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# GLOBEFISH HIGHLIGHTS

A QUARTERLY UPDATE ON WORLD SEAFOOD MARKETS

April 2019 ISSUE, with Jan. – Dec. 2018 Statistics



## GLOBEFISH Highlights

A quarterly update on world seafood markets

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Dear Readers,

This edition of **GLOBEFISH** Highlights is published just after the international exhibition "Brussels Seafood Expo Global". Once again, **GLOBEFISH** was present in Brussels, showing its publications, its market knowledge and expertise and the **GLOBEFISH** website. More importantly, **GLOBEFISH** continues to consolidate its role as a global provider of economic information on fish and fishery products. And new areas of the GLOBEFISH website provide a more comprehensive and market-oriented view for fish and fishery products at the global level.

In the area of post-harvest issues, we have just produced a new website on "Food Loss and Waste in Fish Value Chains".

Food loss and waste occur at all levels of activities of fisheries and aquaculture with direct impact on food security and business competitiveness. Having a better understanding of the main causes of food loss and waste in fisheries and aquaculture is a critical element for decision-making on its reduction.

This specific website provides analysis on causes of [food loss and waste in fish value chains](#) and possible scenarios involving capture fisheries, aquaculture, processing and storage, wholesale, transport, retail, and consumption.

In addition, solutions are also presented on the website. They are a combination of the right policy, including issues on technology, skills, knowledge, services and infrastructure, regulatory environment, social and gender equity, and knowledge of markets. Clearly, these solutions cut across all stages of the value chain.

Addressing the main problems associated with loss and waste in the fisheries sector will bring economic benefits, with positive corollaries on food and nutrition security, natural resource use efficiency, and environmental impacts.

We all know how the fish and aquaculture sectors are complex – solutions for food loss and waste in fish value chains need the engagement of both the public and the private sector, generating not only economic benefits, but also societal benefits as a whole.

Pay a visit to "[Food Loss and Waste in Fish Value Chains](#)" FAO website. In addition, to keep track of all the relevant work of GLOBEFISH on information dissemination towards the development of the sector in economic, social and environmental basis, please subscribe to our newsletter [here](#).

In the next GLOBEFISH Highlights edition, we will briefly introduce the work carried out by FAO Fisheries and Aquaculture Department towards providing the market with pragmatic guidance on how to check for socially responsible fish and aquaculture value chains. It is a crucial topic with impacts in pre- and post-harvest operations. Stay tuned for more.

Happy reading!

Audun Lem Ph.D

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# ABOUT GLOBEFISH

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GLOBEFISH forms part of the Products, Trade and Marketing Branch of the FAO Fisheries and Aquaculture Department and is part of the FISH INFOnetwork. It collects information from the main market areas in developed countries for the benefit of the world's producers and exporters. Part of its services is an electronic databank and the distribution of information through the European Fish Price Report, the GLOBEFISH Highlights, the GLOBEFISH Research Programme and the Commodity Updates.

The GLOBEFISH Highlights is based on information available in the databank, supplemented by market information from industry correspondents and from six regional services which form the FISH INFOnetwork: INFOFISH (Asia and the Pacific), INFOPECA (Latin America and the Caribbean), INFOPECHE (Africa), INFOSAMAK (Arab countries), EUROFISH (Central and Eastern Europe) and INFOYU (China).

Helga Josupeit and Marcio Castro de Souza were responsible for quality content review, and Fatima Ferdouse and Weiwei Wang created statistical figures. The Norwegian Seafood Council provided data support for the FAO Fish Price Index. Illustrations were sourced from the Food and Agriculture Organization of the United Nations, Original Scientific Illustrations Archive

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# ACRONYMS AND ABBREVIATIONS

## ■ GLOBEFISH HIGHLIGHTS

ASC	Aquaculture Stewardship Council
ASEAN	Association of Southeast Asian Nations
ASF	African Swine Fever
CAPPMA	China Aquatic Products Processing and Marketing Alliance
CTE	Committee on Trade and Environment
DFO	Canadian Department of Fisheries and Oceans
EDB	WTO Environmental Database
EEZ	Exclusive economic zone
FAO	Food and Agriculture Organization of the United Nations
FAPPMA	Fujian Aquatic Products Processing and Marketing Association
FDA	US Food and Drug Administration
FOB	Freight On Board
FTA	Free Trade Agreement
GCC	Gulf Cooperation Council
IMARPE	Instituto del Mar del Perú
IUU	Illegal, unreported and unregulated fishing product
MSC	Marine Stewardship Council
NFI	US National Fisheries Institute
NGO	Non-governmental organization
NOAA	US National Oceanic and Atmospheric Administration
NSC	Norwegian Seafood Council
NSS	Norwegian spring-spawning herring
PWC	PriceWaterhouse Coopers
SDGs	Sustainable Development Goals
TAC	Total Allowable Catch
TiLV	Tilapia Lake Virus
TPRs	Trade Policy Reviews
USDA	US Department of Agriculture
VASEP	Viet Nam Association of Seafood Exporters and Producers
VPA	Viet Nam Pangasius Association
WTO	World Trade Organization

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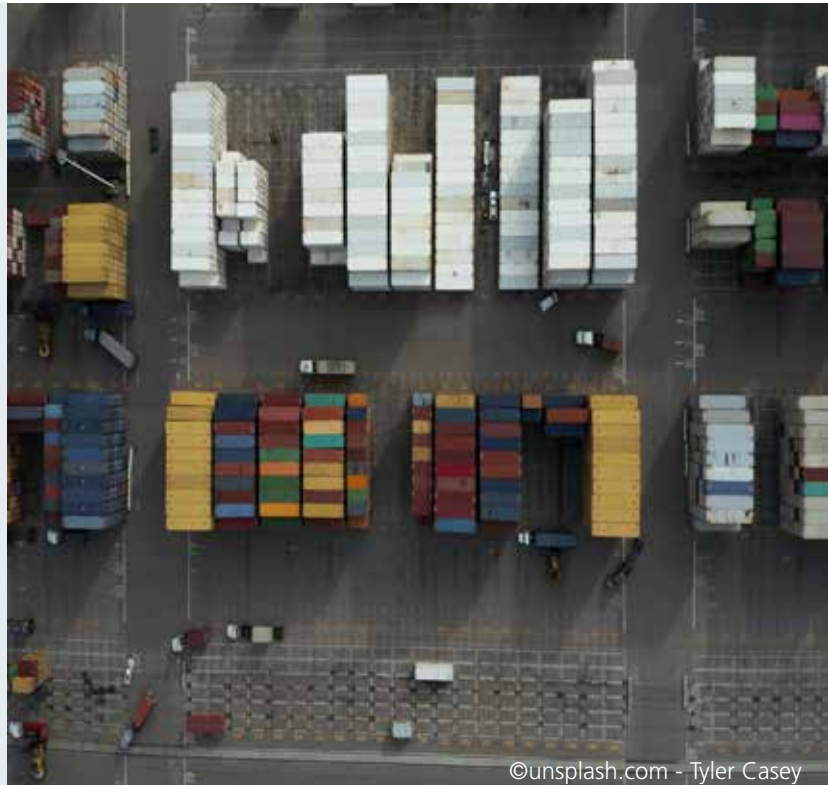
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# GLOBAL FISH ECONOMY

## GLOBEFISH HIGHLIGHTS

*Trade tensions affecting markets in 2019, but tight supply set to keep prices up*



©unsplash.com - Tyler Casey

Production forecasts for the global seafood sector in 2019 suggest total supply will be similar to 2018. Flat or marginal growth is projected while demand continues to strengthen. Catches will remain low for some key wild-caught species, including cod, mackerel and octopus, while tuna fisheries were also less productive in early 2019 compared with the same time last year. Total capture fisheries production is expected to drop by around 3.4 percent in 2019, compared with an increase of 2.2 percent in 2018, largely driven by good anchoveta landings. For aquaculture, the picture for 2019 is mixed. Continued growth of around 4 percent is forecast for aquaculture production as a whole, but supply remains rather tight for important traded species such as salmon. From the estimated 177.8 million tonnes of fish to be produced in 2019, some 89 percent will be utilized for direct human consumption, translating into global per capita consumption of 20.5 kg.

Global seafood trade in 2017 and 2018 was characterised by high prices and significant growth, but formerly positive conditions have deteriorated in early 2019. Trade tensions between the United States of America and China have not been resolved and uncertainty is widespread. Adding to the unfavourable trade environment is the extension

of the deadline for the United Kingdom's exit from the European Union (Member Organization) to 31 October 2019, with no more consensus as to the most likely outcome of ongoing negotiations concerning a potential deal. This keeps the seafood industry in both the United Kingdom and the EU in the dark for up to seven more months and maybe even longer, with the possibility of significant tariff implications still very much on the table. Combined with tighter monetary conditions in many large economies, this uncertainty is expected to restrict global gross domestic product (GDP) growth to 2.6 percent, compared with 2.9 percent last year.

The FAO Fish Price Index (FPI) hit a record level of 165 in March 2018, marking the culmination of a trend driven by tight supply for many heavily traded species coupled with strong demand worldwide. Upward price momentum petered out towards the second half of 2018 as production volumes rose for several species, but price levels were still high in historical terms going into 2019. The FPI was flat year-on-year at 160 points in December 2018, with prices for wild-caught species for octopus and mackerel still exceptionally high, but plentiful shrimp and salmon harvests in the second half of the year helped to push down prices for traded aquacultured species. Prices for

# World Fish market at a glance

2017

2018

2019

Change: 2019  
over 2018

*estimated*  
million tonnes

*forecast*

%

WORLD BALANCE				
<b>Production</b>	<b>172.6</b>	<b>177.7</b>	<b>177.8</b>	<b>0.0</b>
Capture fisheries	92.5	94.5	91.3	-3.4
Aquaculture	80.1	83.2	86.5	3.9
Trade value (exports billion USD)	<b>155.7</b>	<b>163.1</b>	<b>164.5</b>	<b>0.9</b>
Trade volume (exports live weight)	<b>60.5</b>	<b>61.7</b>	<b>60.1</b>	<b>-2.6</b>
Total utilization	172.6	177.7	177.8	0.0
Food	153.4	155.7	158.2	<b>1.6</b>
Feed	14.6	17.5	15.0	<b>-14.2</b>
Other uses	4.7	4.6	4.6	0.0
SUPPLY AND DEMAND INDICATORS				
<b>Per caput food consumption</b>				
Food fish (kg/year)	20.3	20.4	20.5	0.6
From capture fisheries (kg/year)	9.7	9.5	9.3	-2.0
From aquaculture (kg/year)	10.6	10.9	11.2	2.8

Totals may not match due to rounding.

## FAO Fish Price Index (100=2002-2004)



Source: Norwegian Seafood Council

fishmeal, which is an important input for the global aquaculture sector, trended strongly downwards on good production volumes throughout 2018 and remained low in early 2019.

With global demand slowing and trade tensions contributing to a more challenging market, multiple major seafood exporters are seeing trade contractions in 2019 following positive performances last year, particularly in Asia. China's total seafood exports are likely to be down significantly for the year, while the export revenues of Indonesia, India and the Philippines are also set to take a hit. Norwegian exports should remain steady on good price levels for its most important species, while for Latin American exporters, a strong salmon market and high fishmeal production is likely to see total exports rise. On the market side, Japan, the EU and the United States of America have all seen declines in the total value of seafood imports in early 2019, giving back some of the gains achieved last year. In developing economies, import growth is set to slow but remain positive.

The negative effects of the trade war between China and the United States of America will persist throughout 2019, with the additional possibility of an escalation in Transatlantic trade tensions between the United States of America and the EU. Together with a still uncertain Brexit outcome, these concerns are fuelling speculation that global trade is set for a significant slowdown. As seafood tends to follow prevailing trade trends, it is likely that 2019 will be a more challenging year for the industry as a whole. At the same time, however, supply shortages for various groundfish, cephalopod and small pelagic species are set to continue, keeping prices relatively high even if demand weakens. For aquaculture producers, while some species such as shrimp are well-supplied at present, a recognition of long-term demand trends and a general seafood shortage will continue to drive investment and research into alternative means of farmed fish production.



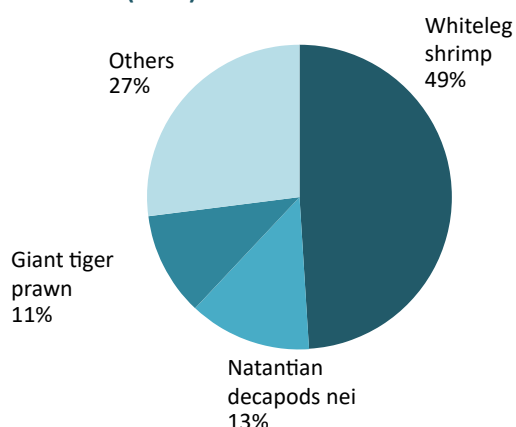
# SHRIMP

## GLOBEFISH HIGHLIGHTS

*An estimated 3 million tonnes of shrimp entered the international trade in 2018*

World production of farmed shrimp reached almost 4 million tonnes in 2018. Import prices fell to a record low level but with minor improvement in imports to the conventional developed markets. Strong buying by Asian markets, particularly China, saved the shrimp aquaculture industry worldwide from a major and far-reaching financial crisis in 2018.

Shrimp production by species, both wild and farmed (2017)



Source: FAO

## Supply

Global farmed shrimp production reached almost 4 million tonnes in 2018, increased by 3 to 5 percent over 2017. According to a review published by Aqua Culture Asia Pacific magazine, China's negative production trend for marine shrimp reversed and production increased by 10 percent in 2018.

World Production of Farmed Shrimp, in 1 000 tonnes

Country	2016	2017	2018
China	800	700	800–850
India	400	700	610–670
Viet Nam	240	600	520–750
Indonesia	390	450	315–355
Thailand	300	305	300
Philippines	60	70	72
Bangladesh	50	60	35
Malaysia	30	35	48
Total Asia/Pacific*	2270	3020	2780–3160*
Total Latin America**	600	700	700
World total	2870	3720	3480–3860(e) +3.8%

Source: Aqua Culture Asia Pacific Magazine and industry sources.

Notes: \*Myanmar, Brunei, Australia, Iran, Saudi Arabia and others;

\*\* Ecuador, Mexico, Brazil, Peru, Nicaragua, Colombia and others

Production increased also in Viet Nam, but declined in India and Indonesia. There have been expansions in farming areas in India and Indonesia, but not adequate to offset overall production declines of 2018. The low price factor also affected Thailand, where farmers produced less vannamei shrimp compared with 2017. The increased farming in Viet Nam, Ecuador, Myanmar and other minor producers more than compensated the lower production in India, Indonesia and Thailand.

Farmers also shifted to black tiger aquaculture in Viet Nam, Thailand, Indonesia and Malaysia. The Aqua Culture Asia Pacific magazine reported that black tiger shrimp had a 12 to 15 percent share in the global farmed shrimp production in 2018, encouraged by relatively stable and high prices compared with vannamei shrimp.

Production in Ecuador increased, reaching almost 500 000 tonnes during the review period. Mexican production swelled to 165 000 tonnes (+3.8 percent)

in 2018 compared to 2017. There were lower harvests in Brazil, Nicaragua and Honduras.

## International Trade

In 2018, the top seven markets imported 2.7 million tonnes of shrimp and prawn, 31 percent more than 2017. This could be credited to high imports in China and other Asian markets. Imports increased marginally in the United States of America and in the EU28, while Japan posted a negative growth rate. Imports also increased in most of the Gulf Cooperation Council (GCC) countries in the Middle East.

**World top Exporters and Importers of shrimp (all types), in 1 000 tonnes, 2017-2018**

Exporters	Exports		percent change 2018/2017
	2017	2018	
India	575.9	617.4	+7.2
Viet Nam	530.0	570.0	+7.0
Ecuador	439.7	508.9	+15.7
China	200.7	202.3	+0.8
Indonesia	181.0	196.9	+9.3
Argentina	183.3	185.4	-1.2
Thailand	207.8	171.6	-17.0

Importers	Imports		percent change 2018/2017
	2017	2018	
EU28	798.4	817.7	+2.4
USA	664.7	698.7	+5.1
China ** (e)	375.5	458.0	+22.0
Viet Nam*	441.2	360.0	-18.4
Japan	233.7	219.1	-6.2
Republic of Korea	70.4	77.2	+9.0
Canada	55.9	57.2	+2.3

Source:

\* Imports from 21 countries;

\*\* including imports through border trade; (e) estimate

## Exports

Among the top seven suppliers, exports increased in volume from the first five but with faltered growth in 2018. Exports earnings declined for all except Ecuador, due to the general price weakening during the same period. For better financial return, able exporters in Asia exported more processed shrimp targeting the developed markets.

India was the lead exporter in 2018 but with a falling growth rate (+7.2 percent) compared with 2017 (+31 percent). The leading markets for Indian shrimp were the United States of America, Viet Nam and the EU28. Exports declined to Viet Nam (-15 percent) and to the EU28 (-13 percent). With a 300 percent export growth in supply

(46 000 tonnes), China became India's fourth largest market overtaking Japan in 2018. India exported more processed shrimp in 2018 (+18 percent up to 22 000 tonnes) than in 2017.

Vietnamese shrimp exports increased by 7 percent in 2018 compared with 2017. The leading markets were the EU28 (+13.7 percent), Australia (-4.0 percent), United States of America (+4.6 percent), Japan (-5.5 percent) and the Republic of Korea (+23 percent). Compared with 2017, official exports from Viet Nam to China increased by 300 percent to 14 000 tonnes in 2018. This volume is small compared with high raw material imports and increased domestic production in 2018.

Ecuador maintained a rather stable position in 2018, diverting 61 percent of its exports to Asian markets, but exports to its number one market, Viet Nam, fell by 10 percent to 202 000 tonnes. However, direct sales to China increased by 512 percent reaching 98 000 tonnes in 2018 compared with a mere 16 000 exports in 2017. Exports also increased to its second largest market, the EU28 (+7.8 percent to 104 300 tonnes).



## Imports

The top seven markets imported nearly 2.7 million tonnes of shrimp in 2018, about 31 percent more than in 2017. This could be attributed to strong Asian markets, particularly China. Imports increased in other emerging markets in East Asia and Middle East, but declined in Viet Nam due to direct imports from China. Among the conventional markets, imports increased marginally in the United States of America and the EU28, but declined in Japan and Australia.

### United States of America

The US shrimp market remained overstocked starting in early 2018, which led to a price crash in the international trade in April. However, US wholesale

prices were stable and lower import prices trickled down to end-users levels by mid-2018, benefitting retail and catering business during 2018 summer sales and year-end sales. Shrimp remains the most popular seafood amongst US consumers.

US imports increased by 5.1 percent in 2018 against 2017, but US buyers paid less in 2018 (USD 6.2 billion in 2018 compared to USD 6.5 billion in 2017) due to record low import prices. India had a 36 percent market share in supply, followed by Indonesia (19 percent), Ecuador (11 percent), Viet Nam (8 percent), China and Thailand (7 percent each). Processed shrimp Imports totalled 160 000 tonnes, mainly supplied by China, Viet Nam, Thailand and Indonesia. US per capita shrimp consumption is bound to be historically high, crossing the 4.5 lb in 2018.

## Japan

Shrimp demand in Japan remained dormant in 2018. This trend confirms the fading appetite for shrimp among Japanese consumers, particularly the younger generation, who prefers beef, pork, chicken and salmon to shrimp.

Demand for raw head-on and headless shrimp in the last ten years has followed a decreasing curve. Only semi-processed peeled shrimp (tail-on and others) experienced improved demand from institutional users and restaurants. Raw frozen shrimp imports declined to 155 000 tonnes in 2018, compared with 210 000 tones in 2010.

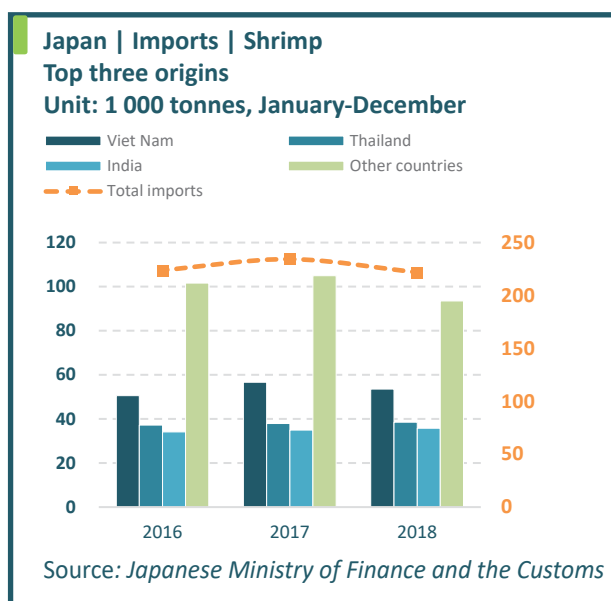
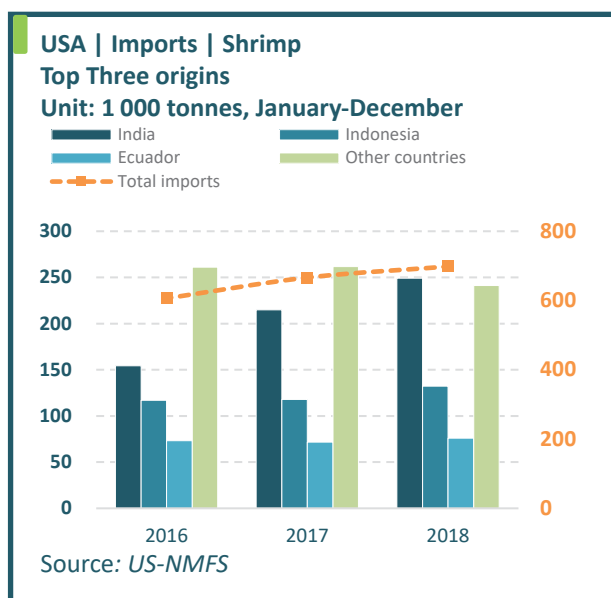
Year-on-year demand for processed shrimp increased consistently, with a 3 percent rise in imports in 2018, compared with 2017. Thailand, Viet Nam, Indonesia and China were the top suppliers of value-added shrimp to Japan.

## European Union (Member Organization)

The EU28 common market remains the world's largest shrimp importer, though without much improvement in demand in recent years. Compared with 2017, low shrimp prices and good supplies of tropical shrimp had minimal impact on consumer market, suggesting a flat demand curve in 2018.

Total shrimp imports reached 817 700 tonnes (+2.4 percent) in 2018, with decreasing imports in Spain (-2.4 percent), France (-1 percent) and the United Kingdom (-1.1 percent). The 12 percent rise in Italy's import to 78 000 tonnes contributed to an overall positive growth for the year. Imports increased in the Netherlands (+11 percent to 86 000 tonnes) and Denmark (+5 percent to 86 000 tonnes), who are generally re-exporters.

For the first time, extra-EU28 imports exceeded 600 000 tonnes in 2018, supplied by Ecuador, Argentina, Viet Nam, India and Greenland. Extra-EU28 imports of raw frozen shrimp declined from



## EU28 imports/exports of shrimp

January - December

2016 2017 2018

(1 000 tonnes)

Imports			
Ecuador	95.9	96.8	104.3
Argentina	78.4	80.6	81.2
Viet Nam	52.5	65.6	74.8
Other countries	577.8	570.7	570.4
<b>Total</b>	<b>804.5</b>	<b>813.6</b>	<b>830.6</b>
Exports			
Denmark	80.8	84.3	88.8
Netherlands	71.3	71.6	79.7
Spain	41.1	46.3	46.5
Other countries	153.4	156.2	143.9
<b>Total</b>	<b>346.6</b>	<b>358.4</b>	<b>358.9</b>

Source: Eurostat



### Japanese imports of shrimp (by product)

	January - December		
	2016	2017	2018
	(1 000 tonnes)		
Frozen raw	163.0	170.9	155.1
Prepared/preserved	39.8	42.7	43.5
Others	30.7	20.7	22.9
<b>Total</b>	<b>223.5</b>	<b>234.4</b>	<b>221.5</b>

Source: Ministry of Finance of Japan

### China imports/exports of shrimp

	January - December		
	2016	2017	2018
	(1 000 tonnes)		
<b>Imports</b>			
Ecuador	13.5	15.0	76.6
Argentina	27.6	20.6	38.0
India	6.5	10.9	35.5
Other countries	59.3	72.4	107.8
<b>Total</b>	<b>107.0</b>	<b>119.0</b>	<b>258.0</b>
<b>Exports</b>			
United States of America	37.4	48.1	51.7
Japan	27.3	32.0	26.7
Taiwan Province of China	14.6	17.8	21.9
Other countries	126.1	117.0	116.3
<b>Total</b>	<b>205.3</b>	<b>215.0</b>	<b>216.7</b>

Source: China Customs, estimates

India, Bangladesh and Indonesia. Value-added shrimp (HS code 1605) imports increased by 5.4 percent to 113 200 tonnes, with Viet Nam as the leading supplier.

## Asia/Pacific

Increased supplies of farmed shrimp and soft prices supported the rising shrimp demand in the regional import markets. Low export prices also diverted supplies to home markets in many producing countries.

China became Asia's leading shrimp importer in 2018. In December 2017, China decreased its import tariff on shrimp from 5 to 2 percent. Since then, producers worldwide increased direct exports to China. According to the Chinese Customs, shrimp imports in 2018 doubled to 265 000 tonnes (+117 percent) compared with 2017. Direct supplies increased from major and minor sources, including Ecuador (+410 percent to 77 000 tonnes), India (+226 percent to 36 000 tonnes) and Argentina (+38 percent to 38 000 tonnes). There were also 2- to 3-digit increases in imports from Thailand, Indonesia and Malaysia. Official imports from Viet Nam increased from 3 200 in 2017 to 13 000 tonnes in 2018.

China's high surveillance on illegal border trade with Viet Nam reduced unreported shrimp imports to an estimated level of 200 000 tonnes in 2018, compared with 300 000 tonnes in 2017. Taking this volume into account, foreign shrimp supply to China possibly reached half a million tonnes in 2018, making China the third largest importer in the world, after the EU28 and the United States of America.

Meanwhile, imports in Viet Nam declined by 18 percent to 360 000 tonnes in 2018, with reduced supplies from Ecuador (-5.5 percent to 189 300 tonnes), India (-9.3 percent to 130 000 tonnes) and other sources.

Total imports in China Hong Kong SAR were slightly low due to a 17 percent supply shortfall from China. Nevertheless, consumer demand remained strong with increased supplies from Viet Nam, Thailand, Myanmar and India. Shrimp Imports also increased in Taiwan Province of China and in Macao SAR.

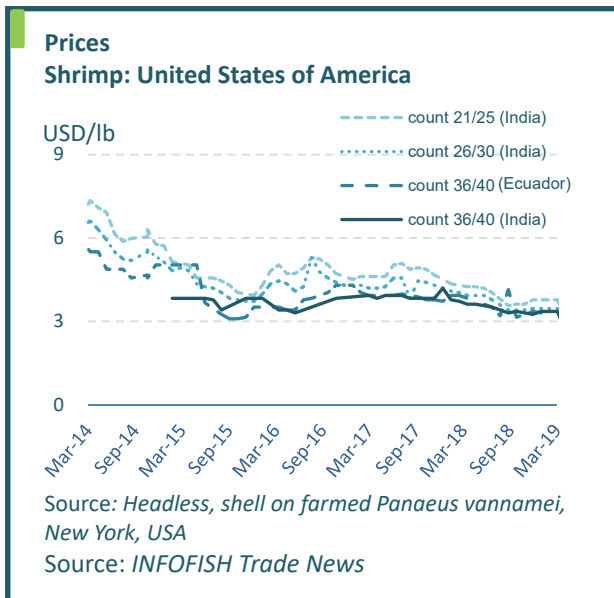
The shrimp market in the Republic of Korea continued strong in 2018. Imports increased by 9 percent compared with 2017, of which 56 percent were semi-processed and processed products, mainly supplied by Viet Nam, Ecuador, Thailand and China. There was an abrupt rise in shrimp exports from the Republic of Korea to China (from 200 tonnes in 2017 to 800 tonnes in 2018), suggesting re-exports of imported shrimp, possibly from Viet Nam.

Economic recession in Australia took a toll on shrimp imports, particularly for the higher value processed products, which declined by 20 percent to 18 100 tonnes in 2018. Imports of cheaper raw frozen shrimp increased by 12 percent to 16 000 tonnes compared with 2017. Shrimp imports in New Zealand remained positive.

### Shrimp imports in Asia-Pacific, in 1 000 tonnes

Importers	Imports			percent change 2018/2017
	2016	2017	2018	
	(1 000 tonnes)			
*China	300.0	375.5	458.0	+22.0
*Viet Nam	330.0	441.2	360.0	-18.4
Japan	223.6	233.7	219.1	-6.1
Republic of Korea	83.0	70.4	77.3	+8.9
Hong Kong	51.6	41.3	46.4	-3.6
Taiwan Province of China	34.2	41.8	45.2	+8.0
Australia	32.6	32.3	31.5	-2.5
Malaysia	21.5	18.9	26.8	+7.8
Singapore	24.8	23.8	23.3	-2.2
Thailand	26.0	14.8	19.6	+4.0
New Zealand	4.9	5.2	5.6	+7.3
Macao	3.0	3.1	3.6	+17.0
<b>Total of 12 markets</b>	<b>223.5</b>	<b>234.4</b>	<b>221.5</b>	<b>+1.1</b>

\*estimates



was a 12 percent decline in January 2019 imports, keeping international prices at bay from improving. US wholesale prices are low and stable compared with 2017, encouraging promotional campaigns at retail and restaurants levels, which will lead to more consumption and reduced stocks in the market.

Imports in the EU28 will be low until the seasonal supplies improve in Ecuador, which exports to the EU28 at Zero tariffs. Likewise, no real recovery is in sight in the Japanese market during 2019. Imports in January 2019 were already lower than last year's. Contrary to some prediction, imports in China during January-February 2019 surpassed all records, reaching 104 000 tonnes, some 337 percent more than during the same period in 2018. This brings some hope to shrimp farmers for the upcoming season.

## Price

Shrimp prices in the international market started to weaken in late 2017, after remaining high and firm between 2014 and 2017. In a price war between the largest exporter India and the largest single market the United States of America, price crashed in April 2018. Between August and December 2018, prices reached some level of stability but with nominal improvement. In the United States of America, the average import price fell by 9 percent to USD 8.95 per kg in 2018, compared with USD 9.83 per kg in 2017. The average export price of Indian shrimp was 13 percent lower at USD 7.58 per kg in 2018 (USD 8.65 per kg in 2017).

Unlike other years, export prices did not rise during the low farming months between December of 2018 and March of 2019. For many producers in India and elsewhere, growing shrimp at 20–30 percent lower ex-farm prices is no longer profitable. Farmers in China and Southeast Asia benefited from high demand and strong prices during the Gregorian New Year and Lunar New Year celebrations, in February 2019.

## Outlook

Industry leaders forecast the supply level for 2019 to be similar to that of 2018. The 'persisting low market price' outlook for 2019 remains a big challenge for farmers, who remain conservative and also undecided in crop planning for 2019. Some farmers in Southeast Asia are shifting from vannamei to black tiger shrimp, which provided better financial return in 2018. In Asia, the new season's crop is expected from April 2019.

Production will be seasonally low in Ecuador, Mexico and other countries in Latin America between March and May. Compared with 2018, Ecuador's farmed shrimp production is forecast to increase in 2019. The 2019 opening inventories in the United States of America were high and there

# TUNA

## GLOBEFISH HIGHLIGHTS

### *World canned tuna market revived in 2018 as raw material prices eased with improved supplies*

Demand for canned tuna improved in global markets during 2018, while developed markets remained stable for higher value products. The markets for non-canned tuna continued with positive trends, as consumers buy more fillets and less whole fish.

months of July through September, catches were moderate to good in the Western and Central Pacific Ocean, keeping skipjack tuna prices 16 percent lower in 2018 than in 2017.

In the Eastern Pacific, catches declined from January to May 2018 and improved in June and October. IATTC fishing closures were from 29 July to 6 October and from November 2018 to 19 January 2019. These closures restricted fishing of Manta's by 41 and 59 percent of the fishing fleet, respectively. During the low catch periods, canneries in Ecuador sourced material from the Western Pacific and The Indian ocean.

Tuna catches were stable in the Indian Ocean, which made regular trans-shipments of frozen raw materials possible to Thailand and Ecuador.

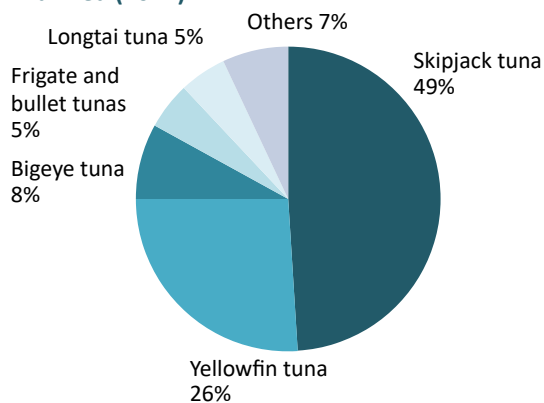
In the Atlantic Ocean, tuna catches fluctuated from moderate level between January and April to low level in May 2018, pushing raw material price up for European canners. Catches improved from August and remained stable until November, but weakened slightly in December 2018.

## Raw Material Supply

Skipjack tuna supplies increased worldwide in 2018, with improved catches in most of the fishing zones compared with 2017. Except for the FAD closure

Better catches of skipjack tuna and price adjustments resulted in higher imports of frozen fish by canneries. Compared with 2017, total frozen tuna imports (skipjack, yellowfin, albacore) in Thailand increased by 14 percent to 745 000 tonnes, and in China was up by 53 percent reaching 107 000 tonnes. Total frozen tuna imports were 0.7 percent lower in the Philippines (140 000 tonnes). Spain imported 10 percent less raw frozen tuna, down to 150 500 tonnes, but 7.6 percent more cooked loins (91 500 tonnes) in 2018.

Tuna production by species, both wild and farmed (2017)



Source: FAO

## Fresh and frozen tuna market (non-canned products)

This market segment of tuna includes sashimi and non-sashimi grade products. The high value species in this market are bluefin, bigeye and yellowfin tuna, in fresh and frozen whole and fillet forms. For whole/dressed fresh tuna the two major markets in ranking were the United States of America and Japan. While imports in the United States of America reached a plateau in 2018, demand for imported fresh tuna in Japan declined significantly.

On the contrary, the frozen fillet market has been expanding worldwide, for both sashimi and non-sashimi grade products. In 2018, an estimated 130 000 tonnes of tuna fillet entered the international trade, some 3–5 percent more than in 2017. In the three large markets of the United States of America, Japan and the EU28, imports increased by 3 to 13 percent in 2018 compared with 2017, with a combined share of 75–78 percent. The other 22–25 percent market share was held by the Republic of Korea, the Russian Federation, China, Turkey and Switzerland, all of which displayed a 20–100 percent growth in imports of frozen fillet during the review period compared with 2017.

## United States of America

Consumer demand for non-canned tuna was positive in 2018, supported by steady import prices. Presenting a reasonable increase over 2017, US total imports of non-canned tuna in 2018 were 6.2 percent higher, reaching 63 800 tonnes.

Demand for high value fresh bluefin tuna and frozen tuna fillet increased in 2018 compared with 2017. Total imports of fresh tuna in 2018 remained the same as the 2017 level, at 23 100 tonnes, but with an increase of 25 percent in supplies of high-value Mediterranean bluefin (2 130 tonnes) and a 2.5 percent rise in yellowfin tuna imports (16 700 tonnes). US imports of bigeye tuna declined by 17 percent. Imports of frozen tuna in the United States of America consisted of 3 600 tonnes of dressed fish (+6 percent) and 37 100 tonnes of frozen fillets (+13 percent).

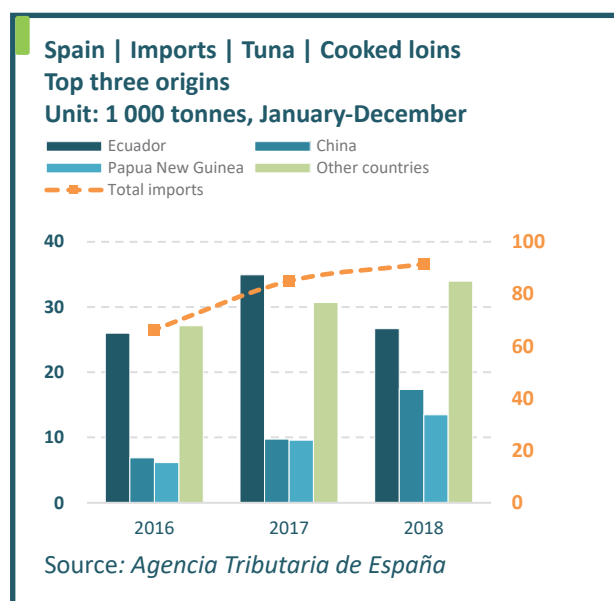
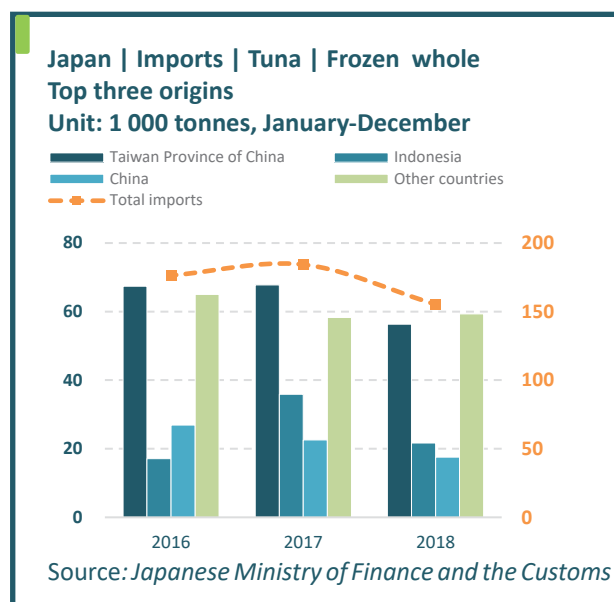
## Japan

In the world's largest sashimi market, tuna is gradually losing market share to salmon, preferred by the younger generation. Tuna has become an item for special occasions and celebrations. In 2018, imports of fresh/chilled and frozen tuna reached ten-year lows at 13 600 tonnes and 155 000 tonnes, respectively. However, increased imports of deep frozen fillet increased by 10.6 percent to 52 500 tonnes in 2018. In recent years local tuna domestically harvested in Japan, including farmed Pacific bluefin tuna, is preferred over imported fresh fish.

## European Union (Member Organization)

The EU28 non-canned tuna imports increased moderately in 2018, dominated by frozen fillets and mostly supplied by non-EU28 sources. The market imported nearly 23 000 tonnes of frozen tuna fillet in 2018, about 2.7 percent more than in 2017. Imports increased in France (+5 percent to 8 000 tonnes), the Netherlands (+20 percent to 2 800 tonnes), Portugal (+38 percent to 1 600 tonnes) and Poland (+100 percent to 910 tonnes) but declined in Spain

(-5 percent to 10 400 tonnes) and Italy (-7 percent to 4 000 tonnes). Summer demand for tuna fillet also increased in Eastern European countries.



## Top exporters of canned and preserved tuna to EU28 (January-December)

	2016	2017	2018
	(1 000 tonnes)		
Ecuador	113.5	142.3	138.2
Spain	88.2	99.9	111.4
Philippines	35.8	50.3	55.7
Other countries	419.6	424.6	425.3
<b>Total</b>	<b>657.2</b>	<b>717.1</b>	<b>730.6</b>

Source: Eurostat

## Canned Tuna Trade

Canned tuna producers and marketers expanded their trade worldwide in 2018, as overall raw material supply particularly skipjack tuna remained smooth at cheaper prices compared with 2017. Subsequently imports increased in many large, medium and small markets globally.

### Exports

Thailand was the top exporter of canned/processed tuna, increasing supplies to the United States of America, Egypt, Australia, Japan and Canada. Thai exports increased by 6 percent in 2018, while 2017 exports were 13 percent lower than 2016. Thai canned tuna exports increased to the regional markets in the Asia/Pacific and in the Middle East.

#### World top 6 exporters and Importers of canned/processed tuna

Exporters	2016	2017	2018	percent change 2018/2017
	(1 000 tonnes)			
Thailand	559.6	485.5	514.3	+ 6.0
Ecuador	180.8	218.1	222.3	+ 2.0
Spain	95.6	101.6	108.5	+ 6.8
China	89.2	91.1	105.8	+16.1
Indonesia	68.5	76.7	82.2	+ 7.1
Philippines	64.0	80.0	81.2	+ 1.5

Importers	2016	2017	2018	percent change 2018/2017
	(1 000 tonnes)			
USA	190.4	197.2	208.6	+ 5.6
EU28	655.6	717.1	730.6	+ 1.9
Egypt	82.9	32.2	50.6	+ 68.3
Japan	60.4	62.9	65.2	+ 3.6
Australia	44.8	45.6	47.1	+ 3.3
Canada	34.2	31.5	32.8	+ 4.0

Source: National statistics

The nominal rise in Ecuador's exports was the result of lower catch in the Eastern Pacific and falling exports to the main market, the EU28 (-3 percent), in particular the 23 percent decline in exports of cooked frozen loins to Spain. However, exports increased from Ecuador to Colombia (+34 percent to 21 300 tonnes), Argentina (+3 percent to 14 400 tonnes) and Chile (+0.3 to 8 800 tonnes).

Spain, a large producer of high value processed tuna, maintained its strong hold in the EU28 market and increased exports to Italy, France, the Netherlands, Germany and Belgium. China increased exports

to the EU28 by 73 percent, mostly in the form of cooked loins. Exports of cooked loins also increased from Indonesia to Thailand and the EU28, while Indonesian canned tuna supply was higher to the Middle East markets.

### Imports

Lower raw material prices generated improved demand for canned tuna in many markets, both large and small. Total imports increased moderately in all the top markets. The positive demand trend for higher value processed tuna also persisted in the US and EU28 markets.

#### North and South America

In 2018, US imports trends were positive for conventional canned tuna as well as for higher value tuna-in pouch/in-cups/convenient packs. Nearly 22 percent or 45 200 tonnes of these imports in 2018 consisted of higher value tuna-in-pouch and other value-added products compared with 19 percent or 38 200 tonnes in 2017. Imports of higher value albacore (including in pouch) increased by 18 percent from 28 200 tonnes in 2017 to 33 000 tonnes in 2018. This trend confirms an increasing demand for higher value products in the US market.

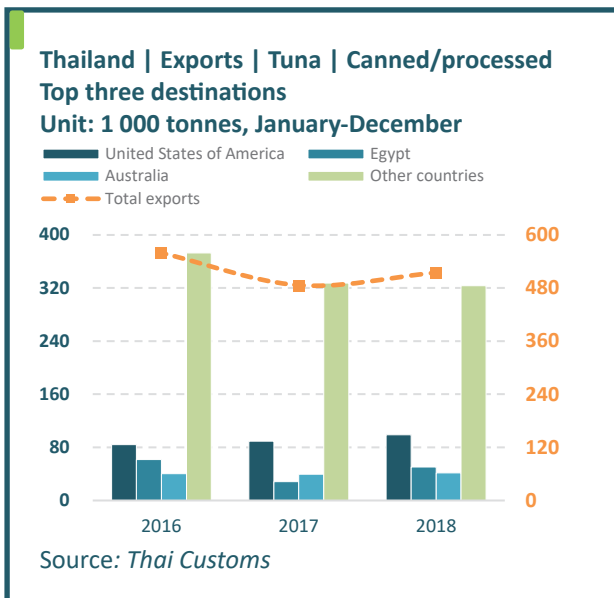
Overall, all light-meat canned tuna (skipjack and yellowfin) imports also increased from 99 400 tonnes in 2017 to 122 800 tonnes in 2018. Nearly 64 percent of these consisted of conventional tuna in brine.

In Canada, canned tuna imports increased by 4 percent to 32 800 tonnes in 2018. Canned tuna imports in Latin America increased in Colombia (+26 percent to 32 200 tonnes) and Argentina (+10 percent to 18 200 tonnes), but declined in Chile (-3 percent to 19 100 tonnes).

#### European Union (Member Organization)

In general, demand for canned/processed tuna in the EU28 remained soft during 2018, with a marginal rise in total imports, which could be attributed to intra-EU28 trade by European producers. The top three suppliers of processed tuna to the EU28 market were Ecuador, Spain and the Philippines. Among these, exports only increased slightly from Spain, indicating the market's inclination towards higher value products, while extra-EU28 imports consisted mostly in cooked loins and conventional canned products that posted a negative trend (-0.22 percent to 513 000 tonnes) compared with 2017.

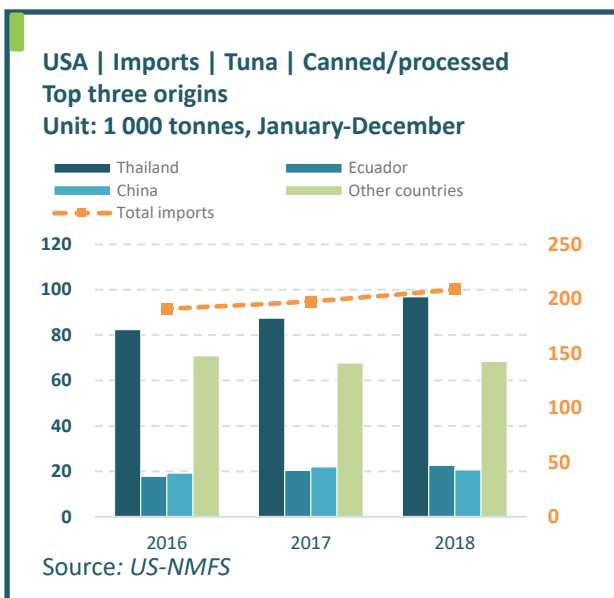
Among the large markets, imports increased by 9.6 percent in Italy to 129 200 tonnes and by



## Asia/Pacific & other Markets

In 2018, demand for canned tuna increased in the established and emerging markets in Asia/Pacific. In the two regional developed markets, imports increased but marginally in Japan to 39 400 tonnes (+3.5 percent) and in Australia to 47 100 tonnes (+ 3.3 percent). Cheaper raw material also encouraged domestic production in Japan. In Southeast Asia, imports increased in Malaysia by 31 percent to 3 200 tonnes, in Singapore by 8.4 percent to 2 300 tonnes, in the Republic of Korea by 28 percent to 1 500 tonnes and in Myanmar to 1 500 tonnes from a mere 80 tonnes in 2017.

Consumer demand for shelf-stable canned tuna has been on the rise in developing south Asia's urban markets. Imports in Sri Lanka increased by almost 100 percent in 2018. In Bangladesh, a wide range of imported canned tuna is now available in medium and high-end supermarkets in the capital city Dhaka, which has a population of 20 million.



## Price

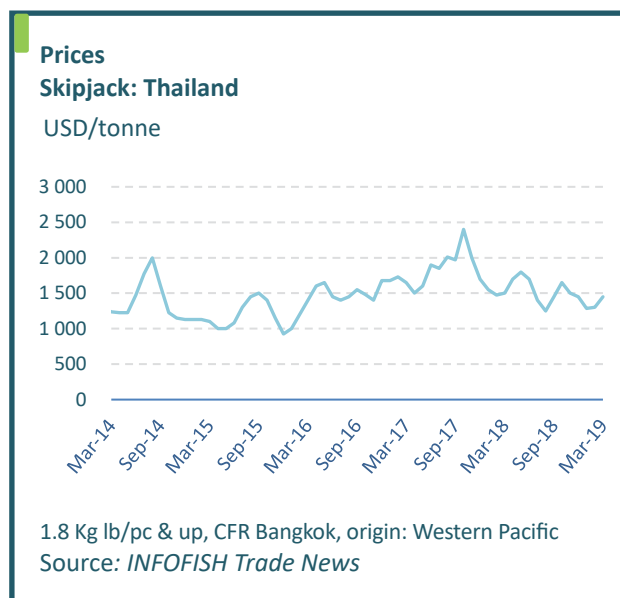
Skipjack tuna prices started to decline in most fishing areas since July 2018. Notably, the average import price of frozen skipjack tuna (CFR Bangkok) from July to September 2018 was nearly 30 percent lower than the corresponding period in 2017, while the 2018 annual average was 15 to 16 percent below 2017. The falling price trend in Thailand also pushed down prices in the Indian Ocean and other fishing regions, but yellowfin tuna prices remained firm with slight rises.

For non-canned tuna, prices of fresh and frozen loins remained firm throughout 2018. During the end of the year high consumption period, wholesalers price of fresh yellowfin tuna loins to retailers reached USD 15.00 per lb and up in the west coast of the United States of America.

4.7 percent in Spain to 128 200 tonnes, but declined in the United Kingdom (-12.5 percent to 104 200 tonnes). The French market imports remained flat at 99 900 tonnes (+0.14 percent). Imports increased in Germany by 8.7 percent to 92 000 tonnes. Despite the general softness in raw material prices and preferential tariff status for Ecuador and the Philippines, imports declined from these suppliers.

## Others in Europe

In Switzerland, canned tuna imports declined marginally (-0.75 percent) to 9 100 tonnes. The price sensitive Russia Federation market, however, increased imports by 12 percent to 4 700 tonnes, during the review period. Imports also increased by 2 percent in the small Norwegian market to 2 000 tonnes.



## Outlook

The current year has started with rising prices of skipjack tuna due to low catches in the Pacific and Indian oceans. Fishing in the Western and Central Pacific started below average because of unfavourable weather during January and February 2019, though it started to improve in March. Skipjack tuna price for Bangkok already increased to USD 1 450 per tonne in March, even though frozen inventories in Thailand seemed to be good.

Fishing in the Eastern Pacific was poor also and canneries in Manta are now extremely short in raw material, where ex-vessel price of skipjack tuna increased to USD 1 600 per tonne and it is expected to move up further. Catches in the Indian Ocean also slowed down with rising prices of skipjack tuna, but yellowfin tuna prices declined slightly. As of April, frozen skipjack price already reached USD 1 650 per tonne, indicating lower supply, which will impact prices of end products.

Demand for sashimi tuna in the largest non-canned tuna market, Japan, is expected to increase during the Spring festival months of April and May. With the approaching warmer months in the West, there will be better demand for tuna fillets and steaks until the end of summer.



# GROUND FISH

## GLOBEFISH HIGHLIGHTS

### *Slightly lower supplies in 2019*

While farmed whitefish supplies will increase slightly, it is expected that supplies of wild-caught marine groundfish will be lower than last year. Cod and Alaska pollock supplies will decrease and cod prices are expected to stay high and even rise. Saithe, which is lower priced, may take over part of the market from the high-priced cod.

### Resources

There was a small increase in global supplies of whitefish in 2018, according to the Norwegian fisheries analyst company Kontali who gave a presentation on the subject at the North Atlantic Seafood Forum in Bergen in March 2019. Farmed whitefish production increased by 4 percent, while capture fisheries decreased by 2 percent. Thus, the total whitefish supplies increased only slightly in 2019.

Iceland's share of the North Atlantic cod fishery is swelling. In 2019, cod landings in Iceland are expected to increase by 13 percent to 285 000 tonnes, haddock catches are expected to increase by 66 percent to 60 000 tonnes, saithe landings are predicted to go up by 43 percent to 70 000 tonnes, but catches of Atlantic redfish are expected to decrease by 2 percent to about 60 000 tonnes.

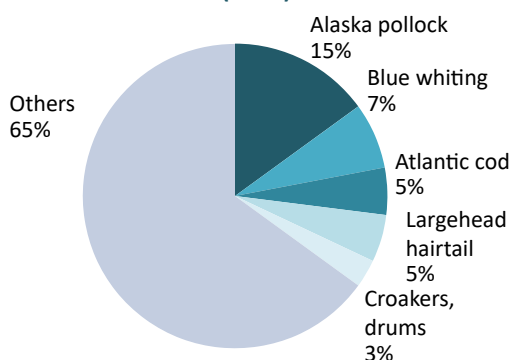
The US Pacific cod fishery is seeing increasing competition from the Russian Federation longline fleet. The Total Allowable Catch (TAC) is being reduced in 2019 and probably also in 2020. Prices are dropping, mainly due to the Russian Federation competition. The TAC for Pacific cod in the eastern Bering Sea is expected to drop to 166 475 tonnes in 2019 and further to 124 625 tonnes in 2020. However, the TAC of the Russian Federation for Pacific cod is increasing to 155 800 tonnes for 2019, some 16 percent higher than in 2018.

### Processing

Chinese processors have been dominating the processed whitefish market for years, depending on imported raw material from Europe and North America. The main advantage of Chinese processors has been the low wages, but that advantage is now disappearing. Labour costs in China are rising, but Chinese processors are still competitive. A main reason for this appears to be that they have been able to develop their skills over the years, and therefore are able to do specialized cuts that require skilled labour and high quality production. China has built up a large volume capacity for processing and they are not likely to drop out of the game because their costs have gone up.

There has been some consolidation in the Chinese processing industry, as some bankruptcies have occurred and some of the large operators have bought companies in financial trouble. This process of mergers and acquisitions will continue throughout 2019.

Groundfish production by selected species, both wild and farmed (2017)



Source: FAO



According to Kontali, there has been a global supply increase of saithe since 2015, but the markets for salted and dried saithe have been weak. Prices have been low and this is now thought to offer an opportunity for Chinese processors to switch from cod to saithe. The price difference between saithe and cod has widened. In 2017, the difference in price for raw material was EUR 1.82 per kg, while in 2018 it had increased to EUR 2.32 per kg.

## Trade

The EU28 market for groundfish has increased by 10 percent between 2012 and 2017, according to the European Seafood Federation. In 2017, the EU28 market for groundfish totalled 3.12 million tonnes, of which 89 percent was imported. Nearly 40 percent of this total was cod. EU28 fisheries are not even close to being self-sufficient. In 2017, EU28 landings of groundfish amounted to 512 700 tonnes, including the seven most important species (cod, saithe, haddock, hake, redfish, Alaska pollock and whiting).

Iceland is taking market shares from Norway in the US cod market, according to Kontali. Iceland's cod exports to the United States of America now account for 12 percent of Icelandic total exports of cod, up from 5 percent in 2009.

Chinese imports of whole frozen cod declined by 8.4 percent to 190 067 tonnes in 2018. The main suppliers were the Russian Federation (101 300 tonnes, +4.7 percent), the United States of America (35 100 tonnes, -22.4 percent), and Norway (30 800 tonnes, -19.3 percent).

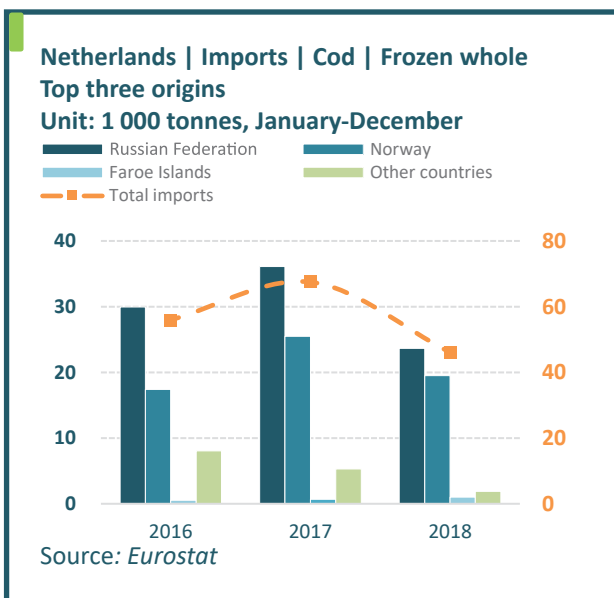
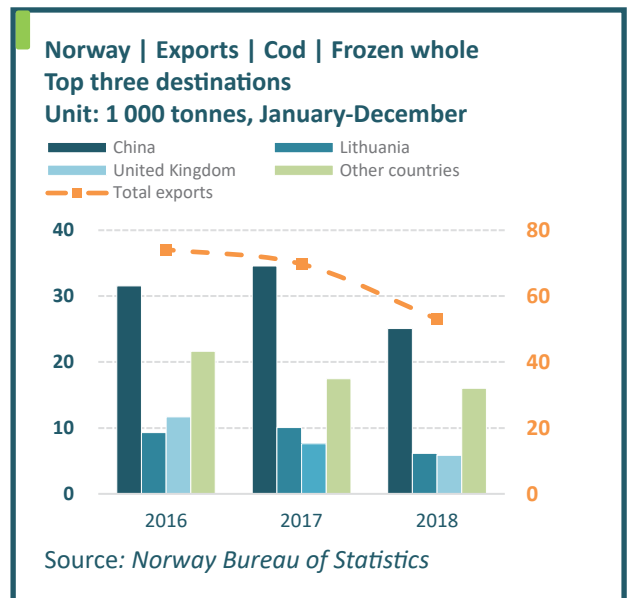
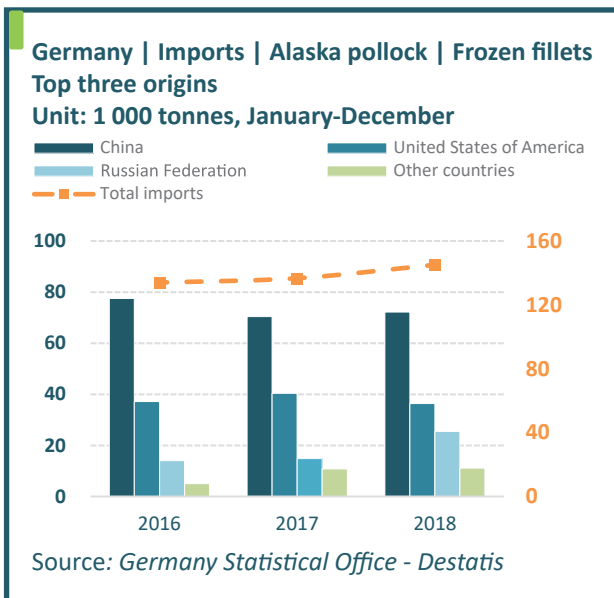
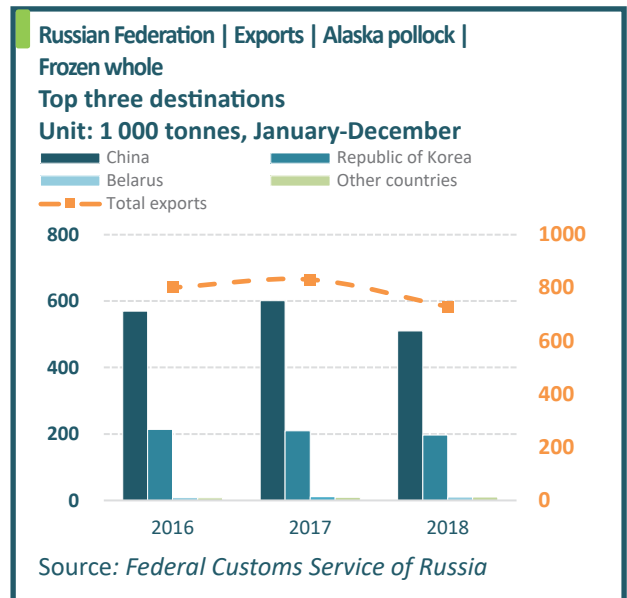
Alaska pollock exports from the Russian Federation fell by 13 percent to 706 700 tonnes in 2018. Even so, pollock still accounts for 39 percent of the country's seafood exports, which amounted to 2.2 million tonnes in 2018.



## RECENT NEWS

The Russian Federation is targeting Brazil and now intends to compete with the Alaskan industry for the Brazilian pollock market. One initiative that is expected to help is the establishment of a Norwegian-style export council. This represents an attempt by the Russian Federation to diversify their market base for whitefish products. The main focus will still be on the markets of the EU28 and China, as well as the growing domestic market of the Russian Federation.





The United States of America, and particularly Alaska, has aggressively promoted the consumption of American seafood by Americans. This campaign has been apparently successful, as reported by a survey by the Alaska Fish Radio. The survey included some 4 000 American respondents and 40 percent said they would be willing to pay a higher price for salmon and other seafood if it came from Alaska.

Chinese demand for whitefish is increasing. According to statistics from the US National Fisheries Institute (NFI), there is more H&G Alaska pollock going to China than what is being exported in the form of double frozen blocks. While it is difficult to say how large the Chinese domestic market for Alaska pollock is, the Nordic Group has estimated it at between 350 000 and 400 000 tonnes in 2018. Moreover, this market is growing by more than 15 percent per year.

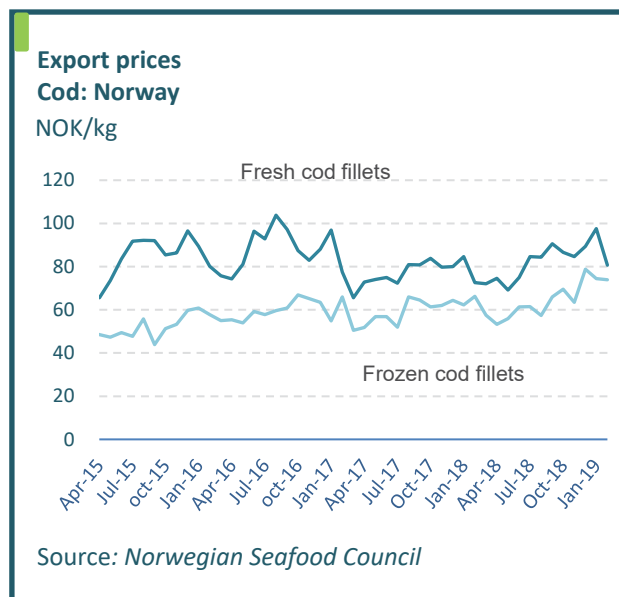
EU28 and US imports of Alaska pollock from China are declining. In 2017, imports from China into these two markets dropped by 7.6 percent, and preliminary numbers indicate a similar drop in 2018.

Russian Federation exports of frozen whole Alaska pollock declined by 12.4 percent in 2018, to 728 400 tonnes. The main markets were China (510 200 tonnes, -15.1 percent), the Republic of Korea (197 000 tonnes, -5.9 percent), and Belarus (10 400 tonnes, -11.1 percent). Significant growth was recorded for markets like Tajikistan, Germany and Nigeria, but the volumes were rather low.

Norwegian exports of frozen whole cod also dropped by 23.9 percent to 53 100 tonnes in 2018. The main markets were China (25 100 tonnes, -27.5 percent), Lithuania (6 100 tonnes, -39.2 percent) and the United Kingdom (5 900 tonnes, -23.0 percent).

## Prices

The high cod prices are pushing UK consumers away from cod and haddock and turning them in the direction of Alaska pollock, according to Young’s Seafood. This trend is strengthened by the expansion of low-priced food chains like Lidl and Aldi on the UK market. The statistics support this trend. The UK retail sector sold about 26 900 tonnes of Alaska pollock in 2018, up from 24 800 tonnes in 2017 (+8.3 percent). During the same period, the retail sector sold 47 200 tonnes of cod or less 2.2 percent, and 19 800 tonnes of haddock or less 2.5 percent.



## Outlook

There will be less marine groundfish on the market in 2019, but there will be slightly more farmed whitefish. Cod supplies will be down, which will help maintain high price levels or even push prices up.

Norwegian catches of groundfish (including cod, haddock, saithe and redfish) in 2019 are expected

to decline by 13 percent over 2018 to 635 000 tonnes, while catch of these species by the Russian Federation is expected to drop by 20 percent to 442 000 tonnes.

Alaska pollock producers will be turning away from production of blocks and fillets and move to producing more surimi and more consumer products. One US integrated seafood company is now working under the motto “ABB – Anything but blocks” and emphasizing production of higher value products.

In the processing sector, China is experiencing higher production costs. Over time, whitefish processing may be returning to Europe, thus saving transport costs. Nevertheless, the Chinese processing sector is still competitive because of their skills and quality.

According to the Norwegian Polar Institute there will be some major changes in the distribution of fish stocks in the Barents Sea as a result of climate change. The Barents Sea ice is melting, opening up the ocean to areas where cod can live. As a result, there may be an increase in the cod stocks in this region in the future.

## RECENT NEWS

According to a report published by the Canadian Journal of Fisheries and Aquatic Sciences, Atlantic cod in the southern part of the Gulf of St. Lawrence could become extinct. The stock, which tends to gather in the same place every year, is very vulnerable to predation by seals. Since the 1990s, the seal population has been growing because no hunting has been undertaken after protests by environmental groups.

# CEPHALOPODS

## GLOBEFISH HIGHLIGHTS

### *Tight supplies and rising prices*

Octopus supplies are tight and will probably remain so throughout the year. There was a 48 percent reduction in the Moroccan quota for octopus. If this low level remains, there will be a supply squeeze. Squid supplies are picking up slightly, but still relatively tight. Demand is good and prices are up.

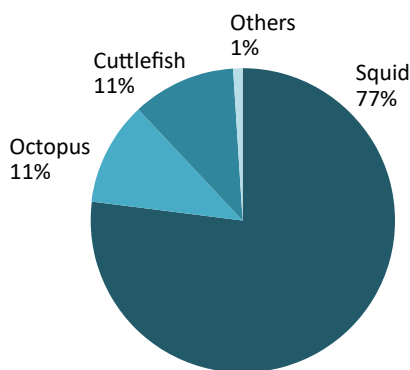
### Octopus

Octopus resources have been and continue to be under pressure for some time and the situation is not improving. The resource situation is approaching a very serious state. Demand for octopus is rising in several markets, which puts further pressure on the resource. The long-term view is that prices will rise, albeit in the midst of short-term ups and downs.

After the drop in octopus prices between June and December of 2018, prices shot up again in the beginning of 2019. Moroccan authorities set the quota for the winter season at just 19 500 tonnes, 48 percent lower than last year. There has been some speculation that the quotas were set that low in order to support the high prices and that the quota could be increased once it has been filled, by the end of March. Indications are that prices have come down lately. Demand is still high, though.

The octopus fishery in the south west of Madagascar has for long been an important economic activity for the region, and the fishery has been in focus for introducing improvements for over a decade. In February 2019, Madagascar finally announced its first octopus fishery improvement project (FIP), focusing on Madagascar's southwest octopus fishery, which forms the backbone of the local seafood processing and exporting industry. The primary aim of the FIP is to encourage responsible use of the local octopus stocks, establish long-term economic benefits for communities and businesses and facilitate access to global markets. The plan involves the Blue Ventures Conservation non-governmental organization (NGO), as well as the Marine Stewardship Council (MSC) for Southern Africa.

Cephalopods production (2017)



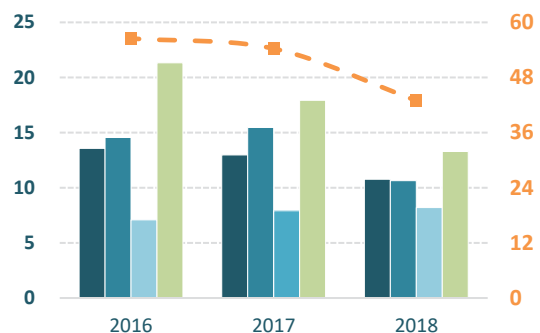
Source: FAO

Japan | Imports | Octopus

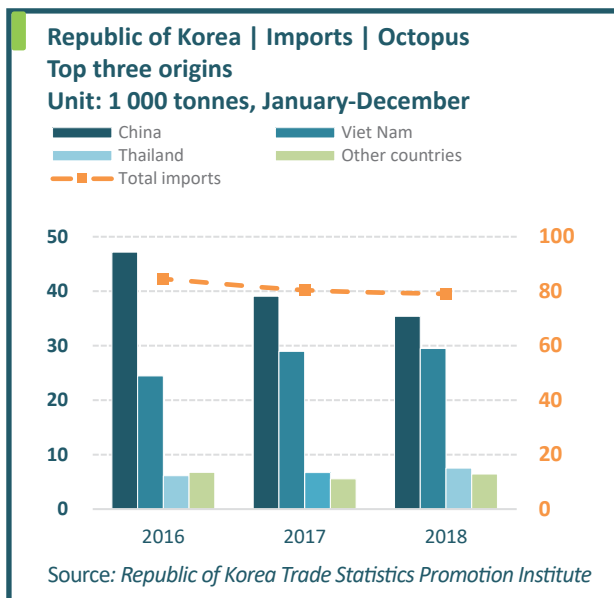
Top three origins

Unit: 1 000 tonnes, January-December

Legend: China (dark blue), Viet Nam (light blue), Mauritania (medium blue), Other countries (green), Total imports (orange dashed line with squares)



Source: Japan Customs



## Trade

The tight supply situation was reflected in lower imports of octopus into Japan during 2018. Overall, Japanese octopus imports fell by almost 21 percent, from 54 300 tonnes in 2017 to 42 900 tonnes in 2018. All major suppliers registered a decline in shipments, except Viet Nam, who exported 3.8 percent more octopus to Japan in 2018 than in 2017.

The Republic of Korea imported less octopus in 2018, although the decline was marginal (-1.8 percent) from 80 300 tonnes in 2017 to 78 900 tonnes in 2018. China was the largest supplier (35 400 tonnes) that saw a drop of 9.4 percent in shipments. All the other important suppliers increased their octopus shipments to the Republic of Korea.

## Squid

### ADVANCES IN OCTOPUS BREEDING IN CAPTIVITY

The so-called “giant squid war” in Chile is heating up. A new regulation, which involves replacing trawl fishing with jigging, has caused protests among fishers. Industrial fishers are violently against the new law, while artisanal fishers protest in favour of the law. Street protests have become more violent recently. The industrial fleet spokespersons claim that the new law is endangering the jobs of some 3 000 workers who are involved in the catching and processing of the giant squid supplied by the industrial fleet.

At the recent Seafood Show Osaka in Japan (20–21 February 2019), “new” sources of squid were presented. Malaysia, where squid has been caught mainly as bycatch with other species, has now entered into dedicated squid fishing and is targeting two species, *Loligo chinensis* and *Loligo sibogae*. These species are different from the Japanese flying squid and the Argentine shortfin squid that are the more familiar species on the Japanese market. The new species are frozen at sea and sold round, unprocessed.

The *Illex* fishery off Argentina was off to a good start in mid-February 2019. During the first month of the fishery, a total of 24 700 tonnes were landed, about 24 percent more than during the same period in 2018. Total *Illex* landings in Argentina in 2018 amounted to 108 300 tonnes, up 9.2 percent compared to 2017.

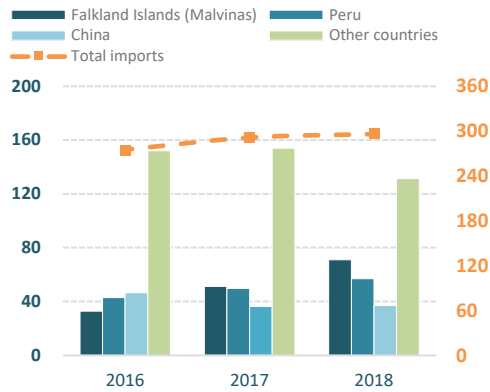
Spanish shipowners are upset over the presence of Asian vessels in South American waters, especially around the Falkland Islands (Malvinas). They claim that the Asians are giving them unfair competition in the international waters south of the exclusive economic zone (EEZ) of Argentina. The Asian vessels are now mainly Chinese. The Galician fleet fishing in Argentine waters was in place already in early January for the opening of the *Loligo* fishery. However, the Spanish fleet is also exploiting this resource, albeit under a fishing agreement with Argentina. Nevertheless, the resource is under pressure.

While Chinese vessels operating 200 miles off Argentina in December and January had virtually zero catches, Argentine fishers working inside the EEZ had catches that averaged 25–30 tonnes per day. Market demand for squid has been strong, but supplies are limited, pushing prices up. Squid fishing continued into February and March, and by mid-March, a total of 50 000 tonnes of *Illex* had been landed.

Peruvian squid (*Dosidicus gigas*, jumbo flying squid) landings were up by about 10 percent to 311 300 tonnes during the first eleven months of 2018. In 2017, landings were low due to El Niño, but landings returned to normal levels in 2018.

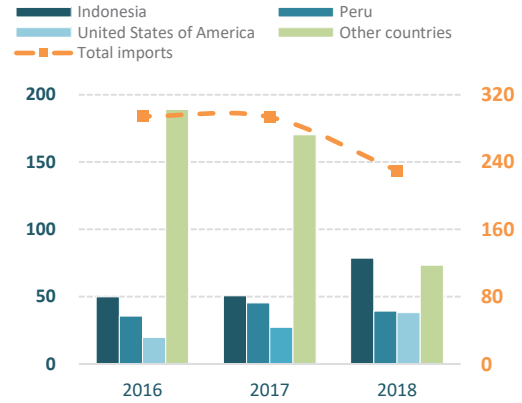
Fishing for Pacific flying squid in Japanese waters was not good in early January, and as a result, prices more than doubled for raw material that is processed into delicacies like “shiokara”. Prices for imported squid have also increased as a result of the supply shortage. The Pacific flying squid resource in Japanese waters has been on a declining trend for some years. In 2017, landings of this species amounted to about 61 000 tonnes, down 13 percent compared to 2016. In 2018 there was a further decline. In response to this situation, prices have gone up. In 2014, the average price for Pacific flying squid was about JPY 200 (USD 1.84) per kg. By 2016, the price had increased to JPY 600 (USD 5.52) per kg.

**Spain | Imports | Squid and cuttlefish**  
**Top three origins**  
**Unit: 1 000 tonnes, January-December**



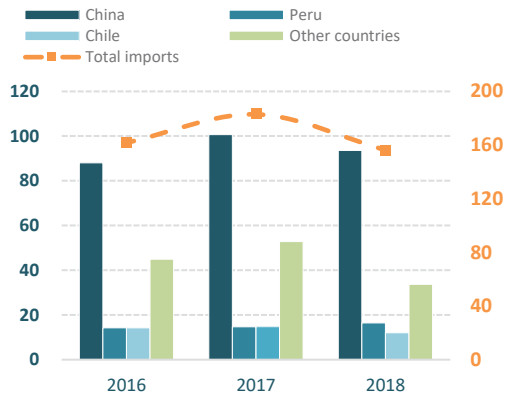
Source: *Agencia Tributaria de España*

**China | Imports | Squid and cuttlefish**  
**Top three origins**  
**Unit: 1 000 tonnes, January-December**



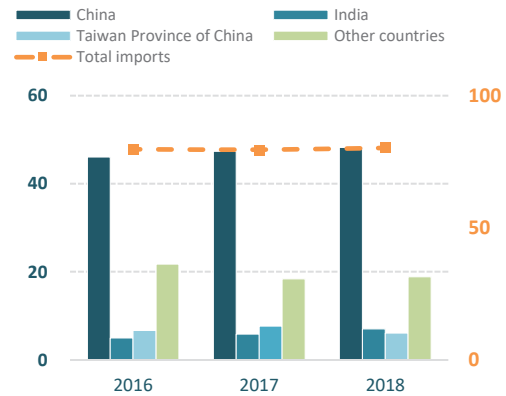
Source: *China Customs*

**Japan | Imports | Squid and cuttlefish**  
**Top three origins**  
**Unit: 1 000 tonnes, January-December**



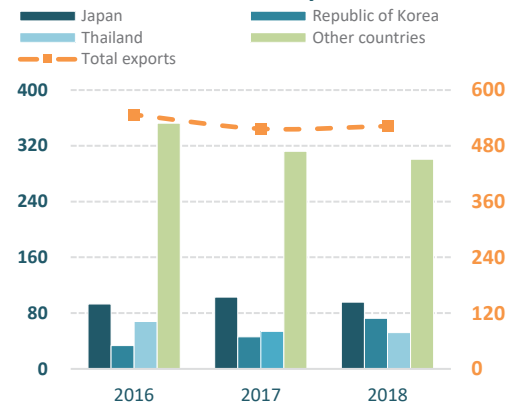
Source: *Japan Customs*

**USA | Imports | Squid and cuttlefish**  
**Top three origins**  
**Unit: 1 000 tonnes, January-December**



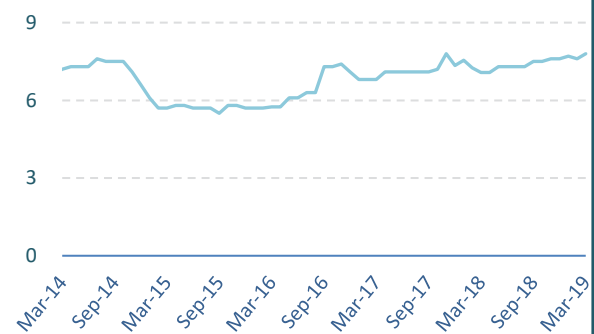
Source: *NMFS*

**China | Exports | Squid and cuttlefish**  
**Top three destinations**  
**Unit: 1 000 tonnes, January-December**



Source: *China Customs*

**Prices**  
**Squid: Italy**  
**EUR/kg**



Whole, FAS middle size, origin: *South Africa*  
 Source: *European Price Report*

## Trade

The supply tightening is showing in trade figures. Japan imported 14.8 percent less squid in 2018 than in 2017. Total imports of squid and cuttlefish amounted to 156 000 tonnes in 2018. The main supplier, China, saw a drop of 7 percent in volume, but the country still accounted for 60 percent of Japan's imports of squid and cuttlefish.

Chinese exports of squid and cuttlefish actually increased to 521 500 tonnes in 2018, up just over 1 percent compared to 2017. The main markets included Japan (accounting for 18.4 percent of the total), Republic of Korea (14.0 percent of the total) and Thailand (10 percent of the total).

Chinese imports of squid and cuttlefish fell by 21.8 percent to 229 700 tonnes in 2018. Indonesia strengthened its position as the number one supplier to China, accounting for 78 800 tonnes (34.3 percent of the total). Peru and the United States of America were about equal, at 39 300 tonnes (17.1 percent) and 38 300 (16.7 percent), respectively.

US imports of squid and cuttlefish increased by 1.2 percent to 80 300 tonnes in 2018, from 79 400 tonnes in 2017. The main supplier by far was China (60 percent of the total), followed by India (8.8 percent of the total) and Taiwan Province of China (7.6 percent of the total).

Spain is a major market for squid and cuttlefish. Its imports of these commodities increased by 1.7 percent to a total of 296 500 tonnes in 2018. There was a strong increase in imports from the main supplier, Falkland Islands (Malvinas), from 51 300 tonnes in 2017 to 71 200 tonnes in 2018 (+38.7 percent), while the second largest supplier, China, only saw a marginal increase.

## Outlook

Octopus may continue to be in short supply this year, especially if the Moroccan quota is not adjusted. If there is no improvement in supplies, prices will continue to rise. Inventories are very low, so there will not be much relief from cold storage, either.

The same is true for squid, although we can expect a somewhat easier supply situation, as the fishery in Argentine EEZ appears to be better than in 2018. World demand for both octopus and squid is on the rise and consequently prices will also rise.

Among the driving factors in this development is the increasing demand for "exotic" foods. Among the consumers interested in this are the "millennials" (individuals who reached adulthood around the turn of the 21st century). Their food habits are generally considered healthier than earlier generations, and seafood in general is part of their diet. Octopus is, to some urban westerners, an "exotic" food, and these consumers are developing a growing appetite for it.

In order for this growth to materialize, supplies must also grow. Supplies from capture fisheries are not expected to be able to support such a growth, so one has to look to aquaculture for any substantial supply growth. But global aquaculture production of octopus is very low. There was a period in the beginning of the century when up to 30 tonnes were produced annually, but recently, this production has fallen to almost nothing. The main problem seems to be that feed costs are too high to make this a profitable operation. Thus, for supplies from aquaculture to become important, some major breakthroughs in octopus farming are necessary. If supplies are not increased, the result could be rising prices as a result of the growing demand, as seen in the beginning of 2019.

In general, squid prices have been climbing upwards and will most probably continue to do so through 2019. In 2018, prices were on the rise as a result of the tight supply situation and this has not improved in 2019. Consequently, prices are going up.

# TILAPIA

## GLOBEFISH HIGHLIGHTS

### *Delay for China tariff leaves US importers with excess stocks in sluggish market*

After an overall decline in imports in 2018, US tilapia traders who bought in anticipation of a 1 March tariff hike that never happened may be left with too much fish to sell amidst falling prices and weak demand.

## Production

Global production of tilapia in 2018 is estimated to have increased by some 3–4 percent to around 6.3 million tonnes, continuing a trend of consistent annual growth that has now lasted some 20 years. China remains the leading producer, accounting for around 28 percent of total production and for a significantly larger proportion of global export volume. However, China's share of farmed tilapia production has been declining as harvests in countries like Egypt, Indonesia and Brazil are now increasing relatively faster. A sustained downward slide in prices and a deterioration of market conditions in the major US market has seen some Chinese aquaculture operators start to explore alternative species. There is a steadily smaller share of tilapia production entering international trade, as many of the more rapidly growing producers are more focused on supplying their domestic markets.

The Brazilian sector is expanding at a rapid rate, with production growing 11.9 percent in 2018 to 400 280 tonnes, according to the Brazilian Aquaculture Association (Peixe BR). This figure represents 55.4 percent of Brazilian fish production and ranks Brazil as the fourth largest tilapia producer worldwide. The bulk of the country's tilapia aquaculture operations are located in the south of Brazil, in the states of Paraná and São Paulo.

In sub-Saharan Africa, where tilapia farming is still relatively small scale, producers have been struggling with disease problems. Authorities in Ghana are directing large-scale vaccinations following two mass mortality events at tilapia farms on Lake Volta attributed to bacterial infection. In the Southern part of the continent, Tilapia Lake Virus (TiLV) continues to threaten tilapia in Lake Victoria, where the species represents an important source of low-cost protein. In response, FAO have partnered with the Ugandan government and academics to develop and implement a coordinated strategy to mitigate the risks and impact of TiLV's presence in the region.

### US imports of frozen tilapia

	2016	2017	2018
(1 000 tonnes)			
<b>Frozen fillets</b>			
China	117.1	110.4	112.9
Indonesia	7.7	7.0	5.7
Mexico	1.8	0.6	1.6
Other countries	4.3	3.7	3.5
<b>Total</b>	<b>130.9</b>	<b>121.8</b>	<b>123.8</b>
<b>Frozen whole</b>			
China	22.9	19.6	22.9
Taiwan Province of China	6.9	6.6	6.3
Viet Nam	1.2	1.5	1.5
Other countries	1.3	1.0	0.8
<b>Total</b>	<b>32.2</b>	<b>28.7</b>	<b>31.5</b>

Source: Trade Data Monitor

## Markets

Demand for tilapia in the US market did not show much sign of recovery in 2018, as marketers continued to struggle to generate new consumer interest in tilapia products. There are few indications of any imminent reversal of the downward trend, as recent statistics from the NFI suggest that other seafood options such as salmon are steadily taking over tilapia's market share. Tilapia from



China, which is all frozen, is losing market share to fresh product, but even fresh fillet suppliers from South America are suffering from poor consumer perception and the availability of more versatile fish species. Further penetration of the lukewarm EU28 market is also proving difficult, with companies now adopting an approach centred in quality to attempt making headway in this potentially lucrative market. Progress in Asia, Latin America and Africa has been much more rapid, particularly in domestic markets of producing countries. Brazil exports only a small proportion of its fast-growing production, while China's domestically produced tilapia is proving popular as a convenience seafood item in the retail sector and in fast-food outlets. Meanwhile, sub-Saharan Africa is absorbing growing volumes of both regionally produced tilapia and Chinese exports once destined for the US market.

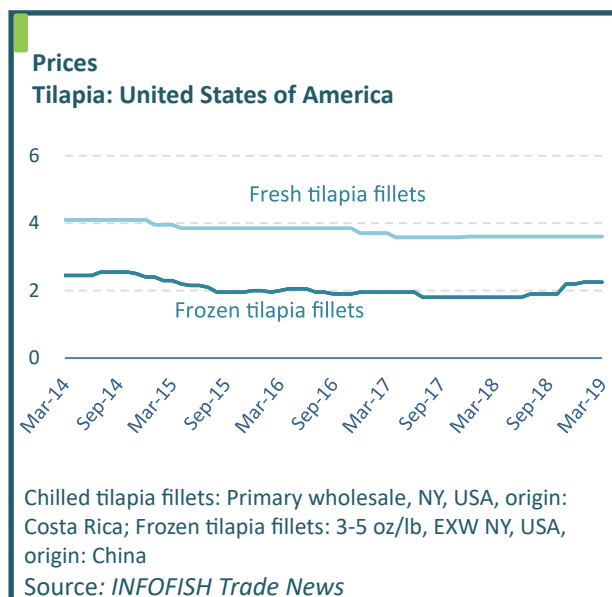
## Trade

The value of Chinese tilapia exports fell again in 2018, driven by an overall decline in export sales to the US market. Volumes temporarily increased towards the end of the year, as US traders sought to build stocks in expectation of the increase in import duty on Chinese tilapia from 10 to 25 percent in January 2019. This hike was delayed and the same scenario was repeated when the tariff's revised effective date of 1 March 2019 was delayed once again. The excess stock and the ongoing uncertainty have seen US market conditions worsen further for Chinese and US traders. China's second most important export market is the Côte d'Ivoire, whose share of total value increased further in 2018. EU28 imports of tilapia fell in 2018, with 67 percent supplied by China, followed by Viet Nam and Indonesia.

Honduras was the main Latin American supplier of tilapia to the US market during 2018 in terms of volume, shipping 8 400 tonnes worth USD 47.5 million. Colombia's tilapia exports led in terms of value, at 6 700 tonnes worth USD 51.3 million. While exports destined to the United States of America increased for Honduras and Colombia in 2018, they decreased for Costa Rica, Ecuador and Mexico.

## Prices

Although demand has been dreary in the United States of America and the EU28, domestic market demand in producer countries and from newer export markets kept traded tilapia prices relatively steady in 2018. FOB prices for frozen fillets out of China have hovered around USD 3.00–3.40 per kg through 2018, while frozen whole fish ranged between USD 2.00–2.20 per kg. For fresh fillets from Latin America, FOB prices bounced between USD 6.50–7.20 per kg.



## Outlook

US buyers' accelerated buying from China in late 2018 and early 2019 turned out to be premature. The increased availability of fish on the market is threatening price levels in the first half of 2019. Price and market development is heavily dependent on when and if the 25 percent tariff does indeed take effect. This added barrier to Chinese access to the US market could prompt something of a reshuffling of trade routes and offer some opportunities to Latin American suppliers, although fresh Latin American tilapia is not a direct substitute for frozen Chinese product that still is significantly cheaper even with a 25 percent duty. The Brazilian and Colombian tilapia industries are on strong growth trajectories, with Brazilian producers focusing primarily on the domestic market and Colombia looking to develop its export business. Global production of tilapia is expected to increase by around 3 percent to 6.5 million tonnes in 2019, with Chinese growth continuing to lag that of other major producers.

# PANGASIIUS

## GLOBEFISH HIGHLIGHTS

### *Viet Nam pangasius farmers reap bumper profits in 2018*

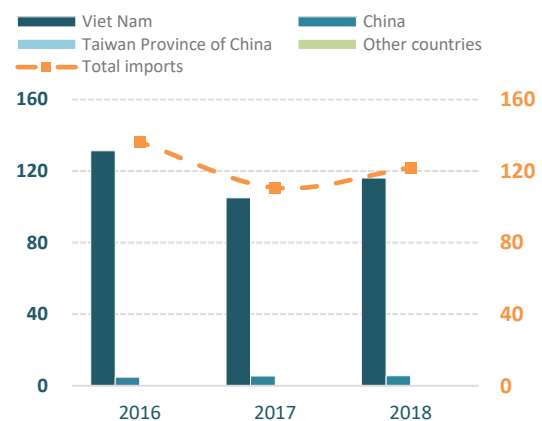
Strong price gains in 2018 translated into profit margins of up to 50 percent for Viet Nam's farmed pangasius sector and saw the country's pangasius export revenue exceed USD 2 billion for the first time. In 2019, prices are expected to drop slightly but the outlook remains positive due to good conditions in multiple markets.

### Production

Total harvests of farmed pangasius in Viet Nam are expected to exceed 1.3 million tonnes in 2018, up 6 percent compared with 2017. This figure represents around half of the total global production, but Viet Nam is much more focused on export than other large producers like Bangladesh, India and Indonesia. The Vietnamese sector has benefitted significantly from soaring prices for traded pangasius and a large proportion of these profits are now being invested into expanding and modernizing the industry. Farming areas in the Mekong Delta have grown, as farmers seek to maximize their share of future profits. According to the Ministry of Agriculture and Rural Development, total farming area increased to around 5 400 hectares, 3.3 percent larger than in 2017. The largest reported newly developed site is a 600 hectare, 200 000 tonne pangasius site, expected to start operating in late 2019. The Viet Nam Pangasius Association (VPA) has also stressed the need to focus on broodstock quality, general fish health and technological improvement in order to ensure sustainable growth. Vietnamese farming companies are also investing upstream, in hatcheries, and downstream, in processing facilities, in a bid to improve vertical integration and avail of the resulting efficiency gains.

Vietnamese producers are mindful of increasing competition from other Asian countries, particularly China, and the associated decline of their share of total supply. China remains some distance behind Bangladesh and Indonesia in terms of its capacity, but this could change rapidly as its powerful aquaculture industry sets its sights on supplying the strong and fast-growing domestic demand for the species. It should be recognized that Viet Nam's dominance is not only due to volume but also a consequence of its efficient and technologically advanced industry with a focus on quality, meaning it will likely be some years before Chinese pangasius producers can compete directly even in the Chinese domestic market.

USA | Imports | Catfish | frozen whole  
Top three origins  
Unit: 1 000 tonnes, January-December

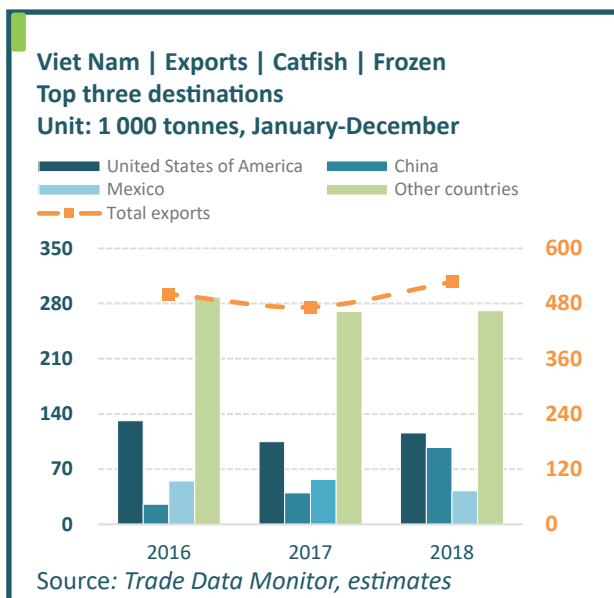


Source: US Census Bureau

### Markets

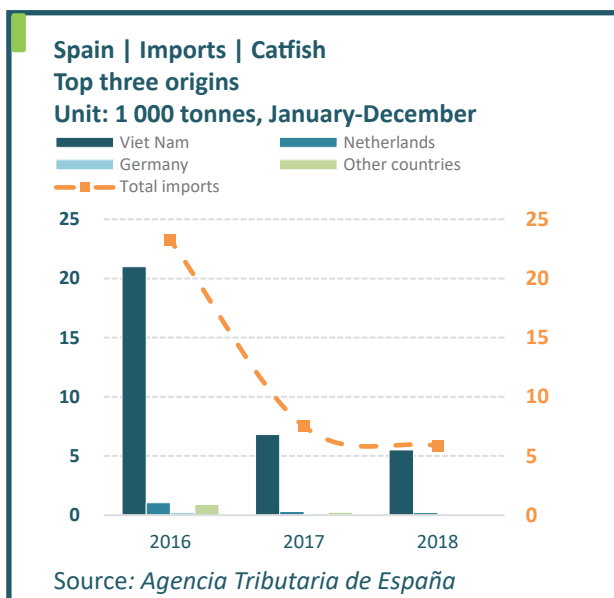
The positive performance of Viet Nam's pangasius export industry in 2018 was driven by good demand in a range of key markets across multiple world regions. The most significant growth was seen in China, where consumers' traditional taste for freshwater fish has allowed pangasius marketers to carve out a profitable segment for themselves amidst a general increase in demand for seafood generally. Prices in China are still lower than those in the United States of America and the EU28 where product requirements are more stringent.

Demand was stable in the United States of America in 2018 despite a sharp price increase and import challenges associated with the new US Department of Agriculture (USDA) inspection regime for Siluriformes, a taxonomic group that includes pangasius.



represents a 26 percent increase compared with 2017. China and Hong Kong SAR have been vying with the United States of America for the status of Viet Nam's largest export market but the most recent reports suggest the United States of America has taken first place on full year statistics. Exports to the United States of America have been boosted by the success of concerted efforts to implement the measures necessary to pass USDA's field tests, which are the most important step in ensuring access to the US market. The EU28 market was Viet Nam's third largest export market in 2018, followed by combined exports to the ASEAN bloc. Both Viet Nam and Indonesia are seeking to increase exports to the Middle East, but strict Halal certification requirements are impeding access to the key Saudi Arabian market.

## Prices



Fingerling issues restricted raw material supply from Viet Nam in early 2018 and drove up prices, helped by strong upward pressure from demand growth in the majority of export markets. The Viet Nam Association of Seafood Exporters and Producers (VASEP) reported average farmgate prices of USD 1.29–1.51 per kg for 2018, with healthy profit margins for farmers. These levels have made pangasius farming several times more profitable than rice farming, the other major agricultural industry of the Mekong Delta, and many new players have entered the sector as a result. FOB export prices hovered around USD 3.25 per kg in 2018, marking the peak of a pronounced upward trend that has seen export prices rise 60 percent from the USD 2 per kg low reported at the beginning of 2016.

## Outlook

The Vietnamese government has set a production target of 1.51 million tonnes of pangasius for 2019, a significantly higher figure than previous forecasts. The VPA has warned of the potential price drop given increased capacity, but a severe decline should be prevented by positive market conditions and a combination of developments that are expected to further strengthen international demand for Vietnamese pangasius. First, the reduction of anti-dumping tariffs and Viet Nam's success in meeting USDA market access standards should see Vietnamese exports to the United States of America increase. Second, the recent agreement of a Free Trade Agreement (FTA) between the EU28 and Viet Nam, expected to enter into force around the second half of 2019, will see EU28 tariffs for major Vietnamese pangasius products eliminated over the course of three years. Third, an expected decline in total whitefish production and the trade war tariffs on whitefish imports into the United States of America and China will also strengthen pangasius' global market position. As a result, Viet Nam's total pangasius export revenue is expected to increase by around 5 percent in 2019, to some USD 2.4 billion.

Demonstrated commitment to traceability and fish health in the EU28, combined with effective retail campaigns has seen some recovery of demand after years of decline that followed negative media coverage. Demand for pangasius has also been strong in markets in the Asia Pacific, particularly the Association of Southeast Asian Nations (ASEAN) bloc, supplied primarily by Viet Nam but also by other regional producers such as Indonesia, Malaysia and China. Consumers in Latin American countries such as Mexico and Brazil have also developed a taste for pangasius but these markets are sensitive to rising prices.

## Trade

According to Viet Nam's Ministry of Agriculture and Rural Development, total pangasius exports reached USD 2.26 billion in 2018, exceeding the industry's stated USD 2 billion target on the back of broad-based demand and high price levels. This

# BASS & BREAM

## GLOBEFISH HIGHLIGHTS

### *Difficult times for bass and bream sector as stubbornly low prices stifle growth*

The Mediterranean seabass and seabream industry suffered from severely depressed prices and challenging market conditions in 2018. Demand has been growing but not fast enough to keep pace with rapid supply expansion led by Turkey. The expected slowdown in production growth this year is long overdue but prices are likely to remain low.

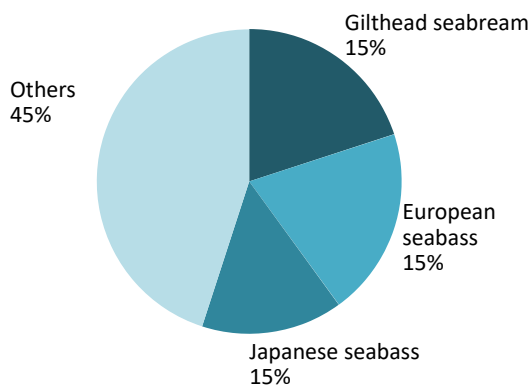
### Production

A combination of factors, including a favourable exchange rate, government assistance and development opportunities in Middle Eastern markets has seen Turkey quickly rise to become the world's leading producer of farmed seabass and seabream. Turkish harvests of both species, primarily from large-scale offshore cage farming operations, have more than doubled in the last decade. In the last five years or so, this growth rate has accelerated as exporters sought to simultaneously undercut European producers in EU28 markets and avail of new opportunities elsewhere. Encouraged by their rapid market share gains, the Turkish sector pushed for further expansion, licensing and opening multiple new sites in areas such as Mersin and Hatay while increasing juvenile production. At the same time, sector-wide investment drove efforts to develop improved production processes and technologies while growing aquaculture companies acquired and built hatcheries and feed plants to secure a more vertically integrated supply chain.

Meanwhile, Greek production has also picked up in the last few years after a long period of poor growth conditions, as the industry sought to take advantage of improved price levels in 2015 and 2016. Greek aquaculture companies previously rescued by banks were restricted and sold off, with the most notable deal being the joint acquisition of Nireus and Selonda by foreign investors. As of early 2019, the European Commission has approved the merger of these two companies with Andromeda, another large Greek aquaculture firm owned by the acquiring fund. The merger is conditional on the sale of some assets including farms and hatcheries and the transfer of knowledge to the purchasing entity in order to create a viable competitor, but the newly created company will nevertheless command around 60 percent of total Greek production, which has increased by some 25 percent since the banks originally took control of Nireus and Selonda in 2015 and 2014 respectively.

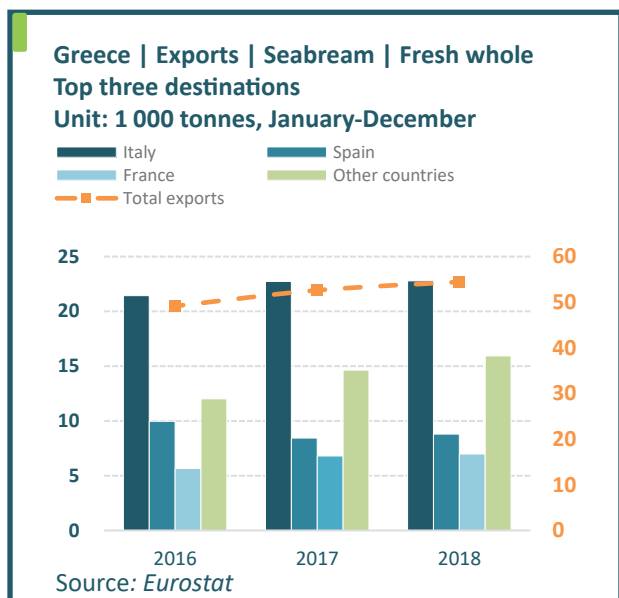
The end result of the rapid expansion in Turkey and a recovery in Greece has been an approximately 60 percent rise in combined global production of seabass and seabream from 2010 to 2018, and an increase of some 34 percent in the three years from 2015 to 2018. Despite Turkey's success in developing new markets and an upward demand trend in a number of important EU28 markets, supply has increased too fast for the market to keep pace. With prices suffering and profitability taking a major hit, the situation for Mediterranean producers of seabass and seabream has deteriorated significantly. Greek companies began posting financial losses in 2017 and this continued into 2018 as further increases in

Seabass and seabream production (2017)



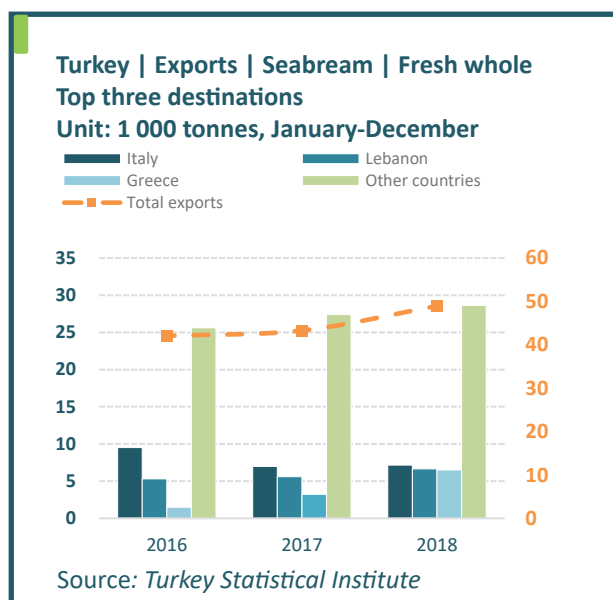
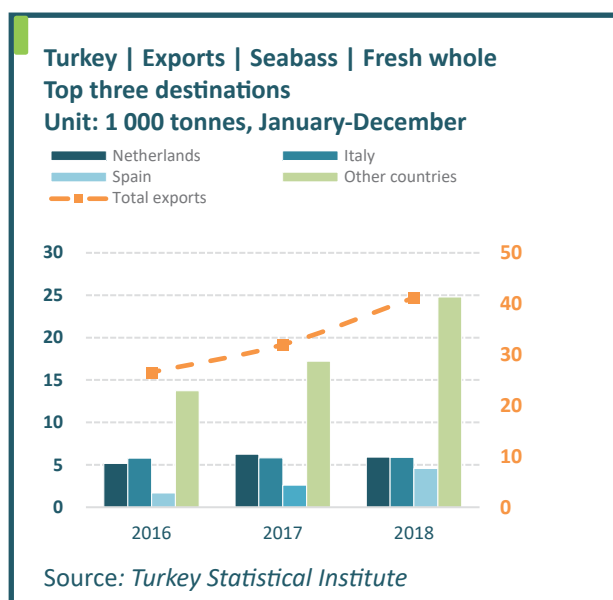
Source: FAO

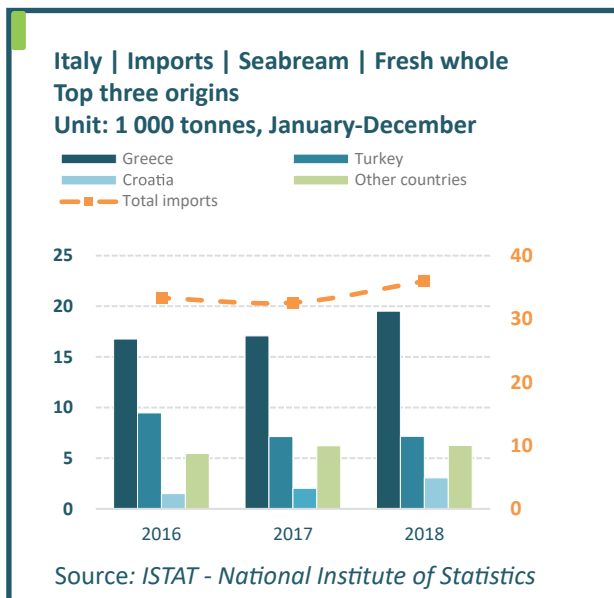
production pushed prices below the breakeven level. In Turkey, a progressively weaker lira helped stave off the worst effects of the price decline initially but this depreciation was a symptom of wider economic problems that have now begun to impact both the Turkish domestic market and the industry itself. After a long period of expansion, largely built on debt financing, financial conditions are tightening and access to credit is being restricted. At least one large aquaculture company has filed for bankruptcy as a result.



## Markets

In the large markets of Italy, Spain and France, where seabass and seabream imports are almost entirely comprised of fresh whole fish, the market in 2018 was universally characterised by oversupply and weak prices. Although demand has been relatively good in these countries due to moderate improvement in economic conditions, the market saturation point had already been reached well before the hike in production levels in 2017 and 2018. Historically there





has been limited scope for product innovation or value addition in these traditional markets and as a result there are few options for marketers looking to soften the price impact of a spike in supply. In Northern Europe, however, fillets have been increasing steadily in popularity due to increased interest in convenience products, a trend that is only slowly beginning to catch on further south. This is a welcome diversification in the seabass and seabream product range, providing an outlet for Turkish producers in particular, who have developed their processed product supply chains to a greater degree than their Greek counterparts. The recent introduction of an Aquaculture Stewardship Council (ASC) standard for seabass and seabream is a development that will allow for much needed segmentation of the market. Several aquaculture companies have already started the certification process, expected completion in late 2019.

## Trade

Full year export statistics reported by Greece, Turkey and Spain in 2018 point to seabass and seabream exporters' need to find alternative outlets for excess production volumes. Total fresh whole export volume of both species from these three major producers combined was up by around 14 percent and 6 percent for seabass and seabream respectively in 2018, compared with the previous year. Exports to markets outside the top eight were up by 45 percent for seabass and 18 percent for seabream over the same period. Export revenues were flat for both seabass and seabream despite higher volumes. Lower prices failed to stimulate additional demand in Italy, Portugal, France or the Netherlands, but Spanish importers took advantage of increased availability of cheap Turkish bass. In the Russian Federation, imports of fresh seabream were down by 1 percent year-on-year to 3 600 tonnes in 2018 while bass imports were up by 6 percent to 3 400 tonnes. Almost all of the Russian Federation supply is exported from Turkey, primarily directed to Moscow and St. Petersburg, although frozen product is now being transported to Ekaterinburg and Kaliningrad.

Out of the other secondary markets, Lebanon and the United States of America also saw imports increase in 2018, but relatively speaking the consumer base in these countries is still small compared to the large EU28 markets.

## Prices

The average unit value of fresh whole bass exports by the major producers was down by around 12 percent for 2018, at around EUR 4.40 per kg. For fresh whole seabream, the drop was limited to around 7 percent, to EUR 4.15 per kg. Euro prices for medium-sized Greek seabass and seabream observed on the Italian market in late 2018 were touching the lowest levels seen in five years. For Turkish exporters, prices in Turkish lira terms rose significantly in 2018, up by almost 20 percent for seabream and 22 percent for seabass. However, these increases should be understood in context of the broader economic situation within Turkey that saw inflation rates spike to 25 percent by late 2018.

## Outlook

Total supply of farmed seabass and seabream should stabilize in 2019, with flat or slightly negative production growth expected by most analysts. Low prices, slowing economic growth in the EU28 as a whole and a negative outlook for the largest market, Italy, combined with the poor economic climate in Turkey, have contributed to conservative business planning as companies seek to minimize further losses. The gloomy outlook also means there is limited appetite for investment into infrastructure or research and development. At the same time, however, the experience of the farmed salmon sector has shown that periods of excess supply can also represent good opportunities to increase penetration in old and new markets. Cheap and plentiful fish are easier to market to otherwise hesitant buyers, particularly when prices for many other key whitefish species are now prohibitively high.

# SALMON

## GLOBEFISH HIGHLIGHTS

*Healthy profit margins for aquaculture companies drive search for new salmon supply*

With the Chilean sector's performance improving in 2018, the global Atlantic salmon aquaculture industry is matching good profitability with consistent and controlled growth. Despite a 5 percent increase in supply in 2018, production growth continues to lag demand and stakeholders are waiting to see whether one of a range of competing supply solutions can fill the gap.

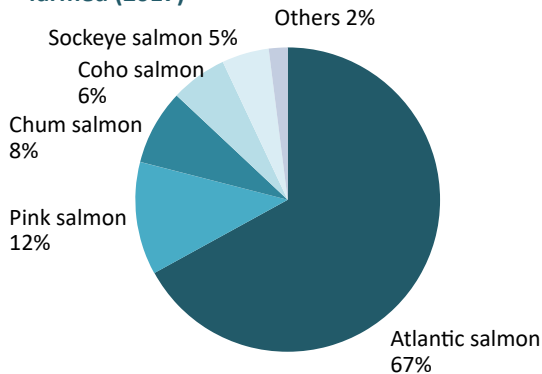
## Production

### Atlantic salmon

Global production of farmed Atlantic salmon is estimated to have increased by around 5 percent in 2018, to a total of almost 2.5 million tonnes. The bulk of the increase was accounted for by 14 percent growth in Chile, where a new regulatory regime is producing results. In Norway, the world's largest producing country, a cold winter and fish health issues translated into a moderate 5 percent increase in harvests. More severe environmental and biological challenges in Scotland saw production drop by over 20 percent. The remaining 13 percent of supply is provided by a number of smaller players, many of which are now stepping up their efforts to develop their salmon aquaculture industries in order to secure a larger share of an increasingly lucrative market.

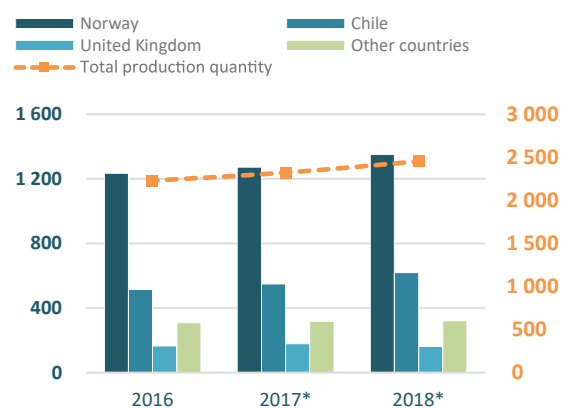
Norwegian production was slightly below projections for 2018, due primarily to the effects of a cold winter and high levels of sea lice, particularly in the south of the country. The cost of combatting sea lice, which have become resistant to many previously effective treatments, is estimated to now represent around a fifth of total production costs incurred by Norway's salmon farmers. However, in spite of this constant drain on the bottom line, current price levels are more than sufficient to ensure good profitability and confidence in the sector is high. While regulatory restrictions impose relatively stricter limits on production growth than many other regions, demand for licenses in Norway is strong and investment continues to pour into the sector.

Salmon production by species, both wild and farmed (2017)



Source: FAO

Top three global producers of farmed Atlantic salmon  
Unit: 1 000 tonnes



Source: FAO (until 2016), \*estimate

Reports in 2018 suggest that new regulations in Chile, which aim to make output growth conditional on positive environmental and biological metrics, are having a positive effect on the industry. Multiple key performance indicators, including feed conversion ratios, mortality rates and average harvest weights all improved last year and production volumes rose significantly as a result. Although some companies are unhappy with the new regulatory regime as they feel it has benefitted stakeholders unequally, stock price trends show that valuations of Chilean companies have risen significantly.

As demand for salmon continues to strengthen globally, a combination of geographic and regulatory constraints on traditional open net-pen farming has limited the ability of producers to keep pace. Atlantic salmon requires specific environmental conditions to flourish, with water temperature being a key consideration. Although open net-pens located in bays and inlets are by far the most cost-efficient means of producing the species at present, the current price level is an increasingly powerful incentive to find new supply solutions. These potential solutions include the development of Atlantic salmon aquaculture in new regions from Iceland to China, new technological approaches such as land-based and offshore farming, genetically engineered salmon and even imitation salmon derived from algae.

### Other farmed salmonids

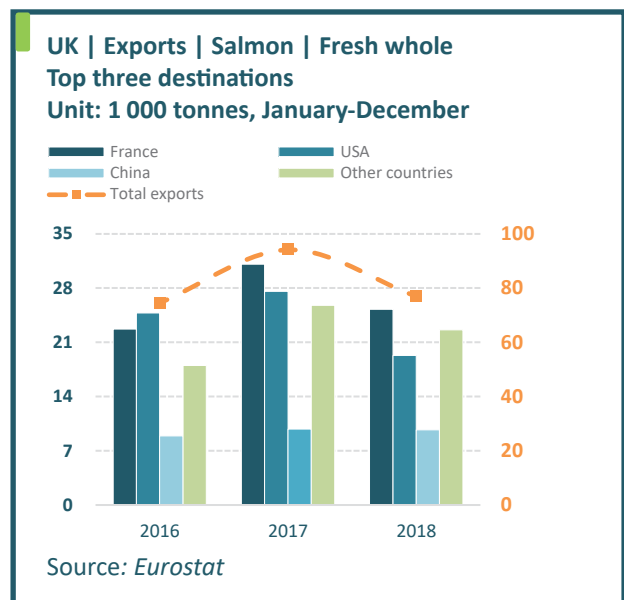
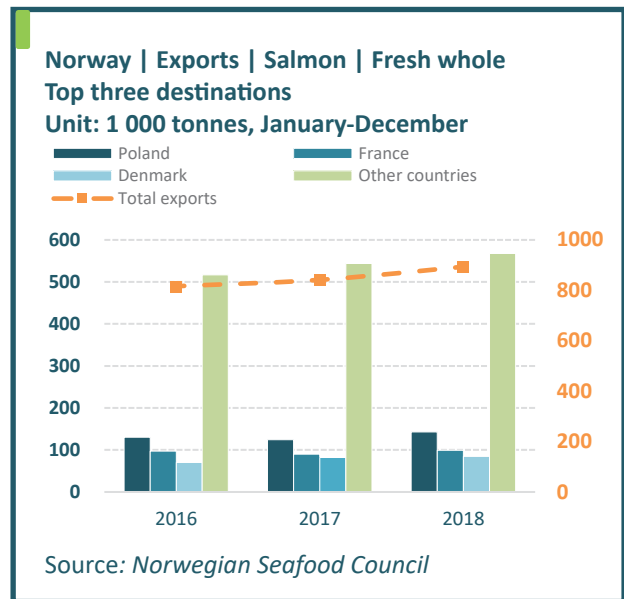
Chilean production of coho salmon is estimated to have reached some 185 000 tonnes in 2018, an increase of 34 percent. This follows on the back of a significant increase in 2017 and underlines the potential that the Chilean industry sees in low-cost coho salmon, despite Japan being the only large market at present. Chilean harvests of farmed trout reached 79 000 tonnes in 2018, an increase of 4 percent from 2017. In Norway, farmed trout harvests increased by 15 percent last year, to an estimated 77 000 tonnes, after 2 years of tight supply.

### Wild salmon

Wild salmon harvests in Alaska and the Russian Far East combined totalled around 921 000 tonnes. The Russian Kamchatka Peninsula fishery accounted for 70 percent of this total, with a record pink salmon harvest exceeding half a million tonnes. In Alaska, catches were below forecasts at around 275 000 tonnes. Sockeye salmon made up the largest proportion of this total with a 43 percent share.

### Markets

Global demand for salmon shows no signs of weakening, and consumer resistance to high prices has largely been temporary. Salmon's popularity continues to grow across virtually all regions of the world, and suppliers have a wide choice of export





markets. The United States of America, the EU28 and Japan remain the most important markets in terms of sales, and underlying demand in all three has been solid. China, Brazil and the Russian Federation are three countries whose large populations translate into enormous potential. While the latter two have struggled with economic difficulties and have only recently begun to recover, demand for salmon in China has been following a strong upward trajectory. Chile stands out as the major beneficiary of demand growth in these key emerging markets, maintaining a complete monopoly of the Brazilian market and securing the role of top supplier to the Russian Federation following the ban on imports from Western nations. In China, supplier competition is intensifying after Norway made significant market share gains in 2018 following concerted efforts to establish themselves in this crucial market. Norway's access to the Chinese market had previously been limited due to political tensions between the two countries but these restrictions are now easing. However, Norwegian salmon is still subject to a 10 percent tariff while their Chilean counterparts pay no duty thanks to a customs agreement.

Chilean marketers have also been working on improving their brand image in the major US market, where they have been at a significant price disadvantage relative to their competitors. High antibiotic use at Chilean farms has inflicted some damage on the reputation of Chilean salmon with US consumers and retailers, and this has motivated efforts to reduce dependence on antibiotics through regulatory reform. The industry is looking to place greater emphasis on the Patagonian origin of Chilean fish in order to associate their product with a world-famous region known for its natural beauty. Some salmonid producers have also begun to open stores in different parts of Chile, to tap into domestic demand for local product.

Genetically engineered Atlantic salmon can now be raised and sold in the United States of America after the US Food and Drug Administration (FDA) lifted import restrictions. AquaBounty, the company to whom these restrictions applied, can now import eggs from their hatchery in Canada that contain a genetic modification promoting more rapid growth than is otherwise possible. The FDA determined that the fish is safe to eat and that there is no negative impact on the welfare of the fish as early as 2015, but it is only the latest ruling that allows for the raising of the genetically engineered fish within US borders.

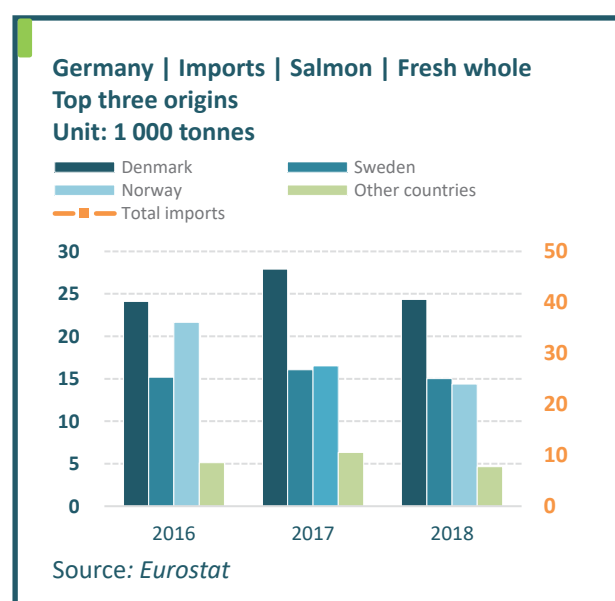
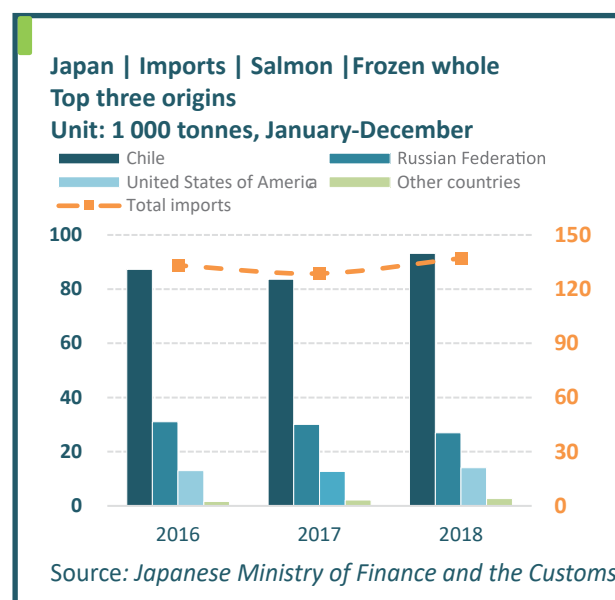
## Trade

Rising prices and strong demand growth, particularly in the core EU28 market, has seen Norwegian salmon export revenues follow a consistent upward trend over the last few years and this continued into 2018. According to figures released by the Norwegian Seafood Council (NSC), Norway exported 1.1 million tonnes of salmon worth NOK 67.8 billion (USD 8.34 billion) last year, an increase of some

NOK 3.2 billion (USD 393 million). Although Norway is making absolute gains in Asia and the United States of America, in relative terms it is becoming more dependent on the EU28 market, helped by favourable currency trends. Exports to the EU28 accounted for 73 percent of Norway's total export value in 2018, up 2 percent from the year before.

The NSC reported a 16 percent increase in the volume of Norwegian trout exports in 2018, to 46 400 tonnes. Total value dropped by 5 percent, to NOK 3 billion (USD 367 million). Belarus, the United States of America and Japan are the top three export markets for Norwegian trout, filling the gap left by the imposition of the Russian Federation import ban in 2014.

Exports of Chilean salmonids (Atlantic salmon, coho salmon and rainbow trout) grew by 20.8 percent during 2018 compared with 2017, to 631 700 tonnes, while revenue increased by 11.1 percent to USD 5.17 billion.



The United States of America remains the most important market for Chilean salmon with 169 700 tonnes (+21.2 percent) worth USD 1.8 billion (+12.3 percent). This represents around 35 percent of the total volume of US imports of salmon in 2018, which were worth a record USD 4.1 billion.

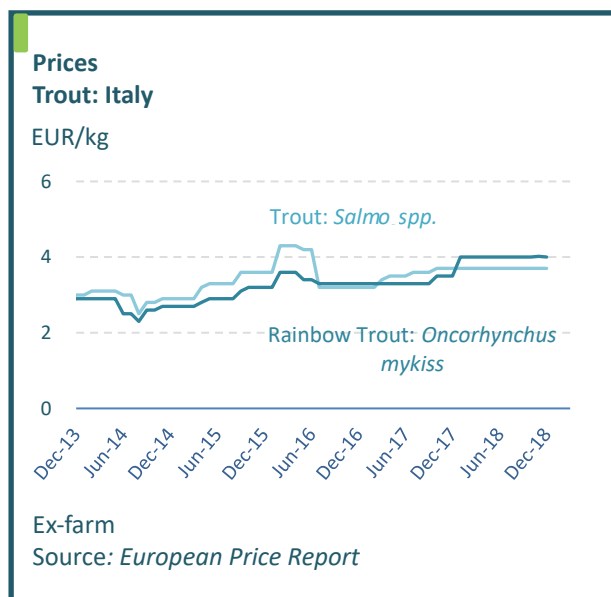
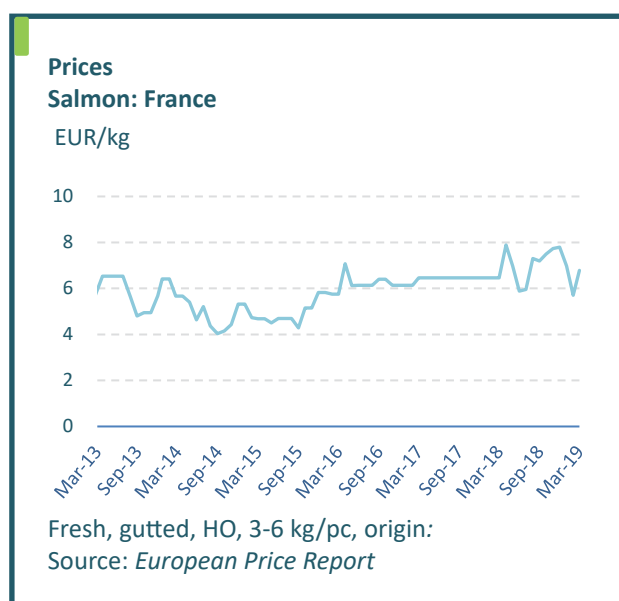
Japan is Chile's second largest export market, importing 143 000 tonnes (+ 18.5 percent) worth USD 1.07 billion (+5.3 percent) in 2018. Japanese imports from Chile are primarily of coho salmon, but Japanese imports of Atlantic salmon from Norway and wild Pacific salmon from the Russian Federation and the United States of America also rose in 2018.

China stood out amongst the larger salmon markets in 2018, importing 300 000 tonnes of salmon worth USD 1.35 billion, an increase in value of 43 percent compared with 2017. The larger proportion of this was comprised of wild salmon imports from the Russian Federation following its record harvest, while imports of farmed Atlantic salmon from Chile and Norway also increased.

Exports of farmed Atlantic salmon from the United Kingdom fell significantly in 2018, primarily due to a drop in production in Scotland. France remains the top export market for the United Kingdom, and around half of UK salmon exports are destined for the EU28. The ongoing uncertainty regarding the terms of the imminent departure of the United Kingdom from the EU28 is of major concern to the country's salmon industry, which would be subject to the EU28 default tariffs of 2 percent for fresh salmon and 13 percent for smoked salmon in the event of a no-deal Brexit.

## Prices

With continued demand growth and tight global supply, the price of Atlantic salmon remained high in 2018. According to the Fish Pool Index, the export price of fresh whole Atlantic salmon from Norway showed no change in krone terms in 2018, averaging



out at NOK 60.70 (USD 7.46) per kg. Regular intra-year swings from the NOK 40s to almost NOK 80 per kg have been taking place on a seasonal basis since 2016, but the NOK 60 per kg level is generally reflective of the new price plateau for Norwegian salmon. In Chile, average prices for fresh fillets to the United States of America fell slightly by 5.4 percent in 2018, from USD 10.96 per kg to USD 10.37 per kg. Meanwhile, lower than expected harvests saw ex-vessel prices for wild salmon in Alaska rise significantly for all species.

## Outlook

Global production of farmed Atlantic salmon is forecast to increase by around 4–5 percent in 2019, keeping pace with aggregate demand growth and maintaining a tight market balance that is expected to support prices at current levels. Growth in Chile is expected to slow and Norway is likely to recover some market share in multiple markets with a 4–5 percent increase in harvests, although warmer sea temperatures that last year may add to sea lice problems. UK production is set to bounce back strongly, but the major focus of the industry will be the outcome of Brexit negotiations. The terms under which the United Kingdom eventually exits the EU28 will potentially have tariff implications for salmon exporters, as well as misunderstandings and associated delays caused by new and unfamiliar customs procedures. Elsewhere, modest but positive economic growth prospects in all major markets, including continued recovery in the Russian Federation and Brazil, will support further strengthening of aggregate global demand. The near-universal profitability of producers worldwide will continue to incentivize efforts to find alternative means of supply.

# SMALL PELAGICS

## GLOBEFISH HIGHLIGHTS

### *Tighter supplies and rising prices*

The overall supplies of small pelagics will be around 11 percent lower in 2019 than in 2018. Prices for most species are expected to rise. For mackerel, prices will continue to rise from a high level, while for herring, the bottom may have been reached. Prices may go up a bit, but this is still uncertain. The outlook is not bright. Blue whiting prices will most likely go up. Capelin will be in extremely short supply, as quotas are set at zero in the Barents Sea.

At the North Atlantic Seafood Forum in Bergen in March, Kontali presented forecasts for pelagic landings in 2019. They expect total pelagic landings to fall by 11 percent compared to 2018, to 20.5 million tonnes. In 2018 landings were the highest since 2011 and anchovy landings particularly went up by 47 percent. Anchovy landings in South America are expected to be somewhat weaker in 2019 than in 2018. Landings of other major species (herring, mackerel, capelin, and blue whiting) are all expected to be weaker this year.

There will be no capelin fishing in the Barents Sea this year. The Norwegian sales organization Sildelaget announced that the 2019 capelin quota in the Barents Sea, set in an agreement between Norway and the Russian Federation, would be set at zero. In 2018, the quota was set at 205 000 tonnes. Iceland has not been able to set a capelin quota so far.

As much as 72 percent of the capelin caught in the Barents Sea in 2018 went for human consumption. Capelin caught in Icelandic waters went mainly for reduction (fish oil and fish meal) and only 11 percent went for human consumption.

Lower catches of North Atlantic pelagic species has made it more difficult to secure raw material for

fishmeal and fish oil production, and raw material prices have gone up. During 2018, blue whiting prices increased significantly, but then fell back to previous levels at the end of the year. The blue whiting quota was reduced from 421 100 tonnes in 2018 to 356 251 tonnes in 2019. In 2019 there will be a reduced supply of blue whiting, and prices are consequently expected to go up again.

Other small pelagic species like sand eel are also not doing so well. The Norwegian sand eel quota was reduced from 70 000 tonnes in 2018 to 55 000 tonnes in 2019.

The United Kingdom stands to increase its landings of small pelagics after Brexit, according to PriceWaterhouse Coopers (PWC), who commented on this during the North Atlantic Seafood Forum. UK landings of pelagics could increase by as much as 600 000 tonnes, consisting mainly of herring and mackerel. This does not help the British consumer, because these are not fish species the British consumer eats. In the UK market, it is about fish and chips, i.e. cod and haddock. The consequence of this could be an upsurge in trade across the channel, or in other directions. The United Kingdom access to EU27 markets is conditional on EU27 access to UK fishing grounds. Whether that is likely is still unknown, as negotiations between the European Union (Member Organization) and the United Kingdom are still ongoing.

### Mackerel

The Norwegian mackerel quota for 2019 decreased by 19.4 percent, to 152 811 tonnes. The lower mackerel quotas will probably push prices further up from the record levels in 2018. The lower supplies pushed first-hand prices up from an average of NOK 9.57 per kg in 2017 to NOK 12.85 per kg in 2018. This year, it is expected that prices will continue to rise.

Africa has for long been an interesting market for small pelagics, and for Japan, Africa is now a major market for its mackerel exports. As much as 50 percent of Japan's 2018 mackerel exports went to Africa, mainly to Nigeria (55 500 tonnes), Egypt (45 700 tonnes) and Ghana (25 700 tonnes). East and South East Asia accounted for about 40 percent of Japan's mackerel.

The main reason for this increase in exports to Africa may be that European fishers are focusing on the larger and more expensive mackerel, which mainly goes to Japan and other Asian markets. The Japanese mackerel is smaller and cheaper than the European mackerel. Japan itself imports a lot of

mackerel and about 90 percent of these imports come from Norway.

## Herring

The Norwegian fishery for Atlanto-Scandic herring was off to a relatively good start this past January, with reasonably good catches in the north of the country. But landings declined in February, as the fish was standing deep in the sea. Unfavourable weather conditions worsen the situation.

Herring prices have been falling since May 2018, and in March 2019 reached NOK 4.02 per kg, compared to NOK 4.61 per kg in March 2018. Observers believe the bottom has been reached, but the experts are not expecting a quick nor strong recovery. The reason for that is that the quota for Norwegian spring-spawning (NSS) herring was raised from 304 500 tonnes in 2018 to 429 650 tonnes in 2019. The North Sea herring quota decreased from 179 391 tonnes in 2018 to 114 677 tonnes in 2019. Total landings of herring in 2019 are expected to be about 1.2–1.3 million tonnes, a slight reduction compared to 2018, according to Kontali. Cold storage holdings are higher this year, so this might help keep prices fairly stable at a low level.

## Anchovy/Sardines/Blue Whiting

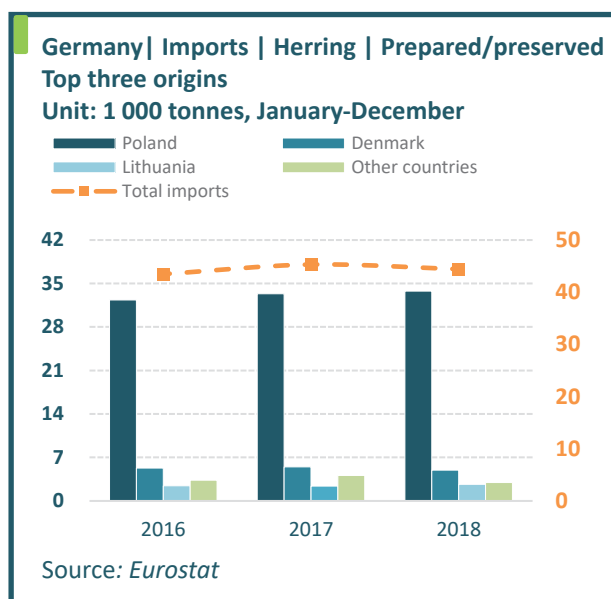
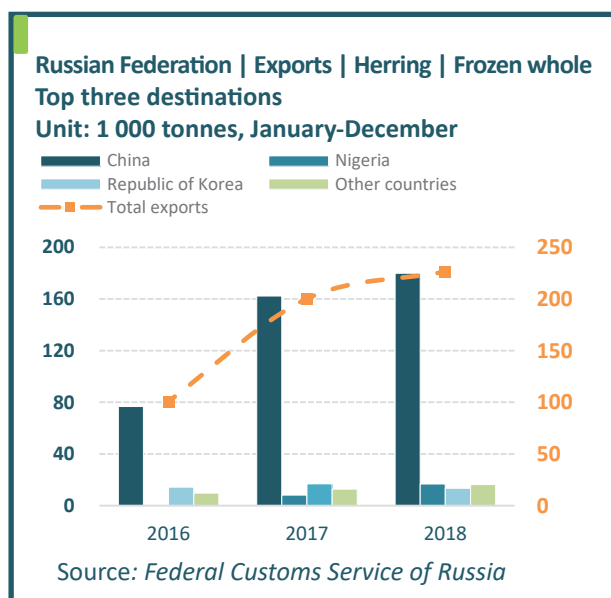
The sardine and anchovy season in Peru opened on the 1 March, but no catches were registered in the first week. The quota is set at 216 000 tonnes, but it may be adjusted later, after a technical evaluation.

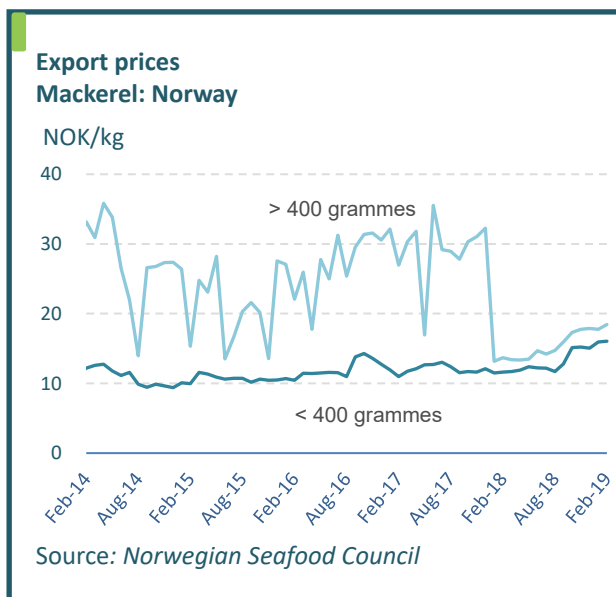
In India, the oil sardine sector is seeing the combined effect of El Niño and global warming. Indian catches of oil sardines went to an all-time low in 2016, when 46 000 tonnes were landed. It recovered briefly in 2017, but it is now expected that another El Niño will affect catches negatively in 2019.

Blue whiting catches in the North Atlantic thrived in March. In spite of unfavourable weather hampering the fishing in the beginning of the month, catches increased sharply in the middle of March, and on 18 March, the single best day of the season was reported, with total landings of 26 360 tonnes. Most of this fish was landed in Norway, with some volume going to Denmark.

## Trade

Norwegian exports of frozen whole mackerel in 2018 dropped by 26.5 percent, to 238 200 tonnes in 2018. Export prices went up significantly though, so the decline by value was only 9.7 percent to NOK 3.5 billion. The largest importer of Norwegian mackerel has been China for several years, and this is still so, but exports to China decreased from 71 100 tonnes in 2017 to 41 400 tonnes in 2018 (-41.8 percent). The Republic of Korea was the second largest market for whole frozen mackerel from Norway in 2018 (25 600

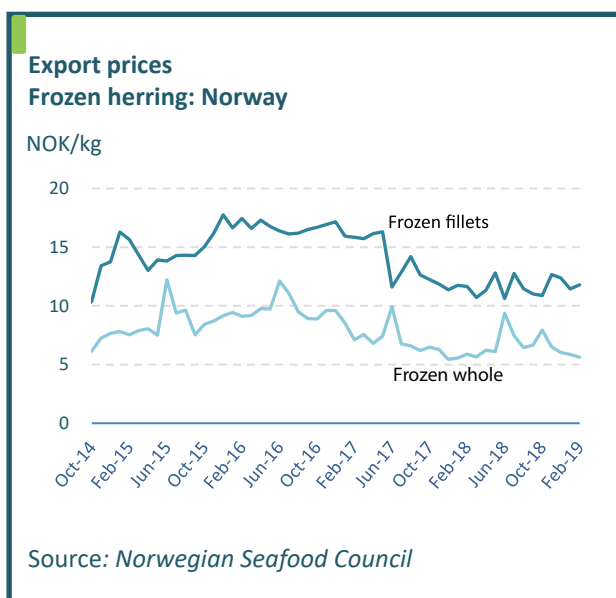




African imports of frozen mackerel fell in 2018 to 110 000 tonnes, from 200 000 tonnes in 2017. The EU28 was the main supplier but it experienced reduced exports to Africa, from 150 000 tonnes to just over 50 000 tonnes (-67 percent). Norway maintained its exports of frozen mackerel to Africa at 50 000 tonnes, even though Norwegian export prices were higher than EU28 export prices.

Norwegian herring exports also decreased somewhat in 2018 compared to 2017, both in volume (-7.5 percent to 131 200 tonnes) and in value (-8.5 percent to NOK 885 million). The main markets were in North Africa and Eastern Europe, with Egypt as the largest importer, accounting for 18.4 percent of total exports, followed by Ukraine (18 percent) and Lithuania (16.8 percent).

There was a strong (+13.1 percent) increase in the Russian Federation's exports of whole frozen herring in 2018. The most notable change was a 100 percent increase in exports to Nigeria, although the total volume was only 16 800 tonnes in 2018. The dominant market was again China, which accounted for 79.4 percent of the total Russian Federation exports of frozen herring, and imported almost 180 000 tonnes during the review period.



Supplies of herring fillets to the EU28 market rose by 6 percent to over 120 000 tonnes in 2018. Norway was the main supplier, with 80 percent of the volume. Norway was also the main supplier of round frozen herring to the EU28, accounting for over 51 000 tonnes out of the total 76 000 tonnes. Faroese shipments of frozen herring to the EU28 dropped by 68 percent, but the Faroe Islands supplied as much as 98 percent of the total frozen herring imports into the Russian Federation.

## Outlook

Overall supplies of small pelagics will be down in 2019, but there are great disparities from species to species. Consequently, there will be variations in price developments also.

Mackerel will be in short supply and mackerel prices are expected to continue to rise in all markets. Herring will be more abundant. Herring prices have been very low, but some observers hope that they will start to increase soon. That is still uncertain as cold storage holdings are high and the outlook for catches is reasonably good.

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Chinese exports of whole frozen mackerel weakened by 10.6 percent in 2018 compared to 2017, to 287 900 tonnes. The largest decline was registered in exports to Indonesia, which fell by 27.9 percent to 56 400 tonnes.

There was a reduction in Asia's imports of whole round frozen mackerel in 2018 compared to 2017. Asian imports amounted to 250 000 tonnes in 2017, while in 2018 they dropped to just over 200 000 tonnes. Four countries (China, Japan, Republic of Korea and Viet Nam) accounted for 84 percent of the total import volume, but all except Viet Nam imported less in 2018 than in 2017.

Russian Federation imports of frozen mackerel fell by 37 percent to 60 000 tonnes in 2018. The Faroe Islands are still the main supplier, accounting for about two thirds of the total.

# FISHMEAL & FISH OIL

## GLOBEFISH HIGHLIGHTS

### Promising fishing season in 2019

The total allowable catch (TAC) allocated for two fishing seasons in Peru totalled 5.42 million tonnes in 2018. As the biggest producer of fishmeal and fish oil products, more than 1 million tonnes of meal produce was exported from Peru last year. The market has been quite positive so far.

### Production

Global production of fishmeal and fish oil in 2018 increased by over 90 percent compared to 2017. This growth was mainly driven by Peru's soaring output that rose from 735 000 tonnes in 2017 to around 141 000 tonnes in 2018.

Peruvian first fishing season of anchovy started on 12 April 2018 in the northern-central area, with a total allowable catch (TAC) set at 3.32 million tonnes, the highest since 2011. This quota was almost fulfilled by early July. According to the Instituto del Mar del Perú (IMARPE), about 10.9 million tonnes of anchovy were recorded in the fishing area before the start of the fishing season, exceeding the average of the past 25 years by some 35 percent.

In November 2018, the Peruvian government set the TAC for the second anchovy fishing season in the north and central region at 2.1 million tonnes. More than 98 percent of the allocated quota was fulfilled. A combined quota for the two seasons of 2018 thus totalled 5.42 million tonnes. This also confirms a normalization of climate conditions and favourable anchovy biomass.

Apart from Peru, Chile and the United States of America also reported double-digit increase in fishmeal production to 371 800 and 342 500 tonnes respectively, both contributing to the high yield of 2018.

The TAC allocated in the past eight years, only in the central-north region in Peru (Unit: Million tonnes)

2011	First season	3.68
	Second season	2.50
	Total	6.18
2012	First season	2.75
	Second season	0.81
	Total	3.56
2013	First season	2.05
	Second season	2.30
	Total	4.35
2014	First season	2.53
	Second season	zero
	Total	2.53
2015	First season	2.58
	Second season	1.10
	Total	3.68
2016	First season	1.80
	Second season	2.00
	Total	3.80
2017	First season	2.80
	Second season	1.49
	Total	4.29
2018	First season	3.32
	Second season	2.10
	Total	5.42

Only refers to the central-north region

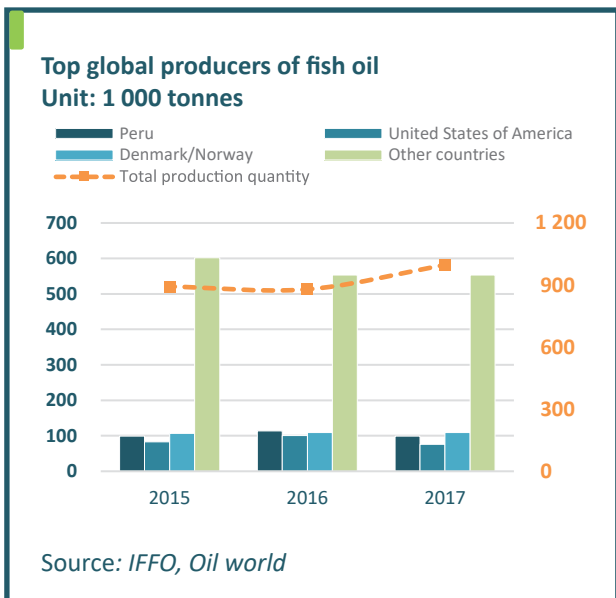
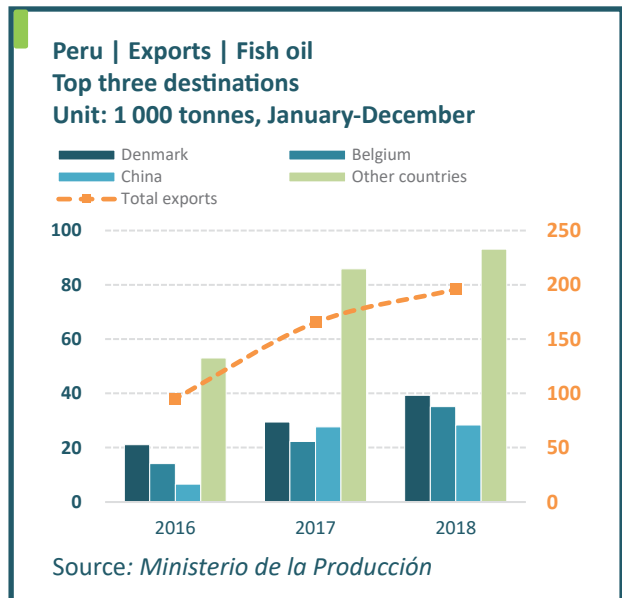
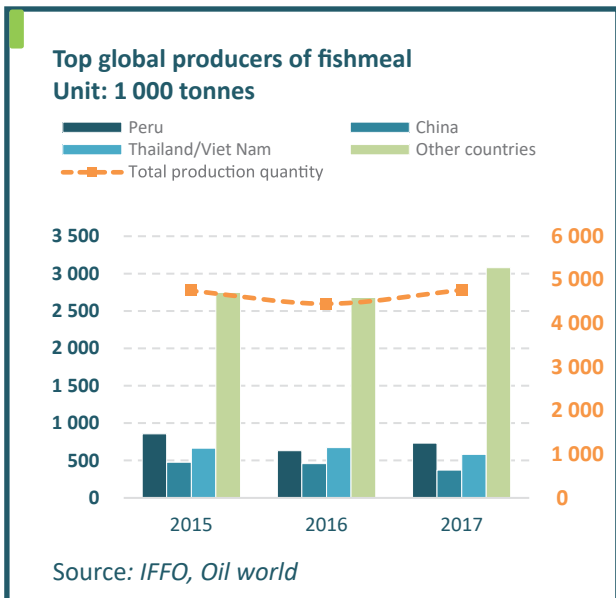
In regards to fish oil, Peru more than doubled its output of fish oil to 227 000 tonnes in 2018, from approximately 98 000 tonnes in 2017.

Currently at the global scale, it is estimated that around 70 percent of fishmeal and fish oil products are reduced from wild captured whole fish, with the rest from by-products of aquaculture and wild capture. The proportion from by-products is likely to increase as a result of its high availability.

### Exports

Peru is the main producer and exporter of fishmeal and fish oil, by a far margin over other producing countries. In 2018, Peru exported 1.03 million tonnes of fishmeal, about 72 percent more than in 2017. Nearly 80 percent of the Peruvian exports were destined for China. Japan and Viet Nam absorbed 5 percent and 4 percent, respectively.

Chile bounced back to the second largest exporter of fishmeal with total exports reaching 227 700



tonnes in 2018. This was mainly due to the abundant biomass of anchovy in the South-Eastern Pacific. Denmark, ranked after Peru just in 2017, fell back to third place with most of its products shipped within Europe, to countries with marine fish farming, namely Norway (salmon), Greece, Italy and Turkey (seabass and seabream).

Peruvian exports of fish oil reached 196 000 tonnes in 2018, some 18.6 percent more than in the same period in 2017. Denmark, Belgium and China were the main destinations for these exports.

## Markets

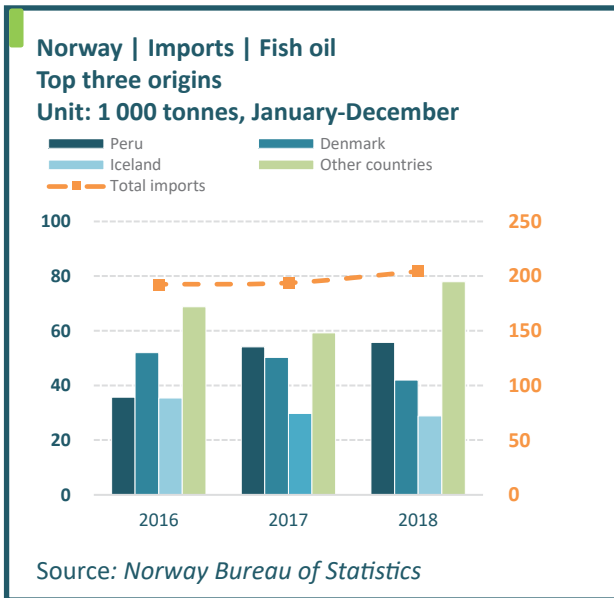
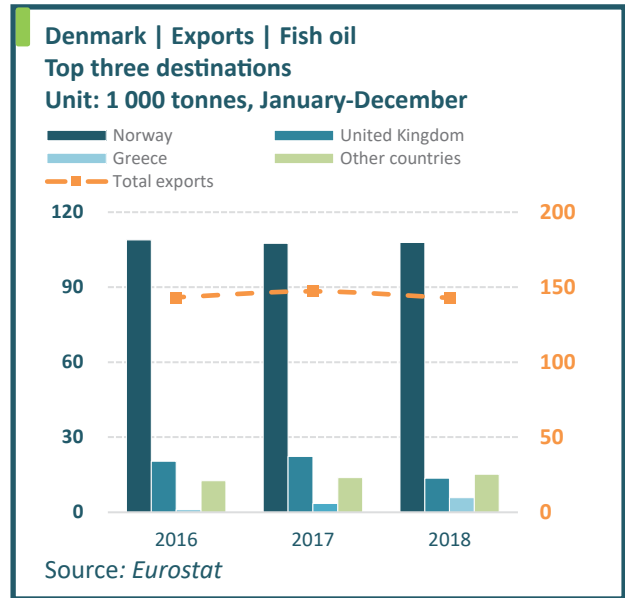
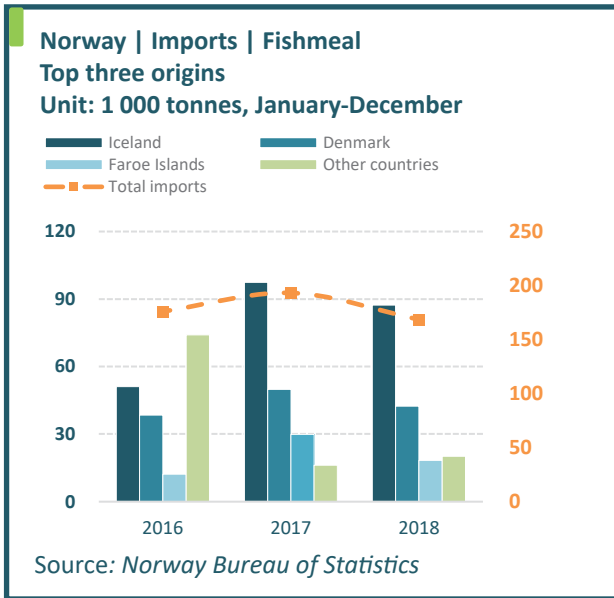
China has consistently been the leading consumption market for fishmeal and fish oil, primarily because of its massive aquaculture industry. In 2018, Chinese imports of fishmeal totalled 1.47 million tonnes, about 7 percent less when compared to 2017, but still more than the 10-year average.



Various incidents in China confounded the demand and supply of fishmeal. First, the environmental protection in China is becoming the priority over any business activities and as a result, many farming cages have been removed from open waters, which will impact Chinese aquaculture to a certain extent. Second, the African Swine Fever (ASF) in China, which has more than 100 reported outbreaks since August 2018, leading to massive deaths, is likely to have a negative effect on fishmeal consumption in the hog-farming sector.

The scale of pig industry has been shrinking and that will probably cause a shift in consumers' intake of animal protein to more fish and fishery products, which will in turn increase consumption of fishmeal and fish oil in aquaculture.

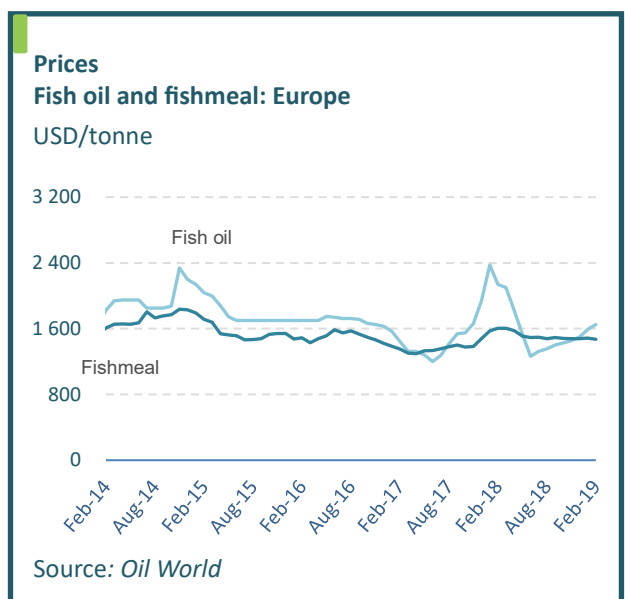
Soft downward price trends of fishmeal gave rise to Chinese fishmeal stocks in the main ports and until January 2019 approximately 180 000 tonnes of fishmeal were stored in Chinese coastal areas.



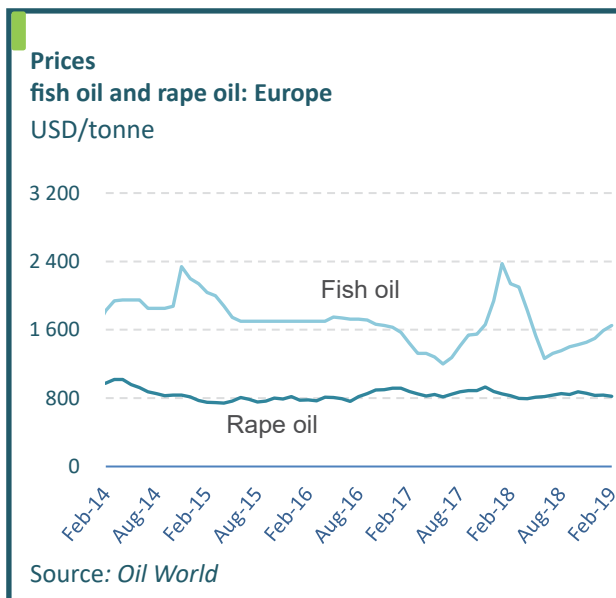
Norwegian fishmeal imports decreased by 13 percent from 193 400 tonnes in 2017 to 168 300 tonnes in 2018, following China and Japan, ranking as the third largest importers of fishmeal. Most of their imports were directed to the aquaculture sector.

## Prices

After the beginning of the first fishing season in Peru in 2018, fishmeal prices began to normalize with a soft downward trend, fundamentally due to plenty global supply grounded on Peruvian bumper harvest. In addition, the biggest market, China, has held fishmeal stocks at a high point since mid-2018, which has prevented Chinese buyers from purchasing more. Moreover, ASF occurrences in China also caused a stir for less demand from the hog-farming sector and impeded Chinese fishmeal imports from outside.







## Outlook

Peru just initiated the evaluation of anchovy biomass for the first fishing season in 2019 and the result is yet to be released. However, the positive trend of fishmeal and fish oil supply registered in 2018 is likely to continue. With no additional adverse factors foreseen affecting the demand, the consequence of ASF outbreaks in China may have a negative impact, but to which extent still awaits the market to testify. In the short term, global demand and supply are in good balance with prices expected to stabilize at current level.



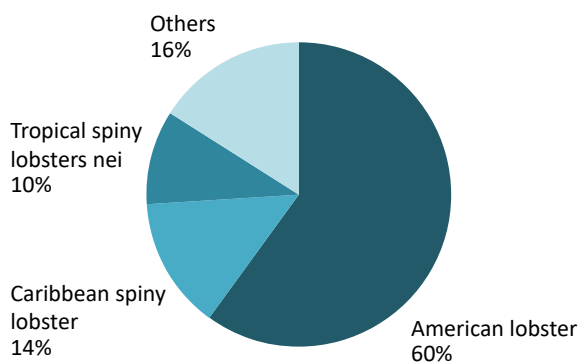
# LOBSTER

## GLOBEFISH HIGHLIGHTS

### Chinese demand still growing but supplies falling behind

While there was a slight increase in supplies of North American and tropical lobsters in 2018, the increase is apparently not enough to keep up with demand. Consequently, prices continue to rise.

Lobster production (2017)



Source: FAO

## Supply

Between 2007 and 2016, landings of *Homarus* lobsters grew steadily, from 84 000 tonnes in 2007 to 164 200 tonnes in 2016. In 2017 there was a breaking point and landings declined from over 164 000 tonnes in 2016 to about 150 000 tonnes in 2017, a level which was confirmed in 2018.

Landings in Maine, which normally account for 80 percent of US lobster landings, increased by 3 600 metric tonnes to 54 400 tonnes in 2018. The value of lobster landings in Maine amounted to USD 484 million, the third highest value it has ever reached.

World imports/exports of lobster (January-December)

	2016	2017	2018
(1 000 tonnes)			
<b>Imports</b>			
United States of America	61.2	58.8	56.7
China	22.0	27.5	41.5
Canada	32.7	25.4	29.4
Other countries	63.5	76.7	59.2
<b>Total</b>	<b>179.5</b>	<b>188.4</b>	<b>186.9</b>
<b>Exports</b>			
Canada	83.9	84.4	85.5
United States of America	58.6	50.5	53.4
Australia	8.5	8.9	8.9
Other countries	44.0	42.7	38.1
<b>Total</b>	<b>194.9</b>	<b>186.6</b>	<b>185.9</b>

Source: Trade Data Monitor, estimates

US imports/exports of lobster (January-December)

	2016	2017	2018
(1 000 tonnes)			
<b>Imports</b>			
Canada	53.2	50.8	49.4
Brazil	0.9	1.2	1.4
Bahamas	1.2	1.8	1.4
Other countries	6.0	5.1	4.6
<b>Total</b>	<b>61.2</b>	<b>58.8</b>	<b>56.7</b>
<b>Exports</b>			
Canada	32.3	25.1	29.0
China	6.4	8.1	9.1
Hong Kong SAR	2.5	2.7	3.2
Other countries	17.4	14.6	12.1
<b>Total</b>	<b>58.6</b>	<b>50.5</b>	<b>53.4</b>

Source: US Census Bureau

Canadian landings of lobster were going up relatively steadily from 2010 until 2016, but now seem to have stagnated at just over 90 000 tonnes. In 2016 Canadian landings amounted to 92 600 tonnes, and in 2017 just a few tonnes less. In 2018, landings are estimated at almost 90 000 tonnes.

The Canadians would like to increase their lobster harvest. The Department of Fisheries and Oceans announced in January that it is investing USD 1.3 million in an artificial reef project that aims to increase lobster harvest in Canadian waters. The project will run for four years and involves placing about 40 000 concrete block units on the ocean floor to provide shelter for lobster and other species.

## OTHER NEWS

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## International trade

Chinese demand for North American *Homarus* lobster and rock lobster from the Pacific has been growing for some time and is likely to continue this way. Chinese demand for Western Australia rock lobster is also strong but supplies are limited and consequently prices are high.

Global trade of lobster weakened in 2018 compared to 2016 and 2017. The biggest exporter was Canada, reaching 85 500 tonnes, followed by the United States of America with 53 400 tonnes. Global imports declined by 11.5 percent in 2018 compared to 2017. The largest importer, the United States of America, experienced a slight decrease (-3.6 percent), while China and Canada imported more lobster.

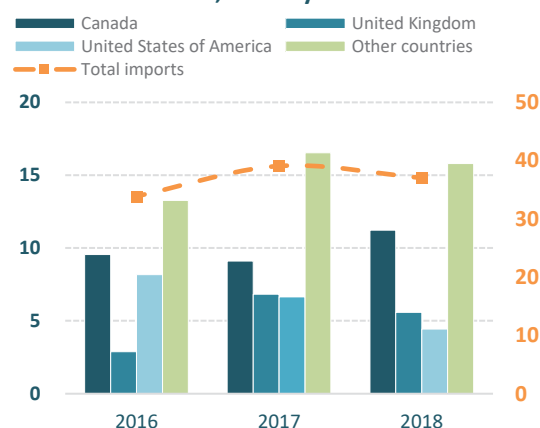
Most lobster imports into the United States of America originated from Canada, as has been the case for years. In 2018, about 87.7 percent of total US lobster imports came from Canada. The trade is also strong the other way, as Canada is the main market for US lobster. In 2018, Canada accounted for 54.3 percent of US lobster exports, followed by China mainland (17 percent) and Hong Kong SAR (6.1 percent).

Canada is the dominant supplier to China. In 2018, Canada exported 12 100 tonnes of lobster to China,

### EU28 | Imports | Lobster

#### Top three origins

Unit: 1 000 tonnes, January-December

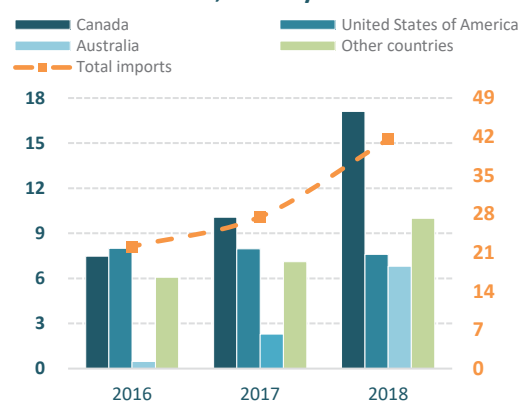


Source: Eurostat

### China | Imports | Lobster

#### Top three origins

Unit: 1 000 tonnes, January-December

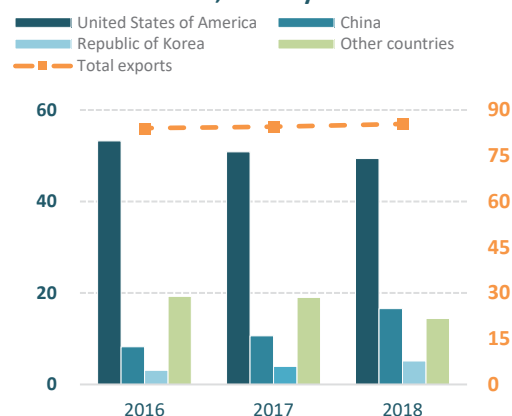


Source: China Customs, estimates

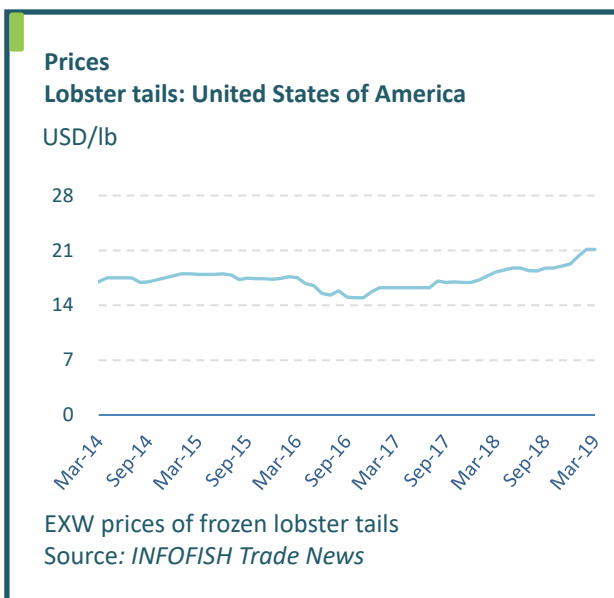
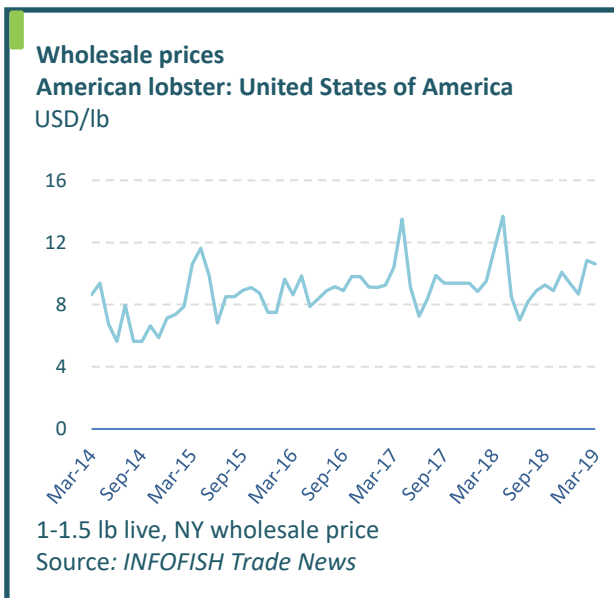
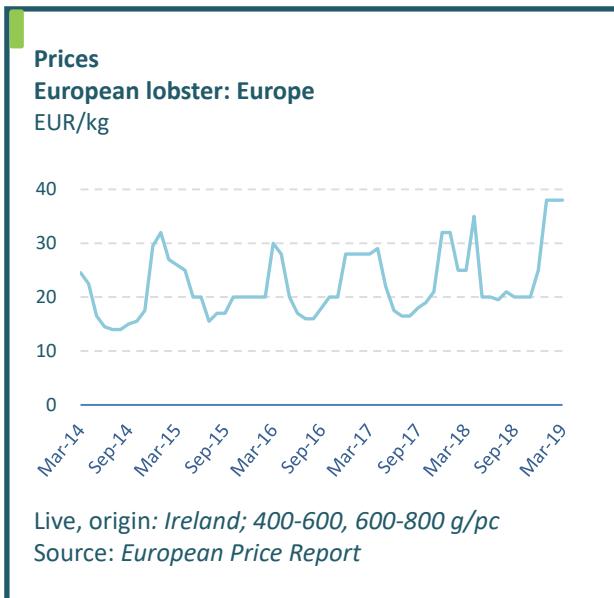
### Canada | Exports | Lobster

#### Top three destinations

Unit: 1 000 tonnes, January-December



Source: Canada Statistics



representing 40 percent of the total lobster imports to China. Canadian lobster exports to China thus doubled. While the 25 percent Chinese tariff on US products was a major driver behind this, growing demand also fostered the increase in shipments from Canada. The value of Canadian exports of lobster to China hiked from USD 27 million in 2011 to USD 230 million in 2018.

The United States of America was the second main supplier to China with 6 800 tonnes (23 percent of the total) and Australia was the third supplier with 5 100 tonnes (17 percent).

## Prices

Lobster prices have been going up, mainly because of limited supplies and growing demand, especially in China. Shore prices in Canada were reported at CAD 9.00 (USD 6.78) per lb, which was an unprecedented price. Rock lobster prices have also been high, up to USD 70 per kg for live lobster going to the Chinese market.

Lobster fishers in Maine have also reported higher prices in 2018, in spite of the higher volumes landed. Fishers were paid between USD 3.92 and USD 4.05 per lb.

## Outlook

It is fairly safe to assume that demand for lobster will continue to increase. In China, demand is continuing to grow, even though the economy is slowing down. Elsewhere, demand is also good. For example, in the Republic of Korea imports were up by almost 23 percent in 2018, reaching 5 900 tonnes. Other countries that imported more lobster in 2018 compared to 2017 included the United Kingdom (+12.5 percent), Malaysia (+37.4 percent) and the Philippines (+150.2 percent).

Supplies have been increasing slightly from 2007 until 2016. In 2017 and 2018, total supplies actually declined by as much as 8–9 percent. At the same time, demand has been growing. If this trend continues, prices will continue to rise for some time.

# BIVALVES

## GLOBEFISH HIGHLIGHTS

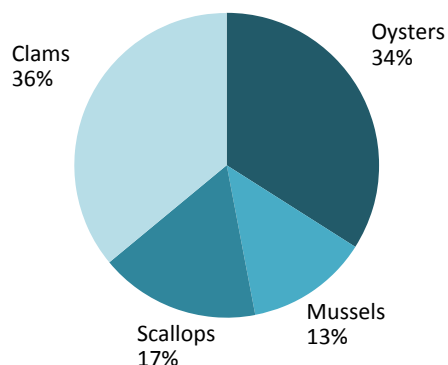
### *New consumers of bivalves*

Bivalves are in huge demand worldwide, with new consumers starting to appreciate this seafood. The production of bivalves is growing, applying new technology, such as offshore production areas, in order to meet the ever-growing demand. Different from other seafood, bivalves are mainly going to the domestic market, and trade is rather limited. This pattern might change soon, with new value-added products entering the scene. Prices are high and rising in most markets.

### Mussels

World mussel production continues to grow. Current estimates place the 2018 production at 2.2 million tonnes, more than double the amount produced ten years ago. Main producers were China, Chile, Spain,

**Bivalve production by selected species, both wild and farmed (2017)**



Source: FAO

Thailand and New Zealand. Buying interest for this inexpensive species is strong and growing, opening up new consumers for the product. At present the US market is mainly supplied by imports, at about 35 000 tonnes per year, provided mainly by Canada, Chile and New Zealand. One company is planning to produce some 9 000 tonnes already in 2020, which would be six times the present mussel production in the United States of America.

Chile is one of the major mussel producers in the world, mainly focused on export markets. Mussel is the second major aquaculture product from Chile, behind salmon. Two massive producers merged in early 2019, creating a company able to produce 50 000 tonnes per year. This consolidation is very much in line with the trend experienced by the Chilean salmon industry in the recent years. This bigger company will be more efficient and able to promote Chilean mussels in emerging markets.

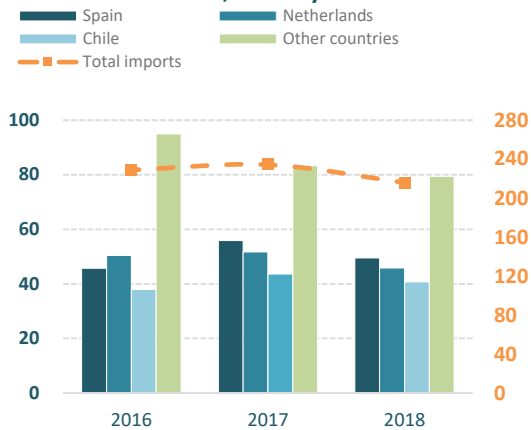
Total world trade in mussels experienced a decline in 2018. Exports dropped from 373 000 tonnes in 2017 to 360 000 tonnes in 2018. Main exporters were Chile and Spain, who experienced some growth in exports. Imports also declined, mirroring the export drops. Main importing countries were Italy, France and the Netherlands, all reporting lower trade. Mussels continued to be one of the cheapest seafoods in the market, with value at around USD 2.00 per kg of live weight, but the sustained demand has enabled substantial growth in prices during the course of 2018.

### World imports/exports of mussels (January-December)

	2016	2017	2018
	(1 000 tonnes)		
<b>Imports</b>			
France	59.4	60.9	59.1
Italy	45.0	50.9	43.1
Netherlands	42.5	36.2	39.0
Other countries	166.8	180.3	168.3
<b>Total</b>	<b>313.8</b>	<b>328.4</b>	<b>309.4</b>
<b>Exports</b>			
Chile	67.4	79.3	80.6
Spain	50.7	59.0	70.2
Netherlands	65.8	67.0	57.8
Other countries	162.7	168.0	151.6
<b>Total</b>	<b>346.5</b>	<b>373.3</b>	<b>360.3</b>

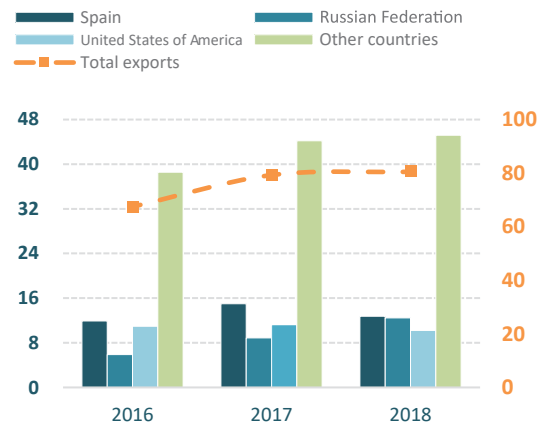
Source: Trade Data Monitor, estimates

**EU28 | Imports | Mussels**  
**Top three origins**  
**Unit: 1 000 tonnes, January-December**



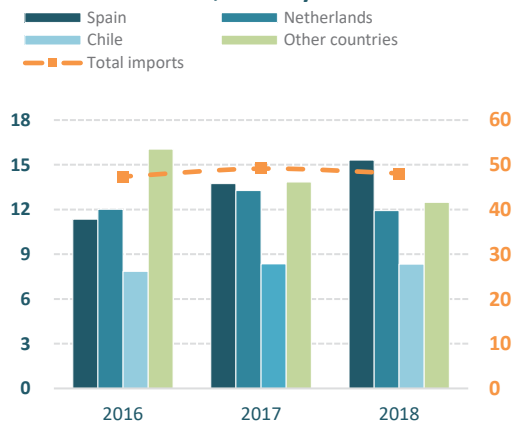
Source: Eurostat

**Chile | Exports | Mussels**  
**Top three destinations**  
**Unit: 1 000 tonnes, January-December**



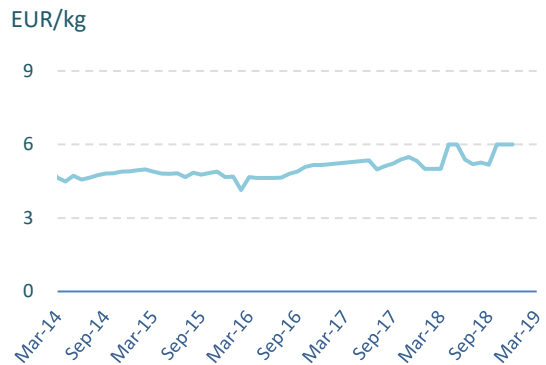
Source: Chile National Customs Office

**France | Imports | Mussels**  
**Top three origins**  
**Unit: 1 000 tonnes, January-December**



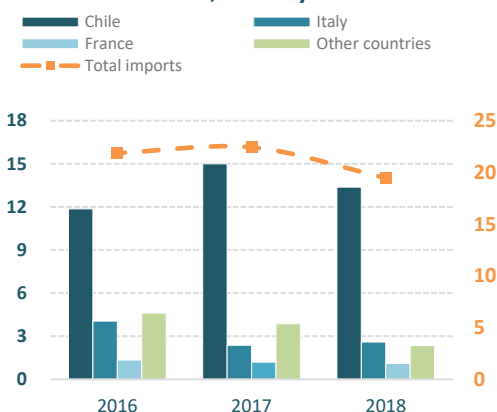
Source: Eurostat

**Prices**  
**Mussels: France**



Monthly average consumer prices in metropolitan France  
 Source: European Price Report

**Spain | Imports | Mussels**  
**Top three origins**  
**Unit: 1 000 tonnes, January-December**

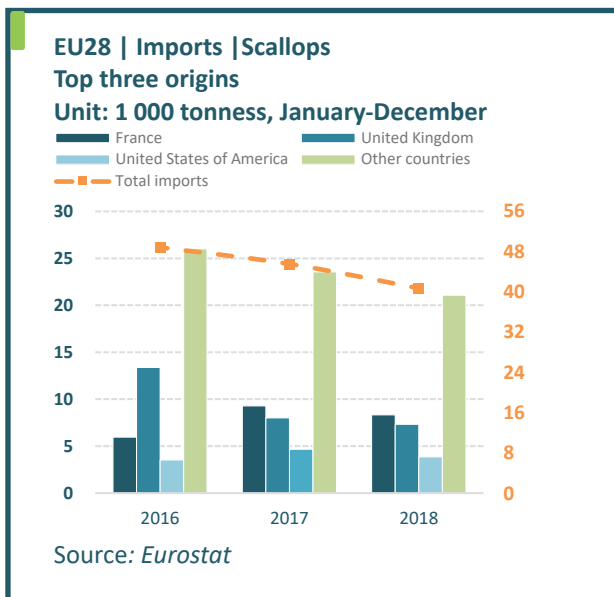
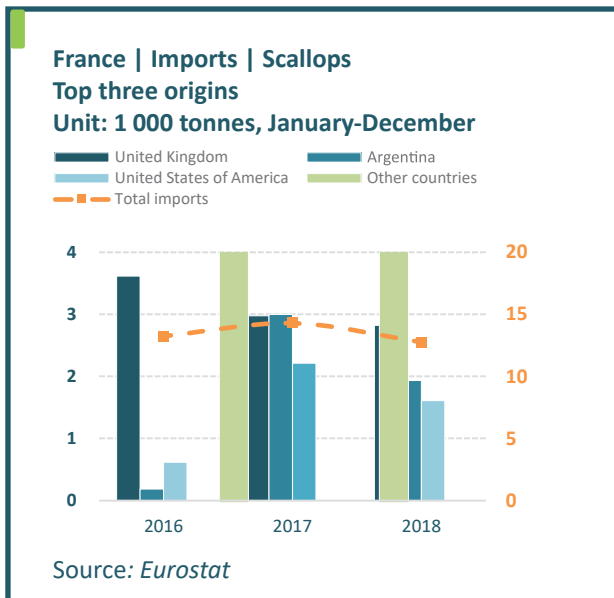


Source: Agencia Tributaria de España

**Scallops**

US harvesters landed roughly 30 000 tonnes of Atlantic scallops in 2018, including many large scallops, which helped to decrease prices to as low as USD 9 for 10/20s, the most common size, nearly all spring and summer of last year. This availability put scallops back on the menu in US restaurants. It also made the country more independent of Canadian imports, which created some problems for the local producers there.

No clear trend emerges from trade data, as imports grew somewhat in 2018, while exports were reportedly lower. China is the world's major producer, exporter and importer of scallops. World volume of scallops entering international trade was low just over 100 000 tonnes, with China accounting for one third of both the exports and imports.



World imports/exports of scallops (January-December)

	2016	2017	2018
(1 000 tonnes)			

Imports			
China	47.1	35.7	73.8
United States of America	23.2	18.8	21.1
France	13.2	14.3	12.7
Other countries	81.3	83.1	67.8
<b>Total</b>	<b>164.8</b>	<b>151.8</b>	<b>175.4</b>
Exports			
China	34.6	30.7	31.3
United States of America	10.4	9.4	7.7
United Kingdom	12.2	8.1	7.4
Other countries	53.9	51.3	51.4
<b>Total</b>	<b>111.1</b>	<b>99.5</b>	<b>97.9</b>

Source: Trade Data Monitor, estimates

## Oysters

End of year sales of oysters in France were relatively good in spite of the yellow vest movements that blocked transport of goods before the Christmas period. Oyster mortality in 2018 was higher than in previous years, which will lead to lower output in 2019. As a result of high demand and low availability in the market, oyster prices are likely to go up.

Oyster trade was stagnant to decreasing in 2018. France, the main exporting country, reported a slight decline in exports. Main importing countries include the United States of America and France.

World imports/exports of oysters (January-December)

	2016	2017	2018
(1 000 tonnes)			

Imports			
United States of America	12.0	12.1	13.7
France	7.6	8.3	7.4
China, Hong Kong SAR	6.6	7.2	6.6
Other countries	42.1	41.0	37.6
<b>Total</b>	<b>68.2</b>	<b>68.6</b>	<b>65.3</b>
Exports			
France	10.8	12.6	12.5
Republic of Korea	8.0	9.1	10.4
China	9.9	9.6	9.9
Other countries	32.1	41.6	42.1
<b>Total</b>	<b>60.7</b>	<b>72.9</b>	<b>75.0</b>

Source: Trade Data Monitor, estimates

## Clams

Clam is among the most expensive bivalves and seafood products, as the yield is very low, when compared with mussels or scallops. China dominates clam exports, mainly directed towards Japan and the Republic of Korea. Trade in 2018 contracted, but still about 250 000 tonnes of clams enter international trade in 2018.

### World imports/exports of clams, cockles, arkshells (January-December)

	2016	2017	2018
(1 000 tonnes)			
<b>Imports</b>			
Japan	80.4	80.6	72.1
Republic of Korea	63.6	63.7	56.1
Spain	33.8	38.6	37.1
Other countries	85.8	100.2	113.2
<b>Total</b>	<b>263.6</b>	<b>283.2</b>	<b>278.5</b>
<b>Exports</b>			
China	156.0	164.2	151.5
Republic of Korea	16.0	16.3	15.7
Canada	11.0	13.3	12.4
Other countris	76.8	74.5	77.8
<b>Total</b>	<b>259.8</b>	<b>268.3</b>	<b>257.5</b>

Source: Trade Data Monitor, estimates

new products are likely to dominate the markets in coming years.

There is no major impediment to increased bivalve production in all main producing countries, as fish farms further away from the coast can start to operate.

Oysters have a great market potential, being one of the highest valued seafood items in terms of consumer appreciation. France is among the main exporters of this product. The main consumption period will be the Christmas period, but supply of oysters is likely to be low due to high mortalities in France during the 2018 summer, which is likely to impact also the production in 2019.

Chinese scallop production will be impacted in the coming two years by the dying of young scallops experienced in early 2018. The lack of domestic supply will lead to increased imports into the country from other scallop producing countries.

## TENURE CONFLICT OVER ARTIC SURF CLAM SOLVED

The bright red Arctic surf clams are particularly suited for sushi dishes and Asian cuisine. This resource has been the monopoly of Clearwater Seafoods company in Canada for 19 years. In 2018, the federal government awarded a multimillion-dollar licence to a company that would give 25 percent of the surf clam catch to local Indigenous communities, but the government later cancelled the deal. In early 2019, Clearwater Seafoods and 14 First Nations in Nova Scotia and Newfoundland and Labrador forged a 50-year partnership on the Arctic surf clam fishery. This agreement will protect existing fishery jobs while creating economic and employment opportunities for First Nations.

## Outlook

This year is likely to be another bonanza year for the Atlantic scallop fisheries in the United States of America. A total production of 30 000 tonnes is likely to be harvested in 2019, based on the limits expected to be set by the US National Oceanic and Atmospheric Administration (NOAA).

Demand for bivalves is strong and prices are expected to increase for all products. Some product diversification is taking place, with the intent to find consumers also among the younger generations. These attempts have been successful, and these



# CRAB

## GLOBEFISH HIGHLIGHTS

### *Tighter supplies, prices keep rising*

Quotas for snow crab are being cut in Canada but increased in Alaska. The overall supply situation will be tighter in 2019. It might be very tight for king crab and the Alaska red king crab fishery may be totally closed.

### Supply

Newfoundland and Labrador crabbers fear that the TAC for 2019 will be drastically cut. The Canadian Department of Fisheries and Oceans (DFO) released the final TAC numbers in early April. The TAC for Newfoundland and Labrador was cut by 9 percent to 28 975 tonnes.

On the west coast of the North American continent, the situation looks brighter. The Alaska snow crab TAC for 2019 was increased by 47 percent to 12 620 tonnes. Though this is not much compared to the

Canadian fishery, it reveals a positive trend. Biomass surveys in 2018 showed that the snow crab stock is improving. If this trend continues, the TAC may be further increased in 2020 and 2021.

Since 2014, there has been a decline in supplies of snow crab to the Japanese market. The main supplier is the Russian Federation and shipments from this source have declined slightly, while supplies from Canada have dropped markedly.

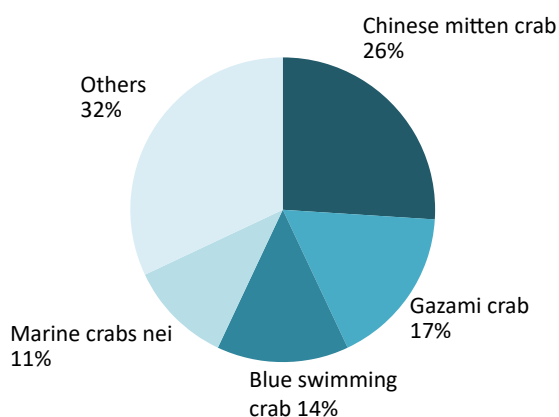
Last year was one of the best years in the last decade for the Alaska Dungeness crab (*Metacarcinus magister*) fishery. According to the Alaska Department of Fish and Game, 771 tonnes of Dungeness crab were caught during the autumn season, compared to the average 340 tonnes over the past ten years. 1 850 tonnes were landed during the spring and autumn season.

### International trade

Global imports of crab (all types) increased slightly (+1.8 percent) in 2018, to 405 400 tonnes. Imports into the United States of America dropped by 3.3 percent to 104 400 tonnes, while Chinese imports grew slightly to 81 900 tonnes. Imports into the Republic of Korea also grew, from 45 400 tonnes to 50 100 tonnes (+10.4 percent).

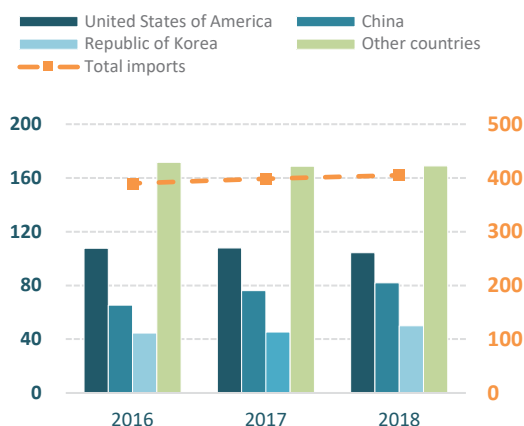
Shipments to the United States of America dropped from Canada and increased from the Russian Federation. Russian Federation crab exports increased by almost 10 percent, and the main markets were the Republic of Korea (43 000 tonnes or 61 percent of the total), the Netherlands (12 800

Crab production (2017)

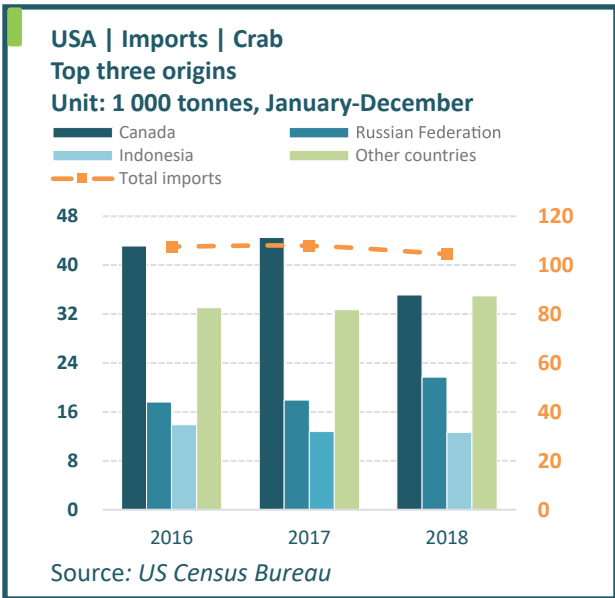


Source: FAO

Top three importers of crab  
Unit: 1 000 tonnes, January-December



Source: Trade Data Monitor, estimates



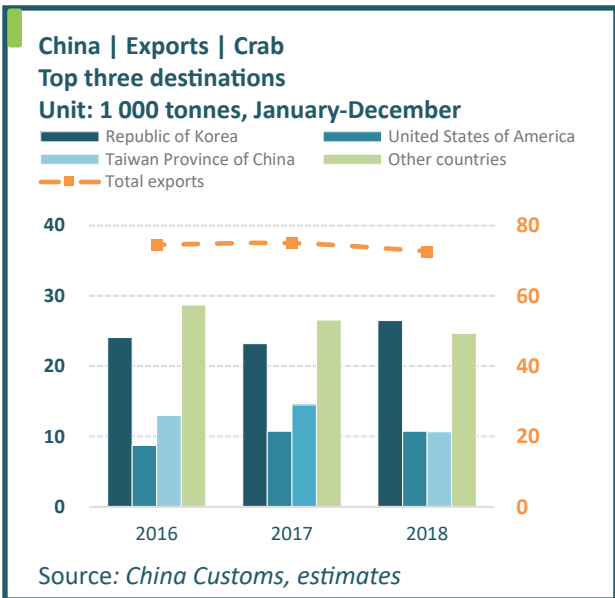
tonnes or 18 percent of the total) and China (11 500 tonnes or 16 percent of the total).

China's crab exports fell slightly to 72 600 tonnes in 2018, from 75 000 in 2017. The main markets were the Republic of Korea, the United States of America and Taiwan Province of China.

## Prices

Snow crab prices have been high because of limited supplies. In the United States of America, high prices and low supplies have translated in fewer retail promotions. Even so, snow crab is by far the most important crab product in the US food service industry, accounting for 50 percent of the total volume and 40 percent of the total value.

Japanese import prices for snow crab from North America and the Russian Federation were at record levels just before New Year. Frozen snow crab legs from Alaska reached JPY 2 100 (USD 19.21) per kg, twice the price registered five years ago.



## Outlook

Snow crab supplies are likely to decline in 2019, in spite of the increased TAC in Alaska. US supplies have been declining steadily since 2015, mainly as a result of lower supplies from Canada. Russian Federation exports to the United States of America have increased slightly, but not enough to offset the overall decline.

US supplies of king crab are decreasing due to the lower TACs in Alaska and the reduced shipments from the Russian Federation. The Russian Federation is shipping more of its red king crab live to China and the Republic of Korea. The Alaska Department of Fish and Game reduced the Bristol Bay king crab quota to 1 950 tonnes for the 2018/2019 season, down from 2 994 tonnes in the 2017/2018 season. There is now apprehension that the Alaska king crab fishery might be suspended altogether in 2019. If so, it would probably remain closed through 2020 and 2021. While supplies from the Far East and the Barents Sea have been growing for the past few years, in 2019 they are expected to stagnate. Thus, the king crab supply situation could be quite tight in 2019.



# SPECIAL FEATURE

## GLOBEFISH HIGHLIGHTS

### *WTO Environmental Database: A tool to track sustainability measures affecting fish trade*

by S. Mathur and D. Ramos  
Trade and Environment Division  
World Trade Organization (WTO)



©unsplash.com - Edmundas Stundzius

A new online database ([www.wto.org/edb](http://www.wto.org/edb)) is available to track trade and environmental measures and policies of over 160 World Trade Organization (WTO) members. With search functionalities to filter data by member/country, sector (e.g. fisheries), objective (e.g. sustainable fisheries management) and type of measure, this dataset offers a useful tool for policy makers, private sector and other interested stakeholders.

The relationship between trade and sustainable development has received increased attention with the adoption of the Sustainable Development Goals (SDGs). For the fisheries sector, SDG 14 (“Life below Water”) is of particular relevance. There are several trade-related targets in SDG 14 and trade itself is considered as a means of implementation of the SDGs. The founding objectives of WTO include sustainable development. The WTO has a specific forum to examine the relationship between trade and environmental measures to promote sustainable development, the Committee on Trade and Environment (CTE).

The CTE has served as the forum to discuss issues ranging from the market access effects of environmental policies such as environmental standards, packaging and labelling requirements, especially in relation to developing countries exports, and how trade can contribute to addressing specific environmental challenges such as illegal, unreported and unregulated (IUU) fishing. One of

the issues that have been high on the global agenda with respect to fish trade, the WTO fisheries subsidies negotiations, was born out of discussions in the CTE. WTO members are working hard to conclude these negotiations by the end of the year before the 12th WTO Ministerial Conference in Kazakhstan planned for June 2020.

Information is key, whether it is for fisheries subsidies or for other ongoing work. For over two decades now, WTO members have been submitting notifications of trade policies and measures that are related to the environment. WTO members are concerned about conservation or environmental degradation and its consequences and are adopting new trade policies in support of sustainability, in the form of environmental taxes, regulations or support programmes.

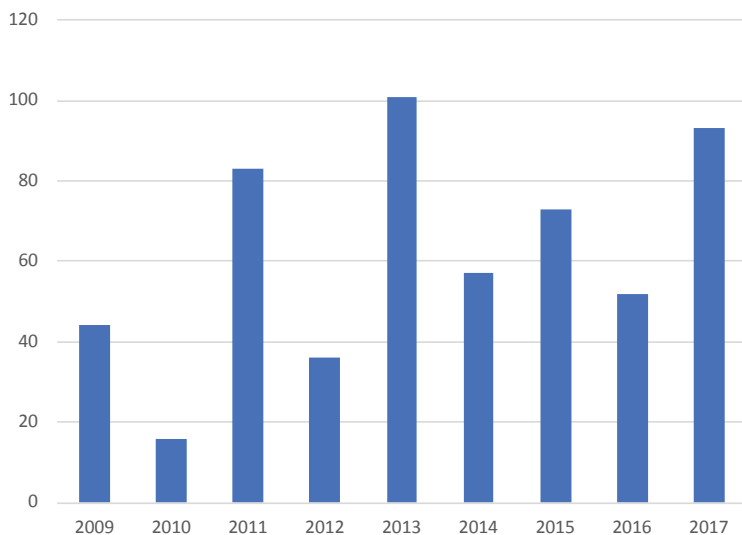
In order to ensure transparency and to keep abreast of these developments, CTE members mandated the WTO Secretariat to compile and annually update the WTO Environmental Database (EDB), collating all environment-related measures notified to WTO. The database also includes environment-related entries found in Trade Policy Reviews (TPRs), which are periodic transparency exercises every WTO member must undergo.

The EDB has recently been updated and relaunched with a wealth of information regarding trade measures adopted for environmental purposes.

The information has been systematized based on harmonized categories covering the environmental objective pursued, the type of trade measure adopted and the sectors affected by the notified measures and programmes. More than 10 000

One concrete example is a draft technical regulation (TBT measure) notified by Mexico in 2017 establishing “specifications for the responsible aquaculture production of Pacific bluefin tuna (*Thunnus orientalis*) in floating cages in the waters of the Pacific Ocean”. Another example (SPS measure) notified to the WTO in 2016 is the “Draft Philippines National Standard Code of Good Aquaculture Practices for Oysters and Mussels” which addresses food safety, environmental integrity, and socio-economic welfare concerns associated with aquaculture production in brackish and marine waters. An important aspect of the notification of such trade and environmental requirements is that, under WTO rules, the SPS or TBT measures should be notified in their draft format, allowing sufficient time for WTO members and stakeholders to provide comments, raise concerns and offer alternatives that might have a lesser impact on their business models. Even after the measure is adopted, WTO rules also require a reasonable period of time before the requirements come into force to allow economic operators to adapt and comply. In that sense, such increased transparency provides a valuable tool

Chart 1 EDB: Notified measures affecting the fisheries sector (breakdown by year)



measures and 7 000 TPR entries are available in a user-friendly online portal, providing a powerful tool to better understand environmental trade measures and requirements in foreign markets.

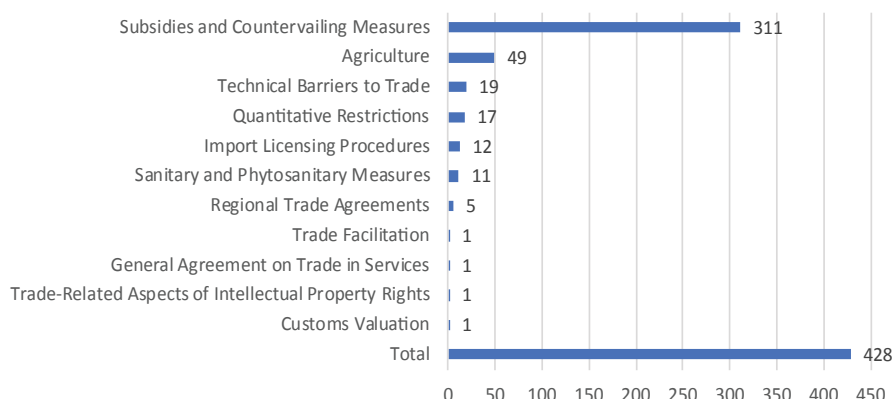
An increasing number of environment-related trade measures is affecting the fisheries sector. Since 2009, 61 WTO members have notified over 550 measures affecting the fisheries sector. In the last five years, 75 new measures have on average been notified each year (Chart 1). The European Union, with 165 measures from 2009 to 2017, has the most notified EDB measures affecting the fisheries sector, followed by the United States of America, Philippines, Canada and Mexico. These measures have been notified by WTO members at all levels of development and from all regions of the world.

Most types of measures affecting the fisheries sector notified from 2009 onwards were support measures, usually in the form of grants and direct payments for fishing effort reduction, acquiring more precision nets and fishing equipment to avoid bycatch, fleet modernization and energy efficient vessels, and support for sustainable fishing and aquaculture practices. Other measures often notified are environmental requirements in the form of import and export licence requirements, technical regulations, and conformity assessment procedures or outright bans.

for stakeholders to keep track of regulatory changes affecting their sector and have their voices heard.

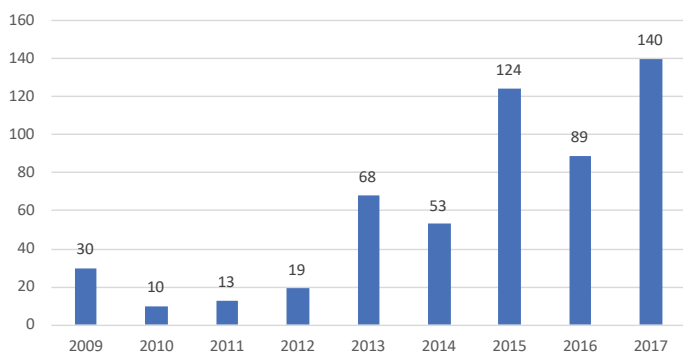
In terms of objectives, there are almost 430 notified measures in the EDB with “sustainable fisheries management” as the underlying environment-related objective. Sustainable fisheries management is being pursued through a wide range of policy instruments including grants and direct payments, loans and financing, non-monetary support, technical regulations, bans, prohibitions, licensing requirements, and transit regulations among others. The breakdown of these measures by WTO Agreement is provided in Chart 2.

Chart 2 EDB: Sustainable Fisheries Management Measures Breakdown by WTO Agreement



Apart from sustainable fisheries management, there are other objectives cited in the notified measures affecting the fisheries sector. Such is the case of measures that seek to protect biodiversity or for natural resource conservation, e.g. to avoid the negative impacts of fishing on marine mammals and endangered species. For instance, a measure notified by the Republic of Korea in 2017 excluded some endangered shark species from the list of approved food products imported into the country.

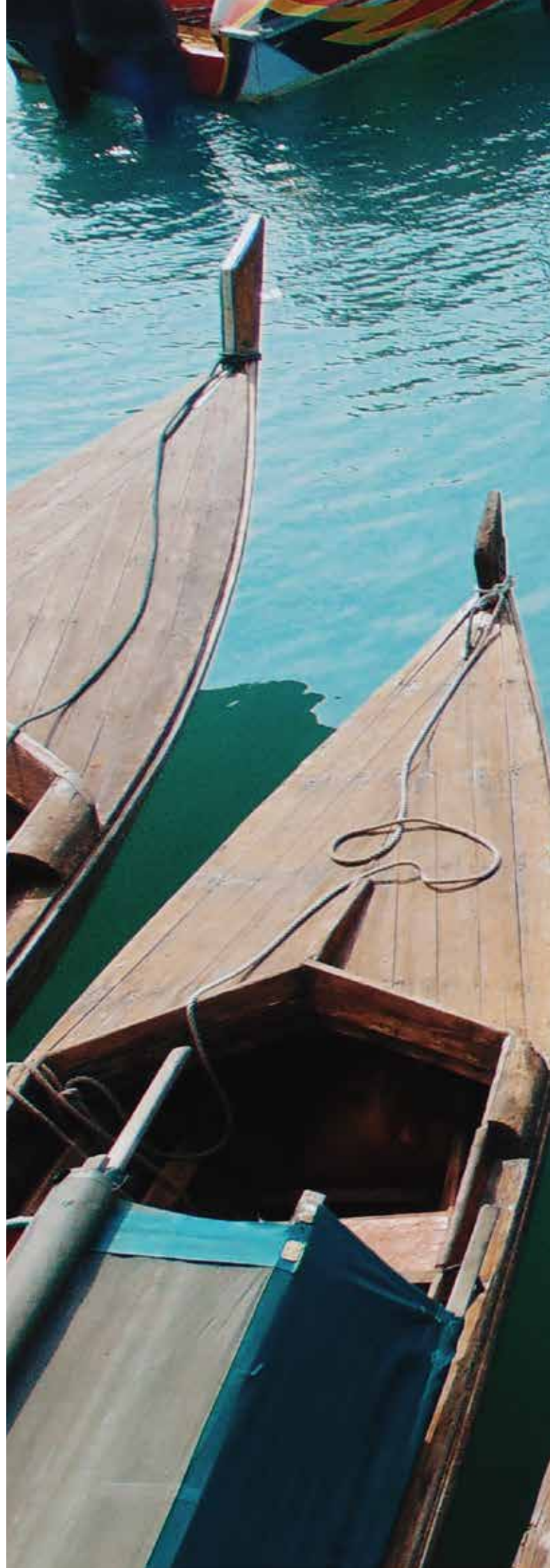
Chart 3 EDB: TPR entries related to the fisheries sector



With respect to TPRs, the growing number of database entries affecting the fisheries sector is evidence of the mutual supportiveness and the intertwining of trade, fisheries and environmental policies. The EDB contains over 540 environmental TPR entries related to the fisheries sector and this number has been increasing rapidly over the last five years (Chart 3).

WTO members are increasingly including environment-related concerns in their fisheries trade policy frameworks. For example, Sierra Leone has developed a Policy Framework for Fisheries with the goal of turning fisheries into an ecologically sustainable and economically viable sector. In effect, from 2009–2017 around 75 percent of WTO members that underwent an analysis of their trade policy frameworks included at least one environmental concern or measure related to their fisheries sector. The EU28 had the highest number of TPR entries on fisheries, followed by Japan, Belize, Morocco, Malaysia and Fiji. In terms of specific measures in these TPRs, the majority relates to fishing quotas, catch certification schemes and bilateral or regional fisheries management agreements to sustainably manage fisheries. Other measures included penalties for violations, bans or licensing requirements, and support schemes.

Based on the transparency pillar of WTO's work, the EDB provides a wealth of data that is publicly available and can be easily accessed. These examples merely provide a flavour of the wide range and depth of information available in the database. As WTO members continue to notify and adopt policies for trade to contribute to the sustainable development of their fisheries sector and more broadly to the blue economy, the WTO's EDB will continue to fulfil its purpose of offering a comprehensive, reliable transparency tool to allow stakeholders to keep well-informed of developments.



# FOOD SAFETY ISSUES

## GLOBEFISH HIGHLIGHTS

*Detentions and rejections of tuna in Canada, the European Union (Member Organization), Japan and United States of America*



©FAO/LOI

The main importing countries of tuna are Japan, EU28, the United States of America and Thailand. The major producing countries of tuna in 2017 were Indonesia, Japan and Ecuador, with 726 287, 358 601 and 323 554 tonnes, respectively. This analysis describes border rejections of tuna in Canada, the European Union (Member Organization), Japan and the United States of America. Rejections are categorized by chemical, microbiological, histamine and other risk categories. In addition, general causes such as packaging issues, allergens, improper health certificate, poor temperature control and labelling issues are described.

### Canada

Tuna detentions and rejections in Canada decreased from 111 cases in 2017 to 72 in 2018, and represented only 7 percent of the total rejections of fishery products at the border last year.

The main causes of rejections and detentions of tuna at the Canadian borders in 2018 were due to other causes with 67 cases. It was followed by chemical causes and histamine with two cases each and microbiological causes with one case. Labelling issues was the leading cause in this category representing 80 percent of all tuna rejections. Other rejections were due to packaging issues (10 cases) and the presence of histamine above the maximum limit (two cases). Under the chemical category the only cause of rejections was due to the presence of non-permitted additives (not specified) with two cases. The only microbiological case was due to the presence of (*Staphylococcus aureus*).

#### Tuna rejected at the Canadian borders in 2018 by category

■ Labelling ■ Packaging ■ Histamine ■ Non permitted additives ■ *Staphylococcus aureus*



Source: Canadian Food Inspection Agency

## European Union (Member Organization)

Tuna detentions and rejections in the EU28 decreased from 49 cases in 2017 to 33 in 2018, representing 11 percent of the total rejections of fishery products at the border.

The majority of border rejections of tuna were due to “other causes” with 27 cases, followed by histamine (four cases) and chemical (two cases). There were no rejections due to microbiological causes. Among other causes, the main problems were related to poor temperature control, improper health certificate and packaging issues. In four cases the rejection was due to the presence of histamine. The only chemical problem detected was mercury above the maximum limit (two cases).

### Tuna rejected at the EU28 borders in 2018 by category

■ Poor temperature control ■ Histamine ■ Improper health certificate ■ Packaging ■ Mercury



Source: Rapid Alert System for Food and Feed

## Japan

Detentions and rejections of tuna in Japan increased from six cases in 2017 to 12 in 2018, representing 11 percent of the total rejections of fishery products at the border.

Border rejections were only due to microbiological issues with a total of 12 cases, twice as many as the previous year. The main cause was the presence of coliform (five cases), followed by *Escherichia coli* and *Salmonella* with three cases each and the presence of live bacteria (one case).

### Tuna rejected at the Japanese borders in 2018 by category

■ Coliform ■ *Escherichia coli* ■ *Salmonella* ■ Live bacteria



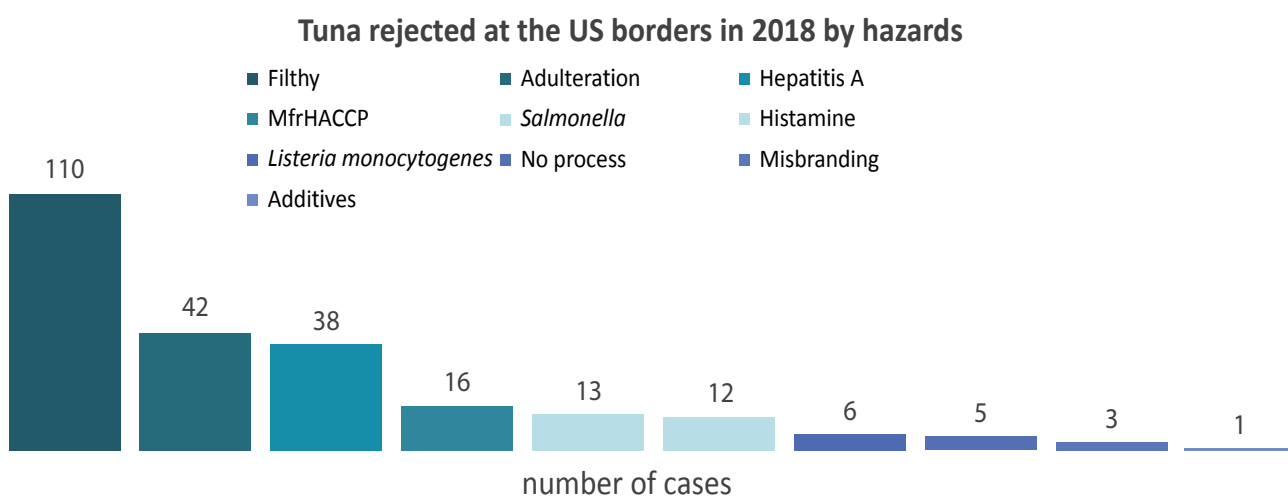
Source: Ministry of Health, Labour and Welfare

## United States of America

Tuna detentions and rejections in US borders increased from 186 cases in 2017 to 246 in 2018, representing 17 percent of the total rejections of fish and fishery products at the border.

The majority of rejections were due to other causes, followed by microbiological causes, histamine and chemical causes. Within the category of other causes, the leading specific cause was “filthy”<sup>1</sup> in 110 cases, followed by adulteration (42 cases) and MfrHACCP<sup>2</sup> (16 cases).

Other rejections were related to no process (five cases) and misbranding (three cases). The main microbiological problems were due to the presence of Hepatitis A (38 cases), Salmonella (13 cases) and Listeria monocytogenes (six cases). The only chemical issue detected was the presence of unauthorized additives with one case.



Source: Food and Drug Administration

1. In the Food and Drug Administration (FDA) Violation Code Translation “filthy” is defined as a condition when “the article appears to consist in whole or in part of a filthy, putrid, or decomposed substance or be otherwise unfit for food.”

2. In the FDA Violation Code Translation MfrHACCP is defined as “product appears to have been prepared, packed, or held under insanitary conditions, or it may be injurious to health, due to failure of the foreign processor to comply with HACCP.”

### References:

- For further information you can visit the following website: [www.fao.org/in-action/globefish/fishery-information/border-rejections/en/](http://www.fao.org/in-action/globefish/fishery-information/border-rejections/en/)
- Canadian Food Inspection Agency (CFIA)
- Rapid Alert System for Food and Feed (RASFF)
- Ministry of Health, Labour and Welfare
- US Food and Drug Administration (FDA)



# EVENTS

## GLOBEFISH HIGHLIGHTS

### *2019 Global Fishery Forum & Seafood Expo*

For the third consecutive year, the city of St. Petersburg will host the Global Fishery Forum and Seafood Expo, the Russian fishery sector's key event.



The Global Fishery Forum & Seafood Expo 2019 will take place from 10–12 July 2019 in St. Petersburg, the Russian Federation's port city on the Baltic Sea. Organized by the Federal Agency for Fishery, the Forum is the fishery sector's key event in Russia and the perfect platform for aquaculture professionals to promote international trade, advanced equipment and technology.

Seafood Expo Russia will feature more than 300 exhibiting companies from 25 countries and is expected to attract more than 7000 visitors from around the world. The three-day event will bring together leading aquaculture experts to discuss the status and the latest developments of the seafood industry and potential emerging technologies.

In 2017 and 2018, the Global Fishery Forum & Seafood Expo was held in September. This year, Russia will welcome Forum participants on the eve of its national Fisherman's Day, traditionally celebrated on the second Sunday in July.

The main theme of the Third Forum is "Ocean of Opportunities: Nature, Economy, and People." Topics covered include:

- the digitalization of the fisheries industry
- economic efficiency, social stability, and competition in natural resource industries
- problems and potential of the fishing industry in the Arctic and Antarctic

- new instruments for the economic regulation of the fishing industry in Russia

For the second consecutive year, FAO GLOBEFISH will participate in the Seafood Expo with a dedicated booth intending to meet countries, organizations, traders, and all fisheries stakeholders to exchange ideas on how to contribute to sustainable growth in the aquaculture sector.

**GLOBEFISH will be present at booth #M6.**

**Come visit us at our booth!**

For more information, please visit:  
<https://seafoodexporussia.com/en/>

Date: **10–12 July 2019**

Venue: ExpoForum Convention and Exhibition Centre, St. Petersburg, Russia

# FISH AND FISHERY PRODUCTS STATISTICS <sup>1</sup>

	Capture fisheries production		Aquaculture fisheries production		Exports			Imports		
	2016	2017	2016	2017	2017	2018	2019	2017	2018	2019
	Million tonnes (live weight equivalent)				USD billion					
					<i>estimated</i>	<i>forecast</i>		<i>estimated</i>	<i>forecast</i>	
<b>ASIA<sup>2</sup></b>	<b>48.8</b>	<b>49.2</b>	<b>67.9</b>	<b>71.3</b>	<b>59.2</b>	<b>61.6</b>	<b>59.1</b>	<b>48.6</b>	<b>54.6</b>	<b>57.7</b>
China	16.7	16.3	46.1	47.1	23.1	24.3	22.1	15.9	20.0	23.5
of which China, Hong Kong SAR & Taiwan Province of China	0.1	0.1	0.0	0.0	0.8	0.7	0.7	3.6	3.9	3.7
India	5.1	5.4	5.7	6.2	7.2	6.9	6.3	0.1	0.1	0.1
Indonesia	6.5	6.7	4.9	6.2	4.2	4.5	4.2	0.4	0.4	0.4
Japan	3.2	3.2	0.7	0.6	2.0	2.3	2.3	15.0	15.4	15.2
Republic of Korea	1.4	1.4	0.5	0.5	1.7	1.7	1.8	5.1	5.9	5.7
Philippines	2.0	1.9	0.8	0.8	0.9	0.9	0.9	0.6	0.6	0.4
Thailand	1.5	1.5	0.9	0.9	5.9	6.0	5.8	3.5	3.9	4.0
Viet Nam	3.1	3.3	3.6	3.8	8.5	9.0	9.5	1.7	1.9	2.0
<b>AFRICA</b>	<b>9.3</b>	<b>9.7</b>	<b>2.0</b>	<b>2.1</b>	<b>7.2</b>	<b>7.6</b>	<b>8.1</b>	<b>4.9</b>	<b>5.4</b>	<b>5.6</b>
Egypt	0.3	0.4	1.4	1.5	0.0	0.0	0.0	0.6	0.9	0.9
Morocco	1.4	1.4	0.0	0.0	2.2	2.3	2.4	0.2	0.2	0.2
Namibia	0.5	0.5	0.0	0.0	0.7	0.7	0.8	0.0	0.1	0.1
Nigeria	0.7	0.9	0.3	0.3	0.1	0.1	0.1	0.7	0.7	0.7
Senegal	0.5	0.5	0.0	0.0	0.4	0.5	0.7	0.0	0.1	0.1
South Africa	0.6	0.5	0.0	0.0	0.6	0.7	0.6	0.4	0.5	0.6
<b>CENTRAL AMERICA</b>	<b>2.1</b>	<b>2.3</b>	<b>0.4</b>	<b>0.4</b>	<b>2.9</b>	<b>3.0</b>	<b>2.8</b>	<b>1.9</b>	<b>1.9</b>	<b>1.9</b>
Mexico	1.5	1.6	0.2	0.2	1.3	1.5	1.5	0.9	0.9	0.9
Panama	0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.1	0.1	0.1
<b>SOUTH AMERICA</b>	<b>8.1</b>	<b>8.9</b>	<b>2.3</b>	<b>2.5</b>	<b>16.5</b>	<b>18.1</b>	<b>21.5</b>	<b>2.9</b>	<b>3.0</b>	<b>3.0</b>
Argentina	0.8	0.8	0.0	0.0	2.0	2.1	2.1	0.2	0.2	0.1
Brazil	0.7	0.7	0.6	0.6	0.3	0.3	0.3	1.4	1.4	1.3
Chile	1.5	1.9	1.0	1.2	6.0	6.8	7.1	0.4	0.4	0.5
Ecuador	0.7	0.6	0.5	0.5	4.6	4.9	4.9	0.1	0.1	0.2
Peru	3.8	4.2	0.1	0.1	2.8	3.3	6.2	0.3	0.3	0.2
<b>NORTH AMERICA</b>	<b>6.0</b>	<b>6.2</b>	<b>0.6</b>	<b>0.6</b>	<b>12.0</b>	<b>12.0</b>	<b>11.3</b>	<b>24.6</b>	<b>25.6</b>	<b>24.3</b>
Canada	0.9	0.8	0.2	0.2	5.4	5.4	5.4	2.9	3.0	3.3
United States of America	4.9	5.0	0.4	0.4	6.1	6.0	5.4	21.6	22.6	21.0
<b>EUROPE</b>	<b>13.7</b>	<b>14.8</b>	<b>2.9</b>	<b>3.0</b>	<b>54.8</b>	<b>57.6</b>	<b>58.4</b>	<b>60.3</b>	<b>64.2</b>	<b>62.7</b>
European Union <sup>2</sup>	5.2	5.6	1.3	1.4	35.5	37.1	37.2	55.8	59.3	57.9
of which Extra-EU	"	"	"	"	6.3	6.4	6.5	29.0	31.0	30.4
Iceland	1.1	1.2	0.0	0.0	2.0	2.4	2.3	0.1	0.1	0.1
Norway	2.0	2.4	1.3	1.3	11.3	12.0	11.8	1.2	1.3	1.4
Russian Federation	4.8	4.9	0.2	0.2	4.5	4.4	5.4	2.0	2.2	1.8
<b>OCEANIA</b>	<b>1.4</b>	<b>1.4</b>	<b>0.2</b>	<b>0.2</b>	<b>3.2</b>	<b>3.2</b>	<b>3.2</b>	<b>2.0</b>	<b>1.9</b>	<b>1.9</b>
Australia	0.2	0.2	0.1	0.1	1.1	1.1	1.0	1.6	1.6	1.5
New Zealand	0.4	0.4	0.1	0.1	1.2	1.2	1.4	0.2	0.2	0.2
<b>WORLD <sup>3</sup></b>	<b>89.4</b>	<b>92.5</b>	<b>76.4</b>	<b>80.1</b>	<b>155.7</b>	<b>163.1</b>	<b>164.5</b>	<b>146.1</b>	<b>157.6</b>	<b>157.8</b>
<b>World excluding Intra-EU</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>126.6</b>	<b>132.4</b>	<b>133.7</b>	<b>119.2</b>	<b>129.4</b>	<b>130.3</b>
Developing countries	65.9	67.7	71.9	75.6	84.5	88.8	90.1	42.8	48.9	52.2
Developed countries	23.5	24.8	4.5	4.5	71.2	74.3	74.4	103.2	108.7	105.6
LIFDCs	13.4	14.4	8.8	9.5	11.4	11.3	11.1	2.7	2.9	2.9
LDCS	9.2	9.7	3.7	4.0	3.7	4.2	4.4	1.1	1.2	1.0

<sup>1</sup> Production and trade data exclude whales, seals, other aquatic mammals and aquatic plants. Trade data include fishmeal and fish oil.

<sup>2</sup> EU-28. Including intra-trade. Cyprus is included in Asia as well as in the European Union.

<sup>3</sup> For capture fisheries production, the aggregate includes also 5 229 tonnes in 2016 of not identified countries, data not included in any other aggregates. totals may not match due to rounding

photo ©FAO/Giulio Napolitano



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