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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 INFO network: INFOFISH (Asia and the Pacific), INFOPESCA (Latin America and the Caribbean), INFOPECHE (Africa), INFOSAMAK (Arab countries), EUROFISH (Central and Eastern Europe) and INFOYU (China).

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<td>SDG</td>
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<td>TILV</td>
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<td>VHS</td>
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<td>WTO</td>
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</table>
According to the latest forecasts, global production of fish and fishery products is expected to expand by 2.3 percent in 2017, a slightly faster growth rate than last year.

Low farmed shrimp output for 2017

Tuna prices worldwide firmed up again in September

Tighter cod supplies and likely rising prices

Growing demand, tighter supplies and record prices

International demand for tilapia steady, though US market weak with discouraging prices

Pangasius trade shrinking

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China | Exports | Mackerel | Whole frozen  
Netherlands | Exports | Herring | Frozen  
Russian Federation | Imports | Mackerel | Frozen Top three origins  
USA | Imports | Sardines | Canned  
--- | --- | --- | ---  
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This acceleration is primarily accounted for by a recovery in catches of anchoveta in South America following the end of El Niño, while world aquaculture production continues to rise at some 4–5 percent a year. Despite higher production, however, the demand stimulus resulting from improving economic conditions globally has lifted prices for many important seafood commodities. In particular, income growth in developing country markets in Latin America and Asia continues to strengthen consumer appetite for seafood, boosting import volumes in addition to absorbing a higher proportion of domestic production.

With increasing supply and high price levels worldwide, the total value of world seafood exports is expected to rise by some 8 percent this year in US dollar terms, building on a similar increase in 2016. Overall, the FAO Fish Price Index was 10 points higher in August 2017, the most recent available month, with all commodity groups higher than the same month in 2016. Higher prices for salmon, shrimp, tuna, cod, cephalopods and some small pelagic species have boosted export revenues for many large producers. In particular, India has seen the value of its seafood exports rise substantially due to its position as an increasingly important shrimp producer, while improved shrimp and tuna prices have also benefitted a number of Central and South American countries. Meanwhile, Norway, Chile and the United Kingdom continue to reap the rewards of the tight global salmon supply. On the market side, the most important individual contributors to trade value growth are China, the United States of America, the EU28 and Japan.

International cooperation in protecting the long-term health of our marine environments remains a priority. At the 11th World Trade Organization (WTO) Ministerial taking place in Buenos Aires on 10-13 December this year, discussions will continue between participants regarding the need to limit fisheries subsidies. An agreement between members that addresses the issue of overcapacity and overfishing resulting from such subsidy schemes is considered an essential component of Sustainable Development Goal (SDG) 14, which concerns the wellbeing of the world’s oceans. Another crucially important aspect of SDG 14 is climate change and how to mitigate its negative effects on fisheries and other marine-based resources, which was the topic of central focus at the VI edition of the CONXEMAR - FAO World Congress that was hosted in Vigo, Spain on 2 October.
## World Fish Market at a glance

### World Balance

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td><strong>Production</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capture fisheries</td>
<td>169.2</td>
<td>170.1</td>
<td>174.0</td>
<td>2.3%</td>
</tr>
<tr>
<td>Aquaculture</td>
<td>76.6</td>
<td>80.0</td>
<td>83.6</td>
<td>4.5%</td>
</tr>
<tr>
<td><strong>Trade value (exports USD)</strong></td>
<td>133.2</td>
<td>142.4</td>
<td>153.5</td>
<td>7.8%</td>
</tr>
<tr>
<td><strong>Trade volume (live weight)</strong></td>
<td>59.6</td>
<td>60.3</td>
<td>60.7</td>
<td>0.6%</td>
</tr>
<tr>
<td><strong>Total utilization</strong></td>
<td>169.2</td>
<td>170.1</td>
<td>174.0</td>
<td>2.3%</td>
</tr>
<tr>
<td>Food</td>
<td>148.8</td>
<td>150.6</td>
<td>153.3</td>
<td>1.8%</td>
</tr>
<tr>
<td>Feed</td>
<td>15.1</td>
<td>14.3</td>
<td>15.6</td>
<td>8.7%</td>
</tr>
<tr>
<td>Other uses</td>
<td>5.2</td>
<td>5.1</td>
<td>5.1</td>
<td>-0.8%</td>
</tr>
</tbody>
</table>

### Supply and Demand Indicators

<table>
<thead>
<tr>
<th></th>
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</thead>
<tbody>
<tr>
<td><strong>Per caput food consumption</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Food fish (kg/year)</td>
<td>20.2</td>
<td>20.2</td>
<td>20.3</td>
<td>0.7%</td>
</tr>
<tr>
<td>From capture fisheries (kg/year)</td>
<td>9.8</td>
<td>9.5</td>
<td>9.2</td>
<td>-2.4%</td>
</tr>
<tr>
<td>From aquaculture (kg/year)</td>
<td>10.4</td>
<td>10.7</td>
<td>11.1</td>
<td>3.3%</td>
</tr>
</tbody>
</table>

### FAO Fish Price Index

<table>
<thead>
<tr>
<th></th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
<th>Change Jan-Aug over Jan-Aug 2016 %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan-Aug</td>
<td>142</td>
<td>146</td>
<td>152</td>
<td>5.9%</td>
</tr>
</tbody>
</table>

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

Totals may not match due to rounding.

---

### FAO Fish Price Index

(100=2002-2004)

![Graph showing FAO Fish Price Index from 1990 to 2017](source: Norwegian Seafood Council)
SHRIMP

GLOBEFISH HIGHLIGHTS

Low farmed shrimp output for 2017

Farmed shrimp supplies were low during the first half of 2017, which was in balance with low to moderate demand in the traditional and emerging markets. The main harvesting season in Asia ended in October. Prices were up due to steady imports from the United States of America and China. Further price increases will depend on the demand pattern in the major markets, while the supply will be seasonally low in Asia until March/April 2018.

Supply

China remained the largest producer of cultured shrimp but with lower production compared with 2016 due to persistent disease issues. The majority of China’s harvest enters the domestic market.

India is the world’s second largest producer of farmed shrimp but in contrast to China, its shrimp industry is largely export-oriented. Production has been good in 2017, and is expected to be higher than 2016 due to the growing number of farming sites. However, sporadic disease occurrence (early mortality, stagnant growth, etc.) was reported in many farming areas, forcing farmers to harvest early or partially. The growth in production was mirrored by increased exports (+7 percent) during the first half of 2017 compared with the same time period in 2016.

Ex-farm prices in India increased during August–September but stabilized in October as there were increased harvests and less inquiries from its largest market, the United States of America. There is also the concern of a possible ban on Indian shrimp from the EU28 because of the escalating number of rejections, due to the presence of antibiotics. In response, India has intensified farm inspections through more significant monitoring, implementation of good aquaculture practices and penalising farms using unauthorised antibiotics.

In Viet Nam, shrimp production also increased; 679 000 hectares were used for brackish aquaculture during January–August 2017, which is 4.2 percent more than in the same time period in 2016. However, heavy rainfall in August caused low salinity in the ponds and affected shrimp health, with raw material prices rising since then.

In Indonesia, unfavorable weather has affected shrimp production. Raw materials prices are rising and supplies are low for export processing. In Thailand a reasonable recovery continues in the farmed shrimp sector. The industry reported a 10–20 percent rise in production during 2017 compared with 2016.

In terms of wild-caught shrimp, another bumper catch of shrimp was reported for Argentina. From January–August 2017, landings totaled 139 000 tonnes, a 34.7 percent rise compared with the same period last year.

Shrimp production by species, both wild and farmed (2015)

Source: FAO

Shrimp production by species, both wild and farmed (2015)

<table>
<thead>
<tr>
<th>Shrimp Species</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whiteleg shrimp</td>
<td>47%</td>
</tr>
<tr>
<td>Giant tiger prawn</td>
<td>12%</td>
</tr>
<tr>
<td>Akia paste shrimp</td>
<td>7%</td>
</tr>
<tr>
<td>Others</td>
<td>34%</td>
</tr>
</tbody>
</table>

Source: FAO
Exports

India and Ecuador continue as the top two exporters in the world market with a 35 percent and 18 percent increase in supplies respectively during the first half of 2017. Among the other top exporters, Viet Nam and China reported higher shipments during January-June 2017, whereas exports declined from Thailand.

For Ecuador, the boosts in export demand mainly came from Asian markets. The top five destinations were Viet Nam (+33 percent), the EU28 (+3 percent), the United States of America (+10 percent), China (+38 percent), and the Republic of Korea (+50 percent).

Viet Nam exported 96 000 tonnes of shrimp to 15 different markets during January–June 2017, which is only one percent higher compared with the same period in 2016. This volume included official imports of 580 tonnes to China, although the actual number was significantly higher through unofficial border trade. The top five import markets for Vietnamese shrimp were Japan (+23 percent), the EU28 (+1 percent), the United States of America (-17 percent), the Republic of Korea (+5 percent), and Australia (-7 percent). The export industry in Viet Nam is suffering from the unethical practice of injecting gel into raw shrimp, a process that increases the weight of shrimp, yielding a higher financial return. According to Undercurrent News, the Vietnamese Agriculture Department reported that out of 10 300 inspections carried out by the agency in the past year, approximately 1 107 found shrimp gel injections.

Exports from Thailand declined by 12 percent during the review period to total 82 300 tonnes. However, exports of value-added shrimp increased, particularly to Japan, where they grew by 12 percent.

Shrimp exports from China increased by 7 percent to 87 300 tonnes during the review period supported by higher sales of value-added shrimp, which make up nearly half of the total Chinese shrimp exports.

A raw material shortage in Indonesia resulted in lower exports of shrimp to North America, Europe and Asian markets. Total Indonesian exports during the review period declined by 18 percent, the lowest since 2015.

Imports

During the January–June 2017 review period, the top five importers of shrimp were the United States of America (+8 percent), the EU28 (+0.12 percent), Viet Nam (+30 percent), China (-11 percent) and the Republic of Korea (-10 percent).

Japan

The favourable economy supported the growth in consumer demand for raw and processed shrimp, with imports increasing during the review period. For the first time since 2014, half-yearly imports of shrimp in Japan reached 100 000 tonnes, which was 7 percent higher than last year’s same period. Viet Nam, Thailand, Indonesia, India and China were the top suppliers to the Japanese market.

Demand for processed shrimp remains strong in Japan. Its share of total shrimp imports increased from 28 percent in 2016 to 30 percent during this year’s review period. Thailand, Viet Nam, China and Indonesia together held 97 percent of this market share.

United States of America

Good seasonal demand during the summer months and stable wholesale prices resulted in an 8 percent rise in shrimp imports during the first half of 2017 to total 286 800 tonnes, worth USD 2.75 billion. The average import price increased from USD 9.06 per kg in June 2016 to USD 9.61 per kg in June 2017, as a result of the weaker US dollar.

The strong supply surge from India (+59 percent) was reflected in an increase of US shrimp imports from India during the first half of 2017. This growth was also a direct result of the reduction in the anti-dumping duty to 0.84 percent for Indian exporters, which is more than 2 percent less than compared with the previous review period.

The US market has weakened since September due to the devastating hurricanes. Consumer demand has been very low in the affected states of Texas, Louisiana, Florida, and the Carolinas. Overall consumption dropped sharply. Moreover, the devaluation of the US dollar has begun to negatively impact imports.
Shrimp imports in the EU28 remained stagnant at 323 900 tonnes during the first half of 2017. The top five single markets were Spain, France, Denmark, the United Kingdom and the Netherlands; all imported less compared with the same period in 2016.

During the first half of 2017, 73 percent of imports into the EU28 came from extra-EU28 sources. Imports declined from all sources but from Ecuador (+3 percent), Honduras (+33 percent), and Madagascar (+40 percent). During the review period, there was also a notable 11 percent decline in extra-EU28 imports of processed shrimp to total 47 600 tonnes.

Asia/Pacific

Import trends were lower in most of the Asian markets except in Viet Nam. Shrimp imports into China, declined by 11 percent to total 49 200 tonnes during January–June 2017, where Canada, Argentina, Ecuador, Greenland and India were the top sources.

Frozen shrimp imports into Viet Nam increased by 30 percent during the first half of the year, totaling nearly 200 000 tonnes. Most of these imports are then re-exported to China and re-processed for other markets. The top suppliers to Viet Nam were Ecuador, India, Thailand and Argentina.

In the Pacific, shrimp imports declined in Australia (-7 percent) and New Zealand (-3 percent) during the review period.

### US imports of shrimp (by product)

<table>
<thead>
<tr>
<th>Month</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shell-on frozen</td>
<td>85.0</td>
<td>91.2</td>
<td>104.0</td>
<td>98.0</td>
<td>99.6</td>
</tr>
<tr>
<td>Peeled frozen</td>
<td>93.0</td>
<td>102.1</td>
<td>103.3</td>
<td>109.3</td>
<td>124.3</td>
</tr>
<tr>
<td>Breaded</td>
<td>16.4</td>
<td>19.7</td>
<td>23.3</td>
<td>20.6</td>
<td>21.7</td>
</tr>
<tr>
<td>Other products</td>
<td>29.3</td>
<td>35.3</td>
<td>37.3</td>
<td>36.5</td>
<td>41.1</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>223.7</td>
<td>248.3</td>
<td>267.9</td>
<td>264.4</td>
<td>286.7</td>
</tr>
</tbody>
</table>

Source: NMFS

### EU28 imports/exports of shrimp

<table>
<thead>
<tr>
<th>Month</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<tr>
<td><strong>IMPORTS</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ecuador</td>
<td>40.7</td>
<td>45.8</td>
<td>41.5</td>
<td>43.6</td>
<td>45.1</td>
</tr>
<tr>
<td>India</td>
<td>28.6</td>
<td>39.7</td>
<td>37.1</td>
<td>37.0</td>
<td>34.2</td>
</tr>
<tr>
<td>Greenland</td>
<td>29.7</td>
<td>27.4</td>
<td>21.8</td>
<td>26.4</td>
<td>24.1</td>
</tr>
<tr>
<td>Others</td>
<td>231.4</td>
<td>290.5</td>
<td>231.9</td>
<td>216.5</td>
<td>220.5</td>
</tr>
<tr>
<td><strong>Subtotal</strong></td>
<td>330.4</td>
<td>403.4</td>
<td>332.3</td>
<td>323.5</td>
<td>323.9</td>
</tr>
<tr>
<td><strong>EXPORTS</strong></td>
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<td></td>
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</tr>
<tr>
<td>Intra-EU</td>
<td>106.8</td>
<td>112.8</td>
<td>112.2</td>
<td>109.2</td>
<td>125.8</td>
</tr>
<tr>
<td>Extra-EU</td>
<td>34.0</td>
<td>34.0</td>
<td>34.0</td>
<td>29.5</td>
<td>26.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>140.8</td>
<td>146.8</td>
<td>146.2</td>
<td>138.7</td>
<td>152.6</td>
</tr>
</tbody>
</table>

Source: EUROSTAT

### Japanese imports of shrimp (by product)

<table>
<thead>
<tr>
<th>Month</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen, raw</td>
<td>84.5</td>
<td>63.4</td>
<td>59.7</td>
<td>65.8</td>
<td>69.8</td>
</tr>
<tr>
<td>Cooked, frozen</td>
<td>12.4</td>
<td>9.5</td>
<td>8.5</td>
<td>8.7</td>
<td>8.9</td>
</tr>
<tr>
<td>Prepared/preserved</td>
<td>23.1</td>
<td>17.0</td>
<td>16.9</td>
<td>16.4</td>
<td>18.9</td>
</tr>
<tr>
<td>Sushi (with rice)</td>
<td>1.2</td>
<td>0.8</td>
<td>1.6</td>
<td>1.2</td>
<td>1.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>122.2</td>
<td>94.1</td>
<td>86.9</td>
<td>92.8</td>
<td>99.7</td>
</tr>
</tbody>
</table>

Source: Japan Customs/INFOFISH, *including others

Source: US-NMFS
Outlook

November to March is the low farming season in Asia, whereas in Latin America, the main season will continue through January/February. Overall availability of raw material will be limited until the new farming season begins in Asia in April 2018.

The positive import trend in Japan is likely to continue for the year-end celebration as well as for the spring festival in April/May 2018.

Though currently demand is dull in the US market, it is entering the period of heavier shrimp imports from Asia as Christmas and the New Year demand starts. However, current weak demand, stagnant inventories and increased imports in the future, may mean lower prices in the coming months. Consumption will be at a minimum in the hurricane affected areas.

The European market is divided into two segments, the Northern part which purchases from Southeast Asia, and the Southern part, which buys primarily from Latin America. Due to Ecuador’s heavy dependence on Vietnamese and Chinese markets, any weakening interest from East Asia will result in lower offer prices for Ecuador’s European buyers.
**TUNA**

**GLOBEFISH HIGHLIGHTS**

**Tuna prices worldwide firmed up again in September**

With the catch situation poor during the July–October ban on fish aggregating devices (FAD) and the ‘veda’ fishing closures period in the Pacific Ocean, frozen tuna prices strengthened further to reach a record of USD 2 400 per tonne in October 2017. Meanwhile, demand for raw material from canneries in Asia and Latin America improved due to the decline in landings.

**Supply**

In the Central and Western Pacific Ocean, the annual four-month ban on FADs and general poor landings resulted in a rise in frozen skipjack prices. In September, local inventories of raw material in Thailand were still reported to be low. Increased demand from canneries resulted in a further rise in delivery prices of frozen skipjack in October 2017 to USD 2 100 per tonne, cost and freight (CFR) Bangkok, which is 35 percent higher than the same month last year.

In the Eastern Pacific, the first ‘veda’ fishing closing started on 29 July and remained in place until 8 October; reportedly 30 percent of the Ecuadorian fleet participated during this period. Lower catches subsequently resulted in a price rise for skipjack. Raw material stocks are currently low in Ecuadorian canneries, where skipjack prices were reported higher than the price levels in Bangkok.

In the Indian Ocean, tuna catches improved as of early October and raw material inventories at local canneries remained healthy. Meanwhile, exports from this area through trans-shipment increased in response to the rising demand from Asian canneries. Strong demand in both Thailand and Ecuador also supported the price rise for both skipjack and yellowfin tuna.

In the Atlantic Ocean, moderate catches have been reported. Skipjack prices continue to increase whereas yellowfin prices remain stable. Month to month increases for skipjack have been notable; in July, skipjack prices shot up by almost 20 percent compared with June, and continue to rise. In September, prices passed USD 2 000 per tonne, a historic high for the past five years.

### Tuna production by species, both wild and farmed (2015)

![Tuna production chart]

Source: FAO

### Japanese tuna landings* (by species)

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1 000 tonnes)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bluefin</td>
<td>1.2</td>
<td>2.1</td>
<td>2.3</td>
<td>2.8</td>
<td>3.2</td>
</tr>
<tr>
<td>Bigeye</td>
<td>13.7</td>
<td>14.1</td>
<td>15.4</td>
<td>14.6</td>
<td>11.2</td>
</tr>
<tr>
<td>Yellowfin</td>
<td>11.8</td>
<td>19.2</td>
<td>17.5</td>
<td>17.0</td>
<td>21.4</td>
</tr>
<tr>
<td>Skipjack</td>
<td>130.3</td>
<td>122.7</td>
<td>115.8</td>
<td>100.5</td>
<td>91.0</td>
</tr>
<tr>
<td>Albacore</td>
<td>39.4</td>
<td>35.0</td>
<td>28.6</td>
<td>24.6</td>
<td>22.7</td>
</tr>
<tr>
<td>Total</td>
<td>196.4</td>
<td>193.1</td>
<td>179.6</td>
<td>159.5</td>
<td>153.3</td>
</tr>
</tbody>
</table>

Source: MAFF, Japan/INFOFISH; (Note: *including distant water catches)
Tuna canners in Europe are resuming normal activities after the summer holiday season, with demand for raw material now growing.

**Fresh and frozen tuna market (non-canned)**

**United States of America**

Consumer demand for fresh and frozen tuna remained steady in the US market, with increased imports reported during the first half of 2017 by 1.4 percent (+400 tonnes). This was made up of fresh and frozen whole/dressed tuna, fillets and steaks that totalled about 28 900 tonnes.

Imports of high-value bluefin (fresh and frozen) increased from 600 tonnes in 2016 to almost 900 tonnes this year during the January-June period. There was also a 4 percent increase (+560 tonnes) in frozen loin imports, to reach 13 900 tonnes. Supplies increased from the top two exporters; Indonesia (+8 percent) and Viet Nam (+15 percent) but declined from the Philippines.

**Japan**

Imports for whole/dressed sashimi-grade tuna (bluefin, bigeye and yellowfin) in Japan were record low during the first half of 2017, as demand for fresh tuna was limited to the spring festival period in April/May. Imports of frozen bluefin and bigeye were also less compared with last year’s due to the same reason.

However, the market continued to enjoy strong demand for frozen tuna loins, with imports increasing by 15 percent during the first half of 2017 compared with the same period in 2016. In volume, Atlantic bluefin had the highest share in frozen loin imports (38 percent), followed by yellowfin (29 percent) and bigeye (25 percent). Atlantic bluefin loins were supplied by Malta, Turkey, Croatia and Spain. For the red-meat quality loins (bigeye and yellowfin), the Republic of Korea and China were the leading suppliers. In recent years, China has replaced Taiwan Province of China as the second largest supplier of frozen loins to Japan.

**Canned tuna market**

During the first half of 2017, Thailand, Ecuador, Spain, the Philippines and China were the top exporters of processed and canned tuna in the global market. These countries had varied exporting trends mainly due to growing raw material prices and the Generalized System of Preferences (GSP) benefits for some countries to the EU28, the largest canned tuna importing market.

Compared with the same period last year, exports of canned and processed tuna increased from Ecuador (+26 percent), Spain (+15 percent), and the Philippines (+90 percent) during January–June 2017 but declined from Thailand (-16 percent ) and China (-19 percent).
Thailand

Exports to the United States of America and Canada suffered during the review period, particularly for the conventional canned tuna in brine. Exports to the EU28 were at a record low, coming to only 18 000 tonnes, as Thailand has to pay the full tariff for canned tuna exports to the EU28 (24 percent), making exports more challenging. Demand from the Middle Eastern markets (Saudi Arabia, Egypt, Jordan and Lebanon) also declined, possibly due to rising tuna prices and available stocks in these markets from last year’s imports.

Ecuador

Ecuador’s zero tariff and no quota status in the EU28 market was the key factor behind the overall growth in exports (+26 percent) during the January–June 2017 period. Supplies of cooked loins to the EU28 increased significantly by 87 percent to total 28 000 tonnes. Ecuadorian exports also increased to the regional markets of Argentina (+4.3 percent at 6 000 tonnes) and Chile (+66 percent at 5 000 tonnes).

Spain

Spanish exports increased by 15 percent to over 53 100 tonnes during the review period. Only 6 percent of this volume was comprised of cooked loins, with the rest made up of higher-value processed and canned tuna for direct consumption. Nearly 80 percent of total exports from Spain entered the top five markets; Italy, France, Portugal, Germany, and the Netherlands.

Philippines

An estimated 35 000–40 000 tonnes of canned and processed tuna were exported from the Philippines during the first half of 2017. Nearly 60 percent of these entered the EU28 markets (24 500 tonnes), where the product group (HS 160414) is now able to take advantage of duty-free status. The main markets in the EU28 were Germany (37 100 tonnes +36 percent), the United Kingdom (5 700 tonnes, -1.5 percent) and Spain (3 500 tonnes, +305 percent). Exports to Spain mainly consisted of cooked loins, with supplies increasing significantly by 300 percent due to the duty-free status of Filipino processed tuna. However, other significant Filipino markets did not fare as well, due to a raw material shortage. Exports to both the United States of America and Japan declined by 51 percent and 11 respectively during the period.

United States of America

The United States of America, the largest canned tuna market, imported 2.2 percent less canned and processed tuna (89 100 tonnes) during the first half of 2017 as consumer demand for the conventional tuna in brine remained flat for more than a year. Thailand, China, Ecuador, Viet Nam and Fiji continued to be the main suppliers. Import demand for the higher-value ‘tuna in pouch’ increased by 19 percent during this period. Another positive development in the market was the rising imports of canned and pouch ed albacore (in brine and in oil). 30 percent of US imports of processed tuna were made up of cooked loins (26 900 tonnes).

European Union (Member Organization)

Moderate tuna prices during the first half of the year and the duty-free status of Ecuadorean and Filipino tuna resulted in a 13 percent rise in EU28 imports of processed and canned tuna during January–June 2017, compared with the same period a year ago. Imports totalled 382 500 tonnes, with the top five markets being Italy, Spain, France, the United Kingdom, and Germany. The leading three markets largely imported cooked loins for reprocessing but imports in the United Kingdom (-6.6 percent) and Germany (+2.2 percent) mainly consisted of canned and pouch ed tuna for direct consumption.

Nearly 70 percent of the EU28’s canned and processed tuna imports came from extra-EU28 countries. Of the total volume from extra-EU28 countries, 67 percent was made up of canned and pouch ed tuna for direction consumption, with less than one percent growth. The remaining 33 percent of extra-EU28 imports was comprised of cooked loins for further processing sourced from Latin America, Asia/Pacific and Africa, with this segment posting growth of 28 percent. Intra-EU28 imports of canned tuna came from processors in Spain, Italy, France and Portugal.

Russian Federation

The Russian Federation canned tuna market remains weak in 2017. Cumulative imports during January–June 2017 declined by almost 20 percent against the same period in 2016. Thailand, China and Ecuador took an 80 percent market share.

Asia/Pacific

Japan, Australia and New Zealand saw positive demand trends for canned tuna during January–June 2017, with all three markets importing higher-value products.

Canned tuna markets in East Asia did not improve much in 2017. Imports into Taiwan Province of China, Hong Kong SAR, Singapore and Malaysia were lower than last year’s due to weak consumer demand and unsold stocks from earlier imports. Imports were also lower during the first half of 2017 in many emerging markets in the Middle East, Central Asia and West Africa, negatively impacting canned tuna exports from Asia.
Outlook

Considering the waning inventories of frozen raw material in canneries, particularly in Thailand and Ecuador, demand for frozen skipjack is likely to increase in the coming months. However, the supply status remains unclear until the FAD and ‘veda’ closure seasons are over. If the catch situation does not improve, particularly in the Pacific Ocean, prices may increase further, which could result in a further lull in global demand for canned tuna in the coming months.

In view of the waning sales in the EU28 and the United States of America, exporters in Thailand and Indonesia plan to focus more on emerging markets. For Ecuador, the EU28 remains the best choice for the time being.
Tight cod supplies and likely rising prices

Reduction in the Barents Sea cod quota is expected, although it is uncertain how much the reduction will be. Consequently, some price increases are expected. For the surimi market, trade appears to be picking up.

Resources

The International Council for the Exploration of the Sea (ICES) has recommended a 20 percent cut in the Barents Sea cod quota for 2018. However, the Joint Russian Federation-Norwegian Fisheries Commission in October agreed on the 2018 quotas, which include a 13 percent cut in the Barents Sea cod quota to 775 000 tonnes, and 13 percent cut in the haddock quota to 202 305 tonnes. Observers expect no drama in the market as a result of these cuts, particularly since the 2017 quotas were historically high.

In 1970, landings of North Sea cod peaked at 270 000 tonnes. Since then, stocks have deteriorated due to overfishing, bottoming out at only 44 000 tonnes in 2006. Preservation measures were introduced in 2007, and included lower quotas and a ban on harvesting small-sized fish, with both of these measures proving successful. With stocks recovering, the annual cod catch in the North Sea has now increased to 150 000 tonnes. In fact, North Sea cod has been awarded the Marine Stewardship Council (MSC) seal of approval as a sustainable stock, to the great relief of the industry.

It remains to be seen whether the MSC label will impact buyers’ choices. IntraFish claims that the United Kingdom retailers are embracing North Sea MSC cod. Retailers such as Waitrose and Marks & Spencers are planning to offer MSC North Sea cod very soon. However, nothing has been noted about how consumers are reacting to the MSC listing.

Chile’s National Service of Fisheries and Aquaculture (Sernapesca) introduced a ban on the southern hake fishery that went into effect from the 1 August to the end of September. This is not the first time such a suspension has been announced. It has become an annual suspension of this fishery in order to protect the species.

Landings and processing

German whitefish processor Frosta is claiming that in order to increase sales of frozen whitefish in Germany, the industry needs to introduce new value-added products and move away from selling blocks. Of the approximately 3.4 million tonnes of Alaska pollock caught this year, about 325 000 tonnes will be block frozen fillets and 64 000 tonnes individually-quick-frozen (IQF) fillets.

Iberian hake landings have fallen 37 percent over the past ten years, despite stronger stocks. Scientists continue to recommend cuts in the quota, although the status of the stocks have improved. However, last year, there was an increase in landings by 20 percent, to 8 063 tonnes.
**Trade**

After several years of low prices, the market for Alaska pollock products now appears to be improving, according to US Alaska pollock producers. However, there is still some price increase in the German market for pin-bone out (PBO) blocks, but at the same time, there seems to be more stable market demand in this market. Supply and demand now appears to be more balanced, and there is therefore reason to expect a better market outlook for 2018.

Demand for deepskin Alaska pollock (more of the flesh is removed for it to be a skinless fillet) is increasing in Asia, North America and Europe, and consequently, producers are increasing their production. Deepskin production in the United States of America was up by 33 percent during the A season, and by 43 percent during the B season until the end of July. Part of this demand is channelled through fast food chains like McDonalds and Subway, which are both promoting Alaska pollock. One reason for this increase in Alaska pollock demand is that cod is in short supply, with cod prices rather high.

The Russian Federation whitefish market is changing. Domestic Alaska pollock consumption is shifting from more basic, low-processed products to more value-added products. At the same time, Russian Federation Alaska pollock exports are on the rise. During the first six months of the year, the Russian Federation exported some 483 200 tonnes of Alaska pollock, after a sharp drop in exports in 2014 and a moderate increase in 2015 and 2016. More fillets are being produced to feed the domestic market, while imports of Alaska pollock fillets have gone down. This is partly a result of the ban on imports from a number of western nations.

In contrast, sales of cod and haddock in the United Kingdom were up during the 12-month period from July 2016 to June 2017, according to data from A.C. Nielsen. Cod continues to be the favourite whitefish sold in supermarkets, yet haddock is getting the best prices. Most of the cod is sold frozen, while only about one third of cod sales are in the form of chilled fish. In total, supermarkets sold 48 600 tonnes of cod during this period, up by 4 percent compared with the same period a year earlier.

During the first six months of 2017, Norway exported 249 000 tonnes of cod, saithe, haddock and other whitefish at a free-on-board (FOB) value of NOK 8.1 billion (USD 1.0 billion). This represents an increase of 9 percent by volume and 10 percent by value. The strongest increase was registered for whole frozen whitefish and for whole klippfish. There was a particularly strong growth in exports of whole frozen cod to China, which increased by 12 percent in volume terms to 12 800 tonnes, and by 23 percent by value, to NOK 364.8 million.

During the first half of the year, China imported a total of 104 200 tonnes of frozen cod, which was actually a decline by 4.4 percent compared with the same period in 2016. The largest suppliers during the first half of the year were the Russian Federation (38 percent of the total), the United States of America (33 percent of total) and Norway (17 percent of total).

Chinese Alaska pollock imports during the first six months of the year grew by almost 15 percent, to 448 800 tonnes. By far the largest part of this came from the Russian Federation (92 percent). Chinese exports of frozen Alaska pollock fillets fell, though, to 109 900 tonnes (-4.8 percent) during this period. Most of the decline was caused by falling exports to Germany, yet German imports of frozen fillets of Alaska pollock increased overall by 7.3 percent to 71 700. Both the United States of America and the Russian Federation gained market share from China.
While a lot of this imported whitefish is processed and re-exported, there is also a growing amount being consumed in China itself.

German frozen cod imports fell during the first half of the year to 17,900 tonnes, down from 18,200 tonnes in the same period of 2016. The main suppliers were China (9,800 tonnes) and Denmark (2,300 tonnes).

Total cod imports into the United States of America were stagnant during the first six months of 2017 at 30,700 tonnes compared with 30,800 tonnes during the same period in 2016. The main suppliers were China (23,300 tonnes or 76 percent of total) and Iceland (2,400 tonnes or 8 percent of total).

Surimi

The global market for surimi seems to be improving. There is a shortage of high-grade surimi, and observers believe there will be a general shortage of surimi this year. During the A season, surimi production was up marginally from 80,200 tonnes in 2016 to 83,100 tonnes in 2017. During the B season, surimi production is increasing more, from 44,800 tonnes in 2016 to 50,600 tonnes in 2017 (+13 percent).

The US surimi market has been flat for the past five years or so, but now there is some optimism. In 2017, US surimi consumption is expected to reach 100,000 tonnes, up from 90,000 tonnes last year. Increased promotion through social media, as well as improved product development in the form of "meal kits" and poke, seems to have given results.

Japanese landings of raw material for surimi have been very tight lately, and as a consequence, imports are going up. For 2017, it is expected that imports will rise by about 10 percent to 263,000 tonnes. Most of the rise in imports will be sourced from the United States of America and India, according to the European Surimi Forum. Imports from the United States of America rose by 32 percent over the past five years to reach 100,000 tonnes, up from 90,000 tonnes last year. Increased promotion through social media, as well as improved product development in the form of “meal kits” and poke, seems to have given results.

The Spanish market for surimi is growing rapidly, with the chilled sector driving this growth. Total sales of surimi in Spain have now reached about 48,000 tonnes, of which about 30,000 tonnes is channelled through retail sales.
Prices

Russian Federation headed and gutted (H&G) Alaska pollock prices remain low. Prices for Russian Federation Alaska pollock shipped to China in June were as low as USD 980 per tonne. Still, these prices represent a very slight increase compared with May. Last year, Alaska pollock prices were at around USD 1 080–1 100 per tonne. Observers are now expecting these prices to increase by perhaps USD 75 per tonne before the end of the year.

Tight supplies of Atlantic cod are expected to push prices up. Iceland’s 5 percent increase in its total allowable catch (TAC) is not enough to offset Norway’s 20 percent drop in TAC, and the result seems to be inevitable price hikes. However, it should once again be noted that the 20 percent cut in Norwegian quotas is still only a recommendation. The final quotas will be set by Norway and the Russian Federation jointly in November.

Prices for Atlantic cod have been pointing upwards for some time, albeit with short-term ups and downs.

On the US market, prices for cod fillets as well as Alaska pollock have been flat. In international markets, on the other hand, cod prices are still showing a rising trend, albeit at a somewhat weaker pace.

Outlook

A slightly tighter supply situation for cod may be expected in the coming year, although it will not be certain until the Joint Russian Federation-Norwegian Fisheries Commission meeting in November. Regardless, the Barents Sea cod quota will for certain be somewhat reduced. For Alaska pollock, the supply situation will remain more or less stable. Prices for cod are expected to edge upwards, while Alaska pollock prices are to remain level. Prices for haddock are increasing.
Growing demand, tighter supplies and record prices

Demand for octopus as well as squid is growing stronger, but poorer landings have limited supplies. Inventories worldwide are also low, so there is no buffer either. As a result, prices have been rising across the board and are expected to continue to grow.

Octopus

Lower catches during the winter season in Morocco have helped push octopus prices up in recent months, as global demand continues to rise. Demand is growing in all major markets such as Japan, the United States of America and Europe. The higher octopus prices caused by a tighter supply situation is proving difficult to pass on to the consumer, and this is naturally squeezing margins for major traders.

In Morocco, the southern octopus fishery quota was set at 12,200 tonnes for the season, from 15 June until 15 September. This represents a decrease compared with last year, and the resulting tighter supplies are expected to push already rising prices up. In fact, prices for Moroccan octopus are at their highest level on record, according to price data for the period 2009–2017.

The octopus fishing ban for the Yucatan peninsula in Mexico ended on the 1 August, when fishing for the Mexican four-eyed octopus (Octopus maya) as well as the common octopus (Octopus vulgaris) resumed. Total Mexican landings of octopus are about 38,000 tonnes per year, making Mexico the third largest producer of octopus in the world. Exports are destined mainly to Spain, Italy and the United States of America.

In Galicia, Spain, the octopus fishing season resumed on 3 July after a closure of 45 days. Expectations were strong, as landings last year were record high at 3,000 tonnes, a 66 percent increase compared with 2015. Significant demand in Europe, coupled with a late start to the season and scarcer catches in Morocco and Mauritania, have pushed Spanish octopus prices up this year.

Morocco and Mauritania are the main suppliers of octopus to the Japanese market. However, when supplies are tight, Japan is forced to look elsewhere for octopus. In 2016, the country bought 8,000 tonnes from China, 3,000 tonnes from Viet Nam, while Mexico, Thailand, Indonesia, India and Peru each shipped up to 1,000 tonnes to Japan. Japanese imports of octopus have been falling over the past two years. However, the rate of decline is decreasing. Of the major suppliers, Morocco saw a decline in shipments from 12,000 tonnes during the first six months of 2016 to 9,000 tonnes in 2017, while Mauritania experienced a significant increase from 5,300 tonnes in 2016 to 8,100 tonnes in 2017 (+52.7 percent).

Nippon Suisan Kaisha (Nissui) is continuing work on octopus farming, and has confirmed that it has hatched about 140,000 eggs produced by octopus,
which are conceived by artificial incubation. Although mortality during the first 30 days after hatching is extremely high, Nissui expects to be able to put fully farmed octopus on the market by 2020, according to a report by Undercurrent News.

Spanish octopus imports during the first half of 2017 increased slightly (+5 percent) compared with the same period in 2016. For the suppliers, the trend was the same as in Japan; a decline in shipments from Morocco and an increase for Mauritania.

Squid

Chinese fishing activities near the coastal waters of Argentina and Peru have increased markedly in recent years. According to a report by China’s state-owned fisheries company CNFC Overseas Fisheries, Chinese fishing activity near Argentine waters increased by 270 percent in the period from 2009–2015, while Chinese activities near Peruvian waters increased by 515 percent during the same period. This increased activity has put pressure on the stocks, especially of squid, which is the main target species of the Chinese vessels.

The Peruvian Ministry of Fisheries and Aquaculture has dismissed allegations that Chinese vessels have been fishing giant squid illegally in Peruvian waters. The Deputy Minister quoted navy data showing that Chinese vessels followed by Peruvian authorities were fishing outside Peru’s 200-mile exclusive economic zone (EEZ).

Argentina suspended the fishing for Illex squid from the end of June due to reports of the stocks being in very bad condition. Indeed, researchers had found that the composition of the catch in mid-May included large quantities of juveniles. There has also been a rapid reduction in landed quantities in the beginning of the year; from 24 028 tonnes in February, to 39 263 tonnes in March, 15 865 tonnes in April and 6 515 tonnes in May. At the same time, Chinese vessels have been increasing their activities outside of the Argentine 200-mile EEZ.

In the United States of America, squid is one of the most valuable items in California fisheries, with a first-hand value of about USD 70–75 million annually. The annual catch limit is 107 050 tonnes, but in the 2016–2017 season, the fleet only managed to catch about one third of that (38 600 tonnes).

Squid and cuttlefish are China’s most popular seafood items, with many of China’s supplies coming from the Democratic People’s Republic of Korea. However, UN sanctions against the Democratic People’s Republic of Korea may put an end to this trade, and Chinese importers are scrambling to get their hands on as much as possible before Chinese customs stop border trade. As a result, prices for squid from the Democratic People’s Republic of Korea (mainly of the Todarodes species) have dropped substantially recently, in some cases as much as one third of the normal price.

In contrast, Argentine Illex squid prices have been on the rise because of the tight supply situation, but in China this price situation has now seemed to stabilize. As Argentine catches were disappointing, prices rose by as much as 40 percent, with price rises for larger sizes particularly strong. Even so, prices are still high and rising marginally in some markets, as demand for squid is now outstripping supply.

With the high Illex prices, other species, such as the Japanese flying squid (Todarodes pacificus) and the red oceanic squid (Ommastrephes bartmanni) have been used as substitutes, with a lower price point than the Illex. If the tight supply situation continues, prices could be expected to rise further and some fishers have been hanging on to their catch, waiting for this to occur.

The first half of 2017 saw a strong increase in Japanese imports of squid and cuttlefish, from 39 300 tonnes in 2016 to 77 400 tonnes in 2017 (+97.1
percent). Most of this came from China (47 500 tonnes), an increase of 123 percent compared with the same period in 2016. There was also a significant increase in shipments of squid and cuttlefish from Peru to Japan.

A similar, albeit not as strong trend was observed in Spain. Total imports of squid and cuttlefish increased from 127 200 tonnes during the first half of 2017 to 141 200 tonnes in 2017. The most noticeable increases came from the Falkland Islands (Malvinas) and Peru.
Outlook

The outlook for both octopus and squid are now for tight supplies and very high prices. In the octopus market, Morocco and Mauritania, the two most important producers, are facing lower landings, while demand is growing all over the globe. In the squid market, there is a shortage of Illex squid due to poor catches and pressure on the stocks off of Argentina and Peru, with prices rising to record heights for this species, too.
International demand for tilapia steady, though US market weak with discouraging prices

During the first half of 2017, approximately 170,000 tonnes of tilapia (whole, fillets and breaded) entered the international market. While the United States of America grapples with a weak market, the EU28 market is recovering somewhat, although prices remain weak. Asian and Latin American markets continue to be strong as production increasingly stays within their own domestic markets in addition to imports from China.

China

Chinese companies are continuing to seek opportunities to expand into African markets to target the potential and growing demand for tilapia there. They are also seeking to find alternative markets with declining demand in their main market, the USA. Prices in the US market have been decreasing to reach record lows, making trading unprofitable amidst high ex-farm prices.

In spite of the slowdown in the US market, total exports of Chinese frozen tilapia continued to post positive growth, with a 7.6 percent increase in exports during the first half of 2017 compared with the same time period a year ago. Growth in exports was almost entirely from the whole frozen tilapia and frozen breaded fillet categories, posting increases of +12 percent and +23 percent respectively.

Frozen whole and frozen fillets account for 35 percent of Chinese tilapia exports. Approximately 70 percent of whole frozen tilapia from China entered African markets during the review period.

United States of America

During the first half of 2017, total imports of frozen tilapia fillets into the USA fell by 15 percent when compared with the same period of 2016. Despite this decline, the USA still represents 70 percent of the tilapia market. Fresh tilapia fillet imports increased by 3 percent.

In terms of pricing, wholesale prices for fresh chilled tilapia fillets (3–5 oz per lb) from Latin America have declined by 9.4 percent to USD 3.58 per lb, while prices of frozen fillets (3–5 oz per lb) from Asia strengthened by 2.6 percent to USD 1.95 per lb.

China continues as the main supplier of tilapia to the US market. Industry sources in Latin America indicate that negative press about tilapia from Asia has contributed to the declining Latin American demand and likely prompted more interest in fresh tilapia fillets from neighbouring countries.

Chinese exports of frozen tilapia (by product and destination)

<table>
<thead>
<tr>
<th></th>
<th>January - June</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>2013</td>
</tr>
<tr>
<td>Frozen whole</td>
<td></td>
</tr>
<tr>
<td>Côte d’Ivoire</td>
<td>8.2</td>
</tr>
<tr>
<td>USA</td>
<td>10.7</td>
</tr>
<tr>
<td>Zambia</td>
<td>4.6</td>
</tr>
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<td>Other countries</td>
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</tr>
<tr>
<td>Subtotal</td>
<td>59.1</td>
</tr>
<tr>
<td>Frozen fillets</td>
<td></td>
</tr>
<tr>
<td>USA</td>
<td>38.9</td>
</tr>
<tr>
<td>Mexico</td>
<td>12.8</td>
</tr>
<tr>
<td>Iran (Islamic Republic of)</td>
<td>1.3</td>
</tr>
<tr>
<td>Other countries</td>
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</tr>
<tr>
<td>Total</td>
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</tbody>
</table>

Source: China Customs
Latin America

Latin America is on alert following the warning by FAO about the Tilapia Lake Virus (TiLV), with cases confirmed in both Colombia and Ecuador. TiLV is contagious and can be spread in both farmed and wild tilapia. Importing countries were urged to take measures, including requiring health certificates and undertaking public information campaigns to help tilapia farmers.

The Ecuadorian Aquaculture Chamber and the National Fisheries Institute reported that there have been no mortality situations in tilapia farms at the national level, but they will continue with preventative measures. Ecuador exported 745 tonnes to the USA during the first six months of the year, with a total value of USD 4.1 million, representing a 35 percent decline both in terms of value and volume.

Honduras continues to be the main Latin American supplier of tilapia fillets to the US market, having surpassed Ecuador and Costa Rica in 2014. During the first half of 2017, exports of tilapia fillets totalled 4 400 tonnes worth USD 25.6 million, demonstrating declines of 12 percent and 19 percent respectively compared with the same time period last year.

Brazil

As one of the main producers of tilapia, Brazil has a very different market orientation compared with its Latin American counterparts, as 99 percent of its national production is consumed domestically. The strong growth of internal consumption coupled with the difficulties of exporting make the domestic market the best choice for the Brazilian tilapia industry, with only 0.5 percent of the national production exported, all to the United States of America.

However, with the US dollar appreciating against the Brazilian real during the past two years, the search for international markets for tilapia has been incentivized. In order for this to occur, however, exporting challenges, related to documentary requirements, sanitary quality and mandatory inspection services will have to be addressed.

European Union (Member Organization)

The EU28 market appears to be showing some signs of recovery with a 4.7 percent increase in total tilapia imports during the first half of 2017 to reach 12 900 tonnes. This growth was encouraged by the lower average import prices, falling by 5.8 percent to reach USD 3.19 per kg. Imports of both whole frozen and frozen fillets increased, with the latter accounting for 57 percent of total tilapia imports. Imports increased from China, Thailand and Malaysia.

Asia and other markets

The Islamic Republic of Iran and the Russian Federation have emerged as important markets for tilapia, with the former now the fourth largest market and the Russian Federation the fifth. During the review period, the Islamic Republic of Iran imported 6 200 tonnes of frozen fillets and the Russian Federation 3 200 tonnes, with China as the leading supplier.

Being the largest supply source of tilapia, Asia exported approximately 145 000 tonnes of tilapia; a 3.8 percent decline from the same period in 2016 as more supplies were directed to domestic markets. Approximately 55 percent of Asia’s total exports were comprised of frozen fillets and 45 percent of whole frozen. The top five producers in the region are China, Indonesia, Taiwan Province of China, Thailand and Malaysia. Exports of whole frozen tilapia increased by 5 300 tonnes while frozen fillet exports were down by 11 000 tonnes during the review period.
Meanwhile, Viet Nam is trying to increase its supply of tilapia with the Prime Minister recently announcing plans to achieve 6 percent growth in aquaculture with an export value of USD 9 billion by 2020. The largest market for tilapia from Viet Nam is the United States of America, France, Spain, Malaysia and the Republic of Korea.

**Outlook**

Considering the current demand situation in the major markets, imports are not expected to increase substantially in the near future nor will a price increase be imminent. Rather, demand is expected to remain steady in Asia, Latin America and Africa.

TiLV continues to be a concern among main producing nations although active surveillance is being conducted in China, India, Indonesia and is in preparation in the Philippines.
PANGASIUS

GLOBEFISH HIGHLIGHTS

Pangasius trade shrinking

Demand for pangasius remains robust in Latin America and Asia, with both regions posting positive growth in imports during the first half of 2017, even amidst strengthening prices. Worldwide, imports of frozen pangasius have fallen by approximately 2.5 percent mainly due to lower imports into the single largest market, the United States of America. Meanwhile, efforts are being taken by several countries in Asia to ensure sufficient supply enters their domestic markets while they are also working to develop a low-cost feed formulation.

Viet Nam

Vietnamese pangasius exports to the EU28 this year are expected to continue to weaken while China is forecasted to overtake the United States of America in imports, thereby becoming the largest export market for Vietnamese pangasius in the near future. In addition to the anti-dumping tax that has been in place since the 2000s, Vietnamese firms are now facing new challenges from the US catfish inspection program, which was moved under the US Department of Agriculture on 1 September.

In a move to promote pangasius in the northern region of Viet Nam, the Ministry of Agriculture and Rural Development recently organized a fair to promote products made from pangasius and other seafood. The first of its kind, the fair was held in Hanoi and aimed at consumers in the northern region of Viet Nam, where pangasius is virtual unknown. The fair also targeted international markets, particularly China.

The United States of America

A combination of higher than average import prices during the review period, high anti-dumping tariffs and new import regulations are among the reasons for the 18 percent decline in total US frozen catfish imports during the first half of 2017. Imports of frozen fillets, which make up 94 percent of US catfish imports, posted a sharp fall. However, there was a notable increase (+24 percent in volume) in imports of frozen catfish (Ictalurus sp) fillets, mostly from China.

European Union (Member Organization)

As has been the long-term trend EU28, demand for pangasius continued to weaken in the first half of 2017, with a 25 percent fall in total imports (whole and frozen) when compared with the same time period last year. Imports also declined significantly into the largest markets within the EU28; Spain and the United Kingdom. Frozen fillet imports, which make up the bulk of the imports, decreased by 27 percent in volume terms to total 38.500 tonnes while average import prices increased by 2.7 percent.

US imports of fresh and frozen catfish fillets (by origin)

<table>
<thead>
<tr>
<th>Fillets</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
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<td>Viet Nam</td>
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<td>3.6</td>
<td>2.8</td>
<td>3.4</td>
</tr>
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<td>Panama</td>
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<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Others</td>
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<td>0.1</td>
<td>0.1</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>56.5</td>
<td>51.6</td>
<td>58.5</td>
<td>67.2</td>
<td>55.2</td>
</tr>
</tbody>
</table>

Source: US Department of Commerce, Bureau of Census
Asia

Pangasius continues to be in strong demand throughout Asia while also playing an important part in local food security, both indirectly through generating income from farming and directly via domestic consumption.

During January–June 2017, approximately 61 000 tonnes of frozen pangasius were imported into Asia, an increase of 21 percent compared with the same period in 2016. China has emerged as the largest importer in Asia, overtaking Thailand and posting 48 percent growth in imports during the review period. In total, China imported 13 600 tonnes of frozen fillets and 5 900 tonnes of frozen whole product during the first half of 2017. Thailand was close behind, importing a total of 13 800 tonnes. Imports also increased into most Asian countries, including a notable 81 percent increase to India to reach 4 500 tonnes of pangasius. Imports only declined for Singapore and Taiwan Province of China.

In the Philippines, the Bureau of Fisheries and Aquatic Resources in the Cagayan Valley (Region 2) announced an imminent ban on the retail of imported frozen fish and fishery products. The fishery products covered are those commonly known as “frozen” and include pangasius as well as mackerel, bonito, squid, sardines, salmon and salmon heads. Following the announcement, it was clarified that the importation of these fishery products is not prohibited, rather the regulation states that these products should go only to institutional buyers such as canneries, restaurant chains and fish processing plants, with imports prohibited for wet markets to direct consumers.

Latin America

Latin America has emerged as the strongest market for Viet Nam following the slow down in the major markets of the EU28 and the United States of America. In the first half of 2017, Latin America imported 15 percent more frozen pangasius compared with the first half of 2017 to total 75 000 tonnes of whole frozen and frozen fillets. In the frozen fillet category, Brazil overtook Mexico to become the largest importer with a 22 percent increase in imports. Average import prices increased by 39 percent for whole frozen and 7 percent for frozen fillets.

Outlook

Although major markets continue to weaken, demand is clearly growing in other regions supported by domestic production. Viet Nam will possibly explore the viability of its domestic market. Overall, prices are expected to remain strong at least for the short term.

RECENT NEWS

SMART-Fish Indonesia

SMART-Fish Indonesia, in collaboration with the Ministry of Marine Affairs and Fisheries, has introduced a self-made feed, called Least Cost Formulation (LCF) in order to reduce farming costs. The LCF has been piloted in demonstration farms in the past year in Jambi and Tulungagung, East Java. The feed is up to 10 percent cheaper and is made from locally available raw materials in order to achieve the most cost effective feed with improved nutrition to allow for better quality pangasius.

To scale up utilization of the LCF to other farmer groups and areas, SMART-Fish Indonesia conducted a training of the trainers in August 2017 as a first step to disseminate the method.

During January–June 2017, approximately 61 000 tonnes of frozen pangasius were imported into Asia, an increase of 21 percent compared with the same period in 2016. China has emerged as the largest importer in Asia, overtaking Thailand and posting 48 percent growth in imports during the review period. In total, China imported 13 600 tonnes of frozen fillets and 5 900 tonnes of frozen whole product during the first half of 2017. Thailand was close behind, importing a total of 13 800 tonnes. Imports also increased into most Asian countries, including a notable 81 percent increase to India to reach 4 500 tonnes of pangasius. Imports only declined for Singapore and Taiwan Province of China.
Proactive action pays off for seabass and seabream sector

Last year, a somewhat ominous production forecast pointed to the possibility of oversupply once again depressing farmed bass and bream prices to unsustainable levels. However, it now seems that the industry’s efforts in developing new markets and products, combined with an improved economic outlook in the EU28, is generating some much-needed demand.

The total increase in bass and bream production in 2017 is expected to be some 8 to 12 percent this year, with relatively higher growth projected for bream. These additional volumes have also been reflected in the export statistics of both Greece and Turkey, the two largest producers, with figures for the first half of 2017 showing significant gains over the equivalent period in 2016 in terms of both quantity and value. However, higher export revenues are only sustainable if production costs are covered by the prevailing price, and this is why concerns over possible price impact had been expressed by multiple industry participants when it became apparent that both Turkey and Greece were looking to boost production volumes over this year and the next. Indeed, throughout the majority of
the first half of 2017, average export prices in euro terms languished well below their equivalents in year-on-year terms, particularly for bream which has been suffering relatively more than bass from the effects of excess supply. However, the general mood improved somewhat over the course of the third quarter as indications pointed to a more balanced market driven firstly by increased demand across a more diverse range of markets and product categories, and secondly by a slight tightening in supply amongst the large Mediterranean producers.

In Turkey, the approximately 2°C lower mean water temperatures observed in the Aegean and Mediterranean seas this year, as well as late warming and early cooling of seawater, has led to relatively lower fish growth rates and availability of 400–600 g and larger fish in the third quarter of 2017. As a result, supply has been restricted for 400–600 g and larger bass and average ex-farm prices (ice-packed) of 400–600 and 600–800 g bass were up to €4.75 and €5.20 per kg respectively. Bream prices have also been relatively stronger compared with the same period in 2016, reaching €3.5 per kg for 400–600 g fish and €4.84 per kg for 600–800 g fish.

The Turkish industry continues to develop more efficient production technologies, and industry sources recently reported positive results of (pre) on-growing of fry in earthen ponds in land-based sites before transferring to off-shore cages. This new practice by some major producers enables vaccination operations to be done on land and transfer of vaccinated 5–10 g bream and 15–20 g bass to off-shore on-growing sites with relatively low mortality/loss (about 2 percent). It also helps to lower labor costs for vaccination operations (compared to vaccination on off-shore sites). Opening and licensing of new production sites (e.g. Mersin/Eastern Mediterranean coast) is also seen by the Turkish industry as a positive development for the expansion of bass/bream production. It is likely that production from new sites will further boost Turkish supply of bass and bream in the coming years.

In Greece, prices for bream and bass diverged further over the course of the third quarter. Prices for 350–400 g bream had fallen to €4.30 per kg by October, their lowest point since early 2014. For bass, however, October prices were at €5.00 per kg, some 20 cents higher than the same period in 2016. As harvest volumes rise, Greece continues to focus primarily on supplying core EU28 markets, with Italy still firmly cemented as the number one export destination. Another notable trend in 2017 is a significant increase in Spanish imports of Greek fish as demand amongst Spanish consumers continues to outstrip domestic supply growth.

Overall, Greek exporters have slightly increased the share of volumes directed towards their four major markets – Italy, Spain, France and Portugal. This rising degree of concentration contrasts markedly with the Turkish strategy of actively seeking to develop consumer bases in new regions, particularly the Middle East, and thereby decreasing dependence on traditional markets. However, it should be recognized that in this respect, Greece is at somewhat of a disadvantage due to its higher-priced product, which is more of an issue for less mature markets in which the ability of consumers to differentiate between product origins is not so developed. That said, there has still been some headway made in less developed EU28 markets such as Romania and Bulgaria. At the same time, value addition through product innovation and quality certification seems to be a viable avenue for Greek marketers to generate new demand in more established markets.

On the production side, there is still some debate as to whether increased consolidation of the industry should be actively pursued in Greece, and this discussion has been thrown into sharper focus as the sale process of Nireus and Selonda, two of the largest Greek aquaculture companies, approaches its conclusion.
The development of Europe’s major bass and bream market, Italy, has been more or less in line with expectations so far in 2017. Import volumes of both species have increased from Greece and Turkey, as buyers take advantage of the lower price level. The share of Turkish fish in total supply to Italy continues to grow, a trend accelerated by the depreciation of the Turkish lira. Supply of domestically produced bass and bream has also increased, typically marketed as a quality product at a higher-price point. Private consumption growth, driven by broader economic recovery, will ensure the strength of underlying demand on the Italian market for the foreseeable future, but as a mature market, its capacity to absorb excess volumes without a significant price impact is limited.

**France**

The French market for bass and bream has largely followed the wider trend, with importers purchasing the majority of supply from Greece and replacing falling Spanish volumes with cheaper fish from Turkey. However, France remains a very origin-sensitive market, and despite a significant increase in supply share this year, Turkish fish still represents a small proportion of the total. Prices for both species have been low at French wholesale markets for most of 2017, but a spike in prices was observed in September.

**Spain**

Price trends at the large Spanish wholesale markets, Mercamadrid and Mercabarna, provide a good reflection of how the situation is developing across the core European markets. Bream prices remain well below last year’s levels on an aggregate level, but there has been a notable post-summer spike in larger-size fish prices as a supply shortage begins to bite. Due to a tighter market balance, bass prices are only marginally below 2016 levels, with the same upward trend observed for larger sizes.
With improving economic fundamentals, demand remains firm in Spain.

**Other markets**

Of the larger European markets, Portugal is the standout growth market in 2017, with imports up 22 percent in the first half of 2017. Lower prices have stimulated buying activity amongst importers, sourcing from Spain, Greece and Turkey. The Netherlands has also been increasing its imports of bass and bream, although a significant proportion of this is re-exported to other European markets. The rebound of the Russian Federation from deep recession is also important for the Turkish sector as an additional source of demand to absorb growing production.

**Outlook**

Total farmed bass and bream production is expected to grow a further 5 to 7 percent in 2018 and although there is evidence that aggregate market demand has increased, all industry participants will be mindful of the potential impact that this continued growth will have on price levels. That said, it must be recognized that there are a number of positive developments in production, processing, logistics and marketing that will help to boost company margins through demand generation and cost savings. Product ranges for bass and bream are becoming significantly more modernized and diverse, with more emphasis on preparation, portioning and packaging. Ecolabelling and organic certification is also increasingly prevalent.

Industry stakeholders, particularly in Turkey, are focusing on developing multiple new markets and producing regions, as well as new production and logistical technologies. In addition, there have been improvements in the economic outlook for a number of key markets, and a sustained increase in prices for some competing seafood items such as salmon, which is now in relatively short supply. Together, these developments represent an improved long-term outlook for the bass and bream sector. However, for 2018, it is still not clear that the positive effects will outweigh the downward pressure on prices resulting from continued supply growth.
Supply surge in the second half of 2017 drags salmon prices down from early year heights

Global supply of farmed salmon has been somewhat lopsided this year, with the relative scarcity of the first half of 2017 contrasting with a post-summer surplus supplemented by better than expected wild catches. However, any price relief experienced by consumers and intermediaries is likely to be temporary.

Supply

Norway

The spectacular performance of Norwegian salmon farming companies over recent years continued into the first half of 2017, supported by prices that began the year well above the equivalent period in 2016. Spiking production costs and reduced harvests have so far been more than offset by the inflated revenues that the sustained high price level has been generating. Since the start of the second half of the year, however, a tight supply situation has been steadily easing on the back of increased volumes coming out of Europe’s top two producing countries, Norway and the United Kingdom. Towards the end of the third quarter, the wider availability of fish had driven down Norwegian export prices to a 20-month low, with the Fish Pool Index dipping just below NOK 51 (USD 6.51) per kg for week 37.

The mid-year report of the Norwegian Seafood Council (NSC) clearly underlined the effect that the price level has had on Norwegian salmon exports. The total volume exported in the first 6 months of the year was 451 000 tonnes, 1 percent below the same period in 2016. In contrast, total value reached NOK 31.5 billion (USD 3.7 billion), a 13 percent increase and an all-time record. Growth has not been split equally between export destinations, however, and there has been an ongoing trend evident in Norway’s export figures that demonstrate that the share of volume accounted for by the core EU28 market is diminishing. Instead, high-priced salmon is being directed to faster growing markets where demand is more robust, such as the United States of America and, increasingly, Asia. According the NSC,
all Asian markets combined imported 15 percent more by volume and 27 percent more by value in the first half of 2017, pointing to rapid expansion of the key salmon-buying demographic. In the US market, the growth in Norwegian-origin imports is more the result of a shift in consumer preferences and strong economic fundamentals.

Despite the softening of prices in the second half of 2017, market expectations are still positive for the longer term. Full-year 2018 forward prices at Fish Pool are holding steady at the NOK 62 (USD 7.78) mark and have even risen marginally for Q4 2017 in anticipation of a strong recovery in prices when seasonal demand kicks in. Reduced dependency on a large but relatively slow growing EU28 market is also a positive development for the Norwegian industry, both because of the greater potential for growth and because of the risk mitigation it entails. On the cost side, although some farmers are reporting close to historic highs this year, companies are still seeing scope for efficiency gains, particularly through vertical integration strategies.

In terms of farmed trout, depleted stocks in Norway over the review period translated into severely elevated price levels and reduced export volumes in the first half of 2017. NSC reported 16 000 tonnes exported over the latter period, worth NOK 1.3 billion (USD 156 million), representing decreases of 56 percent and 31 percent respectively. Good growth in pens has boosted 2016 generation biomass and late summer harvesting has seen prices drop somewhat, but 2015 generation biomass is still 16 percent down year-on-year. As a result, high prices are likely to be supported well into 2018.

Chile

The passage of hurricanes through the Caribbean and Southeast United States of America in Q3 was somewhat of a concern to Chilean salmon industry stakeholders, as 60 percent of the three salmonid species (Atlantic, Coho and trout) enter the United States of America through Miami. Indeed, several fresh Chilean salmon traders were impacted by the suspension of flights during the period.

In terms of pricing, fresh salmon fillets from Chile averaged USD 5.90 per pound in the first half of 2017, 20 percent more than the same period in 2016. The higher price level has boosted revenues of Chilean salmon companies, reversing losses in many cases, but this trend is expected to turn downwards in the second half of the year as increased supply volumes lead to lower prices.

During the first half of 2017, Chilean salmon and trout exports combined were worth USD 2.38 billion, 29.8 percent higher than the same period in 2016. Of this total, 87.6 percent were comprised of salmon (Atlantic and coho) and the remaining 12.4 percent of trout.

There are somewhat varying views amongst industry participants regarding expected harvest volumes in Chile next year, largely due to the uncertain impact of new regulations limiting production growth. According to executives at Marine Harvest, one of the largest salmon aquaculture companies, Chile is likely to slightly reduce its production level in 2018 compared with 2017. However, the Norwegian capital group Austevoll Seafood, through its subsidiary Lerøy, has forecast stable production in 2018 due to regulations, which seek to protect crucial environmental and health aspects of the sector.

Norwegian exports of salmon (by product and destination) January - June

<table>
<thead>
<tr>
<th></th>
<th>2013 (1 000 tonnes)</th>
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<th>2015</th>
<th>2016</th>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>USA</td>
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<td>4.6</td>
<td>4.8</td>
<td>9.0</td>
<td>10.3</td>
</tr>
<tr>
<td>Japan</td>
<td>3.2</td>
<td>4.3</td>
<td>5.0</td>
<td>6.4</td>
<td>6.5</td>
</tr>
<tr>
<td>France</td>
<td>9.4</td>
<td>8.5</td>
<td>9.5</td>
<td>7.5</td>
<td>4.8</td>
</tr>
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<td>Others</td>
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<td>18.7</td>
<td>14.8</td>
</tr>
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<td>35.5</td>
<td>36.1</td>
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<td>36.3</td>
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<tr>
<td><strong>Frozen fillets</strong></td>
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<td></td>
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<tr>
<td>USA</td>
<td>2.6</td>
<td>4.4</td>
<td>3.8</td>
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<td>10.8</td>
<td>12.6</td>
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</tr>
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<td>20.6</td>
<td>22.7</td>
<td>21.7</td>
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</tr>
<tr>
<td><strong>Fresh whole</strong></td>
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<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>Poland</td>
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<td>52.0</td>
<td>58.2</td>
<td>54.7</td>
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<td>43.3</td>
<td>46.8</td>
<td>45.1</td>
<td>38.5</td>
</tr>
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<td>30.1</td>
<td>33.9</td>
<td>29.5</td>
<td>32.3</td>
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<td>247.0</td>
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<td>414.8</td>
<td>378.3</td>
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<td><strong>Frozen whole</strong></td>
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<tr>
<td>Thailand</td>
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<td>1.4</td>
<td>1.5</td>
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<td>1.6</td>
<td>2.0</td>
<td>0.9</td>
<td>1.1</td>
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<tr>
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<td>12.3</td>
<td>6.8</td>
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<td><strong>Subtotal</strong></td>
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<td>17.9</td>
<td>16.6</td>
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<tr>
<td><strong>Total</strong></td>
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<td>463.7</td>
<td>490.3</td>
<td>455.8</td>
<td>441.3</td>
</tr>
</tbody>
</table>

Source: Norwegian Seafood Council

(small shares of product type like salted not included)
Since the depreciation of the British pound versus various currencies, following the Brexit vote, the Scottish salmon farming sector has been in an ideal position to take advantage of the tight global supply and high prices. The currency trend has essentially equipped the United Kingdom’s well-diversified set of export markets, led by the United States of America, France and China, with boosted purchasing power. Together with the increase in United Kingdom production and the prevailing price level, this combination of factors has seen industry revenues increase drastically. However, with warmer waters this year promoting growth and sea lice issues, the associated costs remain a challenge that need to be overcome.

High prices are also having an effect on the United Kingdom’s large domestic salmon market, with a recent Nielsen survey showing a 10 percent increase in prices and a 6 percent decrease in volumes over the 52 weeks before 12 August. Consumer aversion to the high cost of fresh farmed salmon is helping substitute products, and industry reports suggest that fresh wild Alaskan salmon, in particular, is becoming more popular.

### Wild salmon

Wild salmon harvests in Alaska look set to come in above forecast but below those recorded in the last odd year, 2015, mostly due to lower pink harvests. The latest year-to-date figures as of the end of September puts the total number of fish at 219,019, equating to approximately 435,000 tonnes. Chum harvests have been exceptionally good in Alaska this year. In the Russian Federation, wild salmon catches are projected to total 320,000 tonnes, a 28 percent decline from 2016 and 15 percent down from 2015.

### Markets

Although global salmon supply has bounced back from the sharp tightening following the algal bloom mortalities, this has been offset to a significant extent by a parallel recovery of demand in a number of markets, including large emerging markets such as Brazil and the Russian Federation. Import value growth in both countries jumped back into positive figures in the first half of 2017, reflecting an improvement in the economic environment. Meanwhile, Asian markets such as the Republic of Korea and Thailand are posting consistently high growth figures in value terms, indicating that buyers are ready to pay more to secure a limited supply of fish. In developed markets such as the United States of America and the EU28, the focus is on value-addition – smaller portions packed for convenience—in order to make the high price level more palatable to the consumer.
**France**

After a recovery in import volumes in recent years, French consumer demand for Norwegian salmon is now becoming increasingly hesitant in light of the unrelenting price level. Imports of Norwegian product, typically fresh whole, have fallen back slightly this year and household consumption is significantly down. However, demand for Scottish salmon marked “Label Rouge” (a prestigious quality certificate awarded by the French Ministry of Agriculture) and Irish organic salmon is increasing, reflected by increasing import volumes even as prices rise. Overall, domestic demand is steady in Europe’s largest market, but there is limited potential for volume growth when French buyers must share tight global supply with booming markets in emerging regions.

**Germany**

New consumer-level data from the Fisch-Informationszenturm shows that German demand for seafood remains strong, albeit demonstrating considerable resistance to spiking prices in a number of categories, including fresh salmon. Continued growth in this segment remains driven by sales in discounter retailers, despite the current price level, and also in supermarkets. This popularity is largely at the expense of smoked and frozen salmon, however, and imports of both these product types have fallen in the first half of 2017.

**The United States of America**

During the first half of 2017, the United States of America imported an estimated 181 500 tonnes of salmonids during the first semester of 2017 worth a total of USD 1 898 million. These figures represent a slight increase of 0.25 percent in volume and a considerable rise of 24 percent in value compared with 2016. Three countries account for 74 percent of the total volume imported. Chile was the leading supplier (65 700 tonnes worth USD 828 million), followed by Canada (43 500 tonnes worth USD 379 million) and Norway (24 500 tonnes worth USD 285 million). Chile and Canada registered a decrease in volume terms, while combined, all three countries posted growth in value terms.

**Prices**

### Trout: Italy

<table>
<thead>
<tr>
<th>€/kg</th>
<th>Sep 12</th>
<th>Mar 13</th>
<th>Sep 13</th>
<th>Mar 14</th>
<th>Sep 14</th>
<th>Mar 15</th>
<th>Sep 15</th>
<th>Mar 16</th>
<th>Sep 16</th>
<th>Mar 17</th>
<th>Sep 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trout: Salmo spp.</td>
<td>6</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

Ex-farm price from Norway

Source: European Price Report

### Salmon: France

<table>
<thead>
<tr>
<th>€/kg</th>
<th>Sep 12</th>
<th>Mar 13</th>
<th>Sep 13</th>
<th>Mar 14</th>
<th>Sep 14</th>
<th>Mar 15</th>
<th>Sep 15</th>
<th>Mar 16</th>
<th>Sep 16</th>
<th>Mar 17</th>
<th>Sep 17</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh, gutted, HO, 3-6 kg/pc, origin:</td>
<td>8</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
<td>6</td>
</tr>
</tbody>
</table>

Source: Norway European Price Report

**RECENT NEWS**

**Organic salmon**

Organic farmed salmon is a niche but growing market segment that is proving particularly popular with European consumers and allowing smaller producing regions such as Ireland to differentiate themselves with a value-added product that is generally perceived to be healthier. Organic salmon differs from ‘regular’ salmon in various ways, depending on the applicable standards in the region in which it is produced, although producers may also voluntarily impose stricter standards, which will typically then be recognized through third-party certification.

Generally speaking, the stocking density at organic salmon farms is required to be significantly less than that of non-organic sites in order to minimize crowding and disease. All inputs, including feed, for organic salmon production should be derived from natural, sustainable sources, although EU28 regulations do allow for the use of certain non-organic feed ingredients and other inputs under certain conditions.
Japanese imports of Chilean farmed coho salmon are down so far this year, although this is not because of reduced production in the South American country. High prices of Atlantic salmon in 2016 created new demand for alternatives, such as coho, in multiple markets, including the Russian Federation, Brazil and various East and Southeast Asian markets such as Thailand. Combined with a weakening of the Japanese currency, this has lowered the negotiating position of Japanese importers and a substantial decline in salmon import volume is expected for the year as a whole.

French imports of salmon (by product)

<table>
<thead>
<tr>
<th>Product</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen whole</td>
<td>49.2</td>
<td>47.0</td>
<td>48.2</td>
<td>52.9</td>
<td>52.3</td>
</tr>
<tr>
<td>Fresh fillets</td>
<td>9.5</td>
<td>8.4</td>
<td>9.0</td>
<td>7.4</td>
<td>5.9</td>
</tr>
<tr>
<td>Frozen fillets</td>
<td>11.1</td>
<td>11.3</td>
<td>9.0</td>
<td>11.1</td>
<td>9.6</td>
</tr>
<tr>
<td>Smoked</td>
<td>3.9</td>
<td>3.2</td>
<td>3.6</td>
<td>3.4</td>
<td>3.5</td>
</tr>
<tr>
<td>Others</td>
<td>2.3</td>
<td>2.1</td>
<td>2.8</td>
<td>2.3</td>
<td>3.0</td>
</tr>
<tr>
<td>Total</td>
<td>76.1</td>
<td>72.0</td>
<td>72.7</td>
<td>77.3</td>
<td>74.4</td>
</tr>
</tbody>
</table>

Source: DNSCE

German imports of salmon (by product)

<table>
<thead>
<tr>
<th>Product</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen whole</td>
<td>20.5</td>
<td>31.3</td>
<td>28.4</td>
<td>29.5</td>
<td>27.4</td>
</tr>
<tr>
<td>Fresh fillets</td>
<td>4.6</td>
<td>5.1</td>
<td>7.0</td>
<td>7.6</td>
<td>6.4</td>
</tr>
<tr>
<td>Frozen fillets</td>
<td>15.8</td>
<td>18.0</td>
<td>15.2</td>
<td>18.2</td>
<td>16.4</td>
</tr>
<tr>
<td>Smoked</td>
<td>18.4</td>
<td>17.7</td>
<td>19.4</td>
<td>22.3</td>
<td>19.8</td>
</tr>
<tr>
<td>Others</td>
<td>11.5</td>
<td>11.1</td>
<td>8.6</td>
<td>10.9</td>
<td>6.6</td>
</tr>
<tr>
<td>Total</td>
<td>70.7</td>
<td>83.2</td>
<td>78.6</td>
<td>88.5</td>
<td>76.7</td>
</tr>
</tbody>
</table>

Source: Germany Customs

Japanese imports of salmon (by product and destination)

<table>
<thead>
<tr>
<th>Product</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen whole</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td>81.8</td>
<td>65.5</td>
<td>67.6</td>
<td>71.2</td>
<td>64.3</td>
</tr>
<tr>
<td>Russian Federation</td>
<td>7.2</td>
<td>4.8</td>
<td>3.4</td>
<td>6.4</td>
<td>5.5</td>
</tr>
<tr>
<td>USA</td>
<td>1.4</td>
<td>1.4</td>
<td>4.1</td>
<td>4.1</td>
<td>2.3</td>
</tr>
<tr>
<td>Others</td>
<td>4.6</td>
<td>2.3</td>
<td>2.7</td>
<td>1.9</td>
<td>2.1</td>
</tr>
<tr>
<td>Total</td>
<td>95.0</td>
<td>74.1</td>
<td>77.8</td>
<td>83.6</td>
<td>74.1</td>
</tr>
</tbody>
</table>

Source: Chile Customs

US imports of salmon (by product and destination)

<table>
<thead>
<tr>
<th>Product</th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frozen whole</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chile</td>
<td>18.3</td>
<td>20.0</td>
<td>18.2</td>
<td>17.1</td>
<td>17.4</td>
</tr>
<tr>
<td>Chile</td>
<td>13.7</td>
<td>15.3</td>
<td>14.3</td>
<td>15.6</td>
<td>15.1</td>
</tr>
<tr>
<td>Norway</td>
<td>2.9</td>
<td>4.1</td>
<td>4.7</td>
<td>3.5</td>
<td>5.3</td>
</tr>
<tr>
<td>Others</td>
<td>1.3</td>
<td>1.8</td>
<td>1.9</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>Total</td>
<td>36.2</td>
<td>41.1</td>
<td>39.1</td>
<td>38.3</td>
<td>39.9</td>
</tr>
</tbody>
</table>

Source: NMFS
Outlook

The future development of farmed salmon prices will depend primarily on the ability of producing countries to keep pace with rapid demand expansion in an increasingly diversified range of markets. While consumer sensitivity to price hikes has dampened import growth in the more mature markets of the United States of America, the EU28 and Japan, the share of global salmon import volume and value claimed by urbanizing middle-class demographics in developing countries continues to increase. However, in the absence of a negative supply shock, such as the 2016 algal bloom outbreak in Chile, consensus forward prices suggest that supply volumes should be sufficient to keep the average price for 2018 for fresh whole Atlantics from Norway at around NOK 60 per kg. This degree of stability is the result of the expected increase of 7–8 percent in global production next year.

On the market side, the flattening price trend, together with product innovation focused on portion sizing and convenience, will be key in preventing consumers from making a long-term shift towards alternative protein sources, particularly in the larger, established markets.
Increase in global landings of small pelagics

The supply outlook for small pelagics in 2017 indicates an increase in global landings, mainly from Peruvian anchovies. In the North Sea, the mackerel season started with good catches, but low prices. In terms of quotas, the ICES recommends cuts in both the North Atlantic mackerel and herring TAC for 2018.

FAO expects global landings of small pelagics to grow by 7 percent in 2017 compared with 2016, largely due to a significant increase in landings of Peruvian anchovy. This increase may put some pressure on prices, but any changes are not expected to be dramatic. It is more likely that any price changes will be more closely related to currency exchange rates.

ICES has recommended significant reductions in the North Atlantic mackerel and herring quotas. For the mackerel quota, ICES suggests a 35 percent cut to 550 948 tonnes, while for herring the recommendation is for a 15 percent cut to 546 472 tonnes.

Mackerel

Norwegian ocean researchers have recorded a significant growth in the mackerel biomass over the past decade in the Norwegian and Barents Sea. According to researchers at the Institute of Marine Research in Bergen, the resource has doubled over the past ten years, from two million tonnes to four million tonnes. The feeding area has also been enlarged from about 1 million square km to more than 3 million. While this is good news for the mackerel fisheries, it may be bad news for the herring fishery. As mackerel are known to eat everything in its path, herring juveniles are certainly on the mackerel’s menu. For the adult herring, mackerel is a competitor for the feed. Thus, this growth in mackerel may translate into a coming decline for the herring stocks. However, there is debate over the mackerel biomass trend. Data examining shorter-term trends suggest that there has actually been a decline in the stocks, and consequently, ICES has recommended cutting the 2018 mackerel quota by 25 percent.

The Greenland mackerel fishery has had its ups and downs. In 2014, landings peaked at almost 78 000 tonnes, but in 2015, catches dropped to less than half of this volume (30 379 tonnes). In 2017, it is not expected that landings will reach the TAC of 66 365 tonnes, as landings at the end of August were only 35 755 tonnes.

There seems to be a massive under-reporting by China of mackerel catches in the North Pacific Ocean. The North Pacific Fisheries Commission estimates that in 2016, Chinese fishing vessels caught between 300 000 to 400 000 tonnes of mackerel in the high seas of the North Pacific Ocean near the Japanese EEZ. However, Chinese authorities reported catches amounting to only 143 000 tonnes. The higher catch estimates were based on data obtained by the North Pacific Fisheries Commission, which receives data from the automatic identification system installed on all large fishing vessels. Although it does not set

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<table>
<thead>
<tr>
<th>Export price Frozen mackerel: Norway</th>
</tr>
</thead>
<tbody>
<tr>
<td>NKr/kg</td>
</tr>
<tr>
<td>&gt; 600 g</td>
</tr>
<tr>
<td>40</td>
</tr>
<tr>
<td>30</td>
</tr>
<tr>
<td>20</td>
</tr>
<tr>
<td>10</td>
</tr>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

Source: Norwegian Seafood Council
mackerel catch limits in the open sea, the agency is concerned about underreporting.

Herring

The Icelandic Marine Research Institute advised in June for authorities to cut the 2017–2018 quota for Icelandic summer spawning herring by 38 percent to 39 000 tonnes. This advice was based on the size of the biomass, poor recruitment observed, and on diseases. According to ICES, this herring stock has been reduced by 60 percent over the past ten years. The situation has been aggravated by the occurrence of disease, caused by the parasite *Ichthyophonus hoferi*, which was first observed on herring in 2008.

The reduction in the quota for summer spawning herring is not, however, expected to affect the supply of Icelandic herring significantly, as Iceland holds a 54 000 tonne quota of the Norwegian spring spawning herring. A representative of the Icelandic pelagic industry said that instead, Iceland's supply of herring was expected to increase in 2017. The normal supply of herring from the North Atlantic usually amounts to about one million tonnes, so the 22 000 tonne reduction in the Icelandic summer spawning herring quota was therefore only a minor adjustment.

The beginning of the North Sea herring fishery was a disappointment in terms of prices. First-hand prices were down by almost 35 percent compared with last year, at an average of NOK 4.22 per kg. Landings during the first part of the season (from 15 May–10 July) were up by 5 800 tonnes or 7.2 percent, to 86 300 tonnes. As of 10 July, a total of 68 700 tonnes remained of the quota for this year.

Anchovy/Sardines

There is currently an unused pelagic resource off of the Uruguayan and Argentinean coast. Each of these countries holds a 40 000 tonne quota for anchovy in their common fisheries zone, but in recent years, neither country has been able to fill this quota. Now a Chinese investment group is interested in buying the quota in order to be able to begin fishing in the region. The group is also seeking to obtain fishing licences for four to six vessels to fish anchovy in the Uruguay-Argentinean waters. Previously there was a fishmeal factory in the area, but this closed down some years ago due to limited raw material.

In Peru, the TAC for the first anchovy fishing season in the north central zone was set at 2.8 million tonnes. According to Peruvian deputy minister for fisheries and aquaculture, the conditions for reproduction are quite good.

While Peruvian landings were up considerably during the first half of the year, the picture is quite different on the other side of the continent. Brazilian sardine catches fell sharply and hit its lowest level in years. Annual landings went from a high of 99 100 tonnes in 2014 to just 45 000 tonnes in 2016. The low catches have led to an increased need for imported raw material for the country’s fishmeal factories, and the government consequently authorized imports of round sardines at a 2 percent import duty.

The sardine stocks of Portugal and Spain have been under pressure for a number of years, and now ICES has recommended that Portugal’s sardine fishery be suspended for 15 years. Since 2012, the Iberian fleet has been restricted in catching sardines, but apparently to no avail. Portugal will now undertake an evaluation of the stocks, but according to the Portuguese minister of fisheries, a 15-year suspension of the fishery is out of the question.

Trade

In general, the first six months of 2017 showed a growth in international trade. However, for Norway, one of the largest suppliers of mackerel and herring, export volumes were mixed. Norwegian exports of mackerel actually fell by 6 percent during the review period compared with the same period last year, to 93 100 tonnes. While there was a massive increase in exports to China (+120 percent), exports to other markets like the Republic of Korea and Japan fell by 40 percent and 42.5 percent, respectively.

In contrast, Norwegian herring exports, increased by 16 percent to 67 800 tonnes. While there were declining exports to the largest markets (-8.3 percent to Ukraine and -19.1 percent to Egypt) exports to such markets as the Netherlands and Belarus increased by 25 and 55 percent, respectively.

Japanese imports of herring increased by almost 20 percent during the first half of the year, to 21 400 tonnes. The main supplier, the United States of America, saw little change in the volume shipped, imports from Canada were up by 71 percent (to 4 600 tonnes) and the Russian Federation up by 27 percent (to 4 100 tonnes).
China’s exports of frozen mackerel increased by an impressive 73.7 percent during the first half of the year. Total Chinese frozen mackerel exports thus amounted to almost 160 000 tonnes. The main markets were Indonesia (41 150 tonnes), the Philippines (36 700 tonnes) and Thailand (14 300 tonnes).

Dutch exports of frozen herring also registered a strong increase during the first half of the year; up by 68 percent to 56 500 tonnes. Most of this increase was absorbed by Nigeria (23 400 tonnes), which thereby became the largest market for Dutch frozen herring. Exports to Egypt were up by 10 percent to 20 600 tonnes.

Russian Federation imports for frozen mackerel grew by 42 percent during the period, to 42 000 tonnes. This trade is now totally dominated by the Faroe Islands, which accounted for 71 percent of supplies (29 900 tonnes). Other important suppliers to the Russian Federation included China (6 300 tonnes) and Peru (2 800 tonnes).
The Spanish canning industry is reporting higher exports in 2017 compared with 2016. While the most important canned product is tuna, exports of canned sardines also went up. Indeed, during the first half of the year, Spanish exports of canned sardines increased by over 20 percent in volume and 4 percent in value. However, exports of semi-canned anchovies, decreased by 9 percent to 2 600 tonnes. Regardless, the value of these exports increased by 6 percent to €5.15 million.

**Outlook**

The supply of major species of small pelagics may be somewhat tighter moving forward as ICES has recommended cuts in quotas. Landings of mackerel in the beginning of the autumn season have been strong, and this has resulted in downward pressure on already disappointing prices. Anchovy catches in South America will also increase significantly, and as a result, fishmeal production may increase, lowering market prices as well. Total traded volumes of mackerel and herring are expected to increase, with important shifts among the main suppliers continuing.
First fishing season in Peru a success; prices now stabilizing

The first fishing season of 2017 in Peru ended with landings of 2.37 million tonnes, which is equivalent to 85 percent of the TAC. The market glut beginning in late 2016 has been pushing down prices to record lows, with the market situation now expected to stabilize.

Production

The first anchovy fishing season of 2017 in Peru (22 April–1 August) was significantly more successful than in recent years, both in terms of the quota issued as well as the amount landed due to the end of the El Niño phenomenon. The record high quota set at 2.8 million tonnes, the highest TAC since 2011, ended with landings of 2.37 million tonnes, meaning 85 percent of the total TAC was taken.

In addition to a positive season in Peru, other major industry players, namely Chile and Scandinavian countries, also reported better performance compared with 2016. Now, with a strong supply of raw material worldwide, there will be ample provisions of fishmeal and fish oil on the market, driving down already declining prices. This downward price trend was initiated with the relatively high quota set in Peru for the second fishing season in 2016 (2 million tonnes). The fiercely competitive market coupled with new technological developments in the feed industry has also contributed to weakening prices.

The fishmeal sector in Peru has been happy with the larger quotas issued, relying on higher landings to climb out of debt. However, some companies have lowered their expectations of earnings for the incoming months due to the declining price trend.

Peru, the leading producer, reported 700 000 tonnes of fishmeal production in the first half of 2017, which was a remarkable increase of 309 percent compared with the same period in 2016. Chile followed a similar trajectory with production amounting to around 230 000 tonnes (+64 percent). These improved volumes were largely due to

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Fishmeal production by countries* (2015)

- Peru: 34%
- USA/Canada: 17%
- Iceland/North Atlantic: 9%
- Denmark/Norway: 15%
- Chile: 12%
- Others: 13%

Source: FAO
*refers only to IFFO member countries

Top global producers of fishmeal

Unit: 1 000 tonnes, January-June

Source: IFFO
*refers only to IFFO member countries
Top global producers of fish oil
Unit: 1,000 tonnes, January-June

Source: IFFO
*refers only to IFFO member countries

Peru | Exports | Fish oil
Top three destinations
Unit: 1,000 tonnes, January-June

Source: Peru Customs

Peru | Exports | Fishmeal
Top three destinations
Unit: 1,000 tonnes, January-June

Source: Produce

Chile | Exports | Fish oil
Top three destinations
Unit: 1,000 tonnes, January-June

Source: Boletín de Exportaciones del IFOP

Chile | Exports | Fishmeal
Top three destinations
Unit: 1,000 tonnes, January-June

Source: Boletín de Exportaciones del IFOP

USA | Exports | Fishmeal
Top three destinations
Unit: 1,000 tonnes, January-June

Source: NMFS
favourable weather as well as recovered anchovy biomass levels post El Niño. For fish oil, production mirrored fishmeal growth in the major producing countries, with surged performance in Peru (+262 percent), Chile (51 percent), and Nordic countries, again leading to falling market prices.

Exports

Peru registered the best export performance in the first half of 2017. Compared with the same period in 2016, Peru more than doubled its exports of fishmeal (524 000 tonnes) with over 80 percent destined for the Chinese market. As for fish oil, Peru increased its total exports by 62 percent in the first half of 2017 to total 87 400 tonnes. Denmark absorbed the most, followed by China and Canada.

Chile reported somewhat the same export quantities of fishmeal overall, but 31 percent growth in exports to China was registered, to total around 40 000 tonnes.

Markets

In China, the largest fishmeal market, imports stabilized at around 1.4–1.7 million tonnes with Peru as the largest supplier. For the first half of 2017, more than 50 percent of Chinese fishmeal imports were from Peru, amounting to 408 000 tonnes, and demonstrating a notable 71 percent increased compared with the first half of 2016. Currently, the stocks at Chinese ports will be at a very good level and trade activities were subdued until Peru initiates its new season.

Viet Nam is gradually becoming an important supplier of fishmeal to Asian countries, given its clear geographical advantage. Its rapid development of the pangasius industry in the country also entails a large amount of fishmeal input, warranting domestic production of fishmeal a clear win-win. Currently however, a large amount of its fishmeal is imported. Indeed, Viet Nam was the second largest importer of Peruvian fishmeal for the first half of 2017.

Atlantic salmon has been on a downward price trend from its peak at the end of 2016 and this has been reflected in volumes of feed imported during the first six months in 2017. Norway, the global leader in salmon production, slightly decreased its imports of both fishmeal and fish oil from outside the country. However, with the normalization of its trade relationship with China, a rebound of the salmon market is expected. With several Chinese-Norwegian trade promotion events held in China recently, there is a clear message that there will be further cooperation.
Prices

It has certainly been a roller coaster ride for fishmeal prices. At the end of 2014, fishmeal prices were at a record high of more than USD 1,800 per tonne, fish meal/pellets 65 percent protein, CFR. These sky-high prices were due to the fact that the second fishing season of 2014 in Peru had been cancelled, leading to a raw material scarcity. Since then, fishmeal and fish oil prices have been on an overall downward trend with occasional oscillations, with the price now around USD 1,400 per tonne. The continuous declining price has upset the market to a certain extent, with some companies lowering their earning expectations for the coming months.

With the first season of 2017 now over, IMARPE is conducting its biomass evaluation for the second fishing season, which usually starts in November. According to the industry, around 2 million tonnes is expected for the coming season’s TAC. In between the two fishing seasons, prices will slightly increase and then are expected to stabilize in the near future.

Outlook

In terms of production, there are currently no reasons to predict an unsuccessful second season in Peru, at the very least in terms the quota released, which is said to be around 2 million tonnes. The price has nudged up a bit recently and will be expected to stabilize at its current level for some time.
Supplies

North American lobster output is expected to fall notably in 2017. This will mark a continued decline, as North American lobster landings fell by 6 percent in 2016 compared with 2015. Two thirds of North American lobsters are landed in Canada, but Canada is increasingly shipping to markets besides the United States of America. In New Brunswick, lobster fishers stayed on shore in mid-August in protest of unreasonable prices. Supplies in the United States of America are expected to become very tight, and thus prices are forecasted to rise.

While lobster stocks in Maine have soared to new heights in recent years, the lobster population further south, off the coast of Connecticut, Rhode Island and Massachusetts, has collapsed. The commercial catch of lobsters in Connecticut fell from 1 133 tonnes in 1995 to just 91 tonnes in 2015. At the same time, landings in Maine went up from 16 782 tonnes in 1995 to 55 338 tonnes in 2015. In 2016, there was a slight increase in Maine’s lobster landings, to 59 429 tonnes. A plan to restore the southern stocks through a series of measures, including fishing restrictions, was proposed, but this was rejected by the Atlantic States Marine Fisheries Commission this past July.

There currently seems to be enough lobster meat on the market, but traders in Maine are warning that there will be a shortage of lobster meat in the beginning of 2018. However, the end result of the season will not be known until late winter. Regardless, traders are worried that a shortage may develop.

International trade

In volume terms, world trade in lobster products was stagnant during the first half of 2017 compared with the same period in 2016. Total world imports amounted to just over 40 000 tonnes. Of the main importers, China showed growth, while the United States of America was stagnant.

The United States of America imported slightly less lobsters in the first six months of 2017. The main product forms imported were live or fresh, and most of this came from Canada, as usually is the case. EU28 imports were also stagnant at around 11 000 tonnes during the period.

Following the glut in the market in 2012, many Canadian exporters targeted China as an important buyer. At present, China accounts for about 5 percent of Canada’s overseas sales, while the United States...
of America takes as much as 75 percent of Canadian lobster exports. Some exporters are now looking for new alternative markets as the Chinese still expect low-priced lobster from Canada after the glut of 2012, which is initially what opened up this market to exporters. Where these markets are remains to be seen.

Chinese importers are working very actively to promote live lobsters in China. Increasingly, e-commerce is becoming one of the dominating market channels. One of the largest e-commerce companies in China, JD, is now promoting Canadian live lobsters through its system, with great success.

Shipping live lobster around the globe is a logistical challenge, and recently it has not become any easier. Boston lobster exporters are reporting that they are having difficulty finding air freight space to ship their lobsters to China due to the fact that many airlines have reduced their cargo capacity on passenger flights during the summer holiday season. In particular, shipments to Shanghai are difficult, while shipments to Beijing and Guangzhou are somewhat easier to find space for.

### Prices

Maine lobster prices are up due to lower catches and aggressive demand. Much of the North American lobster goes to domestic upscale restaurants. This fact was underlined by the news that McDonald’s would not be offering its McLobster rolls this summer because of high raw material prices. This price trend is opposite of last year, when inventories
were high, and thus prices were kept in check. The high prices for lobsters this season is also to a large extent due to strong demand in China.

A shortage of large-size lobster tails has pushed prices up, and further prices hikes are expected as the supplies this winter will also likely be short.

Outlook

Supplies of North American lobster are expected to be tighter in the coming months, with prices subsequently on the rise. How high these prices can go before consumer resistance sets in is uncertain, but it is reasonable to believe that they can go fairly high. After all, lobster is considered a luxury item.
Excellent market environment for bivalves

Bivalves are a well-established food item in the world market. Demand continues to increase annually, with the supply unable to match the growing interest. Subsequently, bivalve products have evolved from being relatively low priced to rather high priced, where the price of edible weight can easily reach €100 per kg. This rising trend is expected to continue, with only further increases in bivalve prices. Christmas and New Years are in particular a high consumption period for bivalves, especially for oysters, which will give an important push to sales and prices in the closing months of 2017.

Mussels

Spain continues to be one of the main producers of mussels in the world. The production concentrates on artisanal output in the fjords of Galicia. Production during the first half of 2017 reached 80 000 tonnes, an important increase from the 60 000 tonnes harvested during the same period of 2016. This positive development is caused by various developments such as an extension of the concession for mussel producers from 30 years to 50 years, the stop on new concessions as well as various investments by the Spanish government and by EU28 funds into the development of this important small-scale industry.

The total production of mussels in Spain in 2016 was reported as 239 000 tonnes, which is 6 percent higher than the 2009 output, the year when government investments in the sector started. The total value of mussel aquaculture in Spain increased from €88.6 million in 2009 to €109 million in 2016. The public investment during these seven years in the sector was €1.7 million, which funded 67 grants to small-scale producers, demonstrating that investing in small-scale aquaculture proves successful for the economy. The Government and the EU28 began investing in the Spanish mussel industry after complaints by Spanish producers that imports of frozen mussels from Chile had been creating unfair competition for domestic producers.

This increase in Spanish production led to a strong expansion of exports of Spanish mussels. In the first half of 2017, some 16 300 tonnes of live mussels were exported from Spain, a 38 percent increase over the previous year. In value terms, exports grew by 28 percent, indicating that price levels were slightly lower in 2017. The main markets for live mussels from Spain were Italy (57 percent) and France (42 percent).

Chile, the main competitor with Spain at a world level, also reported higher mussel output. In the first half of the year some 260 000 tonnes were landed, up 37.4 percent from the first half of 2016 production, when the red tide negatively impacted Chilean mussel production. 100 percent of Chilean mussel production is carried out in the X region, which is also the main production area of salmon. The increase reported in 2017 made mussels the main aquaculture species produced by Chile, overtaking salmon.

France is a main importer and consumer of mussels. In the first half of 2017, imports increased slightly. During the down period of the domestic mussel production (January–April), live mussels are
imported from Spain and the Netherlands, with the Spanish product having a premium over the Dutch. Indeed, the wholesale price of Dutch mussels in the French market is stable at €1.80 per kg, while Spanish mussels sell at about 10 percent higher. The highest quality product that fetches the best price is the French bouchot mussel, which can easily reach €5.40 per kg, more than double the Spanish and Dutch price. French bouchot is mainly going to restaurants, while the other mussels are used in supermarkets. Red Label French Pole mussel are also present this year, demonstrating the importance of quality differentiation to create value in the French market.

**World imports/exports of mussels**

**EU28 | Imports | Mussels**

*Top three origins*

Unit: 1 000 tonnes, January-June

- **Chile**
- **Spain**
- **Netherlands**
- **Other countries**

**Source: Eurostat**

**Chile | Exports | Mussels**

*Top three destinations*

Unit: 1 000 tonnes, January-June

- **Spain**
- **USA**
- **Other countries**

**Source: GTIS**

**Spain | Imports | Mussels**

*Top three origins*

Unit: 1 000 tonnes, January-June

- **Chile**
- **Italy**
- **Other countries**

**Source: Agencia Tributaria**

**France | Imports | Mussels**

*Top three origins*

Unit: 1 000 tonnes, January-June

- **Spain**
- **Chile**
- **Netherlands**
- **Other countries**

**Source: DNSCE**
**Oysters**

France is the main producer of oysters in the Western hemisphere. Some five years ago, the French oyster industry was hit by a disastrous disease, which almost destroyed the entire industry. As a result, oyster per kg prices jumped from €6.00 before 2011 to over €10 in 2016. Fortunately, the disease seems to be overcome now. According to the IFREMER monitoring programme, at the end of August 2017, seed mortalities are slightly above 2016 levels whereas juvenile were adult mortality rates are below last year’s levels. With this positive outlook for the coming years, prices of oysters are tending downward and have reached €9.20 per kg. However, in view of the overall upward trend for all seafood prices, it is unlikely that oyster prices will decline back to the 2011 level.

**World imports/exports of oysters**

<table>
<thead>
<tr>
<th>Year</th>
<th>USA</th>
<th>France</th>
<th>Malaysia</th>
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<td>3.6</td>
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<tr>
<td>2015</td>
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<td>2.3</td>
<td>3.0</td>
<td>21.0</td>
<td>31.7</td>
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<tr>
<td>2017</td>
<td>5.0</td>
<td>3.4</td>
<td>2.8</td>
<td>14.2</td>
<td>25.4</td>
</tr>
</tbody>
</table>

**Imports**
- Japan: 37.8
- Republic of Korea: 30.4
- Spain: 10.9
- Others: 40.0
- Total: 119.1

**Exports**
- France: 3.4
- China: 74.6
- Italy: 4.9
- Others: 28.1
- Total: 112.7

Source: GTIS

**Clams**

Italy is by far the main market for live clams in the Mediterranean area and beyond. It is interesting to note that the native clam species (*Tapes decussatus*) was replaced in the 1980s by the *Tapes philippinarum*, a quicker growing species, though many find it less tasty. The average price of *Tapes philippinarum* in the Italian market is €10 per kg, but the consumer is still longing for the original product, which is only available in the southern part of the Mediterranean, in Tunisia. These clams from Tunisia are sold for €16 per kg, and sometimes even higher.

In 2016, FAO helped women associations collecting clams in Tunisia sell to the Italian market in order to get a more equitable price for their product. Rather than receiving the usual €1 per kg, they will now get a fixed price of €6 per kg. This is linked with a limit of 4 kg per day for the collectors, which has been set in order to help rebuild the resource as it has been overexploited in recent years.

**World imports/exports of clams, cockles, arkshells**

<table>
<thead>
<tr>
<th>Year</th>
<th>Japan</th>
<th>Republic of Korea</th>
<th>Spain</th>
<th>Others</th>
<th>Total</th>
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<td>12.2</td>
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<td>14.3</td>
<td>39.2</td>
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</tbody>
</table>

**Imports**
- China: 74.6
- Republic of Korea: 5.2
- Italy: 4.9
- Others: 28.1
- Total: 112.7

**Exports**
- China: 74.6
- Republic of Korea: 5.2
- Italy: 4.9
- Others: 28.1
- Total: 112.7

Source: GTIS

**Scallops**

China is the main producer, exporter and importer of scallops at the global level. More than 99 percent of Chinese production, which reached 1.8 million tonnes in 2016, is destined to the domestic market. Total trade in the first six months of 2017 declined by 10 percent over the same period of 2016 to 71 500 tonnes. This was caused by lower imports from the United States of America, Hong Kong SAR and the Republic of Korea.

**RECENT NEWS**

**Indigenous fishery to receive 25 percent of Arctic surf clam quota in 2018**

The Arctic clam fishery off the coast of Canada has been a monopoly of the Canadian company Clearwater in past years. In 2018, however, 25 percent of the Arctic surf clam quota will be given to an indigenous fishery. In recent years, Clearwater has been landing 38 000 tonnes of Arctic surf clams, which are highly prized in the Asian market for sushi and sashimi. The Asian market accounts for 98 percent of sales of the Arctic surf clams, which are a virtually unknown species to North American consumers. The Arctic Surf clam catch is worth USD 80 million per year, so the indigenous communities will have an estimated USD 20 million business to handle in 2018.
World imports/exports of scallops
January - June

<table>
<thead>
<tr>
<th></th>
<th>2013</th>
<th>2014</th>
<th>2015</th>
<th>2016</th>
<th>2017</th>
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<td>8.8</td>
<td>6.4</td>
<td>7.0</td>
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<tr>
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<tr>
<td>USA</td>
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<td>5.7</td>
<td>5.1</td>
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<tr>
<td>Others</td>
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<td>28.1</td>
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<tr>
<td><strong>Total</strong></td>
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<td>61.0</td>
<td>54.9</td>
<td>55.5</td>
<td>48.4</td>
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</tbody>
</table>

Source: GTIS

Outlook

The positive market environment for bivalves on the world market is likely to continue in 2018. Demand is expected to continue to be strong in 2018, which will lead to further increasing price levels. It is likely that several developing countries will get their bivalves catching and culturing areas approved for EU28 standards, allowing them to export live bivalves to the lucrative European market. In the long-term, this development should lead to some cooling down of prices.
The Russian Federation has larger quotas for crab in 2017, and in turn supplies are expected to improve. In the United States of America, Pacific landings have been disappointing. Prices are currently exceptionally high as demand in Asia is strong.

**Supplies**

In the Russian Federation, landings of crab in the Kamchatka peninsula were up 22 percent by the end of August, with 13 700 tonnes landed. The catch consisted of bairdi snow crab and opilio crab. The king crab fishery in the region started only on 1 September, and the quota has been increased to 11 500 tonnes (+29.2 percent). The total TAC for the Russian Federation’s Far East crab fisheries are up by 7 000 tonnes to 73 500 tonnes for 2017.

Russian Federation authorities have been cracking down on illegal, unreported and unregulated (IUU) crab fishing and illegal exports of crabs, yet poachers continue to find new ways to operate. Many crab poachers have started using transport ships to send their IUU cargo from the Russian Federation to Japanese and Republic of Korean ports. Poachers are also using ships under flags of convenience, as these ships are not strictly controlled.

In the United States of America, the dungeness crab fishery in southeast Alaska closed two weeks early this year on 25 July as there has been a dramatic shortage of crab in 2017. During the first weeks of fishing, landings amounted to only 274 tonnes, compared with the over 1 020 tonnes needed to keep the season open for the full two months. In contrast, the California dungeness crab fishery, which last year was hampered by traces of domoic acid presence, has had a very good season. A total
of 9 500 tonnes of dungeness crab were landed in California ports, at a value of USD 66.7 million.

**International trade**

In general, there has been a stagnation or decline in the volume of international crab trade lately. The combined imports of the top three importers of crab (the United States of America, China and Republic of Korea) show a slight decline (-1 percent, to 182 200 tonnes) during the first six months of 2017 compared with the same period in 2016. Of course there were marked differences from country to country. US and Republic of Korean imports were slightly down, (-0.5 percent and -5 percent respectively), while China’s imports increased by 28.1 percent. Japanese crab imports during this period fell by one third, from 19 200 tonnes in 2016 to 12 800 tonnes in 2017.

On the export side, Russian Federation exports were up by 28 percent during the period, to 29 300 tonnes. Most of that increase went directly to the Republic
of Korea. In contrast, Chinese exports declined by 13.3 percent to 30 000 tonnes. There were declining shipments from China to both the Republic of Korea and Taiwan Province of China.

**Prices**

Snow crab prices have been very high this year, mainly due to strong and growing demand in Asia. Buyers in Japan, Republic of Korea and China have all been quite active, while US retailers have been buying much less. The high prices are apparently scaring US supermarkets away from the product.

Fishing activity for king crab in the Barents Sea is increasing, as prices are sky high, with king crab fetching four times as much as snow crab.

**Outlook**

Supplies of snow crab and king crab can be expected to improve this year, and this could halt the rise in crab prices. Russian Federation quotas in the Far East are up significantly, while the Alaska crab fishery has been somewhat disappointing so far. Fishing in the Barents Sea is increasing for both snow crab and king crab, but the dispute over fishing rights may dampen activity. The California dungeness crab fishery is back on track and should provide promising supplies, resulting in a possible decline in prices.
Norwegian capture-based aquaculture of cod

In 2016, the highest volumes of cod (Gadus morhua) that were landed and stored alive in Norway were recorded, totaling over 6,000 tonnes. These record-breaking volumes demonstrate that the Norwegian quota bonus, introduced to encourage capture-based aquaculture (CBA) of cod, is working as intended.

Introduction

Norwegian fishing vessels are annually granted vessel quotas for cod. Through the quota bonus scheme, only half of the actual quantity of live cod captured counts against a vessel’s quota if it is stored alive. Thus, in principle, a vessel can take an extra tonne for each tonne captured. This provides the potential for vessels to deliver twice as much as their existing quota. In reality however, the bonus does not enable double the landings, as not all fish are suitable for live storage after harvesting. Regardless, the quota bonus still allows for more cod than the usual quota and has been a significant incentive for vessels to land and store cod alive.

Although other species are also caught and stored live in Norway, such as herring, saithe and king crab, the quota bonus only applies to cod. The quota bonus scheme was first introduced at 20 percent, but in 2013 expanded to the current level. However, there are still a number of challenges to the quota bonus and CBA of cod, which will be further discussed in this article.

Capture-based aquaculture

CBA has the ability to provide better access to fresh fish, and thus improved opportunities to target higher-end markets. In the traditional cod fisheries in which the fish are not stored alive, there are a number of quality issues. These issues relate to cod not being bled properly, pressure damages in the flesh and skin damages, among other issues. Cod are also highly stressed during harvest and often not immediately chilled. As a result, relatively large shares of cod have limited shelf-life and are not suitable for fresh markets. In contrast, with live storage, most of these issues are avoided relatively easily. Almost all of the cod from CBA are of top quality and can be sold in the highest-paying markets.

Yet CBA of cod has an even more significant benefit; live storage allows actors to overcome the relatively strong seasonal variation in supply. In the traditional Norwegian fisheries, supply of fresh cod is high from January to May, extremely limited during the summer months and increases somewhat starting in November. Although other countries increase their supply of cod during the slow season in Norway, prices worldwide are still considerably higher. Thus, if Norwegian vessels shifted supply of cod to the slower period in the traditional season through live
storage, they would be able to increase sale prices and revenues. The increase of cod in the summer or fall season from CBA would be a relatively small volume, thus not flooding the markets and allowing for higher profitability.

The supply of cod from traditional fisheries is also strongly push driven - generally vessels catch when they can and brokers look for buyers after the fish is caught. With CBA, marketing could be shifted towards consumer-driven demand. Sellers could enter into agreements with buyers before the fish are harvested, enabling longer-term planning for both parties and increased bargaining power for the supplier. Thus, cod from CBA could also be more accessible, as it can be slaughtered, processed and transported in accordance with consumer needs. Avoiding seasonalities in supply may also allow for more streamlined logistics and make fresh cod a more interesting product for the retail sector. Of course, as with other farmed fish, the acceptance of CBA cod is a challenge, and it is vital that the sector address these issues.

The most crucial challenge for CBA cod is profitability, as there are significant extra costs to both capture and store the fish alive. For vessels, the prime cost component is the reduction in harvesting efficiency. Live fish take up more space in the cargo hold, hauls should be smaller to ensure high survival and fishing in severe weather should be avoided. When delivering, the vessel has to moor at both the storage site as well as the traditional processing plant, increasing steaming time. In general, harvesting capacity is halved; a vessel that would generally catch and deliver 20 tonnes per day at sea would land about 10 tonnes of live cod. In addition, the pumps that supply live cod with fresh sea water and the extra steaming distance increases fuel consumption. Storage is especially costly, due to the labour and equipment needed.

Mortalities and weight loss are additional costs. High mortality is sometimes experienced during the first few days of storage if fish have been severely stressed during capture or if grading and removal of injured fish has been poor. Normal rates of loss would be around 1–3 percent. Beyond the first week, mortalities are generally very low. In terms of weight loss, one can expect about 0.7 percent weight loss per week. In total, it is reasonable to expect to harvest about 85 percent of the biomass introduced in the cages after three months storage with very limited feeding. Currently, fish are stored for a relatively short period (2–3 months) and fed only small rations of herring or capelin cuts, primarily to ensure fish welfare. Thus, feed costs are low. A few sites keep some of their fish for longer and feed for growth. Fish grow relatively quickly and can almost double their weight in six months. With herring, a feed conversion rate of about 3.5 is reasonable and at a price of about NOK 4.00 per kg, this means a feed cost of about NOK 14 per kg of fish produced.

Although fishers can be traditional in their methods, several new actors are investigating and testing CBA for cod and are willing to invest both effort and capital. One encouraging sign is that the number of vessels that participate in the live cod fishery has increased significantly. The quota bonus scheme has also helped reduce resistance. Indeed, the growth in CBA cod production in Norway has been startling. In 2013, nearly 2 000 tonnes of cod were stored alive, whereas in 2016 that volume more than tripled to over 6 000 tonnes. About 15 different commercial actors are buying live cod.

In terms of storage, live cod are normally stored between eight and twelve weeks. Commercial actors and researchers are gradually gaining more experience with the storage of wild-caught cod and the market opportunities it provides.

Despite this growth, CBA of cod is still in the early stage with actors involved being the pioneers. Experiences and knowledge gained now will be crucial for its long-term development. Improving profitability will be crucial for encouraging new actors and capital to venture into this industry. It is hoped that as the quality of fish is raised, a greater proportion of cod may be sold in the highest paying markets.

Pertinent regulations

The quota bonus for cod, which has proven to motivate interest for CBA, will be evaluated this year. Though it was introduced as a temporary measure, it seems the quota bonus will continue also in 2018. It remains to be seen whether CBA for cod can survive without the quota bonus, and this will be specifically looked at in the evaluation.

Currently, most players are only allowed to store fish up to 12 weeks. Storage facilities are located as close to the fish processing plant as possible in order to have easy access regardless of weather conditions. The fish are slaughtered based on markets contracts, in terms of volume, quality and dates of delivery. The main season for catching cod is from March to May and thus to take full advantage of the market, more than 12 weeks of storage is needed. A deviation permit allows actors to obtain permission to save the fish longer, but so far, few application for such licenses have been granted.

There are a number of reasons that few actors are taking advantage of this market opportunity. First, it remains difficult to find adequate sites for storage. With a large salmon farming industry, many potential sites are occupied, and strict siting distance requirements render many more unavailable. Secondly, strict disease and sanitary regulations are a challenge. Authorities are concerned about potential disease transfer from the slaughter of the live stored cod. They are also worried about the transfers of disease from traditional harvesting plants to the live stored cod sites from discharge of water as both sites may be located close to one another. In particular, the authorities are worried about the transfer of Viral hemorrhagic septicemia (VHS) virus...
from the processing of traditionally caught fish to the storage site. As Norway today has a “free status” of VHS disease, a potential breakout of this disease would have considerable trade implications. From the private-sector side, the live storage firms are generally operated by traditional processing firms and they want their sites close to the processing plants for convenience, cost, etc. Overcoming these challenges with storage will require significant investments and an increase in operating costs, which so far has not been undertaken to a large extent.

**Conclusion**

CBA for cod has seen strong growth in recent years, primarily related to the introduction of a quota bonus incentive. On a longer term, the industry is facing several challenges. Among other things, profitability needs to increase in the catch operation for the CBA concept to continue to grow without the quota bonus. One way of improving the attractiveness is to increase the harvesting efficiency in the catch stage of the CBA concept. Currently the harvesting efficiency is hampered by the lower catch and transport volumes required as well as the higher costs related to the care of the fish.

At present, the total Norwegian quota for cod is at a historical high level. The attractiveness of CBA will continue to improve as the total quota for cod falls, as vessels will be able to take more through the quota bonus scheme. The quota peaked in 2013/2014 at about 475 000 tonnes. For 2017 this was reduced to about 410 000 tonnes and this is expected to further decrease.

To improve the CBA concept, challenges during the live storage stage must be addressed. For this, the industry needs to find a way to make more use of longer-term storage than the present 12 weeks to tap into the strong prices during the low season for cod. This will require cooperation with authorities and adjustments of veterinary site requirements for aquaculture in general as well as for CBA for cod.

Not long ago there was significant interest in closed-cycle aquaculture of cod. However, this production experienced biological issues and the growth in production coincided with strong supplies of wild stock. Thus, farmers were facing both higher than anticipated production costs and reduced sale prices, resulting in bankruptcy for most. A major motivation for farming was to tap into the potential during the period of supply shortage from wild fisheries. CBA of cod can now perhaps provide a more economical way of exploring and developing this potential. With costs of production being strongly linked to the prices for wild landings, the economic risk of storage is reduced. With short-term storage, the industry can have a fast response time to market changes. The required investments in non-malleable capital items are also far less than for traditional aquaculture, further reducing the economic risk.

**Growth in CBA: Volume of Arctic cod landed to be stored alive**

![Diagram showing growth in CBA volume from 2000 to 2017](https://via.placeholder.com/150)
Number of Norwegian vessels participating in CBA for Arctic cod

- 20 percent quota bonus
- 50 percent quota bonus

Years: 2004 to 2017

Number of vessels
TUNA 2018 BANGKOK
28 – 30 MAY 2018
Shangri-La Hotel | Bangkok, Thailand

15th INFOFISH WORLD TUNA TRADE CONFERENCE & EXHIBITION

*now open for registration

www.tuna2018.infofish.org
The world’s leading event dedicated for the Tuna Industry, TUNA 2018 conference and exhibition, the 15th in the series awaits you again at the Shangri-La Hotel from 28 – 30 May 2018.

More than 600 major tuna industry players and stakeholders are expected to attend, debate and discuss the present challenges and opportunities in creating a socially, economically and environmentally sustainable global tuna market.

Programme highlights of the conference are available on our website: www.tuna2018.infofish.org

THE VENUE & ACCOMMODATION
The 5-star luxury Shangri-La Hotel, Bangkok will again be the venue of TUNA 2018. Ideally located on the bank of the Chao Phraya River and adjacent to the sky train, it takes about 30 minutes to arrive here from the Suvarnabumi International Airport. Rooms at reduced rates have been blocked at the Shangri-La hotel and other satellite hotels available nearby the venue.

Shangri-La Hotel, Bangkok (the Venue),
Tel: 662-2367777
Fax: 662-2368566/79
E-mail: slbk_reservation@shangri-la.com
Web: www.shangri-la.com

For hotel reservations, delegates are requested to submit the hotel registration form provided, directly to Shangri-La Hotel or to the satellite hotels. Hotel registration forms are available from our website: www.tuna2018.infofish.org

CONFERENCE FEES & CANCELLATION POLICY
Only registered delegates are allowed to attend the conference. Conference fees are as indicated in the registration form and the fees cover the coffee breaks, lunches, receptions, conference kit and documentation. The fees do not include hotel accommodation. (Please refer to the registration form for further details).

The registration fee will be refunded, less 25%, for cancellations received before 23 April, 2018. No refund can be made for cancellation after 23 April 2018. However, a substitute delegate may attend in place. Refunds will be issued only after the conference.

THE EXHIBITION
An exhibition will also be held concurrently in the same venue. A total of 40 booths will be made available for companies and organizations to display and promote their products, equipment, machineries and services related to the industry.

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SPONSORSHIP PACKAGES
INFOFISH is inviting companies and organizations to be a partner of this prestigious event by signing up for the sponsorship packages - Platinum, Gold, Silver or Bronze - which offer attractive and real benefits to sponsors.

PROMOTIONAL PACKAGES
Promotional packages are available for companies who are interested to effectively advertise and promote their products or services during TUNA 2018 with minimal charges. These packages will provide a better impact and a bonus in introducing their products and services.

SIMULTANEOUS INTERPRETATION
We are pleased to inform that for the first time, INFOFISH will be providing simultaneous interpretation of presentations from English to Spanish throughout the two and a half days event for the benefit of Spanish speaking delegates.

PROGRAMME HIGHLIGHTS
Session 1: Global Trends & Sustainability
• Overview on supply, stocks and effectiveness of the management measures: Working towards a Global Consensus
• Industry efforts towards sustainable tuna industry
• Fishery Improvement Programmes (FIPs) and Certification

Session 2: Industry Status & Updates
• Parties to the Nauru Agreement (PNA) Measures on Global Tuna Market: Challenges and Opportunities
• Sustainability and Fishing Operations
• Fish Aggregating Devices (FADs): Improving monitoring, management and effectiveness

Session 3: Global and regional tuna trade and markets
• USA
• Europe
• Japan
• Asia
• Latin America
• Middle East
• Africa

Market Access and Market Access Issues
• Catch Documentation System (CDS)
• Fair Labour Standards On-board Fishing Vessels
• Consumers’ Confidence in Certified Seafood
• How Important is Sustainability for the Retailer

Session 4: Sustainability, environment and eco-labelling in the tuna industry
• Impact of eco-labelling on fish stocks, consumers and fishers

Session 5: Recent Innovations and Trends in Technology for the Tuna Industry
• Improving Monitoring at Sea
• Processing and Packaging
## Fish and Fisheries Products Statistics

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1. Production and trade data exclude whales, seals, other aquatic mammals and aquatic plants. Trade data include fish meal and fish oil.
2. EU 28. Including intra-trade. Cyprus is included in Asia as well as in the European Union.
3. For capture fisheries production, the aggregate also includes 3 762 tonnes in 2014 and 38 732 tonnes in 2015 of not identified countries; data not included in any other aggregates. Totals may not match due to rounding.