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# GLOBEFISH HIGHLIGHTS

A QUARTERLY UPDATE ON WORLD SEAFOOD MARKETS

QUARTERLY ISSUE, including Jan - Mar 2016 Statistics

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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), INFOPECCA (Latin America and the Caribbean), INFOPECHE (Africa), INFOSAMAK (Arab countries), EUROFISH (Central and Eastern Europe) and INFOYU (China).**

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# ACKNOWLEDGEMENTS

## GLOBEFISH HIGHLIGHTS

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# GLOBAL FISH ECONOMY

## GLOBEFISH HIGHLIGHTS

*After a long period of consistent growth, the value of global seafood trade is projected to fall by 1.1 percent compared with 2015, to USD 132.6 billion in 2016*

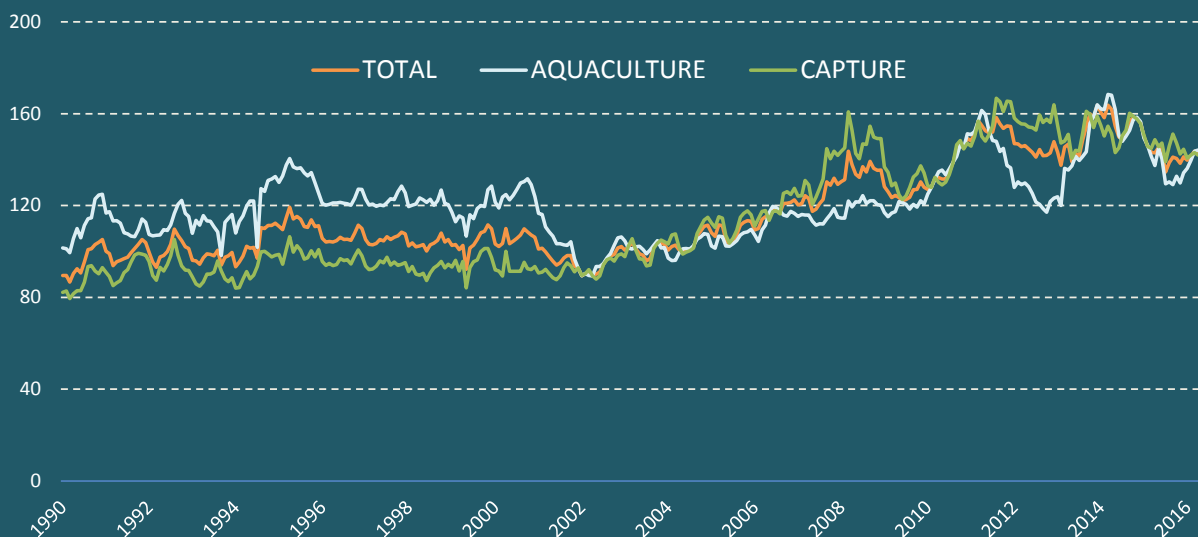
This will be the second year of decline and it will be the first time that there have been two consecutive years of decline since the FAO statistics on global trade began 40 years ago.

The drop in value is not related to decreased trade volumes, which are forecast to remain flat this year at 59.9 million tonnes, but rather the result of a significantly stronger US dollar – decreasing the relative value of trade in other currencies - and a drop in prices for some major traded species. The major trends in fish production and consumption are continuing, however, with stable capture production and a further 5 percent increase in aquaculture production. Meanwhile, per capita consumption of farmed species is expected to reach 10.9 kg this year, higher than the estimated 9.7 kg of wild species.

As of April 2016, the latest reported month, the FAO Fish Price Index was on a par with the same month in 2015. Overall, prices of traded seafood remained relatively low over the first half of 2016 compared with recent years, due primarily to a large proportion of global trade consisting of shrimp and tuna, highly traded commodities for which prices have fallen substantially over the last year or so. Prices for some high volume species such as mackerel, pangasius and tilapia, have fallen as well. That said, the price situation is somewhat mixed, with a number of other

### FAO Fish Price Index

(100=2002-2004)



Source: Norwegian Seafood Council



# World fish market at a glance

	2014	2015	2016	Change: 2016 over 2015
		<i>estim.</i>	<i>fcst.</i>	
	<i>million tonnes</i>			<i>%</i>
<b>WORLD BALANCE</b>				
<b>Production</b>	<b>167.2</b>	<b>171.0</b>	<b>175.0</b>	<b>2.3</b> ▲
Capture fisheries	93.4	93.5	93.6	0.1 ▲
Aquaculture	73.8	77.5	81.4	5.0 ▲
<b>Trade value (exports USD billion)</b>	<b>148.1</b>	<b>134.1</b>	<b>132.6</b>	<b>-1.1</b> ▼
<b>Trade volume (live weight)</b>	<b>60.0</b>	<b>59.9</b>	<b>59.9</b>	<b>0.0</b> ▲
<b>Total utilization</b>	<b>167.2</b>	<b>171.0</b>	<b>175.0</b>	<b>2.3</b> ▲
Food	146.3	149.4	153.6	2.8 ▲
Feed	15.8	16.5	16.3	-1.2 ▲
Other uses	5.1	5.1	5.1	0.0
<b>SUPPLY AND DEMAND INDICATORS</b>				
<b>Per caput food consumption</b>				
Food fish (kg/year)	20.1	20.3	20.6	1.7 ▲
From capture fisheries (kg/year)	10.0	9.8	9.7	-0.7 ▼
From aquaculture (kg/year)	10.1	10.5	10.9	3.9 ▲
	<b>2014</b>	<b>2015</b>	<b>2016 Jan-Feb</b>	<b>Change Jan- Feb 2016 over Jan-Feb 2015 %</b>
<b>FAO FISH PRICE INDEX</b>				
<b>(2002-2004=100)</b>	<b>156</b>	<b>142</b>	<b>141</b>	<b>-5.0</b>

Source of the FAO Fish Price Index: Norwegian Seafood Council (NSC)

Totals may not match due to rounding.

species following upward trends. Cephalopods and certain groundfish species such as cod have shown strong gains over the same period, as have herring prices. The standout performer, however, is farmed salmon, for which prices in Europe are reaching unprecedented highs as global supply tightens.

Of the world's top seafood exporters, the majority are expected to see export revenues drop in US dollar terms, due to a combination of lower prices and a strong US currency. Major tuna and shrimp exporters such as India, Thailand, the Philippines, China, Ecuador and Mexico are all forecast to suffer to varying degrees from low commodity prices. A number of large producers will perform better however, such as Argentina, Norway and Iceland. Norway and Iceland are both benefitting from high cod prices, while Norwegian salmon aquaculture companies are taking in huge revenues as farmed salmon prices take progressively higher leaps upwards. Argentina meanwhile, took in record catches of Argentine red shrimp last year and has significantly boosted sales to European markets and China.

On the import side, the three most important markets, the USA, the EU and Japan are all expected to see marginal declines in total import value, and there are few countries expected to perform well over the year.

The referendum vote in the UK to exit the EU has

had an immediate and negative impact on the UK economy as uncertainty reigns over how the exit scenario will play out and what the implications will be for trade between the UK and its most important trading partner. The most significant effect so far has been the rapid deterioration of the British pound, which is an advantage for exporters but drastically reduces the purchasing power of seafood importers. For a country that imports well over twice the value of seafood that it exports, the consequences are likely to be serious. Beyond matters of trade, the exit of the UK will mean a reinstatement of national control of fisheries management policies and thus will likely lead to an adjustment of sovereign water quotas previously established in Brussels under the Common Fisheries Policy.

In the longer term, projections in the recently released OECD-FAO Agricultural Outlook put total fish production at 195 million tonnes in 2025, of which aquaculture production will contribute 103 million tonnes. By the same year, fish consumption is forecast to reach 21.8 kg per capita per year, increasing in all continents, particularly in Asia and Oceania. Due to income growth, which is typically accompanied by higher household expenditure on expensive proteins such as seafood, fish consumption will rise more rapidly in developing regions. This increase in demand is not expected to be accompanied by an overall rise in prices, with fish prices projected to decline in real terms over the next decade.

# SHRIMP

## GLOBEFISH HIGHLIGHTS

### *Low production in Southeast Asia, while ex-farm prices may move upwards*

During the first quarter of 2016, year-on-year shrimp imports increased to EU and east Asian markets but declined to the USA. Chinese traders have been active in Southeast Asia, buying directly from farms at strong prices. Meanwhile, raw material availability for export to traditional developed markets is low.

### Supply

A general overview implies lower availability of raw material in major shrimp producing countries, particularly in Asia.

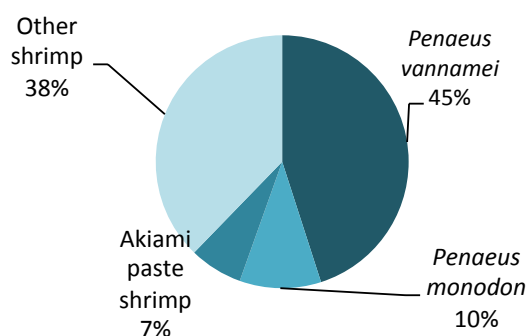
In China, farming efforts this year have slowed, even though Early Mortality Syndrome (EMS) disease has in general been under control. Farmers that lost crops in 2015 to disease are not keen to continue farming shrimp this year. Reportedly, production is recovering in the Hainan area but in Zhanjiang and other areas, availability of good quality post larvae is poor, likely due to environmental pollution.

Availability of raw material is also limited in India. As of June, overall production during the first half of the year remains lower than average in Andhra and Tamil Nadu, the two major farming areas of vannamei. Farms in Tamil Nadu are affected by the heat wave and diseases (*Enterocytozoon hepatopenaei* (EHP), white feces). Early harvests mostly consisted of smaller sizes (10 g/pc) destined to domestic markets at strong prices for farmers and traders. Export processors in Andhra and Tamil Nadu are sourcing raw material from Odisha and West Bengal to supplement, as production in these areas is better.

Poor availability of local raw material is also reported in southern Viet Nam due to drought and saltwater intrusion as well as EHP and white feces disease. According to the Ministry of Agriculture and Rural Development (MARD), production in large farming areas in Ca Mau, Kien Giang, Tra Vinh and Ben Tre provinces is poor, with conditions showing no sign of improving in the near future. Since May/June, Chinese traders have been heavily trading in Southeast Asia, buying shrimp directly from farmers in Viet Nam and Thailand at good prices. As a result, local export industries are now facing a raw material shortage.

In some positive news for the sector, overall production in Indonesia has shown signs of improvement so far this year. Vannamei shrimp farmers that took a break from farming in 2015 are now reporting high density production with new areas being developed for farming. Fortunately, there has been no severe drought, though white feces disease has been reported throughout the country. Meanwhile, the Ministry of Fisheries plans to revitalize black tiger farming particularly in Northern Kalimantan (Tarakan). The dry season is expected from July onwards.

**Shrimp production by species, both wild and farmed (2014)**



Source: **FAO**

Ecuador reported moderate to high production supplies during the first quarter of the year. However, since the earthquake in April, supplies have slowed down.

### TRADE NEWS

#### India to allow 100 percent foreign investment in aquaculture

According to the Economic Times in India, the government's decision to allow 100 percent foreign direct investment in aquaculture has resulted in optimism in the country's seafood sector, which predominantly relies on aquaculture for exports.

"The foreign firms can now directly set up brood stock multiplication centres and produce genetically improved brood stock over two to three years time. This could bring down the import cost substantially," said Mr. Satyanarain, President of All India Shrimp Hatcheries Association. Shrimp farms concentrated in Andhra Pradesh and Tamil Nadu largely depend on imported brood stock from regions like Hawaii and Florida for developing seeds.

## Imports

Last year's low price trends persisted in international shrimp trade until March/April 2016, helping boost imports in many markets during the first quarter. Imports increased to Japan and EU markets compared with the same period in 2015. However, there was a decline in imports in the USA due to high local inventories, a result of lower winter demand in the retail and catering trade during the year-end sales period.

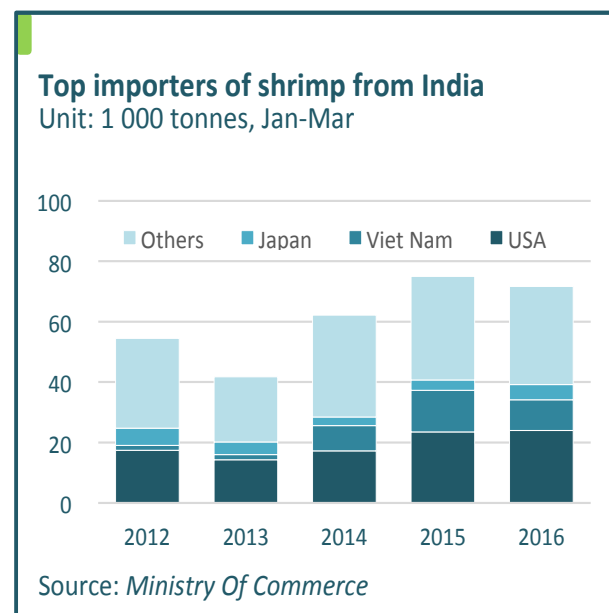
In many east Asian markets, imports experienced growth in order to meet Chinese New Year demand during January/February. As noted above, local production was seasonally low in China and Southeast Asia during this period. Looking ahead, the Asian aquaculture production forecast for the rest of 2016 remains less promising compared with last year. In terms of prices in Asia, raw material prices have bottomed out and began climbing in May.

Ecuador has increased its direct sales to China since the establishment of its trade office in China last year. Interestingly, Viet Nam imports a significant

volume of Ecuadorian shrimp, which is then re-exported to China without further processing.

## Exports

During the first quarter of 2016, the top five global shrimp exporters (in order of ranking) were Ecuador, India, Thailand, China and Argentina. Exports from Ecuador declined by 1 percent compared with the same time period a year ago to total nearly 80



000 tonnes, Indian exports declined by 4 percent (totaling 71 700 tonnes) and Chinese exports also by 4 percent (36 800 tonnes).

In Thailand, aquaculture production improved year-on-year in the first quarter, with exports showing an ample recovery to total 42 000 tonnes (+20 percent). Exports from Argentina increased as well by a significant 72 percent to reach 34 100 tonnes during the reporting period. The preliminary data on Indonesia indicated a marginal rise in exports during this period.

## Japan

Lower market prices resulted in strong shrimp consumption in Japan this year. During the spring festival months of April/May, retail demand for shrimp increased in the market as usual with supermarkets reintroducing promotional sales. This trend of spring sales was reflected in first quarter imports that increased 12.3 percent against the same period in 2015. Viet Nam, Thailand, Indonesia and India were the top suppliers.

Japanese imports of raw frozen shrimp, (shell-on, tail-on nobashi and peeled products), experienced 17 percent growth in the review period. Whereas imports of value-added shrimp, which took a 27

### Japanese imports of shrimp (by product)

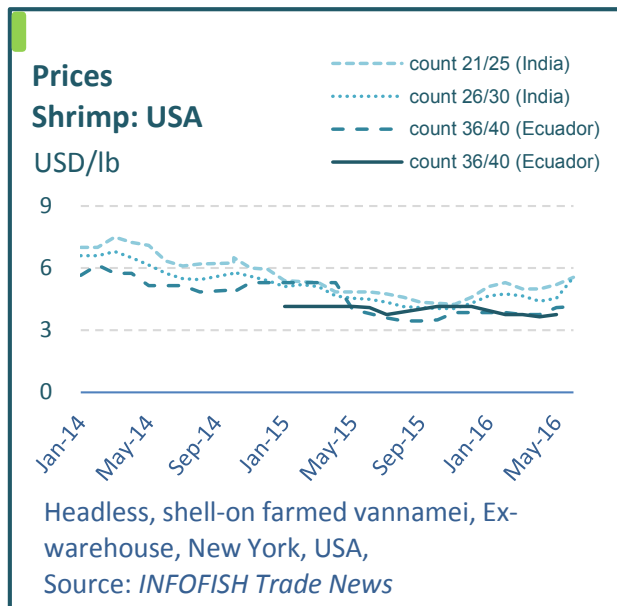
	January-March				
	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Frozen, raw	42.4	38.5	36.4	27.6	32.3
Cooked, frozen	5.1	5.2	4.5	3.6	4.0
Prepared/preserved	11.6	11.3	8.8	8.2	7.9
Sushi (with rice)	0.5	0.6	0.4	0.5	0.5
<b>Total</b>	<b>60.3</b>	<b>56.1</b>	<b>50.7</b>	<b>40.1</b>	<b>45.1</b>

Source: Japan Customs/INFOFISH

percent share of total Japanese shrimp imports, increased only marginally.

## USA

2016 began with great concern about low wholesale shrimp demand. Global stock markets were high, causing alarm and a demand drop in US markets. In a strategy to stabilize the wholesale market, shrimp of most sizes, origins and presentations, were offered



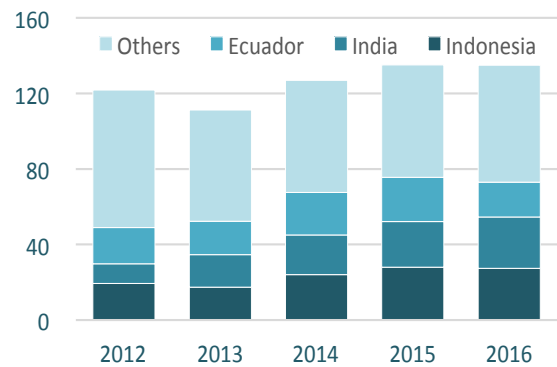
at low prices in March, with importers cutting prices and offering discounts.

The tactic succeeded as demand increased and achieved some balance with the previous oversupply. Despite this more promising market, cumulative shrimp imports declined marginally during the first quarter of this year compared with the same period in 2015. Reduced supplies from Indonesia, Ecuador and stagnant imports from India were reported, while imports increased from Thailand, Viet Nam and Mexico. The general weaker import trend continued in April.

So far this year, the competitiveness of US buyers has weakened in the market due to Japanese and Chinese buyers offering higher prices. Indeed, Japanese shrimp imports are increasing and Chinese traders are buying aggressively in Asia. Supplies from

### Top exporters of shrimp to the USA

Unit: 1 000 tonnes, Jan-Mar



Source: US-NMFS

### US imports of shrimp (by product)

	January-March				
	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Shell-on frozen	49.0	40.7	47.6	52.5	55.4
Peeled frozen	44.7	48.3	52.1	47.3	56.6
Breaded	8.7	8.0	10.5	11.7	10.0
Other products	19.3	14.3	16.9	23.6	12.8
<b>Total</b>	<b>121.7</b>	<b>111.3</b>	<b>127.1</b>	<b>135.1</b>	<b>134.8</b>

Source: NMFS

## TRADE NEWS

### USA increases tariff rates for Indian shrimp

In its 10th annual review of anti-dumping duties, the US government has increased the tariff rates by 1.93 percent to total 4.89 percent for Indian shrimp for the period 1 February 2013 to 31 January 2014. Final duties for the period of 1 February 2015 to 31 January 2016 will be determined in July/August 2016.

At the same time, the FDA has refused 53 line items of shrimp imported from India during January to May 2016, which is 30 percent higher compared with the same period a year ago.

Ecuador decreased to the USA and appear to be re-diverted to east Asian markets, which experienced growth in Ecuadorian shrimp.

## EU

Year-on-year shrimp imports increased into the EU by almost 2 percent during the first quarter of 2016. Nearly 74 percent of imports came from non-member countries.

The most important markets were Spain (29 800 tonnes), France (25 200 tonnes), Denmark (21 900 tonnes), the UK (18 500 tonnes) and the Netherlands (16 400 tonnes). Compared with last year's same period, imports declined by 6.3 percent to Spain and 3 percent to France, increased by 12 percent to Denmark as well as to the UK and grew by 3 percent

### EU imports/exports of shrimp

		January-September				
		2012	2013	2014	2015	2016
		(1 000 tonnes)				
IMPORTS	Ecuador	19.5	16.3	21.3	18.0	20.0
	India	13.6	15.5	18.9	19.7	19.8
	Greenland	14.1	14.6	14.2	11.2	13.4
	Others	120.0	114.3	108.0	119.9	118.6
EXPORTS	Intra-EU	57.7	56.6	52.9	54.6	52.5
	Extra-EU	18.0	16.0	14.9	17.2	15.1
	Total	75.7	72.6	67.8	71.8	67.6

Source: EUROSTAT

to the Netherlands. Notably, part of these imports into Denmark and the Netherlands are re-exported to markets within the EU. There were also higher imports in Italy, Germany, Portugal, Sweden and Greece during the review period.

## Asia and other markets

China, Republic of Korea, Hong Kong SAR, Taiwan Province of China and Singapore are the main import markets in Asia. During the reporting period, imports increased considerably in all of these markets.

In China, there was a 4 percent fall in exports but imports increased extraordinarily by 125 percent to total 31 100 tonnes during the first quarter of 2016 against the same period last year. Supplies increased from all top ten sources. The leading suppliers were Argentina (+500 percent), Canada (+75 percent), Ecuador (+390 percent), Thailand (+37 percent) and India (+41 percent). This significant export growth was driven by tapering domestic production and high demand during the Chinese New Year period in January/February. There were also higher imports from Viet Nam and Myanmar into China through border trade during this period, which is not available in published records.

Viet Nam is possibly the largest importer of shrimp in Asia. Imports from five sources including Ecuador and India totaled 50 000 tonnes during January-March 2016, although with slightly lower supplies from both of these countries.

In the Middle East, imports increased during the reporting period. Australia imported less due to the weak Australian dollar.

Domestic demand for shrimp is also growing in many producing countries. For instance, in Mexico, supplies of farmed shrimp increased this year with products selling mostly in the domestic market. The black tiger shrimp production in Bangladesh also found a growing local market, as exports suffered during the last two years with falling prices in the international market.

## Outlook

The production forecast for farmed shrimp in Asia remains less promising for 2016 due to the ongoing disease problem in China and in some parts of Southeast Asia along with draught and a delayed monsoon in the region. Supplies in the coming months are likely to be lower than earlier predicted. Production in India, Viet Nam and Malaysia in July-August 2016 will possibly be lower than in July-August 2015.

Though Thailand expects strong production of 270 000 to 300 000 tonnes for 2016, increased regional demand, particularly from China, is taking away supplies previously channeled to traditional developed markets.

Overall, China will likely to continue to influence the global market and prices if domestic production there does not improve. The market will also depend on the supply situation in India and Viet Nam, which currently does not have a promising forecast for the coming months. Thus, with low production and possible demand growth in Asia, the global shrimp market could see rising prices for the rest of 2016.



# TUNA

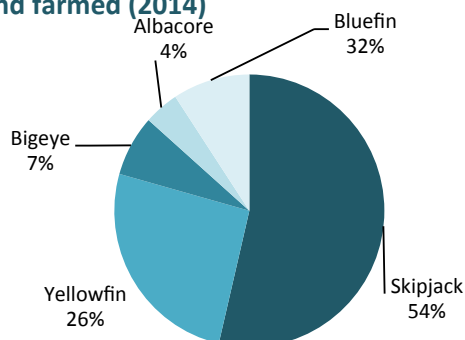
## GLOBEFISH HIGHLIGHTS

### *Lower imports from traditional markets and canned tuna producers*

In the first quarter of 2016, global tuna supply remained balanced against lower imports by traditional markets and low to moderate raw material demand from canned tuna producers.

Catches of skipjack in the main fishing grounds improved during the first quarter of the year, leading to a slight ease in prices. Import demand for processed and canned tuna remained mixed in both traditional and emerging markets.

**Tuna production by species, both wild and farmed (2014)**



Source: **FAO**

### Supply

During the first quarter of the year, fishing in the Western and Central Pacific improved. In the Eastern Pacific, skipjack catches improved while for yellowfin were worse. As a result, yellowfin prices grew more markedly in that region while skipjack prices increased only marginally.

In the Indian Ocean, fishing has been moderate with landings consisting primarily of skipjack. With slight weakening of skipjack prices in this side of the world, raw material inventories during the first quarter period in Thailand increased moderately both through imports as well as carriers arriving in Bangkok. From January-March 2016, the average import price of skipjack was 6.3 percent lower than last year's. Frozen tuna import volumes into Thailand increased by 8 percent to total 125 600 tonnes against 120 000 tonnes in the same period in 2015. However, import volumes of yellowfin and albacore declined by 35 percent and 28 percent respectively at 21 500 tonnes and 7 000 tonnes compared with the same period last year.

Fishing in the Atlantic Ocean continues at a low-to-moderate rate, while raw material inventories at local canneries are at low levels. Skipjack and yellowfin prices continue their upward trend due to short supplies from the Indian and Atlantic Ocean.

Indonesia reported improved domestic catches of pole and line caught skipjack since the first quarter of this year as a result of the government's measures to combat IUU fishing by foreign fishing vessels. Price of pole and line skipjack has a premium price at USD 1 700-1 800 per tonne, FOB Indonesia, which is USD 200 per tonne higher than purse seine caught skipjack. The main fishing areas for pole and line fishing are the eastern part of Indonesia, namely North Sulawesi, South of Sulawesi, Maluku and East Flores.

Canned tuna production in Ecuador, the largest supplier to the European market, was lower in May following the earthquake in mid-April. The canneries in Manta were kept closed for two weeks as many workers went back home to be with their family members following the quake. In addition, the port infrastructure at Manta was directly impacted, which made it impossible to land raw material for the canneries. Combined with a scarcity of tuna arrivals from the Eastern Pacific, this situation is pushing prices upwards.

## Japanese tuna landings (by species and fresh/frozen)

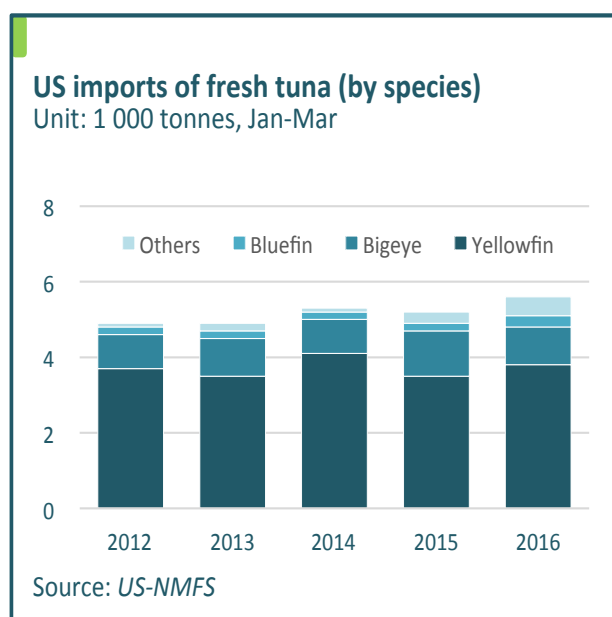
		January-March				
		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Bluefin	Fresh	0.0	0.1	0.0	0.0	0.1
	Frozen	0.2	0.1	0.3	0.3	0.6
<b>Subtotal</b>		<b>0.2</b>	<b>0.2</b>	<b>0.3</b>	<b>0.3</b>	<b>0.7</b>
Bigeye	Fresh	1.0	0.8	0.7	0.7	0.7
	Frozen	5.9	5.8	5.9	7.2	6.7
<b>Subtotal</b>		<b>6.9</b>	<b>6.6</b>	<b>6.6</b>	<b>7.9</b>	<b>7.4</b>
Yellowfin	Fresh	1.0	0.9	0.9	1.2	0.7
	Frozen	9.3	5.2	7.6	9.3	8.2
<b>Subtotal</b>		<b>10.3</b>	<b>6.1</b>	<b>8.5</b>	<b>10.5</b>	<b>8.9</b>
Albacore	Fresh	10.6	7.6	5.8	8.5	5.5
	Frozen	2.6	2.7	1.8	1.7	1.3
<b>Subtotal</b>		<b>13.2</b>	<b>10.3</b>	<b>7.6</b>	<b>10.2</b>	<b>6.8</b>
Skipjack	Fresh	2.4	3.5	2.0	4.9	3.0
	Frozen	52.3	47.5	47.6	38.2	36.9
<b>Subtotal</b>		<b>54.7</b>	<b>51</b>	<b>49.6</b>	<b>43.1</b>	<b>39.9</b>
<b>Total</b>		<b>85.4</b>	<b>74.2</b>	<b>72.6</b>	<b>72.2</b>	<b>63.8</b>

Source: MAFF, Japan; \* including distant water catches

## Non-canned tuna markets (fresh and frozen)

### USA

US-non canned tuna imports totaled 12 100 tonnes during the first quarter of this year, against the 11 700 tonnes of imports during the same period last year. Supplies consisted of fresh airflown tuna, frozen whole/dressed tuna and fresh/frozen fillets. There were increased imports of high quality bluefin tuna from Mexico and Spain as well as southern bluefin from the Pacific, meant for sushi and sashimi usages. During this period, imports of whole/dressed fresh and frozen yellowfin as well as frozen tuna fillets increased. Indeed, more than 6 000 tonnes of frozen tuna fillets were imported during January-March 2016 (+1.6 percent). Supplies increased from the



Philippines, Viet Nam, Sri Lanka, Thailand and the Maldives but declined from Indonesia, the leading exporter.

### Japan

On 5 January, Tokyo's Tsukiji fish market witnessed the auction of the most expensive local bluefin tuna of the year at USD 118 000 (fish weight of 200 kg). This was the last New Year auction trade in this market as Tokyo's wholesale fish operations will move to the newly established Toyosu fish market in October.

In general, imports of fresh and frozen tuna destined for the sashimi trade in Japan increased during January-March 2016. Compared with the first quarter of 2015, supplies of whole/dressed fresh yellowfin and bluefin, frozen bigeye and frozen yellowfin were higher.

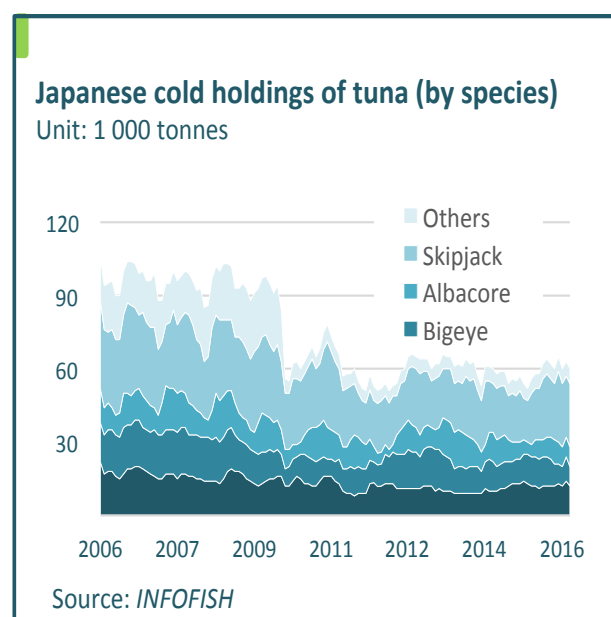
Frozen bluefin and bigeye fillet imports also increased during the reporting period. Total imports of deep frozen (at -60°C) tuna fillets were slightly lower at 12 300 tonnes (-4 percent), due to reduced catches of bluefin and yellowfin. However, imports of popular bigeye fillet (redmeat quality) increased by 34 percent.

Consumer demand for sashimi tuna in Japan was better during this year's spring festival months from April-May, which is one of the highest sales periods for sashimi tuna in Japan.

## Canned tuna

### Exports

Lower prices of raw material supported export growth of canned tuna from most of the producing



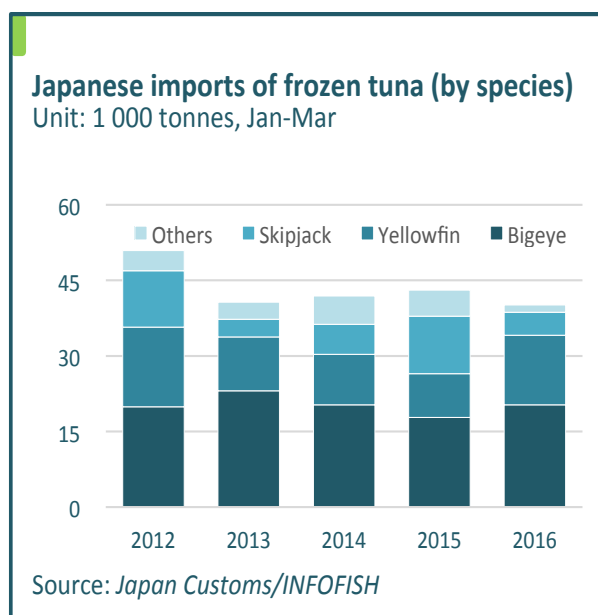
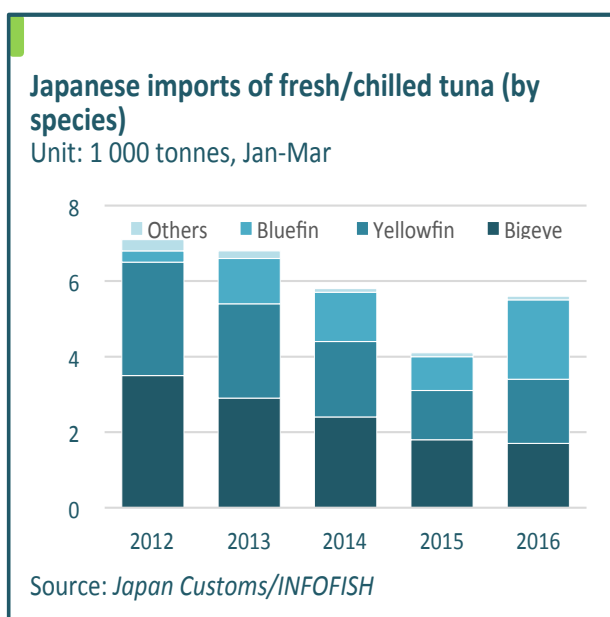
countries in the first quarter of the year. Among the top six global exporters of canned and prepared tuna, exports from Thailand increased marginally (+1 percent). By the end of May however, frozen skipjack prices for delivery from the Western Pacific to Thailand had stopped falling.

In Spain, canned tuna exports demonstrated strong growth for the first quarter of 2016, increasing by 20 percent compared with the same time period last year. Spanish supplies increased to EU-markets as well as to the Middle East and North Africa. Other EU canned tuna producers, namely Italy and Portugal, also reported higher sales by 13 percent and 7.5 percent respectively. Exports from France declined by 4 percent.

Among the top six global exporters of canned/processed tuna, there was a 19 percent rise in exports from Ecuador and 12 percent from China during the first quarter of 2016 compared with the same period in 2015. The first two months export data on Indonesia implied a 13 percent rise but a 23 percent drop from the Philippines.

## Imports

Lower prices seem to have induced import demand for canned/processed tuna in some EU markets, but the trends were negative in the North American markets of the USA (-14.5 percent) and Canada (-10 percent). In Asia/Pacific, imports increased in Japan and New Zealand but declined in Australia. There were higher imports to Southeast Asia, the Middle East and North African markets during the first quarter of 2016 compared with the same period in 2015. In Latin America, canned tuna imports increased in Argentina, Peru and Chile, but declined in Brazil.

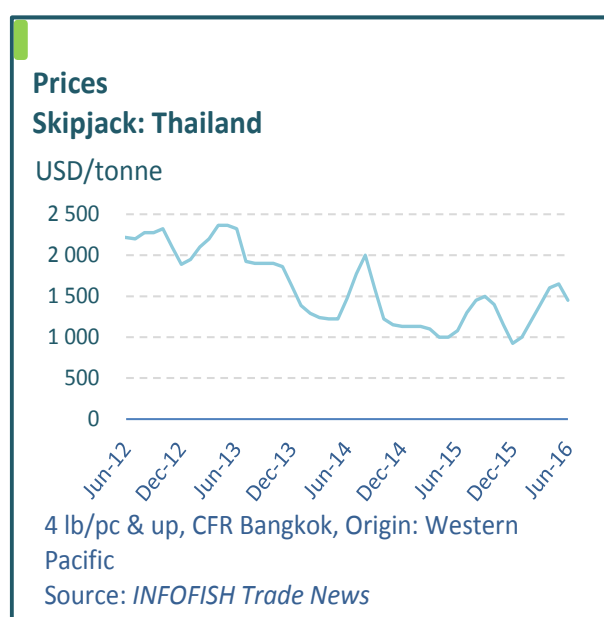


## USA

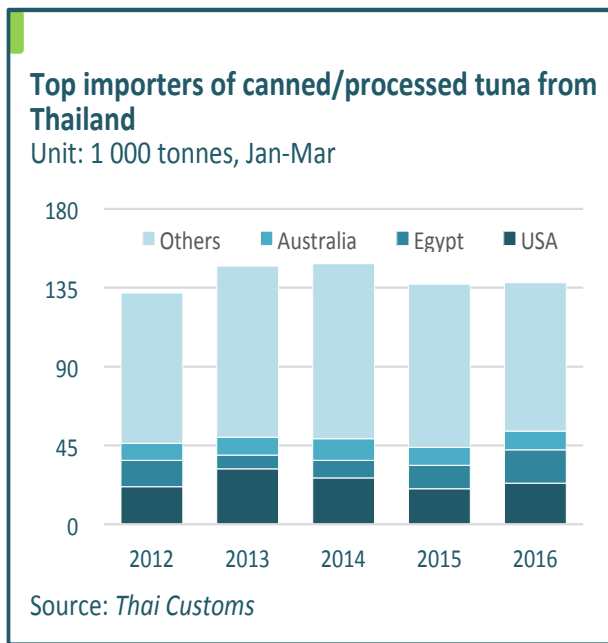
The US canned tuna market has been holding enough inventories from last year, which resulted in falling import volumes despite the continuous ease in prices. Indeed, total imports of prepared and canned tuna in the USA was 7 percent lower during the first quarter of 2016 compared with the same period in 2015. Among the top six sources, supplies declined from all but Viet Nam and Mexico. Total imports of canned/processed tuna were comprised of 10 500 tonnes of tuna in pouch, 17 120 tonnes of cooked loin with the balance (14 580 tonnes) being made up of canned tuna. The imports of higher-value tuna in pouch increased by 3.7 percent compared with the same period a year ago, while for cooked loins, imports declined by 12.7 percent.

## EU

The negative import trend for EU canned and



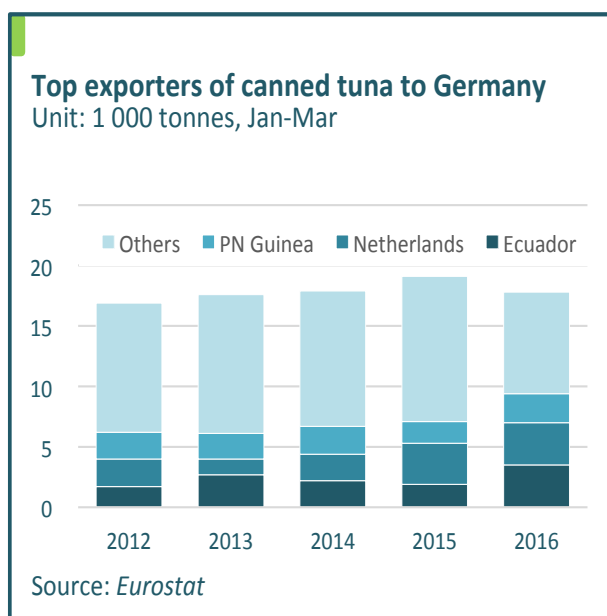
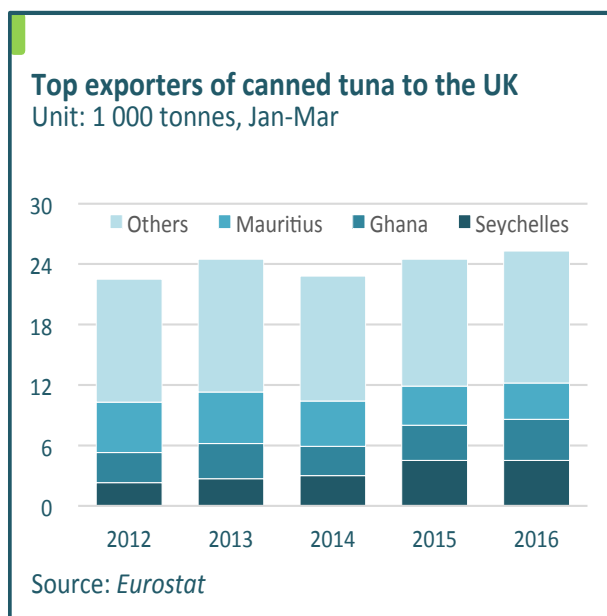
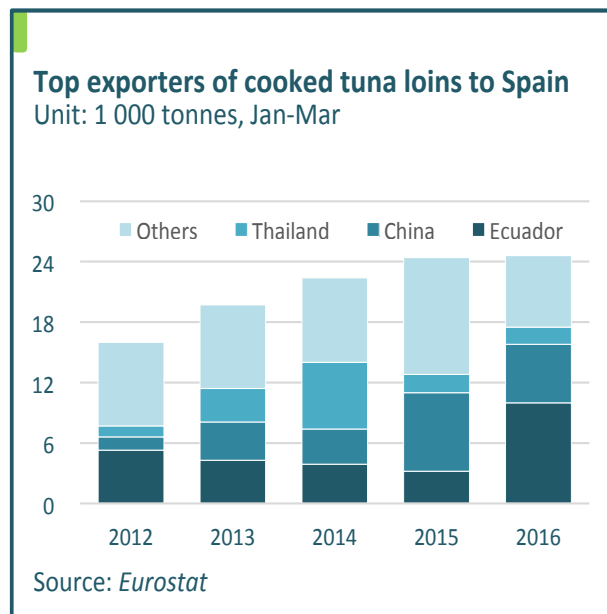
processed tuna in 2015 reversed somewhat during the first quarter of 2016. Imports totaled 124 000 tonnes, which is nearly 6 percent higher than the same period last year. This was mainly due to the significant supply surge from a single source, Ecuador, which increased its exports to the EU by 1 percent. Ecuador's volume to the EU comprised a 26 percent share in total imports of canned/processed tuna from non-EU countries and demonstrated supply growth.



Also during this period imports of canned and processed tuna increased from Thailand by 4 percent, from the Seychelles (+20 percent) and from Ghana (+21 percent). Among the top ten extra-EU suppliers, volumes declined from Mauritius (-3 percent), China (-40 percent), the Philippines (-42 percent) and Viet Nam (-20 percent).

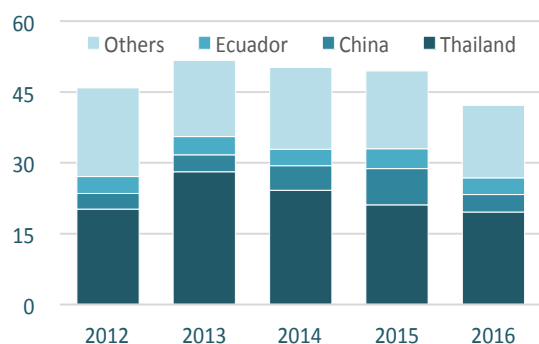
Among the individual EU markets, canned and processed tuna imports increased into Spain, with its total volume consisting mostly of cooked loins for reprocessing. For direct consumption, the UK imported 3.5 percent more, while Germany reported lower imports (-7 percent).

An important observation for the first quarter of 2016 is the increased demand of higher-value canned tuna in the intra-EU market, which is generally supplied by EU canners in Spain, France, Italy and Portugal. Exports of this Spanish origin higher-value product within the EU increased by nearly 17 percent in quantity and by more than 7 percent in value to total 31 200 tonnes valued at USD 155.2 million during January-March this year.



## Top exporters of canned tuna to the USA

Unit: 1 000 tonnes, Jan-Mar



Source: USNMFS

## Other markets

In the Asia/Pacific region, other important trade trends in the canned tuna market during the first quarter of the year included Japanese imports increasing reasonably by 14 percent to total 14 100 tonnes with growing supplies from Thailand, the Philippines, Indonesia, China and Viet Nam. Nearly 1 500 tonnes of these were cooked/dried katsuobushi products. In Australia, imports weakened by 15.5 percent to total 11 300 tonnes, with Thailand taking a 91 percent market share.

Canned tuna imports increased in New Zealand, Taiwan Province of China, Malaysia, Singapore and Sri Lanka during the January-March 2016 period. Export data from Thailand also indicated better sales opportunities of canned tuna destined to the Middle East.

## Outlook

Starting from 1 July, purse seine operations in the Western and Central Pacific have been subjected to the seasonal three month FAD fishing ban. Hence, demand for tuna from processors is likely to stay positive and prices should remain stable or be on the rise.

The most significant trade related news for the tuna sector in the future is the European Commission's formal notice (yellow card) issued in April 2016 to Thailand for not taking sufficient measures in the international fight against IUU fishing. In April, the EU issued that they had "given six months (for Thailand) to implement a corrective tailor-made action plan. Should the situation not improve, the EU could resort to banning fisheries imports from Thailand".

Last year, the EU imported USD 184 million worth of canned tuna from Thailand, so if the ban goes into effect, there could be serious repercussions to Thailand with the EU facing possible supply shortages.



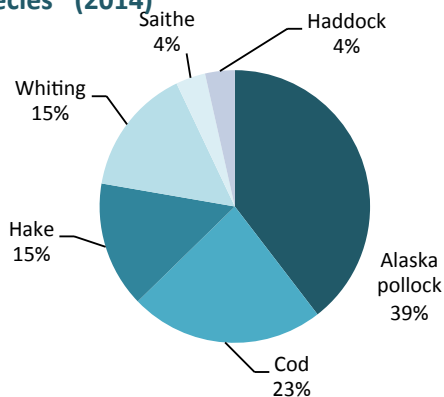
# GROUND FISH

## GLOBEFISH HIGHLIGHTS

### *Smooth waters ahead except for surimi*

Groundfish quotas are increasing slightly and supplies are expected to be stable. For some products, prices have inched upwards, and may go further. Surimi is the oddball however - production is expected to increase significantly, which may lead to a pronounced price fall. The supply situation is stable, with an expected slight (+2-3 percent) increase in supplies in 2016. However, there may be an oversupply of pollock, resulting in some pressure on prices. Overall, trade flows will undergo shifts in 2016, as more processing of raw material from Europe and North America will be shipped to Viet Nam instead of China.

**Groundfish production by selected species\* (2014)**



Source: **FAO**  
\*Both wild and farmed

## Resources

The Icelandic Marine Research Institute is recommending a 2 percent increase in its TAC (to total 244 000 tonnes). At the same time, ICES is recommending a 9 percent cut in the quota in the Barents Sea. For 2017, ICES has recommended a cod quota of 805 000 tonnes, down from 894 000 tonnes in 2016. The haddock quota suggested by ICES for 2017 was set at 233 000 tonnes, down from 244 000 tonnes in 2016.

In the North Sea, ICES has recommended a 2017 cod quota of 47 431 tonnes, down from 49 259 in 2016. The saithe quota in the North Sea, on the other hand, will be increased by 60 percent to 116 605 tonnes.

Canada's Atlantic cod stocks are reported to be slowly recovering. According to a report by the CBC News, the stocks are the largest they have been since 1992, but this does not mean that large-scale commercial fishing is being resumed. The Canadian Government imposed a moratorium on this fishery in 1992 because the stock was in danger of extinction. As a result, the stock is now recovering, and has grown to 300 000 tonnes in 2013 and to 538 000 tonnes in 2015.

The 2016 quota for US hake (also called Pacific whiting) has been increased by 13 percent to 367 553 tonnes. Of the total quota, 17.5 percent (64 322 tonnes) is reserved for Native Americans, 1 500 tonnes are set aside for by-catch, and the rest is for commercial operations.

The FAO General Fisheries Commission for the Mediterranean has announced that countries bordering on the Mediterranean have agreed to limit the fishing for hake in the Strait of Sicily in an effort to rebuild the resource. The measures introduced include closure of bottom trawling in three breeding areas, the introduction of a minimum reference size of 20 cm, and catch limits for 2017 and 2018.

## Landings

Total Icelandic landings of groundfish increased by 8.2 percent during the first five months of the year, to come to 208 700 tonnes. Cod landings grew by 11.8 percent to 124 000 tonnes, and haddock landings went up by 4.6 percent to 19 100 tonnes, while saithe landings were down by 6.4 percent to 21 244 tonnes.

Norwegian groundfish landings by the end of June were also up. The three major species (cod, haddock and saithe) were up by 9.2 percent to 350 400 tonnes compared with the January to June period in 2015. Cod was just slightly up (+1.9 percent to 254 900), haddock increased by a significant 55.7 percent to 46 100 tonnes and saithe increased by 20.1 percent to 49 300 tonnes.

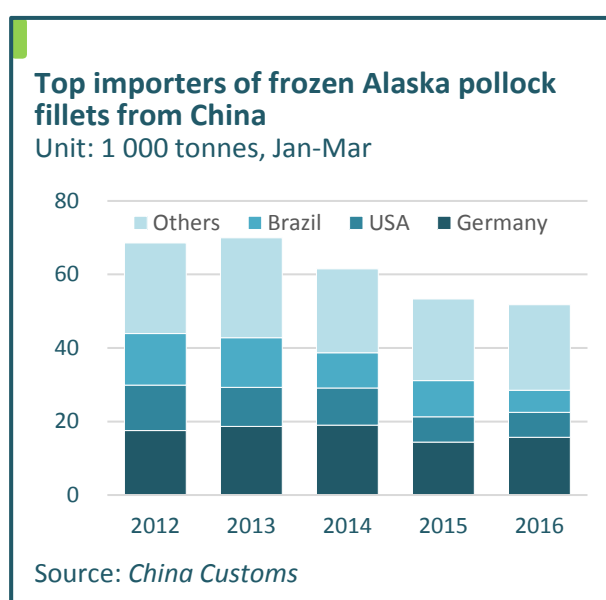
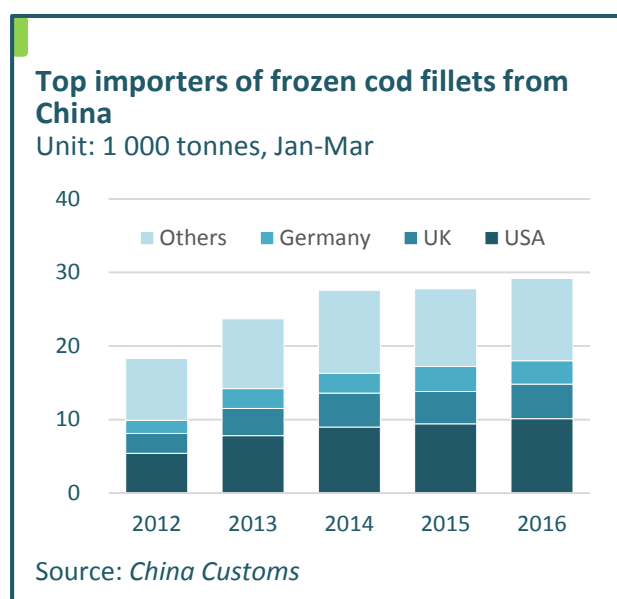
Also in Norway, the skrei (spring spawning cod) season (January-May) was reported to be very strong. A total of about 90 500 tonnes of skrei were landed, and at good prices to fishers. The fishery was a little slow to start with first-hand prices running high initially, as much as USD 3.60 per kg, but prices declined to about USD 3.00 per kg when landings increased.

## Processing

The size of the cod landed this season has been a problem for processors, who complain that the fish is too big. Processors prefer fish sized 1-2 kg, but this year fish caught near Lofoten in Norway have been around 2-3 kg, with some over the 3 kg mark. Smaller fish has been hard to come by, and this has pushed prices for larger fish down.

China continues to play an important role in processing cod and Alaska pollock for international markets. During the first three months of the year, Chinese exports of frozen cod fillets increased by 5 percent, to 29 200 tonnes. The largest importers of Chinese frozen cod fillets are the USA (accounting for 34.5 percent of the total), the UK (16.1 percent of total) and Germany (11 percent of total).

The largest importers of Chinese frozen Alaska pollock fillets were Germany (30.3 percent of total), the USA (13.1 percent of total), and Brazil (11.6 percent of total).



Raw material (whole frozen fish) for Chinese fillet production is imported from three major suppliers: Russia, the USA and Norway. During the first quarter of 2016, Chinese imports of whole frozen cod increased year-on-year by 18.4 percent to total 47 700 tonnes.



Imports of whole frozen Alaska pollock into China showed a more modest increase by 0.7 percent, to total 229 tonnes. Russia is by far the top exporter, accounting for as much as 96.9 percent of the total during the first quarter of 2016.

In a new trend, Viet Nam is becoming more active in the re-processing of groundfish from Europe and North America, and is thus competing with China. Since 2012, EU imports of double frozen Atlantic cod fillets have included about 2-4 percent product from Viet Nam. So far in 2016, the share of this product from Viet Nam in total EU Alaska pollock imports have jumped to almost 9 percent. Not only that, but



prices paid for Vietnamese processed and re-frozen Atlantic cod fillets are consistently higher than prices for the same product from China. Indeed, in 2016, Vietnamese exports prices for double frozen Atlantic cod fillets to the EU were over 29 percent higher than the corresponding product from China.

## Trade

Norwegian sales of fresh cod increased by 14.2 percent during the first quarter of 2016, while Norwegian exports of fresh saithe increased by 232 percent in the same period. It seems that the market demand for fresh groundfish is growing, with other groundfish species like saithe and haddock now being increasingly consumed. Export growth was strong for fresh saithe and haddock, which from the first quarter of 2015 to 2016 increased by 244 percent and 144 percent respectively.

US imports of cod-like groundfish fell by 7.8 percent during the first quarter of 2016 compared with the same period in 2015. China, the largest supplier, accounted for most of this. Imports of fillets went down by 3.7 percent, while imports of blocks and

slabs fell by 23 percent.

In Germany, frozen cod fillet imports fell from 9 700 tonnes during the first quarter of 2015 to 8 800 tonnes in the same period in 2016 (-9.3 percent). While most European exporters to Germany shipped less frozen cod fillets in this period, China and Viet Nam exported more of this product to Germany.

There was also a fall in German imports of frozen Alaska pollock fillets during the first quarter of the year. Total imports of the product fell by 3.4 percent, from 35 000 tonnes in 2015 to 33 800



tonnes in 2016. China and the USA dominated as exporters, accounting for 59 percent and 36 percent respectively.

## Prices

Norwegian export prices for cod have been on an upward trend since 2014, and although prices fell in the period from December 2015 to March 2016, they have now recovered somewhat again.

However, it should be noted that this trend is true mostly only for fresh whole cod and fresh fillets. Frozen products are still slightly down. A rather turbulent currency exchange market is one of the main reasons for the rising exports prices in Norway as the Norwegian krone has depreciated against the US dollar and the euro. Thus export prices reported in NOK appear to be on the rise, whereas in reality they may be rather stable.

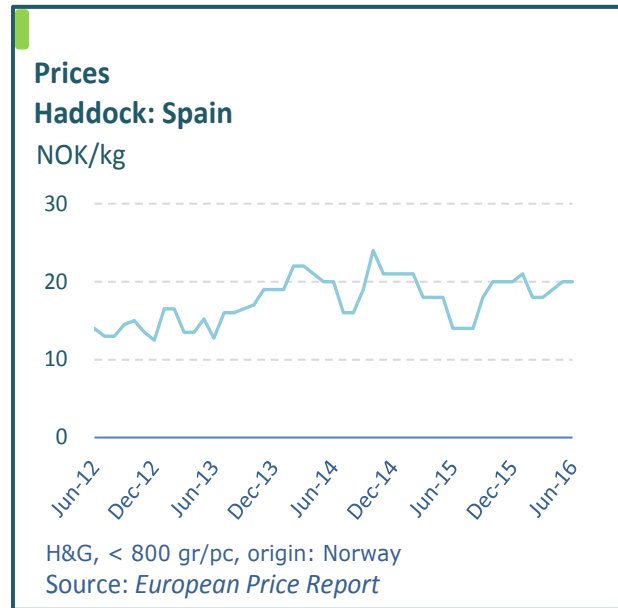
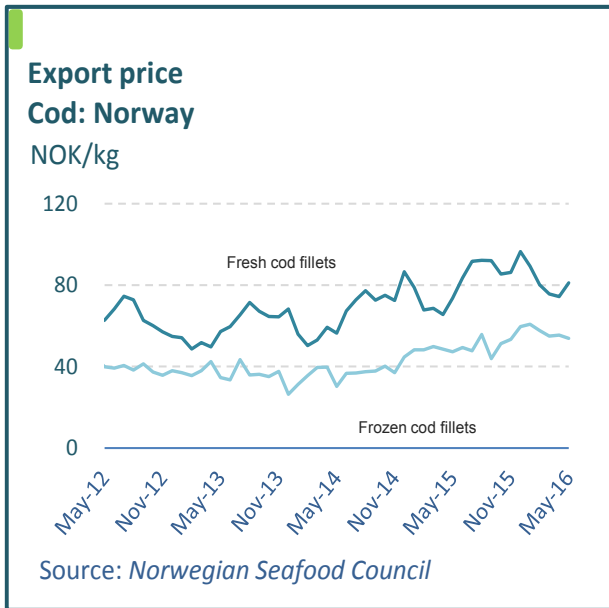
US Pacific cod prices have firmed since the beginning of the year. Though there is ample supply, demand in the USA is strong, with consumers asking for sustainable, domestically-sourced products. Prices

### US imports of cod-like groundfish (by product and origin)

		January-March				
		2012	2013	2014	2015	2016
Fillets	China	21.3	22.4	23.0	23.9	22.7
	Iceland	2.1	3.1	3.3	2.6	3.5
	Canada	1.1	0.9	1.0	0.8	1.1
	Others	2.9	5.7	4.9	4.9	3.7
	<b>Subtotal</b>	<b>27.4</b>	<b>32.1</b>	<b>32.2</b>	<b>32.2</b>	<b>31.0</b>
Blocks/ Slabs	China	9.3	8.4	8.6	6.8	5.1
	Iceland	0.3	0.5	0.6	0.6	0.4
	Norway	0.1	0.2	0.3	0.3	0.2
	Others	1.1	1.6	0.5	1.0	1.0
	<b>Subtotal</b>	<b>10.8</b>	<b>10.7</b>	<b>10.0</b>	<b>8.7</b>	<b>6.7</b>
<b>Total</b>	<b>38.2</b>	<b>42.8</b>	<b>42.2</b>	<b>40.9</b>	<b>37.7</b>	

Source: NMFS





for US Pacific cod were expected to rise somewhat when the B season started on 10 June, as fishing is then slower and landed volumes were expected to drop somewhat. For US cod blocks, prices are flat in a continued long-term trend. US Alaska pollock block prices dropped this spring.

Prices for frozen at sea (FAS) cod were high this spring due to tight supplies. Demand for this product is quickly increasing, outpacing that of actual supplies. FAS cod and haddock are much used in fish and chips dishes, and demand for these foods is on the rise in the UK.

Haddock (H&G) prices were weak in July 2015, then moved up rapidly at the end of last year. There was a fall in haddock prices in the beginning of this year,

but over the last few months they have moved upwards.

Observers in the industry expect haddock prices to be stable for up to six months. It is forecasted that in the beginning of 2017, prices for H&G haddock may move up moderately.

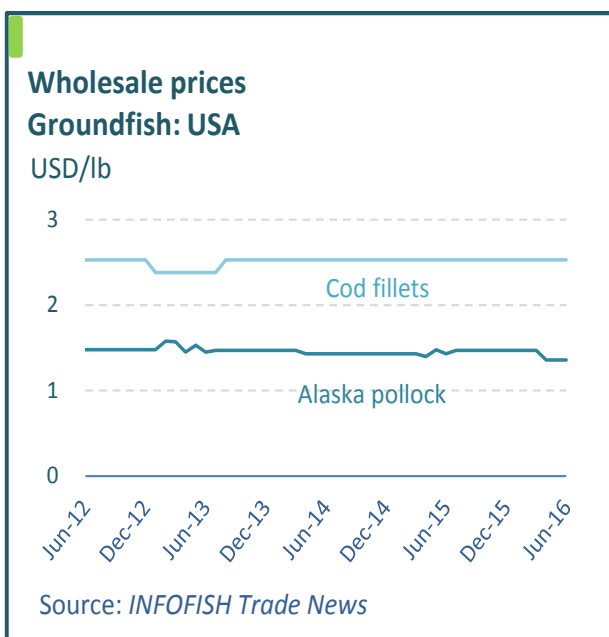
## Surimi

The Alaska pollock A season fell short of expectations, but the US surimi industry still believes that 2016 will be a good one, if not a bumper year. Production is expected to pick up in the B season, which started 10 June. In the 2014/2015 season, global surimi production was estimated at some 800 000 tonnes, of which Alaska pollock surimi accounted for 200 000 tonnes. Tropical fish surimi accounted for about 500 000 tonnes, with other fisheries contributing the rest (Source: *US Surimi Forum*, April 2016).

In Alaskan waters, pollock tends to stay longer in colder waters, and consequently the fish grows slower. This smaller fish has prompted some processors to shift from filleted pollock production to surimi production. This is a trend that started in 2015, and is expected to continue. Also contributing to a shift in surimi production is the increased Alaska pollock quota and problems in the European block industry.

According to some analysts, these shifts towards surimi production may lead to a significant increase in surimi that will result in a price crash following a slight price increase since 2014.

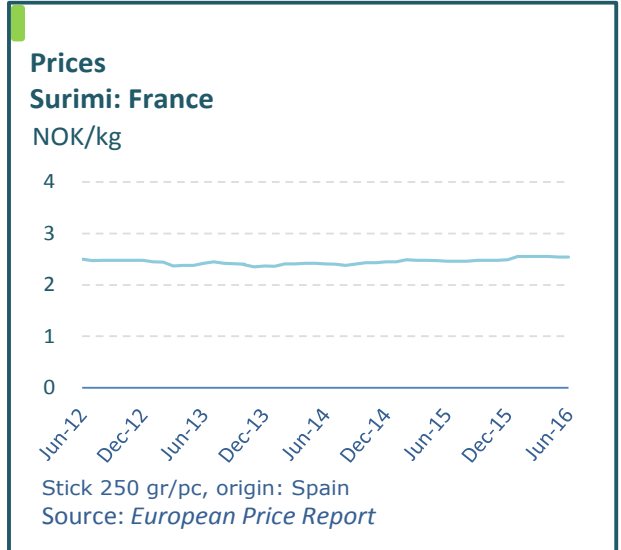
The expected additional production may amount to





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30 000 to 40 000 tonnes, and it is doubtful whether the market can absorb that amount without a major price reduction. Adding to the concern is a longer-term trend that consumers are increasingly preferring “natural” products, which is leading them to move away from processed foods, such as surimi. However, there is also still a significant demand for



high-protein products, with surimi filling that need. With all of these developments and trends, it will be interesting to see how demand does with a possible over supply.

In the Faroe Islands, a fishing and processing company is building a surimi plant to produce surimi based on blue whiting. Rather than using the blue whiting for fishmeal production, as they currently do, they think they can get a higher price for their catch by turning it into surimi. The company has a blue whiting quota of 70 000 tonnes for 2016, and expects to produce about 6 000 tonnes of surimi in 2017. The plant is expected to open in December 2016.

In Japan, buyers are demanding even lower prices for Alaska pollock surimi after they fell in April. Compared with the 2015 A season, Japan’s purchasing price for middle- and low- grade products went down by JPY 20 per kg. This is the first time in six seasons that Japanese surimi prices have declined, which demonstrates that it is largely due to currency exchange fluctuations as the yen has appreciated against the USD. Prices in USD have remained stable.

**Outlook**

For the rest of 2016, a stable supply situation is expected. In terms of prices, there will likely be relatively high prices for cod, while haddock prices will be lower, but showing signs of going up. In the surimi sector, there is a danger of overproduction that could result in a major price crash for some products.

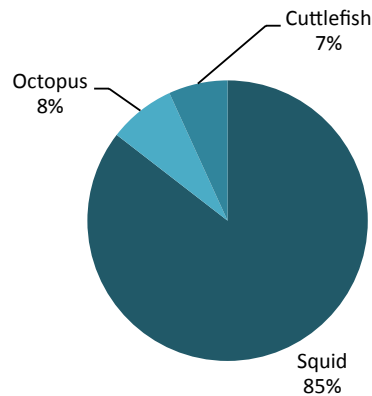
# CEPHALOPODS

## GLOBEFISH HIGHLIGHTS

### *Squid landings disastrously low and prices skyrocketing*

The 2016 squid season off South America has been a significant disappointment for the sector thus far. Landings are dramatically down, especially around The Falkland Islands (Malvinas), so much so that the authorities are considering reimbursing licence fees. As a result of the poor landings, prices are up by more than 30 percent. The strong El Niño this year is negatively impacting South American cephalopod landings in the Pacific, yet global squid supplies are expected to remain stable. Supplies of octopus have increased recently, and this has resulted in weaker prices on the main markets.

Cephalopods production (2014)



Source: **FAO**

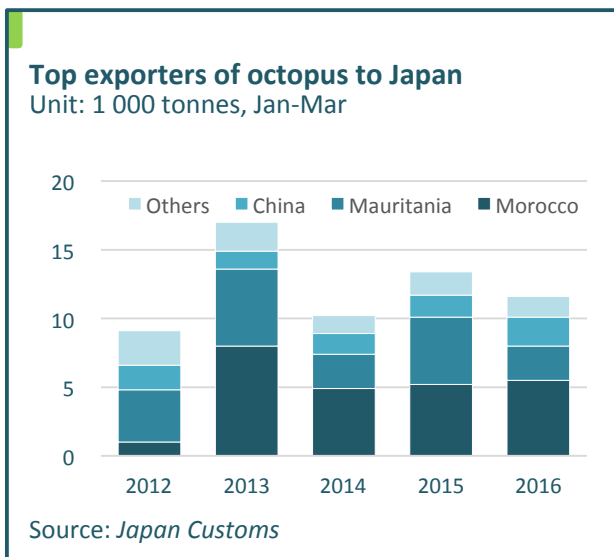
Earlier expectations of a relatively stable supply of squid in 2016 have been smashed by recent developments, as squid landings in South America have been dramatically reduced. In contrast, there seems to be reason for a more optimistic view in the longer term, as recent research has shown that global cephalopod populations are growing.

For instance, the University of Adelaide in Australia reports that populations of some squid and octopus species are increasing. Jumbo squid (*Dosidicus gigas*), for example, have been found to live longer and grow larger than previously. Researchers believe that warmer ocean temperatures may have caused this development.

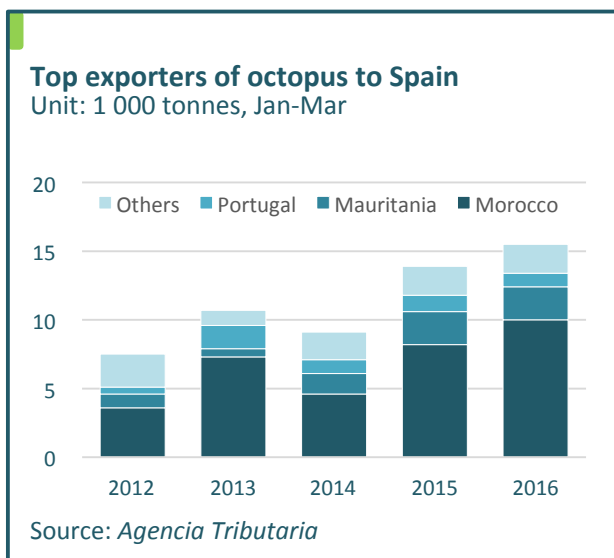
### Octopus

In Spain, authorities and the fishing industry agreed on imposing a ban on octopus fishing in Galician waters for a six-week period, from 20 May until 4 July, and imposing catch limitations thereafter in an effort to improve the stocks in these waters. During this period, prices were solid as a result of restrictions. In the beginning of June, supplies of fresh cooked octopus and frozen octopus in Mercamadrid, a Spanish food distribution company, increased.

During the first quarter of 2016, Japanese imports of frozen octopus fell by 13.4 percent. The main reductions came from lower shipments from Mauritania, which shipped 49 percent less than during the same period in 2015. Shipments from Morocco and China both went up.



Spanish octopus imports, on the other hand, grew by 11.5 percent during the first quarter period, to 15 500 tonnes. The main supplier, Morocco, increased exports to Spain by almost 22 percent, to total 10 000 tonnes. For the other suppliers there were only minor changes.



US octopus imports declined by some 17 percent during the first quarter of 2016 compared with the same period in 2015. Imports fell from 5 700 tonnes in 2015 to 4 700 tonnes in 2016.

## Squid

Landings of *Illex* squid off the South American coast in 2015 were about 25 percent below 2014 figures. Total Argentine landings of *Illex argentinus* for 2015 amounted to 126 500 tonnes. For 2016, the situation is even more dire.

According to authorities, *illex* catches in the Falkland Islands' (Malvinas) exclusive economic zone (EEZ) so far this season were just 2 000 tonnes, an extreme

drop compared with 170 000 tonnes during the same period last year. In fact, catches have been so low that the authorities are considering reimbursing part of the licence fees to vessels.

The *loligo* fishery has shown more encouraging signs. In 2015, Argentine *loligo* landings hit a record 358 000 tonnes, up from 306 000 tonnes in 2014. In 2016, *loligo* landings are expected to fall again, but not as dramatically as is the case for *illex*.

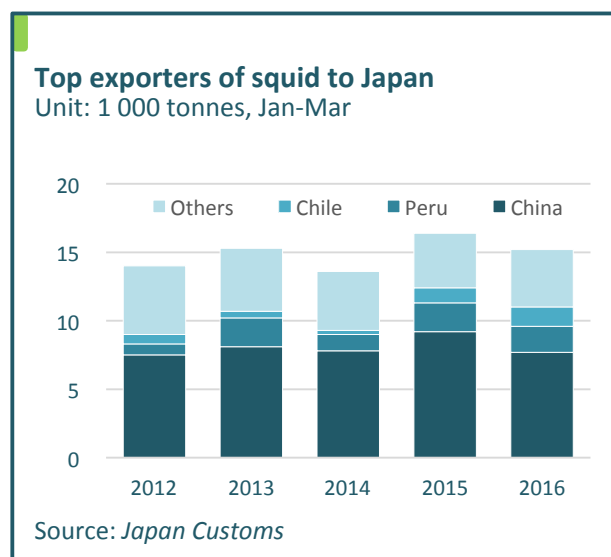
In Argentine waters, production figures are a bit brighter, but still below landings last year. The poor landings off South America are generally attributed to the strong El Niño in 2015/2016. However, scientists are now expecting the current El Niño to taper off and temperature conditions to return to normal. This should bring about an improvement in landings over the next year.

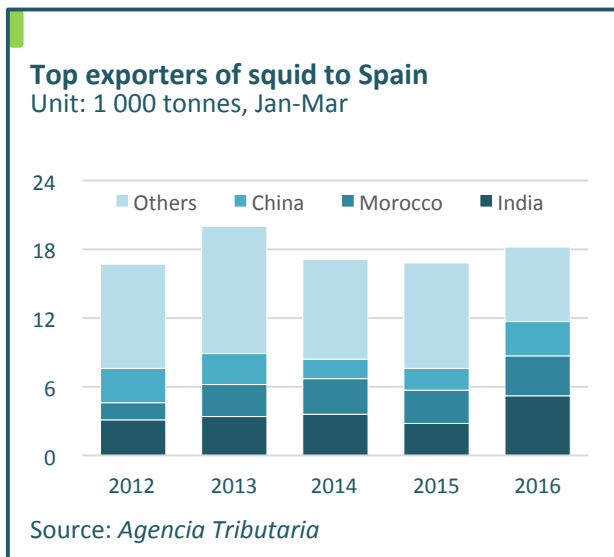
El Niño is having the same effect on squid fisheries further north, along the California coast. Squid supplies are very tight locally, and this is affecting local restaurants as well as the squid fishermen.

According to Undercurrent News, the shortage of *illex* may lead some retailers to shift their sourcing to giant squid from Peru. Retail demand for squid in Europe is strong, but supplies and inventories are low.

In terms of trade, for the first quarter of 2016, there was a slight decline in Japanese imports of squid. Imports fell from 16 400 tonnes during the first quarter of 2015 to 15 200 tonnes during the same period in 2016 (-7.3 percent). Both the leading supplier, China, and the second largest supplier, Peru, shipped less squid to Japan during this period, while shipments from Chile went up by 300 tonnes (+27.2 percent).

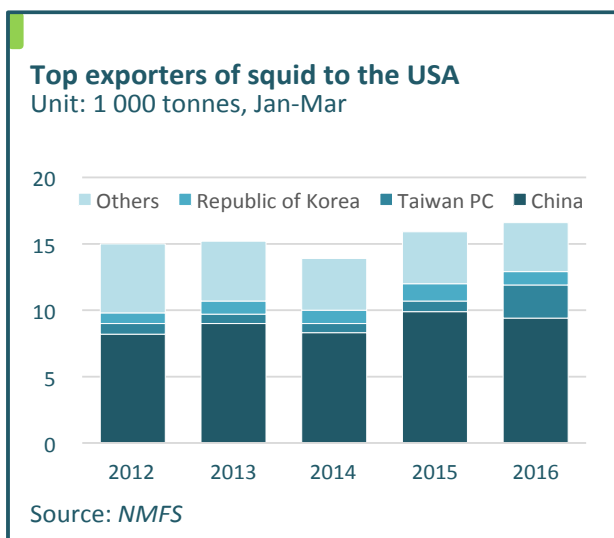
Squid imports into Spain increased by 8.3 percent during the first quarter, to 18 200 tonnes. The main supplier was India, which increased shipments substantially, from 2 800 tonnes in the first quarter of 2015 to 5 200 tonnes during the same period in





2016 (+85.7 percent). Morocco, China, and the USA also increased squid shipments to Spain during this period.

US squid imports increased as well during the first

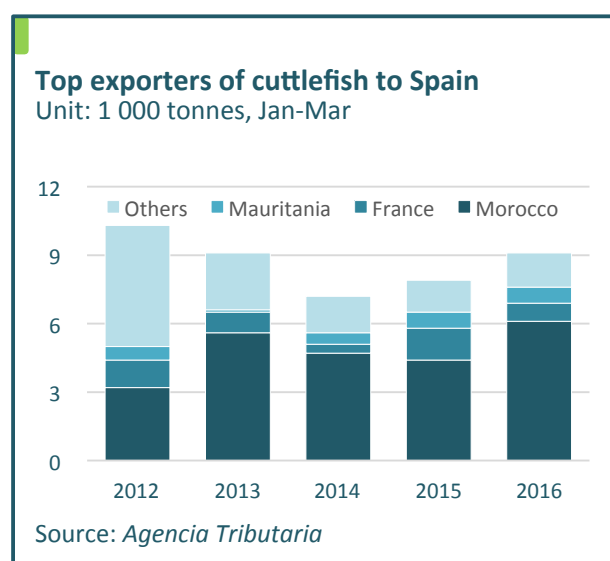
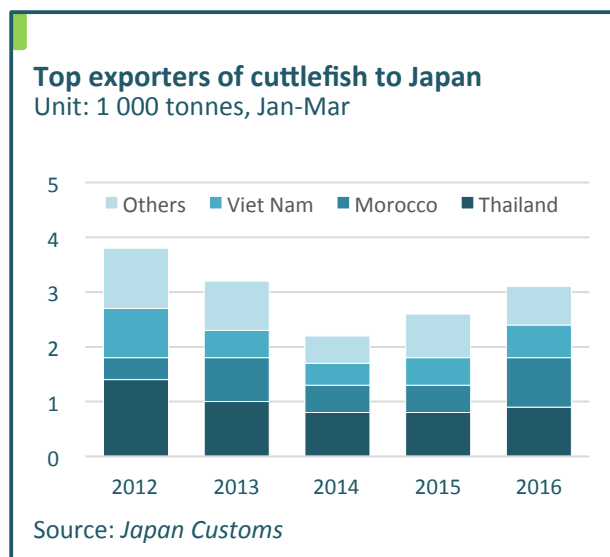


quarter, albeit by only 4.4 percent to 16 600 tonnes. The main supplier to the USA was China, which accounted for as much as 56.6 percent of total US squid imports during this period.

The USA is also an important exporter of squid, and the poor landings on the west coast had a major effect on US exports. During the first quarter of 2016, US squid exports fell by 62.8 percent, from 17 800 tonnes in 2015 to just 6 600 tonnes during the same period in 2016.

## Prices

Inevitably, the poor landings have significantly affected squid prices, which have increased markedly during the first half of the year. Urner Barry reports that prices for 3-5 tubes and tentacles from China were up by 17.5 percent since the beginning of 2016, and that prices as of this writing are 30

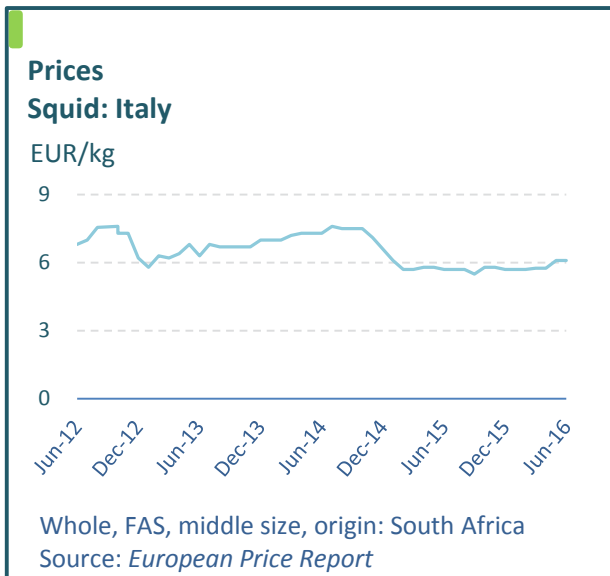


percent above what they were a year ago. Some Argentine exporters report that demand from China has been especially strong, and thus prices paid by Chinese importers have increased dramatically. Prices for Argentine squid have risen from USD 1 700 per tonne at the beginning of the year to about USD 2 300 per tonne in June. Further price increases are likely.

Squid prices in Italy have been very stable for the past 18 months, when they dropped significantly in December 2014. Since then, prices have hovered around EUR 6.00 per kg. In May and June, prices went up slightly, to EUR 6.10 per kg.

## Cuttlefish

It seems that the cuttlefish trade has been more dynamic as of late. During the first quarter of 2016, imports into Japan increased by almost 20 percent. Spanish imports of cuttlefish went up by 15 percent during the same period.



The main suppliers to Japan were Thailand and Morocco, while the main suppliers to Spain were Morocco, France and Mauritania. Morocco accounted for as much as two thirds of Spanish imports during this period.

## Outlook

Supplies will remain very tight for some time, but the longer-term outlook might be brighter, as the El Niño effect is expected to taper off with temperature conditions expected returning to normal over the next six to twelve months. This should improve catches next season, however squid prices will remain high for some time with sustained strong demand. Demand for giant squid may grow as retailers are looking for a substitute for illex and loligo.



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# TILAPIA

## GLOBEFISH HIGHLIGHTS

*Major tilapia markets continue to weaken, however international trade stays positive with promising African markets*

The weak positions of the USA and EU, the major tilapia markets, continue into the first quarter of 2016. Nevertheless, international trade remained positive. Based on reporting by major markets and producers, total global tilapia exports are estimated to have increased by 18 percent during the first quarter of 2016, while imports are estimated to have grown by 15 percent compared with the same period in 2015. In addition to Asia and Latin America, which continue to produce and consume a growing amount of tilapia, African markets are increasingly taking a larger share of exports. Tilapia farming is also proving to play an important role in food security of countries in the Pacific, such as Fiji and Papua New Guinea.

## China

Total exports of Chinese frozen tilapia experienced a year-on-year 3 percent decline in volume during the first quarter of 2016 mainly due to lower exports of frozen fillets (-13 percent). However, exports of breaded fillets and whole frozen tilapia were up by 9.8 percent and 2.4 percent respectively.

### Chinese exports of frozen tilapia (by product and destination)

	January-March				
	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Frozen whole	21.3	23.1	29.1	24.3	24.9
Frozen fillets	33.6	30.7	31.8	34.9	30.2
Breaded fillets	11.7	13.3	15.1	18.5	20.3
<b>Total</b>	<b>66.6</b>	<b>67.1</b>	<b>76</b>	<b>76</b>	<b>75.4</b>

Source: China Customs

In terms of prices, average export prices of frozen tilapia in 2016 weakened further for all product groups. Export prices of frozen fillets were down 14.4 percent to USD 3.6 per kg, whole frozen by 6.5 percent to USD 2.04 per kg and breaded fillets by 11.8 percent to USD 3.86 per kg.

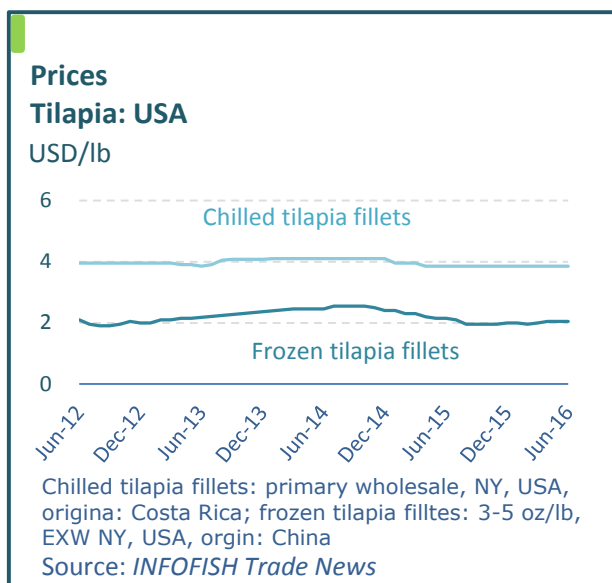
The USA remains the main market for Chinese frozen tilapia. In a new development however, Côte d'Ivoire overtook the USA as the largest Chinese market for whole frozen tilapia by importing 6 425 tonnes from China during the first quarter of 2016. This was an enormous 307 percent increase from the same period in 2015. Other African markets experiencing growth in Chinese whole frozen tilapia include Ghana, Kenya and Tanzania. Although average export prices to these African markets declined during the period under review, these markets paid higher prices (USD 2.20-2.60 per kg) compared with the US market (USD 1.79 per kg) due to strong demand, higher import tariffs and more nascent trade ties. It is important to note that imported tilapia represents a challenge for the development of domestic tilapia aquaculture in Africa.

For frozen fillets, which make up 40 percent of Chinese tilapia trade, exports declined to most markets including the USA. Notably, there was positive growth in exports to Iran, which indicated its potential as a growing market for tilapia fillets. Chinese exports of frozen fillets to Iran reached 3 600 tonnes during the 2016 first quarter, 59 percent up from the same period in 2015. The market has turned to tilapia as a cheaper source of frozen fish fillets compared with the popular New Zealand hoki.

In contrast, Chinese exports of frozen breaded tilapia experienced positive growth (+9.8 percent) into the main markets of Mexico, Côte d'Ivoire, Congo and Kenya.

## USA

Total tilapia imports into the US market during the first quarter of 2016 were 14 percent lower in terms of volume and 24 percent less in value terms compared with the same period of last year. 61 400 tonnes were shipped into the country valued at USD 247 976 million.



### US imports of tilapia (by product and origin)

	January-March				
	2012	2013	2014	2015	2016
	(1 000 tonnes)				
<b>Fresh fillets</b>					
Honduras	0.5	2.3	2.8	2.6	2.6
Colombia	0.4	0.9	0.9	1.2	1.4
Costa Rica	0.0	1.6	1.6	1.3	1.2
Others	1.7	2.4	1.7	2.0	1.5
<b>Subtotal</b>	<b>2.6</b>	<b>7.2</b>	<b>7.0</b>	<b>7.1</b>	<b>6.7</b>
<b>Whole frozen</b>					
China	6.6	5.4	5.2	7.9	7.3
Taiwan PC	2.8	3.4	3.4	2.6	3.4
Thailand	0.2	0.1	0.1	0.3	0.2
Others	0.4	0.2	0.2	0.8	0.3
<b>Subtotal</b>	<b>10.0</b>	<b>9.1</b>	<b>8.9</b>	<b>11.6</b>	<b>11.2</b>
<b>Frozen fillets</b>					
China	36.1	32.8	37.7	48.7	39.4
Indonesia	2.9	2.4	2.9	2.7	2.2
Others	1.5	1.1	1.1	1.4	1.5
<b>Subtotal</b>	<b>40.5</b>	<b>36.3</b>	<b>41.7</b>	<b>52.8</b>	<b>43.1</b>
<b>Total</b>	<b>53.1</b>	<b>52.6</b>	<b>57.6</b>	<b>71.5</b>	<b>61.0</b>

Source: NMFS

During the first three months of the year, China as usual remained the main tilapia supplier to the USA with 46 700 tonnes imported worth USD 166 838 million. These figures demonstrate a year-on-year decrease of 17 percent in volume and 29 percent value. The product mainly imported was frozen.

Other important suppliers, such as Honduras, Indonesia, Costa Rica and Mexico also registered drops in shipments to the USA, while Colombian exports of tilapia during January-March 2016 rose by 11.6 percent volume wise and 10 percent value wise.

Colombia's interest in the US market was demonstrated during the Seafood Expo North America 2016 in Boston where 14 Colombian companies participated. The potential growth of Colombia as a tilapia supplier to the US market is largely driven by the Free Trade Agreement signed three years ago. Colombia is also targeting other potential markets such as Chile, Spain, France, the UK, Netherlands, Belgium, Germany and Poland.

For now, Honduras maintains its leadership in the Latin American region as the largest exporter of fresh tilapia to the USA, despite the drop in production volume as a result of the drought caused by El Niño.

## RECENT NEWS

### Strengthening tilapia production in Belize and Fiji

In early June, the government of Taiwan Province of China introduced a tilapia farming workshop at a high school in Belize as part of its Aquaculture Project, a five-year initiative started in February of 2012 with the aim of enhancing tilapia production in Belize while improving the economic condition and the nutrition of Belizeans in rural areas.

The project teaches about guidelines on tilapia farming, constructing and managing ponds as well as cultivating and managing the fish themselves. They also received secchi disks and a lesson on how to use the tool to measure the water quality of their ponds.

In a similar vein in Fiji, the Department of Fisheries announced in June that it would provide tilapia and post larvae at no cost to farmers for the stocking of their fish and prawn ponds annually in a move to strengthen food security and improve livelihoods. A dedicated team of aquaculture specialists will provide farm development and husbandry training for both fresh water prawn and fish.



## PRODUCER FOCUS

### Viet Nam

The Ministry of Agriculture and Rural Development (MARD) is encouraging further expansion of aquaculture by supporting the development of tilapia farming. Launched in 2015, MARD's Development Scheme on Tilapia Cultivation has a target of raising tilapia production to 300 000 tonnes per year by 2020 of which 50-60 percent would be available for export. Plans call for some 33 000 hectares of water surface to be used for tilapia rearing by 2020, along with farming cages totalling 1.5 million square metres in area. Employment opportunities will increase as tilapia production grows and MARD estimates that by 2030, some 67 000 people will be directly employed in tilapia production.

## Taiwan Province of China

In the first quarter of 2016, total exports of frozen tilapia from Taiwan Province of China experienced 18 percent growth compared with the same period in 2015 to total 6 000 tonnes. The whole frozen tilapia makes up 90 percent of total frozen tilapia exports, with the first quarter showing 20 percent growth in this product category for exports to the major markets, namely the USA and the Middle East. Together, the US and Middle Eastern markets took an 88 percent market share of whole frozen tilapia exports from Taiwan Province of China. In contrast, frozen tilapia fillet exports experienced a marginal decline (-0.48 percent). Main markets for this product category are the USA, Republic of Korea, Canada and Japan.

## Outlook

Despite weakening in the major markets, the outlook seems promising amidst production problems in China as demand continues to be strong in Asia, Africa and Latin America. The species is also growing in importance for food security in the Pacific and the some parts of West Asia.

## EU

The weak demand in the EU persisted during the first quarter of 2016 as the EU imported 15.9 percent less total frozen tilapia compared with the same period in 2015. In total, the EU imported 6 600 tonnes of tilapia during this period. Both categories of frozen fillets and whole frozen tilapia, which take up almost equal shares, experienced declines of 7.3 percent and 26.4 percent respectively. Within the EU, Spain imports the largest volume of tilapia, mostly fillets although like elsewhere in the EU, imports declined during the review period.

Asia remains the main supply source to the EU, with the top five suppliers being China, Viet Nam, Indonesia, Thailand and Taiwan Province of China. Frozen tilapia fillets from Taiwan Province of China fetch premium prices due to high quality. In the whole frozen category, imports increased from Bangladesh, with this tilapia primarily consumed by the ethnic population of Bangladeshi residents in the EU.

# PANGASIOUS

## GLOBEFISH HIGHLIGHTS

### *Latin America and Asia Pacific remain lucrative for pangasius*

During the first quarter of 2016, approximately 150 000 tonnes of frozen pangasius (whole and frozen fillets) were imported into over 50 countries supported by low prices. Nearly 85 percent of this trade was comprised of frozen fillets. Markets in Latin America absorbed the largest share, followed by Asia. Combined, these two regions accounted for almost 50 percent of imports. The single largest market remains the USA, with imports to this market showing a recovery during the review period.

#### US imports of frozen catfish fillets

	January-March				
	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Viet Nam	22.6	20.0	29.5	26.8	31.9
China	1.9	1.3	2.9	2.7	2.4
Others	0.2	0.2	0.1	0.1	0.0
<b>Total</b>	<b>24.7</b>	<b>21.5</b>	<b>32.5</b>	<b>29.6</b>	<b>34.3</b>

Source: NMFS

### Viet Nam

According to the Vietnam Association of Seafood Exporters and Processors (VASEP), the value of pangasius exports for the first four months of 2016 totaled USD 507.54 million, up 5.2 percent year-on-year.

Also during the first four months of the year, Vietnamese exports to China and Hong Kong SAR experienced the highest increase (+61.1 percent in value terms to total USD 67.49 million), while exports to ASEAN countries declined slightly (-3.3 percent in value terms, dropping to USD 44.03 million) compared with the same time period last year. Among the ASEAN countries, Thailand, remained the leading importer of pangasius from Viet Nam (valued at USD 15.87 million), followed by Singapore and the Philippines with export values of USD 11.17 million and USD 9.41 million respectively.

As usual, the USA remained the largest global pangasius importer from Viet Nam with a total import value of USD 115.16 million for the first four months of 2016, accounting for 22.7 percent of Viet Nam's total export value. This value is 7.2 percent higher than compared with the same period last year.

In terms of pricing, VASEP reports that raw Vietnamese pangasius prices were in a standstill at the beginning of the year, but since mid-March, have started soaring. A drop in the country's pangasius farming area production drove this large growth.

In regulation news, in a development that was positive for the Vietnamese pangasius industry, the US Senate has supported scrapping the United States Department of Agriculture catfish inspection programme as critics argue that the programme was both economically wasteful and unnecessary. The programme is also said by some to be violating WTO rules. The resolution is pending the approval of the House of Representatives and President Barack Obama's signature to take effect.

### USA

Total imports of frozen catfish during the first quarter of 2016 were up 16 percent from the same period a year ago to total 34 500 tonnes. Imports of Pangasius spp comprised 93 percent of the total

pangasius imports, which showed an increase by 5 100 tonnes. Imports of other species of frozen catfish, mainly coming from China and Myanmar, declined marginally (-1.7 percent).

For 2015, total frozen catfish imports into the USA grew by nearly 8 percent compared with 2014, with the majority of the supplies coming from Viet Nam as usual. Imports of frozen pangasius fillets, which makes up 95 percent of total frozen volumes (107 626 tonnes) increased by nearly 11 percent compared with 2014. Myanmar exports, though acute, did grow, from 17 tonnes of frozen pangasius fillets in 2014 to 67 tonnes in 2015.

## EU

Continuing the longer-term trend, imports of frozen pangasius (whole and fillets) weakened further in volume terms during the first quarter of 2016. A decline of 7 percent year-on-year was reported. However, it is important to note that the trend was positive for whole frozen pangasius, for which imports rose by 27 percent to total 880 tonnes.

Although Viet Nam was the leading supplier of this product category, Indonesia, Thailand, Bangladesh and Myanmar also regularly supplied this product to the EU market. The largest market within the EU is Spain, however, Spanish imports for both whole frozen and fillets for the first quarter were down by 400 tonnes during the review period.

## Asia and the Pacific

The continued and growing imports of frozen freshwater fillets into Asia indicate the rising demand for fish fillets, which began when pangasius entered the markets more than a decade ago. For the first quarter of 2016, demand for frozen pangasius fillets strengthened, consumed at both the household and catering level. Approximately 22 000 tonnes of pangasius (whole and fillets) were imported into Asia from Viet Nam, some 29 percent more than the same period in 2015. Thailand, China, Singapore, Malaysia and India were amongst the biggest importers.

In India, imports of pangasius fillets during the January-March 2016 period demonstrated a 52 percent increase to total 1 500 tonnes, where they are primarily used for the catering sector. In terms of domestic product, local catfish is making steady inroads although the fillet size is smaller compared with imported pangasius.

## Australia

During the first quarter of 2016, approximately 6.5 percent more frozen pangasius (mostly fillets) were imported into Australia. Prices have dropped, with the average import price of frozen catfish fillets during the period under review at USD 2.56 per kg, a 10 percent decline compared with the 2015 period.

## Latin America

For 2015, Latin America continued to be one of the most lucrative regions for Viet Nam pangasius exporters. According to national statistics, Latin American markets imported more than a total of 120 000 tonnes of pangasius (whole and fillets) in 2015. Frozen fillets comprised nearly 91 percent of these imports. Mexico was the largest market within the region, followed by Brazil and Colombia although supplies declined to the latter markets. Average import prices on the whole declined by an estimated 6-10 percent in 2015 from the year before, which encouraged imports into the region.

## Outlook

Current low prices will continue to encourage imports throughout 2016. The persisting demand for pangasius production will support growth in producing countries other than Viet Nam. This demand will possibly keep prices from going down further.

# SEABASS & SEABREAM

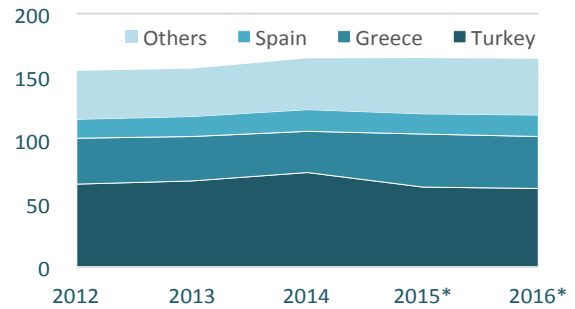
## GLOBEFISH HIGHLIGHTS

### Unexpected volumes halt price rise

After a year of slowing production growth and firming prices, an improved outlook has led to some much needed investor confidence in the farmed seabass and seabream sector. However, caution still prevails in 2016. Although prices for both species have remained relatively high in the first quarter, surplus volumes from Spain and Turkey have slowed this upward trend.

#### Top global producers of seabass

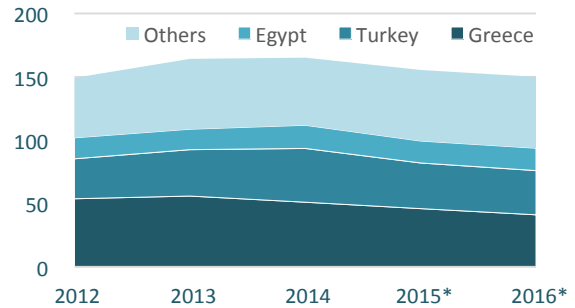
Unit: 1 000 tonnes



Source: FAO (until 2014) (\*) Estimate

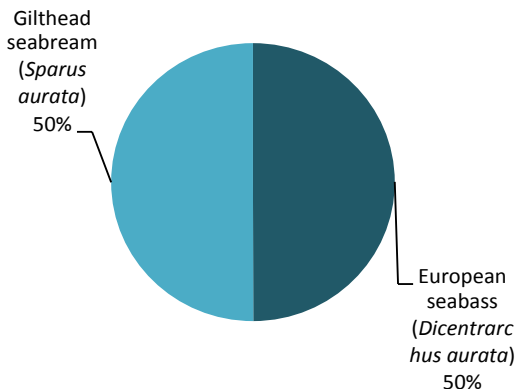
#### Top global producers of seabream

Unit: 1 000 tonnes



Source: FAO (until 2014) (\*) Estimate

#### Bass and bream production (2014)



Source: FAO

### Greece

In Greece, a fragile bass and bream aquaculture sector has been buoyed by the upturn in prices resulting from a cut back in harvest volumes. As a result, the major farming companies have seen a steady improvement in financial results continuing into 2016. Not all companies have pulled themselves out of the red yet, however, and in their case improvement means a reduction in heavy losses rather than an overall return to profitability.

Considering that progress on cost reduction in Greece is lagging well behind that of other aquaculture industries, a recent paper from the University of Stavanger outlines that it is important

for the sector that the price level is maintained at current or high levels.

Though Greek production volumes are marginally down, Spanish producers and Turkish exporters have together increased the total bass and bream supply in the EU market this year. This increase could potentially exert downward pressure on prices, particularly if the market uncertainty that has followed the UK's referendum vote worsens.

In the longer term, with the future stability of the Greek sector still far from guaranteed, it is likely that further consolidation will be necessary to reap the much needed benefits of economies of scale and ensure the continued competitiveness and profitability of the industry.

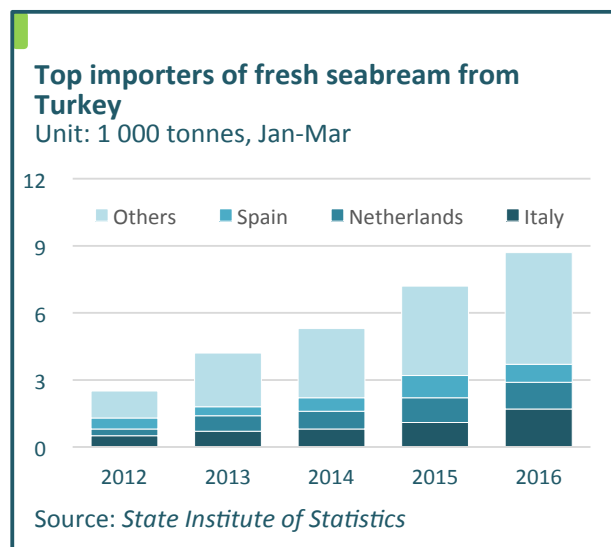
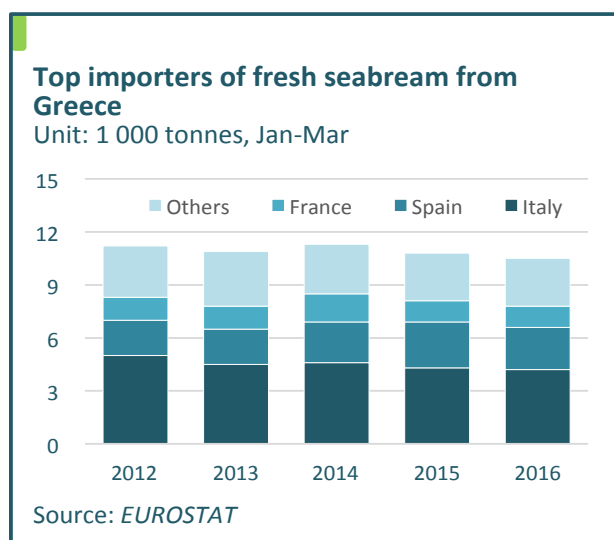
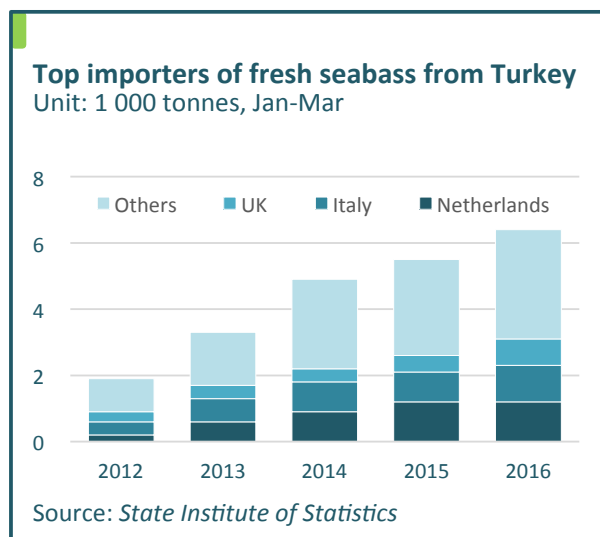
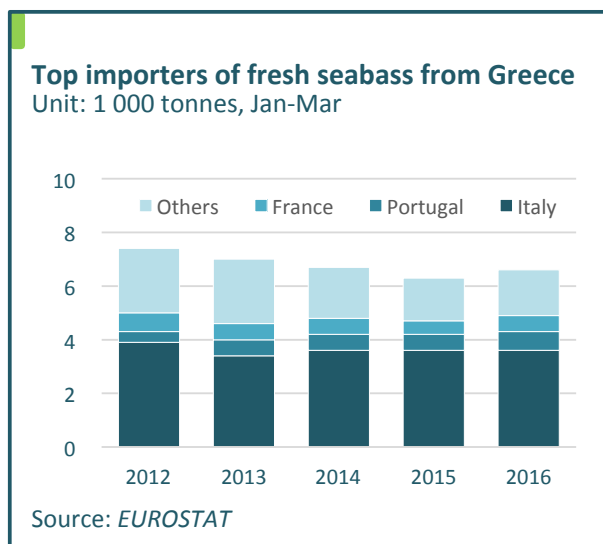
In the first quarter of 2016, Greece exported 2.3 percent less combined volume of bass and bream compared with the same period in 2015, comprised of a 5 percent drop in fresh bream exports and a 1.3 percent increase in fresh bass exports.

These figures broadly reflect flat production growth at farms for the latter species and an estimated 10 percent increase for the former. Average prices for both species rose marginally in the first quarter, building on 2015 gains, but dropped below 2015 levels in major markets by June.

In Italy, prices for bream were some 10 percent down compared with June 2015, while prices for bass were around 14 percent lower. Exports to Italy, traditionally accounting for around half of all Greece's bass and bream exports, fell by 8 percent in volume terms while the Netherlands was notable in the first quarter for boosting imports of Greek bass and bream by 76 percent.

## Turkey

Turkey saw a downward trend in prices for the second quarter of 2016 due to unsold stocks of 2014 generation bream as well as the arrival of 2015 generation fish in markets, resulting in excess supply. Ex-farm (ice-packed) prices of bream in June



were as low as EUR 4 per kg regardless of size. Ex-farm prices of bass were slightly higher than the first quarter of the year ranging from EUR 4.00-6.50 per kg depending on size. It is also worth noting that June 2016 coincided with Ramadan (fasting month) and thus domestic demand for fish is generally low during this period.

According to industry sources, the latest figures from hatcheries indicate that the number of juveniles stocked in cages in 2016 were nearly 10 percent higher than compared with 2015. The same sources emphasize that the impact of this supply increase in coming year(s) will not be a major problem as the surplus will be balanced by reduced Greek production. In addition, major Turkish producers have started using sophisticated software in order to have a constant watch on their production costs and avoid sales below unit production costs. Industry sources believe that this will also help to control the cost-price balance more efficiently.

## Italy

In early 2016, demand on the Italian market for bass and bream was strong. Despite higher prices for both species, import volumes in the first quarter increased 2.4 percent overall, although there was a

## Spain

In Spain, the aquaculture sector is growing, domestic production volumes and exports are increasing, and consumer demand for bass and bream is strong. According to market analysis firm, Kontali, the Spanish market is expected to absorb substantially more fresh bass and bream this year, while first quarter export volumes were up 11.7 percent compared with the same period last year. Specifically, bass exports were up 49 percent while bream exports fell 21 percent, with Portugal taking the bulk of the volume in both cases. Domestic production increased for both species, but prices at wholesale markets remain relatively high.

## France

French supermarkets are promoting the relatively cheaper imported bass and bream over domestically produced fish, with import volumes 8.3 percent higher in the first quarter of 2016. While other major European markets are steadily increasing the proportion of Turkish fish in their imports, French consumers still favour Greek product.

## Russia

Russia continues its downward trend in seafood trade due to the combined effects of the food embargo and decreased consumer demand. Imports of fishery and aquaculture products from January-April 2016 were 9 percent down in value compared with the same period in 2015 and 12.5 percent down in volume. Chile and the Faroe Islands were the largest supplying countries.

As of 1 July 2016, Russian imports of fresh bream and bass from Turkey amounted to 650 and 600 tonnes respectively. Despite the deficit of imported fish on the market, fish imports have been down due to the increasing prices.

Due to the recent improvements in the Russian-Turkish relationship, several measures will be implemented affecting trade. For instance, the ban on certain Turkish vegetables will be lifted and permission for tourism packages to Turkey will be granted. These measures may also positively impact the imports of bass and bream from Turkey, if Russian retailers and exporters manage to offer the fish to end Russian consumers at a suitable price level. It is estimated that for 2016 the share of imported fish on the Russian market will be 20 percent, with the share of domestic fish close to 80 percent.

Italian imports of fresh bass and bream (by product and origin)

		January-March				
		2011	2012	2013	2014	2015
		(1 000 tonnes)				
Dentex	Spain	0.1	0.1	0.1	0.1	0.1
	Greece	0.3	0.1	0.1	0.1	0.0
	Others	0.0	0.0	0.1	0.0	0.1
	<b>Subtotal</b>	<b>0.4</b>	<b>0.2</b>	<b>0.3</b>	<b>0.2</b>	<b>0.2</b>
Gilthead	Greece	4.6	4.2	3.8	4.2	3.5
	Turkey	0.4	0.7	0.8	1.1	1.6
	Croatia	0.1	0.3	0.3	0.5	0.4
	Others	0.7	0.6	0.6	0.5	0.7
	<b>Subtotal</b>	<b>5.8</b>	<b>5.8</b>	<b>5.5</b>	<b>6.3</b>	<b>6.2</b>
Seabass	Greece	3.4	3.3	3.2	3.2	3.3
	Turkey	0.4	0.7	0.8	1.0	1.1
	Croatia	0.3	0.3	0.3	0.5	0.7
	Others	0.7	0.5	0.3	0.6	0.6
	<b>Subtotal</b>	<b>4.8</b>	<b>4.8</b>	<b>4.6</b>	<b>5.3</b>	<b>5.7</b>
<b>Total</b>	<b>11</b>	<b>10.8</b>	<b>10.4</b>	<b>11.8</b>	<b>12.1</b>	

slight drop of 1.7 percent in fresh bream imports.

Continuing the trend of the last few years, the proportion of fish supplied by Greece decreased to 57.3 percent while the proportion supplied by Turkey, its major competitor, increased to 22.7 percent. This development is the result of both increased availability of Turkish fish and their more attractive price due to lower production costs and favorable exchange rates.

## Other markets

Overall, import volumes into European markets increased in the first quarter of 2016, supplied by higher volumes coming out of Spain and Turkey. Germany in particular was notable for strengthening demand for fresh Turkish fish, increasing import volumes of bass and bream by 33.4 percent and 55.4 percent respectively.

## Outlook

The outlook for the farmed bass and bream sector at present can be best described as cautiously positive, so long as prices are maintained at economically sustainable levels. This is dependent on the rate of production volume growth and the progress made towards cost reductions at the farm level.

On the market side, the economic and political uncertainty that has resulted from the exit of the UK from the EU represents a potential risk to consumer demand if the situation deteriorates further and damages consumer confidence. In the short-term, it appears that prices for both bass and bream will not quite reach the mid-summer peaks achieved last year on major markets, and will soon begin their decline as seasonal demand weakens.



# SALMON

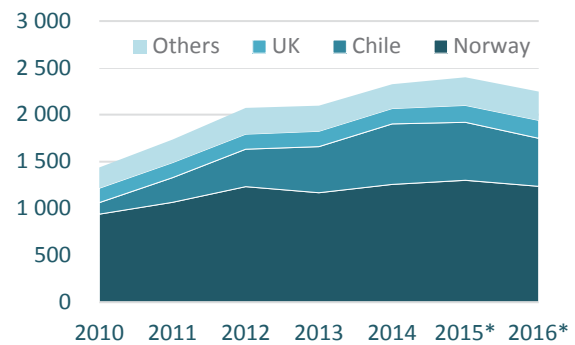
## GLOBEFISH HIGHLIGHTS

### *New Chilean regulations limit supply growth*

As global demand shows little sign of abating, prices for farmed salmon have been pushed steeply upwards over the last six months as the market adjusts to multiple supply limiting developments. These include algal bloom mortalities and new regulations in Chile, problems with sea lice in Norway and lower global wild harvests. Profitability is strong for Norwegian farmers, but wild producers, Chilean farmers, processors and wholesales are not benefitting to the same extent.

### Top global producers of farmed Atlantic salmon

Unit: 1 000 tonnes



Source: FAO (until 2014) (\*) Estimate

## Producers

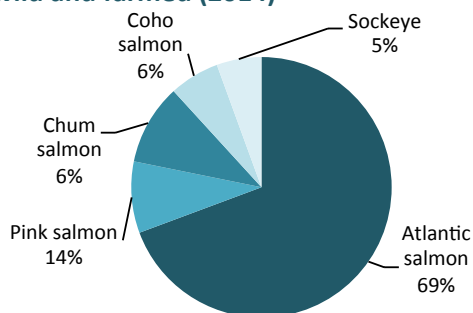
### Norway

As Norwegian farmers continue to face difficulties with sea lice, farmed Atlantic salmon production in the country is expected to decrease by 2 percent this year to approximately 1.2 million tonnes. In May, total standing biomass at farms was down 4 percent compared with May 2015, with a relatively higher proportion of younger generation fish and a lower average weight. The shortage, particularly for larger sizes, has seen prices spike repeatedly to higher and higher levels. As of week 24, the weighted NASDAQ salmon index hit NOK 74.8 per kg (EUR 8 per kg), some 45 percent higher than the same week in 2015.

Salmon export volume out of Norway in the first three months of 2016 was 6 percent lower than the same period in 2015, to total 227 000 tonnes. In value terms, exports were up 20.7 percent over the same period, due to the elevated price level. The average price for fresh whole Atlantics over the first quarter of 2016 was NOK 58.9, 28.5 percent higher than in 2015, yet demand in Norway's major markets was not overly affected. In particular, the large EU market, constituting 74 percent of Norwegian export value, imported NOK 9.9 billions worth of salmon from January to March, 23 percent more than in 2015.

The most important growth markets for Norway in the first quarter of 2016 were Italy, the USA and Viet Nam. Total volume of Norwegian salmon exports to these markets increased by 5.8 percent, 10.9

### Salmon production by species, both wild and farmed (2014)



Source: FAO



## Norwegian exports of salmon (by product)

	January-March				
	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Fresh	187.3	181.0	184.7	205.4	188.2
Frozen	12.9	8.8	8.2	8.3	7.6
Fresh fillets	15.0	15.4	16.4	17.8	20.3
Frozen fillets	11.2	9.9	9.2	11.2	10.5
<b>Total</b>	<b>226.9</b>	<b>215.5</b>	<b>218.9</b>	<b>243.3</b>	<b>227.0</b>

Source: Norwegian Seafood Council

percent and 83.8 percent respectively. Buyers in Italy and Viet Nam are primarily interested in fresh whole Atlantics for reprocessing, while in the USA, Norwegian exporters are rapidly expanding their share of the fresh fillet segment, helped by the strong US dollar. Aside from the USA, Asian markets are also being targeted by the Norwegian industry as a growing, urbanized middle-class there represents an enormous source of future demand for salmon. Thailand in particular has been identified as having great potential given the strong increasing trend in salmon consumption.

The Norwegian's industry top challenge remains sea lice, and one possible solution currently being pursued is the development of offshore sites. Salmon kept in offshore pens are generally less susceptible to sea lice infestation and the large aquaculture companies are scrambling to apply for a total of 27 development licenses on offer while also investing in offshore farming technology. For the foreseeable future, however, costs of sea lice treatments will be more than offset by the extreme price levels which are resulting in healthy margins, record profits and soaring stock prices for Norwegian farming companies. And with a widening gap between supply and demand, reflected by regular upward revisions of forward prices over the last six months, the outlook for the industry's producers is even more positive.

## Trout

The Norwegian farmed trout sector is now recovering strongly after the negative impact of the Russian trade embargo, with a 113.6 percent increase in total exported value in the first three months of 2016, for a total of NOK 856 million. Average prices for fresh whole trout were up 8.6 percent over the same period, to NOK 47 per kg. The recovery has been driven by strong demand from Asian markets such as Japan, Eastern European markets like Poland and Belarus, and increasing interest from US buyers. With the supply surplus from the temporary hike in biomass limits following the Russian import ban now used up, harvest volumes are relatively lower than last year, and the price outlook remains positive.

## Chile

In Chile, 2016 started shaky due to the algal bloom in southern Chile, resulting in large salmon mortalities and decreased harvests during the first quarter of the year, continuing into April. Chilean fishery officials considered the situation extremely serious as an estimated 10 percent of salmon had to be tossed into the sea.

According to a report by AquaBench, for the first four months of 2016, Atlantic salmon experienced a 38.5 percent cumulative mortality, coho salmon 8.5 percent and rainbow trout 15.8 percent. In figure terms, this meant a total of 38.2 million dead fish (31 million Atlantic salmon, 4.2 coho salmon and 2.9 million rainbow trout). Moreover, smolt harvests during the January-April 2016 period decreased by an average of 20.7 percent, compared with the same period last year.

## Chilean exports of salmon (by product and destination)

	January-March					
	2012	2013	2014	2015	2016	
	(1 000 tonnes)					
<b>Frozen</b>	Japan	59.2	57.8	41.7	44.4	41.1
	Russia	0.7	6.7	9.2	10.3	14.1
	USA	3.8	6.9	9.1	8.6	9.9
	Others	16.4	29.8	34.4	35.5	40.4
	<b>Subtotal</b>	<b>80.1</b>	<b>101.2</b>	<b>94.3</b>	<b>98.7</b>	<b>105.5</b>
<b>Fresh</b>	USA	16.0	21.6	24.4	25.3	29.2
	Brasil	12.0	13.5	17.5	22.6	20.2
	Argentina	0.9	1.6	1.4	2.0	2.2
	Others	0.7	1.1	1.3	2.3	4.2
	<b>Subtotal</b>	<b>29.5</b>	<b>37.7</b>	<b>44.5</b>	<b>52.2</b>	<b>55.8</b>
<b>Total</b>	<b>112.4</b>	<b>141.2</b>	<b>140.0</b>	<b>152.9</b>	<b>162.5</b>	

Source: Chile Customs (small shares of product type like canned, salted not included)

This crisis also impacted livelihoods, with the salmon industry having to layoff employees. The Undersecretary of Fisheries and Aquaculture (Subpesca), rejects the idea that the algal bloom is a good excuse for layoffs, however these dismissals are continuing and as a result, workers and legislators are urging for solutions.

In an attempt to address the volatility of supply in recent years, Chilean authorities have introduced new regulations limiting production growth to 3 percent per year. The new legislation also penalizes aquaculture companies for poor sanitary performance, targeting an issue that has troubled the Chilean industry for some time. The market response to this development has generally been positive, and shares for many companies have spiked on the news.

In terms of prices, analysts predict that the price of Atlantic salmon, which as of June was USD 8.9 per kg, will experience a significant increase in the second half of the year.

## UK

The major event defining current market trends in the UK is clearly the referendum vote to exit the EU. Although the UK economy took a hit in the immediate aftermath of the surprise result, the full impact of the decision is yet to become clear. As the UK government now has two years to negotiate the terms of the country's departure, there are many possible scenarios that will have varying implications for the salmon farming industry and its competitiveness on the export market.

### UK exports of salmon (by product and destination)

		January-March				
		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh	USA	8.8	7.8	10.7	6.8	6.5
	France	4.0	3.2	4.5	5.1	5.7
	China	1.4	2.1	2.7	1.3	2.5
	Others	5.3	5.2	5.2	3.7	3.8
	<b>Subtotal</b>	<b>19.5</b>	<b>18.3</b>	<b>23.1</b>	<b>16.9</b>	<b>18.5</b>
Frozen	France	0.4	0.3	0.4	0.3	2.6
	Others	1.6	1.1	1.4	1.3	4.0
	<b>Subtotal</b>	<b>2.0</b>	<b>1.4</b>	<b>1.8</b>	<b>1.6</b>	<b>6.6</b>
	<b>Total</b>	<b>22.9</b>	<b>20.9</b>	<b>26.1</b>	<b>20.1</b>	<b>27.0</b>

Source: Her Majesty's Revenue & Customs (small shares of product type like canned, salted not included)

In the meantime, the sharp weakening of the GBP has made Scottish salmon relatively cheaper for foreign buyers, which is likely to stimulate demand at least in the short term. In fact, the currency has been depreciating since the start of the year, and this saw export volumes increase by 31.7 percent, to 28 700 tonnes in the first quarter of 2016.

Of course, exchange rate developments that favour exporters have the opposite effect on importer purchasing power, making Faroese, Norwegian and wild US salmon more expensive. Consumer demand in the UK for salmon is still growing, however, and a recent Nielsen report shows a 6.1 percent increase in total volume purchased over the period up to April 23.

## Markets

The persistent resilience of market demand in the face of ever-rising prices highlights the success of the farmed salmon industries' marketing and innovation efforts over the past few years. The suitability of salmon for use in convenience food products and its uniqueness and palatability compared with other seafood options has shielded it from price competition from other species, and has ensured that demand growth in developing markets is exerting maximum upward pressure on prices. Considering that the three largest developing markets, Russia, Brazil and China, are all currently in relative economic lulls, it remains to be seen exactly

how high prices can be driven by booming global salmon demand if supply options remain limited.

### French imports of salmon (by product)

		January-March				
		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh whole		27.0	24.5	21.9	22.6	26.6
Fresh fillets		3.8	5.0	3.8	4.0	3.9
Frozen fillets		4.9	5.5	5.8	4.7	6.1
Smoked		1.9	2.0	1.5	1.7	1.7
<b>Total</b>		<b>39.1</b>	<b>38.4</b>	<b>34.2</b>	<b>34.8</b>	<b>39.4</b>

Source: DNSCE (small shares of product type like canned, salted not included)

## France

After an extended period of consumer aversion to farmed Norwegian salmon due to negative publicity, French buyers are now turning to Norwegian suppliers once again in order to meet seemingly unstoppable demand for salmon. Retailers have allayed consumer fears to some extent through ecolabels such as the Aquaculture Stewardship Council, and although presenting significant challenges to smokers and other contract-supplied intermediaries, soaring prices are having limited impact on consumer-side demand.

Total French import volumes in the first quarter of 2016 were 13.2 percent higher than quarter one 2015, to total 39 400 tonnes, despite a 12 percent increase in the average price of fresh whole Atlantics to EUR 6.3 per kg.

### German imports of salmon (by product)

		January-March				
		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh		10.8	10.6	16.0	12.8	12.1
Frozen		0.9	1.5	2.6	1.4	1.6
Smoked		8.6	9.9	8.6	10.6	11.1
Fresh fillets		1.9	2.1	2.3	3.4	3.5
Frozen fillets		6.9	8.6	10.0	8.6	8.7
<b>Total</b>		<b>31.5</b>	<b>37.8</b>	<b>43.3</b>	<b>39.5</b>	<b>41.0</b>

Source: Germany Customs (small shares of product type like canned, salted not included)

## Germany

Similarly to their French counterparts, German consumers' demand for salmon has been remarkably resistant to inflated price levels. After a dip last year, German imports of salmon were up 6.4 percent in the first quarter of 2016 in volume terms, with increases for both fresh and smoked salmon even as prices rose.

German consumers' preferences are somewhat different to those of the French, with more interest in preserved and prepared convenience products and seemingly less concern with product origin. Fresh salmon sold largely through discount chain retailers is also a popular choice for German customers.

## Japanese imports of salmon (by product and origin)

		January-March				
		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh	Norway	6.3	4.9	4.2	4.5	4.4
	Australia	0.4	0.3	0.1	0.2	0.3
	UK	0.1	0.1	0.1	0.1	0.1
	Others	0.2	0.8	0.4	0.2	0.7
	<b>Subtotal</b>	<b>7.0</b>	<b>6.1</b>	<b>4.8</b>	<b>5.0</b>	<b>5.5</b>
Frozen	Chile	53.6	45.2	25.6	28.3	40.0
	Russian Fed.	0.7	3.9	3.3	2.3	4.6
	USA	1.0	0.4	0.3	2.0	1.6
	Others	0.8	1.1	0.1	0.6	0.5
	<b>Subtotal</b>	<b>56.1</b>	<b>50.6</b>	<b>29.3</b>	<b>33.2</b>	<b>46.7</b>
	<b>Total</b>	<b>68.3</b>	<b>60.9</b>	<b>42.0</b>	<b>47.4</b>	<b>60.4</b>

Source: Japan Customs (Total including fillets)

## Japan

The strengthening of the yen has boosted Japanese importer demand for frozen farmed coho from Chile to replenish inventories, although the supply squeeze resulting from the algal bloom mortalities is yet to be fully felt.

As of late May, prices climbed back above 2015 levels in yen terms, and can be expected to continue their climb as supply tightens. Buyers are also having to pay more for fresh Atlantic salmon given the elevated global price level, although Atlantics constitute a much smaller proportion of the Japanese import market.

## USA

During the first quarter of 2016, the USA imported 93 300 tonnes of salmon worth USD 721.5 million. These figure represents an increase of 9.4 percent in volume terms and a decrease of 1 percent in value terms compared with the same period of 2015.

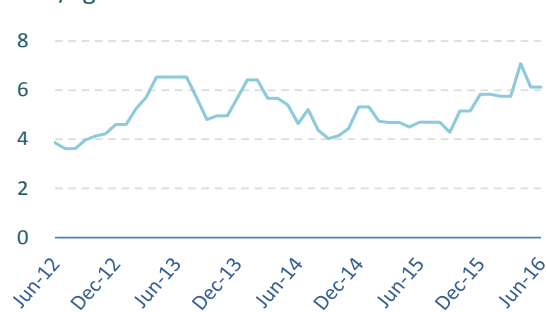
## US imports of salmon (by product and origin)

		January-March				
		2012	2013	2014	2015	2016
		(1 000 tonnes)				
Fresh fillets	Chile	11.1	22.1	23.9	24.5	27.5
	Norway	0.8	0.8	2.9	3.3	4.9
	Canada	0.7	1.6	1.0	1.2	1.9
	Other	2.2	2.6	3.5	2.3	3.2
	<b>Subtotal</b>	<b>14.8</b>	<b>27.1</b>	<b>31.3</b>	<b>31.3</b>	<b>37.5</b>
Frozen fillets	China	8.2	10.4	9.7	10.0	9.0
	Chile	14.4	7.2	8.1	7.1	8.0
	Norway	2.8	1.7	1.6	2.7	2.1
	Others	3.4	0.5	0.9	0.9	0.7
	<b>Subtotal</b>	<b>28.8</b>	<b>19.8</b>	<b>20.3</b>	<b>20.7</b>	<b>19.8</b>
Smoked	Netherlands	0.4	0.5	0.6	0.7	0.4
	Chile	0.7	0.5	0.4	0.4	0.1
	Other	0.3	0.2	0.1	0.5	0.6
	<b>Subtotal</b>	<b>1.4</b>	<b>1.2</b>	<b>1.1</b>	<b>1.6</b>	<b>1.1</b>
Frozen whole	Canada	0.7	0.4	0.2	0.6	0.7
	Chile	0.0	0.3	0.9	0.3	0.8
	Others	0.0	0.3	0.4	0.6	1.4
	<b>Subtotal</b>	<b>0.7</b>	<b>1</b>	<b>1.5</b>	<b>1.5</b>	<b>2.9</b>
Frozen fillets	Canada	21.9	19.8	9.7	17.8	19.7
	Faroe Isl	1.1	2.2	3.0	1.6	2.8
	Others	3.9	3.4	6.2	5.9	5.2
	<b>Subtotal</b>	<b>26.9</b>	<b>25.4</b>	<b>18.9</b>	<b>25.3</b>	<b>27.7</b>
	<b>Total</b>	<b>67.6</b>	<b>77.1</b>	<b>76.7</b>	<b>85.3</b>	<b>93.3</b>

Source: NMFS

## Prices

### Salmon: France EUR/kg



Fresh, gutted,HO, 3-6kg/pc, origin: Norway  
Source: European Price Report

Chile was the USA's main salmon supplier during this period, having exported 38 400 tonnes, which was a 13 percent increase. In terms of value, a decrease of 4.7 percent was registered (USD 319 million). Canada was the second largest supplier to the USA, exporting 23 000 tonnes worth USD 149 millions.

For US exports of salmon, there was a slight decrease (-0.68 percent) in salmon shipments and -10.84 percent in terms of value. Wild salmon harvests in Alaska, particularly pink and sockeye salmon, are expected to be lower in 2016 after a supply glut in 2015. With farmed salmon prices now so high, there are calls for the Alaskan industry to focus on improving the quality of their post-harvest product so that they may better establish themselves in the same segments as farmed rather than being restricted to the canned market where price levels are not so appealing.

## Outlook

After months of upward revisions, FishPool forward prices for Norwegian farmed salmon are now above NOK 50 for every month until January 2019. For the remainder of 2016, a slight dip is expected in August and September following the traditional late summer harvest, but Christmas and year end demand is expected to lift prices once again.

The global salmon market, from producer to consumer, has to now come to terms with a new price plateau. Norwegian farmers will continue to reap the benefits of physical and regulatory limits on supply. In Chile, the business implications of new regulations are more complicated for its industry considering the additional costs entailed by sanitary requirements despite the obvious price benefits of slower and regulated production growth. Worldwide, the processing sector, facing soaring raw material prices, will likely need to consolidate to drive costs down, while big retail chains will use their market power to resist passing prices onto consumers for as long as possible. For wild salmon producers, however, this may be seen as an opportunity, particularly if product innovation and improved quality control can more closely integrate the wild market with that for farmed fish.

# SMALL PELAGICS

## ■ GLOBEFISH HIGHLIGHTS

### *Tighter supplies and higher prices*

Supplies of small pelagics will be somewhat tighter this year, but with continued strong demand this means higher prices for most products.

So far, it has not been a good start to the year for the Icelandic pelagic industry. Total fish landings as of mid-June were 26 percent below landings during the same period in 2015. Most of this was attributed to lower pelagic catches. According to Statistics Iceland, total pelagic landings in Iceland were down from 510 000 tonnes during January-May 2015 to just 270 000 tonnes during the same period in 2016 (-47 percent). The herring and mackerel fishery in Iceland was late getting started this year.

### Mackerel

The mackerel summer season in Norway was off to a slow start at the end of May. Usually, this fishery starts sometime in early June, but fishers reported sightings of mackerel earlier this year. Early landings indicate that the season will be an average one, perhaps with somewhat smaller volumes landed than last year. On the bright side, mackerel prices are slightly higher this year. Much depends on the weather, with warmer temperatures likely to bring improved landings.

Canadian environmentalists are criticizing the authorities for setting an overly high quota for Atlantic mackerel this year. According to the Ecology Action Center in Nova Scotia, the mackerel biomass is critically low. The quota has been set at 8 000 tonnes, while the advice by a panel of scientists was just 800 tonnes for both 2014 and 2015.

After two years of efforts by the UK Mackerel Industry Northern Sustainability Alliance (MINSAs), the northeast mackerel fishery was granted MSC certification in May. According to MINSAs, the mackerel stock is in good shape, and the MSC certification will help promote this resource to the consumers.

### TRADE NEWS

#### Pelagic imports to Nigeria facing challenges

Pelagic imports to Nigeria have been somewhat difficult since the Nigerian Government imposed a "structured embargo" on imports in 2014. Fish traders in Nigeria are not able to use foreign currency for importing fish (and some other goods). The foreign exchange restrictions may be seen in light of low oil prices, which are also affecting imports into some Middle East Markets. Despite these difficulties, Nigeria continues to remain an important mackerel market for Norway and herring market for the Netherlands.

Source: *Undercurrent News*.

### Herring

The Norwegian Institute of Marine Research (IMR) has recommended that the North Sea herring quota be cut by 12 percent to 426 259 tonnes, down from 518 242 tonnes last year. The herring stock is in good shape, according to the IMR, but scientists are worried about recruitment, which is poor at the moment. The main reason for this is a higher natural death rate than normal this year.

The North Sea herring is reported to be "fat and fine" by fishers and traders, according to *Fiskeribladet/Fiskaren*. Fat content was measured to be 15.5 percent, which is quite good. Herring caught further south were smaller in size.

Fishermen active in Skagerak (the area between Norway and Denmark), on the other hand, are complaining that the herring is spread all over the place in smaller shoals, and that the fish are very small, about 10 fish to the kg, which is too small for human consumption. It therefore goes to reduction, and at considerably lower prices than herring for human consumption. Later in the season, it is expected that the herring will form larger shoals and be easier to catch.

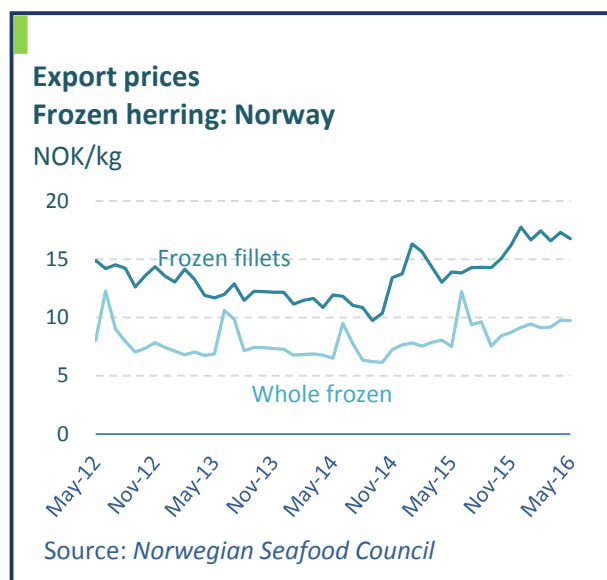
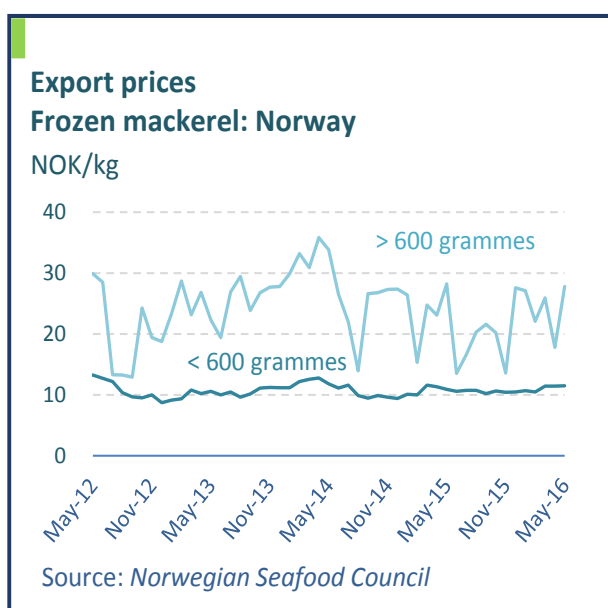
The Alaska Department of Fish and Game reports that some 32 000 tonnes of herring will be available for harvesting in the Togiak region this year. This represents about 20 percent of the estimated biomass in the region, which has been set at 162 244 tonnes.

The Togiak roe herring harvest for 2016 was set at 13 763 tonnes, which is a reduction of 26 percent compared with last year's landings, although reasonably close to the 2004-2013 average catch of 14 066 tonnes.

## Prices

Norway reports record high prices for all pelagic species during the first quarter of the year. Indeed, Norwegian export prices increased by between 2-53 percent per kg (Source: *Norwegian Seafood Council*). However, one of the main reasons for this registered increase is the fact that the Norwegian krone has depreciated against most currencies, so that prices reported in NOK appear to be higher than what they are on the international market.

However, Norwegian herring fishermen report poor prices paid for the matjes herring they land in Norway. In the beginning of June, first-hand prices were as low as NOK 4.37 per kg. In an effort to achieve better prices, some vessels have chosen to go all the way to Skagen in Denmark.



## Anchovy/Sardines

El Niño is causing issues for the anchovy fishery off South America. According to the fishing company Pesquera Camanchaca, anchovy catches during the first quarter of 2016 are down by 94 percent compared with last year, and furthermore the fish are of a smaller size.

El Niño is having a negative effect on fisheries in India as well, according to reports from the country's Central Marine Fisheries Research Institute (CMFRI). Fish landings in the southern state of Kerala declined by 16 percent in 2015, with sardine landings plunging 60 percent as a combined result of El Niño, overexploitation and fishing juveniles.

In the USA, the government has banned practically all sardine fishing on the west coast in an effort to protect the species. Since 2007, the sardine stocks have declined by a disturbing 90 percent, and now need to be left in peace to recover. It will probably take a few years before any results can be seen.

## Trade

Norwegian exports of small pelagics increased significantly during the first quarter of 2016. Total exports of whole frozen mackerel went up from 48 700 tonnes during the first three months of 2015 to 69 100 tonnes during the same period in 2016 (+41.9 percent). Whole frozen herring exports grew by 54.1 percent during the same period, to 41 600 tonnes.

Nigeria was once again the largest market for Norwegian mackerel, and accounted for 11.6 percent of total Norwegian mackerel exports. Other important markets were Japan, Ghana and China.

In terms of herring, the largest importers of frozen Norwegian herring were Ukraine (36.3 percent of

## Norwegian exports of small pelagics (by product and destination)

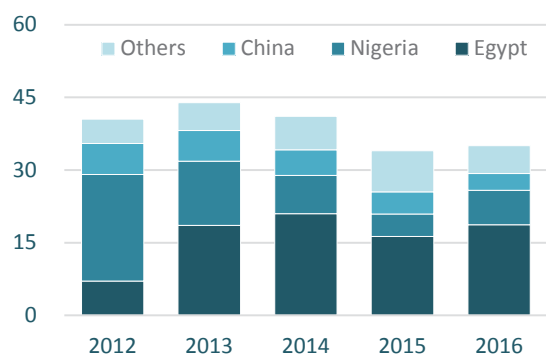
	January-March				
	2012	2013	2014	2015	2016
	(1 000 tonnes)				
<b>Frozen mackerel</b>					
Nigeria	1.2	0.6	7.5	3.6	8.0
Japan	7.5	4.8	4.8	2.1	7.8
Ghana	0.0	2.2	0.0	2.7	7.0
Others	48.5	38.3	39.5	40.3	46.3
<b>Subtotal</b>	<b>57.2</b>	<b>45.9</b>	<b>51.8</b>	<b>48.7</b>	<b>69.1</b>
<b>Frozen herring</b>					
Ukraine	21.3	11.6	9.1	6.3	15.1
Egypt	11.1	8.4	1.9	5.6	11.1
Lithuania	11.0	6.2	11.8	4.2	5.0
Others	47.9	32.5	28.2	10.9	10.4
<b>Subtotal</b>	<b>91.3</b>	<b>58.7</b>	<b>51.0</b>	<b>27.0</b>	<b>41.6</b>
<b>Total</b>	<b>148.5</b>	<b>104.6</b>	<b>102.8</b>	<b>75.7</b>	<b>110.7</b>

Source: Statistics Norway

total exports), Egypt (26.7 percent of the total) and Lithuania (12.0 percent of the total).

## Top importers of frozen herring from the Netherlands

Unit: 1 000 tonnes, Jan-Mar



Source: Eurostat

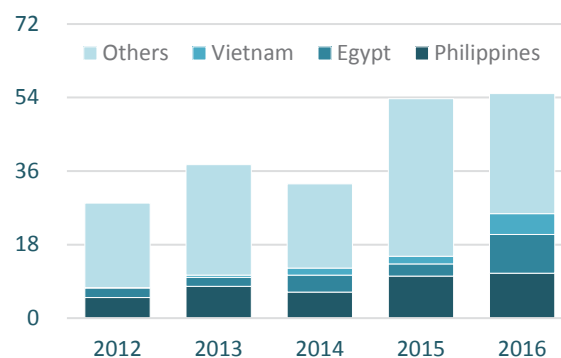
Dutch exports of frozen herring increased slightly during the first quarter of 2016, from 34 000 tonnes to 35 000 tonnes (+2.9 percent). Shipments increased to Egypt (+14.7 percent) and Nigeria (+54.3 percent), but declined to China (-23.9 percent).

China has been well established as a re-processing country for a number of small pelagic species, including mackerel. In the first quarter of 2016, the country's exports of frozen mackerel continued to grow, albeit at a very much slower rate of that in 2015. In the first quarter of 2015, Chinese mackerel exports grew by almost 64 percent, but in 2016, growth had slowed to just 2.4 percent. Even so, the total amount of Chinese frozen mackerel exports was impressive at 55 000 tonnes during the quarter. The main markets were the Philippines, Egypt and Viet Nam.

German imports of small pelagics increased during the first quarter of 2016. Frozen mackerel imports went from 4 000 tonnes in the first quarter of 2015 to 5 500 tonnes in the same period in 2016 (+37.5 percent). The main supplier was the Faroe Islands,

## Top importers of frozen mackerel from China

Unit: 1 000 tonnes, Jan-Mar



Source: China Customs

which accounted for no less than 64 percent of total German frozen mackerel imports. There was also a significant increase in German imports of frozen herring fillets during this period, from 3 900 tonnes in 2015 to 5 000 tonnes in 2016 (+28 percent). The main supplier was Norway, which accounted for 54 percent of the total.

## German imports of small pelagics (by product and origin)

	January-March				
	2012	2013	2014	2015	2016
	(1 000 tonnes)				
<b>Frozen mackerel</b>					
Faroe Islands	0.5	0.2	0.1	0.7	3.5
UK	1.7	0.9	2.3	1.5	0.8
Ireland	1	1.1	1.3	0.7	0.6
Others	2.3	1	1.3	1.1	0.6
<b>Subtotal</b>	<b>5.5</b>	<b>3.2</b>	<b>5</b>	<b>4</b>	<b>5.5</b>
<b>Frozen herring fillets</b>					
Norway	5.7	2.8	4.0	1.6	2.7
Denmark	1.8	2.1	2.1	1.4	0.5
Iceland	0.5	0.6	0.4	0.0	0.5
Others	1.0	2.1	0.8	0.9	1.3
<b>Subtotal</b>	<b>9</b>	<b>7.6</b>	<b>7.3</b>	<b>3.9</b>	<b>5</b>
<b>Total</b>	<b>14.5</b>	<b>10.8</b>	<b>12.3</b>	<b>7.9</b>	<b>10.5</b>

Source: Germany Customs

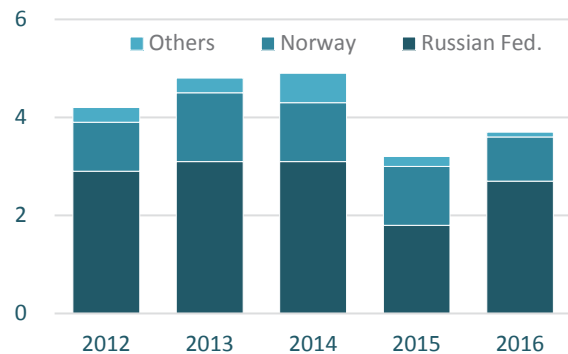
Japanese imports of fresh and frozen herring, which have declined since 2014, increased somewhat in the first quarter of 2016. The import volume went from 3 200 tonnes to 3 700 tonnes (+15 percent). The major part of this came from Russia (73 percent).

Japan is also importing some frozen herring fillets, and during the first quarter of 2016, this trade amounted to 1 900 tonnes, of which the bulk (1 100 tonnes) came from Iceland. Imports in the first quarter were up by almost 27 percent compared with the same period in 2015.

Russia has been and will continue to be a vital market for small pelagics. In spite of the import ban on fish from western countries, which traditionally have been the main suppliers, Russian imports of frozen mackerel during the first quarter of 2016 increased

### Top exporters of fresh and frozen herring to Japan

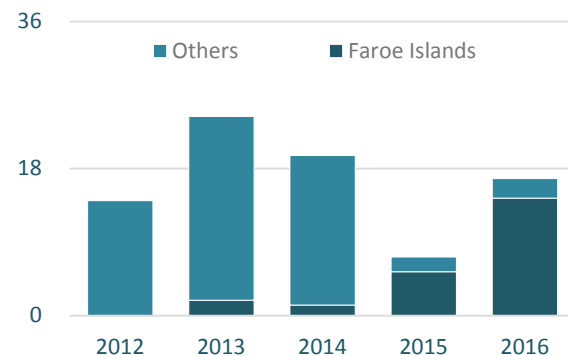
Unit: 1 000 tonnes, Jan-Mar



Source: *Japan Customs*

### Importers of frozen mackerel to the Russian Federation

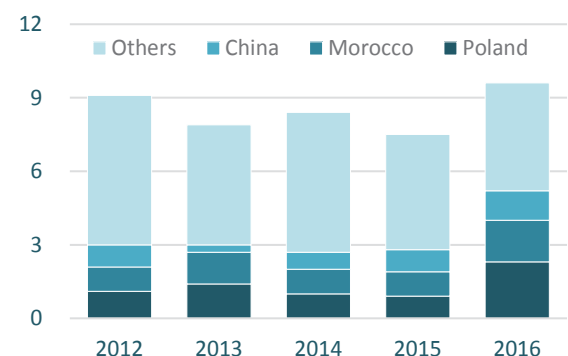
Unit: 1 000 tonnes, Jan-Mar



Source: *Federal Customs Service of Russia*

### Top exporters of canned sardine to the USA

Unit: 1 000 tonnes, Jan-Mar



Source: *NMFS*

dramatically compared with the first quarter of 2015. Total imports of frozen mackerel grew from 7 200 tonnes in 2015 to more than double that, 16 800 tonnes, in 2016. However, this growth was mainly supplied by the Faroe Islands, which is exempted from the import ban, and accounted for almost all of the imported volume (85.7%).

Canned sardines seem to be rising in popularity in the USA. US imports of this commodity increased by a healthy 28% in the first quarter of 2016 compared with the same period in 2015. Poland moved up to the top position among suppliers and shipped 2 300 tonnes, accounting for 24% of the total import volume, with Morocco, China and Ecuador following.

## Outlook

Supplies of the main species such as mackerel and herring will be somewhat tighter this year. In South America, supplies of anchovies will be considerably lower, and in California there will be no sardine fishing at all. Thus, one can expect prices for all pelagics to increase in general, although this will inevitably also depend on the development of currency exchange rates.

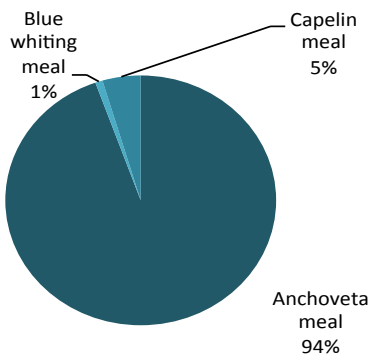
# FISHMEAL & FISH OIL

## GLOBEFISH HIGHLIGHTS

### *Fishmeal and oil prices expected to remain strong*

The supply of fishmeal and fish oil in Peru is forecasted to be adequate in the short-term as Imarpe's second biomass evaluation for the first fishing season reported 7.3 million tonnes. This second finding was a significant improvement from the first evaluation that found only 4.42 million tonnes, which would have been a volume insufficient to even open a season. With the second survey finding, Peru's Ministry of Production set the quota for the first fishing season in the central-north season at 1.8 million tonnes on 17 June. The season will run from 1 July until the quota is met or the winter production cycle begins.

#### Fishmeal production by species\* (2013)



Source: FAO

\*Refers to direct fishmeal production, excluding waste

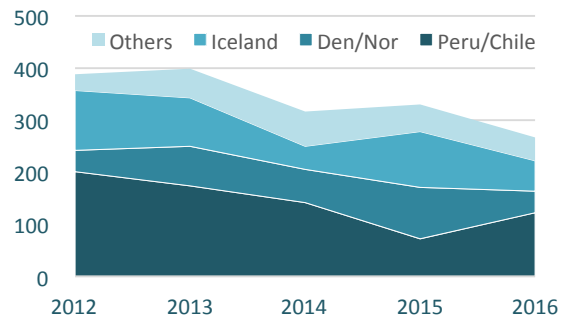
## Production

Peru and Chile have always been the leading world fishmeal and oil supplier. However, in the first quarter of 2016, the growth in production in these two countries was not able to reverse the global downward trend in meal and oil supply.

In terms of fishmeal, tightened quotas in Iceland coupled with constraints on production in Scandinavia due to high production costs exerted pressure on the world market. As a result, for the first three months in 2016, world fishmeal production volumes slid down to 267 000 tonnes, around 70 000 tonnes less than the corresponding period in 2015. Despite this world decline, Chile and Peru's combined fishmeal production totaled 122 000 tonnes in the first quarter reflecting year-on-year growth of roughly 70 percent

#### Top global producers of fishmeal

Unit: 1 000 tonnes, Jan-Mar

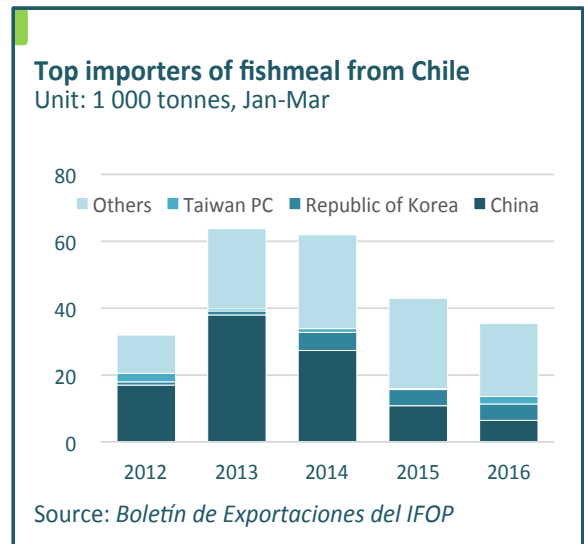
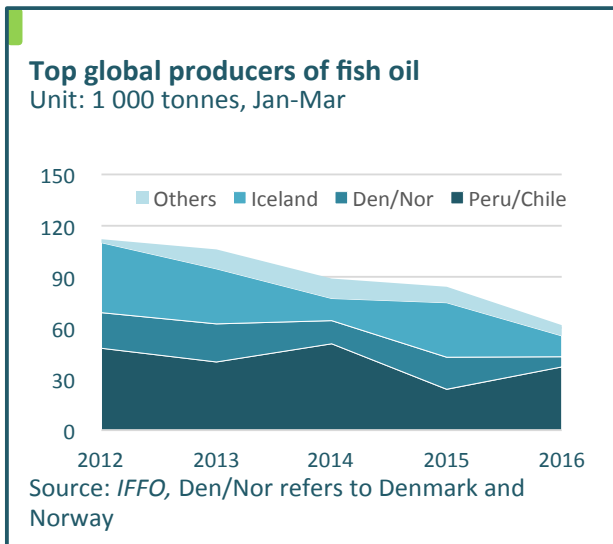


Source: IFFO, Den/Nor refers to Denmark and Norway

In terms of fish oil, Chile and Peru's combined production increased significantly by 54 percent. Peru's resumption of the second fishing season in 2015 largely contributed to this growth in fishmeal and oil in the opening months of the year.

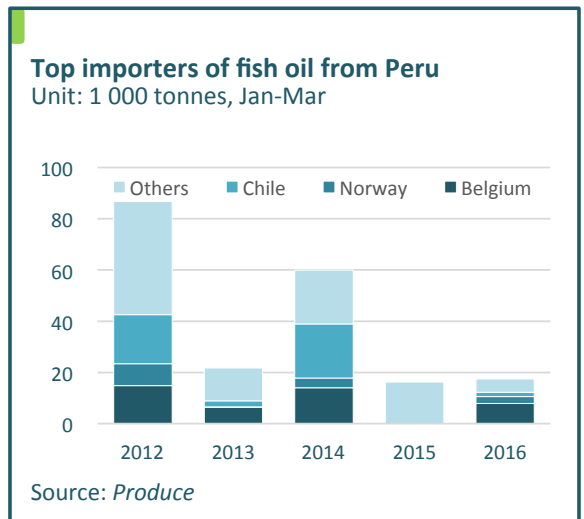
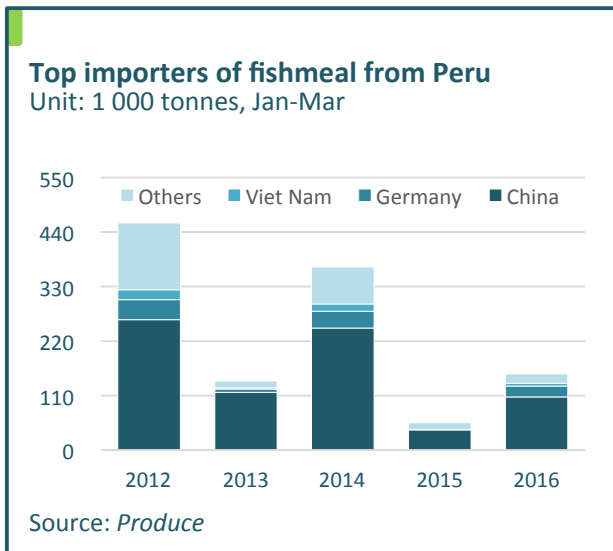
It was reported that some companies were benefiting from the colder temperatures that were helping to normalize the biomass levels. However, ENFEN (Peru's committee for the national study of the El Niño phenomenon) has indicated that ocean conditions along Peru's coastline will be back to normal levels with the onset of kelp waves brining cold water from the west.





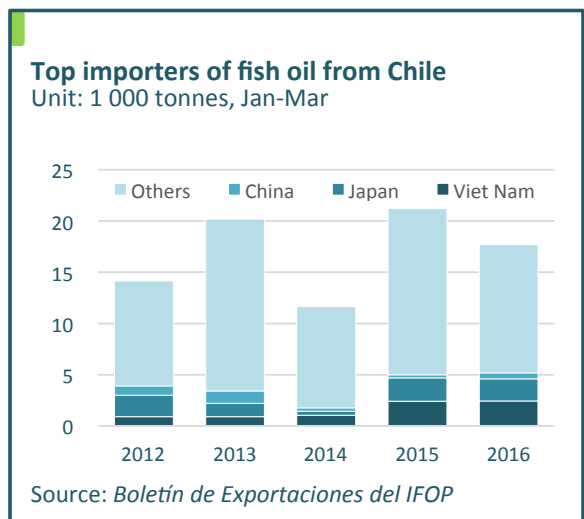
## Exports

In Peru, the relatively good situation of fishmeal production in late 2015 carried over to 2016, and as a result trade during the review period benefited tremendously with exports almost tripling compared with the same period in 2015. From January to March 2016, 77 percent of Peruvian fishmeal was destined for Asian markets followed by Germany, which has gone back to its normal levels of fishmeal imports after a historic low in the first quarter of 2015.



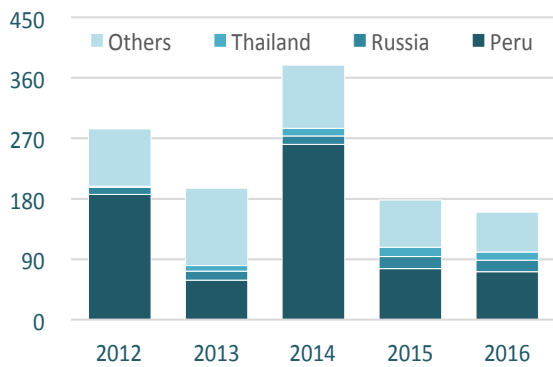
Chilean exports of fishmeal demonstrated the same scenario with Asia absorbing most of its national surplus.

In the case of fish oil, exports from both Peru and Chile were shipped to diverse destinations, exporting more or less the same volume amounting to around 18 000 tonnes each worldwide. Globally, Asia and Europe were the most important areas for fish oil imports, utilized mostly for livestock and fish farming.



### Top exporters of fishmeal to China

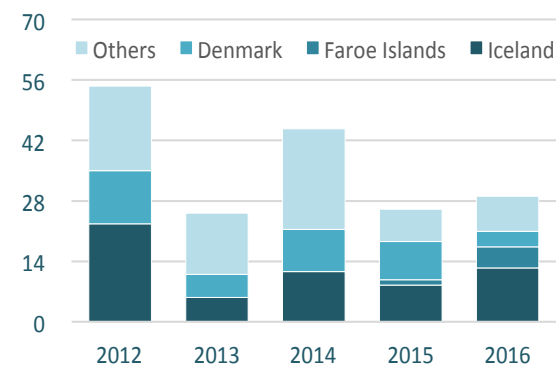
Unit: 1 000 tonnes, Jan-Mar



Source: China Customs

### Top exporters of fishmeal to Norway

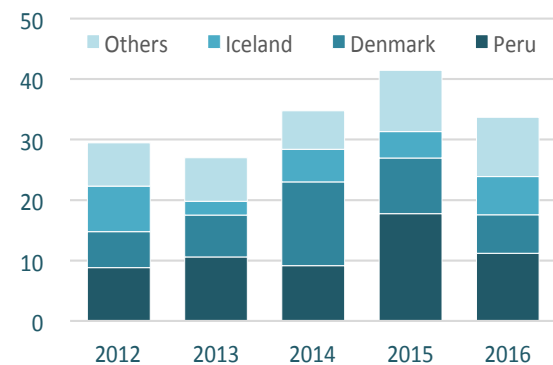
Unit: 1 000 tonnes, Jan-Mar



Source: Statistics Norway

### Top exporters of fish oil to Norway

Unit: 1 000 tonnes, Jan-Mar



Source: Boletín de Exportaciones del IFOP

## Markets

In China, the world's largest fishmeal and oil market, imports usually increase during the Chinese New Year celebration during the first quarter of 2016 due to the increased consumption of fish and pork. However, continuous heavy rains and abnormal low temperatures delayed the aquaculture season in south China, with the flood season coming about two weeks earlier than normal. For these reasons, China's overall meal and oil imports were sluggish in the first quarter, although it did double its imports from Peru.

With a solid supply from Iceland and the Faroe Islands, Norwegian imports of fishmeal were up slightly in the first quarter.

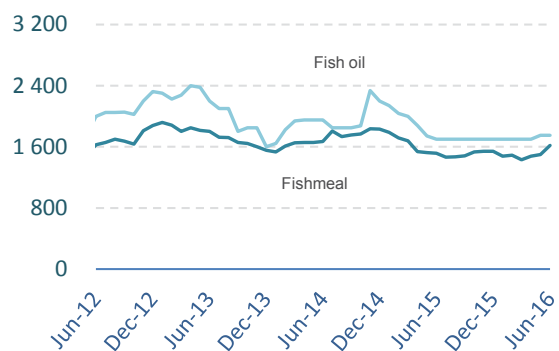
As Norwegian salmon prices reached record highs due to the challenges facing the Chilean salmon farming industry and a favorable exchange rate, Norway will continue efforts to explore fishmeal and fish oil alternatives, with these efforts unlikely to stop in the near future.

Various attempts to revise the feed formulas in order to reduce the dependence on fishmeal and oil continues, while technological development coupled with the flexibility of raw material have enabled research to get closer. Skretting, a global leader in innovative and sustainable nutrition solutions for the aquaculture industry, recently claimed that salmon feeds can be formulated completely free of fishmeal while rendering the same performance in terms of fish growth and health. It remains to be seen if such a product would be able to be utilized on a large-scale.

### Prices

#### Fish oil and fishmeal: Europe

USD/tonne



Source: Oil World

## Prices

In the first half of the first quarter, Peruvian fishmeal prices were down to USD 1 650 per tonne as trade remained slow. A number of reasons could be ascribed to the stagnant trade. These include Chinese buyers being hesitant to buy due to poor weather and the downward market price trend, other buyers holding off in hopes that the price could be further revised down, EL Niño strength projections being adjusted from extraordinary to moderate and importers seeking to diversify their sources in order to reduce their dependence on the South American market.

However, from February on, FOB Peruvian fishmeal prices bounced back due to world supplies tightening with Icelandic quotas set. According to Undercurrent News, a short capelin season is expected as the total catch of Icelandic vessels was only 74 000 tonnes in January 2016, which year-on-year is a 20 percent decline. The two-month delay in the first north-central fishing season in Peru, which usually starts in April, also further tightened supplies. Additionally, China's seasonal market rebound helped with the price recovery.

## Outlook

With the more than expected quota released by the Peruvian government for the first fishing season, coupled with likely colder ocean temperatures that are more conducive to fishing, the supply of fishmeal from the Southeastern Pacific seems like it will be adequate in the short-term, perhaps offsetting impacts from El Niño. In the longer-term however, the supply and demand gap will continue to increase, with the continuous worldwide growth of fish and livestock farming pushing market prices further upwards.



# LOBSTER

## GLOBEFISH HIGHLIGHTS

### *Lobster season late in some areas, resulting in high prices*

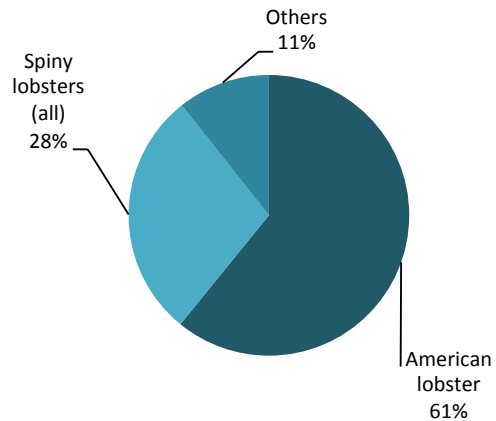
The Prince Edward Island lobster season was off to a late start this year, and consequently, supplies are tighter than earlier expected. Coupled with strong demand, this makes for high prices. North American lobster continues to gain popularity in Asia.

The EU threat to ban live lobsters from North America due to concerns and claims that the lobsters are invading non-native waters has created quite a debate. Companies in New England are working together to collaboratively fight the ban.

In March, the US National Fisheries Institute (NFI) stated that there was no ban in effect, and that the claim of “invasion” was an overstatement: during an eight year period, a total of 32 North American lobsters had been found in EU waters. The rumoured future import ban will most likely be discussed as part of the Transatlantic Trade and Investment Partnership Negotiations, and the NFI expects an acceptable solution to be found. EU authorities have given Sweden a deadline of 31 July to present evidence that North American lobster represents an invasive species.

In Canada, the government has announced that the minimum size of lobsters harvested in New Brunswick, Nova Scotia and Prince Edward Island will be raised for the summer season. It is, to put it mildly, a marginal increase at 1 millimeter (mm), but by 2018 the minimum size will be increased

Lobster production (2014)



Source: **FAO**

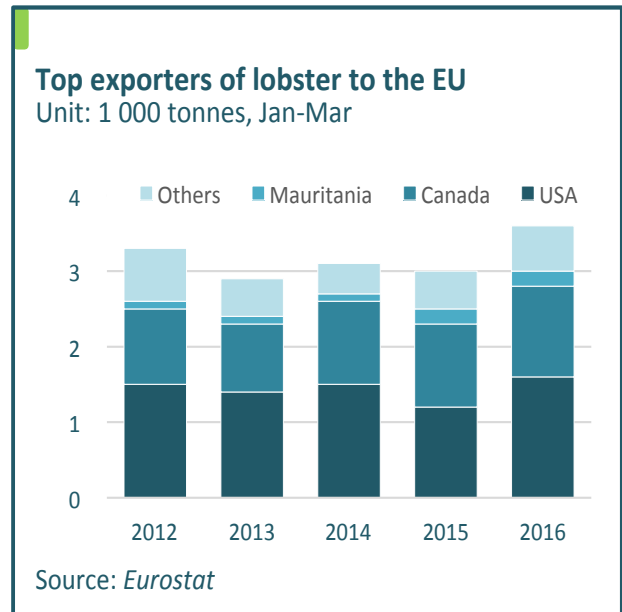
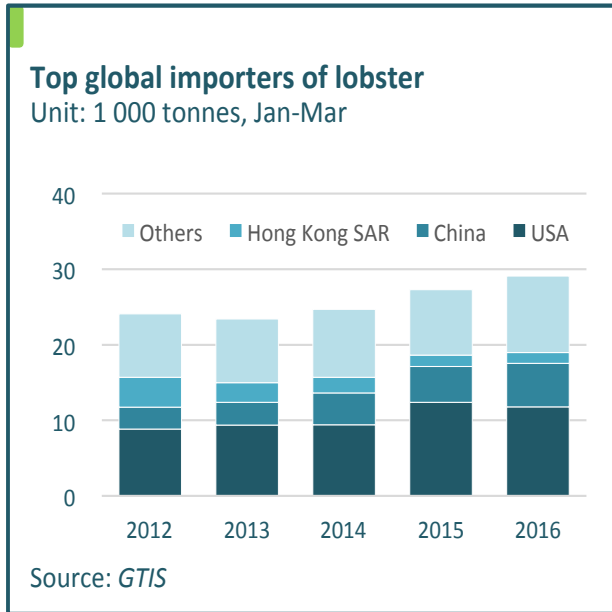
by 5 mm to total 77 mm. For processors of lobster tails and meat, this decision is welcomed, as larger lobsters are easier to process and generally give a better yield. However, for packers of the so-called ‘popsicles’ (whole lobsters frozen in brine), it is bad news, as lobster raw material prices are expected to increase. Popsicles are particularly popular on the European market, where this product is sold at relatively low prices.

In 2015, global lobster landings reached 160 000 tonnes. Estimates from 2013 demonstrate that almost 55 percent of total global landings are comprised of American lobster (*Homarus americanus*). In 2015, this share was probably even higher. Thus, American lobster is dominating the world lobster market.

## Supplies

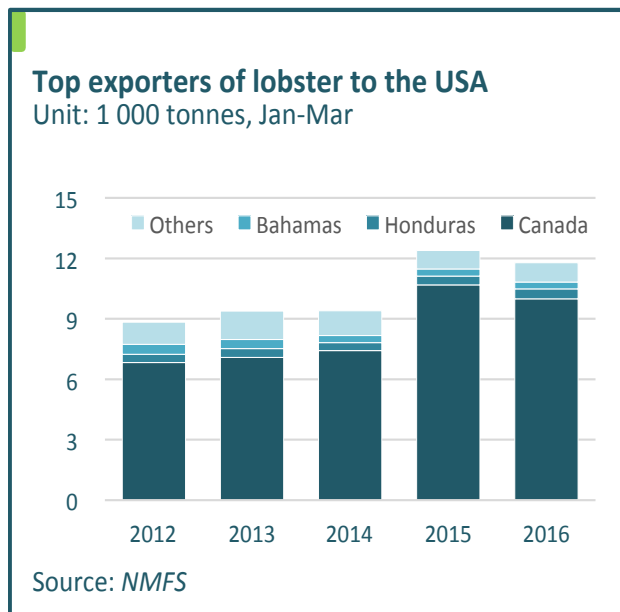
This year’s lobster season in Nova Scotia is expected to be a strong one. According to some fishers, it may be the best season in a decade. In contrast, in Prince Edward Island, things are not looking as optimistic. Normally, the season peaks in the second half of June, but in spite of predictions of an early start to the season by the Gulf of Maine Research Institute, by the end of June, fishers had still not seen any signs of the peak season. Fishing has also been made difficult due to high winds. Experts do not expect that the lost volume will be made up for during the rest of the summer season, which only lasts for eight weeks. As a result of low catches, lobster prices in

the region are high.



## International trade

Global imports of lobster increased slightly during the first quarter of 2016, from 27 300 tonnes to 29 100 tonnes (note that this includes selected countries only). Major importers were the USA with 11 800 tonnes (-4.8 percent compared with the

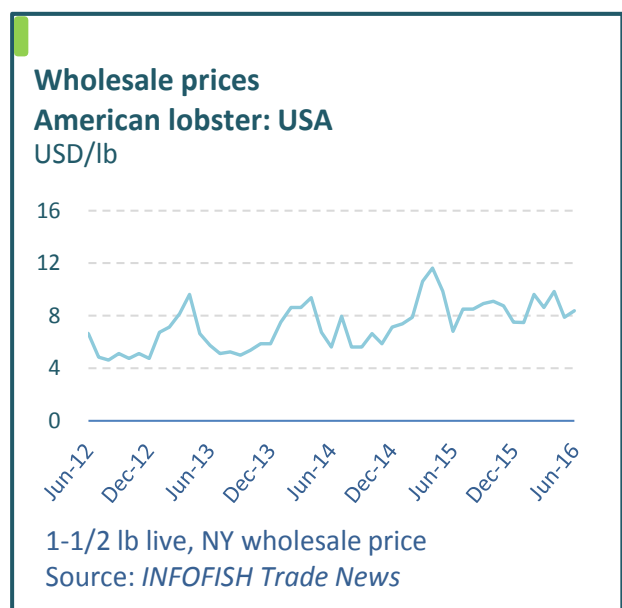


same period in 2015) and China with 5 800 tonnes (+23.4 percent.). US imports came overwhelmingly from Canada (86 percent).

The EU also increased lobster imports during the first quarter, from 3 000 tonnes during the first quarter of 2015 to 3 600 tonnes in 2016 (+20 percent). The main suppliers were the USA and Canada.

The market for North American lobster in Asia continues to grow. A Canadian exporter reports that in spite of falling demand for high priced lobster (likely mostly live) in China, other Asian markets such as the Republic of Korea, Japan, Thailand, Viet Nam and Indonesia, are opening up to the product. In the past, it has been challenging to get live lobster from New England to Asian markets, but recently this has become easier. With better availability, demand has taken off.

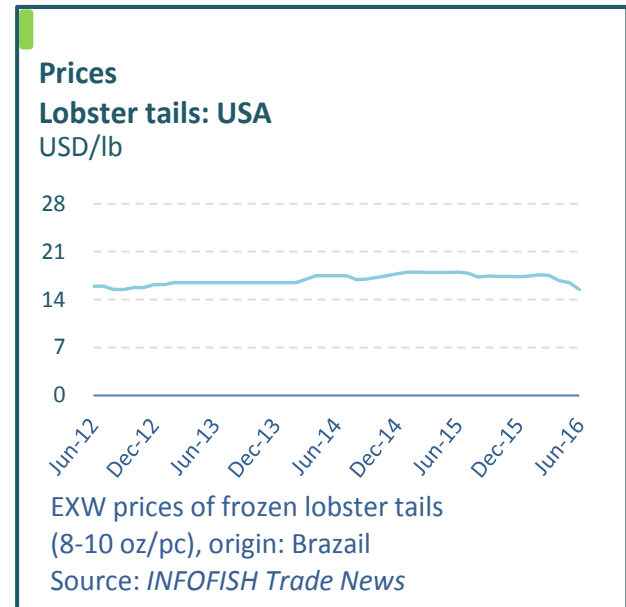
Lobster exporters in New Zealand are also looking at the Asian market, particularly China. However, New Zealand lobster exports consist of rock lobsters. A New Zealand company recently opened a new plant for packing and exporting live lobster with a 6 tonne per day processing capacity and it will be interesting to see how this trade develops.





Live North American lobsters are also gaining popular elsewhere. A Canadian company is now shipping live lobsters to Brazil, where they are sold fresh in Sao Paulo at upper-end restaurants. The North American lobsters compete well with local lobsters due to their larger claws and higher yield of meat.

## Prices



The poor weather and short supplies from New England, coupled with strong demand in several markets, have pushed lobster meat prices up. With the tourist season coming up, some expect prices to go even higher this summer. Lobster meat prices are already at an all time high.

The Maine Lobster Marketing Collaborative recently stated that consumers seem willing to pay more for lobsters from Maine. Restaurants serving Maine lobster are able to charge more for this product than for lobsters from other regions. Apparently, marketing of the Maine lobster has been successful in claiming higher quality for their product.

## Outlook

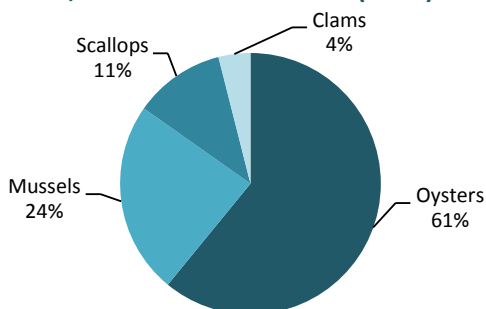
It seems that supplies of North American lobster may become quite tight this summer, as catches have been low. Demand is strong and prices are high, and perhaps may climb even higher. Demand for North American lobster in Asia will continue to strengthen, in spite of the lull in the Chinese economy.

# BIVALVES

## GLOBEFISH HIGHLIGHTS

*Demand for European mussels within the EU on the decline*

**Bivalve production by selected species, both wild and farmed (2014)**



Source: *FAO*

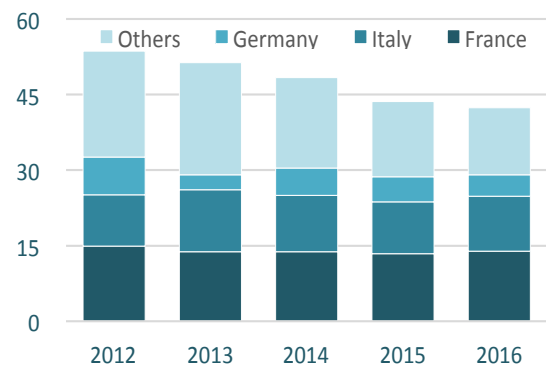
## Mussels

In the first quarter of 2016, purchases of mussels in the 10 largest buying countries slightly increased (+2 500 tonnes) compared with the same period in 2015. For the world's largest importers, France and Italy, imports grew by 5 percent and 4 percent respectively.

In terms of exports, the leading traders declined notably: the Netherlands by 24 percent, Chile by 12 percent, and Spain by 1 percent. Interestingly, by contrast, modest producers reported growing exports on the international market, including Denmark (+54 percent or +1 900 tonnes), New Zealand (+21 percent or +1 500 tonnes), and Canada (+36 percent or +900 tonnes).

**Top exporters of mussels to the EU**

Unit: 1 000 tonnes, Jan-Mar



Source: *EUROSTAT and Customs*

**World imports/exports of mussels**

	January-March				
	2012	2013	2014	2015	2016
	(1 000 tonnes)				
<b>IMPORTS</b>					
France	14.9	13.8	13.8	13.4	13.9
Italy	10.2	12.3	11.2	10.3	10.9
USA	8.6	7.8	8.6	7.0	8.2
Others	37.5	35.8	33.5	29.4	29.6
<b>Total</b>	<b>71.2</b>	<b>69.7</b>	<b>67.1</b>	<b>60.1</b>	<b>62.6</b>
<b>EXPORTS</b>					
Chile	13.6	16.8	14.9	17.5	15.4
Spain	13.6	14.0	14.3	14.2	14.1
Netherlands	12.0	10.9	10.1	12.7	9.7
Others	36.8	33.9	34.6	27.7	33.0
<b>Total</b>	<b>76</b>	<b>75.7</b>	<b>73.8</b>	<b>72.1</b>	<b>72.1</b>

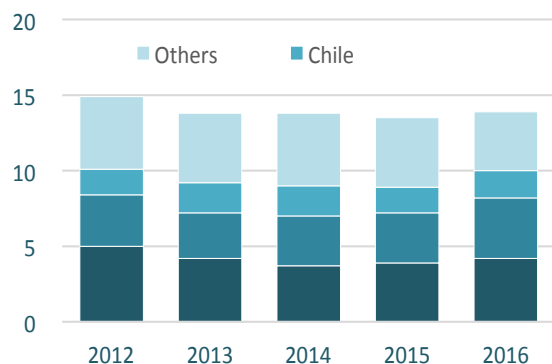
Source: *GTIS*

During the review period, total EU imports of mussels declined by 3 percent to total 42 400 tonnes compared with 43 600 tonnes in the same period the year before.

The largest importers inside the EU - France and Italy - consolidated their share to take 58 percent of total EU mussel imports. Inter-EU imports of mussels into smaller markets demonstrated a clear decline, such as Germany (-14 percent), Belgium (-10 percent) and the Netherlands (-48 percent). These markets were traditionally important mussel consumers, but young consumers are not consuming the product as

## Top exporters of mussels to France

Unit: 1 000 tonnes, Jan-Mar



Source: DNSCE

much as older generations have.

The two largest suppliers to the French market, The Netherlands and Spain, consolidated their market share, and in the first quarter comprised 59 percent of all French imports, at the expense of Italy and Denmark.

Notably, supplies from non-EU origin into the EU

reached an unprecedented peak during the first quarter of 2016, accounting for 22 percent of total EU imports.

Organic mussel production within the EU continues to grow. Indeed, the largest offshore rope-grown mussel farm was started in early 2016 off the coast of southern England (pre-Brexit). At full operation, production is expected to produce 10 000 tonnes of blue mussels *Mytilus edulis*. Denmark is also leading the organic production charge, with estimates of the country totaling over 2 000 tonnes of organic rope-grown mussels.

Disease incidence continues to brutally impact farms on the west coast of France during the first quarter of 2016. In some areas, local mortality observed in 2015 and 2016 reached 90 percent. As of May 2016, mortality was still as high as 70 percent in certain basins (Source: *Charente Libre*). The *Vibrio splendidus* bacteria is suspected to be the cause of mortality. Moreover, unusual environmental conditions including "large amounts of fresh

## ABOUT

### Organic mussel production

Organic mussel farming is characterized by:

- Required distance between the production unit and possible sources of pollution
- Prohibition to apply hormones and GMO in production
- Consideration of protected species (e.g. birds, porpoise, otter)
- Focus on prevention of diseases
- Maintenance of an extended log-book to secure traceability of production
- Prohibition of antifoulant use on boats and production units
- Priority of using easily degradable materials
- No use of antibiotics or chemicals in production
- Use of only approved organic substances in connection to processing on land

(Source: *The International Centre for Research in Organic Food Systems*)

## PRODUCER FOCUS

### Ireland and Scotland

According to the annual aquaculture survey by Bord Iascaigh Mhara (the Irish Sea Fisheries Board) released in May 2016, the aquaculture industry in Ireland increased by a noticeable 20 percent in 2015 over 2014. With all species included, volume reached 40 140 tonnes worth EUR 150 million, employing over 1 800 people. Ireland shellfish farming includes oysters (valued at EUR 51 million) and mussels (valued at EUR 13 million).

In Scotland, the Scottish Shellfish Farm Production Survey published in May 2016 reported that production of mussels reached 7 270 tonnes, reflecting a 5 percent decline compared with the year before. However, when looking at the longer-term picture, the Scottish production of farmed mussels has regularly grown, from 4 219 tonnes in 2006 to 6 302 tonnes in 2009 and 7 683 tonnes in 2014, which was the peak year of the decade. In terms of Scottish oyster volumes, the production of Pacific oysters declined by 21 percent in 2015, compared with 2014 to total only 2 693 tonnes. Notably, 2015 was the second lowest production year since 2006. 2014 was the peak year with 3 392 tonnes produced.



## World imports/exports of oysters

		January-March				
		2012	2013	2014	2015	2016
		(1 000 tonnes)				
IMPORTS	USA	0.9	1.9	1.8	1.8	2.6
	Japan	1.0	1.6	1.4	1.4	2.3
	Hong Kong SAR	1.4	1.3	1.5	1.5	1.4
	Others	7.8	5.9	6.5	6.6	7.2
	<b>Total</b>	<b>11.1</b>	<b>10.7</b>	<b>11.2</b>	<b>11.3</b>	<b>13.5</b>
EXPORTS	Republic of Korea	2.3	1.8	2.1	3.4	1.0
	China	1.7	2.2	1.5	2.0	2.2
	France	1.5	1.7	1.7	2.0	2.1
	Others	5.7	5.2	5.8	6.0	5.9
	<b>Total</b>	<b>11.2</b>	<b>10.9</b>	<b>11.1</b>	<b>13.4</b>	<b>11.1</b>

Source: GTIS

water, re-suspension of sediments during a series of storms, and a high renewal rate of specific water masses in Brittany's Pertuis area" may be partially responsible for sparking the phenomenon (Source: *Epidemiological Bulletin, Animal Health and Food*). In May 2016, the French State Minister for Maritime Affairs announced a grant of EUR 4 million to provide to impacted mussel farmers.

## Oysters

Historically, oyster trade during the first months of the year is relatively stagnant, however, during the first quarter of 2016, oyster trade grew by a remarkable 19% compared with the same period the year before. This increase reflects higher demand in Japan (+60%) and in the USA (+41%),

### RECENT NEWS

#### Public interest group sues FDA over not protecting public from bacteria in shellfish

In late May, the US Center for Science in the Public Interest sued the Food and Drug Administration (FDA), responsible for the safety of oysters and other shellfish, for failing to protect public safety. The shellfish they pointed to contained the bacteria *Vibrio vulnificus*, and was proven deadly in several cases, particularly for people with weakened immune systems. A response to the Center's complaint is expected by later this summer.

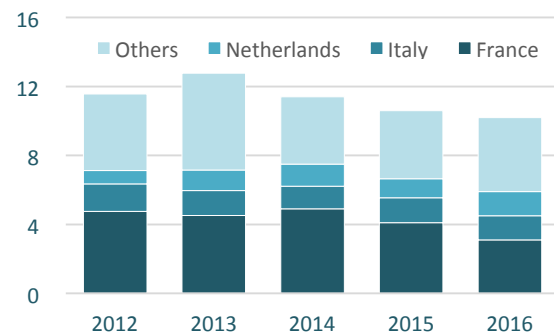
## World imports/exports of scallops

		January-March				
		2012	2013	2014	2015	2016
		(1 000 tonnes)				
IMPORTS	USA	3.8	6.9	9.8	6.5	8.9
	China	2.1	3.5	2.6	11.2	5.6
	France	4.8	4.6	5.0	4.2	3.2
	Others	17.1	19.5	17.5	19.6	19.3
	<b>Total</b>	<b>27.8</b>	<b>34.4</b>	<b>34.8</b>	<b>41.5</b>	<b>37</b>
EXPORTS	China	7.8	8.7	10.7	9.0	11.4
	UK	3.3	2.7	2.6	2.3	2.5
	USA	2.9	3.1	2.4	2.3	2.1
	Others	11.8	12.5	14.5	14.6	10.3
	<b>Total</b>	<b>25.8</b>	<b>27.1</b>	<b>30.2</b>	<b>28.2</b>	<b>26.4</b>

Source: GTIS

### Top exporters of scallops to the EU

Unit: 1 000 tonnes, Jan-Mar



Source: EUROSTAT and Customs

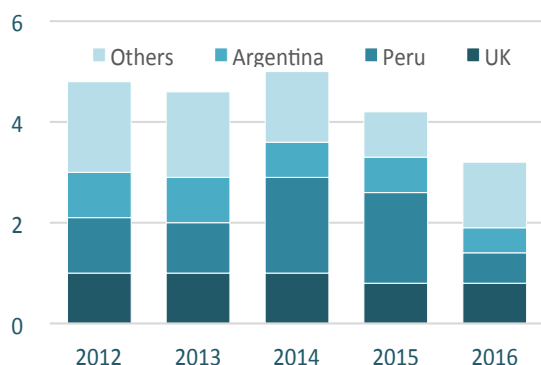
largely due to the drop in domestic supplies. It will be interesting to see how this demand in the USA sustains as according to NOAA, the estimated per capita consumption of oyster products in the USA has been on the decline, from about .11 kg in the early 1990s to less than .09 kg during the last five years.

## Scallops

International trade of scallops slowed down during the first quarter of 2016 compared with the same period in 2015. Major buyers on the international market reduced their imports, such as China, with imports dropping by a significant 50 percent. This decline may be partially due to increased local production. According to SeafoodNews.com, the production of yesso scallops in the Changai province increased by 4.9 percent to reach over 59 000 tonnes in the period from January to May

### Top exporters of scallops to France

Unit: 1 000 tonnes, Jan-Mar



Source: DNSCE

2016.

In the EU, scallop imports in the first quarter declined by 4 percent compared with the same period the year before, to total only 10 200 tonnes. In France, the largest global scallop market, year-on-year imports fell by 24 percent during the first quarter of 2016. Consequently, France's market share of the total EU market, declined from 38.7 percent to 30.4 percent. Peru, the historical leading supplier to the French market, decreased its market share from 42.9 percent in 2015 down to 18.8 percent in 2016, as a result of sales to France declining by a significant 67 percent (-1 200 tonnes).

## Clams, cockle, ark shells

When looking at the 10 largest importers of clams, cockles and ark shells, trade during the first quarter of 2016 was rather stable (+0.7 percent) compared with the same period the year before. Japan, the world's largest buyer, continued their marginal

### World imports/exports of clams, cockles, ark shells

	January-March				
	2012	2013	2014	2015	2016
	(1 000 tonnes)				
Japan	16.9	18.8	19.0	21.9	22.6
Republic of Korea	18.2	14.6	17.8	18.8	17.1
Spain	2.0	5.7	5.8	6.4	7.0
Others	17.2	20.4	19.2	20.0	19.9
<b>Total</b>	<b>54.3</b>	<b>59.5</b>	<b>61.8</b>	<b>67.1</b>	<b>66.6</b>
China	41.3	39.2	36.1	41.8	45.5
USA	0.9	1.3	2.6	2.1	2.1
Canada	0.5	1.9	1.8	2.0	1.9
Others	40.9	11.4	15.0	13.4	13.0
<b>Total</b>	<b>83.7</b>	<b>53.8</b>	<b>55.6</b>	<b>59.3</b>	<b>62.5</b>

Source: GTIS

import growth (+3 percent by 700 tonnes). In contrast, purchases by the second largest market, the Republic of Korea, declined by 9 percent.

Exports from China, the leading global supplier, comprised 78 percent of the market share of the ten largest exporters, increasing by 9 percent (+3 700 tonnes).

## Outlook

The development of organic mussels will be worth watching carefully in the coming years, with sustained development already observed in Denmark and Ireland so far. On the regulatory side, the EU, Chile and Canada signed an agreement in early April on organic product trade.

Consequences of the Brexit vote on the seafood trade are difficult to assess, as the long-term impact on relative prices are unknown (due to currency movements, duty rates, etc). If any, the trade of scallops, cockles, razor and clam shells may be impacted as the UK is the key supplier of these species on the international market.

# CRAB

## GLOBEFISH HIGHLIGHTS

### North American landings up and prices strong

Landings on the US west coast have been robust in spite of a late start to the season and a 40 percent reduction in the Bering Sea quota. Prices are higher than last year, and demand in China and Japan is growing.

## Supplies

### USA

On the west coast of the USA, Oregon's dungeness crab landings were 6 200 tonnes by the middle of May, according to the Oregon Department of Fish and Wildlife. This is an increase of 76 percent compared with the same time in 2015, which came in spite of a slow start to the fishery due to domoic acid levels registered. The California dungeness crab

season was also delayed because of the domoic acid levels, with the fishery only getting underway in late March. The dungeness fishery is the most valuable fishery in Washington state and Oregon, and the second most valuable in California. It is estimated that the dungeness crab harvest in 2014 was worth USD 80 million in Washington, USD 48 million in Oregon and USD 67 million in California.

In Alaska, 93 percent of the quota for opilio snow crab had been caught as of early April. The bairdi snow crab season was over by this time. Quality throughout the season has been excellent and high demand continues along with a price premium for Alaskan snow crab, which is favoured over Russian product. Sellers are allocating product to ensure inventory for customers as volumes must last until the next season, which is not until mid-October.

### MARKET NEWS

#### Seafood Watch upgrades Eastern Bering Sea crab

The Monterey Bay Aquarium Seafood Watch released new recommendations giving crab fisheries in the Eastern Bering Sea an upgraded rating. Bristol Bay Red King (*Paralithoides camtschaticus*) crab caught in the Eastern Bering Sea are now rated a "Best Choice" by Seafood Watch. According to Seafood Source, with the updated recommendation, all of the major crab fisheries in the Eastern Bering Sea have obtained the Seafood Watch "Best Choice" rating, including, including two species of Snow crab (*Chionoecetes opilio*, *C. Bairdi*) and Blue King crab from St. Matthews Island (*P. platypus*).

On the east coast, crab landings have also been up this year so far in Florida. Stone crab landings in Florida by mid-May had grown by as much as 25 percent compared with the previous season. The crabs were of excellent quality with unusually large claws.

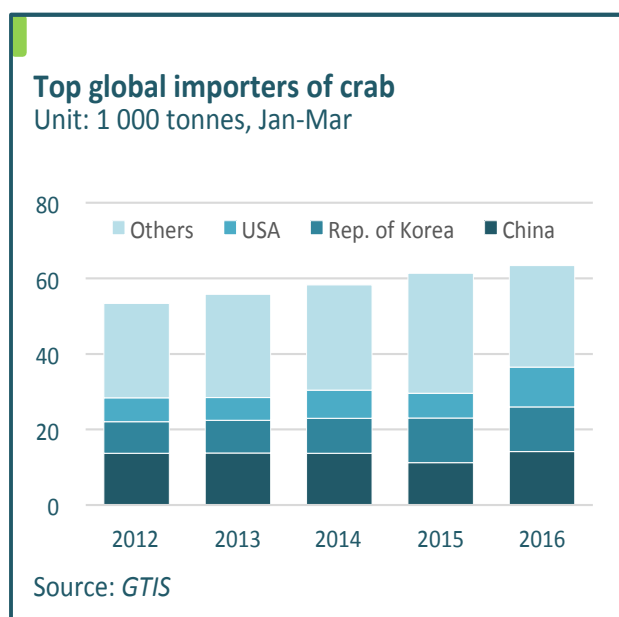
### Russia

In the Russian sector of the Barents Sea, a new snow crab fishery is opening. Quotas for 1 500

tonnes of snow crab were auctioned off at the end of March, and just over USD 17.6 million were paid for these quotas. There are significant expectations for this fishery, with Russian fishing companies very interested in securing crab quotas.

## Europe

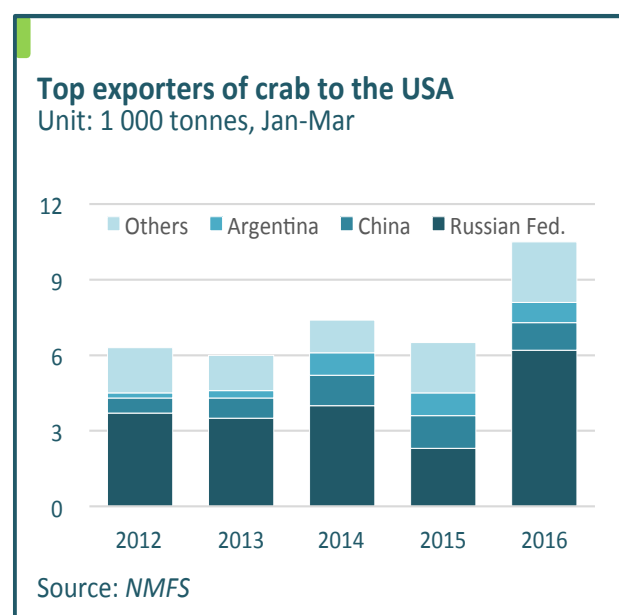
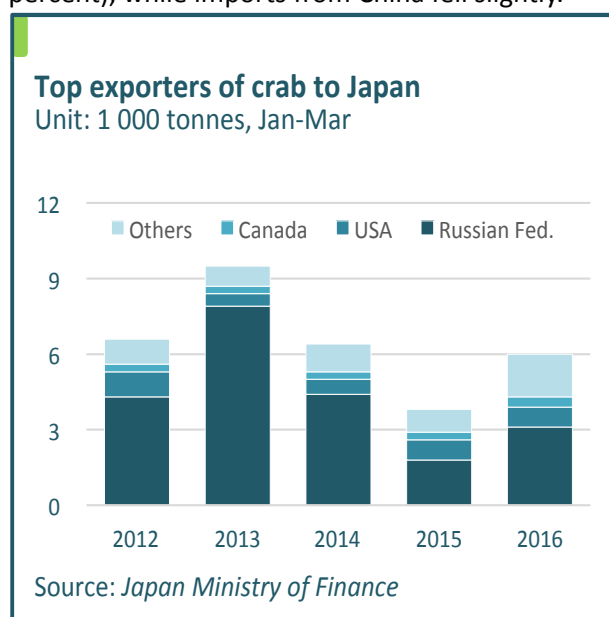
Crab production in Europe was disappointing during the first quarter due to bad weather conditions. In May, crab fishing started in Europe and landings were high, leading to a pronounced decline in prices on the European market.



## International trade

During the first quarter of 2016, global crab trade increased marginally by 3.4 percent, when imports of fresh and frozen crab rose from 61 300 tonnes in 2015 to 63 400 tonnes in 2016.

All of the largest importers either increased imports or remained at the same level as in the previous year. China showed an increase of 26.8 percent, while the USA imported a significant 61.5 percent more crab than during the same period in 2015. In the case of the USA, there were marked increases in supplies from Russia, their main supplier (+169.6 percent), while imports from China fell slightly.



Japan also imported substantially more crab during the first quarter of the year; 6 000 tonnes compared with 3 800 tonnes during the first quarter of 2015 (+57.9 percent). As with the USA, the main supplier to Japan was Russia.

In spite of the economic problems that China is currently undergoing, demand for king crab and snow crab is still growing. However, Chinese consumers are becoming increasingly aware of the origin of their seafood, and according to some sources, prefer crabs originating from Alaska and China. One of the factors contributing to the rise in crab sales in China is the improvement in cold chain logistics as well as e-commerce efforts.

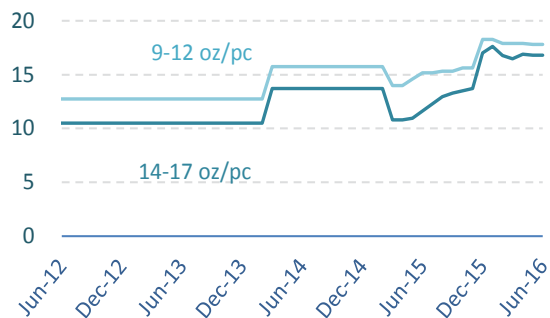
Demand for crab is also growing in Japan. Crab imports into Japan increased by 58 percent during the first quarter of 2016 compared with the same period the year before.

## Prices

Although availability of crab on the US west coast has markedly increased this year, average prices are up. From the Bering Sea fleet, prices have also risen. Prices

## Prices Crab\*: USA, Japan

USD/lb



\*Claw and sections, red, EXW New York

Source: INFOFISH Trade News

began climbing when the quota in the Bering Sea was reduced by 40 percent to 18 100 tonnes last autumn. This reduced quota combined with a favourable market has analysts predicting that 2016 will be a very profitable year for the US west coast crab fleet.

## Outlook

Despite the reduced quota in the Bering Sea, the outlook is for strong crab supplies. More snow crab from Russia is expected to enter international markets, and prices are expected to be strong. Overall, 2016 looks to be a favourable year for the crab sector.



# SPECIAL FEATURE

## ■ GLOBEFISH HIGHLIGHTS

### *Towards sustainable fisheries in the face of climate change*

#### Background

Climate change is expected to make the situation of sustainable fisheries governance even more urgent and critical. However, the full implications of climate change for international trade of fish and fishery products are not well known and require further study. Research is particularly needed on the links between changing resource abundance/distribution and fisheries and aquaculture production systems at regional and national levels.

What is known is that climate change will increase uncertainties and raise risks—as well as opportunities - in the supply of products from both marine and inland capture fisheries and aquaculture.

Climate change and increased carbon dioxide absorption in the world's oceans leads to warming water temperatures; changing ocean currents; southern oscillation; sea level rise; changes in rainfall, river flows, lake levels, thermal structure, storm severity and frequency; and ocean acidification<sup>1</sup>. These impacts could result in changes in total fish catch, composition of the catch, and the distribution of fish, especially within Exclusive Economic Zones (EEZs) in tropic regions, as fish move to cooler waters found further offshore. These changes could especially impact small-scale fishers using traditional methods. Extreme weather



events and sea level rise are anticipated to impact fisheries related infrastructure such as ports and fleets, further raising costs of fishing, processing and distribution activities.

As a result of these expected impacts, climate change has the potential to change the distribution of fisheries production, the competitiveness of exports from the fisheries sector, and thus ultimately world trade patterns. While some regions may gain from expected resource shifts, others will face major adjustments, and thus risk sustainability of their livelihoods and food security. Climate-induced movements in aquatic species used by the fisheries and aquaculture sector will require adaptation at all stages of the seafood value chain, from producers, processors, marketers, exporters, and importers as they search for and adapt to changing supplies in order to meet the world's growing demand for seafood.



© FAO/ Suuronen Petri

## Research on climate change impacts

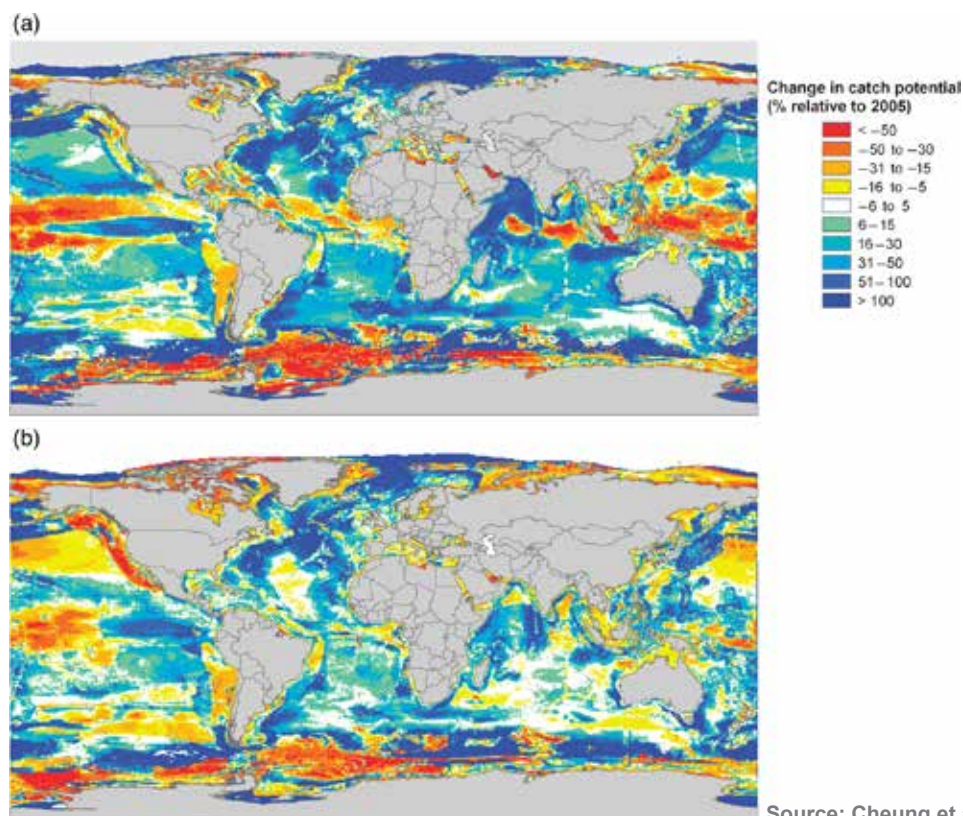
One early model developed to predict the impact of climate change on capture fisheries illustrates a latitudinal shift in currently targeted species that could drastically alter the location of fishery resources (Cheung et al., 2010)<sup>2</sup>. Tropical countries could face up to a 40 percent drop in catch potential of traditional and/or commercially-valuable species. Whereas high-latitude regions could gain as much as a 30 to 70 percent increase in catch potential, as illustrated in Figure 1. This has vital implications for tropical developing countries and small-island states highly dependent on fisheries for livelihoods, export earnings, and domestic food security. Other vulnerable communities and economies, including many African coastal states are particularly exposed to climate change impacts in fisheries and aquaculture due to low adaptive capacity and high dependence on the resource<sup>3</sup>.

A more recent model in 2012 was developed to estimate climate change impacts on capture fisheries production (Merino et al, 2012)<sup>4</sup>. The Merino model predicts a 6 percent increase in potential yield from large commercially-valuable fish stocks by 2050 but this is less than the expected human population growth rate. The authors propose that aquaculture could fill the gap between future supply and demand but that such intensification will require technological advances to ensure that the increased production does not have a negative environmental impact, for example, by significantly lowering the FIFO rates. The Merino model does predict one constraint on aquaculture growth; falling output from the anchovy fisheries in Latin America due to more unpredictable El Niño effects and increased severe weather episodes from climate change. This is expected to contribute to rising prices and increased price variability for fish feed ingredients as demand growth leads supplies.

Another recent study by Barange et al (2014) is optimistic in its projections that global fish supplies will be able to meet rising global demand in 2050, though not without possible negative impacts on vulnerable regions<sup>5</sup>. A redistribution of resources as a result of climate-induced shifts will imply the need for changing trade patterns to move products from surplus to deficit regions. It is likely, however, that the deficit regions will lack the financial resources necessary to pay for these imports and will result in net losses for some of the most vulnerable fisheries communities. The Barange et al model combines predicted productivity changes from climate change with measured vulnerability of populations dependent on fisheries resources. The results illustrate that South Asian and Southeast Asian fishing communities are highly vulnerable to the impacts of climate change on fisheries, in part due to high population density and dependency on the resource for food security. Coastal communities in West Africa are also at high risk, and even though the climate change impacts in this region are expected to be not as severe, these populations are less economically able to adapt to changes and thus more vulnerable.

Despite these general models that predict worldwide impacts, different conditions exist around the world, both regionally and nationally, and various adaptation responses will be needed, particularly for aquaculture. Thus, further work needs to be done at the national and regional level in order for these projections to be useful for policymakers, who must decide on how to allocate limited financial resources in order to assist the vulnerable fisheries communities to adapt to climate-induced resource changes.

Figure 1: Predicted changes in fisheries catch potential between 2005-2055



## Areas for future work

It is early days for predicting climate change impacts on aquatic resources and all of the stakeholders along the seafood value chain. It is certain that there will be shifts in fisheries resources, with net winners and losers. Linking early predictions with production and eventually trade flows requires additional research efforts, especially moving down from global to regional and national level analysis. More experience in how the sector can transition to climate-ready production and post-harvest activities need to be collected and shared. There also needs to be more flexibility in existing management tools used by national governments and Regional Fisheries Management Organizations (RFMOs) to allow adequate policy space for countries to adapt to changes in resource availability under climate change.

To further information sharing among stakeholders, FishAdapt, an international conference to be held in Bangkok from 8 to 10 August, will bring together experts from the sector, academia, civil society, government and intergovernmental organizations to share their experiences in building fisheries and aquaculture sector adaptation to climate change (see news on FishAdapt to the left).

### FISHADAPT

8 -10 August 2016  
Bangkok, Thailand

FishAdapt, a knowledge sharing platform on climate change adaptation in the fisheries and aquaculture sector, will provide participants the opportunity to share real-life experiences and practical research relating to the vulnerabilities associated with climate change.

Most importantly, the conference will exchange lessons learned on how to identify, prioritize and implement adaptation and disaster risk management actions within the fisheries and aquaculture sector, particularly in dependent rural communities.

Visit the FishAdapt conference website ([www.fishadapt.com](http://www.fishadapt.com)) to learn more.

- 1 De Young, C., D. Soto and J. Muir. 2013. Module 10: Climate-Smart Fisheries and Aquaculture. In: Climate Smart Agriculture (CSA) Sourcebook.
- 2 Cheung, W., V. LAM, S. Sarmiento, K. Kearney, R. Watson, D. Zeller, and D. Pauly. 2010. Large-scale redistribution of maximum fisheries catch potential in the global ocean under climate change. *Global Change Biology*.
- 3 Allison, E., A. Perry, M-C Badjeck, W.N. Adger, K. Brown, D. Conway, A. Halls, G. Pilling, J. Reynolds, N. Andrew and N. Dulvy. 2009. Vulnerability of national economies to the impacts of climate change on fisheries. *Fish and Fisheries*.
- 4 Merino, G., M. Barange, J. Blanchard, J. Harle, R. Holmes, I. Allen, E. Allison, M.C. Badjeck, N. Dulvy, J. Holt, S. Jennings, C. Mullon, L. Rodwell. 2012. Can marine fisheries and aquaculture meet fish demand from a growing human population in a changing climate? *Global Environmental Change*.
- 5 Barange, M., G. Merino, J.L. Blanchard, J. Scholtens, Harle, E.H. Allison, J.I. Allen, J. Hold, and S. Jennings. 2014. Impacts of climate change on marine ecosystem production in societies dependent on fisheries. *Nature Climate Change Letters*.





# EVENTS

## GLOBEFISH HIGHLIGHTS

### *Vigo16: A consolidated yearly appointment for fisheries stakeholders*

The World Congress co-organized by FAO and Conxemar has become a benchmark event both for professionals of the sector as well as for experts, renowned scientists and the highest fishing authorities worldwide. The following day, the annual International Frozen Seafood exhibition, the biggest event dedicated to the frozen seafood sector in Spain, will take place over three days.



© FAO/ GLOBEFISH

### **Global experts convene in Vigo to discuss the status of the cephalopods sector during the 2016 World Congress**

The World Congress co-organized by FAO and Conxemar has become a benchmark event both for professionals of the sector as well as for experts, renowned scientists and the highest fishing authorities worldwide. The following day, the annual International Frozen Seafood exhibition, the biggest event dedicated to the frozen seafood sector in Spain, will take place over three days.

Global experts convene in Vigo to discuss the status of the cephalopods sector during the 2016 World Congress

The 2016 World Congress on Cephalopods will be held on 3 October at the Centro Social Afundación in Vigo, Spain, and is now open for registration.

The one-day agenda of this 5th Edition of the World Congress will focus on Cephalopods in the context of raw material shortages. Ministers of Fisheries, FAO experts and international industry executives will address the state of the resource, markets, supply and the use of the main Cephalopod species. Attendees will gain an overview of the international market performance and future prospects in trade.

As strong participation representing over 30 countries is expected, CONXEMAR will inevitably be the most important place for the cephalopod sector to be this October. The Congress will also serve as an excellent opportunity for networking and to learn how to improve decision making capacities through innovative methods of data gathering and management.

## FAO GLOBEFISH to meet the Spanish seafood sector during the 18th International Frozen Seafood Exhibition



© FAO/ GLOBEFISH

Josè Estors Carballo welcomes Isabel Garcia Tejerina, Spanish Minister for Agriculture, Food and Environmental Affairs, at the FAO Globefish booth during the sixteenth edition of the International Frozen Seafood Exhibition (CONXEMAR)

Annually, the Spanish Association of Wholesalers, Importers, Manufacturers and Exporters of Fish products and Aquaculture organizes the International Frozen Seafood Exhibition (CONXEMAR), which this year will celebrate its 18th edition, from 4 to 6 October 2016.

The event is held in a worldwide key market for the industry - Spain is the largest European seafood importer and the third largest worldwide. Vigo in particular serves as the main fishing port in Europe and is home to some of the most prominent companies in the fish processing industry. CONXEMAR has become an essential meeting

point and business platform for processors, distributors, importers and exporters of seafood products.

FAO Globefish will be present at the exposition - please stop by our booth to share your point of view on fish market trends or to join our international family!

## VIGO DIALOGUE *on decent work in fisheries and aquaculture*

4 OCTOBER 2016  #VIGO2016 [decent-fish-work@fao.org](mailto:decent-fish-work@fao.org)



C022467/07.16

### Decent work for Blue Growth: towards social responsibility in the fish business

Along with a significant exhibition area, the fair will host the third FAO Vigo Dialogue on decent work. The Vigo Dialogue sessions in 2014 and 2015 discussed the promotion of decent work issues in fisheries and aquaculture, and in 2015 focused on benefits and incentives of decent work in the sector. This year discussion will address labour issues and due diligence in seafood supply chains. Participants will also discuss the progress made in promoting decent work in fisheries and aquaculture and next steps moving forward. More detailed information and the provisional agenda can be found here: <http://www.fao.org/in-action/globefish/news-events/details-news/en/c/425535/>

# EVENTS

## GLOBEFISH HIGHLIGHTS

*GLOBEFISH meets the Chinese seafood industry during SIFSE 2016 to discuss about sustainable fisheries*



© FAO/ Proto A.

For the first time, FAO's GLOBEFISH will attend the Shanghai International Fisheries and Seafood Expo (SISFE). The expo, now in its 11th year, will be held from 25 to 27 August in Shanghai, China.

SIFSE is an international meeting point for professionals involved in the fish trade sector and serves as a global platform to network and share information on seafood trade.

According to last year's post-show report from 2015, the exhibition attracted 24 000 visitors from over 30 countries. 80 percent of attendees were from the domestic audience, making this event an excellent opportunity to meet with Chinese seafood stakeholders and establish more direct contact with this significant part of the sector.

GLOBEFISH will be present during the three exciting and packed days of the exhibition, so stop by our booth to meet us and discuss fish trade, sustainability and FAO's Blue Growth Initiative. You can also learn more about GLOBEFISH's work in fish trade analysis, with our flagship publications available, as well as our international correspondents network.

In addition to the exhibition, several side events will also take place, focusing on different aspects of the seafood industry.

GLOBEFISH will contribute to the discussions with its expertise in the field of sustainability in the fisheries sector on the first day of the event, Thursday, 25 August. Victoria Chomo, Fishery Industry Officer (FAO), will present on “Global Supply and Markets of Fishery Products - What Has Been Done for Sustainable Seafood?”, which will be followed by discussion. Dr Chomo will demonstrate how a responsible and sustainable approach can support economic growth and food security by preserving aquatic resources at the same time.

GLOBEFISH looks forward to attending SIFSE for the first time and meeting attendees there! Don't miss the opportunity to learn more about our work in global trade analysis, our international correspondents' network and future events. How? Stop by and ask us!



FAO Assistant Director-General of the Fisheries and Aquaculture Department Árne M. Mathiesen addresses the 32nd session of Committee on Fisheries about the health benefits of fish, recently recognized at the ICN2 Conference. Mathiesen welcomed findings in SOFIA that fish consumption for the first time reached 20 kg per capita

## CHINA's fishery profile at a glance



China is a key country in the fish trade sector. According to FAO's SOFIA report (<http://www.fao.org/3/a-i5798e.pdf>), China has been responsible for most of the growth in fish availability, owing to the dramatic expansion in its fish production, particularly in aquaculture: China accounted for 45.5 million tonnes in 2014, or more than 60 percent of global fish production from aquaculture.

China is also the largest exporter of fish and fishery products and a major importer due to outsourcing of processing from other countries as well as growing domestic consumption of species not produced locally.

The FAO's report also forecasts an expansion of total world fisheries production reaching 196 million tonnes in 2025, even though with a slower annual growth, with China alone accounting for 62 percent of world output.

Fish consumption, which is nowadays higher than ever with 20 kg per capita is expected to increase alongside with population growth and in particular, major increases are projected in Brazil, Peru, Chile, Mexico, and China.

More resources, statistics, indicators can be found at the FAO China fishery country profile webpage: <http://www.fao.org/fishery/facp/CHN/en>

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

	Capture fisheries production		Aquaculture fisheries production		Exports			Imports		
	2013	2014	2013	2014	2013	2014	2015	2013	2014	2015
	Million tonnes (live weight equivalent)				USD billion					
	2013	2014	2013	2014	2013	2014	2015	2013	2014	2015
					estim.		estim.		estim.	estim.
<b>ASIA</b>	<b>50.8</b>	<b>52.8</b>		<b>65.6</b>	<b>57.8</b>	<b>53.2</b>	<b>52.4</b>	<b>43.4</b>	<b>41.9</b>	<b>41.7</b>
China <sup>2</sup>	17.4	18.3	43.9	45.8	23.8	21.9	21.2	13.5	13.4	13.6
of which China, Hong Kong SAR & Taiwan Province of China	0.2	0.2	0.0	0.0	1.0	0.8	0.6	3.6	3.6	3.7
India	0.9	1.1	0.3	0.3	1.8	1.6	1.5	1.2	1.2	1.3
Indonesia	4.6	4.7	4.6	4.9	5.6	4.9	4.6	0.1	0.1	0.1
Japan	6.0	6.4	4.0	4.3	4.2	3.7	3.5	0.3	0.3	0.2
Republic of Korea	3.7	3.7	0.6	0.7	1.9	1.9	1.7	14.8	13.5	13.3
Philippines	1.6	1.7	0.4	0.5	1.7	1.5	1.5	4.3	4.3	4.4
Thailand	2.3	2.4	0.8	0.8	1.0	0.7	0.4	0.3	0.4	0.3
Viet Nam	1.8	1.8	1.0	0.9	6.6	5.6	5.3	2.7	2.5	2.6
	2.8	2.9	3.2	3.4	8.0	8.0	8.1	1.3	1.3	1.3
<b>AFRICA</b>										
Ghana	0.4	0.3	1.1	1.1	0.0	0.0	0.0	0.7	0.7	0.7
Morocco	1.3	1.4	0.0	0.0	2.0	1.9	1.9	0.2	0.2	0.2
Namibia	0.5	0.4	0.0	0.0	0.7	0.7	0.7	0.1	0.1	0.1
Nigeria	0.7	0.8	0.3	0.3	0.1	0.1	0.1	1.3	1.3	1.3
Senegal	0.5	0.5	0.0	0.0	0.4	0.4	0.4	0.0	0.0	0.0
South Africa	0.4	0.6	0.0	0.0	0.6	0.6	0.6	0.4	0.4	0.3
Mexico	1.6	1.5	0.2	0.2	1.2	1.0	0.9	0.9	0.8	0.7
Panama	0.2	0.2	0.0	0.0	0.2	0.2	0.2	0.1	0.1	0.1
Argentina	0.9	0.8	0.0	0.0	1.6	1.5	1.7	0.2	0.2	0.2
Brazil	0.8	0.8	0.5	0.6	0.2	0.2	0.3	1.6	1.2	1.0
Chile	1.8	2.2	1.0	1.2	5.9	4.8	4.5	0.4	0.4	0.3
Ecuador	0.5	0.7	0.3	0.4	4.3	3.7	3.6	0.1	0.1	0.1
Peru	5.9	3.6	0.1	0.1	2.9	2.4	2.3	0.2	0.3	0.3
Canada	0.9	0.9	0.2	0.1	4.5	4.8	4.9	3.0	2.7	2.5
United States of America	5.1	5.0	0.4	0.4	6.1	5.9	5.8	20.3	18.8	18.4
European Union <sup>2</sup>	5.0	5.5	1.2	1.3	33.5	30.1	29.6	54.1	48.0	47.7
of which Extra-EU	"	"	"	"	6.0	5.4	5.3	28.2	25.1	25.0
Iceland	1.4	1.1	0.0	0.0	2.1	2.1	2.0	0.1	0.2	0.1
Norway	2.1	2.3	1.2	1.3	10.8	9.2	9.9	1.4	1.2	1.2
Russia	4.3	4.2	0.2	0.2	3.8	3.1	3.3	3.0	1.7	1.6
Australia	0.2	0.2	0.1	0.1	1.1	1.1	1.0	1.7	1.4	1.3
New Zealand	0.4	0.4	0.1	0.1	1.2	1.1	1.2	0.2	0.2	0.2
<b>World excluding Intra-EU</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>"</b>	<b>120.6</b>	<b>109.4</b>	<b>108.3</b>	<b>114.7</b>	<b>104.9</b>	<b>103.6</b>
Developing countries	68.4	68.9	66.1	69.4	80.7	72.9	72.1	38.6	37.6	37.2
Developed countries	24.3	24.5	4.2	4.4	67.4	61.2	60.5	102.0	90.2	89.1
LIFDCs	11.8	12.1	7.1	7.6	9.0	8.1	7.8	3.3	3.3	3.3
LDCs	10.3	10.7	3.2	3.4	2.9	2.8	2.7	1.1	1.1	1.1
NFIDCs	20.2	18.5	4.8	5.0	10.7	9.9	9.8	4.3	4.1	4.1

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

<sup>2</sup> EU28. 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 22 155 tonnes in 2013 and 7 999 tonnes in 2014 of not identified countries, data not included in any other aggregates. Totals may not match due to rounding.

## PRICE REFERENCE (INCOTERMS 2010)

CFR	Cost and Freight
CIF	Cost, Insurance and Freight
CIP	Carriage and Insurance Paid To
CPT	Carriage Paid To
DAT	Delivered at Terminal
DAP	Delivered at Place
DDP	Delivered Duty Paid
EXW	Ex Works
FCA	Free Carrier
FAS	Free Alongside Ship
FOB	Free on Board

## PRODUCT FORM

C&P	Cooked and Peeled
FAS	Frozen at Sea
H&G	Headed and Gutted
HOG	Head on Gutted (salmon)
IQF	Individually Quick Frozen
IWP	Individually Wrapped Pack
PBI	Pinbone In
PBO	Pinbone Off
PD	Peeled and Deveined
PTO	Peeled Tail On
PUD	Peeled, Undeveined

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