 and were utilized in similar levels by both APEC-industrialized and developing economies. The second largest type was fuel subsidies, which constituted 20% of the total subsidies and were mostly used in APEC-developing economies. In general, APEC-developing economies destined a larger percentage of subsidies to capacity-enhancing activities compared to APEC-industrialized economies, with the exception of the development of and support to fisheries and the modernization of ports.

Figure 7: Fisheries Subsidies in 2009 by Type



Source: Sumaila et al. (2010, 2013), The Sea Around Us project. APEC Secretariat, Policy Support Unit calculations

Table 4 presents the subsidy intensity in APEC, represented by the ratio of subsidies over the total landed value of fish caught by economies. Subsidization rates in APEC-industrialized economies are greater than in APEC-developing economies. However, the higher subsidy intensity of APEC-industrialized economies is largely explained by their greater use of subsidies for fisheries management and R&D which are considered as beneficial. In the case of APEC-developing economies, the capacity-enhancing subsidization rate is stronger, due to the extended use of fuel subsidies.

Table 4: Subsidy Intensity in 2009, by Main Category

% of landed value	APEC	APEC-Industrialized	APEC-Developing
Overall	28.8%	39.7%	23.5%
Beneficial	9.7%	17.7%	5.8%
Capacity-enhancing	15.2%	14.4%	15.6%
Ambiguous	3.9%	7.6%	2.1%

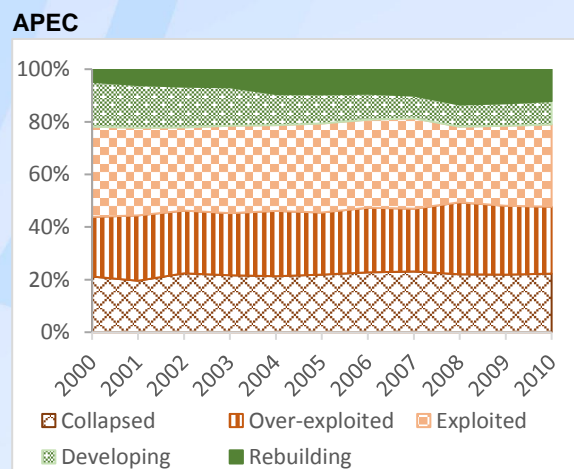
Source: Sumaila et al. (2010, 2013), The Sea Around Us project. APEC Secretariat, Policy Support Unit calculations

Sustainability of Fisheries Resources

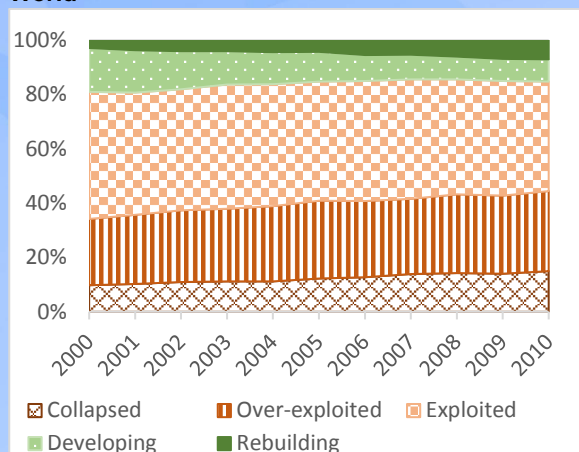
Previous research have found that the existence of capacity-enhancing subsidies encourages fishermen to catch fish beyond sustainable levels.⁷ Estimations of fish stocks indicated that a high level are either over-exploited or in a state of collapse in the APEC region. While the proportion of rebuilt fish stocks increased in recent years, it only constituted a relatively small proportion of the fish stocks in the region (Figure 8). Within APEC-industrialized economies, nearly 23% of the fish stocks had been exploited and 64% of them had been over-exploited or in a state of collapse in 2010. For APEC-developing economies, 33% of fish stocks had been exploited and 44% of them had either been over-exploited or collapsed.

The state of fish stocks around the world also shows worrying signs, as indicated by the global levels of fish stocks under serious risk (30% over-exploited and 15% in state of collapse). These alarming figures highlight the urgency of actions and international cooperation to ensure the sustainability of marine fisheries resources.

Figure 8: Percentage of Fish Stocks by Status in APEC and the World



World

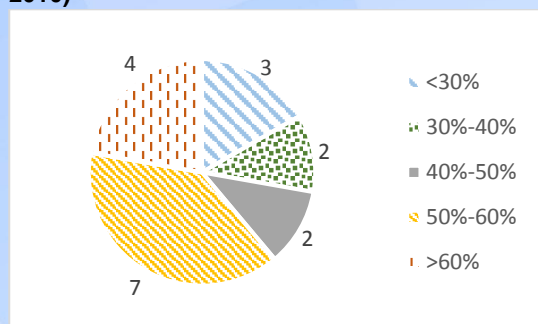


Source: The Sea Around Us project. APEC Secretariat, Policy Support Unit calculations

Note: The sample includes data from 18 APEC economies. Brunei Darussalam; Hong Kong, China; and Singapore do not report data on the status of their fish stocks.

Furthermore, the trend of over-exploitation of fish stocks has been widespread across all APEC economies as shown in Figure 9 – 11 out of 18 APEC economies with available data reported more than half of stocks as either over-exploited or in the state of collapse in 2010.

Figure 9: Number of APEC Economies with Over-exploited or Depleted Fish Stocks by Range (year 2010)

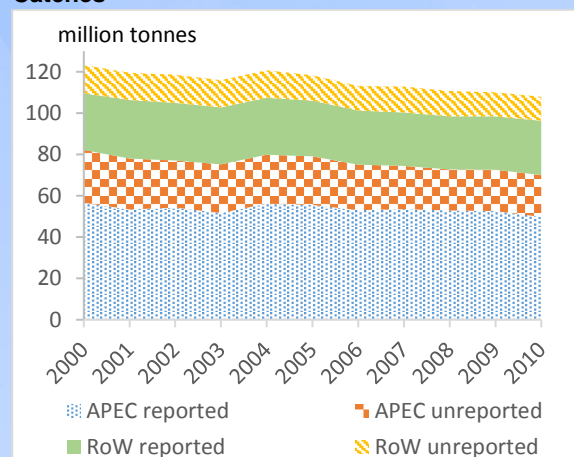


Source: The Sea Around Us project. APEC Secretariat, Policy Support Unit calculations.

Note: The sample includes data from 18 APEC economies. Brunei Darussalam; Hong Kong, China; and Singapore do not report data on the status of their fish stocks.

As shown in Figure 10, APEC accounted for around 62% of total fisheries catches in the world in 2010. APEC reported a faster decline of unreported catches – it fell at an average rate of 2.3% during 2000-2010 while unreported catches from the rest of the world fell 1.7%. Nonetheless, as of 2010, more than a quarter of the total fisheries catches in APEC were still unreported indicating continuous efforts are required for monitoring of illegal, unreported and unregulated (IUU) fishing activities in order to effectively manage the sustainability of oceans and fisheries resources. In the recently concluded Fourth APEC Ministerial Meeting on Food Security in September 2016, APEC Leaders also reinforced their determination to prevent, deter and eliminate IUU fishing.

Figure 10: Reported and Unreported Fisheries Catches



Source: The Sea Around Us project. APEC Secretariat, Policy Support Unit calculations

Final Remarks

To move towards sustainable fishing and use of ocean resources, collaboration among international community is essential to address issues like subsidies or other incentive programs that lead to overfishing. In July 2016, several international organizations such as the United Nations Conference on Trade and Development (UNCTAD), FAO and the United Nations Environment Programme (UNEP) jointly proposed a roadmap to end pointless fishing subsidies. Some of the policies recommendations are as follows:

- Additional efforts in data collection to better understand the nature and extent of fisheries subsidies in order to identify measures that incentivize overfishing.
- Eliminating capacity-enhancing subsidies that encourage overfishing and redirect resources to activities such as fisheries management, R&D and maintenance of marine resources.
- Introducing programs to better monitor the impact of various subsidies programs in order to identify those that have a positive impact in supporting sustainable fishing activities.
- Enhancing transparency, accountability as well as enforcement on fulfilling commitments pledged with various international organizations.

The fishery sector is very important for several reasons: 1) it is a critical source of food and nutrients, as it provides to more than 2.9 billion people with at least 15% of their average per capital animal protein intake⁸; 2) it contributes to development, approximately 56 million people worked as fishermen or fish farmers in 2014⁹; and 3) it represents a significant source of foreign exchange, since world exports of fishery products accounted for US\$ 156.4 billion in 2014.

Given the importance of the fishery sector, collective efforts are required to ensure the sustainability of fishery

resources. The increasing levels of fishery production in recent years, together with the high percentage of fish stocks that are over-exploited or in a state of collapse, creates a sense of urgency to address this problem.

As fish stocks and vessels move across borders and also into international waters, solutions need to be implemented at the global level to improve the sustainability of fish stocks. APEC could lead efforts to address these issues in the multilateral fora and to propose initiatives to find a right balance between the exploitation of fish stocks allowing the production and trade of fishery products, and the long-term sustainability of these natural resources.

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The authors would like to thank Denis Hew for his valuable comments and Aveline Low Bee Hui for her editorial assistance. The views expressed in this Policy Brief are those of the authors and do not represent the views of APEC member economies. This work is licensed under the Creative Commons Attribution-NonCommercial-ShareAlike 3.0 Singapore License.

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APEC#217-SE-01.1

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Appendix

List of fish and fisheries products based on Harmonization System Codes 2002

03	Fish and crustaceans, molluscs and other aquatic invertebrates
0508	Coral and similar materials, unworked or simply prepared but not otherwise worked; shells of molluscs, crustaceans or echinoderms and cuttle-bone, unworked or simply prepared but not cut to shape, powder and waste thereof.
051191	Products of fish or crustaceans, molluscs or other aquatic invertebrates; dead fish, crustaceans, molluscs or other aquatic invertebrates, unfit for human consumption
121220	Seaweeds and other algae, fresh, chilled, frozen or dried, whether or not ground

130231	Agar-agar, whether or not modified
1504	Fats and oils and their fractions, of fish or marine mammals, whether or not refined, but not chemically modified.
1604	Prepared or preserved fish; caviar and caviar substitutes prepared from fish eggs.
1605	Crustaceans, molluscs and other aquatic invertebrates, prepared or preserved.
230120	Flours, meals and pellets of fish or crustaceans, molluscs or other aquatic invertebrates, unfit for human consumption
230990	Preparations of a kind used in animal feeding (excl. dog or cat food put up for retail sale)

¹ IMF Primary Commodity Prices, FAO Fish Price Index and FAO European Market Prices

² Please see Appendix for the complete list of fishery products included

³ Sumaila, Bellmann and Tipping (2014)

⁴ Sumaila, Bellmann and Tipping (2014)

⁵ The latest available data is in year 2009.

⁶ According to Sumaila (2016), empirical studies found that subsidies involving the construction and modernization of

boats tend to contribute to overfishing through fishing fleet overcapacity.

⁷ Sumaila, U. R., Christophe Bellmann and Alice Tipping (2014),

⁸ United Nations Department of Public Information (2010), Resumed Review Conference on the Agreement Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York, 24-28 May.

⁹ FAO (2016), The State of World Fisheries and Aquaculture 2016