

# Monthly Highlights

No. 2 / 2018

## EUM OFA

European Market Observatory for  
Fisheries and Aquaculture Products

### In this issue

Between January–December 2017 and January–December 2016, Belgium, Latvia and Norway grew in first-sales volume. The increase in volume was the highest for Norway (+11%), mainly herring, as well as haddock and sprat.

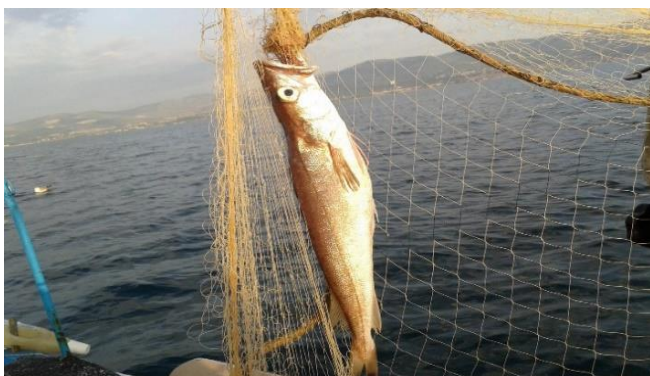
In the same period, first-sale value and volume declined in Denmark, Estonia, France, Italy, Poland and the United Kingdom. The decrease in first-sales volume was particularly high for Spain (–23%), which saw lower sales of hake, clam, and cephalopods i.e. squid and octopus.

On the EU import side, weekly prices of Nile perch fillets from Uganda followed a downward trend in 2017 as did prices of saithe from Iceland. Prices for imported tropical shrimp from Ecuador declined in the last weeks of 2017, whereas prices of yellowfin tuna imported from Seychelles were remarkably stable, fluctuating tightly around an average of 5,36 EUR/kg during 2015–2017.

In January–November 2017, the average retail prices of fresh herring for household consumption in Germany and the Netherlands were 10,22 EUR/kg and 13,74 EUR/kg, respectively. In Sweden, it was much lower, 6,60 EUR/kg.

The main suppliers of Atlantic salmon to the EU in 2016 were Norway, the Faroe Islands and Chile. Norway sold to the EU 84% of the EU salmon imports in 2016. EU exports of salmon is primarily originating from the UK.

Mauritania is an important partner of the EU in the field of fisheries through a Sustainable Fisheries Partnership Agreement giving the EU vessels access to the Mauritanian Exclusive Economic Zone.



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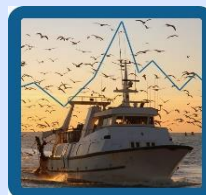
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# 1 First sales: Europe

In January–December 2017, 11 EU Member States (MS) and Norway reported first-sales data for 11 commodity groups<sup>1</sup>.

## 1.1 Compared to the same period last year

**Increases in value and volume:** Belgium and Latvia saw growth in first-sales value and volume. In Belgium, sales grew by 5% in value and 2% in volume, due mainly to plaice, turbot and cuttlefish. In Latvia, sales rose for cod, sprat and smelt. Norway experienced decrease in first-sales value, but volume increased by 11%.

**Decreases in value and volume:** First sales value dropped in Denmark, Estonia, France, Italy, Poland, Portugal, Spain Sweden, and the UK. The decrease in value was particularly high for Poland (–20%), which saw lower sales of herring, sprat and cod, Spain (–23%) due to hake, and the United Kingdom (–37%), in sales value of mackerel, scallops and Norway lobster.

Table 1. **JANUARY–DECEMBER FIRST-SALES OVERVIEW OF THE REPORTING COUNTRIES**  
(volume in tonnes and value in million EUR)

Country	January–December 2015		January–December 2016		January–December 2017		Change from January–December 2016	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
BE	18.132	67,20	16.179	62,84	16.425	66,18	2%	5%
DK	268.819	321,22	263.635	369,82	260.112	339,38	-1%	-8%
EE	53.223	12,41	48.723	11,53	47.479	11,02	-3%	-4%
ES	438.279	1123,20	584.179	1561,53	453.003	1197,49	-22%	-23%
FR	200.758	668,17	197.943	673,58	193.739	667,16	-2%	-1%
IT*	92.148	324,88	87.183	321,02	84.755	318,20	-3%	-1%
LV	56.553	13,69	52.555	11,20	57.815	11,53	10%	3%
NO	2.676.688	2.118,88	2.413.057	2.157,58	2.688.986	2.074,89	11%	-4%
PL	n/a	n/a	102.580	36,08	84.843	28,70	-17%	-20%
PT	114.729	184,88	102.232	194,04	92.093	184,70	-10%	-5%
SE	150.893	91,59	105.531	85,57	88.629	68,12	-16%	-20%
UK	409.181	721,42	451.313	825,87	284.869	518,15	-37%	-37%

Source: EUMOFA (updated 17.02.2018); volume data is reported in net weight.

\*Partial data. First-sales data for Italy covers 229 ports (approximately 50% of the total landings).

<sup>1</sup> Bivalves and other molluscs and aquatic invertebrates, cephalopods, crustaceans, flatfish, freshwater fish, groundfish, miscellaneous aquatic products, other marine fish, salmonids, small pelagics, tuna and tuna-like species.

## 1.2 In December 2017

**Increases in value and volume:** First sales grew in Belgium, Denmark and Norway from a year earlier. The increase in value was particularly high for Belgium (+35%, mainly in the flatfish fishery, also cuttlefish and squid), while Norway experienced a very large volume increase of 93% owing to a high catch of herring.

**Decreases in value and volume:** First sales dropped in Denmark, Estonia, Italy, Portugal, Sweden, and the UK. The decrease was particularly high in Poland and United Kingdom, due largely to low supplies and weak prices of top species such as cod, mackerel and herring.

Table 2. **DECEMBER FIRST-SALES OVERVIEW OF THE REPORTING COUNTRIES**  
(volume in tonnes and value in million EUR)

Country	December 2015		December 2016		December 2017		Change from December 2016	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
BE	1.798	6,17	1.605	5,28	1.878	7,11	17%	35%
DK	9.251	16,05	15.975	22,25	16.686	23,16	4%	4%
EE	3.790	1,07	4.884	1,15	5.181	1,07	6%	-7%
ES	22.453	103,25	51.011	210,22	21.982	101,98	-57%	-51%
FR	16.937	66,61	18.647	70,38	14.683	61,02	-21%	-13%
IT*	9.442	32,66	7.964	30,41	5.047	23,50	-37%	-23%
LV	5.417	1,19	5.018	1,10	4.194	0,77	-16%	-30%
NO	64.736	90,03	67.326	80,31	129.978	90,49	93%	13%
PL	n/a	n/a	4.448	2,17	1.675	0,52	-62%	-76%
PT	4.551	10,81	4.284	12,75	3.481	9,63	-19%	-24%
SE	4.965	4,19	6.214	5,73	4.662	4,62	-25%	-19%
UK	15.810	41,73	25.508	58,15	8.262	20,50	-68%	-65%

Source: EUMOFA (updated 17.02.2018); volume data is reported in net weight.

\*Partial data. First-sales data for Italy covers 229 ports (approximately 50% of the total landings).

The most recent first-sales data for **January 2018** available on EUMOFA can be accessed [here](#).

### 1.3 First sales in selected countries


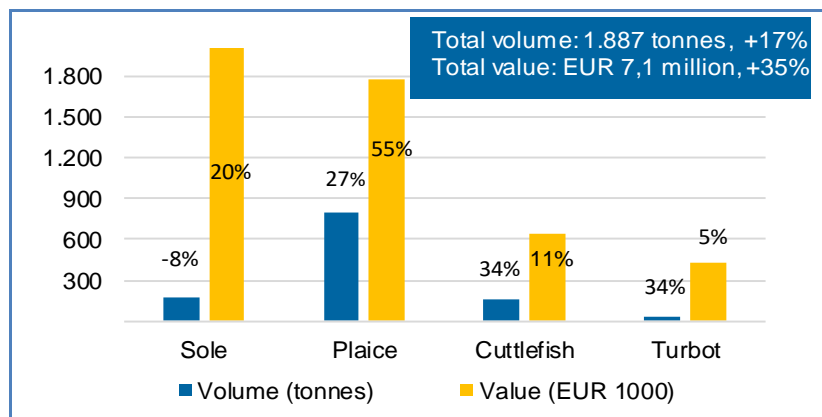
 In **Belgium** in **January–December 2017**, the main species that contributed to the slight overall increase in first sales were flatfish plaice, monk, turbot (all up in value and volume). This stable incline happened throughout the whole year, with an especially significant increase in both value and volume in **December 2017** compared to December 2016. Leading contributors to the December increase in first sales remained primarily flatfish as well as cuttlefish. The greatest increase in average prices occurred for plaice, going up by 55% to a price of 2,20 EU/kg.

Figure 1. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN BELGIUM, DECEMBER 2017**



Percentages show change from previous year.  
Source: EUMOFA (updated 17.02.2018).


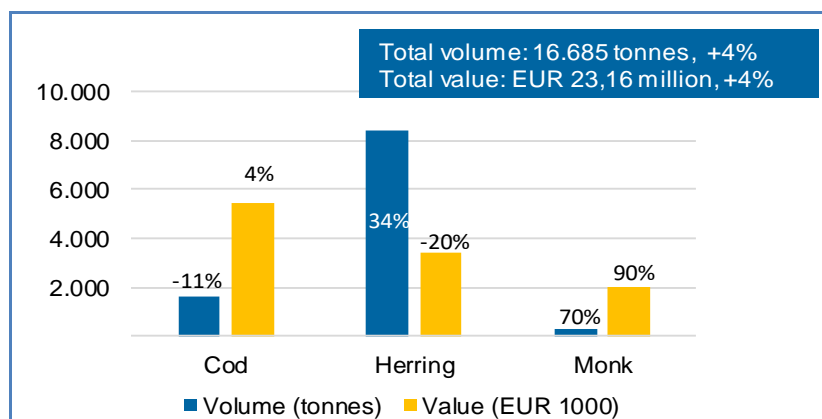
 In **Denmark** in **January–December 2017**, lower prices of cod, plaice and Norway lobster led to the decrease in overall value. Increased supply of herring did not offset a decrease of overall first-sales volume. **December 2017** was a month of growth, where first-sales value went up for Norway lobster and shrimp *Crangon* spp., while higher volumes of herring, Greenland halibut and monk drove an overall slight increase in volume. In general, average prices were stable, with few exceptions: the price of herring fell 40% to 0,40 EUR/kg, while the price of plaice jumped 55% to 2,44 EUR/kg.

Figure 2. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN DENMARK, DECEMBER 2017**



Percentages show change from previous year.  
Source: EUMOFA (updated 17.02.2018).


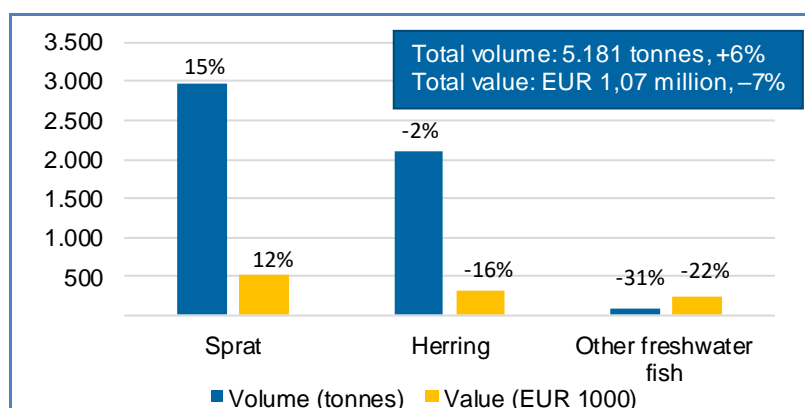
 In **Estonia** in **January–December 2017**, herring and sprat, as the most important target-species in fisheries of Estonia, were the main species behind decreases in overall first-sales value and volume. The decline in value continued in **December 2017**, when herring prices fell. Total volume increased thanks to sprat whose price, consequently decreased because of higher supply. In total, average prices decreased by 12%.

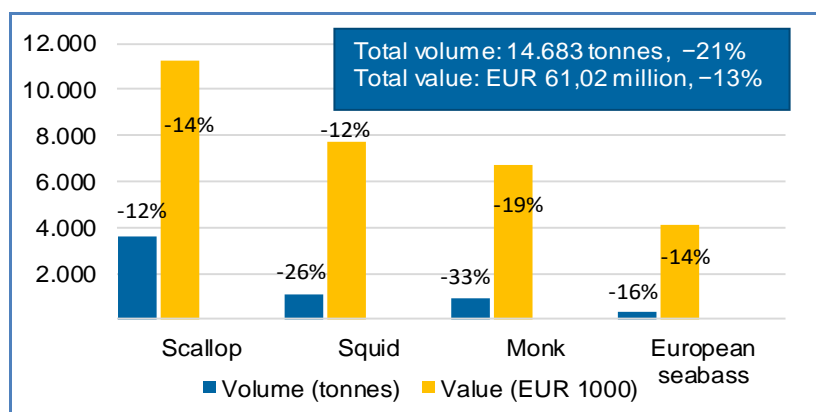
Figure 3. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN ESTONIA, DECEMBER 2017**



Percentages show change from previous year.  
Source: EUMOFA (updated 17.02.2018).

 In **France** in **January–December 2017**, first sales remained relatively stable – a slight decrease of 1% in value and 2% in volume from January–December 2016. In **December 2017**, the top four species, scallop, squid monk and European seabass, all recorded significant decreases in value, but only squid among these four fell in price, dropping 3% to 3,14 EUR/kg. The decrease in overall first-sales value and increase in average prices were responses to a strong decrease in supply of top species.

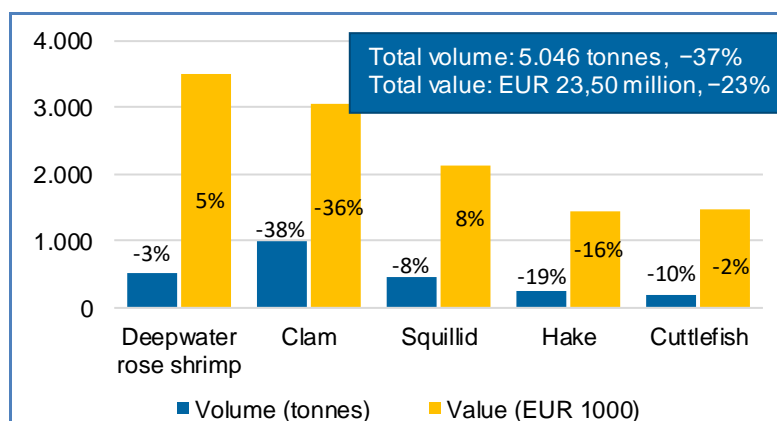
Figure 4. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN FRANCE, DECEMBER 2017**



Percentages show change from previous year.  
Source: EUMOFA (updated 17.02.2018).

 In **Italy** in **January–December 2017**, first sales were stable for deepwater rose shrimp, clam and tropical shrimp and fell for anchovy and hake; these were the top species responsible for an overall slight decrease (-3%) in first-sales value. Lower supply of sardine also contributed. In **December 2017**, the main species responsible for a decrease in first-sales value and volume from a year earlier were clam, hake, and cuttlefish among others. The first-sales value of cuttlefish decreased 2% despite the rise in the average price, up by 9% to 8,12 EUR/kg from last December.

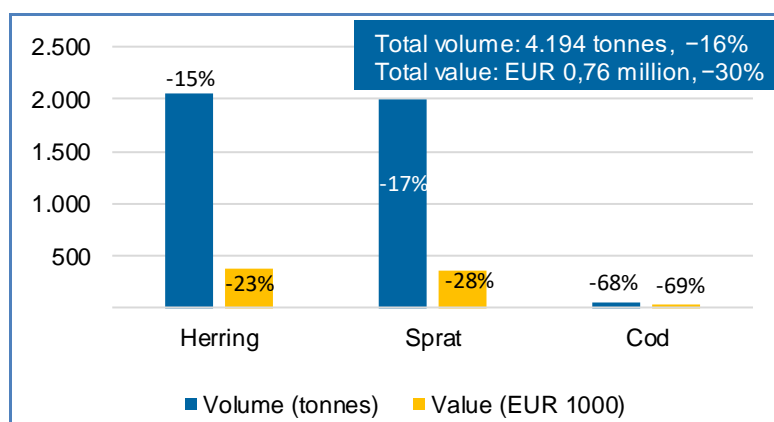
Figure 5. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN ITALY, DECEMBER 2017**



Percentages show change from previous year.  
Source: EUMOFA (updated 17.02.2018).

In **Latvia**, the primary drivers of the increase in first sales during **January–December 2017** over the previous year included high landings of cod, sprat, and smelt. Lower first-sales value and volume of herring did not offset overall increases. **December 2017** saw decreases in value and volume mainly due to herring, sprat and cod, but that did not affect overall sales. Average prices decreased the most for smelt – down by 43% at 0,12 EUR/kg. There were no single species which recorded average price increases in December 2017.

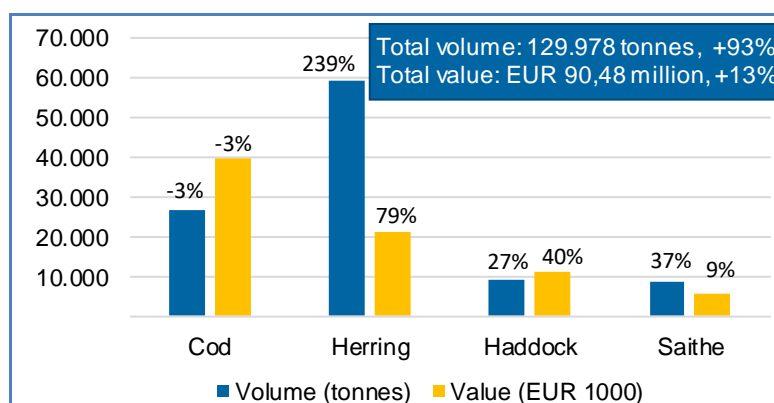
Figure 6. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN LATVIA, DECEMBER 2017**



Percentages show change from previous year.  
Source: EUMOFA (updated 17.02.2018).

In **Norway** in **January–December 2017**, changes in first-sales value and volume were caused mainly by lower first-sales prices, and larger catches, of mackerel, herring, and saithe. In **December 2017**, first-sales value and volume increased mainly because of higher first-sales value and volume of herring, haddock, and saithe. Average prices decreased the greatest (-47%) for herring at 0,35 EUR/kg, the result of the increase (+239%) in catches compared to December 2016.

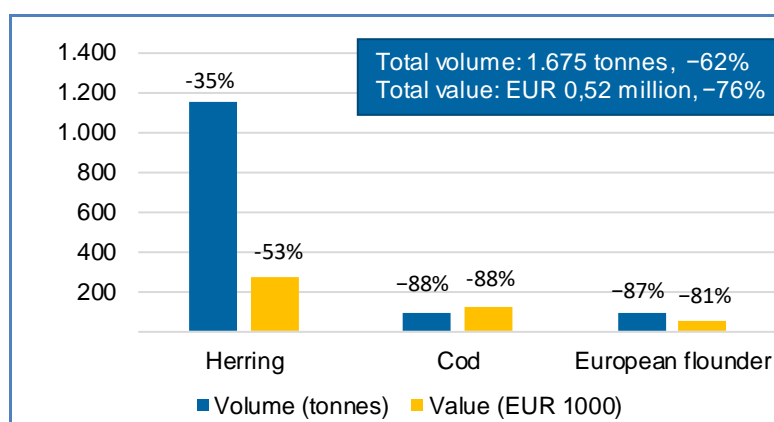
Figure 7. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN NORWAY, DECEMBER 2017**



Percentages show change from previous year.  
Source: EUMOFA (updated 17.02.2018).

In **Poland** in **January–December 2017**, lower first-sales value and volume of herring, sprat, cod, and European flounder were the main contributors of the decrease in overall value and volume. In **December 2017**, the largest decline was in cod value and volume (both -88%). Overall, average prices fell from December 2016, with the exceptions of European flounder (price up +45%) and trout (+30%).

Figure 8. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN POLAND, DECEMBER 2017**



Percentages show change from previous year.  
Source: EUMOFA (updated 17.02.2018).




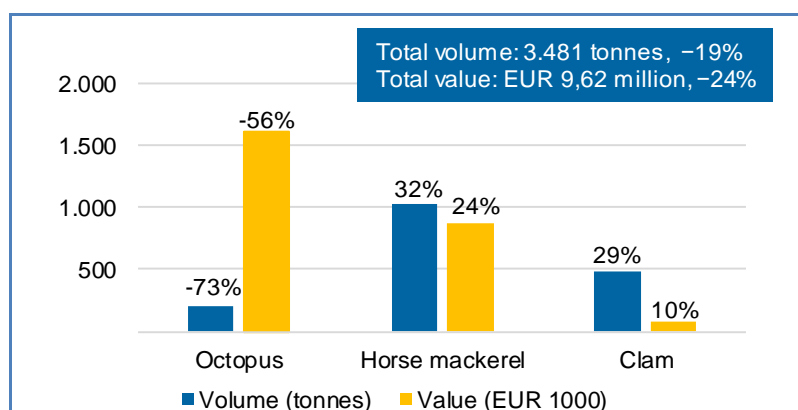
 In **Portugal**, overall first-sales value and volume fell in **January–December 2017**, resulting with decrease in value for some species, including octopus, sardine, horse mackerel and mackerel. The main contributors to volume decrease were mackerel, octopus and hake. In **December 2017**, first-sales value fell as the result of smaller catches of octopus, as well as of mackerel and blue whiting. Among the leading species, octopus prices went up (to 8,08 EUR/kg, an increase of 64%), and fell for clam (to 1,77 EUR/kg, down by 14%) compared to December 2016.

Figure 9. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN PORTUGAL, DECEMBER 2017**



Percentages show change from previous year.  
Source: EUMOFA (updated 17.02.2018).


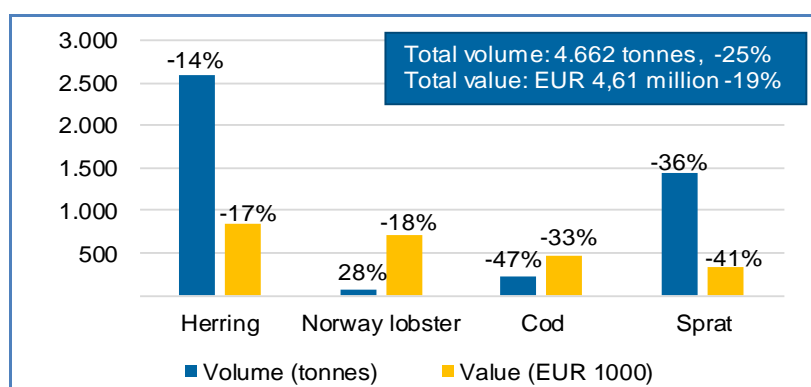
 In **Sweden**, first sales decline in value in **January–December 2017** was caused mainly by cod, herring, sprat, saithe, plaice and thanks to Norway lobster. The negative trend continued in **December 2017**, due to lower first-sales value of the same species. The added supply of Norway lobster drove the average price down by more than third (-36%) at 10,68 EUR/kg, whereas the average price of cod registered another of the largest increases among the major species, jumping 27% from 1,66 EUR/kg to 2,11 EUR/kg in December 2017 over a year earlier.

Figure 10. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN SWEDEN, DECEMBER 2017**



Percentages show change from previous year.  
Source: EUMOFA (updated 17.02.2018).


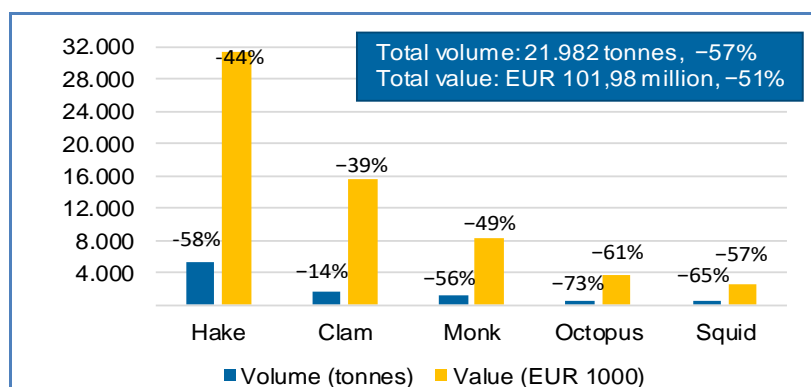
 In **Spain**, the first sales decline in value and volume in **January–December 2017** was due mainly to anchovy, clam, hake, and monk among others. In **December 2017**, lower first-sales value of these species contributed to the overall decrease in value and volume of more than 50% compared to December 2016. There were some exceptions: the reduced supply drove the average price of hake up by 33% and the average price of octopus registered a large increase, up by 46% from a year earlier to 7,25 EUR/kg.

Figure 11. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN SPAIN, DECEMBER 2017**

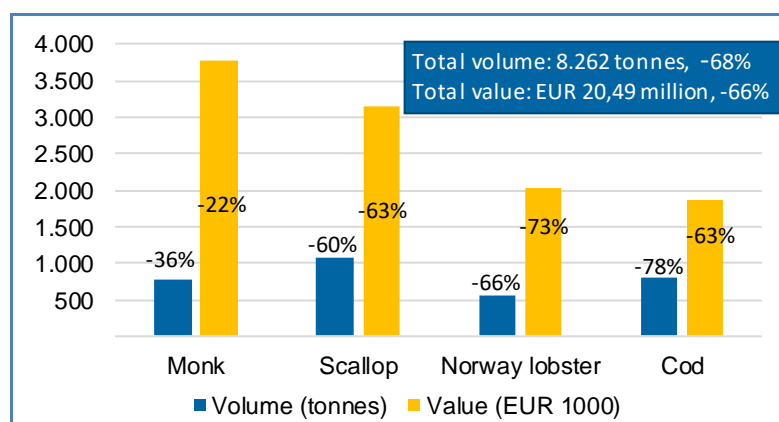


Percentages show change from previous year.  
Source: EUMOFA (updated 17.02.2018).



In the UK, overall first-sales value and volume fell in **January–December 2017**, as value decreased for several top species, including mackerel, Norway lobster, scallop, haddock, monk and cod. The main contributors to lower overall volume were mackerel, haddock and scallop. In **December 2017**, first-sales value dropped mainly as the result of smaller catches of Norway lobster, as well as of scallop and crab. Among the leading species, prices went up for cod (by 66%, to 2,32 EUR/kg), and down for Norway lobster (by 21%, to 3,68 EUR/kg) compared to December 2016.

Figure 12. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN THE UK, DECEMBER 2017**

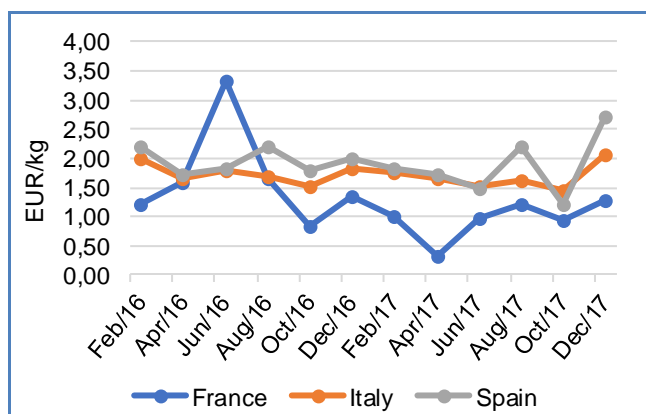


Percentages show change from previous year.  
Source: EUMOFA (updated 17.02.2018).



## 1.4 Comparison of first-sales prices of selected species in selected countries

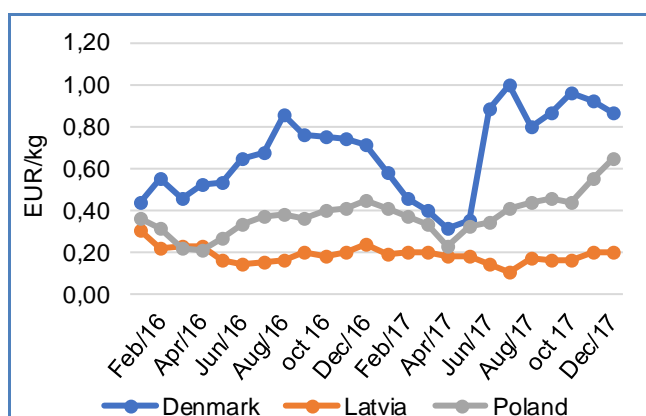
Figure 13. **FIRST-SALES PRICES OF ANCHOVY IN SELECTED COUNTRIES**



Source: EUMOFA (updated 17.02.2018).

**France, Italy and Spain** had the highest levels of **anchovy** first sales in January–December 2017. First-sales prices in these countries all took an upward turn in December 2017, reaching levels that, for Italy and Spain at least, had not been seen since 2016. The December 2017 prices in the three observed countries were 1,27 EUR/kg, 2,05 EUR/kg and 2,73 EUR/kg, respectively in France, Italy and Spain. The unusual spikes in prices for anchovy in France in March 2017 and earlier in 2016 all took place during periods of almost no supply, suggesting that reported monthly data on first sales may have reflected a very few, unrepresentative transactions in those months.

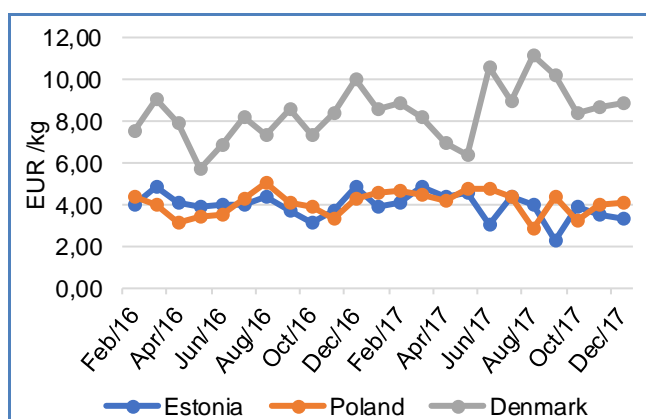
Figure 14. **FIRST-SALES PRICES OF EUROPEAN FLOUNDER IN SELECTED COUNTRIES**



Source: EUMOFA (updated 17.02.2018).

For **European flounder**, well over half of all reporting countries' first sales in January–December 2017 took place in **Denmark, Latvia and Poland**. Despite their relative proximity, these countries show almost no common trend in first-sales prices for European flounder. Poland, the largest in this market, and to a lesser extent Denmark, experience large drops in first-sales volume as summer approaches, resulting in the observed increases in prices. By December 2017, prices in Denmark, Latvia and Poland were 0,87 EUR/kg, 0,20 EUR/kg, and 0,64 EUR/kg, respectively.

Figure 15. **FIRST-SALES PRICES OF PIKE-PERCH IN SELECTED COUNTRIES**



Source: EUMOFA (updated 17.02.2018).

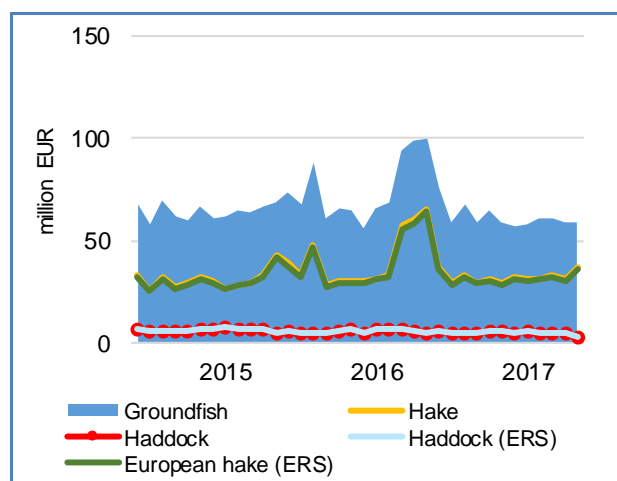
**Pike-perch** first sales are dominated by **Estonia**, with 70% of total first-sales volume by all reporting countries in January–December 2017. However, by around May of each year Estonian supply is down to the same monthly volumes for the rest of the year as volumes sold in the next largest countries, **Poland** and **Denmark**. First-sale prices of pike-perch in Estonia and Poland are both quite stable over the course of the year and closely related, and perhaps reflect similar traditional demand and culinary practices. Higher prices in Denmark may reflect transport costs, as there is comparatively little domestically produced pike-perch supply. By December 2017, prices were 3,36 EUR/kg, 4,13 EUR/kg, and 8,90 EUR/kg, respectively, in Estonia, Poland and Denmark.

## 1.5 Commodity group of the month: groundfish

The **groundfish** commodity group (CG) ranked the second highest among the 11 commodity groups in both volume and value during **January–December 2017**<sup>2</sup>. First-sales value reached EUR 738 million and 298 thousand tonnes, during the 12-month period, a decline of 3% in volume and no change in value compared to first sales in January–December 2016. In **December 2017**, first sales totaled EUR 58 million and 16.634 tonnes, down by 41% and 53% in value and volume from December 2016.

The groundfish commodity group includes 13 main commercial species (MCS): blue whiting, cod, grenadier, haddock, hake, ling, other groundfish, pollack, pouting, redfish, saithe, toothfish and whiting. At the species (ERS)<sup>3</sup> level, European hake and haddock together made up 60% and 44% of total first-sales value and volume, respectively, during **January–December 2017**<sup>4</sup>.

Figure 16. **FIRST-SALES VALUE COMPARISON AT CG, MCS, AND ERS LEVEL FOR ALL REPORTING COUNTRIES**



Source: EUMOFA (updated 17.02.2018).

## 1.6 Focus on European hake



European hake (*Merluccius merluccius*) is a demersal species which belongs to the family of cod-like fish, Merlucciidae. It is one of the most important demersal fish stocks in European seas and is commonly caught in mixed fisheries throughout the Northeast Atlantic, along with cod, haddock and whiting. Hake can live for

as much as 20 years, and reach a maximum size of 140 cm and 15 kg, but their average size is closer to 45 cm. They reach sexual maturity at around three to four years of age. They are usually found in waters between 75 and 400 meters in depth and tend to live close to the seabed (the “ground”) in daytime, leaving it to swim up the water column only at night.

There are two stocks of hake in EU waters which have been separately identified by scientists. The northern stock is found in the North Sea, Skagerrak, and off the Atlantic coasts of the UK, Ireland and France. The southern stock is located off the Atlantic coasts of Spain and Portugal. Hake is caught with a wide range of gears, both as targeted catch and as by-catch. In the case of the southern stock, it is commonly targeted by vessels also fishing for Norway lobster<sup>5</sup>. Hake is managed under two long-term separate plans, one for each stock. The Northern hake stock is managed with Total Allowable Catches (TAC). Each year, the European Council decide by qualified majority on a proposal from the European Commission on a TAC for the following year for the Northern hake stock concerned<sup>6</sup>. In 2018, the overall TAC for Northern hake has been set at 111.785 tonnes<sup>7</sup> what was the decrease from 2017, when TAC was 119.765 tonnes<sup>8</sup>.

<sup>2</sup> More data on commodity groups can be found in table 1.2 and 1.3 in the Annex.

<sup>3</sup> Species reported at Electronic Reporting System (ERS) level, based on FAO 3-alpha codes.

<sup>4</sup> Ranking of the main commercial species in the groundfish commodity group can be found in table 1.4 in the Annex.

<sup>5</sup> [https://ec.europa.eu/fisheries/marine\\_species/wild\\_species/hake\\_en](https://ec.europa.eu/fisheries/marine_species/wild_species/hake_en)

<sup>6</sup> COUNCIL REGULATION (EC) No 811/2004 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32004R0811&from=EN>

<sup>7</sup> COUNCIL REGULATION (EU) 2018/120 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0120&from=en>

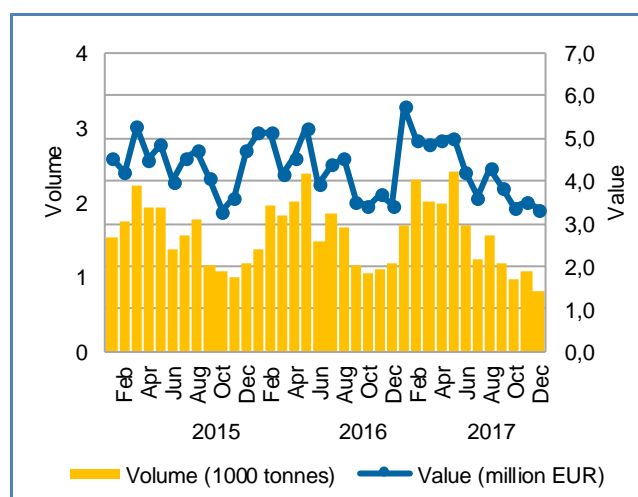
<sup>8</sup> COUNCIL REGULATION 2017/127 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:02017R0127-20170101&from=EN>

Southern hake stock, which inhabits Cantabrian Sea and Western Iberian peninsula (ICES divisions VIIIc and IXa), is also subject to TACs and a system including closed area, fishing effort controls and selectivity where those stocks are restricted to levels at which the TACs may not be exceeded<sup>9</sup>. Hake is also managed by Minimum Reference Size which in the Mediterranean fishery is 20cm<sup>10</sup>.

## Selected countries

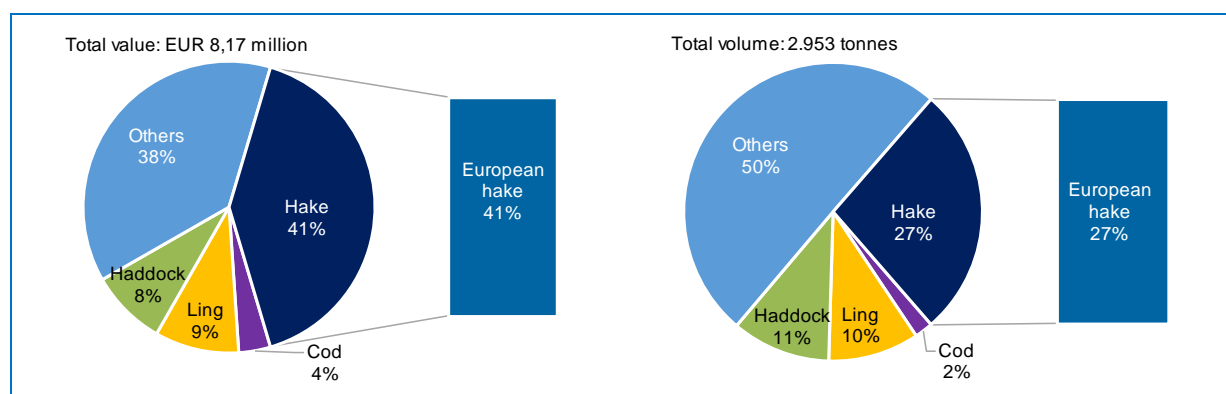
First-sales value and volume of European hake during **January–December 2017** in **France** were nearly unchanged from 2016. **December 2017** first-sales value and volume decreased compared to the same month a year earlier. On average, first-sales prices in 2017 reached 2,75 EUR/kg representing a slight increase of 2% compared to 2016, although down from levels in 2015. All European hake first sales were registered at ports in the Bay of Biscay and the Iberian Coast as well as on the Mediterranean coast. The top three ports are St Jean-de-Luz, Lorient and Les Sables-d'Olonne.

Figure 17. **EUROPEAN HAKE: FIRST SALES IN FRANCE**



Source: EUMOFA (updated 17.02.2018).

Figure 18. **FIRST-SALES COMPARISON OF GROUND FISH IN FRANCE IN VALUE AND VOLUME, DECEMBER 2017**



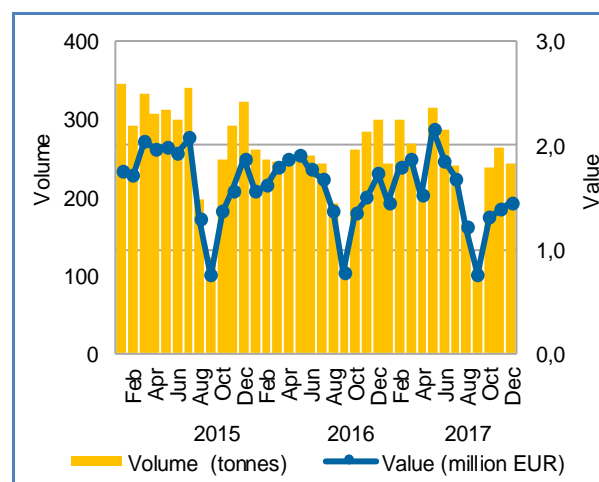
Source: EUMOFA (updated 17.02.2018).

<sup>9</sup>COUNCIL REGULATION (EC) No 2166/2005 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32005R2166&from=EN>

<sup>10</sup>COUNCIL REGULATION (EC) No 850/98 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31996R2406&from=en>

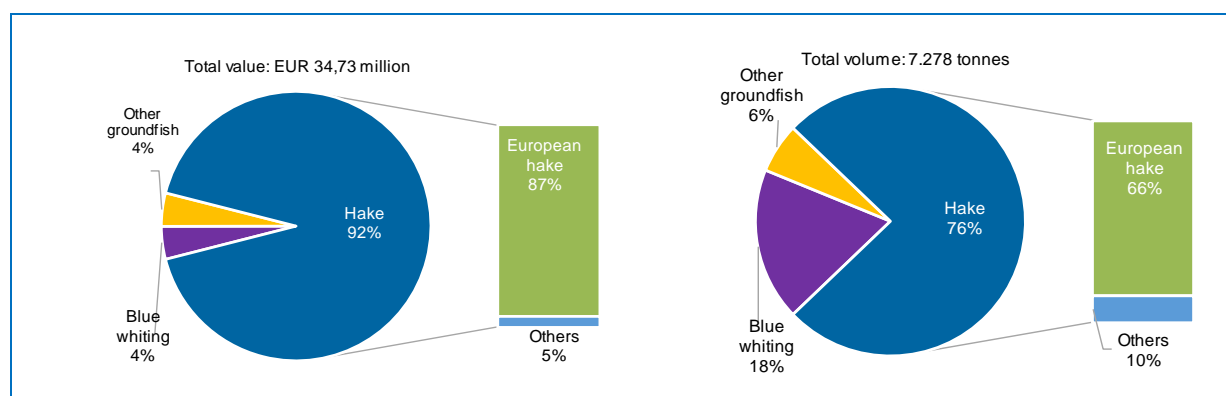
First sales of European hake in **Italy** fell in value and volume in **January–December 2017** compared to the same period in 2016 as well as in 2015. In December 2017 value and volume decreased by over 16% from December 2016. Overall, average prices in 2017 were little changed from 2016 (–1%) and up from 2015 (+7%). The main Italian ports in first-sales value of hake are Pescara, Civitanova Marche and Manfredonia.

Figure 19. **EUROPEAN HAKE: FIRST SALES IN ITALY**



Source: EUMOFA (updated 17.02.2018).

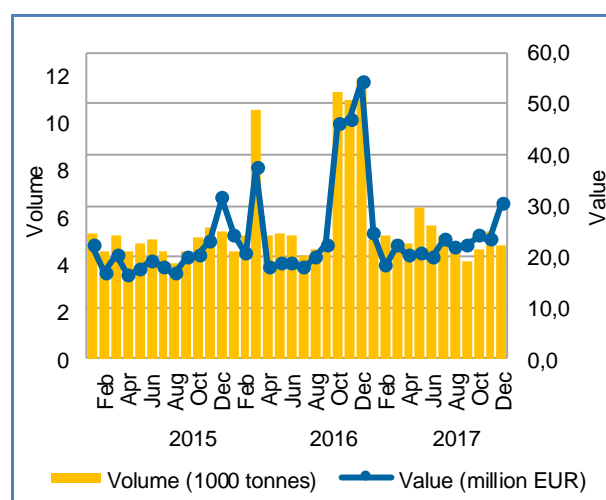
Figure 20. **FIRST-SALES COMPARISON OF GROUND FISH IN ITALY IN VALUE AND VOLUME, DECEMBER 2017**



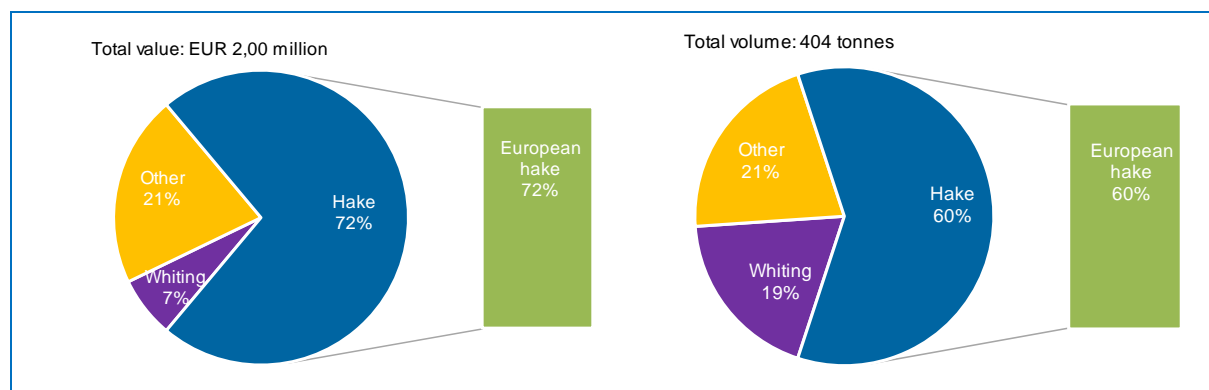
Source: EUMOFA (updated 17.02.2018).

First sales of European hake in **Spain**, compared with the other surveyed countries, experienced the strongest decrease in both value and volume (both over 20%) during **January–December 2017** from the same period in 2016. However, **December 2017** first-sales were sharply lower in both value and volume (–44%, –60%, respectively) compared to December 2016, mostly due to a poor hake-fishing-season in late 2017 compared to the winter of 2016-2017. The main ports in first-sales value of European hake are Burela, Cirello, Pasejes and Aviles.

Figure 21. **EUROPEAN HAKE: FIRST SALES IN SPAIN**

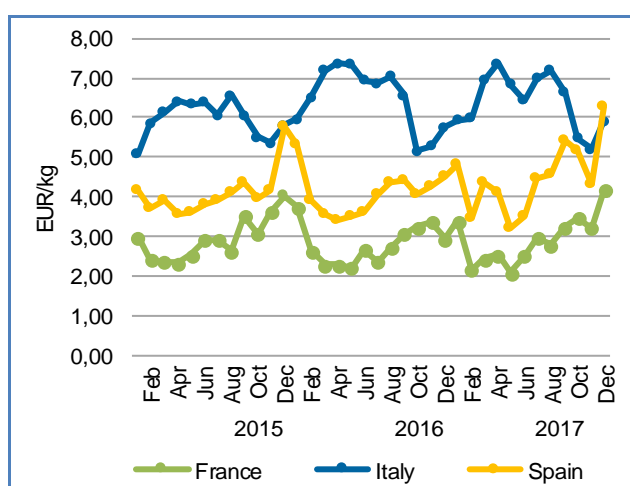


Source: EUMOFA (updated 17.02.2018).

Figure 22. **FIRST-SALES COMPARISON OF GROUNDFISH IN SPAIN IN VALUE AND VOLUME, DECEMBER 2017**

Source: EUMOFA (updated 17.02.2018).

## Price trends

Figure 23. **EUROPEAN HAKE: FIRST-SALES PRICE IN SELECTED COUNTRIES**

Source: EUMOFA (updated 13.02.2018).

We have covered **hake** in previous Monthly Highlights:

**First sales:** Denmark (October 2013), Greece (7/2016, 3/2014), France (1/2016), Portugal (5/2015, May 2013).

**Topic of the month:** Hake in Spain (8/2015), Hake in France (2/2015).

**Trade:** Extra-EU Import (11/2016).

**Consumption:** France (4/2016, 9/2016, 7/2015, 6/2014), Greece (4/2016, 9/2016, 7/2015), Portugal (4/2016, 9/2016, 6/2014), Ireland (9/2016), Spain (4/2016, 9/2016, 7/2015, 6/2014, October 2013), Sweden (6/2014, October 2013), UK (6/2014, October 2013).

Over the past three years, average first-sales prices of European hake generally increased in Italy and Spain, while in France they decreased. Prices in December 2017 were higher than in 2016 in both France and Spain. Also, it was observed that prices are usually higher in December, during the Christmas holidays, when fish consumption, traditionally, increase in those countries. In general, December prices in Italy were stable.

In **France** in January–December 2017, the average unit price of European hake at 2,75 EUR/kg was 2% higher than the previous year but 3% lower from 2015. In the three-year period, prices reached a peak in December 2017 at 4,18 EUR/kg, a result of the lowest catch (800 tonnes) in the observed period. The lowest price occurred in May 2017, with a catch that month of 2.400 tonnes that sold for as little as 2,09 EUR/kg.

For the past three years, average prices in **Italy** were highest among surveyed countries and they peaked in April–July. The highest observed price in the three-year period was in April 2016 when the price reached 7,38 EUR/kg. The lowest price was recorded in January 2015 at 5,08 EUR/kg.

In **Spain** in January–December 2017, the average price at 4,41 EUR/kg was 33% lower than in Italy, mainly due to high supply of European hake in Spanish ports. Prices peaked in December 2017, when they reached 6,27 EUR/kg, whereas the lowest price at 3,19 EUR/kg was observed in May 2017.

## 1.7 Focus on haddock



Haddock (*Melanogrammus aeglefinus*) is a valuable North Atlantic fish of the cod family, Gadidae. The haddock is a bottom living or demersal fish, and is caught close to the bottom, mainly in waters 40-300 m deep. The adult fish are found mainly on sandy or muddy ground, usually in shoals. The haddock feeds mainly on shellfish, sea urchins, worms, and small fish like sand eels and

capelin. The haddock spawns in the north-east Atlantic from late January to early June, but in the North Sea mainly between the middle of February and the end of March.

There is on record a haddock measuring 94 cm in length and weighing 11 kg, but haddocks more than 80 cm long are rare. The haddock is found on both sides of the north Atlantic but is more abundant on the European side. It occurs in the north-east Atlantic from the Bay of Biscay to Spitzbergen but is not found in any great quantity south of the English Channel. There are large stocks of haddock in the North Sea, at Faroe and Iceland, and off the Norwegian coast, but there is no great interchange between them. In the northwest Atlantic, the haddock occurs from west Greenland down to Cape Hatteras, but the main commercial fishery is between Cape Cod and the Grand Banks.

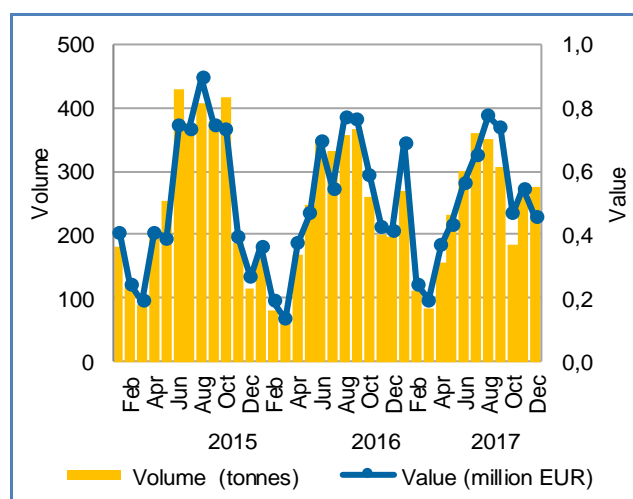
Haddock is caught using demersal single or pair trawls and by seining and is usually sold as whole gutted fish, normally with the head on, either iced or frozen at sea<sup>11</sup>.

The management of North Sea haddock has been subject to a long-term management plan between the EU Member States and Norway since 1999. The exploitation of haddock is regarded as being appropriate to Maximum Sustainable Yield objectives which include Total Allowable Catches (TAC) and quotas set by European Council based on European Commission proposals each year<sup>12</sup>. Minimum size for haddock is 30 cm, with exception of Skagerrak/Kattegat region, where minimum size is 27cm<sup>13</sup>.

### Selected countries

In **Denmark**, haddock first-sales value and volume increased during **January–December 2017** compared to the same period in 2016, whereas compared to 2015 trend was similar in value but down in volume. **December 2017** first-sales value and volume significantly increased compared to the same month a year earlier (+11% and +39%, respectively). All haddock first sales were registered at ports in the Baltic and North Sea. The main Danish port for haddock is Hanstholm, followed by Hirtshals, Skagen and Thybørn.

Figure 24. **HADDOCK: FIRST SALES IN DENMARK**



Source: EUMOFA (updated 17.02.2018).

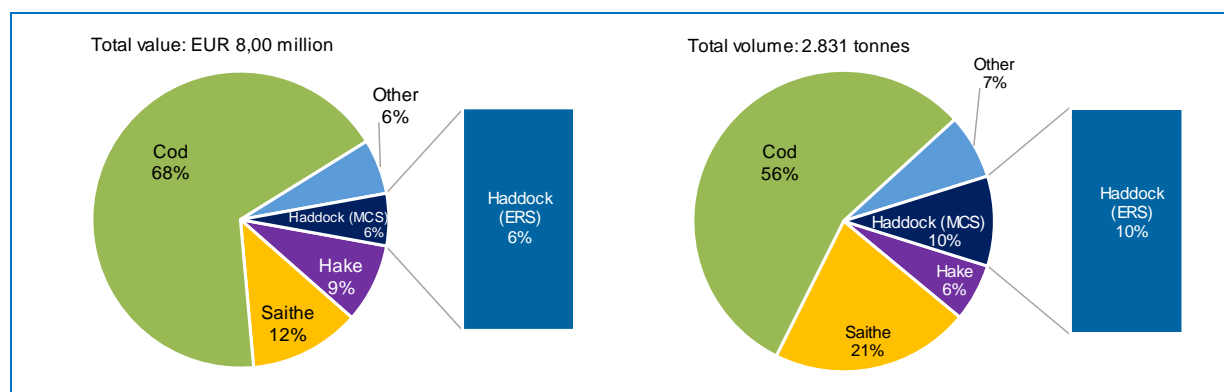
<sup>11</sup><http://www.fao.org/wairdocs/tan/x5939e/x5939e01.htm>

<sup>12</sup>COUNCIL REGULATION (EU) 2018/120, <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32018R0120&from=en>

<sup>13</sup>COUNCIL REGULATION (EC) No 850/98 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31998R0850&from=EN>



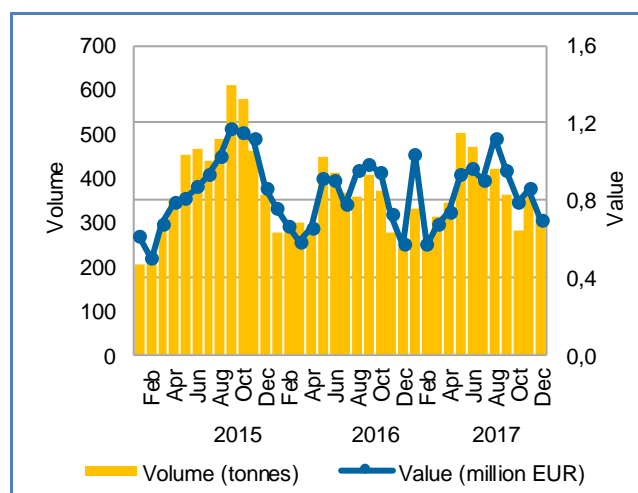
Figure 25. **FIRST-SALES COMPARISON OF GROUNDFISH IN DENMARK IN VALUE AND VOLUME, DECEMBER 2017**



Source: EUMOFA (updated 17.02.2018).

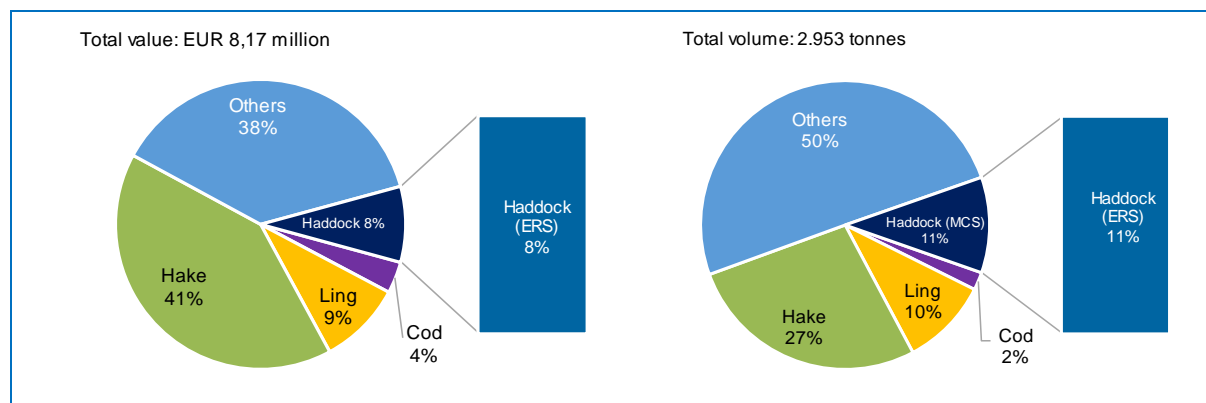
First sales of haddock in France increased in both value and volume during **January–December 2017** from the same period in 2016, whereas they decreased if compared to the same period in 2015. The highest values of haddock landed were registered at the ports in the Bay of Biscay and Iberian Coast: Le Guilvinec, Saint-Quay-Portrieux and Erquy.

Figure 26. **HADDOCK: FIRST SALES IN FRANCE**



Source: EUMOFA (updated 17.02.2018).

Figure 27. **FIRST-SALES COMPARISON OF GROUNDFISH IN FRANCE IN VALUE AND VOLUME, DECEMBER 2017**

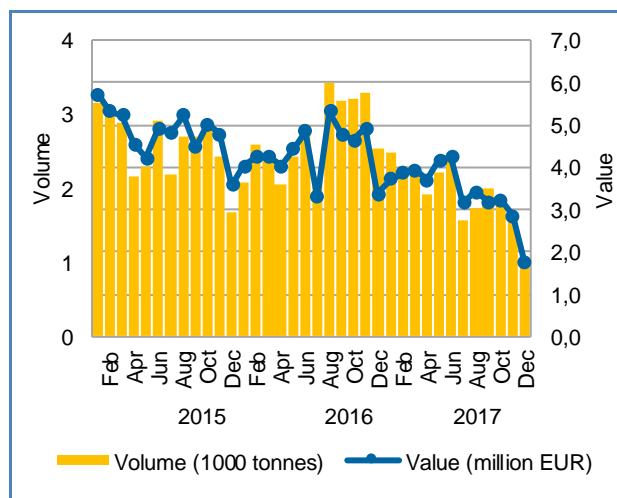


Source: EUMOFA (updated 17.02.2018).



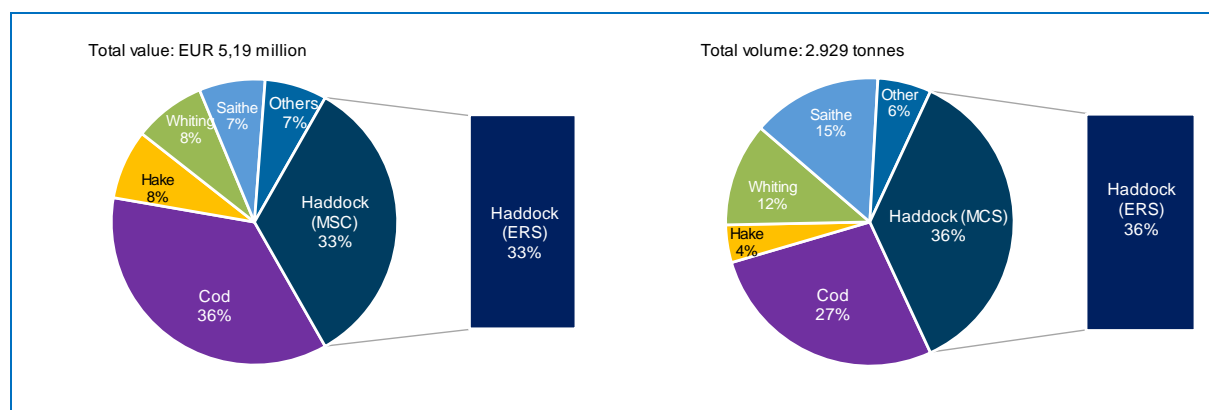
First sales of haddock in the **UK** decreased over 20% in both value and volume during **January–December 2017** from the same period in 2016 and 2015. Decrease in value which continued in December 2017, was linked with a lower supply in first-sales volume (~49%) compared to December 2016. Haddock was landed at ports in the North and Celtic Sea, with the top five ports of first-sales value in 2017: Cullivoe, Scalloway, Yell, Ullapool, and Lerwick,

Figure 28. **HADDOCK: FIRST SALES IN THE UK**



Source: EUMOFA (updated 17.02.2018).

Figure 29. **FIRST-SALES COMPARISON OF GROUND FISH IN THE UK IN VALUE AND VOLUME, DECEMBER 2017**



Source: EUMOFA (updated 17.02.2018).

## Price trends

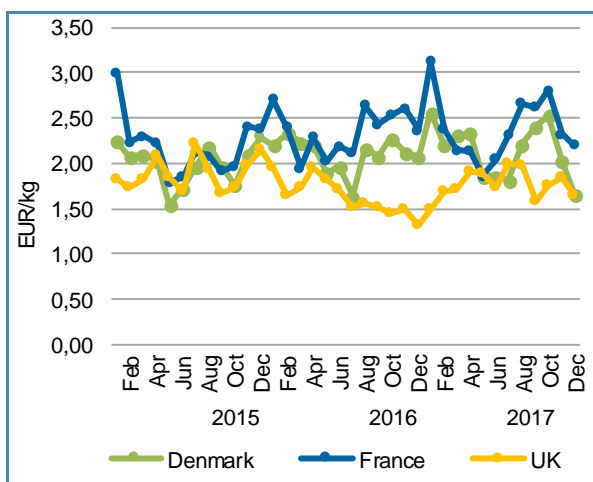
Over the past three years, average first-sales prices of haddock generally increased in **Denmark, France and slightly decreased in the UK**. Overall, in all surveyed countries prices in **December 2017** were higher than in 2016.

- In **Denmark** in **January–December 2017**, the average unit price of haddock was slightly higher than in either January–December 2016 (+3%) and January–December 2015 (+8%). In recent years, the highest price occurred in January 2017 at 2,56 EUR/kg, with landings of 270 tonnes. The lowest price occurred in May 2015, when 252 tonnes of haddock cost as little as 1,56 EUR/kg.

- For the past three years, prices in **France** peaked in winter. They peaked in December 2016–February 2017 at 2,37–3,13 EUR/kg, while the lowest first-sales price occurred in pre-summer period, i.e. in May 2015, when price was at 1,79 EUR/kg. In **January–December 2017**, prices averaged 2,35 EUR/kg, a slight increase over January–December 2016.

- Average prices in the **UK** in **January–December 2017** were 24% and 15% lower compared with France and Denmark, respectively. In the past three years, the peak price of 2,22 EUR/kg occurred in July 2015 when 2.180 tonnes were landed. Prices are usually lowest when the catches are high, i.e. after summer period. The lowest price in the 3-year period was 1,32 EUR/kg, occurring in December 2016.

Figure 30. **HADDOCK: FIRST-SALES PRICE IN SELECTED COUNTRIES**



Source: EUMOFA (updated 17.02.2018).

We have covered **haddock** in previous *Monthly Highlights*:

**First sales:** Denmark (October 2013), Norway (8/2015), Sweden (4/2014), the UK (April 2014, 5/2015).

**Topic of the month:** Haddock in the EU (7/2017, 5/2015, April 2013).

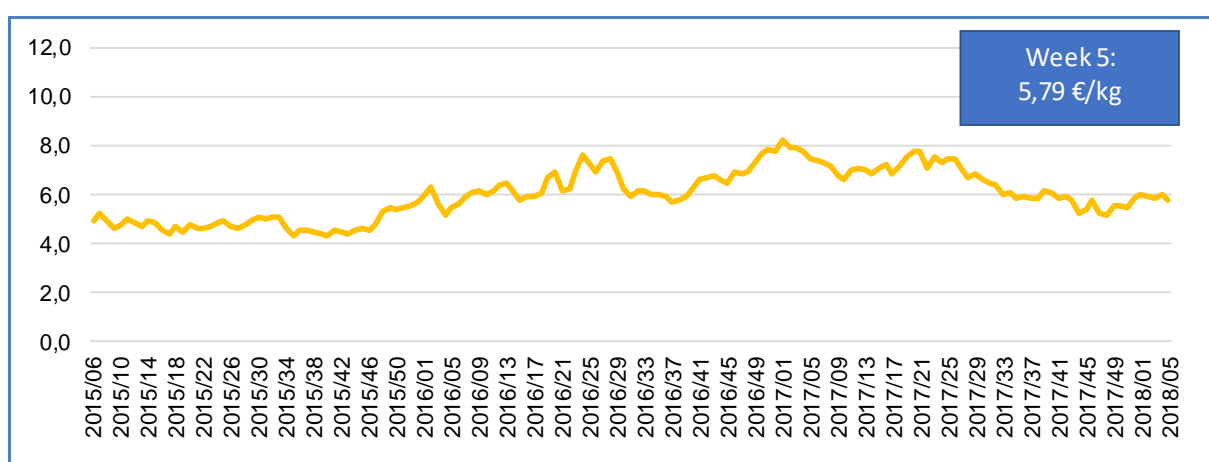
**Consumption:** Ireland (9/2017), Sweden (9/2017, October 2013), the UK (9/2017, October 2013).

## 2 Extra-EU imports

Each month, weekly extra-EU import prices (average unit values per week, in EUR per kg) are examined for nine species. Three species, which are the most relevant in terms of value and volume, are examined every month: Alaska pollock from China, Atlantic salmon from Norway, and tropical shrimp (genus *Penaeus*) from Ecuador. The other six change, and comprise this month of Nile perch, lobster, and yellowfin tuna, haddock, hake, and saithe. The latter three belong to the commodity group selected for the month.

The weekly price of fresh whole **Atlantic salmon** (*Salmo salar*, CN code 03032200) imported from **Norway** dropped in week 5 of 2018 to 5,79 EUR/kg, down 3% from 5,98 EUR/kg in week 4. Weekly prices in 2018 so far have averaged 5,89 EUR/kg, much higher than in the last several weeks of 2017, when prices were as low as 5,11 EUR/kg (week 48). The late 2017 bottoming-out followed an extended decline beginning in week 1 of 2017. EU prices of Norwegian salmon in the EU are affected by many factors, from the price of Scottish salmon to prices in markets around the world, and production is in the double-digit range in all major producing countries.

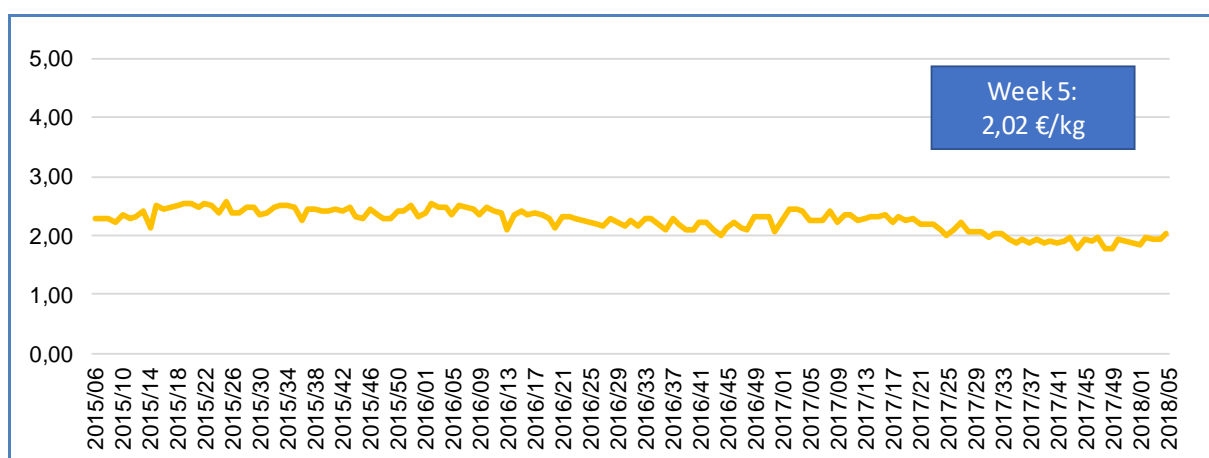
Figure 31. IMPORT PRICE OF ATLANTIC SALMON, FRESH WHOLE FROM NORWAY



Source: European Commission (updated 17.02.2018).

For frozen fillets of **Alaska pollock** (*Theragra chalcogramma*, CN code 03047500) imported from **China**, EU prices reversed a long, irregular decline that began in week 2 of 2016. By week 5 of 2018 the price of 2,02 EUR/kg was the highest since week 33 of 2017. This apparent market strengthening may be due to conditions in the world market for Alaska pollock, which is supplied by most North Pacific countries. EU prices in 2017 were stable on a week-to-week basis, if declining in the longer run. The low points in late 2017 were weeks 48-49, with a price of 1,76 EUR/kg, and prices generally rose up since then.

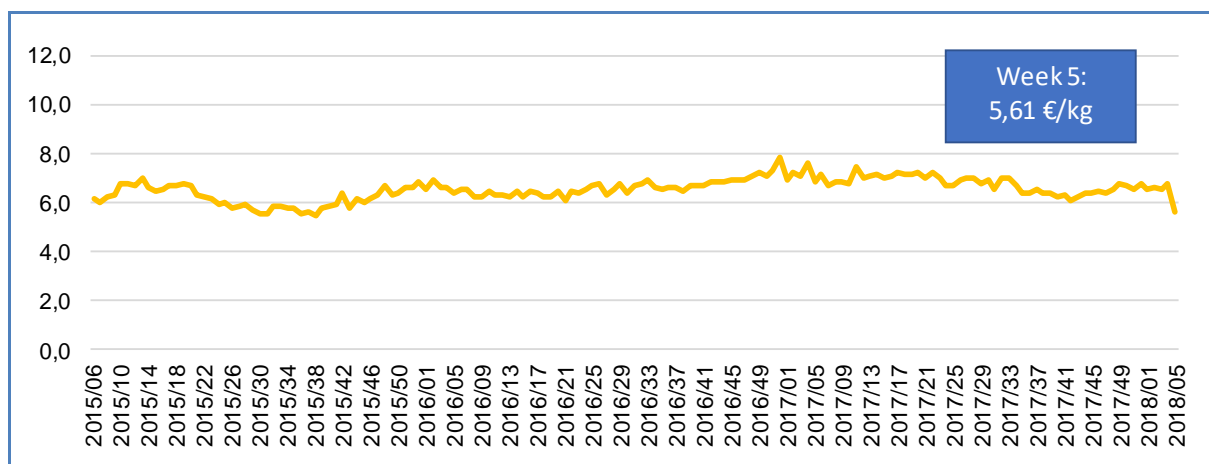
Figure 32. IMPORT PRICE OF ALASKA POLLOCK, FROZEN FILLETS FROM CHINA



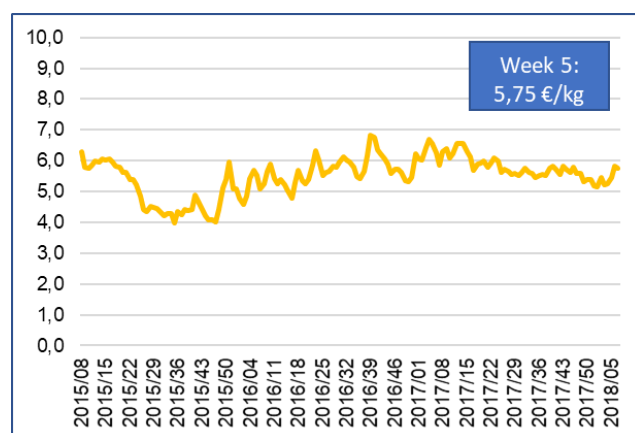
Source: European Commission (updated 17.02.2018).

The weekly price of frozen **tropical shrimp** (genus *Penaeus*, CN code 03061792) from **Ecuador** plummeted in week 5 of 2018 to 5,61 EUR/kg, a 17% drop from one week earlier, and the lowest price since week 38 of 2015. Since that 2015 trough, EU prices of Ecuadorian shrimp had followed an irregular, long-run rise through the end of 2016. Prices became erratic in early 2017, then began a long decline which appeared to be ending in the last weeks of 2017, when prices reach 6,77 EUR/kg in week 49, and through to week 4 of 2018, with a price of 6,75 EUR/kg. Industry sources have not yet found an explanation for the sudden drop in week 5.

Figure 33. IMPORT PRICE OF TROPICAL SHRIMP, FROZEN FROM ECUADOR



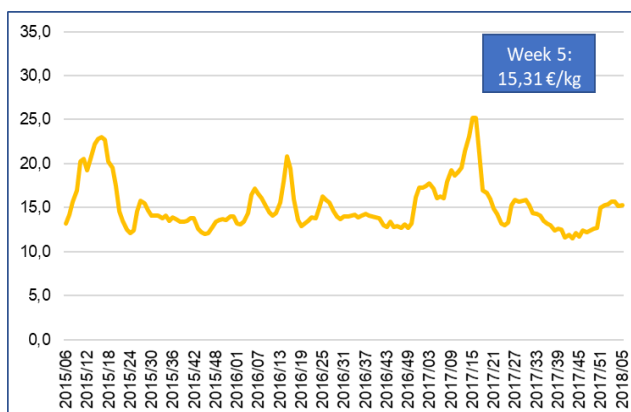
Source: European Commission (updated 17.02.2018).



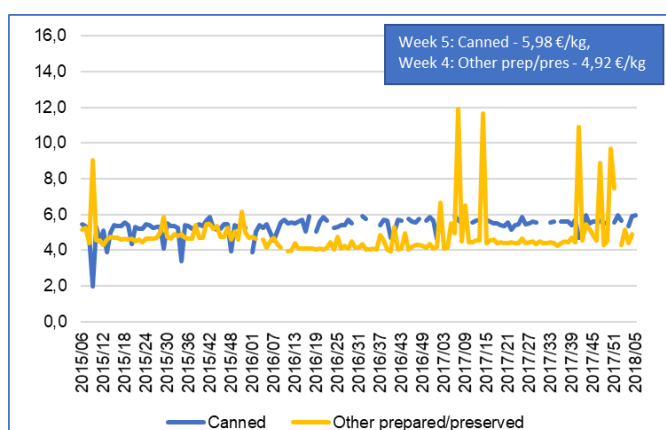
Source: European Commission (updated 17.02.2018).

Fresh fillets of **Nile perch** (*Lates niloticus*, CN code 03043300) come from **Uganda**, from Lake Victoria and weekly prices through most of 2017 followed a downward trend, from a peak of 6,70 EUR/kg in week 2 of 2017 to a bottom of 5,15 EUR/kg in week 51. Since then, prices started to move upward to a peak in week 4 2018 of 5,83 EUR/kg, before declining to 5,75 EUR/kg in week 5 of 2018.

Weekly prices of live **lobster** (*Homarus* spp., CN code 03063210) from the **USA** reflect large long-run harvest fluctuations as well as prices of lobsters from other sources, and they are highly erratic. In 2017 the average weekly price for the year was 15,62 EUR/kg but this price was never actually observed in any one week. Instead, prices swung through the year from a high of 25,22 EUR/kg in week 16 to a low of 11,54 EUR/kg in week 43. Since that low point prices have increased, and in week 5 of 2018 the price was 15,31 EUR/kg, which is almost the weekly average during the previous 156 weeks of 15,21 EUR/kg (which also was never observed in any week).

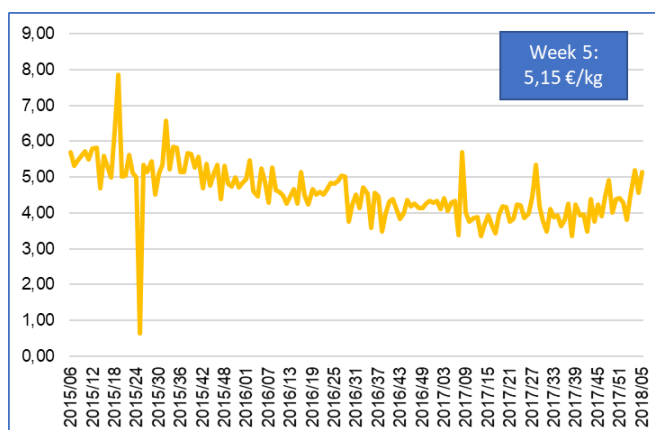


Source: European Commission (updated 17.02.2018).



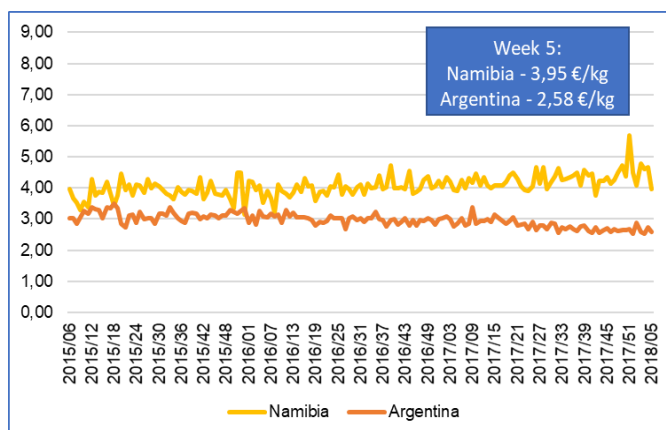
Source: European Commission (updated 17.02.2018).

**Yellowfin tuna** (*Thunnus albacares*) is imported from the **Seychelles** in many forms, from frozen whole to loins for canning, to canned tuna, to fillets and steaks. Weekly prices of canned yellowfin tuna (CN code 16041431) are remarkably stable, fluctuating tightly around an average of 5,36 EUR/kg during 2015–2017. In 2018 there has been an uptick, and the price in week 5 of 2018 was 5,98 EUR/kg, a price matched only in week 52 of 2017. Weekly prices of yellowfin tuna otherwise prepared or preserved (excluding canned or loins, CN code 16041438) are much more erratic, with occasional large spikes seeming to do with supply changes. This price is lower than the canned price (85% lower, omitting the spikes, during 2015–2017), because it goes through different market channels and requires less processing to become a consumer product. The price in week 4 of 2018 (week 5 n/a) was 4,92 EUR/kg, against an average weekly price in 2017 of 4,63 EUR/kg.



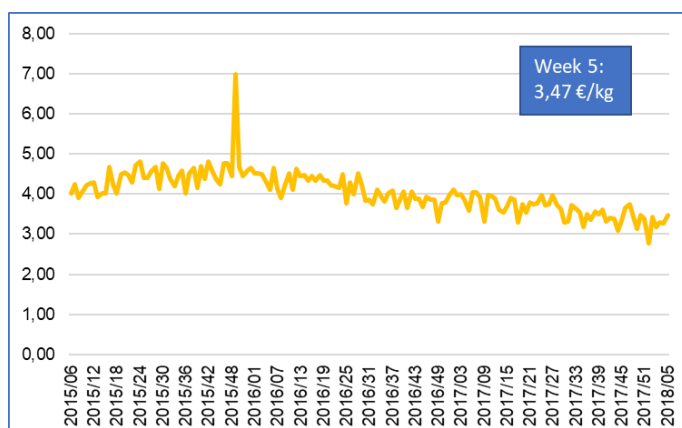
Source: European Commission (updated 17.02.2018).

The weekly price of frozen fillets of **haddock** (*Melanogrammus aeglefinus*, CN code 03047200) from **Russia** has risen in recent weeks, to 5,15 EUR/kg in week 5 of 2018 from a low of 3,35 in week 13 of 2017. Despite occasional sharp jumps and drops, this price followed a long downward trend from early 2015, a trend that reversed in early 2017, and especially after week 38 which also observed a price of 3,35 EUR/kg. Haddock from Russia faces many competing sources and its price is entirely subject to other supply and demand conditions.



Source: European Commission (updated 17.02.2018).

Frozen fillets of **hake** come from many sources, including **Namibia** (Cape hake or shallow-water hake, *Merluccius capensis*, CN code 03047411) and **Argentina** (Southwest Atlantic hake, *Merluccius hubbsi*, CN code 03047415). Hake from Namibia are similar to European hake but much smaller than Argentine hake, and the smaller size adds to processing costs, which may explain why import prices for Namibian hake fillets more than double are (on average during 2015–2017) those for Argentine hake. Prices for Namibian hake have slowly risen since 2015, while those for Argentine hake have slowly declined. Weekly prices for Namibian hake became more volatile in the last few weeks, with week 5 of 2018 price of 3,95 EUR/kg falling by 15% from the previous week. The week 5 price for Argentine hake was 2,58 EUR/kg, slightly lower than the 2017 weekly average of 2,80 EUR/kg.



Source: European Commission (updated 17.02.2018).

The weekly price of frozen fillets of **saithe** (or coalfish, *Pollachius virens*, CN code 03047300) from **Iceland** has, with one unexplained exceptional week, followed a very smooth wave pattern since early 2015, with small fluctuations usually within a 10% band above and below the average price in any one month. From a 2017 peak price of 4,05 EUR/kg in week 5, prices slowly declined to 2,78 EUR/kg in week 52, before rising again, reaching 3,48 EUR/kg in week 5 of 2018.

## 3 Consumption

### 3.1 HOUSEHOLD CONSUMPTION IN THE EU

In November 2017, the consumption of fresh fishery and aquaculture products increased over November 2016 in both volume and value in Denmark (+6% and +8%, respectively), Germany (+34% and +38%), Hungary (+28% and +32%), the Netherlands (+1% and +7%), Sweden (+28% and +23%), and the UK (+17% and +21%). In France, volume increased 2% and value decreased 1%. In Poland and Portugal, the opposite occurred: value increased, and volume decreased.

Decreases in consumption in both volume and value happened in Ireland and Spain. The largest drop in both volume and value in November 2017 occurred in Ireland, whereas the largest increase in both volume and value was observed in Germany.

Compared with October 2017, among the Member States surveyed, the greatest increase in value was registered in Hungary (+45%), followed by the UK (+26%). Volume decreased only in Sweden (-20%) and Denmark (-7%).

Table 3. **NOVEMBER OVERVIEW OF THE REPORTING COUNTRIES** (volume in tonnes and value in million EUR)

Country	Per capita consumption 2015* (live weight equivalent) kg/capita/year	November 2015		November 2016		October 2017		November 2017		Change from November 2016 to November 2017	
		Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Denmark	22,9	696	9,78	527	7,58	600	9,35	561	8,18	6%	8%
Germany	13,4	6.197	77,46	5.150	67,69	6.268	82,48	6.917	93,47	34%	38%
France	33,9	19.540	191,35	19.521	209,29	19.811	206,40	19.845	207,76	2%	1%
Hungary	4,8	415	2,08	254	1,39	211	1,27	326	1,84	28%	32%
Ireland	22,1	1.021	14,13	1.046	14,56	902	12,62	925	13,45	12%	8%
Italy	28,4	25.211	215,98	26.001	226,32	23.573	210,68	26.011	232,96		3%
Netherlands	22,2	2.672	32,80	2.487	31,74	2.250	31,59	2.507	33,89	1%	7%
Poland	13,6	5.677	27,67	5.228	24,98	4.040	22,13	4.842	25,13	7%	1%
Portugal	55,9	4.951	29,78	4.399	27,61	4.070	26,54	4.238	28,08	4%	2%
Spain	45,2	58.898	416,67	56.420	416,43	51.594	378,02	53.104	408,59	6%	2%
Sweden	26,9	759	9,04	553	7,28	887	12,19	709	8,96	28%	23%
UK	24,3	22.799	276,20	23.558	237,05	22.378	227,93	27.613	286,41	17%	21%

Source: EUMOFA, based on Europanel (updated 07.02.2018).

\*Data on per capita consumption of all fish and seafood products for all EU Member States can be found at: <http://www.eumofa.eu/documents/20178/108446/The+EU+fish+market+2017.pdf>

Generally, the consumption of fishery and aquaculture products in November declined in both volume and value in most of the Member States analysed. Only in Germany, France, Italy, and the UK, did an increase in both volume and value occur. In the Netherlands, volume fell, and value increased.

In November for the past three years, household consumption of fresh fish products has been below the annual average in both volume and value in Denmark (-20% and -21%, respectively), Hungary (-30% and -6%), Portugal (-12% and -2%), and Sweden (-14% and -16%). In the rest of the Member States analysed, household consumption in November was above the average in value. In volume, it was below the annual average.

The most recent consumption data available on EUMOFA for **December 2017** can be accessed [here](#).



## 3.2 FRESH HERRING

**Habitat:** An oily pelagic species, reaching 40 cm in length and 700g in weight<sup>14</sup>.

**Catch area:** North Atlantic, in the water of the Baltics, the North Sea, West of Scotland.

**Main producing countries in Europe:** Sweden, Denmark, Ireland, United Kingdom<sup>15</sup>.

**Production method:** Caught.

**Main consumers in the EU:** Sweden, Denmark, Germany, Latvia, Lithuania.

**Presentation:** whole, filleted.

**Preservation:** Fresh, smoked, canned.

**Ways of preparation:** Grilled, fried, baked.



### 3.2.1 General overview of household consumption in Germany, the Netherlands and Sweden

Among Germany, the Netherlands and Sweden, per capita consumption of fish and seafood products was the highest in Sweden which registered per capita consumption of 7% above the EU average in 2015 (25,1 kg). Per capita consumption in Sweden was 26,9 kg in 2015, 52% lower than Portugal, the Member State with the highest per capita consumption in the EU in 2015. In Germany, per capita consumption was 13,4 kg, or 47% lower than the EU average and 40% lower than in the Netherlands, where it was 22,2 kg, 12% below the EU average. See more on EU per capita consumption in Table 3.

Apparent consumption of herring in the EU registered 1,38 kg per capita. Herring comes entirely from wild catches and displayed a 5% share of the most important species consumed in the EU<sup>16</sup>. Retail prices of fresh herring fluctuated the most in Germany during the period January 2014–November 2017. Volume saw considerable monthly variations, particularly in Germany and the Netherlands, peaking in the summer months. Volumes of sardine consumed were significantly lower in Sweden.

We have covered **herring** in previous *Monthly Highlights*:

**First sales:** Denmark (1/2018, 3/2015, 4/2014, March 2013), Latvia (5/2016, 5/2015), Poland (1/2018), Sweden (1/2016, November–December 2013), the UK (1/2018).

**Topic of the month:** Preserved herring in glass jars in Sweden (12/2016).

**Trade:** Intra-EU Export (04/2015).

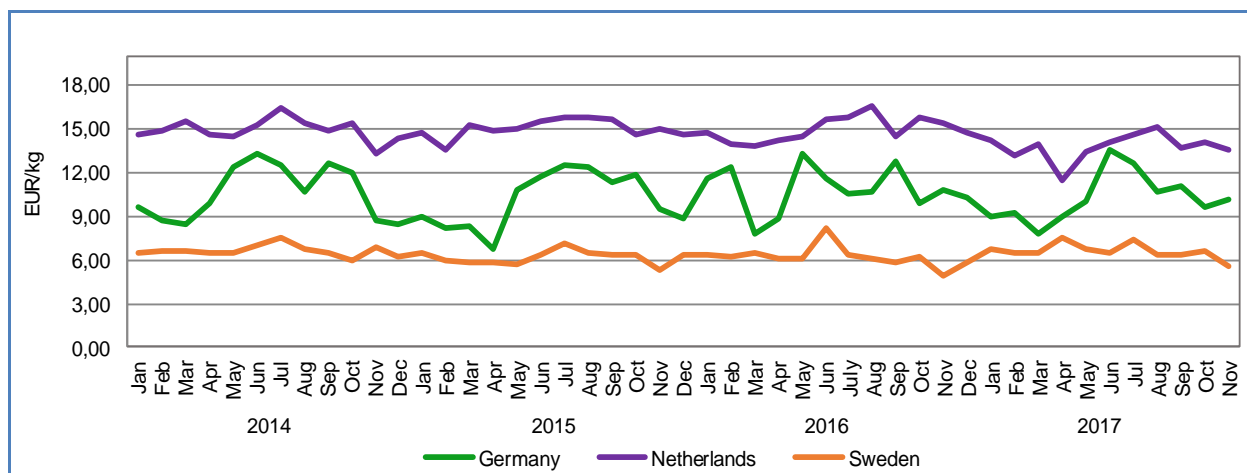
**Consumption:** Germany (2/2016), Estonia (6/2015), Latvia (November–December 2013), Lithuania (November–December 2013), Poland (November–December 2013), Portugal (6/2015), Sweden (2/2016), the UK (2/2016).

<sup>14</sup> <http://www.eumofa.eu/documents/20178/111091/MH+1+2018+07.02.pdf/>

<sup>15</sup> EUMOFA.

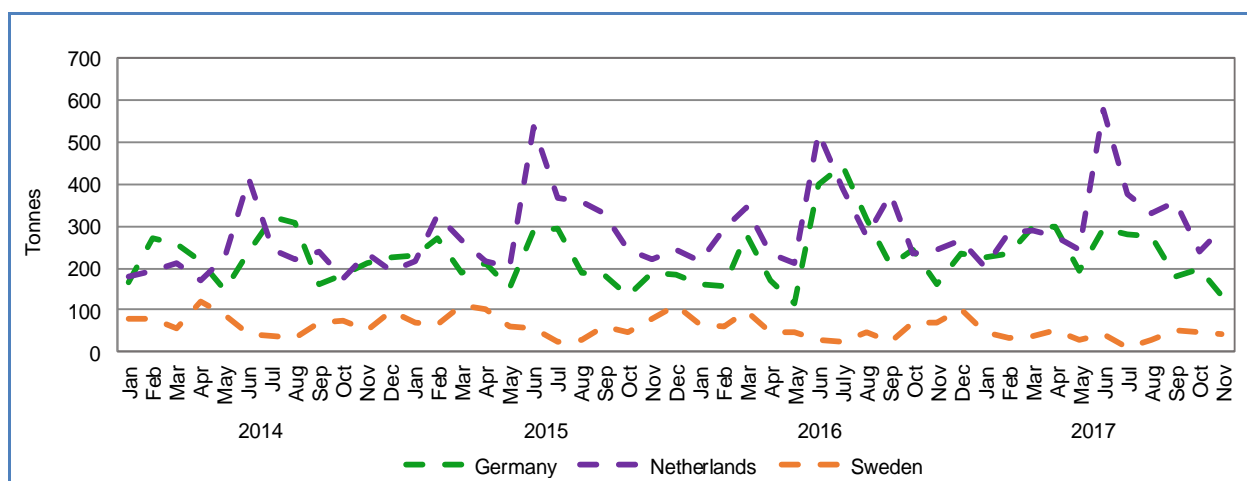
<sup>16</sup> <http://www.eumofa.eu/documents/20178/108446/The+EU+fish+market+2017.pdf/>

Figure 34. RETAIL PRICES OF FRESH HERRING



Source: EUMOFA, based on Europanel (updated 07.02.2018).

Figure 35. VOLUME SOLD OF FRESH HERRING



Source: EUMOFA based on Europanel (updated 07.02.2018).

### 3.2.2 Consumption trend in Germany

**Long-term trend, January 2014–November 2017:** increasing slightly in price and in volume.

**Average price:** 10,60 EUR/kg (2014), 10,08 EUR/kg (2015), 10,86 EUR/kg (2016).

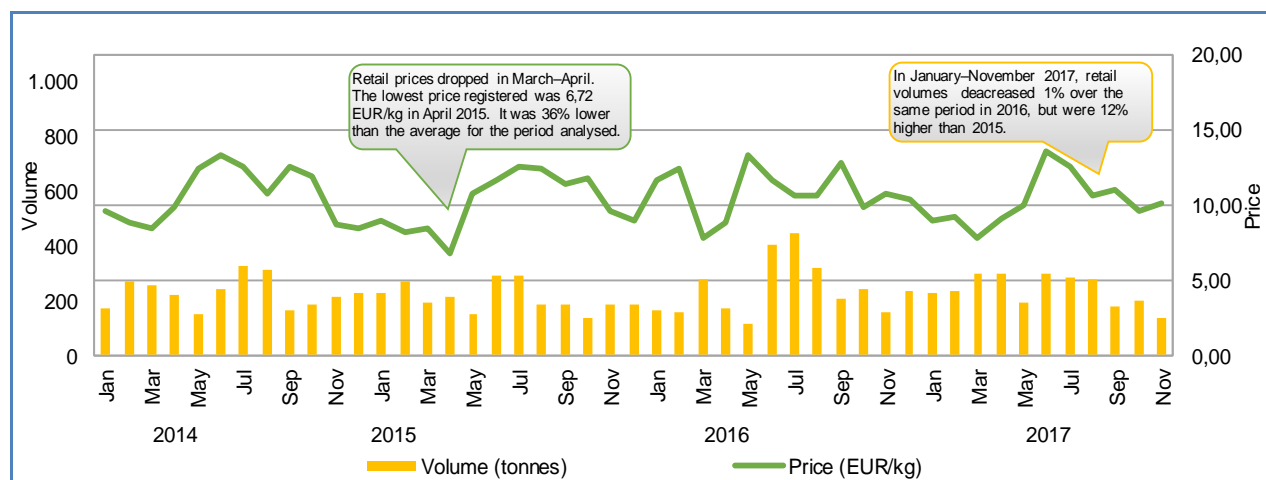
**Total consumption:** 2.718 tonnes (2014), 2.518 tonnes (2015), 2.895 tonnes (2016).

**Short-term trend, January–November 2017:** increasing in price and decreasing slightly in volume.

**Average price:** 10,22 EUR/kg.

**Total consumption:** 2.620 tonnes.

Figure 36. RETAIL PRICE AND VOLUME SOLD OF FRESH HERRING IN GERMANY



Source: EUMOFA, based on Europanel (updated 07.02.2018).

### 3.2.3 Consumption trend in the Netherlands

**Long-term trend, January 2014–November 2017:** decreasing slightly in price and increasing volume.

**Average price:** 14,89 EUR/kg (2014), 15,01 EUR/kg (2015), 14,94 EUR/kg (2016).

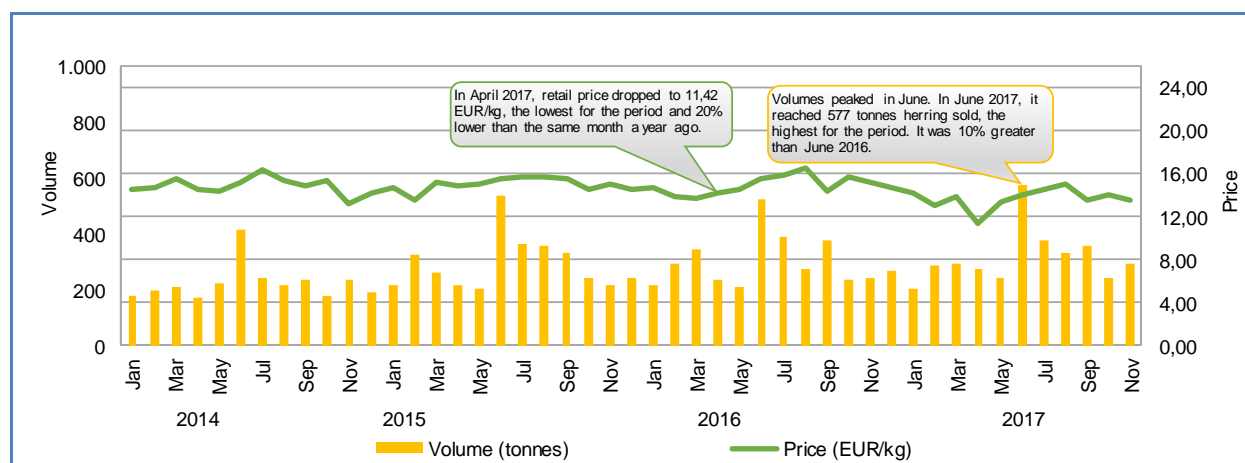
**Total consumption:** 2.711 tonnes (2014), 3.529 tonnes (2015), 3.618 tonnes (2016).

**Short-term trend, January–November 2017:** both increasing in price and volume.

**Average price:** 13,74 EUR/kg.

**Total consumption:** 3.482 tonnes.

Figure 37. RETAIL PRICE AND VOLUME SOLD OF FRESH HERRING IN THE NETHERLANDS



Source: EUMOFA, based on Europanel (updated 07.02.2018).

### 3.2.4 Consumption trend in Sweden

**Long-term trend, January 2014–November 2017:** decreasing in both price and volume.

**Average price:** 6,60 EUR/kg (2014), 6,16 EUR/kg (2015), 6,22 EUR/kg (2016).

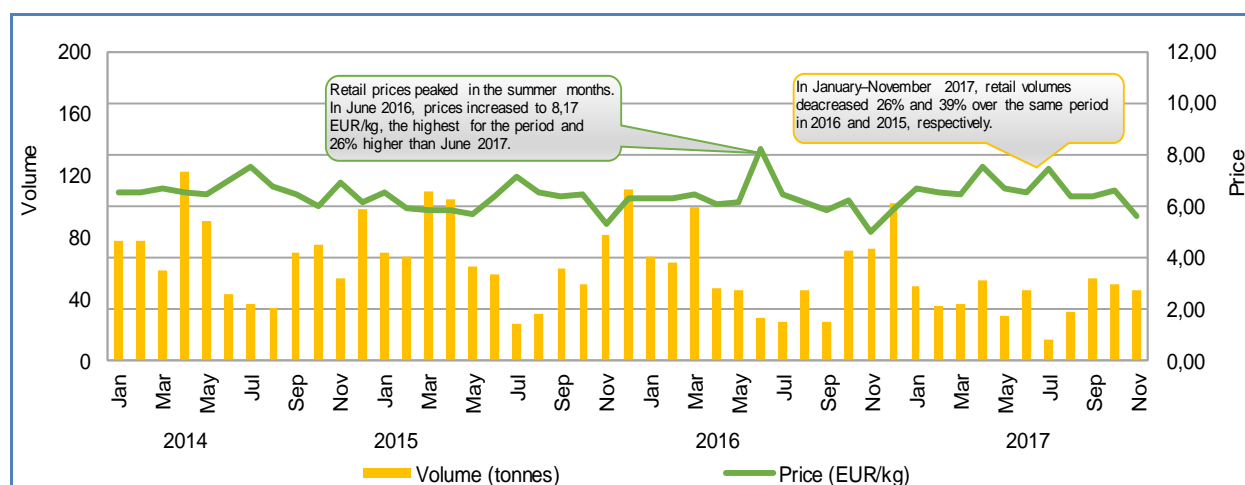
**Total consumption:** 831 tonnes (2014), 818 tonnes (2015), 687 tonnes (2016).

**Short-term trend, January–November 2017:** slightly decreasing in both price and in volume.

**Average price:** 6,60 EUR/kg.

**Total consumption:** 435 tonnes.

Figure 38. RETAIL PRICE AND VOLUME SOLD OF FRESH HERRING IN SWEDEN

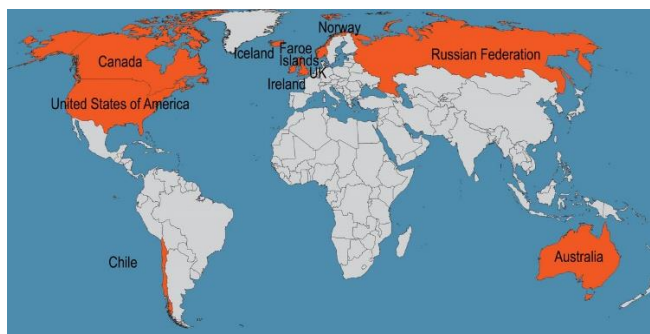


Source: EUMOFA, based on Europanel (updated 07.02.2018).

## 4 Case study - Salmon in Europe

### 4.1 Introduction

Figure 39. **MAIN PRODUCING COUNTRIES OF ATLANTIC SALMON**



Source: FAO.

Salmon has been a staple of the diet of Europeans for centuries, mainly due to its historical abundance along the European coast. Wild salmon has been captured in Europe since Paleolithic times, and its importance can be recognized by the fact that regulations to protect salmon stocks have existed since at least 1030 AD<sup>17</sup>.

Atlantic salmon (*Salmo salar*) is the most important aquaculture species in Europe and a well-acknowledged and popular species for recreational fisheries. Wild Atlantic salmon are found in the North Atlantic on both the American and European side, distributed from Cape Cod and Portugal in the South to Labrador and Russia in the North. It is also found around the North Atlantic Islands, e.g. in the UK, Iceland, Greenland<sup>18</sup> and in the Baltic. The species is known for undergoing long migrations and significant physiological changes during transitions of habitats from freshwater rivers, to coastal seas, and back to freshwater rivers to spawn<sup>19</sup>. Atlantic salmon can be highly migratory in the ocean, undertaking feeding migrations in a broad range of areas<sup>20</sup>. This species has for long been a subject of conflict between various stakeholders, such as commercial fishermen, recreational fishermen and the farming industry<sup>21</sup>.

Danube salmon (*Hucho hucho*) is a central European salmonid that lives exclusively in freshwater. Before the series of constructions of large hydroelectric power plants in Europe, which blocked the species access to important spawning grounds, the species was widespread in Southern Germany and Austria. It has for a long time been of interest for fish farmers, scientist and recreational fishers, but its popularity has never equaled that of other salmonids species. Danube salmon has primarily been targeted by anglers because of its size and has never been a part of commercial fisheries. Today, it is threatened by extinction and is classified as an endangered (EN) species according to the IUCN criteria<sup>22</sup>. It is severely fragmented within the Danube drainage, and most of the populations depend upon stocking, with very limited natural reproduction<sup>23</sup>.

<sup>17</sup> The History Of Salmon 2.0

[http://www.westcoast.fisheries.noaa.gov/publications/recovery\\_planning/salmon\\_steelhead/domains/north\\_central\\_california\\_coast/central\\_california\\_coast\\_coho/history\\_i.pdf](http://www.westcoast.fisheries.noaa.gov/publications/recovery_planning/salmon_steelhead/domains/north_central_california_coast/central_california_coast_coho/history_i.pdf)

<sup>18</sup> [http://www.fao.org/fishery/culturedspecies/Salmo\\_salar/en](http://www.fao.org/fishery/culturedspecies/Salmo_salar/en)

<sup>19</sup> <https://www.marine.ie/Home/site-area/areas-activity/fisheries-ecosystems/salmon-life-cycle>

<sup>20</sup> <https://academic.oup.com/icesjms/article/69/9/1538/635167>

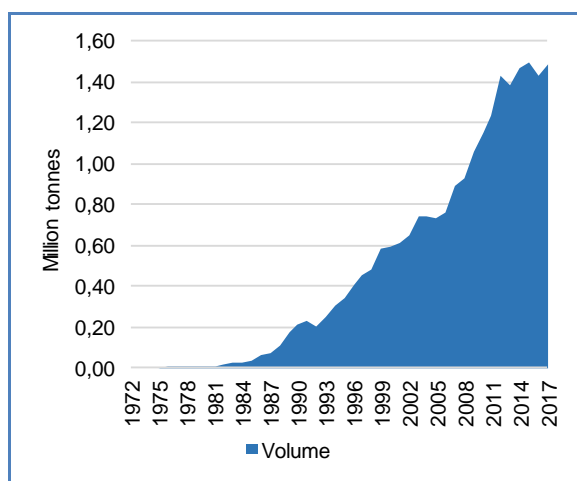
<sup>21</sup> Whelan, B., Aas, Ø., Uglem, I., Curtis, J. & Dervor, B. (2006). «Assessment of the socio-economic value of aquaculture and sport angling for wild in salmonids northwestern Europe. Implications for treatments for sea lice infestation." NINA Report no. 126. 45 pp.

<sup>22</sup> <http://www.iucnredlist.org/details/10264/0>

<sup>23</sup> Witkowski, A., Bajic, A., Treer, T., Hegedis, A., Maric, S., Sprem, N., Piria, M & Kaputsta, A. (2013). "Past and present of perspectives for the Danube huchen, Hucho (L.). In the Danube Basin". Arch.Pol.Fish. (2013) 21: 129-142.

## 4.2 History of salmon farming in Europe

Figure 40. **HISTORIC DEVELOPMENT FOR EUROPEAN ATLANTIC SALMON PRODUCTION (1972–2017)**



Source: Kontali Analyse.

The farming of Atlantic salmon dates back to the 19<sup>th</sup> century, when hatchery techniques were developed in the United Kingdom, which was the first country involved in the production of immature fish to restock rivers for recreational fishing<sup>24</sup>. In the 1950s – 1960s, salmon farming pioneers in Norway started to experiment in cooperation with a wide-ranging research environment, with the aim of producing salmon for human consumption. This cooperation created a good basis for further growth potential in the salmon farming industry. Early in the 1970s, the development of floating cages gave the Norwegian salmon farming industry the opportunity to benefit from the natural conditions, with good sea temperatures, salinity and currents in sheltered fjords<sup>25</sup>. The Norwegian success sparked the development of salmon farming, first in Europe, and then in all temperate seas in both hemispheres (figure 1). The now wide-spread farmed Atlantic salmon was based on a hybrid stock resulting from cross-fertilization of the Norwegian stock with different local stocks<sup>26</sup>.

Although rapid production growth has led to several market collapses, and the industry has experienced considerable fish disease, salmon lice, salmon escapes and pollution problems<sup>27</sup>, the industry continues to grow. Currently, most of the farmed Atlantic salmon in Europe is produced in floating cages in sea, while there are a few land-based farms. The fish is normally harvested after one to two years in the water at sizes around 5 kg<sup>28</sup>. The European production of Atlantic salmon has since the early 70s increased from approximately 150 tonnes to almost 1,5 million tonnes WFE in 2017<sup>29</sup> (figure 2). The most important producing country in Europe is Norway, followed by the UK, Faroe Islands and Ireland. Chile is the largest producer outside of Europe. Most modern salmon farming companies today handle salmon from egg to slaughter, before it gets processed and marketed in various types of products<sup>30</sup>. Atlantic salmon is now found in dozens of different product preparations available in retail and food-service segments<sup>31</sup>.

## 4.3 Fisheries and aquaculture trends for Atlantic salmon

### FISHERIES

Wild Atlantic salmon is distributed widely in the North Atlantic Ocean (figure 3), making many parties involved in the management of the species. Today, all fishing of wild Atlantic salmon in rivers and sea is highly regulated. The North Atlantic Salmon Conservation Organization (NASCO) has the responsibility for its conservation, restoration, enhancement and rational management. Distant-water salmon fisheries, e.g. in Greenland and Faroe Islands which target many Atlantic salmon strains originating from different rivers and countries, are regulated by NASCO under the terms of the convention.

<sup>24</sup> [https://ec.europa.eu/fisheries/marine\\_species/farmed\\_fish\\_and\\_shellfish/salmon\\_en](https://ec.europa.eu/fisheries/marine_species/farmed_fish_and_shellfish/salmon_en)

<sup>25</sup> Hovland, W., Møller, D., Haaland, A., Kolle, N., Hersoug, B., Nævdal, G (2014). "Over den leiken ville han rå Norsk havbruksnærings historie". Fagbokforlaget Vigmostad & Bjørke AS. Bergen, 2014.

<sup>26</sup> [https://ec.europa.eu/fisheries/marine\\_species/farmed\\_fish\\_and\\_shellfish/salmon\\_en](https://ec.europa.eu/fisheries/marine_species/farmed_fish_and_shellfish/salmon_en)

<sup>27</sup> Hovland, W., Møller, D., Haaland, A., Kolle, N., Hersoug, B., Nævdal, G (2014). "Over den leiken ville han rå Norsk havbruksnærings historie". Fagbokforlaget Vigmostad & Bjørke AS. Bergen, 2014.

<sup>28</sup> Marine Harvest Industry Handbook

<sup>29</sup> Whole Fish Equivalent – fish without blood, not gutted.

<sup>30</sup> Kontali Analyse

<sup>31</sup> [https://ec.europa.eu/fisheries/marine\\_species/farmed\\_fish\\_and\\_shellfish/salmon\\_en](https://ec.europa.eu/fisheries/marine_species/farmed_fish_and_shellfish/salmon_en)

Sovereign states have the responsibility for regulation of the Atlantic salmon fisheries targeting salmon originating from their own rivers<sup>32</sup>. Most of today's catches of wild Atlantic salmon are done in recreational fisheries in rivers, where catch and release is increasingly common. This trend is a result of salmon management aimed at conserving stock and maintaining the opportunity for recreational fisheries<sup>33</sup>. Norway, the UK, and Iceland are acknowledged and well-known destinations in Europe for anglers aiming to catch wild Atlantic salmon. Because of the species popularity, fishing rights in rivers holding wild Atlantic salmon commonly are sold or rented out by the fishing rights owners, often for significant amounts<sup>34</sup>.

Figure 41. **DISTRIBUTION OF WILD ATLANTIC SALMON**



Source: Wikipedia.

Fisheries after wild Atlantic salmon in Europe mainly occurs in Norway, Iceland, UK, and Ireland, where Norway accounts for approximately 60% of the total wild Atlantic salmon catches. The preliminary nominal catches<sup>35</sup> of Atlantic salmon in Europe in 2016 was 984 tonnes, which was 14 tonnes less than in 2015 (table 1). The changes in catches may be a result of increasing usage of catch and release in recreational fisheries, which is not included in these numbers<sup>36</sup>. Most catches of wild Atlantic salmon in Europe occurs in rivers, and nets and traps used in sea fisheries to catch wild Atlantic salmon has declined significantly over time in Europe. This reduction reflects increasingly restrictive measures, including closure of fisheries, to reduce levels of exploitation in many countries<sup>37</sup>. Limited amounts of wild Atlantic salmon from fisheries are sold and exported, although most of the sales occur in local markets.

Table 4. **NOMINAL CATCH OF ATLANTIC SALMON IN EUROPE**

Country	2013	2014	2015	2016
Norway	475	490	580	610
Iceland	147	69	125	118
Sweden	14	30	16	9
Denmark	11	9	9	9
Finland	46	59	45	51
Ireland	87	57	63	58
France	11	12	16	6
Spain	5	6	5	5
UK	207	143	139	118
<b>Europe</b>	<b>1003</b>	<b>875</b>	<b>998</b>	<b>984</b>

Source: ICES.

<sup>32</sup> ICES. (2017). "Report of the Working Group on North Atlantic Salmon (WGNAS)." 29 March–7 April 2017, Copenhagen, Denmark. ICES CM 2017/ACOM: 20. 296 pp.

<sup>33</sup> ICES. (2017). "Report of the Working Group on North Atlantic Salmon (WGNAS)." 29 March–7 April 2017, Copenhagen, Denmark. ICES CM 2017/ACOM: 20. 296 pp.

<sup>34</sup> Toivonen, A-L., Appelblad, H., Bengtsson, B., Geertz-Hansen, P., Gudbergson, Kristofersson, D., Kyrkjebø, G., Navrud, S., Roth, E., tuunainen, P & Weissglas, G. (2000). "Economic Value of recreational fisheries in the Nordic countries." TemaNord 2000:604. Nordic Council of Ministers, Copenhagen 2000

<sup>35</sup> Nominal Catch: Round, fresh weight of wild Atlantic salmon and fish-farm escapees that are caught and retained. Catch and release salmon from recreational fisheries is not included.

<sup>36</sup> ICES. (2017). "Report of the Working Group on North Atlantic Salmon (WGNAS)." 29 March–7 April 2017, Copenhagen, Denmark. ICES CM 2017/ACOM: 20. 296 pp.

<sup>37</sup> ICES. (2017). "Report of the Working Group on North Atlantic Salmon (WGNAS)." 29 March–7 April 2017, Copenhagen, Denmark. ICES CM 2017/ACOM: 20. 296 pp.

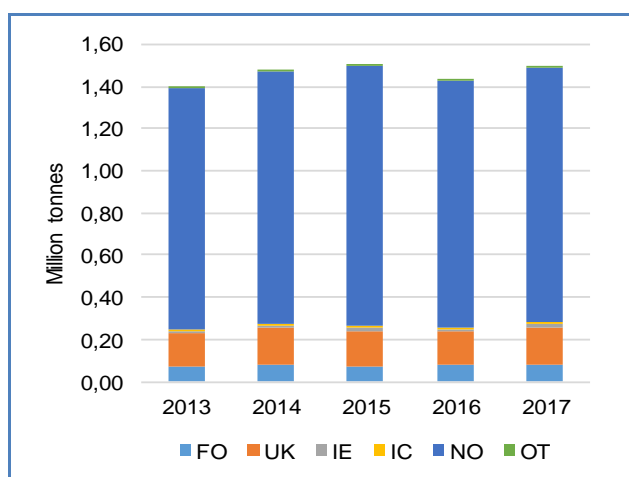


## AQUACULTURE

The production of Atlantic salmon in Europe has been relatively stable the last five years compared to earlier years. The all-time peak was achieved in 2015 with approximately 1,5 million tonnes WFE. However, the production decreased by 4% in 2016 as a result of poor biological conditions, and in the following year the production was again close to the 2015 level (figure 4).

Norway is the largest producer of Atlantic salmon in Europe, accounting for 81% of the European production of this species; the second largest producer, UK, accounts for 12%. During 2013-2017, Iceland has had the fastest growth rate, with production rising by 255%. However, its share on total is still less than 1%<sup>38</sup>.

Figure 42. **DEVELOPMENT IN EUROPEAN AQUACULTURE PRODUCTION OF ATLANTIC SALMON (2013–2017)**



Source: Kontali Analyse.

Despite volumes produced having been relatively stable during the last five years, the first-sale value of farmed Atlantic salmon in Europe has increased by almost 40%, amounting to approximately EUR 8,7 billion<sup>39</sup> in 2017. The salmon farming industry is known for its cyclical ups and downs, but the average earnings has not dropped below break-even since early 2000. The European salmon farming sector went through considerable consolidation over the last decade. Historically, the salmon farming industry was made up by small local companies<sup>40</sup>, but have now consolidated to more large seafood groups, often listed on stock exchanges. The top 10 companies now control approximately 60% of the total production in Europe, while companies listed on the Norwegian stock exchange control approximately 58% of all European Atlantic salmon production<sup>41</sup>.

## 4.4 EU salmon trade

In 2016, the EU imported 830.137 tonnes of salmon (including wild Pacific salmon, representing approx. 5 % of this), with a value of almost EUR 5,5 billion. These imports mainly consist of fresh whole salmon originating from Norway, entering into the EU market through Sweden and Denmark<sup>42</sup>. Compared to 2012, imported volumes have increased by 15% while the value grew by 83% (figures 5 and 6)<sup>43</sup>.

The main suppliers of Atlantic salmon to the EU in 2016 were Norway, the Faroe Islands and Chile. Norway sold to the EU 695.548 tonnes, covering 84% of the EU salmon imports in 2016. In the same year, EU internal production of this species was approximately 170.100 tonnes WFE<sup>44</sup>.

<sup>38</sup> Kontali Analyse

<sup>39</sup> Kontali Analyse

<sup>40</sup> Marine Harvest Industry Handbook

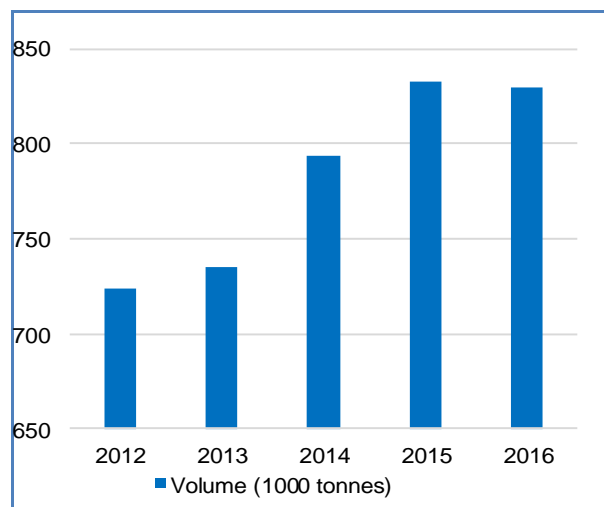
<sup>41</sup> Kontali Analyse

<sup>42</sup> The EU fish market – 2017 Edition

<sup>43</sup> EUMOFA

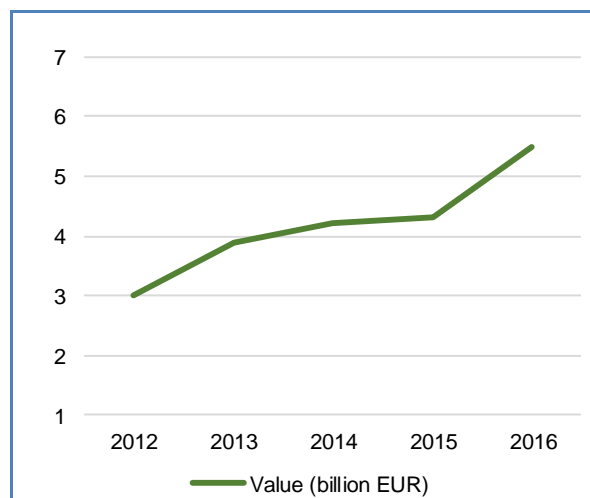
<sup>44</sup> Kontali Analyse

Figure 43. IMPORTS OF SALMON IN THE EU



Source: EUMOFA.

Figure 44. VALUE OF SALMON IMPORTED IN THE EU



Source: EUMOFA.

In 2016, algae-bloom killed as much as 25 million farmed salmon in Chile. In addition, through 2015 and 2016, Scotland and Norway suffered poor biological conditions due to sea-lice and side effects of implementing more and new treatment methods against sea-lice. These events in Chile, Scotland and Norway led to a worldwide 7% reduction in the supply of farmed Atlantic salmon from 2015 to 2016<sup>45</sup>. Consequently, the import price of salmon to the EU increased by 25%<sup>46</sup>, leading to a large increase in value terms (figure 6). From 2012 to 2016, the average import price rose by 73%.

EU exports of salmon, primarily originating from the UK, amounted to 82.363 tonnes worth EUR 592 million in 2016. Salmon from the EU is mainly exported fresh or frozen, but the biggest share of the value comes from exports of smoked salmon fillets<sup>47</sup>.

## 4.5 The EU market for salmon

Salmon in the EU is distributed through the retail and food-service sector, including fishmongers, large-scale retail chains, restaurants, caterings, canteens, schools, and hospitals. It is mainly consumed fresh or smoked, and apparent consumption per capita of farmed salmon in 2015 was 2,17 kg. Over the last decade, EU consumption has increased by 40%<sup>48</sup>. The most important European seafood consumption trends are growing demand for convenient products, interest in the health benefits from consuming seafood, an increase in e-commerce and low-cost stores and an increased focus on sustainability. These trends have led to more “food-to-go / ready-to-eat” meals available in grocery, and private labeling of products to emphasize quality, health benefits and sustainability<sup>49</sup>.

In 2016, the main EU Member States where Atlantic salmon was consumed were France, the UK, Germany, Italy and Spain (figure 7). Salmon is the most consumed species in France, mainly sold in grocery. However, due to increased retail prices of salmon in 2016 and 2017 (figure 8), consumers have searched for cheaper alternatives. This trend can also be seen in other main consuming Member States except from Italy, where salmon consumption is continuing to increase<sup>50</sup>.

<sup>45</sup> Kontali Monthly Salmon Report

<sup>46</sup> EUMOFA

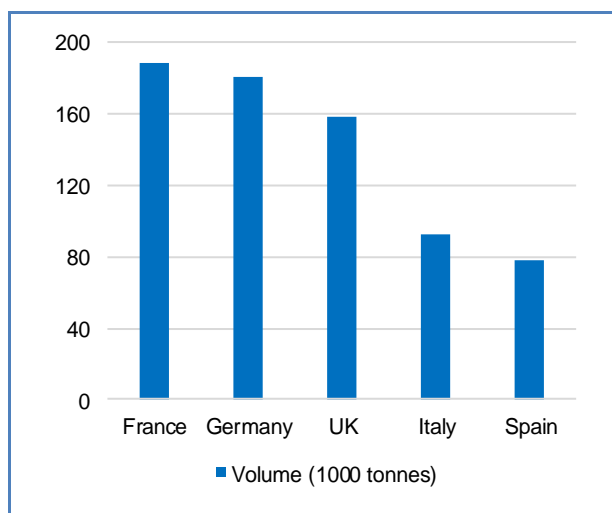
<sup>47</sup> The EU Fish Market – 2017 Edition

<sup>48</sup> The EU Fish Market – 2017 Edition

<sup>49</sup> Norwegian Seafood Council (2017). “Seafood development in European and American grocery”.

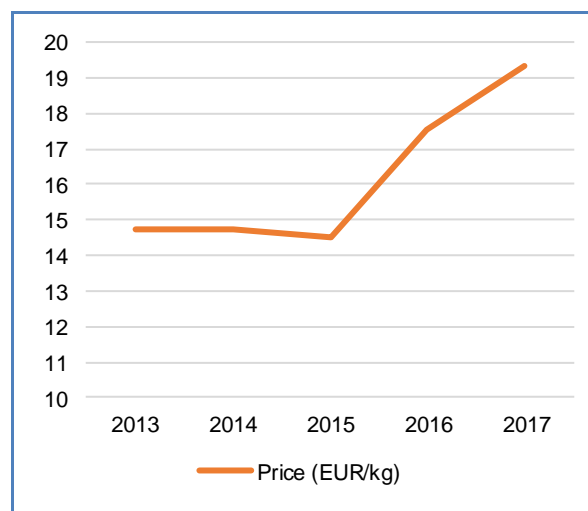
<sup>50</sup> Norwegian Seafood Council (2017). “Seafood development in European and American grocery”.

Figure 45. **ESTIMATED TOP 5 CONSUMING COUNTRIES OF ATLANTIC SALMON IN THE EU (2016)**



Source: Kontali Analyse.

Figure 46. **AVERAGE RETAIL PRICES OF ATLANTIC SALMON FILLETS IN FRANCE (2013 – 2017)**



Source: SNM.

Consumption of organic fish and seafood products has been continuously rising since 2012, with salmon being one of the most important species. This is a result of the increased awareness of the consumers. However, production and consumption of organic fish and seafood today still represents a niche. Retail companies and traders of fish and seafood are adapting to the trend, so more organic seafood is available to the EU consumer. The supply of organic salmon to the EU market consist of internal production (mainly Irish) and imports solely from Norway. Organic salmon provides good sales price premiums, which in most cases cover the extra costs involved in organic production<sup>51</sup>. Fish processing is an important industry in the EU and salmon is one of the most important species used as raw material by the sector. The industry produces smoked salmon, portions and ready meals, and is mainly carried out in Poland, France, the UK, the Baltic States and the Netherlands. The EU is the most important market for consumption of smoked salmon, where Germany and France are the most significant Member States<sup>52</sup>.

## 4.6 Recent trends

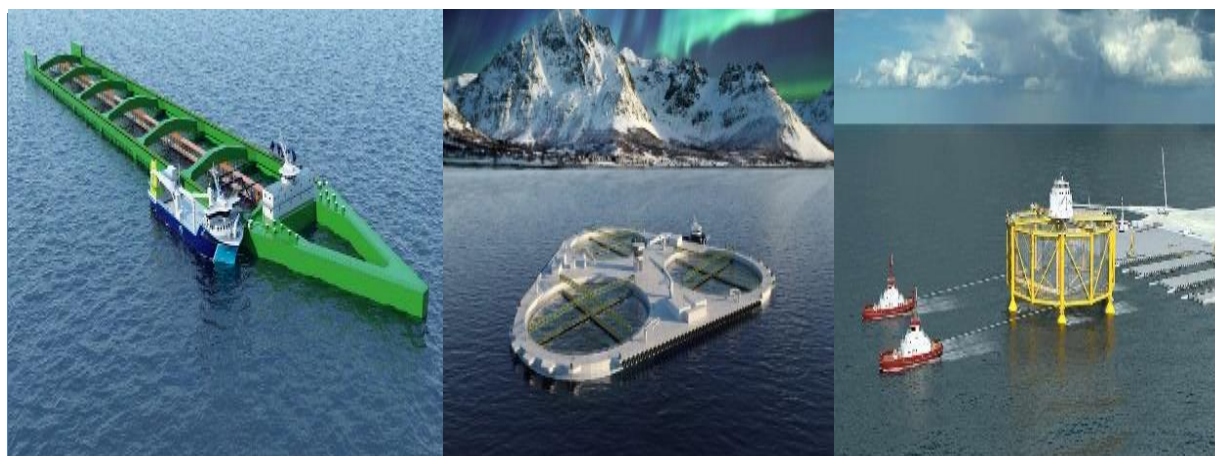
In Europe, Atlantic salmon is still mainly farmed in floating sea cages, as it has since the early 70s. However, in 2015 the Norwegian Government announced a development-license scheme with the purpose of motivating the salmon industry to invest in new farming technologies. This has led to the creation of various new farming concepts, such as closed and semi-closed constructions in sea, as well as open solutions aimed at producing salmon off-shore<sup>53</sup>.

<sup>51</sup> EU Organic Aquaculture, EUMOFA 2017

<sup>52</sup> Marine Harvest Industry Handbook

<sup>53</sup> Norwegian Directorate of Fisheries

Figure 47. NEW SALMON FARMING CONCEPTS



From the left: HAVFARMEN (Nordlaks/NSK Ship Design), FJORDMAX (Salaks), OCEAN Farm (Salmar Ocean Farming).  
 Source: Nordlaks / NSK Ship Design; Salaks; Salmar Ocean Farming.

Of many applications to the new development licenses, five concepts have so far been approved and granted capacity by the Norwegian authorities. Two of them are going to produce salmon off-shore at more vulnerable sites, two others are closed constructions and one concept is semi closed<sup>54</sup>. The development license scheme is expected to contribute to innovation and improving technology in the sea-based salmon industry in the years to come. Many full-cycle pilot land-based salmon farms have been built around the world, as well as some commercial ones<sup>55</sup>. The production systems built today still meets challenges and have not been free from problems, but improving technology and knowledge are making it increasingly feasible to produce salmon on land on a large scale<sup>56</sup>. Europe is the leading continent for land-based salmon farming, but still produces only small quantities of Atlantic salmon<sup>57</sup>.

The production of Atlantic salmon in Europe is estimated to grow by 6% in 2018 compared to 2017, reaching almost 1,6 million tonnes. The growth is mainly driven by the improvement in biological conditions in the sea through 2017, leading to better productivity in standard floating sea cage farming<sup>58</sup>.

Salmon consumption in Europe continues to be driven by convenience and by the benefits of consuming seafood holding healthy fatty acids. In addition, as consumers' awareness rises, demand for farmed salmon certified by different schemes that guarantee sustainable production may continue. Salmon is keeping its position as a leading source of seafood nutrition in Europe and will continue to be a staple in the diet to Europeans, as it has been for centuries.

<sup>54</sup> Norwegian Directorate of Fisheries

<sup>55</sup> Warrer-Hansen, I (2015). "Potential for Land based Salmon Grow-out Recirculating Aquaculture systems (RAS) in Ireland." A report for the Irish Salmon Grower's Association.

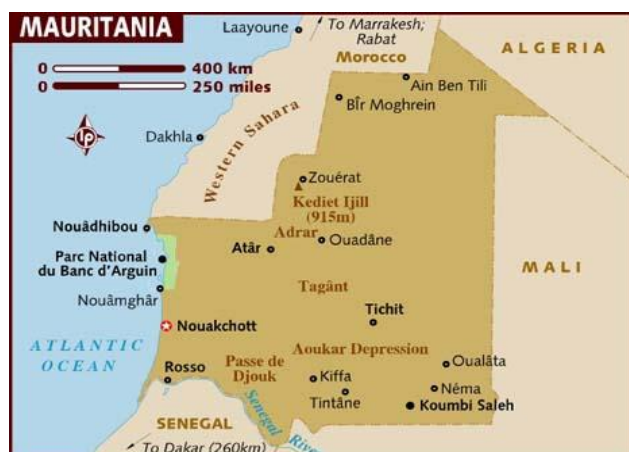
<sup>56</sup> Warrer-Hansen, I (2015). "Potential for Land based Salmon Grow-out Recirculating Aquaculture systems (RAS) in Ireland." A report for the Irish Salmon Grower's Association.

<sup>57</sup> Kontali Analyse

<sup>58</sup> Kontali Monthly Salmon Report

## 5 Case study - Fisheries in Mauritania

Figure 48. MAP OF MAURITANIA



Source: Lonely Planet

Thanks to its significant fish resources, Mauritania plays a major role in the East Atlantic fishery sector. The resources, including mostly small pelagics used for fishmeal processing, are exploited by the Mauritanian fishing fleet as well as other countries' industrial fleets. Mauritania is an important partner of the EU in the field of fisheries through a Sustainable Fisheries Partnership Agreement giving the EU vessels access to the Mauritanian Exclusive Economic Zone (EEZ). However, the Mauritanian government is implementing a strategical plan aiming to develop and diversify its own fishery sector and benefit more from its EEZ richness.

### 5.1 Production

Mauritania is located at the extremity of West Africa, bordered by Western Sahara to the north and Senegal to the south. Its coastline is 720 km long. The EEZ of Mauritania covers an estimated area of 234.000 km<sup>2</sup>. Mauritania has some of the world's most fish-abundant waters due to strong upwelling coastal currents and a large continental shelf favouring the development of fisheries resources. Mauritanian legislation distinguishes three kinds of fishing: artisanal (canoes), coastal and industrial. The main species targeted are cephalopods (octopus, cuttlefish, squid), demersal fish (hake, breams, mullets, rays, sharks, etc.), crustaceans (shrimp, rocky lobster and deep-water crabs), small pelagics (sardinellas, sardines, horse mackerels, mackerels, etc.) and tunas. Total annual catches in the Mauritanian EEZ reach between 800.000 and 1,2 million tonnes.

#### ARTISANAL AND COASTAL FISHERIES

The artisanal fleet mostly targets octopus and has grown in the last decade. The number of canoes rose from 4.000 in 2007 up to 7.000 in 2013. About 100 vessels represent the Mauritanian coastal fleet, but only half of them are active; most of them target octopus. Foreign coastal fishing vessels operating in Mauritanian waters are mostly purse-seiners targeting small pelagics. In 2015, there were 450 purse-seiners fishing in Mauritanian waters. Artisanal and coastal fleets caught more than 344.000 tonnes of fish in 2013 (against 100.000 tonnes in 2009). This increasing trend is mainly the result of the increasing fishing effort on small pelagics (83% of catches in 2013) due to the growth of the fishmeal industry<sup>59</sup>.

#### INDUSTRIAL FISHERIES

In contrast to the artisanal and coastal fleets, the industrial fleet targeting demersal species shrank as the number of vessels operating in the Mauritanian EEZ fell from 380 in 2002 to 137 in 2013. Cephalopods account for 70% of landing volumes (about 40.000 tonnes in total in 2013). In 2013, the industrial pelagic fleet operating in Mauritanian EEZ included about 50 vessels, most of them being foreign vessels. In 2013, eight seiners owned by a private Asian company operated under Mauritanian fishing license. After having reached a peak at 1,2 million tonnes in 2010, small pelagic industrial catches have been slightly but constantly declining, after several foreign vessels stopped their activity in Mauritanian waters. In 2013, industrial pelagic catches reached 600.000 tonnes, of which 40% were sardinellas. Tuna and tuna-like species fisheries involve vessels operating all along the West African coast. Tuna catches reached 47.000 tonnes in 2013.

<sup>59</sup><http://extwprlegs1.fao.org/docs/pdf/mau152643.pdf>

All catches by EU vessels are landed or transshipped in Mauritania. The small pelagics are transhipped to Gulf of Guinea countries (Nigeria and Ivory Coast in particular) as well as to Russia and neighbouring countries. Demersal species enter into the distribution cycle of the Spanish market.

The access of foreign fleets to Mauritanian fishing zones is made possible through bilateral agreements (EU), private arrangements with private companies (Chinese and Turkish for small pelagics and Japanese for tuna) or by the acquisition of private licenses.

From 2007 to 2013, industrial fishing represented between 85% and 90% of total reported catch by artisanal and industrial activities (1 million tonnes in 2012). About 90% of industrial catches were small pelagics (of which 30% caught by EU vessels)<sup>60</sup>. In 2016, industrial catches reached 740.000 tonnes, according to national sources.

The volume of fish landed in Mauritanian ports was estimated at 400.000 tonnes in 2014, accounting for approximately 30% of the total catches in Mauritanian waters. This share has been increasing constantly in the last decade due mostly to significant improvements in landing facilities and port infrastructure. Although some small pelagic stocks are considered to be overexploited or exploited slightly above sustainable level (in particular sardinella and mackerel), several stocks targeted by artisanal fleets remain underexploited (shrimps and clam) and may be considered as a development opportunity for the future of the local industry<sup>61</sup>.

## NATIONAL CATCH

According to FAO, Mauritanian catches (i.e. vessels operating under national license) exceeded 400 thousand tonnes in 2015. Sardinellas were by far the main species caught with 190 thousand tonnes caught in 2015, accounting for 47% of the total catches. Other important species groups were coastal fishes (11%), bonga shad (9%), octopuses (8%) and jack and horse mackerels (8%).

Table 5. **CATCHES IN MAURITANIA BY MAIN SPECIES (tonnes)**

Species	Volume	Value	Volume	Value	Volume	Value
Sardinellas	147.651	165.031	216.248	205.026	233.814	190.165
Coastal fishes	20.114	16.117	25.115	19.703	29.813	42.945
Bonga shad	1.416	2.382	2.862	90.349	43.326	36.372
Octopuses	15.801	16.716	25.227	24.733	20.798	33.249
Jack and horse mackerels	33.710	47.154	55.553	322	2.707	32.197
Freshwater fishes <sup>62</sup>	15.000	15.000	15.000	15.000	15.000	15.000
Sardine	16.674	27.955	11.361	1.491	1.532	14.793
Flounders, halibuts, soles	195	1.049	1.752	2.042	2.702	11.715
Crustaceans	962	1.260	4.742	2.781	1.063	2.889
Other	24.715	79.347	79.849	26.386	27.584	24.451
<b>Total</b>	<b>276.238</b>	<b>372.011</b>	<b>437.709</b>	<b>387.833</b>	<b>378.339</b>	<b>403.776</b>

Source: FAO – Fishstat.

## OTHER SECTORS: INLAND FISHERIES AND MARINE AQUACULTURE

Inland fisheries and marine aquaculture activities are very limited though they are considered to have an important potential. Inland fishery production reaches yearly approximatively 2.500 tonnes annually. Marine aquaculture is considered to have a high potential, especially for oyster and algae farming. The production of oysters was below 40 tonnes in 2014<sup>63</sup>.

<sup>60</sup>[https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/report-mauritania-2014\\_fr.pdf](https://ec.europa.eu/fisheries/sites/fisheries/files/docs/body/report-mauritania-2014_fr.pdf)

<sup>61</sup> Source: Tuna Fisheries Transparency Initiative in ATLAFCO zone, 2016.

<sup>62</sup> This assessment seems unrealistic, it should be closer to 2 500 tonnes, according to national sources.

<sup>63</sup> Ministry of Fisheries and Maritime Economy of Mauritania <http://extwprlegs1.fao.org/docs/pdf/mau152643.pdf>



## PROCESSING

In general, Mauritanian fish products are sold with a low level of processing: fresh whole on the domestic market and frozen whole for exports. Processing stage includes only initial steps (heading, gutting, fileting) before being frozen, as well as traditional processing (drying and salting). However, the fishmeal and fish oil industry has become more and more important mostly in Nouadhibou, and to a lesser extent in the area of Nouakchott.

Processing small pelagics into fishmeal and fish oil has become very important in the Mauritanian fishery industry. In 2006 only 5 factories were processing fishmeal and oil. In 2016 they were 40. These factories are related to foreign investments (mainly Chinese, Turkish, and to a lesser extent, Moroccan and Russian). In 2014, the volume of small pelagics processed into fishmeal was above 300.000 tonnes<sup>64</sup> and is assessed to have been around 450.000 tonnes in 2017, according to the Mauritanian fisheries Ministry.

## MAURITANIA AND THE EU: FISHERIES PARTNERSHIP

The current four-year Protocol to the Fisheries Partnership Agreement (FPA) entered into force in November 2015. Under the Protocol, the EU fleet is allowed to fish in Mauritanian waters for shrimp, demersal fish, tuna and pelagic fish, up to total of 287.050 tonnes a year. In addition to the fees paid by the European fleet, the EU pays a financial contribution of 61,6 million euros per year for this partnership. A share of this amount aims to support local fishing communities and improve fisheries governance<sup>65</sup>.

## 5.2 TRADE

### MAURITANIAN GLOBAL FISH TRADE

According to FAO, in recent years, Mauritanian exports of fishery products have grown in value: from EUR 148 million (134 000 tonnes) in 2010 to EUR 512 million (367 000 tonnes) in 2015. In comparison, imports of fishery products are much lower: EUR 1,3 million imported in 2015 (3 860 tonnes), according to FAO. In 2015 the country had a positive trade balance of EUR 512 million.

Table 6. **MAURITANIAN TRADE BALANCE FOR SEAFOOD (million EUR)**

Trade flow	2013	2014	2015
Exports	260	330	513
Imports	0,8	1,0	1,3
<b>Balance</b>	<b>260</b>	<b>329</b>	<b>512</b>

Source: FAO fish trade and commodity statistics.

According to the Mauritanian Ministry of Fisheries and Maritime Economy, over the first 11 months in 2016 Mauritanian seafood exports reached MRO<sup>66</sup> 222 billion (EUR 520 million) for a volume of 728 thousand tonnes. Fishery sector is estimated to account for almost 50% of total Mauritanian exports.

The main destination for Mauritanian exports of fishery products is Europe (36%), followed by Asia (28%) and Africa (24%), and to a lesser extent Russia (11%).

<sup>64</sup><http://extwprlegs1.fao.org/docs/pdf/mau152643.pdf>

<sup>65</sup><https://ec.europa.eu/fisheries/cfp/international/agreements/mauritania>

<sup>66</sup> Mauritanian ouguiya



Table 7. **MAIN DESTINATION MARKETS FOR MAURITANIAN EXPORTS (JANUARY–NOVEMBER 2016)**

Countries	Volume (tonnes)	Value (million MRO)
Africa	428.930	54.040
America	610	227
Asia	79.642	63.067
Europe	117.337	79.314
Russia	101.040	25.253
<b>Total</b>	<b>727.558</b>	<b>221.902</b>

Source: Ministère des Pêches et de l'Economie Maritime<sup>67</sup>.

Over the 11 first months in 2016, the main fishery products exported were cephalopods (35% in value), and frozen fish ((29%). Other important products exported were pelagics (13%) and fishmeal (13%). Fresh fish accounted only for 1% of exports value.

Table 8. **MAIN PRODUCTS EXPORTED FROM MAURITANIA (JANUARY – NOVEMBER 2016)**

Product	Volume (tonnes)	Value (million MRO)
Cephalopods	33.436	76.913
Frozen products	401.241	64.428
Pelagics	148.017	28.465
Fishmeal	68.842	28.081
Fish oil	17.749	7.227
Fresh	24.473	4.837
Demersal	4.388	3.146
Lobster	1.232	2.254
Shrimp	969	2.235
Preserved	751	1.142
SSF	999	185
Others	25.460	2.988
<b>Total</b>	<b>727.558</b>	<b>221.902</b>

Source: Ministère des Pêches et de l'Economie Maritime.

## MAURITANIA AND THE EU

In 2016, EU imports of Mauritanian fishery products totalled EUR 278 million and 79.000 tonnes. The most important species imported were octopus (35% of total import value), other marine fish (17%), fishmeal (13%) and to a lesser extent squid and fish oil (both 8%). Most of seafood imports from Mauritania were frozen products (57% of import value). The rest was imported fresh (22%) or under unspecified preservation state (21%).

The main EU destination for Mauritanian exports was by far Spain (67% of total value). Other important EU importers of Mauritanian fishery products were Italy (8%), Denmark (7%), France (6%), and Germany (5%).

<sup>67</sup> [http://www.peches.gov.mr/IMG/pdf/exportation\\_globale-2.pdf](http://www.peches.gov.mr/IMG/pdf/exportation_globale-2.pdf)

Table 9. **TOP EU MARKETS FOR SEAFOOD IMPORTS FROM MAURITANIA** (value in 1000 EUR and volume in tonnes)

Country	2014		2015		2016	
	Value	Volume	Value	Volume	Value	Volume
Spain	115.286	26.598	174.067	35.426	185.611	35.396
Italy	24.607	4.295	28.690	5.482	23.593	3.679
Denmark	23.804	23.760	15.538	11.648	18.860	14.012
France	9.578	5.996	11.434	5.981	16.633	7.883
Germany	18.116	18.343	2.948	2.602	14.573	11.404
Greece	5.946	2.195	7.776	2.327	8.684	3.864
Portugal	19.782	2.839	8.102	1.253	6.112	894
Netherlands	1.522	1.193	1.535	903	2.155	1.239
Others	1.554	881	792	313	1.472	782
<b>Total</b>	<b>220.194</b>	<b>86.100</b>	<b>250.883</b>	<b>65.936</b>	<b>277.694</b>	<b>79.152</b>

Source: COMEXT.

Table 10. **TOP MAIN COMMERCIAL SPECIES IMPORTS FROM MAURITANIA** (value in 1000 EUR and volume in tonnes)

Species	2014		2015		2016	
	Value	Volume	Value	Volume	Value	Volume
Octopus	70.990	12.122	94.805	16.033	95.973	13.374
Other marine fish	34.278	7.336	40.148	7.790	46.693	9.021
Fishmeal	38.182	39.510	21.360	16.828	37.068	29.492
Squid	10.320	1.932	20.729	3.725	22.098	3.753
Fish oil	17.312	15.401	15.099	10.434	21.230	12.696
Other seabreams	9.920	2.151	13.216	2.915	14.722	3.233
Rock lobster and sea crawfish	11.590	872	16.566	948	11.642	514
Others	27.603	6.776	28.961	7.263	28.269	7.071
<b>Total</b>	<b>875</b>	<b>183</b>	<b>917</b>	<b>180</b>	<b>943</b>	<b>183</b>

Source: COMEXT via EUMOFA.

In comparison to imports, EU exports to Mauritania are much lower. In 2016, EU exports of seafood to Mauritania totalled EUR 5,8 million and 6.694 tonnes. The most important main commercial species exported by value were other products (33% of total value, mostly soups and broths and preparations), skipjack tuna (24%), and to a lesser extent sardine (13%) and yellowfin tuna (11%). These EU exports concerned mostly frozen products (57%) and prepared and preserved products (43%). In 2016, the main EU exporters to Mauritania were by far Spain (76% of total value) and Germany (22%, mostly small pelagics).

### 5.3 Strategy and prospective

In 2014, the Mauritanian Ministry of Fisheries and Marine Affairs has published a document providing the strategy for the fisheries sector over the 2014-2019 period<sup>68</sup>. This strategical plan has 6 main objectives:

- **Improving knowledge on marine resources and environment:** conservation of marine and coastal environment, evaluation of stocks status and dynamics, enhancing research capacity.

<sup>68</sup> <http://extwprlegs1.fao.org/docs/pdf/mau152643.pdf>

- **Optimizing fisheries management:** planning of fisheries activities, management of the allocation of access and resource (licenses, TAC and quotas), enhancing surveillance of fishing activities.
- **Enhancing integration of the fishery sector in the national economy:** development of facilities and processing industries in coordination with other policies objectives (coastal management, policy against poverty, etc.), contributing to food security, development of professional training in the field of marine economy (fisheries, processing, aquaculture), enhancing health and quality control.
- **Promoting inland fisheries and aquaculture:** development of a legal framework for these activities (in inland and marine areas), deepening knowledge and competences on technical aspects (production system, species, water management, etc.), increase in production (new aquaculture projects, pilot-projects).
- **Developing marine affairs** (in the context of blue growth): enhancing onboard security, improving coastal and public-owned coastal land governance, enhancing protection of marine environment, development of marine and river transport (legal framework and facilities to be developed), development of ancillary marine jobs and improvement of human resources management.
- **Enhance fisheries governance:** adaptation and modernization of the legal and institutional framework, promotion of dialogue in the decision making with the sector's stakeholders, improving transparency and cooperation in the field of sustainable management of the fishery sector.

This strategy aims to make the fishery sector grow, through sustainable development, modernization and diversification. Quantitative objectives have been drafted and some of them, market-related, are provided in the table below.

Table 11. **MARKET – RELATED QUANTITATIVE OBJECTIVES OF THE MAURITANIAN STRATEGY FOR THE FISHERIES SECTOR**

Indicator	State of play 2013/2014	Objective 2019/2020
GDP fishery sector (in million USD)	142,6	226,6
EEZ Fisheries production in volume (tonnes)	800.000	1.200.000
EEZ Fisheries production in value (million USD)	740	900
GDP processing sector (million USD)	105,52	198,79
% of production landed in Mauritania	15%	60%
Inland fisheries and aquaculture (tonnes)	1.000	20.000
Oyster farming production (tonnes)	40	250
Algae farming production (tonnes)	0	100
Domestic fish consumption	6 kg/year/capita	10 kg/year/capita

Source: Ministère des Pêches et de l'Economie Maritime.

## 6 Global highlights

**EU / Southern Pacific / SPRFMO:** The sixth annual meeting of the South Pacific Regional Fisheries Management Organisation (SPRFMO) held in Lima, Peru (30 January - 3 February 2018) resulted in important progress on key issues. On the basis of the advice from the Scientific Committee the total allowable catch (TAC) of jack mackerel was increased by more than 15% for 2018. Accordingly, the EU quota in 2018 will rise to 35.000 tonnes, opening new opportunities for EU fishermen. Southern Pacific Regional Fisheries Management Organisation (SPRFMO) agreed on the comprehensive set of implementing rules, ensuring a more efficient control of the fleets<sup>69</sup>.



**EU / Bosnia and Herzegovina / Mediterranean:** Minister of Foreign Trade and Economic Relations of Bosnia and Herzegovina (BiH) Mirko Šarović signed the Malta MedFish4Ever Declaration, a multilateral strategy, proposed by the European Union, for safeguarding the future of the Mediterranean fishermen and coastal communities. This Declaration represents a practical example of EU's neighbourhood policy and has been signed by the European Commission and 15 northern and southern Mediterranean coastline states. The Declaration sets out common objectives for the next ten years, based on ambitious and realistic targets<sup>70</sup>.

**FLAG / Baltic Sea:** Four Fisheries Local Action Groups (FLAGs) have joined the initial ten FLAGs that came together last January to collaborate on the transnational cooperation scheme to research, analyse and raise awareness on the impact of seals and cormorants on fisheries communities and fish stocks in the Baltic Sea. The partnership agreement is signed and the 14 FLAGs in the coastal areas of Sweden, Finland, Estonia and Germany have launched a joint project aimed at sustainable solutions to the negative impact caused by seals and cormorants on fishing activities and stocks<sup>71</sup>.

**EU / Fisheries Organisations / Guidelines:** The Guidelines to strengthen organizations representing the small-scale fisheries sector have been prepared as practical action points to strengthen small-scale fisheries organisations and help them make their voices heard in the decision-making process. Based on interviews with fishermen and fisheries organisations from the Atlantic (France, Spain and Portugal), the guidelines are made up of practical action sheets, each referring to articles from the EMFF regulation and according to individual Member States and national administrations<sup>72</sup>.

**Croatia / Sports and Recreational fisheries / Regulation:** In Croatia, the new regulation on 'Recreational and sport fisheries' has been adopted in December 2017. The new Regulation brings some more stringent rules and obligations to fishers about fish tagging and about purchases of licenses for locals and EU citizens – where now the similar rules applies for both, without exceptions. Among the key changes there is an obligation to cut the tail of fish of 18 fish species that are recognized as economically important, and that are caught in recreational or sports fisheries in order to be distinguished from fish caught in commercial fisheries<sup>73</sup>.

**Scotland / Aquaculture:** SCOTTISH farmed salmon exports reached a record high of EUR 647 million last year, 35% up on the previous year's total. Export tonnage of salmon had increased in 2017, by 26%. The US remains the largest market for Scottish salmon with sales worth EUR 216 million, followed by France (EUR 211 million), China (EUR 77 million) and the Republic of Ireland (EUR 38 million). Taiwan secured its place in the top five markets with sales worth EUR 18 million, above Germany, Poland, Canada, Belgium, and the Netherlands, which make up the top ten export destinations<sup>74</sup>.

**Chile / Supply:** Chile exports for the year 2017 totaled EUR 4.61 billion, a 19,6% increase over exports in 2016. The total harvest for the seafood sector totaled 1.15 million tonnes, an 18% increase over 2016. Atlantic salmon contributed the largest share, representing 51% of the harvest, followed by mussels (29%) and coho salmon (12%)<sup>75</sup>.

<sup>69</sup> [https://ec.europa.eu/fisheries/promising-outcome-annual-negotiations-southern-pacific-regional-fisheries-management-organisation\\_en](https://ec.europa.eu/fisheries/promising-outcome-annual-negotiations-southern-pacific-regional-fisheries-management-organisation_en)

<sup>70</sup> <http://europa.ba/?p=54644>

<sup>71</sup> [https://webgate.ec.europa.eu/fpfis/cms/farnet2/news-events/news/professional-fishermen-baltic-sea-area-cooperate-secure-future-their-trade\\_en](https://webgate.ec.europa.eu/fpfis/cms/farnet2/news-events/news/professional-fishermen-baltic-sea-area-cooperate-secure-future-their-trade_en)

<sup>72</sup> [https://webgate.ec.europa.eu/fpfis/cms/farnet2/news-events/news/guidelines-strengthen-organizations-representing-small-scale-fishing-sector\\_en](https://webgate.ec.europa.eu/fpfis/cms/farnet2/news-events/news/guidelines-strengthen-organizations-representing-small-scale-fishing-sector_en)

<sup>73</sup> [https://narodne-novine.nn.hr/clanci/sluzbeni/2017\\_12\\_122\\_2785.html](https://narodne-novine.nn.hr/clanci/sluzbeni/2017_12_122_2785.html)

<sup>74</sup> <https://www.fishupdate.com/scottish-salmon-exports-soar-record-600m/>

<sup>75</sup> <https://www.seafoodsource.com/news/supply-trade/chiles-seafood-exports-grew-19-6-percent-in-value-in-2017%22>

## 7 Macroeconomic context

### 7.1 Marine fuel

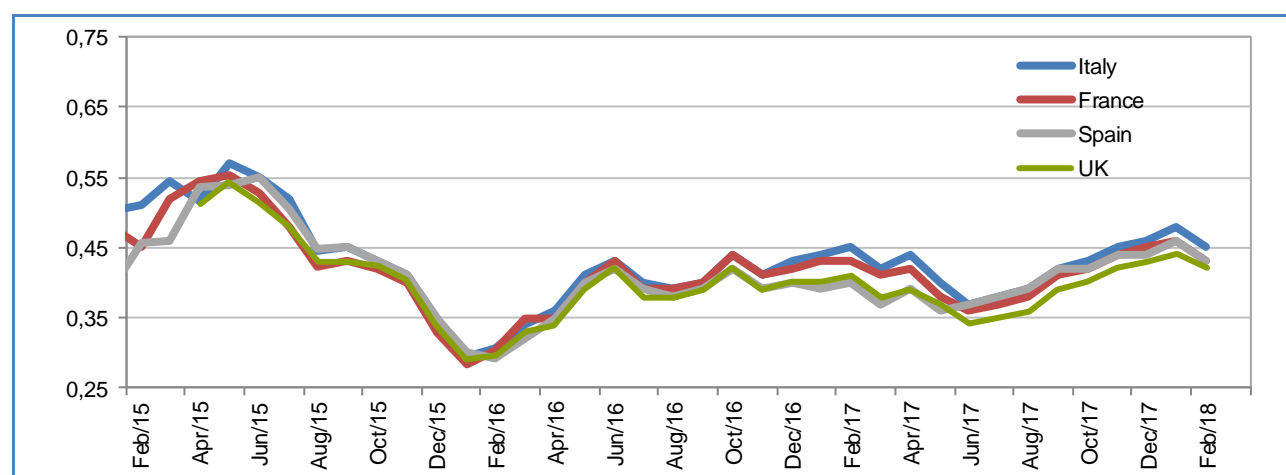
Average prices for marine fuel (low-sulfur oil) in **February 2018** ranged between 0,42 and 0,45 EUR/litre, in ports in **France, Italy, Spain,** and the **UK**. These prices were about 6% lower than in the previous month, but from February 2017, they remained stable in Italy and France, and increased in Spain and the UK.

Table 12. AVERAGE PRICE OF MARINE DIESEL IN ITALY, FRANCE, SPAIN, AND THE UK (EUR/litre)

Member State	Feb 2018	Change from Jan 2018	Change from Feb 2017
France (ports of Lorient and Boulogne)	0,43	-7%	0%
Italy (ports of Ancona and Livorno)	0,45	-6%	0%
Spain (ports of A Coruña and Vigo)	0,43	-7%	7%
The UK (ports of Grimsby and Aberdeen)	0,42	-5%	2%

Source: Chamber of Commerce of Forlì-Cesena, Italy; DPMA, France; Spain; ARVI (January 2013–March 2015); MABUX (April 2015–February 2018).

Figure 49. AVERAGE PRICE OF MARINE DIESEL IN ITALY, FRANCE, SPAIN, AND THE UK (EUR/litre)



Source: Chamber of Commerce of Forlì-Cesena, Italy; DPMA, France; Spain; ARVI (January 2013–March 2015); MABUX (April 2015–February 2018).

### 7.2 Consumer prices

The EU annual inflation rate was at 1,6% in January 2018, down from 1,7% in December 2017. A year earlier it was 1,7%.

**Inflation: lowest rates in January 2018, compared with December 2017.**



**Inflation: highest rates in January 2018, compared with December 2017.**

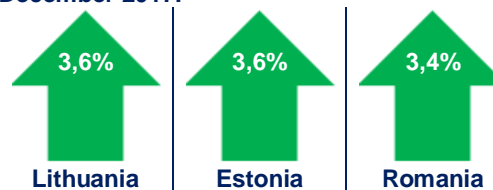


Table 13. HARMONISED INDEX OF CONSUMER PRICES IN THE EU (2015 = 100)

HICP	Jan 2016	Jan 2017	Dec 2017	Jan 2018	Change from December 2017		Change from January 2017	
Food and non-alcoholic beverages	99,98	101,71	103,39	103,99	↑	0,58%	↑	2,24%
Fish and seafood	103,30	106,56	107,54	109,43	↑	1,76%	↑	2,69%

Source: Eurostat.

## 7.3 Exchange rates

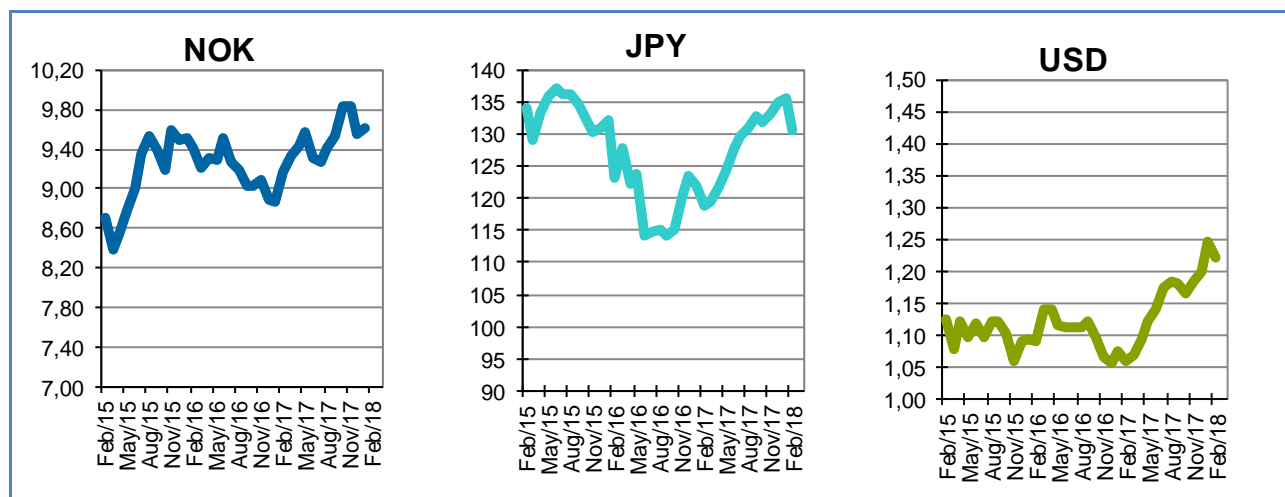
Table 14. EXCHANGE RATES FOR SELECTED CURRENCIES

Currency	Feb 2016	Feb 2017	Jan 2018	Feb 2018
NOK	9,5043	8,8693	9,5620	9,6153
JPY	123,14	118,83	135,60	130,72
USD	1,0888	1,0597	1,2457	1,2214

Source: European Central Bank.

In February 2018, the euro appreciated against the Norwegian krone (+0,6%), and depreciated against the US dollar (-2,0%) and Japanese yen (-3,6%) from January 2018. For the past six months, the euro has fluctuated around 1,20 against the US dollars. Compared with a year earlier (February 2017), the euro has appreciated 8,4% against the Norwegian krone, 10,0% against the Japanese yen, and 15,3% against the US dollar.

Figure 50. TREND OF EURO EXCHANGE RATES



Source: European Central Bank.

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This report has been compiled using EUMOFA data and the following sources:

**First sales:** European Commission

**Consumption:** EUROPANEL.

**Case study:** European Commission, Kontali Analyse, Marine Harvest Industry, Norwegian Directorate of Fisheries, FAO, Mauritanian ouguiya, Ministry of Fisheries and Maritime Economy of Mauritania.

**Global supply:** European Commission, Directorate-General for Maritime affairs and Fisheries (DG MARE); Ministry of Agriculture of Croatia; FishUpdate.com, seafoodsource.com.

**Macroeconomic context:** EUROSTAT; Chamber of Commerce of Forlì-Cesena, Italy; DPMA, France; ARVI, Spain; MABUX, European Central Bank.

The underlying first-sales data is in a separate Annex available on the EUMOFA website. Analyses are made at aggregated (main commercial species) level and according to the EU Electronic recording and reporting system (ERS).

The **European Market Observatory for Fisheries and Aquaculture Products (EUMOFA)** was developed by the European Commission, representing one of the tools of the new Market Policy in the framework of the reform of the Common Fisheries Policy. [Regulation (EU) No 1379/2013 art. 42].

As a **market intelligence tool**, EUMOFA provides regular weekly prices, monthly market trends, and annual structural data along the supply chain.

The database is based on data provided and validated by Member States and European institutions. It is available in 24 languages.

EUMOFA website is publicly available at the following address: [www.eumofa.eu](http://www.eumofa.eu).