

# Monthly Highlights

No. 4 / 2019

E U M O F A

European Market Observatory for  
Fisheries and Aquaculture Products

## In this issue

In February 2019, first-sales value and volume grew in Belgium, France, Italy, Portugal, Sweden, and the UK over February 2018. In the same period, they experienced downward trends in Latvia, Lithuania, Poland, the Netherlands, and Norway.

Import prices of fresh whole sole from Iceland reached 11,76 EUR/kg in week 14 (the first week of April), up by 10,3% from the preceding four-week average of 10,66 EUR/kg.

Each year, the EU produces around 450–500 thousand tonnes of fishmeal and 150–200 thousand tonnes of fish oil. Denmark is by far the largest producer, accounting for almost 50% of the total fish meal and fish oil production.

Micro and small enterprises represent 86% of the total number fish and seafood processing companies in the EU. They provide 28% of the total number of jobs and of the total income generated by the sector.

The Irish mussel industry was valued at EUR 11,7 million in 2018. Almost 14.000 tonnes of mussels were produced in Ireland last year. Bottom grown mussels made up 4.800 tonnes of that total.



## Contents



### First sales in Europe

Common sole (Denmark, the Netherlands, the UK) and lemon sole (Denmark, France, the UK)



### Extra-EU imports

Weekly average EU import prices for selected products from selected countries of origin



### Consumption



### Case studies

Fishmeal and fish oil  
The EU fish processing industry



### Global Highlights



### Macroeconomic context

Marine fuel, consumer prices, exchange rates



Find all data, information, and more at:  
[www.eumofa.eu](http://www.eumofa.eu)

Follow us on twitter:  
[@EU\\_MARE](https://twitter.com/EU_MARE) [#EUMOFA](https://twitter.com/EUMOFA)

# 1 First sales in Europe

In **January–February 2019**, 13 EU Member States (MSs) and Norway reported first-sales data for 10 commodity groups<sup>1</sup>. First-sales data are based on first-sales notes and data collected from auction markets.

## 1.1 Compared to the same period last year

**Increases in value and volume:** First sales grew in France, Italy, Portugal, and the UK. The increases were particularly high in Portugal due to higher harvests of anchovy and octopus.

**Decreases in value and volume:** First sales dropped in Belgium, Latvia, Lithuania, Poland, the Netherlands, Norway, and Sweden. The decrease was particularly sharp in Lithuania due to lower first sales of cod, which fell by more than 102 tonnes (EUR 0,13 million less).

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

Country	January-February 2017		January-February 2018		January-February 2019		Change from January-February 2018	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
BE	3.380	10,87	2.767	10,21	2.589	9,59	-6%	-6%
DK	42.852	54,46	43.647	54,04	49.077	53,43	12%	-1%
EE	11.240	2,32	10.677	2,04	11.103	2,00	4%	-2%
FR	31.978	109,34	29.513	104,27	32.263	106,03	9%	2%
IT	11.186	40,80	10.216	40,14	10.539	44,69	3%	11%
LV	12.886	2,63	10.475	1,92	9.929	1,71	-5%	-11%
LT	321	0,43	428	0,44	233	0,27	-46%	-39%
NL	14.789	41,29	42.357	66,29	31.020	53,88	-27%	-19%
NO	542.181	504,40	596.788	470,49	519.989	438,29	-13%	-7%
PL	20.210	6,60	30.012	8,42	21.861	5,61	-27%	-23%
PT	8.687	28,89	10.604	26,59	13.358	32,30	26%	21%
SE	13.606	9,13	31.766	15,09	31.369	13,31	-1%	-12%
UK	83.953	133,61	54.508	85,11	59.786	117,08	10%	38%

Source: EUMOFA (updated 12.04.2019).

\* Volume data is reported in net weight for the EU MSs and in live weight equivalent (lwe) for Norway. Prices are reported in EUR/kg (without VAT). For Norway, they are reported in EUR/kg of live 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, other marine fish, salmonids, small pelagics, tuna and tuna-like species.

## 1.2 In February 2019

**Increases in value and volume:** First sales grew in Belgium, France, Italy, Portugal, Sweden, and the UK. The increase was particularly sharp in Portugal because of higher supplies of anchovy and octopus and in the UK due to mackerel. Sweden saw a high increase in volume due to sprat (up by 6.142 tonnes).

**Decreases in value and volume:** First sales dropped in Latvia, Lithuania, Poland, the Netherlands, and Norway. The decreases were particularly high in Lithuania and Norway because of cod. The Netherlands also experienced sharp decrease in first sales due to lower harvests of Atlantic horse mackerel and mackerel.

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

Country	February 2017		February 2018		February 2019		Change from February 2018	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
BE	1.463	5,24	1.042	4,42	1.123	4,52	8%	2%
DK	18.739	31,25	19.259	24,70	20.694	21,75	7%	-12%
EE	6.110	1,22	4.859	0,96	4.894	0,90	1%	-6%
FR	16.063	53,17	14.944	49,56	16.615	53,02	11%	7%
IT	5.895	22,36	4.353	17,92	5.389	22,67	24%	27%
LV	6.568	1,32	5.375	1,01	5.172	0,88	-4%	-12%
LT	140	0,19	258	0,24	108	0,13	-58%	-48%
NL	9.115	21,05	30.195	42,05	19.668	30,56	-35%	-27%
NO	303.156	283,76	386.370	291,31	264.852	216,77	-31%	-26%
PL	11.260	3,39	16.169	4,65	12.330	3,16	-24%	-32%
PT	4.309	13,49	4.822	12,64	6.794	16,20	41%	28%
SE	6.627	4,32	19.748	7,92	26.857	8,88	36%	12%
UK	23.412	45,97	11.792	23,40	20.073	42,55	70%	82%

Source: EUMOFA (updated 25.4.2019.); volume data is reported in net weight.

\*Volume data is reported in net weight for the EU MSs and in live weight equivalent (lwe) for Norway. Prices are reported in EUR/kg (without VAT). For Norway, they are reported in EUR/kg of live weight.

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

The most recent weekly first-sales data (up to week 20-2019) available in EUMOFA can be accessed [here](#).

The most recent monthly first-sales data for **March 2019** available in EUMOFA can be accessed [here](#).

### 1.3 First sales in selected countries


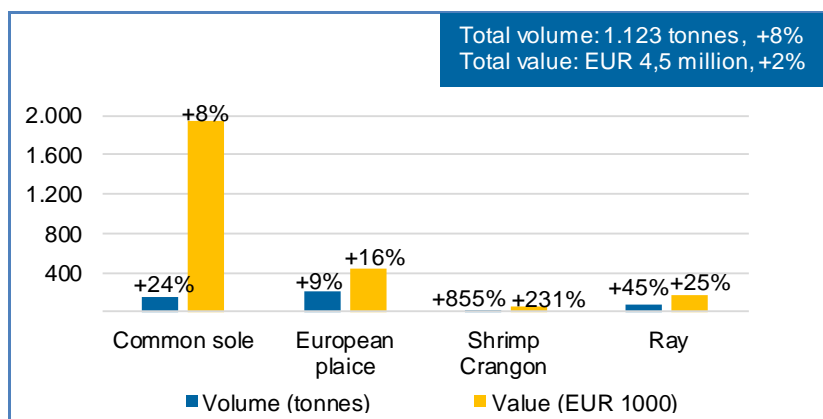
 In **Belgium** in **January–February 2019**, the main species that contributed to the overall decreases in first-sales value and volume (both down by 6%) from the same period in 2018 were scallop, cuttlefish, and European plaice. In **February 2019**, both value and volume were higher compared with February 2018. Common sole, European plaice, shrimp *Crangon* spp., and ray were the key species responsible for these trends. Among the top valued species, the average price of cuttlefish fell by 29% to 3,19 EUR/kg.

Figure 1. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN BELGIUM, FEBRUARY 2019**



Percentages show change from previous year.  
Source: EUMOFA (updated 15.04.2019).


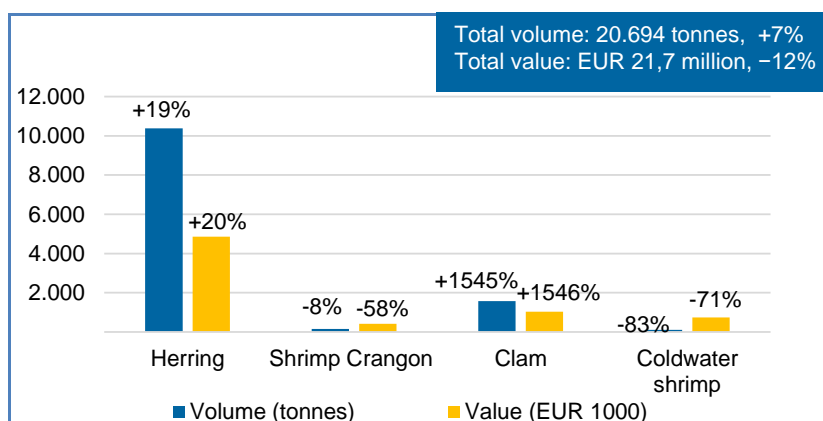
 In **Denmark** in **January–February 2019**, first-sales value fell slightly by 1%, while volume grew by 12% in comparison to the same period in 2018. In **February 2019**, first sales decreased in value, but increased in volume compared to February 2018. The value decline was mostly affected by coldwater shrimp, whereas volume grew due to high supplies of herring and clam. Average prices increased remarkably for coldwater shrimp (+68%), which is linked to its decreased supply.

Figure 2. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN DENMARK, FEBRUARY 2019**



Percentages show change from previous year.  
Source: EUMOFA (updated 15.01.2019).


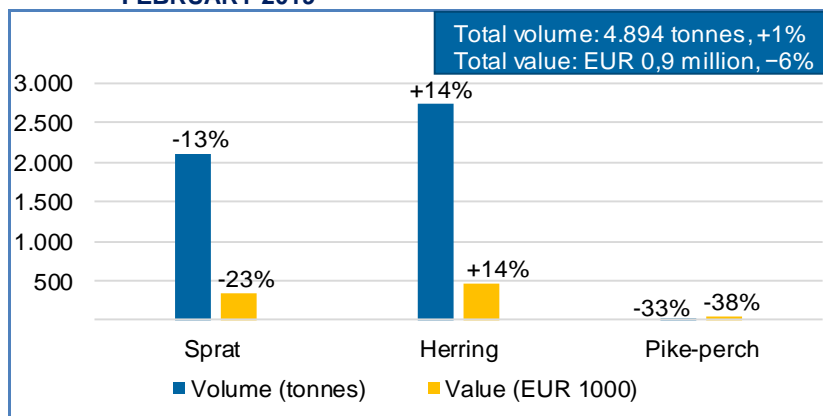
 In **Estonia** in **January–February 2019**, sprat was the main species behind a 2% decrease in overall first-sales value, while herring caused a 4% rise in overall volume, compared to the same period in 2018. The same species, together with pike-perch, were responsible for similar changes in overall first sales in **February 2019** compared to February 2018. The average price of herring remained stable, while that of sprat decreased by 11% to 0,16 EUR/kg, although its volume fell by 13%.

Figure 3. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN ESTONIA, FEBRUARY 2019**



Percentages show change from previous year.  
Source: EUMOFA (updated 15.04.2019).


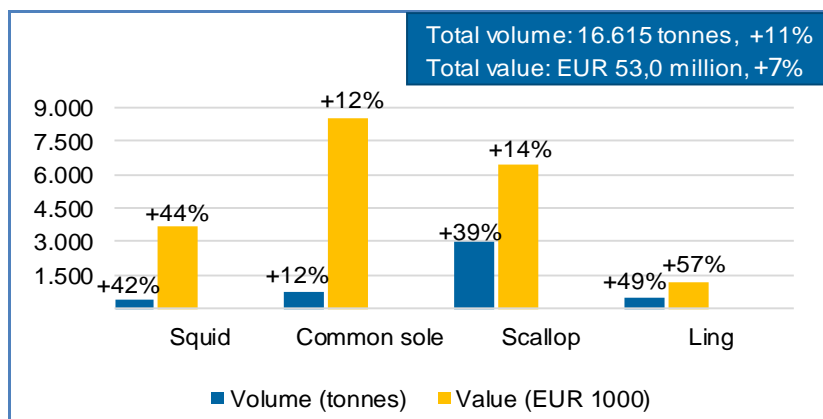
 In **France** in **January–February 2019**, first sales increased by 2% in value and 9% in volume over January–February 2018. Squid and common sole in value, and herring in volume, were the most responsible for the first sales increases. In **February 2019**, squid, common sole, scallop, ling, herring and sardine were the main species behind the overall increases in first sales over February 2018. Among the top valued species, prices fell for scallop (–18%, to 2,17 EUR/kg) and sardine (–47%, to 0,69 EUR/kg).

Figure 4. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN FRANCE, FEBRUARY 2019**



Percentages show change from previous year.  
Source: EUMOFA (updated 15.04.2019).


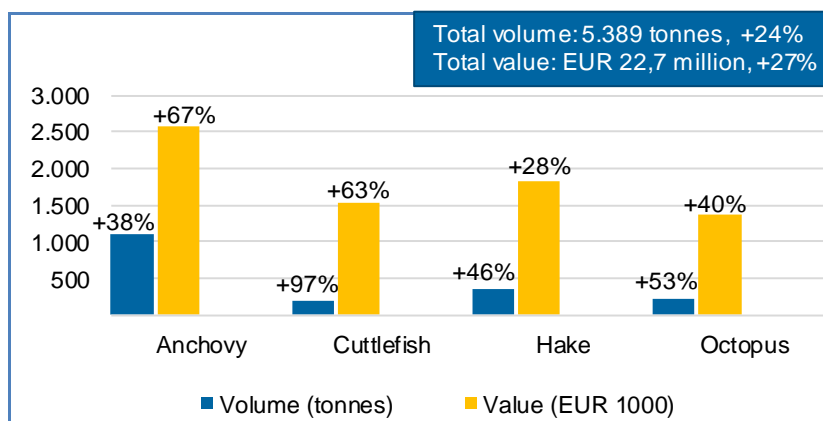
 In **Italy** in **January–February 2019** compared to the same period in 2018, first-sales value and volume grew by 11% and 3%, respectively, mainly due to anchovy and cuttlefish. In **February 2019**, first sales increased in both value and volume compared to February 2018. Anchovy, cuttlefish, hake, and octopus were the main species contributing to the increases. Among the top species, average prices increased for anchovy (+20% to 2,36 EUR/kg) and fell for cuttlefish (–18% to 7,43 EUR/kg).

Figure 5. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN ITALY, FEBRUARY 2019**



Percentages show change from previous year.  
Source: EUMOFA (updated 15.04.2019).


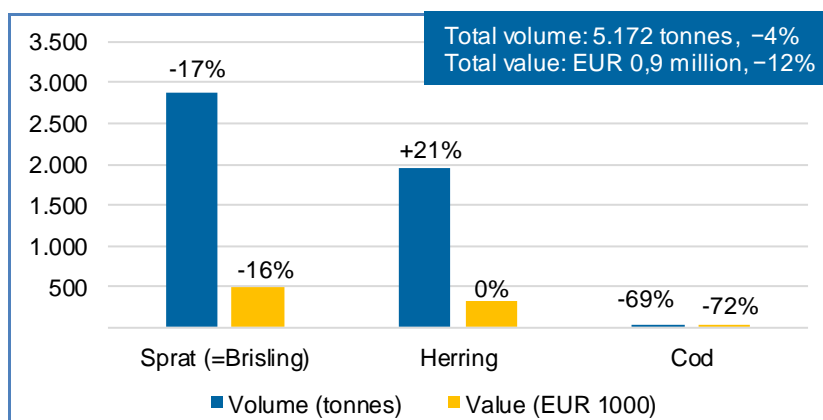
 In **Latvia** in **January–February 2019**, sprat was a primary driver of the first-sales value and volume decrease (–11% and –5%, respectively) from the previous year. In **February 2019**, first sales declined compared to February 2018. The main factors for this change were lower supplies of sprat, cod and European flounder. Increased volume of herring, the second most important species in terms of first sales, did not offset overall trends, but its average price decreased by 17% to 0,17 EUR/kg. The price of sprat increased slightly (+1%) to 0,17 EUR/kg.

Figure 6. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN LATVIA, FEBRUARY 2019**



Percentages show change from previous year.  
Source: EUMOFA (updated 15.04.2019).




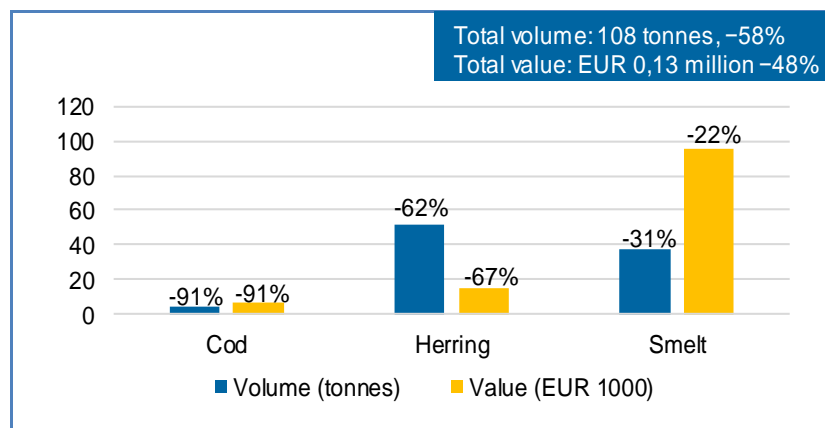
 In **Lithuania** in **January–February 2019**, first sales fell in overall value and volume by 39% and 46%, respectively, from January–February 2018. This was mainly driven by cod and smelt. In **February 2019**, first sales sharply dropped from February 2018 due to cod, herring, and smelt. The average price of cod remained relatively stable, while that of herring fell by 13% to 0,30 EUR/kg. Among other top species, the price of smelt increased by 13% to 2,52 EUR/kg.

Figure 7. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN LITHUANIA, FEBRUARY 2019**



Percentages show change from previous year.  
Source: EUMOFA (updated 15.04.2019).


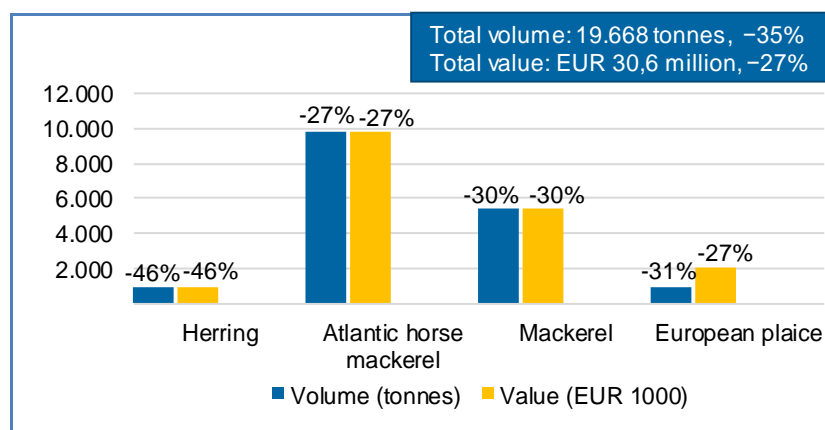
 In the **Netherlands** in **January–February 2019**, first-sales fell by 19% in value and 27% in volume compared to January–February 2018. The species most responsible for the decreases included small pelagics such as herring, mackerel, and Atlantic horse mackerel. In **February 2019**, similar downward trends continued compared with February 2018 for the same species. Among the top valued species, the average price of European plaice increased by 5% to 2,25 EUR/kg, while those of small pelagic species did not change significantly.

Figure 8. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN THE NETHERLANDS, FEBRUARY 2019**



Percentages show change from previous year.  
Source: EUMOFA (updated 15.04.2019).


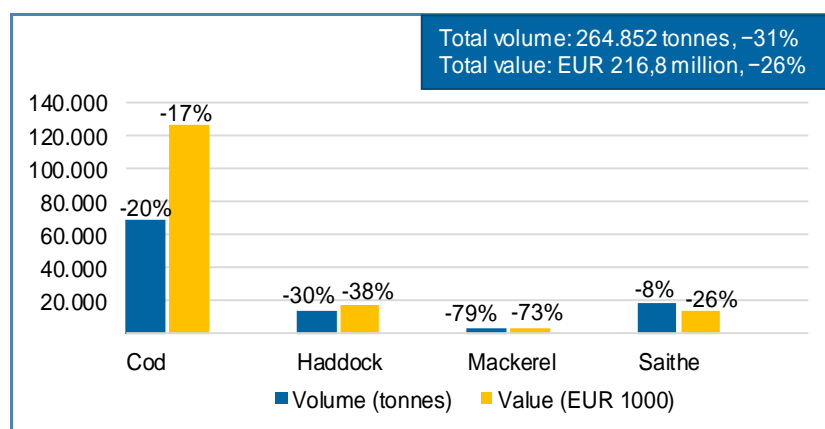
 In **Norway** in **January–February 2019**, first sales decreased by 7% in value and 13% in volume from the same period in 2018. The main contributors to these decreases were miscellaneous small pelagic species, cod, and haddock. In **February 2019** compared to February 2018, first-sales value and volume decreased for the same species as well as mackerel and saithe. The price of mackerel increased by 27% to 1,36 EUR/kg, and that of haddock decreased by 12% to 1,29 EUR/kg.

Figure 9. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN NORWAY, FEBRUARY 2019**



Percentages show change from previous year.  
Volume data is reported in live weight equivalent (lwe). Prices are reported in EUR/kg of live weight.  
Source: EUMOFA (updated 15.04.2019).


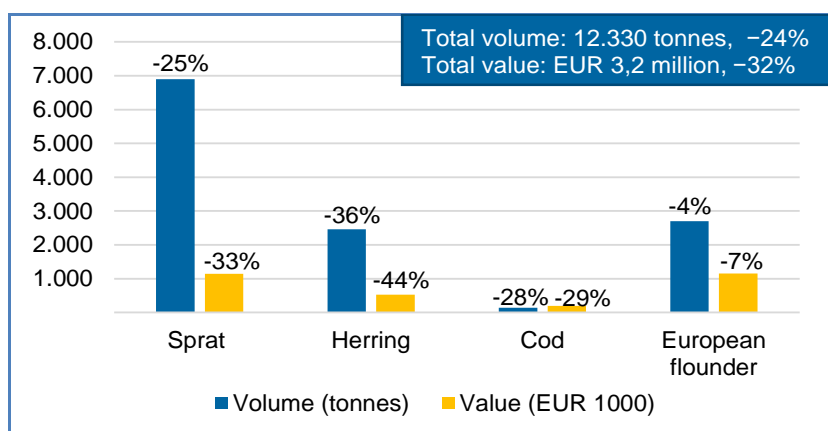
 In **Poland** in **January–February 2019**, first-sales decreased by 33% in value, and 27% in volume compared to the same period in 2018. The decline was mostly due to sprat, herring, and trout. In **February 2019**, first-sales value and volume continued the downward trend compared to February 2018, mainly because of the same species, as well as due to European flounder and cod. Most of the key species recorded decreases of their average price, of which herring and trout fell the most (–12%).

Figure 10. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN POLAND, FEBRUARY 2019**



Percentages show change from previous year.  
Source: EUMOFA (updated 15.04.2019).


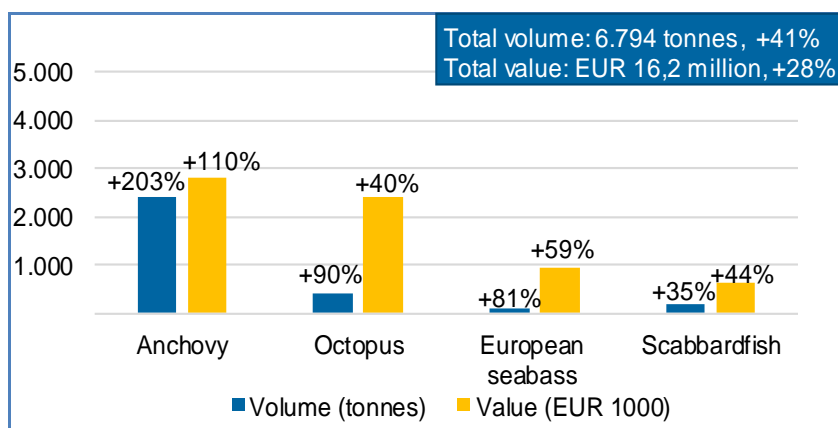
 In **Portugal** in **January–February 2019**, first-sales value increased by 21%, while volume increased by 26% compared to the same period in 2018. The growth was mostly because of high-valued octopus, anchovy, and clam. In **February 2019**, first-sales value and volume continued to grow compared to February 2018, mainly because of anchovy, octopus, European seabass, and scabbardfish. Anchovy and octopus recorded average price decreases of 31% and 26% due to higher supply.

Figure 11. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN PORTUGAL, FEBRUARY 2019**



Percentages show change from previous year.  
Source: EUMOFA (updated 15.04.2019).


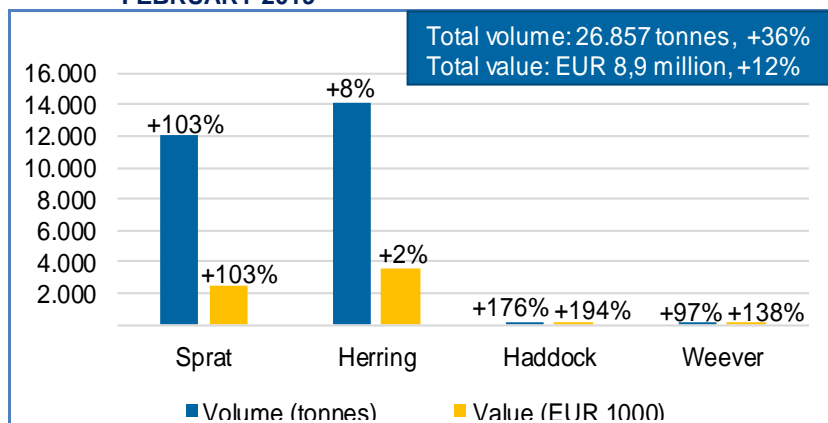
 In **Sweden**, lower first-sales value (–12%) and volume (–1%) in **January–February 2019** compared to the same period in 2018 were caused mainly by a lower supply of herring in January 2019. In **February 2019**, both value and volume increased over February 2018. This was caused by two small pelagic species, namely herring and sprat. The average price for herring decreased by 6% to 0,25 EUR/kg, whereas that of weever increased by 20% to 0,27 EUR/kg.

Figure 12. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN SWEDEN, FEBRUARY 2019**



Percentages show change from previous year.  
Source: EUMOFA (updated 15.04.2019).


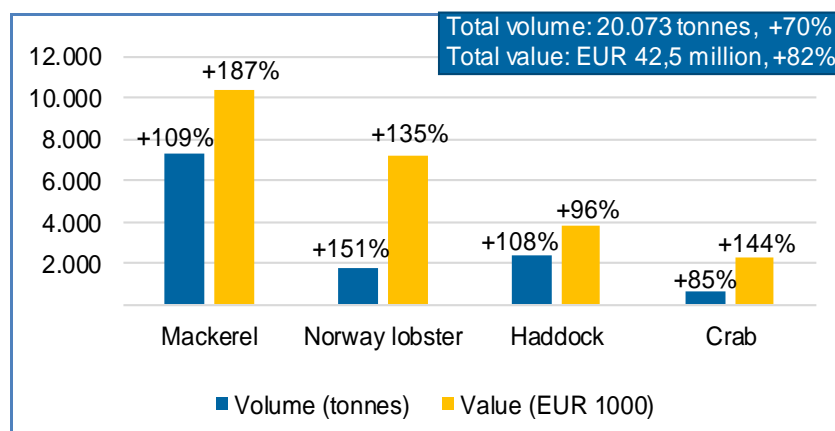
 In the **UK** in **January–February 2019**, first-sales value and volume increased by 38% and 10%, respectively, compared to the same period in 2018. The value increase was mainly caused by mackerel, while volume grew for haddock and Norway lobster. In **February 2019**, higher first sales of mackerel and Norway lobster caused an overall first-sales increase from February 2018. Other contributing species included haddock, cod, and squid. The average price increased for mackerel (+38% to 1,41 EUR/kg) and crab (+32% to 3,53 EUR/kg).

Figure 13. **FIRST SALES OF MAIN COMMERCIAL SPECIES IN THE UK, FEBRUARY 2019**

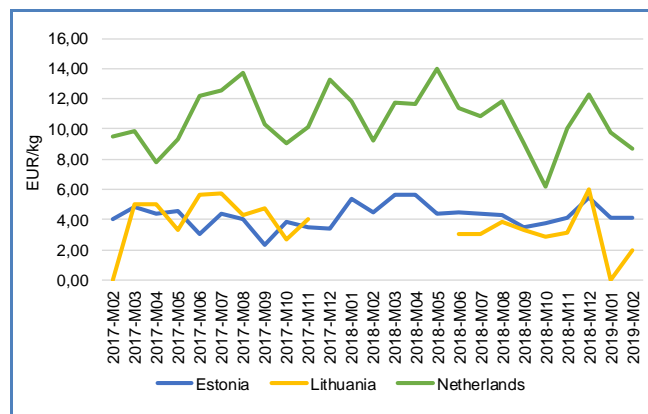


Percentages show change from previous year.  
Source: EUMOFA (updated 15.04.2019).



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

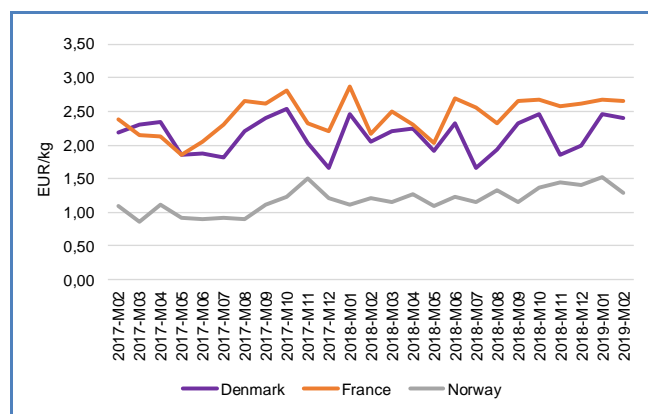
Figure 14. FIRST-SALES PRICES OF PIKE-PERCH IN ESTONIA, LITHUANIA AND THE NETHERLANDS



Source: EUMOFA (updated 15.04.2019).

First sales of **pike-perch** in the EU take place in **Estonia**, **Lithuania**, and the **Netherlands**, which are three of the main countries that together accounted for 89% of 2018 volume by reporting countries. The average first-sales price in **February 2019** was: 4,11 EUR/kg in Estonia (up by 0,4% from January 2019 but down by 7,3% from February 2018): 2,00 EUR/kg in Lithuania (Lithuanian first sales are sporadic and so this is down by 66,7% from the most recent month, December 2018, and 63,6% from April 2018): 8,68 EUR/kg in the Netherlands (which was down by 10,8% from January 2019 and by 6,4% from a year earlier).

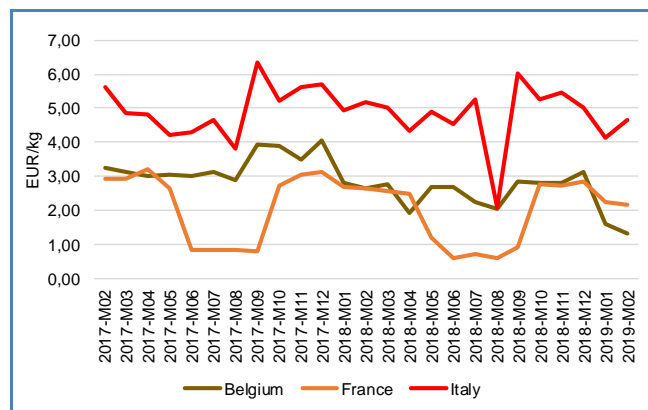
Figure 15. FIRST-SALES PRICES OF HADDOCK IN DENMARK, FRANCE AND NORWAY



Source: EUMOFA (updated 15.04.2019).

In Europe first sales of **haddock** occur in many northern countries, and in **Denmark**, **France**, and **Norway** they accounted for 85% of reported 2018 volume. The average first-sales price in **February 2019** was: 2,39 EUR/kg in Denmark (down slightly by 2,6% from January 2019 but up by 17,3% from February 2018): 2,65 EUR/kg in France (down by 1,1% from the previous month but up by 22% from the same month in 2018), 1,29 EUR/kg in Norway (down by 15,1% from January 2019 but up by 6,9% from February 2018). Norway is by far the largest first-sales market among reporting countries, and its price over the observed period has generally followed an upward trend, as volumes have generally declined. Prices in Denmark and France are higher than in Norway and track each other closely: they have also followed a general upward trend over the observed period.

Figure 16. FIRST-SALES PRICES OF SCALLOP IN BELGIUM, FRANCE AND ITALY



Source: EUMOFA (updated 15.04.2019).

First sales of **scallops** in **Belgium**, **France** and **Italy** accounted for 57% of first sales in 2018. France accounts for the majority of first sales in these three markets. The average first-sales price in **February 2019** was: 1,30 EUR/kg in Belgium (down by 18,5% from January 2019 and by 51,5% from February 2018): 2,17 EUR/kg in France (down by 3,6% from the previous month and by 18,1% from the same month in 2018): 4,66 EUR/kg in Italy (up by 12,8% from January 2019 but down by 10% from February 2018). Volume is highly seasonal, reaching bottom around July–September of each year, but that is also when prices are lowest.

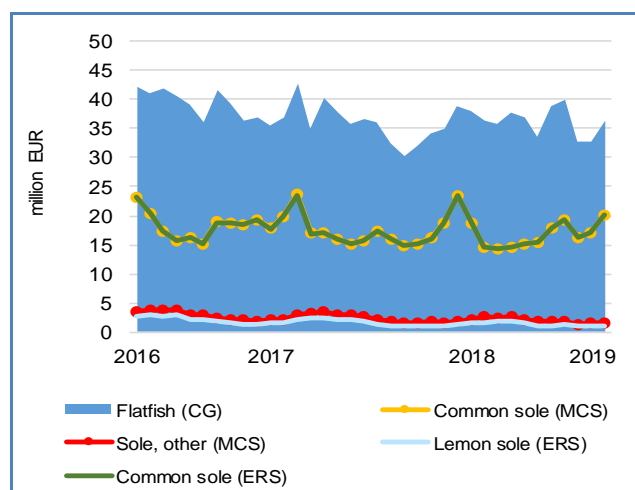
## 1.5. Commodity group of the month: flatfish

The **flatfish** commodity group (CG) ranked 2<sup>st</sup> in value and 4<sup>th</sup> in volume among 10 CGs sold at the first-sales stage in February 2019<sup>2</sup>. First sales reached EUR 36,4 million and 10.149 tonnes, remaining stable in value and decreasing by nearly a quarter in volume from February 2018. In the past 36 months, the highest value of flatfish was registered in March 2017, at about EUR 43 million.

The flatfish commodity group includes 13 main commercial species (MCS): Atlantic halibut, brill, common sole, dab, European flounder, European plaice, Greenland halibut, megrim, turbot, other flatfish, other flounders, other plaice, and other sole.

At the species (ERS) level, common sole and lemon sole represented 60% of total first-sales value (57% and 3%, respectively) of flatfish species in February 2019<sup>3</sup>.

Figure 17. FIRST-SALES VALUE COMPARISON AT CG, MCS, AND ERS LEVEL FOR REPORTING COUNTRIES



Source: EUMOFA (updated 15.04.2019).  
\*Norway excluded from the analyses.

## 1.6. Focus on common sole



**Common sole** (*Solea solea*) is a species of the flatfish commodity group that belongs to the Soleidae family. It is distributed in the Eastern Atlantic, the North Sea, western Baltic, the Mediterranean Sea and the Black Sea. It lives in deeper water in the winter but also comes into shallow water to feed and spawn when the weather warms up in the spring and summer. Sole spawns from April to June in the southern North Sea, from May to June off the coast of Ireland and southern

England, and in February in the Mediterranean<sup>4</sup>.

Sole is caught using beam and otter trawls, which also catch plaice, cod, rays, brill, turbot, and monk. It is also caught in a fixed-net fishery targeting sole. The EU sole fishery is regulated by long-term management plans for the stocks in the North Sea, Bay of Biscay, and Western Channel<sup>5</sup>.

The marketing size for common sole is set by the Council Regulation (EU) 2406/96<sup>6</sup>. The species is subject to a multiannual plan for fisheries which includes total allowable catches (TACs) in the North Sea<sup>7</sup>, Bay of Biscay<sup>8</sup>, and Western Channel<sup>9</sup>.

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

<sup>3</sup> Ranking of the main commercial species in the flatfish species commodity group can be found in table 1.3 in the Annex.

<sup>4</sup> <http://www.fishbase.org/Summary/SpeciesSummary.php?ID=525&AT=sole>

<sup>5</sup> [https://ec.europa.eu/fisheries/marine\\_species/wild\\_species/sole\\_and\\_plaice](https://ec.europa.eu/fisheries/marine_species/wild_species/sole_and_plaice)

<sup>6</sup> COUNCIL REGULATION (EU) 2406/96 <http://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31996R2406&from=EN>

<sup>7</sup> COUNCIL REGULATION (EC) No 676/2007 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2007:157:0001:0006:EN:PDF>

<sup>8</sup> COUNCIL REGULATION (EC) No 388/2006 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32006R0388:EN:NOT>

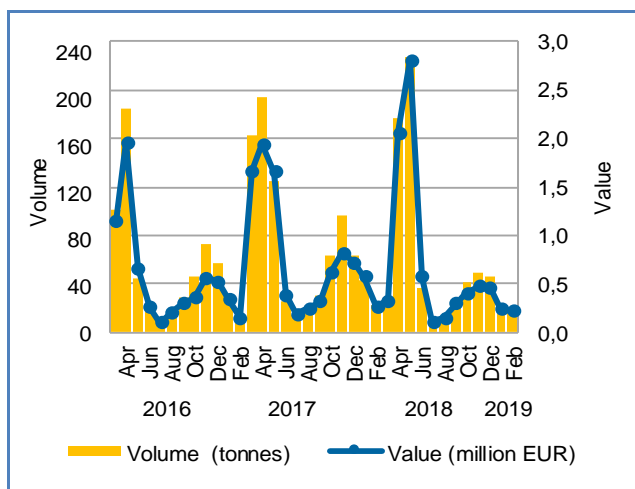
<sup>9</sup> COUNCIL REGULATION (EC) No 509/2007 <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32007R0509:EN:NOT>

## Selected countries

In **Denmark** in January-February 2019, first sales of common sole decreased by 44% in value and 40% in volume compared to the same period in 2018. Compared to 2017, value decreased by 5% and volume by 11%. Of flatfish species sold in February 2019, common sole composed 5% of first-sales value and 1% volume, whereas, for comparison, common sole represented 11% of value and 3% of volume of flatfish in 2018. February is one of the months with lowest first sales due to fishery seasonality of sole.

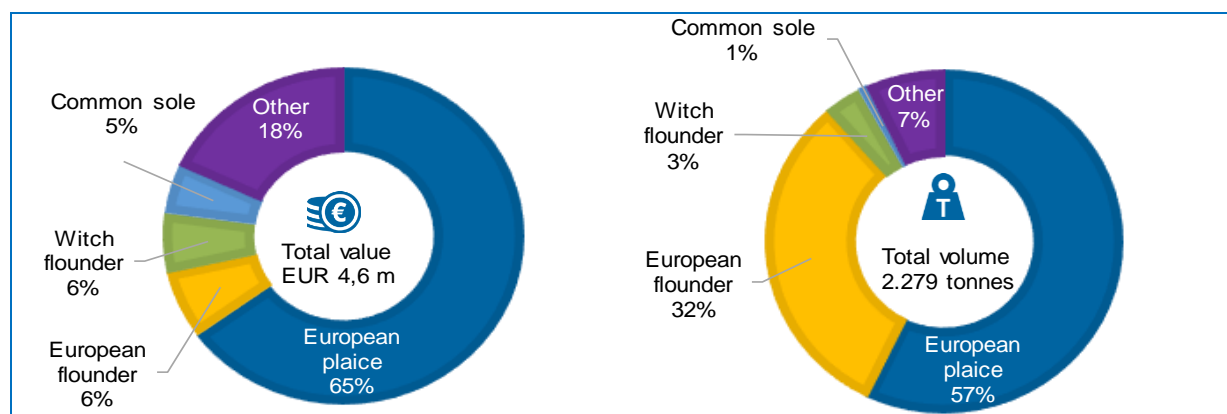
The most important ports for common sole in terms of value are Thyborøn, Hvide Sande, and Thorsminde on the North Sea coast.

Figure 18. **COMMON SOLE: FIRST SALES IN DENMARK**



Source: EUMOFA (updated 15.04.2019).

Figure 19. **FIRST-SALES COMPARISON OF FLATFISH SPECIES (ERS) IN DENMARK, VALUE AND VOLUME, FEBRUARY 2019**

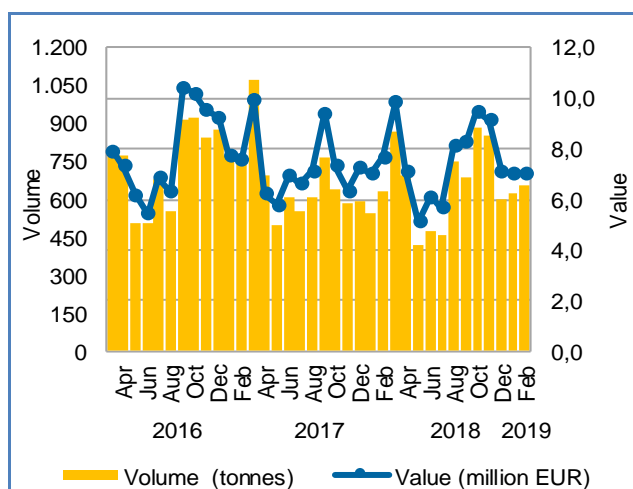


Source: EUMOFA (updated 15.04.2019).

In the **Netherlands** in January–February 2019, first sales of common sole decreased by 4% in value although volume increased by 8% compared to January–February 2018. This was due to an average price decrease of 11%. Compared with January–February 2017, first-sales value was down by 8%, while volume fell by nearly 20%. Of flatfish species sold in February 2019, common sole composes 63% of total value and 30% of volume. For comparison, common sole represented 54% of value and 25% of volume of flatfish in 2018.

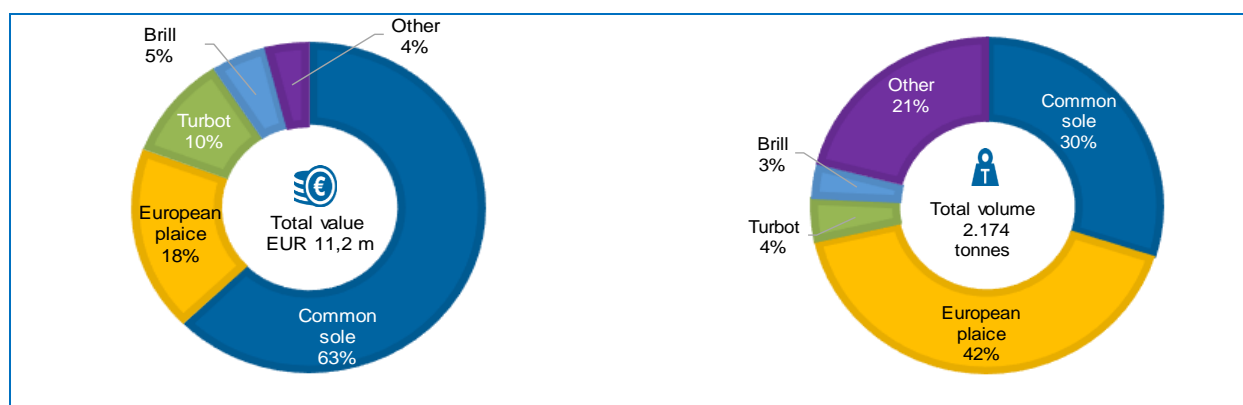
IJmuiden/Velsenis, Urk, Scheveningen, Vlissingen, and Stellendam are the Dutch fishing ports where most first sales of common sole occur.

Figure 20. **COMMON SOLE: FIRST SALES IN THE NETHERLANDS**



Source: EUMOFA (updated 15.04.2019).

Figure 21. **FIRST-SALES COMPARISON OF FLATFISH SPECIES (ERS) IN THE NETHERLANDS, VALUE AND VOLUME, FEBRUARY 2019**

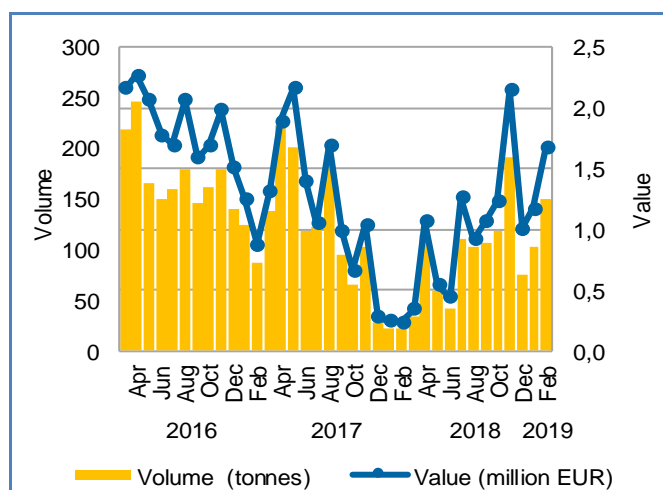


Source: EUMOFA (updated 15.04.2019).

In the **UK** in January–February 2019, first-sales value and volume increased by 245% and 238%, respectively, over the same period in 2018. Compared with 2017, the trends moved in the other direction, as 2019 value and volume were 22% and 30% lower, respectively. Of flatfish species sold in February 2019, common sole composes 22% of total value and 8% of volume. For comparison, common sole represented 32% of value and 12% of volume of flatfish in 2018.

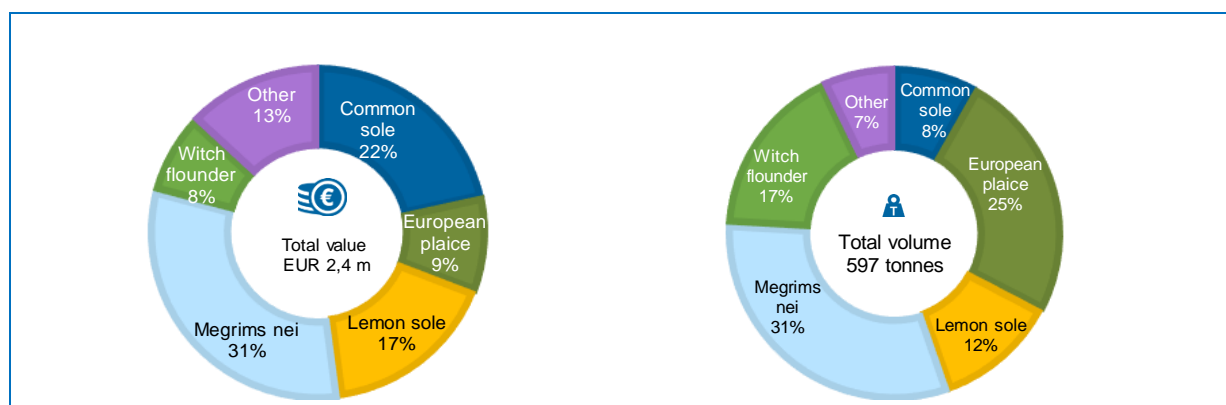
The main ports for first sales of common sole are Brixham and Milford Haven on the coast of the Celtic Sea.

Figure 22. **COMMON SOLE: FIRST SALES IN THE UK**



Source: EUMOFA (updated 15.04.2019).

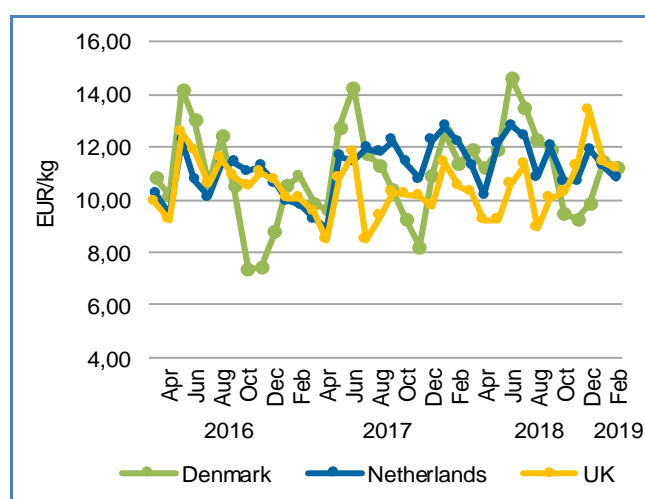
Figure 23. **FIRST-SALES COMPARISON OF FLATFISH SPECIES (ERS) IN THE UK, VALUE AND VOLUME, FEBRUARY 2019**



Source: EUMOFA (updated 15.04.2019).

## Price trends

Figure 24. **COMMON SOLE: FIRST-SALES PRICE IN SELECTED COUNTRIES**



Source: EUMOFA (updated 15.04.2019).

In the observed 36-month period (March 2016–February 2019), the highest average price of common sole was recorded in the Netherlands (11,17 EUR/kg), 1% higher than in Denmark (11,03 EUR/kg), and 7% more than the price in the UK (10,46 EUR/kg).

In **Denmark** in February 2019, the average first-sales price of common sole (11,22 EUR/kg) decreased by 2% from the same period in 2018 but compared to 2017 it increased by 4%. The average price peaked in June 2018 at 14,62 EUR/kg for 39 tonnes landed. In the past 36 months, the price was the lowest in May 2016, at 7,39 EUR/kg for 48 tonnes. Supply of common sole is the highest during the spring (April-May) when spawning takes place.

In the **Netherlands**, the average price of 10,82 EUR/kg in February 2019 was the lowest among the surveyed countries. The price decreased by 10% from 2018 but increased by 10% over February 2017. The highest average price was recorded in June 2018 when 477 tonnes were sold at 12,82 EUR/kg, while the lowest price occurred in April 2017 at 8,90 EUR/kg for 698 tonnes.

In the **UK** in February 2019, the average price (10,72 EUR/kg) was up by 2% over February 2018, and 6% over the same period in 2017. In the past 36 months, the lowest price (8,48 EUR/kg) was registered in April 2017, when 223 tonnes of common sole were sold. The highest price at 13,36 EUR/kg occurred in December 2018, when supply was scarce.

## 1.7. Focus on lemon sole



Lemon sole (*Microstomus kitt*) is a flatfish species which belongs to the plaice family of Pleuronectidae. It is a right-eyed benthic fish native to the northeast Atlantic from the White Sea and Iceland down to the Bay of Biscay, and lives on a wide range of ocean bottoms: from mud and sand, gravel, even rocky grounds, in depths of 20-200m, particularly on offshore banks. It feeds mainly on a variety of small invertebrates. It spawns in spring and summer in depths of 100 m. Sexually maturity starts at age of 3-4 years (males), and 4-6 years (females), and it can live for 17 years<sup>10</sup>. Adults may reach a body length of 70 cm and a weight of 3 kg.

It is a moderately important food-fish, caught mainly in spring and summer in multi-species fisheries such as otter trawls<sup>11</sup>. The most common fishing techniques are "demersal bottom trawling" and "small flatfish (flounders, soles) bottom trawling". Lemon sole is of considerable economic importance to fisheries in the southwest of England. Lemon sole is marketed fresh and frozen and eaten steamed, fried, broiled, microwaved, or baked<sup>12</sup>.

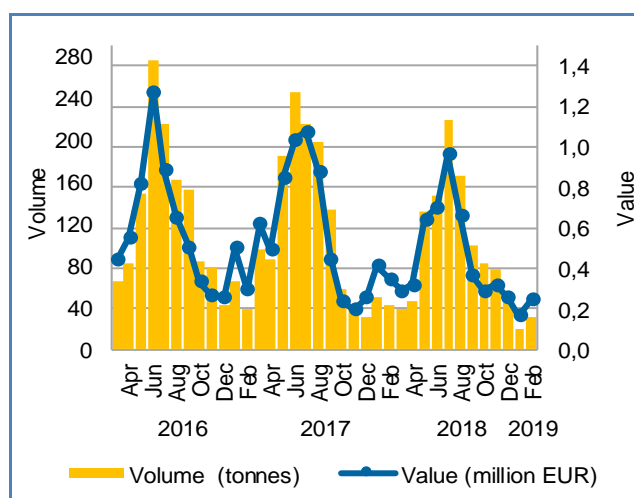
The European Commission set a Minimum Marketing Standard for lemon sole at 180g/25 cm, therefore it can only be marketed when at/or heavier than this weight<sup>13</sup>.

### Selected countries

In **Denmark** in January–February 2019, lemon sole first sales fell by nearly a half in both value and volume from the same period in 2018. Compared to the observed period in 2017, overall first sales were also lower, down by 49% in value and 51% in volume. Lemon sole composes 5% of value and 1% of volume among flatfish species traded in February 2019. For comparison, lemon sole represented 7% of value and 4% of volume of flatfish in 2018. February is the month with one of the lowest first sales due to fishery seasonality of lemon sole.

The main ports for first sales of lemon sole were Thyborøn, Hvide Sande, and Hanstholm on the coast of the North Sea.

Figure 25. **LEMON SOLE: FIRST SALES IN DENMARK**



Source: EUMOFA (updated 15.04.2019).

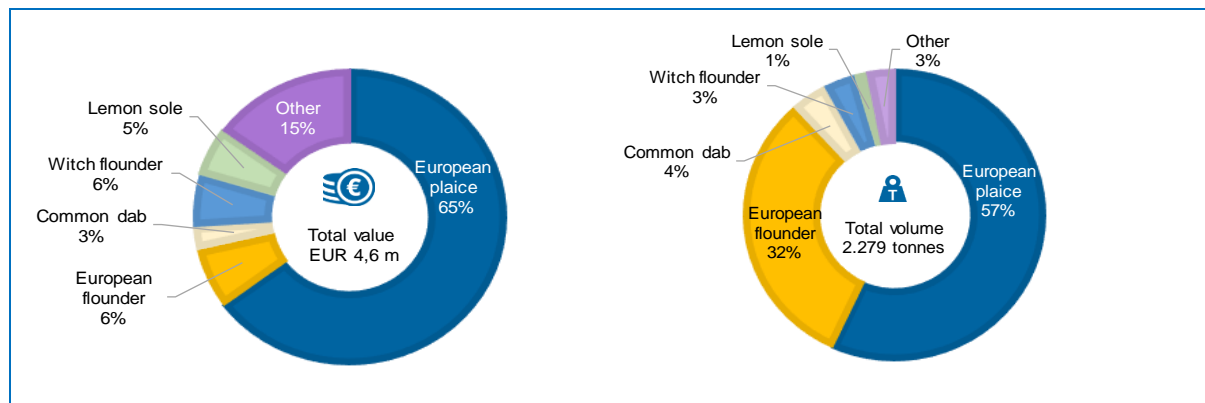
<sup>10</sup> <https://www.fishbase.in/summary/Microstomus-kitt.html>

<sup>11</sup> [https://www.fishsource.org/stock\\_page/1489](https://www.fishsource.org/stock_page/1489)

<sup>12</sup> <http://www.fao.org/fishery/species/3363/en>

<sup>13</sup> COUNCIL REGULATION (EC) No 2406/96 <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:31996R2406&from=GA>

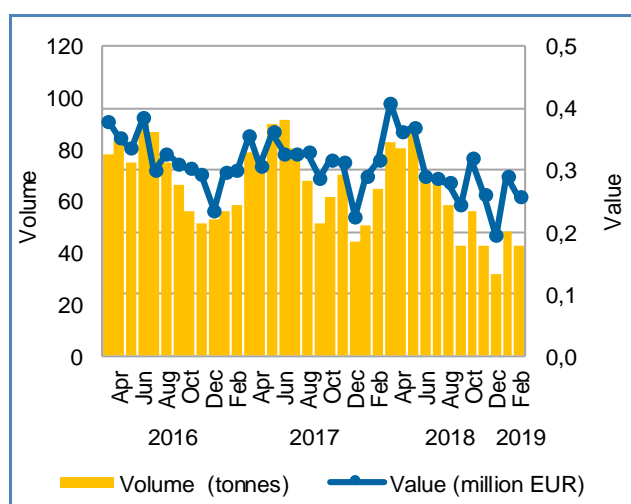


Figure 26. **FIRST-SALES COMPARISON OF FLATFISH SPECIES (ERS) IN DENMARK, VALUE AND VOLUME, FEBRUARY 2019**

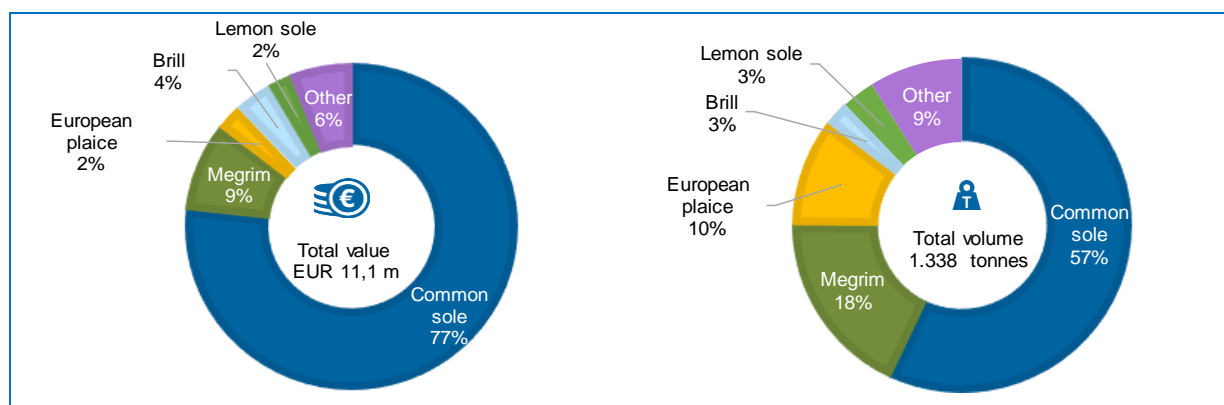
Source: EUMOFA (updated 15.04.2019).

In **France** in January–February 2019, first sales of lemon sole fell by 9% in value and 21% in volume from the same period in 2018. Compared to the same period in 2017, first-sales value and volume decreased by about the same as in the reference period of 2018. Lemon sole composes 2% of value and 3% of volume among flatfish species traded in February 2019. For comparison, lemon sole represented 4% of value and 7% of volume of flatfish in 2018.

The port of Guilvinec on the coast of the Bay of Biscay and Erquy in the Celtic Sea, are the main ports for first sales of lemon sole.

Figure 27. **LEMON SOLE: FIRST SALES IN FRANCE**

Source: EUMOFA (updated 15.04.2019).

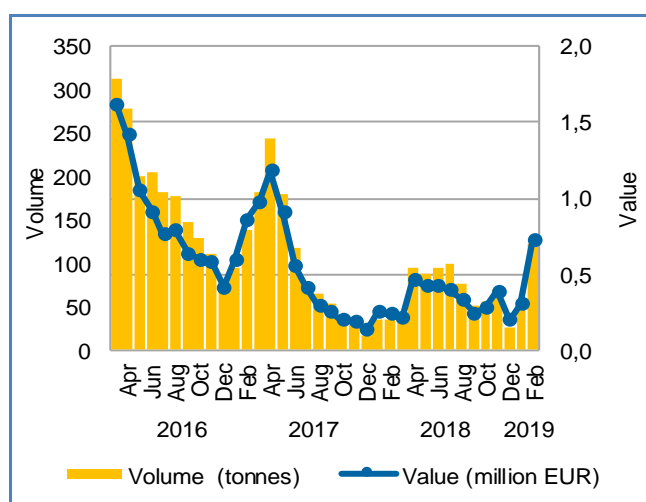
Figure 28. **FIRST-SALES COMPARISON OF FLATFISH SPECIES (ERS) IN FRANCE, VALUE AND VOLUME, FEBRUARY 2019**

Source: EUMOFA (updated 15.04.2019).

The **UK** had the highest catches of lemon sole among surveyed countries. In general, the winter period is when supply of lemon sole is the lowest. Nevertheless, in January–February 2019, first sales of lemon sole increased in value by 53% and in volume by 74% compared to January–February 2018. On the other hand, first-sales value and volume decreased by about half compared to the same period in 2017. Of flatfish species, lemon sole share composes 17% of value and 12% of volume in February 2019. For comparison, lemon sole represented 12% of value and 9% of volume of flatfish in 2018. February is the month with one of the lowest first sales due to fishery seasonality of lemon sole.

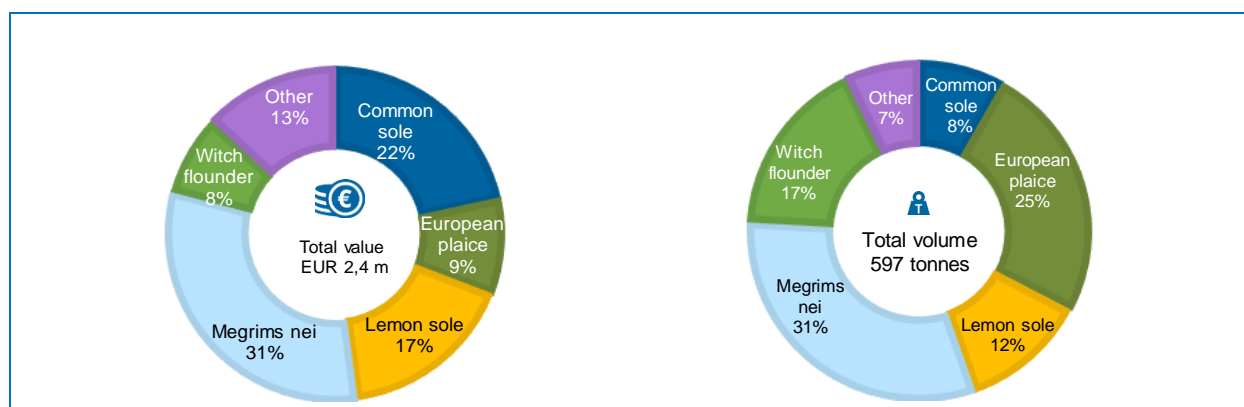
Peterhead and Scalloway on the coast of the North Sea were the busiest ports for first sales of lemon sole in the UK.

Figure 29. **LEMON SOLE: FIRST SALES IN THE UK**



Source: EUMOFA (updated 15.04.2019).

Figure 30. **FIRST-SALES COMPARISON OF FLATFISH SPECIES (ERS) IN THE UK, VALUE AND VOLUME, FEBRUARY 2019**



Source: EUMOFA (updated 15.04.2019).

## Price trends

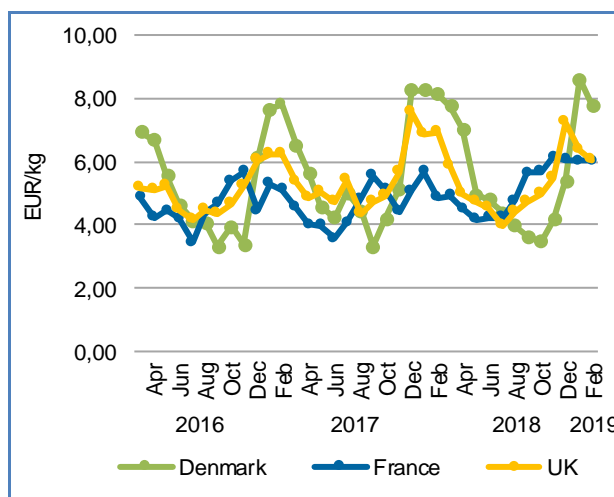
For the past 36 months (March 2016–February 2019), the highest lemon sole average price was observed in Denmark (5,50 EUR/kg), 12% more than in the UK (5,30 EUR/kg) and 4% over the price in France (4,84 EUR/kg).

In **Denmark** in February 2019, the average first-sales price (7,80 EUR/kg) slightly decreased (–4%) from February 2018, whereas it remained stable compared to February 2017. The highest price was recorded in January 2019, at 8,62 EUR/kg for 19 tonnes, while the lowest price was registered in September 2016 when 153 tonnes were sold at 3,30 EUR/kg. Lemon sole is mainly a bycatch species in the North Sea demersal fisheries during the summer (June–August).

In **France**, the average price of lemon sole during February 2019 was 6,02 EUR/kg – the lowest among the surveyed countries. The average price increased by 24% over February 2018 and 18% over the same month in 2017. The highest average price occurred in November 2018 when 43 tonnes were sold for 6,15 EUR/kg. The lowest average price occurred in July 2016 at 3,44 EUR/kg for 86 tonnes. The high season for lemon sole fishery starts in early March and lasts until July.

In the **UK** in February 2019, the average price of lemon sole was 5,77 EUR/kg – a decrease by 16% from February 2018 and 8% from February 2017. The highest price was recorded in December 2017 when 18 tonnes were sold at 7,53 EUR/kg. The lowest price in a three-year period occurred in July 2018 at 3,95 EUR/kg for 99 tonnes. As in other surveyed countries, the most intensive lemon sole fishery occurs during the warmer periods of the year, when fish move to shallow coastal areas.

Figure 31. **LEMON SOLE: FIRST-SALES PRICE IN SELECTED COUNTRIES**



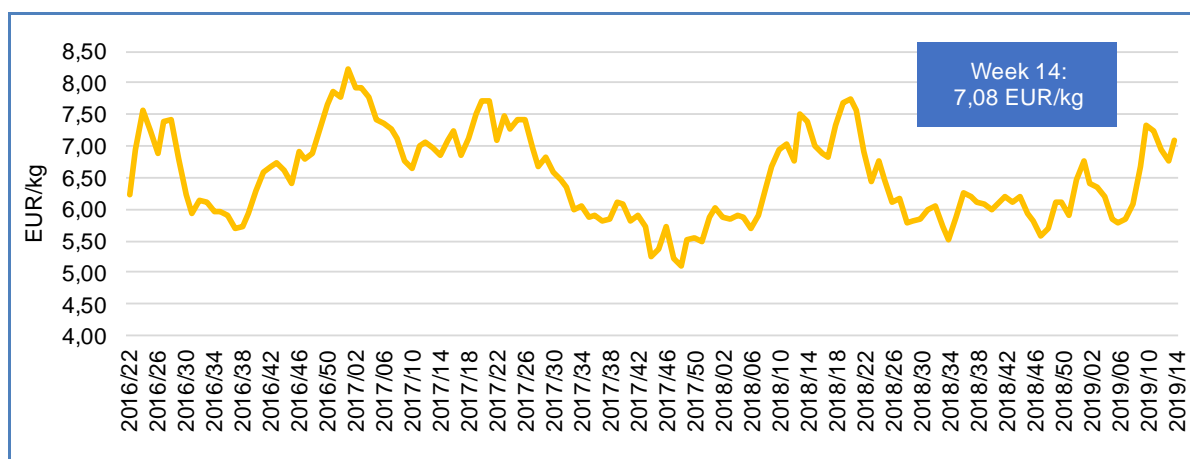
Source: EUMOFA (updated 15.04.2019).

## 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 of them, which are the most relevant in terms of value and volume are examined every month: fresh Atlantic salmon from Norway, frozen Alaska pollock from China, and frozen tropical shrimp (genus *Penaeus*) from Ecuador. Six other species change every month, and this issue of Monthly Highlights looks at Greenland halibut, plaice, and sole, examined as part of the month's selected commodity group, which is flatfish, along with three other selected species products – redfish, squid, and mussel.

The price of **fresh whole Atlantic salmon** (*Salmo salar*, CN code 03021400) imported from **Norway** rose to 7,08 EUR/kg in week 14, a slight increase (0,2%) from the preceding four-week average of 7,07 EUR/kg but a drop of 4% from the price of 7,38 EUR/kg prevailing a year earlier. Volume totalled 12.592 tonnes, up by 20% from the average amount imported during the previous four weeks and up by 16% from a year earlier. Price is very responsive to volume, and the low volumes in recent weeks have contributed to higher prices. The price peaks observed during the three-year period under review are also times when volume abruptly declined, usually at or near the beginning of each calendar year.

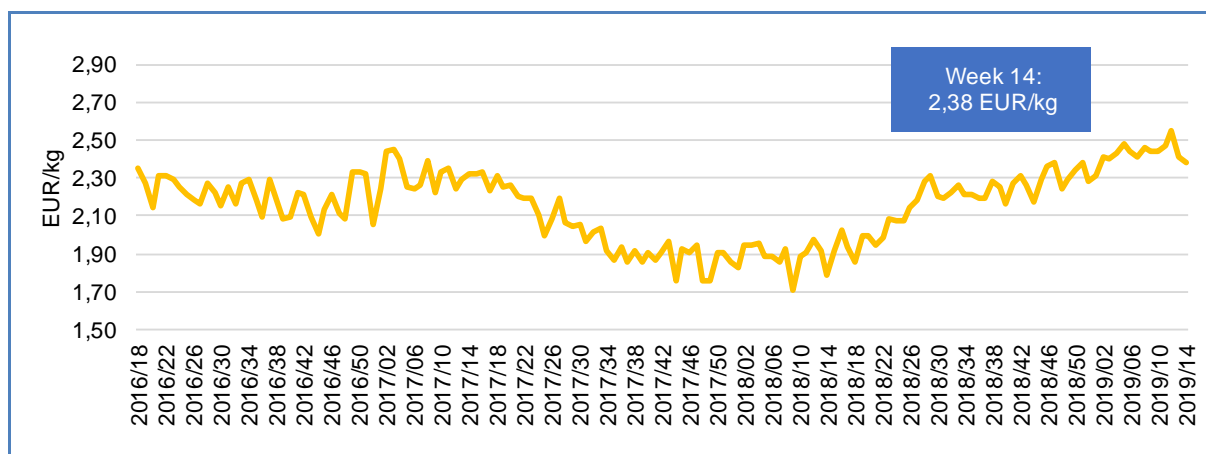
Figure 32. IMPORT PRICE OF ATLANTIC SALMON, FRESH WHOLE FROM NORWAY



Source: European Commission (updated 15.04.2019).

For **frozen fillets of Alaska pollock** (*Theragra chalcogramma*, CN code 03047500) imported from **China**, the price in week 14 fell to 2,38 EUR/kg, or 3,5% below the preceding four-week average, but 33,5% higher than a year earlier. Volume imported totalled 109 tonnes, was down by 21% from the average during the previous four weeks and down by 12,4% from a year earlier. The decreased supply to EU countries is likely due to domestic demand in China, which would be expected to reduce exports, is due to Europe and elsewhere.

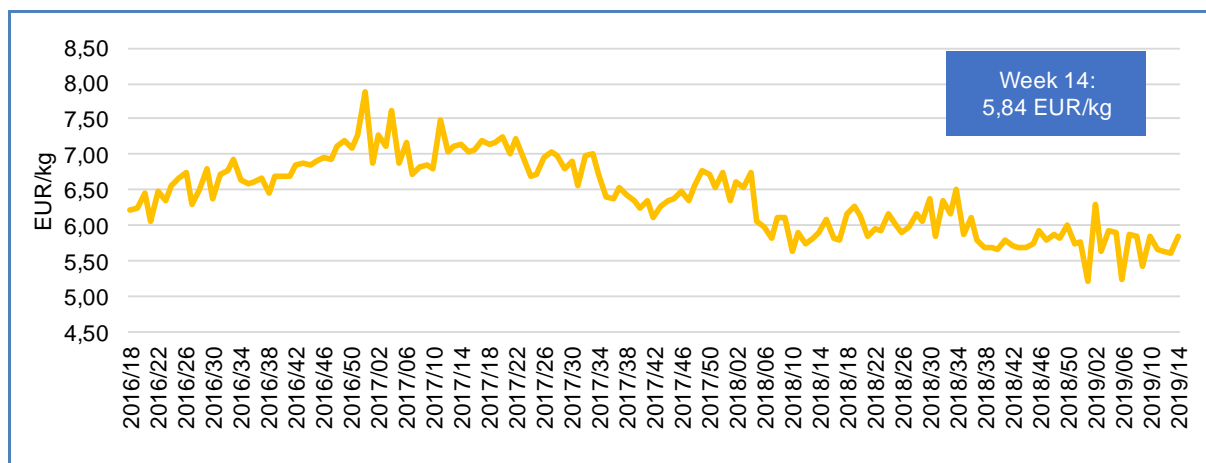
Figure 33. IMPORT PRICE OF ALASKA POLLOCK, FROZEN FILLETS FROM CHINA



Source: European Commission (updated 15.04.2019).

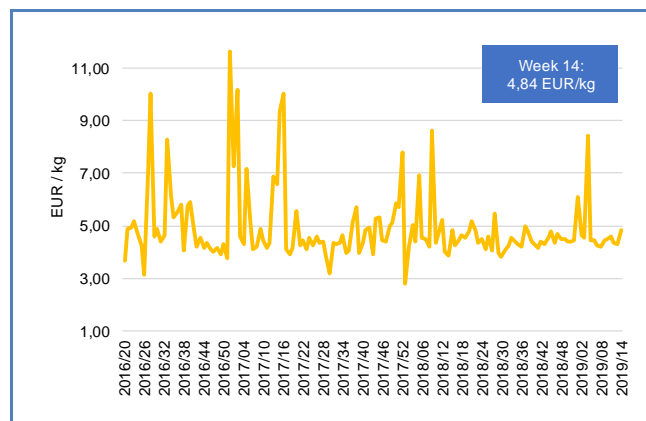
The price of **frozen tropical shrimp** (genus *Penaeus*, CN code 03061792) from Ecuador reached 5,84 EUR/kg in week 14. This price – up significantly from a week earlier – was about 3% above the preceding four-week average. However, it was down by about 1% from the price a year earlier. Volume imported in week 14 was much lower (-33%) than the average of the previous four weeks, probably contributing to the price increase. Volume shows a seasonal trend, bottoming out around the beginning of the year. The price does not show a corresponding pattern: it has generally fallen irregularly from a peak of 7,88 EUR/kg in week 52 of 2016. Ecuadorian production is expected to continue its growth, and some scientists reportedly believe this year's El Niño will also augment production.

Figure 34. **IMPORT PRICE OF FROZEN TROPICAL SHRIMP FROM ECUADOR**



Source: European Commission (updated 15.04.2019).

Figure 35. **IMPORT PRICE OF FRESH WHOLE LESSER OR GREENLAND HALIBUT FROM NORWAY**

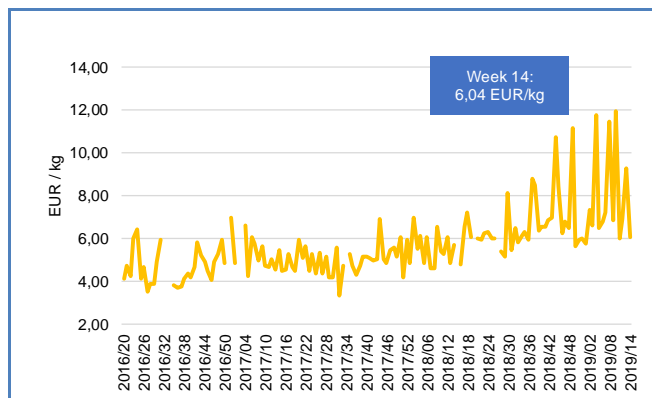


Source: European Commission (updated 15.04.2019).

The price of fresh **whole lesser or Greenland halibut** (*Reinhardtius hippoglossoides*, CN code 03022110) from **Norway** reached 4,84 EUR/kg in **week 14**, up by 9,4% over the average price of 4,43 EUR/kg in the preceding four weeks and 25,6% over the price of 3,86 EUR/kg a year earlier. Volume imported in week 14 was very low (159 tonnes), but not unusually so during the three-year period under review. Volume tends to be small, but it experiences brief, huge spikes around weeks 20-25 of each year. However, these spikes have no significant effect on prices, on the other hand, in the periods when supply is very low the price spikes. Prices appear to be prevented against dropping significantly below a “price floor” of 4,00 EUR/kg. This may suggest a large buyer or an integrated buyer/seller accounting for most trade in this product by setting a contract price at which price most volume in a given week is sold.

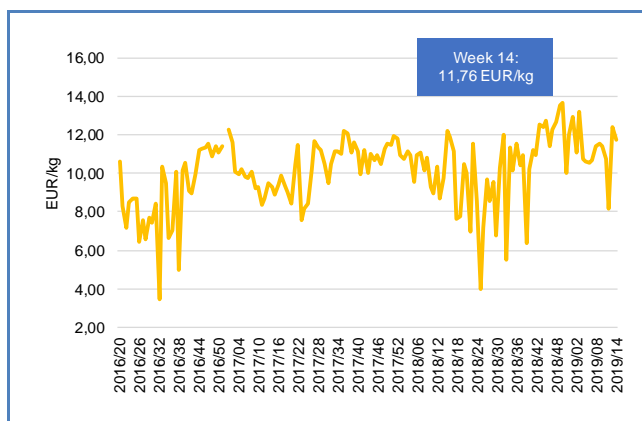
The import price of **frozen fillets of plaice** (*Pleuronectes platessa*, CN code 03048310) from **Iceland** has become quite volatile since week 29 of 2018, with week-to-week increases as high as 77% and decreases as high as 50%. The price in week 14 was 6,04 EUR/kg, down by 35% from the previous week but 34% higher than a week earlier. Over the longer run, the price has trended upward, which correlates with a general decline in volume. The average price during the first 14 weeks of 2019 was 46% higher than that in the same period of 2017, while average weekly volume was down by 13% between the two periods.

Figure 36. **IMPORT PRICE OF FROZEN FILLETS OF PLAICE FROM ICELAND**



Source: European Commission (updated 15.04.2019).

Figure 37. **IMPORT PRICE OF FRESH WHOLE SOLE FROM ICELAND**

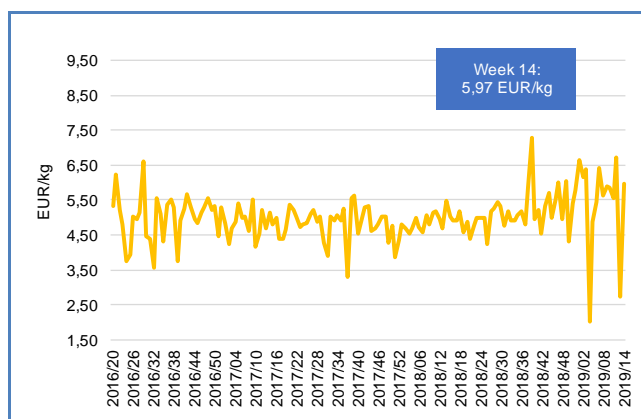


Source: European Commission (updated 15.04.2019).

The price of **fresh whole sole** (*Solea* spp., CN code 03022300) imported from **Iceland** reached 11,76 EUR/kg in **week 14**, up by 10,3% from the preceding four-week average of 10,66 EUR/kg, and up by 20,8% from the price of 9,74 EUR/kg prevailing a year earlier. Volume of 6 tonnes in week 14 followed a three-week decline, probably contributing to the price increase. Indeed, during the three-year observed period, all significant price peaks and low points for this product are associated with volume changes in the opposite direction.

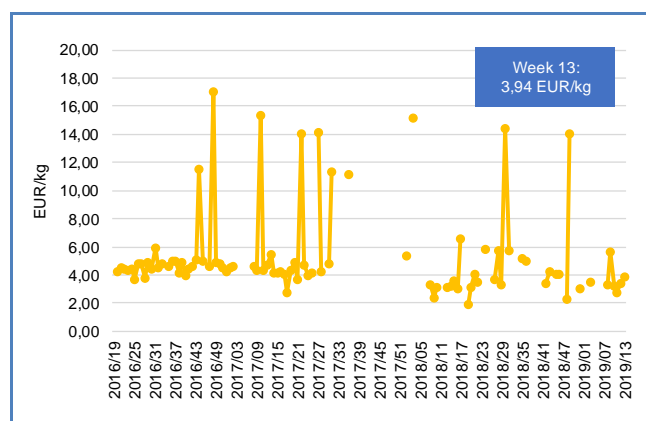
The price of **frozen fillets of redfish** (*Sebastes marinus*, CN code 03048921) from **Iceland** was 5,97 EUR/kg in **week 14**, a sharp rise from the previous week but only 14% higher than the preceding four-week average, and 9% above the price prevailing a year earlier. Volume was down in week 14, but not unusually so. In general, frozen redfish price and volume do not show the inverse relationship observed with many other seafood products: the two recent downward spikes in price were not during periods of excess supply, nor was the spike of 7,28 EUR/kg in week 39 of 2018 during a period of low supply. In general, the price has trended upward since week 51 of 2017, and volume during the three-year observed period has trended downward.

Figure 38. **IMPORT PRICE OF FROZEN FILLETS OF REDFISH FROM ICELAND**



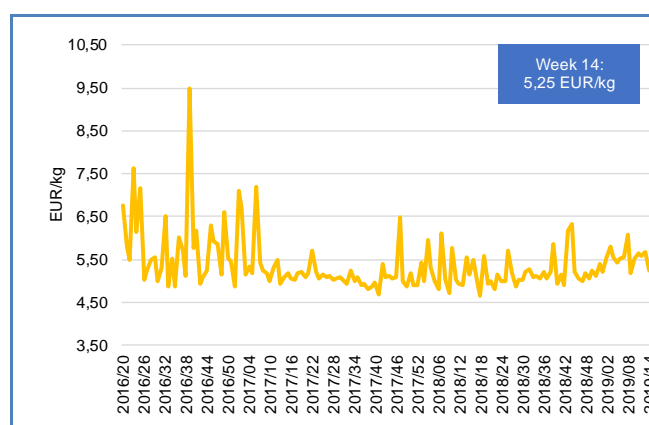
Source: European Commission (updated 15.04.2019).



Figure 39. **IMPORT PRICE OF FROZEN SQUID FROM THE US**

Source: European Commission (updated 15.04.2019).

The import price of **frozen mussels** (*Perna* spp., CN code 03073290) from **New Zealand** fell to 5,25 EUR/kg in **week 14**, down by 6,4% from the average during the preceding four weeks and by 5,4% from a year earlier. Volume of 43 tonnes in week 14 was down by 47% from the preceding four-week average, and 30% from a year earlier. From a low point of 4,64 EUR/kg in week 18 of 2018, this price has slowly trended upward: the average price for the year ending in week 14 was 5,29 EUR/kg in 2019 and 5,14 EUR/kg in 2018.

Figure 40. **IMPORT PRICE OF FROZEN MUSSELS FROM NEW ZEALAND**

Source: European Commission (updated 15.04.2019).

For **frozen squid** (*Loligo pealei*, CN code 03074333) imported from the **US** the price in **week 13** was 3,94 EUR/kg, up by 4,3% from the preceding four-week average and 26,4% above the price one year before. Volume of 47,7 tonnes was down by 20% from the preceding four weeks but up by 107,5% from a year earlier. This is a sporadically traded product, but its price still shows an observable inverse relationship with volume: the several notable peaks in price correlate with low volume levels, and the less frequent dips in price occur during periods of sustained volume. This product's price appears to have a "price floor" of about 4,00–4,30 EUR/kg. The weighted average price (with price peaks above 10,00 EUR/kg omitted) during the last three years was 4,28 EUR/kg.

## 3 Consumption

Consumption data for January 2019 are not available for this Monthly Highlights issue. Consumption data for January and February 2019 will be analysed in the Monthly Highlights No. 5/2019.

## 4 Case study – Fishmeal and fish oil

### 4.1 Global production and usage

A significant but declining share of world fisheries is destined to the production of fishmeal and fish oil. The average yearly fishmeal and fish oil production in the last 10 years is around 5 million tonnes of fishmeal and 1 million tonnes of fish oil<sup>14</sup>. Each year, around 20 million tonnes of raw material are used to produce fishmeal and fish oil. Around 15 million tonnes come from whole fish of which nearly half is landed in South America. The rest comes from by-products from the processing of wild and farmed fish<sup>15</sup>. It is estimated that by-products account for about 25% to 35% of the total production of fishmeal and fish oil in terms of volume, but there are also regional differences<sup>16</sup>.

Because a large share of these products is used as feed in aquaculture and livestock production, fishmeal and fish oil contribute indirectly to human food production and consumption.

Many species from direct fisheries (the whole fish delivered to the factories) are used in the production of fishmeal and fish oil, in addition to fish trimmings or other by-products from the fish processing industry. The species dominating the raw material supply to the “reduction industry”<sup>17</sup> are mainly small pelagics (like anchovy, sprat and sardinellas). In fact, global fishmeal and fish oil production fluctuates in line with catches of these species and might vary strongly from one year to another. Variations in the fishery of Peruvian anchoveta have the largest impact on the global supply of fishmeal and fish oil. This fishery is the world’s largest in terms of volume, varying between 3 and 7 million tonnes a year. The strong variations in the Peruvian anchoveta fishery is closely linked to the weather phenomena El Nino which occurs every few years and brings warm water into the upwelling areas. In years when this happens, fisheries suffer, and catches might decrease by several million tonnes in one season.

Owing to the growing demand for fishmeal and fish oil from the aquaculture industry, and coupled with high prices, a growing share of fishmeal is being produced from by-products which previously were often wasted. With no extra raw material expected to come from direct fisheries (small pelagics), an increase or even a stable production is foreseen from increased use of by-products. In the EU, most of the trimmings/by-products from the industry are already utilized, thus there are not expected any significant increase in supply coming from the EU producers in the coming years. The largest potential is from the aquaculture industry in other parts of the world, particularly Asian countries<sup>18</sup>.

---

<sup>14</sup> IFFO – The Marine Ingredients Organisation.

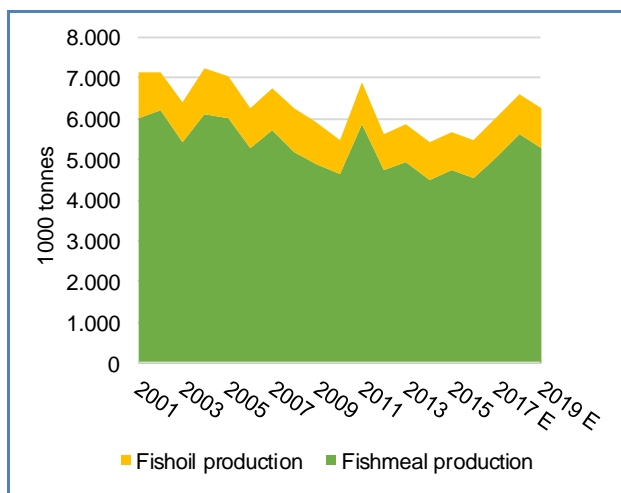
<sup>15</sup> [https://www.seafish.org/media/Publications/Seafish\\_FishmealandFishOil\\_FactsandFigures2018.pdf](https://www.seafish.org/media/Publications/Seafish_FishmealandFishOil_FactsandFigures2018.pdf)

<sup>16</sup> FAO.

<sup>17</sup> <http://www.bloomassociation.org/en/our-actions/our-themes/sustainable-fishing/reduction-fisheries/>

<sup>18</sup> <http://www.ifo.net/byproduct>

Figure 41. **GLOBAL FISHMEAL AND FISH OIL PRODUCTION (volume in 1000 tonnes)**

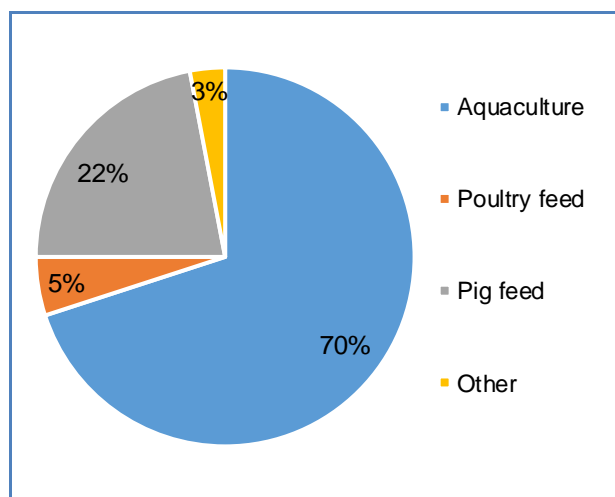


Source: The Marine Ingredients Organisation (IFFO).

In 2018, estimated global production of fishmeal was at 5,6 million tonnes, its highest level since 2011. A good fishing year in Peru, due to large landings of Peruvian anchoveta, was the main reason to the increased supply. Fish oil production was estimated at around one million tonnes in 2018. Due to a quota decrease of small pelagics going into the reduction industry, fishmeal production is expected to decrease in 2019.

The aquaculture sector is the main consumer of fishmeal and fish oil, taking about 70% of global consumption in 2017. Fishmeal is mainly used in aquaculture feed as well as in poultry and pig diets. In 2017, 22% of fishmeal was used in pig feed and 5% in poultry feed. In 2016, 31% of the fishmeal destined for aquaculture was used to feed crustaceans, 23% to feed salmon and trout and 15% to feed other marine fish<sup>19</sup>.

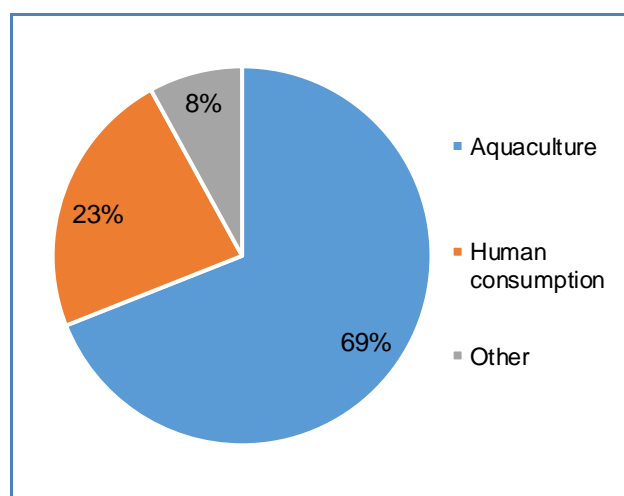
Figure 42. **GLOBAL FISHMEAL USAGE PER DESTINATION IN 2017 (in volume)**



Source: The Marine Ingredients Organisation (IFFO).

<sup>19</sup> IFFO- The Marine Ingredients Organization.

Figure 43. **GLOBAL FISH OIL USAGE PER DESTINATION (volume in tonnes)**



Source: The Marine Ingredients Organisation (IFFO).

Farmed fish, and in particular salmon, needs a certain share of fish oil in their diets to secure a final product which is comparable to their wild counterparts in terms of nutritional qualities<sup>20</sup>. Therefore, of the fish oil destined to the aquaculture segment, around 60% is used in the salmon and trout feed, 18% in marine fish and 6% in crustaceans<sup>21</sup>. The benefits of the omega-3 fatty acids are also highly valued as food supplement for human consumption: this segment is therefore the largest competitor to the aquaculture segment constituting 23% of the global fish oil consumption in 2017. The other category contains hydrogenated products and products for industrial and pharmaceutical purposes<sup>22</sup>.

## 4.2 EU production and usage

In Europe there are 29 factories producing fishmeal and fish oil and their output is around 600.000 tonnes at an export value of more than EUR 1 billion/year. The industry directly generates 3.000 jobs in coastal areas. In addition, the industry generates numerous jobs in the fishing sector and the ancillary support sector<sup>23</sup>.

Each year, the EU produces around 450-500 thousand tonnes of fishmeal and 150–200 thousand tonnes of fish oil. This constitutes around 10-15% of the global annual production. In 2016, EU fishmeal production reached 461.000 tonnes, down by 5% from 2015. In the same period, fish oil production increased by 14% to 144.000 tonnes.

There are currently 10 fish meal in the EU in 6 different EU member states. These factories are owned by 3 companies. Most of the factories are situated in Denmark and the UK.

Denmark is by far the largest producer, accounting for almost 50% of the total. Danish production is mainly based on landings of small pelagics like blue whiting, sandeel, Norway pout and sprat. Spain ranks second, covering almost 20% of the total. In Spain, fishmeal and fish oil are produced from waste/trimmings from the processing industry.

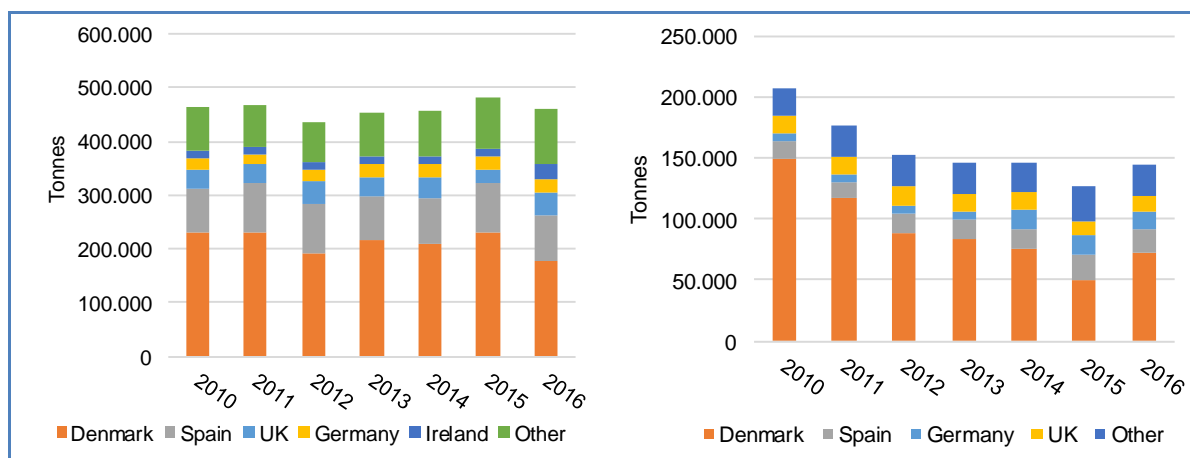
<sup>20</sup> <http://www.fao.org/in-action/globefish/fishery-information/resource-detail/en/c/338773/>

<sup>21</sup> IFFO – The Marine Ingredients Organization.

<sup>22</sup> <http://www.iffonet.net/node/735>

<sup>23</sup> Eufishmeal: EUfishmeal input to the BREF SA TWG.

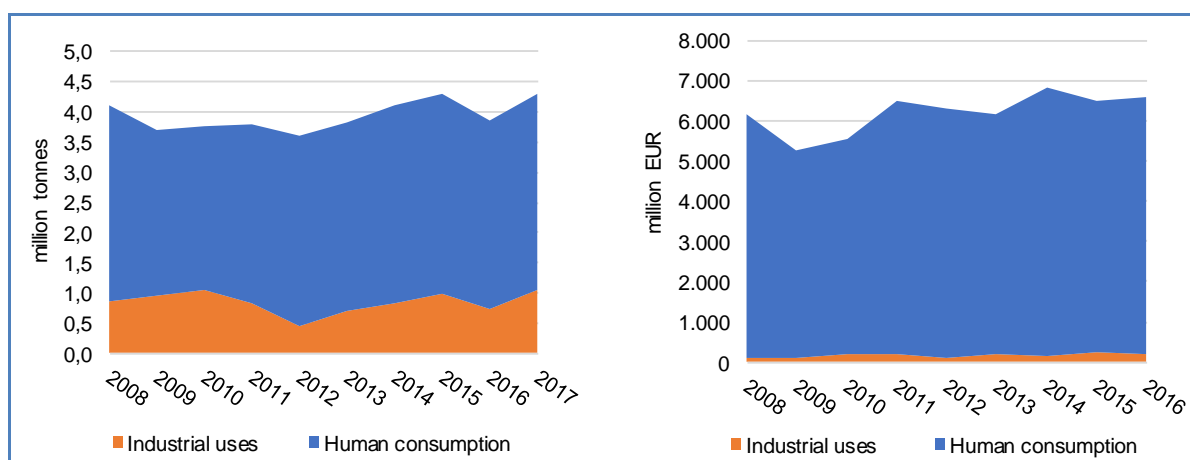
Figure 44. **FISHMEAL (LEFT) AND FISH OIL (RIGHT) PRODUCTION IN THE EU**



Source: FAO.

EU landings for industrial uses increased by 44% from 2016 to 2017. In 2017, total fishery landings in the EU were 4,3 million tonnes, of which 24% was destined for fishmeal and fish oil production (industrial uses). Of this share, nearly all was landed in Denmark. In terms of value, fish for industrial uses constituted 3% of total EU landings in 2016. Some of the industrial use's volumes will go into the human consumption markets after being produced into fishmeal or fishoil. This is especially true for fishoil which highly valued as dietary supplement in markets with good purchasing power.

Figure 45. **TOTAL LANDINGS IN THE EU PER DESTINATION USE (in volume (left) and value (right))**



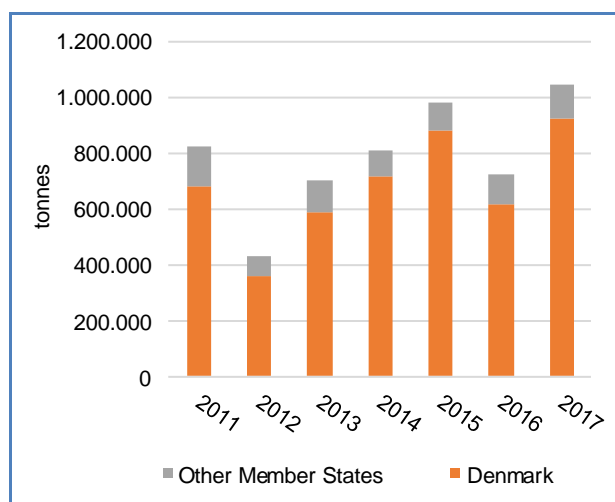
Source: Source: Eurostat, Udenrigsministeriet Fiskeristyrelsen (DK). Eurostat only provide value data including 2016. Volume includes 2017 data for all countries except Denmark. 2017 figures for Denmark are therefore sourced from national statistics in Denmark.



Most of the direct fisheries for industrial uses are landed in Denmark. Other European fishmeal and fishoil producers use mainly trimmings in their production.

The major fish species landed for industrial uses in the EU are sandeel, blue whiting, sprat and herring. Herring is mainly destined for human consumption, but of the large volumes caught and subsequent low prices, some are used in the production of fishmeal and fish oil. Due to significant variations in the quotas for the different species utilized for non-food uses, the availability in the EU fisheries vary strongly from year to year. For example, from 2016 to 2017 there was a large increase in the landings of sandeel (+900%) due to a quota increase of the same proportion. During 2016–2017, total EU landings of all species for industrial uses increased by 44% to 1.040 thousand tonnes.

Figure 46. **EU LANDINGS FOR INDUSTRIAL USES (in volume)**



Source: Eurostat, Udenrigsministeriet Fiskeristyrelsen (DK).

Table 3. **MAIN SPECIES LANDED IN THE EU FOR INDUSTRIAL USES (volume in 1000 tonnes)**

Species	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Sandeel	280	320	350	360	60	250	200	250	40	400
European sprat	320	420	380	290	180	180	250	390	330	260
Blue whiting	70	0	0	0	0	70	170	180	160	190
Herring	130	130	130	110	70	120	120	130	150	150
Norway Pout	30	30	70	0	30	40	30	30	30	20
Boarfish	10	40	100	20	40	30	20	0	0	0
Capelin	0	0	0	40	30	10	10	0	0	0
Other	0	0	0	0	10	10	10	50	10	20
<b>Total EU</b>	<b>840</b>	<b>940</b>	<b>1.030</b>	<b>820</b>	<b>420</b>	<b>710</b>	<b>810</b>	<b>1.030</b>	<b>720</b>	<b>1.040</b>

Source: Eurostat.

Large quotas of sandeel, sprat and blue whiting mean more raw material to the fishmeal producers as these species are mainly used for reduction and not suitable for human consumption. The large sandeel quota in 2017 (+900% compared with 2016) contributed strongly to the good raw material situation this year.

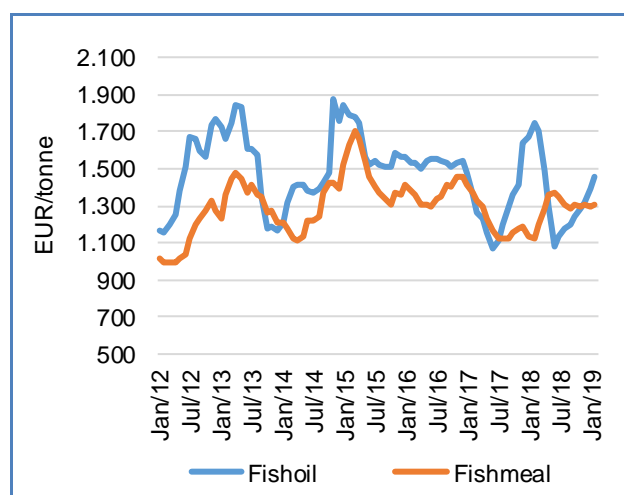
In 2018, quotas of the species decreased by 11% to 1,94 million tonnes and 2019 quotas show a further 24% decline. The fishing quotas for small pelagic species forms the basis for the volumes which goes in to the reduction industry. Large quotas of especially sandeel, sprat and blue whiting means more raw material for the fishmeal producers as these species are mainly used for reduction. The large sandeel quota in 2017 contributed strongly to the good raw material situation in 2018. In 2018, quotas of the selected species decreased by 11% to 1,94 million tonnes and 2019 quotas show a further 24% decline.

Table 4. EU FISHING QUOTAS OF MAIN SPECIES DESTINED FOR INDUSTRIAL USES (volume in 1000 tonnes)

Specie	2012	2013	2014	2015	2016	2017	2018	2019	% change 18/19
Sandeel	180	264	207	0	87	486	233	113	-52 %
Euroean sprat	441	457	422	479	458	461	457	463	+1 %
Blue whiting	73	133	218	482	208	385	401	320	-20 %
Norway pout	0	167	106	128	129	142	55	55	0 %
Boarfish	82	82	128	53	43	27	20	22	+10 %
Herring	696	754	783	818	619	684	776	509	-34 %

Source: European Commission (2012-2015), eufishmeal.org (2016-2019).

Figure 47. FISHMEAL AND FISH OIL PRICES IN THE EU (EUR/tonne)



Source: Oil world.

With some local variations, the fishmeal and fish oil prices in Europe correspond significantly to the global prices, which are linked to the supply situation in South America, in particular Peru.

During 2018, Peruvian fishmeal and fish oil production increased strongly from the years before and reached its highest level since 2011. Since more than 90% of the Peruvian production is exported, this has balanced the global fishmeal and fish oil market and helped stabilize prices. Fishmeal prices in the EU showed a declining trend throughout the second half of 2018. Fish oil prices came down from the very high level seen in the beginning of 2018 when price was above EUR 1.750/tonne. Fishoil prices reached a bottom in June last year and has since then increased to around EUR 1.450/tonnes.

### 4.3 Extra-EU imports

A large share of fishmeal and fish oil consumption in the EU is supplied by imports from non-EU countries. In 2016, comparing production, imports and exports, 50% of the fish meal consumption was sourced from non-EU countries.

In 2018, fishmeal imports amounted to 268.960 tonnes and EUR 356 million, increasing by 39% in terms of volume and by 46% in terms of value compared with 2017. The top three suppliers were Norway, Iceland and the Faroes, constituting 46% of the volume and almost 50% of the value. Imports from Norway increased by 57%, reaching 56.900 tonnes, and value increased by 66% to EUR 82.190 million.

EU imports of fish oil in 2018 reached 216.753 tonnes, valued at EUR 333 million. This was a 18% increase in volume and a 22% increase in value from 2017. The top three suppliers were Peru, Norway and the US, accounting for 64% of total volume and 54% of total value. Imports from Peru increased by 76%, to 61.891 tonnes while their value increased by 66% to EUR 89 million.

Table 5. EXTRA-EU IMPORTS OF FISHMEAL BY COUNTRY OF ORIGIN (volume in tonnes, value in 1000 EUR)

Country of origin	2013		2014		2015		2016		2017		2018	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Norway	45.500	41.540	51.860	46.600	67.400	78.230	44.590	61.800	36.280	49.460	56.940	82.190
Iceland	58.500	82.050	13.700	18.380	51.380	77.360	20.370	31.630	33.660	40.750	36.400	51.530
Faroe Islands	11.990	15.100	10.450	13.000	13.980	19.400	11.130	16.240	16.890	21.240	30.040	42.380
Peru	112.500	136.200	150.910	181.010	45.400	60.010	63.690	86.660	18.630	23.800	27.900	34.700
Morocco	25.060	26.270	29.340	29.550	35.130	46.320	50.600	61.810	28.180	29.660	27.990	30.460
Chile	37.560	48.730	48.220	58.730	18.060	27.870	18.430	27.110	20.170	25.880	19.430	26.850
Mauritania	23.570	25.860	39.510	38.180	16.830	21.360	29.490	37.070	10.310	12.760	21.230	25.970
Other	19.690	24.430	28.440	35.120	30.820	42.720	45.340	62.650	28.730	40.090	49.030	62.350
<b>Total EU</b>	<b>334.370</b>	<b>400.180</b>	<b>372.430</b>	<b>420.570</b>	<b>279.000</b>	<b>373.270</b>	<b>283.640</b>	<b>384.970</b>	<b>192.850</b>	<b>243.640</b>	<b>268.960</b>	<b>356.430</b>

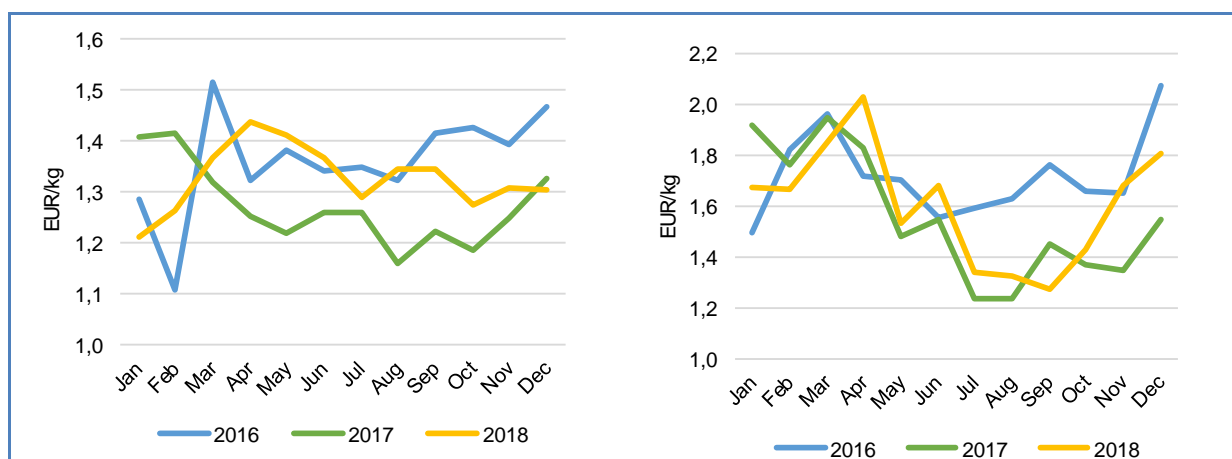
Source: EUMOFA.

Table 6. EXTRA-EU IMPORTS OF FISH OIL BY COUNTRY OF ORIGIN (volume in tonnes, value in 1000 EUR)

Country of origin	2013		2014		2015		2016		2017		2018	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Peru	39.710	66.840	59.080	90.220	58.110	90.020	21.980	47.540	35.190	53.660	61.890	89.230
Norway	45.880	58.410	40.490	46.460	54.970	59.820	56.930	63.660	51.990	56.770	52.760	61.380
USA	22.520	28.320	26.360	36.430	13.260	25.630	39.900	65.060	25.220	35.540	25.010	29.590
Mauritania	13.770	19.000	15.400	17.310	10.430	15.100	12.700	21.230	15.160	17.440	17.130	24.000
Mexico	1.840	21.470	0	31.310	0	31.520	0	22.700	9.490	20.510	8.000	18.200
Morocco	13.130	7.180	21.480	60	17.550	130	10.920	6.880	8.480	1.080	7.480	14.370
Turkey	4.360	23.710	30	9.070	60	13.210	4.510	16.740	520	18.860	7.210	13.060
Other	30.180	59.170	33.410	50.300	20.880	36.930	29.890	53.360	38.230	69.050	37.270	82.820
<b>Total EU</b>	<b>171.390</b>	<b>284.100</b>	<b>196.250</b>	<b>281.160</b>	<b>175.260</b>	<b>272.360</b>	<b>176.830</b>	<b>297.170</b>	<b>184.280</b>	<b>272.910</b>	<b>216.750</b>	<b>332.650</b>

Source: EUMOFA.

Figure 48. EXTRA-EU IMPORT PRICES OF FISHMEAL (LEFT) AND FISH OIL (RIGHT)



Source: EUMOFA.

The average EU import price of fish oil in 2018 was 1,53 EUR/kg, increasing by 3% over 2017. For fishmeal, it was 1,33 EUR/kg, increasing by 6% over 2017.

## 4.4 Extra-EU exports

In 2018, EU exports of fishmeal to non-EU countries totalled 136.926 tonnes, valued at EUR 189 million. This was a 13% decrease in volume and a 12% decrease in value. Norway was the largest destination market, constituting 41% of both volume and value.

In 2018, the EU exported 129.686 tonnes of fish oil valued at EUR 205 million. This was a 3% increase in terms of volume and a 6% increase in value. As with fishmeal, Norway was by far the largest market, accounting for 91% of the volumes and 80% of the export value. The main EU exporting country is Denmark, with 80% (109.000 tonnes) of the fishmeal volumes and 81% (EUR 152 million) of value. For fish oil, Denmark accounted for 85% (110.000 tonnes) of the volumes and 73% (EUR 150 million) of the value in 2018.

Table 7. EXTRA-EU EXPORTS OF FISHMEAL BY COUNTRY OF DESTINATION (volume in tonnes, value in 1000 EUR)

Country of destination	2013		2014		2015		2016		2017		2018	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Norway	125.530	170.980	159.150	208.100	106.510	154.130	119.380	181.090	62.980	87.460	56.110	77.700
China	17.730	25.290	8.680	11.530	16.620	26.830	9.700	15.040	22.720	29.690	13.900	20.470
Canada	5.200	8.080	5.370	8.040	5.680	9.850	7.100	12.360	8.450	14.210	8.140	13.890
Taiwan	3.630	4.940	3.420	4.540	8.070	11.860	6.410	9.550	10.610	13.270	7.540	10.070
Turkey	5.320	6.690	1.990	2.370	3.180	4.520	1.930	2.720	12.600	15.920	7.600	9.290
United States	1.850	3.310	1.440	2.820	2.790	5.250	4.580	8.830	2.990	6.400	6.100	9.210
Japan	3.260	4.640	1.960	2.810	10.010	16.210	1.240	2.130	5.560	7.820	5.890	7.220
Other	46.270	58.890	42.650	46.360	52.310	85.670	32.200	48.280	30.790	40.730	31.650	41.040
<b>Total EU</b>	<b>208.790</b>	<b>282.820</b>	<b>224.660</b>	<b>286.570</b>	<b>205.170</b>	<b>314.320</b>	<b>182.540</b>	<b>280.000</b>	<b>156.700</b>	<b>215.500</b>	<b>136.930</b>	<b>188.890</b>

Source: EUMOFA.

Table 8. EXTRA-EU EXPORTS OF FISH OIL BY COUNTRY OF DESTINATION (volume in tonnes, value in 1000 EUR)

Country of destination	2013		2014		2015		2016		2017		2018	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Norway	88.950	139.610	113.370	158.840	92.560	163.500	114.340	190.610	113.710	159.090	117.800	164.650
China	430	3.700	430	4.110	250	3.190	200	4.570	50	2.120	110	6.930
Switzerland	720	5.980	660	2.630	370	1.100	470	1.890	660	2.920	870	4.680
Russia	430	1.570	830	1.520	790	3.110	1.030	3.700	950	3.380	980	4.000
Usa	320	3.570	210	2.020	300	1.360	1.670	3.980	1.240	3.660	1.220	3.600
Canada	1.020	2.490	1.000	2.080	40	300	1.280	3.210	440	1.370	1.150	2.330
Turkey	830	1.390	490	620	190	410	210	610	480	1.310	1.050	1.850
Other	8.530	25.520	4.290	22.500	11.710	38.280	7.850	28.780	8.520	20.450	6.510	17.090
<b>Total EU</b>	<b>101.230</b>	<b>183.830</b>	<b>121.280</b>	<b>194.320</b>	<b>106.210</b>	<b>211.250</b>	<b>127.050</b>	<b>237.350</b>	<b>126.050</b>	<b>194.300</b>	<b>129.690</b>	<b>205.130</b>

Source: EUMOFA.

## 4.5 Outlook

The fisheries destined to the production of fishmeal and fish oil in the EU are limited by both the quotas and the demand for fish for human consumption. Species like herring and Atlantic mackerel were earlier utilized for non-food products to a much larger degree. Today, there are still some volumes of herring utilized for the non-food industry, and small or no volumes of mackerel.

The development concerning a switch from non-food uses to human consumption can also be noticed for other species like blue whiting and sprat. Nonetheless, as the catch volumes may fluctuate strongly, the potential surplus cannot be destined for the human consumption markets and will most likely go to the reduction industry, ending up as fishmeal and fish oil. Regarding this, the UN's Food and Agriculture Organisation (FAO) reports that

90% of the fish used in the production of fishmeal and fish oil is “presently unmarketable in large quantities as human food”<sup>24</sup>.

Fishmeal and fish oil production also offers a unique opportunity for recycling the otherwise unusable trimmings discarded by the seafood processing sector. The utilization of trimmings for reduction is expected to rise to 49% by 2022<sup>25</sup>.

Because of better utilization of trimmings and a stable raw material supply from direct fisheries, fishmeal and fish oil production might increase in the coming years. However, only a marginal share of that growth is likely to come from fish by-products. According to FAO, fishmeal produced from fish by-products will represent 34% of the world fishmeal production in 2030 compared to 30% today.

As seen from the quota table, the raw material situation from direct fisheries to the fishmeal and fish oil producers fluctuates from one year to the next. However, production over a longer run will likely be stable as the fisheries are fully exploited with no prospects to increase the catches. The possibility of increasing global production of fishmeal and fish oil from the traditional raw material sources is therefore limited mainly to better utilization of trimmings.

While global catches will remain constant, the largest market for fishmeal and fish oil, the aquaculture sector, is growing and will continue to grow for the foreseeable future, according to FAO. Therefore, the aquaculture industry will search for new options to cover their increased needs. There are some possible alternative options to increase the production of marine and land-based proteins and oil (such as krill, algae, insect-based feeds, marine worms, yeast-based ingredients etc.), but none of these can today compete with the traditional sources, in terms of both volumes and price<sup>26</sup>.

---

<sup>24</sup> <https://www.seafish.org/article/fishmeal-and-fishoil>

<sup>25</sup> <https://www.seafish.org/article/fishmeal-and-fishoil>

<sup>26</sup> <https://www.aquaculturealliance.org>

## 5 Case study – The EU fish processing industry

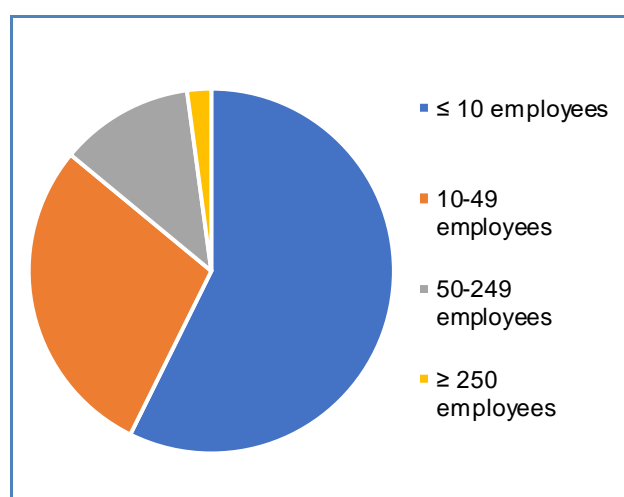
This case study focuses on the importance of micro and small companies in the EU fish processing industry and is based on the Joint Research Centre's (JRC) report on "The Economic Performance of the EU fish processing sector 2017"<sup>27</sup>.

For the purpose of this case study, micro enterprises are enterprises with less than 10 persons employed, small enterprises with 10 to 49 persons employed, medium-sized enterprises with 50 to 249 persons employed, large enterprises with 250 or more persons employed. Small and medium-sized enterprises (SMEs) are enterprises having less than 250 persons employed.

Micro and small enterprises represent 86% of the total number of fish and seafood processing companies in the EU. They provide 28% of the total number of jobs and of the total income generated by the sector.

### 5.1 Number of companies

Figure 49. **NUMBER OF ENTERPRISES IN THE EU FISH PROCESSING SECTOR IN 2015**



Source: JRC.

The total number of enterprises in the EU fish processing industry was 3.601 in 2015 (3.827 including landlocked countries<sup>28</sup>), of which 86% are micro companies and small companies. Over the period 2008–2015, the number of micro-enterprises has increased by 13%, being the only size category showing a growth.

<sup>27</sup> [https://stecf.jrc.ec.europa.eu/reports/economic/-/asset\\_publisher/d71e/document/id/2108729?inheritRedirect=false&redirect=https%3A%2F%2Fstecf.jrc.ec.europa.eu%3A443%2Freports%2Feconomic%3Fp\\_id%3D101\\_INSTANCE\\_d71e%26p\\_p\\_lifecycle%3D0%26p\\_p\\_state%3Dnormal%26p\\_p\\_mode%3Dview%26p\\_p\\_col\\_id%3Dcolumn-2%26p\\_p\\_col\\_pos%3D1%26p\\_p\\_col\\_count%3D2](https://stecf.jrc.ec.europa.eu/reports/economic/-/asset_publisher/d71e/document/id/2108729?inheritRedirect=false&redirect=https%3A%2F%2Fstecf.jrc.ec.europa.eu%3A443%2Freports%2Feconomic%3Fp_id%3D101_INSTANCE_d71e%26p_p_lifecycle%3D0%26p_p_state%3Dnormal%26p_p_mode%3Dview%26p_p_col_id%3Dcolumn-2%26p_p_col_pos%3D1%26p_p_col_count%3D2)

<sup>28</sup> Landlocked countries are Austria, Czechia, Hungary and Slovakia.



Table 9. **EVOLUTION OF THE NUMBER OF ENTERPRISES BETWEEN 2008–2015**

Size category	2008	2009	2010	2011	2012	2013	2014	2015	Trend 2008–2015
Micro ≤ 10 employees	1.829	1.807	1.854	1.858	1.891	2.102	1.970	2.064	+ 13%
Small 11-49 employees	1.146	1.186	1.162	1.087	1.114	1.124	1.106	1.033	- 10%
Medium 50-249 employees	475	435	432	440	451	438	443	427	- 10%
Large ≥ 250 employees	80	75	76	76	78	77	81	77	- 4%
<b>Total enterprises</b>	<b>3.530</b>	<b>3.503</b>	<b>3.524</b>	<b>3.461</b>	<b>3.534</b>	<b>3.741</b>	<b>3.600</b>	<b>3.601</b>	<b>+ 2%</b>

Source: JRC.

Large companies exist in only nine Member States, with four of them (France, the UK, Poland and Spain) accounting for 69% of the total number of large enterprises.

In three Member States (Cyprus, Finland, and Malta) only micro and small companies are present.

Table 10. **NUMBER OF ENTERPRISES BY MEMBER STATE IN 2015**

Country/Size category	Micro companies ≤ 10 employees	Small companies 11-49 employees	Medium companies 50-249 employees	Large companies ≥ 250 employees	Total enterprises
Belgium	37	26	3	0	66
Bulgaria	11	24	10	0	45
Croatia	18	3	13	1	35
Cyprus	2	0	0	0	2
Denmark	54	31	23	0	108
Estonia	31	23	10	0	64
Finland	113	23	0	0	136
France	111	127	36	17	291
Germany	164	54	22	8	248
Greece	112	29	4	0	145
Ireland	92	47	22	0	161
Italy	447	112	18	0	577
Latvia	59	36	15	4	114
Lithuania	20	12	12	7	51
Malta	3	2	0	0	5
Netherlands	0	66	15	0	81
Poland	52	68	53	12	185
Portugal	63	51	39	4	157
Romania	1	4	3	0	8
Slovenia	7	3	2	0	12
Spain	320	196	71	11	598
Sweden	183	33	8	0	224
UK	166	129	63	13	371
<b>Total enterprises</b>	<b>2.066</b>	<b>1.099</b>	<b>442</b>	<b>77</b>	<b>3.684</b>

Source: JRC.

## 5.2 Employment

The total number of employees in the EU fish processing sector was 126.413 or 20% fewer than direct employment created by the EU fleet in the same year. This includes the number of employees in countries for which data by size category is not available (i.e. Estonia, France, Germany, and the Netherlands) <sup>29</sup>.

Employment was relatively stable between 2008 and 2015, while the average wage increased by 22%. Over the same period, labour productivity, measured as gross value added (GVA) per FTE<sup>30</sup>, decreased by 8%, in relation with the decrease of the GVA, which can be partly explained by the significant increase (+28%) of the cost for purchase of fish and other raw materials.

Micro and small companies provide 28% of the total number of jobs, while medium and large enterprises provide 41% and 31% of jobs, respectively. The countries, for which data by size category are not available, are not included in this calculation (table below).

Table 11. **NUMBER OF EMPLOYEES BY MEMBER STATES IN 2015**

Country/Size category	Micro companies ≤ 10 employees	Small companies 11-49 employees	Medium companies 50-249 employees	Large companies ≥ 250 employees	Total employees
Belgium	160	744	625	0	1.529
Bulgaria	75	722	1.110	0	1.907
Croatia	73	49	1.358	320	1.800
Cyprus	14	0	0	0	14
Denmark	173	822	2.619	0	3.614
Finland	229	775	0	0	1.004
Greece	561	749	752	0	2.062
Ireland	483	1.352	1.962	0	3.797
Italy	1.769	2.240	1.917	0	5.926
Latvia	138	934	1.847	1.250	4.169
Lithuania	48	337	1.557	3.431	5.373
Malta	30	52	0	0	82
Poland	254	1.468	6.846	9.175	17.743
Portugal	182	1.776	2.868	2.322	7.148
Romania	4	87	392	0	483
Slovenia	24	37	148	0	209
Spain	886	4.931	7.542	5.674	19.033
Sweden	346	685	1.140	0	2.171
UK	931	3.013	7.589	8.579	20.112
<b>Total number of employees</b>	<b>6.380</b>	<b>20.773</b>	<b>40.272</b>	<b>30.751</b>	<b>98.176</b>

Source: JRC.

\*Data are for Member States which provided data by size category.

<sup>29</sup> The JRC report is based on data collected under the Data Collection Framework (DCF) of the EU.

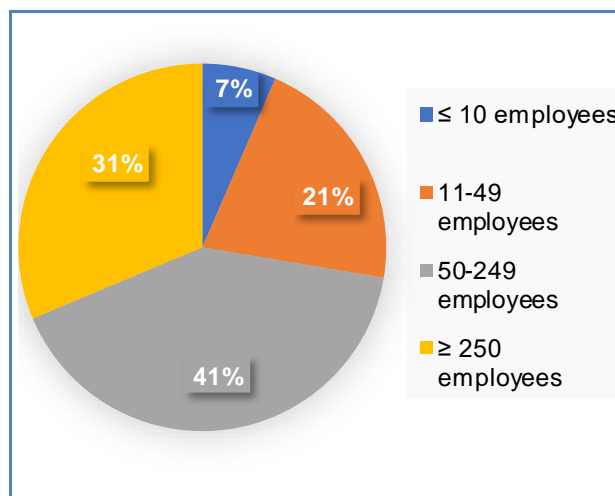
The Member States were requested to provide economic data by size category. They delivered these data for the period 2008-2015, with the following exceptions: Cyprus, Estonia, Germany did not provide data segmented by size category. France delivered data by size category from 2008 to 2013, but not for 2014 and 2015. The Netherlands did not deliver data for 2015.

<sup>30</sup> Full time equivalent.

The Member States where the percentage of employees working in micro and small companies is clearly below the EU average (27,7%) are Croatia, Latvia, Lithuania, Poland, Romania and the UK.

Three Member States have employees only in the two smallest size categories (Cyprus, Finland, Malta). Concerning the Member States with higher level of activity, Italy and Greece have the highest ratio of employees in micro and small enterprises (68% and 64% of the total number of employees in the country, respectively).

Figure 50. **NUMBER OF EMPLOYEES IN 2015**



Source: JRC.

The average annual wage was equal to EUR 30.133 per FTE<sup>31</sup> in 2015, i.e. significantly more than the average wage in the manufacture of food products (25.455 EUR/FTE according to Eurostat/SBS<sup>32</sup>) and markedly less than the average wage in the manufacturing sector in general (33.828 EUR/FTE).

In the countries for which data on size categories are available (covering 97.841 employees), the annual average wage amounts to EUR 26.995 per employee and EUR 29.784 per FTE. The highest wages are paid in the intermediate size categories, i.e. small and medium companies (27.040 and 26.571 EUR/FTE respectively), while the lowest wages are paid at each end of the size category spectrum, in the micro (EUR 19.317) and large (EUR 21.835) companies.

Wages vary considerably from one MS to the other; the maximum wage, paid in Denmark (65.306 EUR/FTE), is 16 times higher than the lowest one (3.974 EUR/FTE), paid in Romania. These divergences are not specific to the sector, they reflect the general trend at EU level. Geographic situation influences much more wage disparity than companies' sizes.

### 5.3 Income

The income generated by the EU fish processing industry amounted to EUR 30,3 billion in 2015, of which EUR 22,2 billion in the Member States for which detailed data are available (table below).

The highest incomes are generated by the UK and Spanish industries.

<sup>31</sup> Full time equivalent.

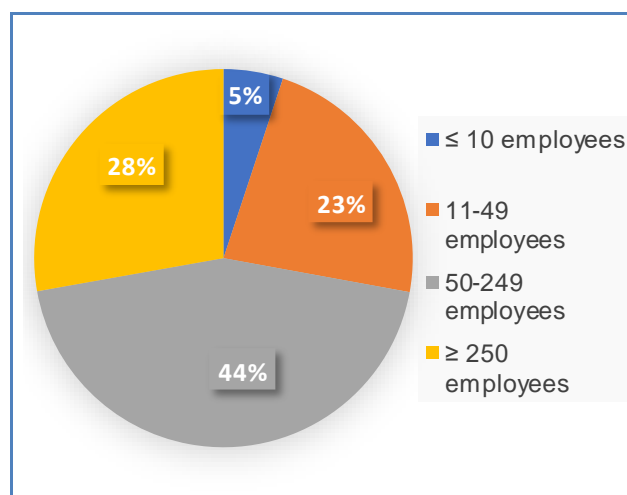
<sup>32</sup> Structural Business Statistics.

Table 12. **INCOME BY MEMBER STATE IN 2015 (value in EUR million)**

Country/Size category	Micro companies ≤ 10 employees	Small companies 11-49 employees	Medium companies 50-249 employees	Large companies ≥ 250 employees	All employees
UK	86,7	886,5	2.384,0	1.978,7	5.335,9
Spain	171,5	1.052,9	1.917,6	1.842,9	4.984,9
Denmark	99,4	533,4	1.934,3	0,0	2.567,1
Poland	26,8	199,7	728,9	1.578,0	2.533,4
Italy	371,0	873,2	1.021,1	0,0	2.265,3
Portugal	30,5	297,4	480,4	388,9	1.197,2
Ireland	34,1	281,4	445,3	0,0	760,8
Belgium	128,7	271,1	323,8	0,0	723,6
Lithuania	1,9	14,7	134,9	370,6	522,1
Sweden	84,4	194,8	238,2	0,0	517,4
Finland	28,7	273,1	0,0	0,0	301,8
Greece	39,3	94,6	107,0	0,0	240,9
Latvia	3,9	49,9	86,2	39,8	179,8
Bulgaria	16,6	38,0	37,2	0,0	91,8
Slovenia	2,2	4,1	19,7	0,0	26,0
Romania	0,1	1,8	22,3	0,0	24,2
Malta	8,8	13,9	0,0	0,0	22,7
Cyprus	0,4	0,0	0,0	0,0	0,4
<b>Total Income</b>	<b>1.135,0</b>	<b>5.080,5</b>	<b>9.880,9</b>	<b>6.198,9</b>	<b>22.295,3</b>

Source: JRC.

Figure 51. **EU FISH PROCESSING SECTOR INCOME IN 2015**



Source: JRC.

Micro and small companies generate 28% of the total income.

Among the countries whose fish processing industry generates more than EUR 500 million of income, three draw more than half of their fish processing income from micro and small companies: Sweden (53,9%), Italy (54,9%) and Belgium (55,3%).

## 5.4 Production costs

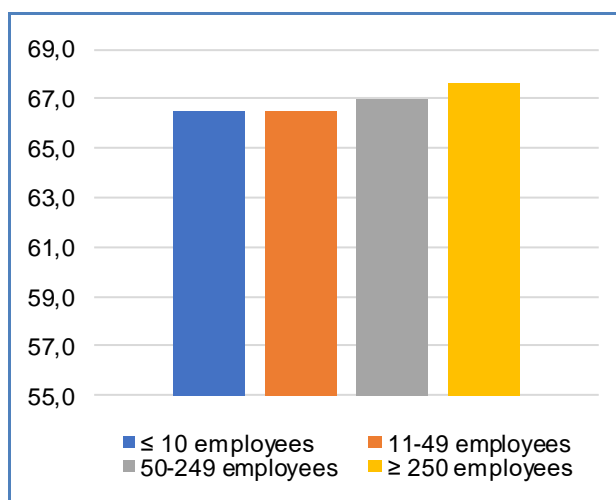
The major cost item in fish processing is “the purchase of fish and other raw materials”, which represented 67,1% of the total costs in 2015. Wages and salaries represent 12,1% and other operational costs and energy 17,6% and 2,7% respectively.

An analysis made on the Member States, for which detailed data by size category are available, shows that the share of the raw materials cost in the total income is slightly increasing when the size of the company increases: it is 66,5% in the micro and small enterprises, and rises to 67,0% in the medium-sized companies and 67,6% in the large companies. Due to the high variations in wages between MS, it is difficult to draw conclusions from the slight differences observed. Two elements may anyhow partly explain these differences:

- it is likely that large companies make use of more efficient processing equipment and that processing is more automatized reducing the share of labour costs;
- as indicated above, the level of salaries is substantially lower in large companies.

Micro and small companies accounted for 28% of all purchases of fish and other raw materials made by the EU fish processing industry in 2015, while medium and large-sized companies accounted for 44% and 28%, respectively.

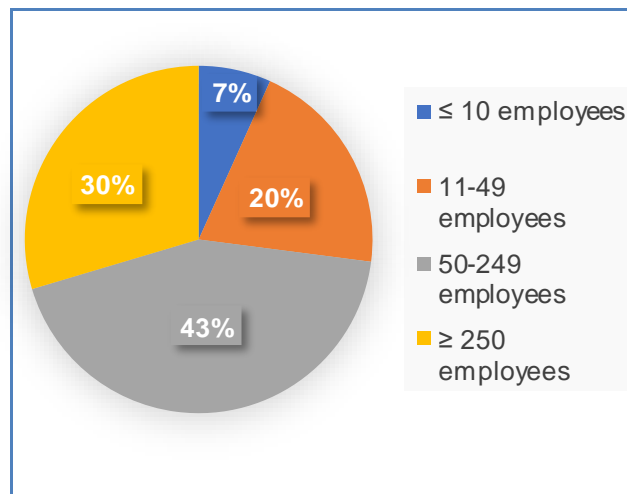
Figure 52. **VALUE SHARE OF THE COST FOR PURCHASING FISH AND RAW MATERIALS OF THE TOTAL INCOME IN 2015**



Source: JRC.

## 5.5 Economic performance and productivity

Figure 53. EU FISH PROCESSING SECTOR TOTAL GROSS VALUE ADDED (GVA) IN 2015



Source: JRC.

The UK fish processing industry generated the highest gross added value (GVA) in absolute terms in 2015, followed by France (not shown in the table below, as no detailed data by size category are available) and Spain.

The UK is also at the first rank for large companies (preceding Spain and Portugal) and for medium companies (preceding Spain and Denmark), but only at the second rank behind Spain for small companies and at the fourth rank for micro companies (behind Belgium, Italy and Spain). Among the countries for which data could be calculated, the UK industry generated the highest net profit in absolute terms in 2015 (36,3% of the estimated total), followed by the French (19,4%) and Belgian (9,5%).

The productivity (value added per employee) is the highest in the medium-sized category (EUR 47.903 in 2015), followed by micro enterprises (EUR 45.965), small enterprises (EUR 42.144) and large companies (EUR 41.845).

Table 13. GROSS VALUE ADDED BY MEMBER STATE AND BY SIZE CATEGORY in 2015 (value in EUR million)

Country/Size category	Micro companies ≤ 10 employees	Small companies 11-49 employees	Medium companies 50-249 employees	Large companies ≥ 250 employees	All employees
UK	27,3	159,2	468,5	628,3	1.283,3
Spain	27,7	197,0	418,7	233,9	877,3
Portugal	10,6	102,9	166,3	134,6	414,4
Poland	5,0	30,3	114,5	215,3	365,1
Denmark	11,1	65,2	280,4	0,0	356,7
Italy	52,6	101,7	145,0	0,0	299,3
Belgium	114,0	52,6	40,6	0,0	207,2
Ireland	2,5	47,8	70,3	0,0	120,6
Lithuania	0,4	3,8	32,8	50,3	87,3
Sweden	17,0	31,9	34,9	0,0	83,8
Greece	7,3	12,4	31,6	0,0	51,3
Finland	6,3	38,1	0,0	0,0	44,4
Bulgaria	5,9	17,3	19,3	0,0	42,5
Latvia	0,8	11,4	18,7	11,0	41,9
Romania	0,0	0,6	21,0	0,0	21,6
Slovenia	0,6	0,4	1,5	0,0	2,5
Malta	0,4	0,8	0,0	0,0	1,2
Cyprus	0,4	0,0	0,0	0,0	0,4
<b>Total GVA</b>	<b>289,9</b>	<b>873,4</b>	<b>1.864,1</b>	<b>1.273,4</b>	<b>4.300,8</b>

Source: JRC.

## 5.6 Outlook

SMEs are often referred to as the backbone of the European economy, providing a potential source for jobs and economic growth.

This is also the case in the EU fish processing industry, where micro and small companies (enterprises with less than 50 people employed) generated an income of EUR 8,5 billion and a gross value added of EUR 1,65 billion, providing 35.000 jobs in 2015<sup>33</sup>.

The incompleteness of the collection of data disaggregated by size categories under the EU Data Collection Framework precludes the drawing of robust and targeted conclusions. However, geographical distribution and size of the country appear to be influencing factors, more important than size of the companies.

In addition to some of the less populated Member States (Cyprus, Finland, Malta), which have only micro and small companies in the fish processing sector, a few other Member States draw the biggest part of their income through micro and small companies, e.g. Belgium, Bulgaria, Greece, Italy, and Sweden.

Micro and small companies' share in the income and GVA generated by the sector has decreased over the period 2008–2015, but the number of micro enterprises has increased by 13%, being the only size category showing growth. Micro and small enterprises retain a crucial role in the fish processing economy in most Member States.

---

<sup>33</sup> To achieve these results, we applied the ratios to the entire EU fish processing sector calculated for the Member States for which data by size category were available (and representing 78% of the sector in terms of jobs).



## 6 Global highlights

**Fisheries / Brexit / EU:** The European Commission presented contingency measures to mitigate the impact on fisheries of a possible “no-deal” Brexit. The first preparedness measure amends the Regulation on the Sustainable Management of the External Fleets, with the aim of creating the appropriate legal framework for continued reciprocal fishing access by the EU and the UK vessels to each other’s waters during 2019, provided the UK grants such access for EU vessels. The second measure allows fishermen and operators from EU Members States to receive compensation for the temporary cessation of fishing activities, due to Brexit, under the European Maritime and Fisheries Fund<sup>34</sup>.

**EU / Fisheries / Safety:** The European Commission has adopted a report urging EU Member States to ratify the International Convention on Standards of Training, Certification and Watchkeeping for Fishing Vessels Personnel (STCW-F Convention). This offers extra protection to fishers, one of the most hazardous professions in Europe. The Convention sets standards of training for personnel on board fishing vessels and is an important contribution to the promotion of safety at sea<sup>35</sup>.

**EU / Trade / Tuna:** EU-28 imports of frozen tuna loins increased by 6% to 19.200 tonnes during the first nine months of 2018, compared with the same period in 2017. The top markets were Spain (+2% to 8.200 tonnes), France (+3,2% to 6.400 tonnes), the Netherlands (+22% to 2.100 tonnes), and Germany (+94% to 2.000 tonnes). Imports were also higher in the UK and Portugal. During the review period, Spain imported 18.000 tonnes of bigeye (+45%) as well as 129 tonnes of frozen bluefin tuna (+209%), for non-canned tuna usages<sup>36</sup>.

**EU / Trend / Shrimp:** Positive consumer demand led to a 4,7% rise (25.600 tonnes) in total EU-28 imports of shrimp from Asia during the first nine months of 2018. This could be attributed to an even higher percentage increase in extra-EU28 imports (+6,3% to 428.100 tonnes) supplied mainly by Ecuador, Vietnam, India, Argentina, and Greenland. Nearly 20% or 81.000 tonnes of extra-EU28 imports consisted of processed shrimp, for which Vietnam was a major supplier (22.500 tonnes)<sup>37</sup>.

**Ireland / Shellfish / Supply:** The Irish mussel industry was valued at EUR 11,7 million in 2018. Almost 14.000 tonnes of mussels were produced in Ireland last year. Bottom grown mussels made up 4.800 tonnes of that total. The Irish bottom grown mussel sector is almost entirely export led and provides employment for close to 200 people, directly and indirectly in coastal communities<sup>38</sup>.

**US / Seafood / Consumption:** Seafood consumers in the US reportedly would prefer any aquaculture growth to come from offshore enterprises, rather than land-based or inshore operations. Some Americans prefer farmed fish and seafood over wild-caught. About half of consumers and operators also believe that off-shore mariculture produces better quality products, is cleaner and free of antibiotics, pesticides and other chemicals, is better for the environment, has less impact on wildlife and is more humane compared to other aquaculture methods<sup>39</sup>.

**Argentina / Fisheries / Trade:** In 2018, the fishing industry exported 489.173 tonnes of seafood in exchange for EUR 1,9 billion – a growth of 2,9% in volume and 8,6% in value compared to 2017. The main destinations for exports of fresh and frozen fish were the EU (EUR 96 million), Mercosur - the Southern Common Market (EUR 80 million) and the North American Free Trade Agreement -NAFTA (EUR 62 million)<sup>40</sup>.



<sup>34</sup> [https://ec.europa.eu/fisheries/press/brexitfisheries-commissioner-vella-presents-contingency-plans-mitigate-%E2%80%99no-deal%E2%80%9D-impact\\_en](https://ec.europa.eu/fisheries/press/brexitfisheries-commissioner-vella-presents-contingency-plans-mitigate-%E2%80%99no-deal%E2%80%9D-impact_en)

<sup>35</sup> [https://ec.europa.eu/fisheries/press/training-and-certification-fishermen-commission-adopts-report-calling-eu-member-states-ratify\\_en](https://ec.europa.eu/fisheries/press/training-and-certification-fishermen-commission-adopts-report-calling-eu-member-states-ratify_en)

<sup>36</sup> <http://www.fao.org/in-action/globefish/market-reports/resource-detail/en/c/1189882/>

<sup>37</sup> <http://www.fao.org/in-action/globefish/market-reports/resource-detail/en/c/1189878/>

<sup>38</sup> <https://thefishsite.com/articles/irish-launch-new-survey-boat-to-monitor-mussel-beds>

<sup>39</sup> <https://thefishsite.com/articles/us-consumers-back-offshore-aquaculture>

<sup>40</sup> <https://fis.com/fis/worldnews/worldnews.asp?monthyear=3-2019&day=14&id=101941&l=e&country=0&special=&ndb=1&df=0>

## 7 Macroeconomic Context

### 7.1 Marine fuel

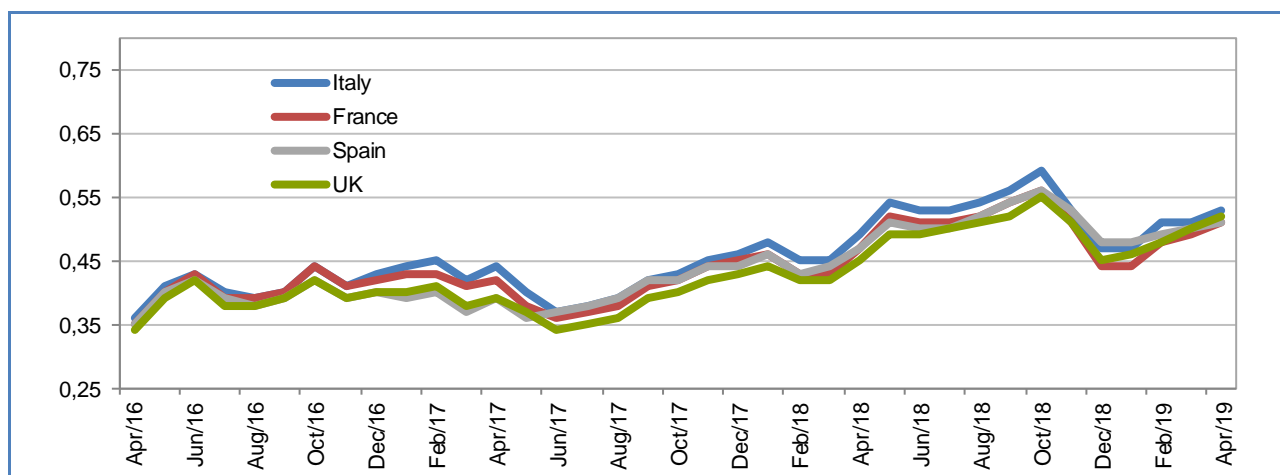
Average prices for marine fuel in **April 2019** ranged between 0,51 and 0,53 EUR/litre, in ports in **France, Italy, Spain,** and the **UK**. These prices were about 4% higher compared with the previous month and 10% higher compared with the same month a year ago.

Table 14. **AVERAGE PRICE OF MARINE DIESEL IN ITALY, FRANCE, SPAIN, AND THE UK (EUR/litre)**

Member State	Apr 2019	Change from Mar 2019	Change from Apr 2018
France (ports of Lorient and Boulogne)	0,51	4%	9%
Italy (ports of Ancona and Livorno)	0,53	4%	8%
Spain (ports of A Coruña and Vigo)	0,51	2%	9%
The UK (ports of Grimsby and Aberdeen)	0,52	4%	16%

Source: Chamber of Commerce of Forlì-Cesena, Italy; DPMA, France; MABUX.

Figure 54. **AVERAGE PRICE OF MARINE DIESEL IN ITALY, FRANCE, SPAIN, AND THE UK (EUR/litre)**



Source: Chamber of Commerce of Forlì-Cesena, Italy; DPMA, France; MABUX.

### 7.2 Consumer prices

The EU annual inflation rate was at 1,6% in March 2019, stable compared to February 2019. It was also stable compared to a year earlier, when it was 1,6%.

**Inflation: lowest rates in March 2019, compared with February 2019.**



**Inflation: highest rates in March 2019, compared with February 2019.**

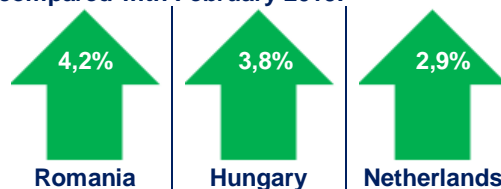


Table 15. HARMONISED INDEX OF CONSUMER PRICES IN THE EU (2015 = 100)

HICP	Mar 2017	Mar 2018	Feb 2019	Mar 2019	Change from Feb 2019		Change from Mar 2018	
Food and non-alcoholic beverages	102,08	104,02	105,98	105,84	↓	0,13%	↑	1,75%
Fish and seafood	105,55	108,12	110,32	110,21	↓	0,10%	↑	1,93%

Source: Eurostat.

### 7.3 Exchange rates

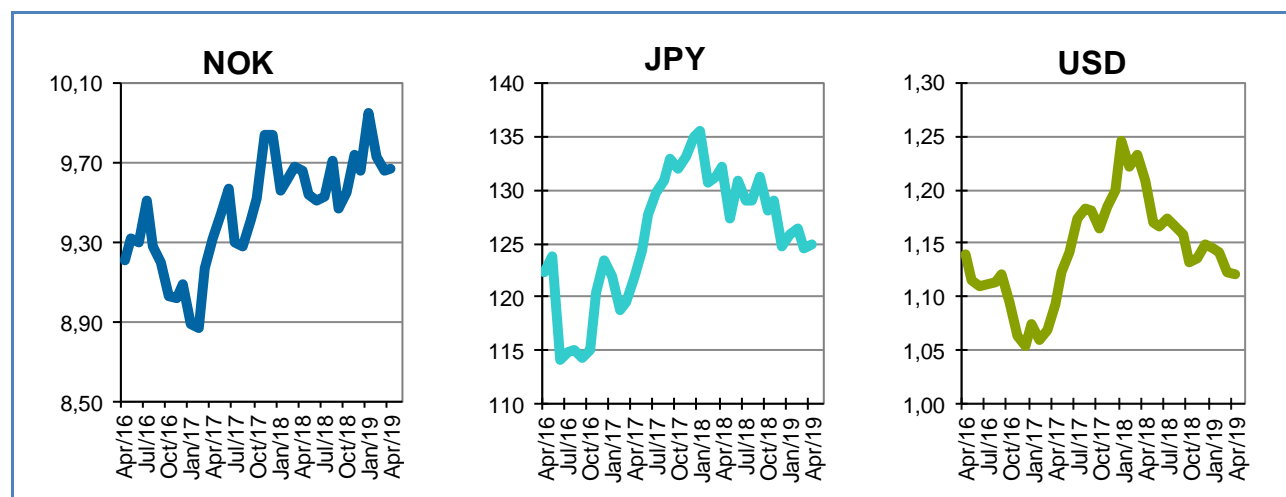
Table 16. EXCHANGE RATES FOR SELECTED CURRENCIES

Currency	Apr 2017	Apr 2018	Mar 2018	Apr 2019
NOK	9,3243	9,6620	9,6590	9,6678
JPY	121,76	132,12	124,45	124,93
USD	1,0930	1,2079	1,1235	1,1218

Source: European Central Bank.

In April 2019, the euro appreciated against the Norwegian krone (+0,1%) and the Japanese yen (+0,4%) from March 2019. However, it depreciated against the US dollar (-0,2%). For the past six months, the euro has fluctuated around 9,73 against the NOK. Compared with April 2018, the euro has depreciated 5,4% against the Japanese yen and 7,1% against US dollar, but it appreciated 0,1% against the Norwegian krone.

Figure 55. TREND OF EURO EXCHANGE RATES



Source: European Central Bank.

Manuscript completed in April 2019

Neither the European Commission nor any person acting on behalf of the Commission is responsible for the use that might be made of the following information.

Luxembourg: Publications Office of the European Union, 2019

© European Union, 2019

Reuse is authorised provided the source is acknowledged.

The reuse policy of European Commission documents is regulated by Decision 2011/833/EU (OJ L 330, 14.12.2011, p. 39).

Copyright for photographs: © Eurofish, 2019

For any use or reproduction of photos or other material that is not under the EU copyright, permission must be sought directly from the copyright holders.

PDF ISSN 2314–9671

#### FOR MORE INFORMATION AND COMMENTS:

Directorate-General for Maritime Affairs and Fisheries

B-1049 Brussels

Tel: +32 229-50101

E-mail: [contact-us@eumofa.eu](mailto:contact-us@eumofa.eu)

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

**First sales:** European Commission, FAO, European Council, FishBase.in, STECF

**Consumption:** EUROPANEL.

**Case studies:** The Marine Ingredients Organisation (FFO), Seafish, FAO, Eurostat, Udenrigsministeriet Fiskeristyrelsen Denmark, European Commission, eufishmeal.org, Oil world, Aquaculture Allience, Joint Research Centre (JRC).

**Global highlights:** European Commission, FAO, thefishsite.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).

In the context of this Monthly Highlights, analyses are led in current prices, expressed in nominal values.

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).

**EUMOFA Privacy Policy**