

# Monthly Highlights

No. 2 / 2023

EUMOFA

European Market Observatory for  
Fisheries and Aquaculture Products

## In this issue

The “cephalopods” commodity group (CG) recorded the second highest first-sales value and fourth highest first-sales volume of the 10 CGs recorded in November 2022.

Over the 36-month observation period from December 2019 to November 2022, the weighted average first-sales price of common octopus in France was 7,48 EUR/kg, nearly the same as in Portugal (7,45 EUR/kg, and 5% more than in Spain (7,14 EUR/kg).

During the period December 2019–November 2022, retail prices of mackerel were highest in Denmark (12,93 EUR/kg), with a total amount of 1.401 tonnes sold.

In 2021, the EU exported to Canada 38.941 tonnes of fishery and aquaculture products (FAPs) at a value of EUR 150 million. Compared to 2020, this was an increase of 14% in terms of volume and 20% in terms of value.

EU mussel production amounted to 430.748 tonnes in 2020, of which 94% was from aquaculture. Between 2011 and 2020, EU production fluctuated with a 13% downward trend.

On 17 January, the European Fisheries Control Agency (EFCA) presented three new patrol vessels that will strengthen fisheries inspections in European and international waters.



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## 1. First sales in Europe

Between **January** and **November 2022**, 12 EU Member States (MS), Norway and the United Kingdom reported first-sales data for 10 commodity groups<sup>1</sup>. First-sales data are based on sales notes and data collected from auction markets.

First-sales data analysed in this section, “*First sales in Europe*”, are extracted from EUMOFA<sup>2</sup>, as collected from national administrations.

### 1.1. January–November 2022 compared to the same period in 2021

**Increases in value and volume:** France and Norway recorded increases due to higher supplies of scallop and squid in France, and of cod and saithe in Norway.

**Decreases in value and volume:** Bulgaria, Cyprus, Estonia and Lithuania recorded decreases. The most significant drops were registered in Bulgaria and Lithuania. A decrease in first sales of clam and sprat was behind the decline in Bulgaria, while in Lithuania the decrease was due to herring.

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

Country	January – November 2020		January – November 2021		January – November 2022		Change from January – November 2022	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Bulgaria	2.514	1,6	3.934	2,8	1.905	1,3	-52%	-54%
Cyprus	798	3,1	818	3,6	627	2,9	-23%	-18%
Estonia	60.026	15,5	58.836	15,8	51.965	15,4	-12%	-3%
France	226.225	555,9	245.003	646,8	256.509	708,1	5%	9%
Germany			60.115	82,2	29.424	84,9	-51%	3%
Italy	81.519	301,9	80.375	332,6	75.160	337,4	-6%	1%
Latvia	44.290	9,1	42.240	9,0	40.072	9,0	-5%	0%
Lithuania	2.181	0,8	2.394	1,0	777	0,5	-68%	-47%
Netherlands	213.727	325,2	192.912	295,8	197.293	233,4	2%	-21%
Portugal	97.267	214,7	125.699	273,6	108.295	277,3	-14%	1%
Spain	479.569	1301,5	461.406	1390,0	429.410	1465,4	-7%	5%
Sweden	146.991	40,6	106.883	38,8	78.118	54,5	-27%	41%
Norway	2.808.127	2368,2	2.765.678	2520,9	2.801.046	3114,1	1%	24%
United Kingdom	283.451	520,9	317.815	594,8	298.160	620,9	-6%	4%

*Possible discrepancies in % changes are due to rounding.*

\* Volumes are reported in net weight for EU Member States, and in live weight equivalent (LWE) for Norway. Prices are reported in EUR/kg (without VAT). For Norway, prices are reported in EUR/kg of live weight.

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

<sup>2</sup> First-sales data updated on 17.01.2021.



## 1.2. November 2022 compared to November 2021

**Increases in value and volume:** First sales increased in Cyprus, Estonia, Spain, Sweden and Norway. Sweden and Estonia recorded the highest first sales increase due to sprat and herring, while mackerel was behind the increases in Norway.

**Decreases in value and volume:** First sales decreased in Bulgaria, Lithuania, the Netherlands and Portugal. Lithuania and Bulgaria recorded the sharpest drops in relative terms. This was due to decreased sales of herring and smelt in Lithuania, while in Bulgaria the main species responsible were clam and red mullet.

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

Country	November 2020		November 2021		November 2021		Change from November 2020	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Bulgaria	308	0,3	262	0,3	30	0,034	-89%	-89%
Cyprus	23	0,2	36	0,3	39	0,3	7%	1%
Estonia	7.728	1,6	7.364	1,7	8.881	2,4	21%	42%
France	18.492	57,8	20.217	71,4	17.939	71,8	-11%	0%
Germany			8.159	7,1	5.506	8,0	-33%	13%
Italy	8.108	28,9	6.633	32,3	6.995	32,1	5%	-1%
Latvia	5.168	1,1	6.807	1,5	6.232	1,6	-8%	3%
Lithuania	368	0,11	319	0,089	12	0,021	-96%	-76%
Netherlands	11.217	22,8	24.895	36,8	14.856	24,4	-40%	-34%
Portugal	8.089	17,3	14.020	28,4	9.082	21,0	-35%	-26%
Spain	40.600	110,2	38.681	135,8	39.042	139,6	1%	3%
Sweden	14.961	6,2	2.484	0,3	6.984	6,3	181%	1772%
Norway	217.600	193,5	240.995	245,0	284.137	291,0	18%	19%
United Kingdom	29.373	53,4	36.223	74,2	36.121	70,2	0%	-5%

*Possible discrepancies in % changes are due to rounding.*

*\* Volumes are reported in net weight for EU Member States and the UK, and in live weight equivalent (LWE) for Norway. Prices are reported in EUR/kg (without VAT). For Norway, prices are reported in EUR/kg of live weight.*

The most recent weekly first-sales data (**up to week 6 of 2023**) are available via the EUMOFA website and can be accessed [here](#).

The most recent monthly first-sales data **for December 2022** are available via the EUMOFA website and can be accessed [here](#).

### 1.3. First sales in selected countries

First-sales data analysed in this section are extracted from EUMOFA<sup>3</sup>.

Table 3. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN BULGARIA**


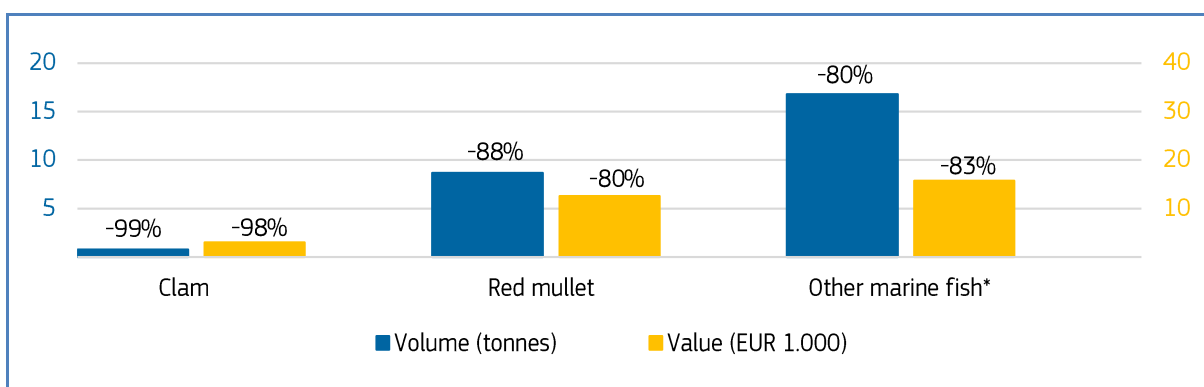
 Bulgaria	First-sales value / trend %	First-sales volume / trend %	Main contributing species
<b>Jan-Nov 2021 vs Jan-Nov 2022</b>	EUR 1,3 million, -54%	1.905 tonnes, -52%	Clam, sprat, red mullet, other marine fish*.
<b>Nov 2021 vs Nov 2022</b>	EUR 33.538, -89%	30 tonnes, -89%	Clam, red mullet, other marine fish*.

Figure 1. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN BULGARIA, NOVEMBER 2022**



Percentages show change from the previous year. \*EUMOFA aggregation for species: Metadata 2, Annex 3 <https://www.eumofa.eu/supply-balance-and-other-methodologies>

Table 4. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN CYPRUS**


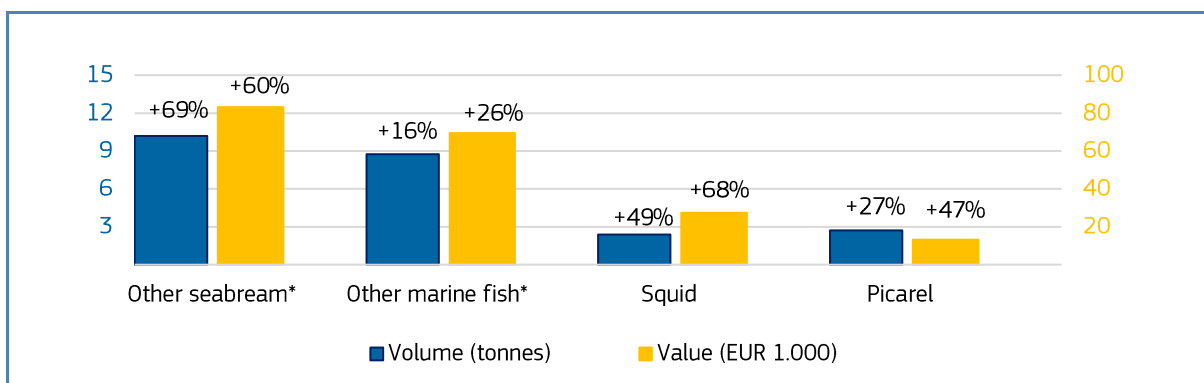
 Cyprus	First-sales value / trend %	First-sales volume / trend %	Main contributing species
<b>Jan-Nov 2021 vs Jan-Nov 2022</b>	EUR 2,9 million, -18%	627 tonnes, -23%	Swordfish, other marine fish*, albacore tuna.
<b>Nov 2021 vs Nov 2022</b>	EUR 0,3 million, +1%	39 tonnes, +7%	Other seabream*, other marine fish*, squid, picarel.

Figure 2. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN CYPRUS, NOVEMBER 2022**



Percentages show change from the previous year. \*EUMOFA aggregation for species Metadata 2, Annex 3 <https://www.eumofa.eu/supply-balance-and-other-methodologies>

<sup>3</sup> First-sales data update on 16.01.2023.



Table 5. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN ESTONIA**


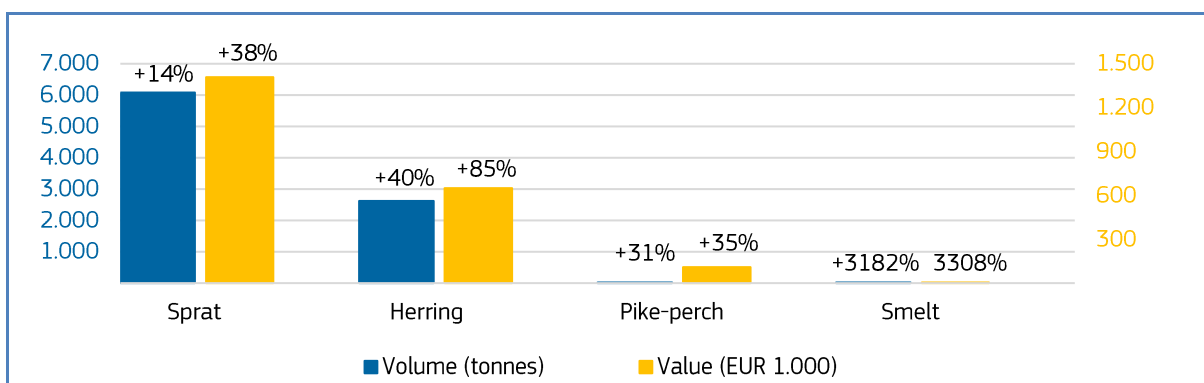
 Estonia	First-sales value / trend %	First-sales volume / trend %	Main contributing species
<b>Jan-Nov 2021 vs Jan-Nov 2022</b>	EUR 15,4 million, -3%	51.965 tonnes, -12%	Herring, pike-perch, smelt, sprat.
<b>Nov 2021 vs Nov 2022</b>	EUR 2,4 million, +42%	8.881 tonnes, +21%	Sprat, herring, pike-perch, smelt.

Figure 3. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN ESTONIA, NOVEMBER 2022**



Percentages show change from the previous year.

Table 6. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN FRANCE**


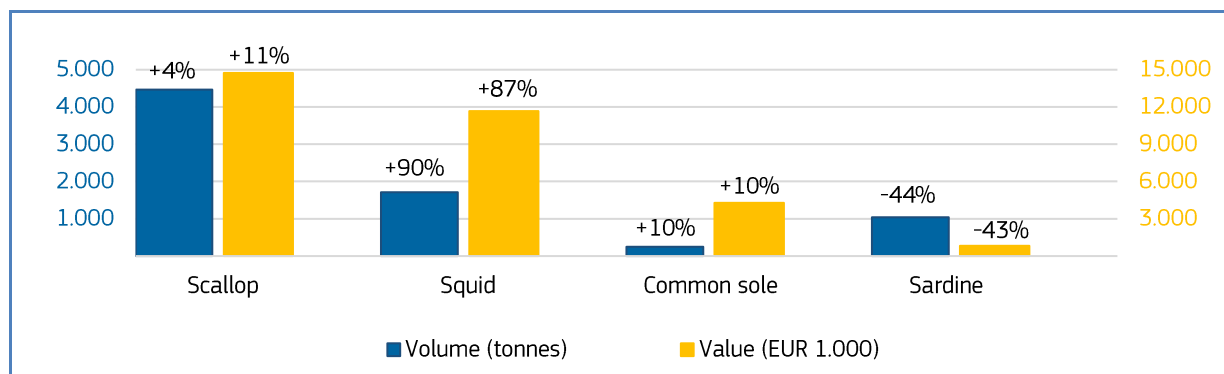
 France	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Nov 2021 vs Jan-Nov 2022</b>	EUR 708,1 million, +9%	256.509 tonnes, +5%	Scallop, squid, octopus, sardine.	First sales of <b>squid</b> recorded high increases in November 2022 compared to November 2021. This could be due to biological reasons as the natural cycles of Cephalopods are highly heterogeneous, and abundance can vary strongly from year to year. The squid resources are now increasing, especially in the eastern English Channel and the southern North Sea, where the stock is now considered to be in a rather good state. This is partly reflected in increased production observed during the first 12 months of 2022 (+155 % in volume compared to the first 12 months of 2021).
<b>Nov 2021 vs Nov 2022</b>	EUR 71,8 million, 0%	17.939 tonnes, -11%	Scallop, squid, common sole, sardine.	

Figure 4. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN FRANCE, NOVEMBER 2022**



Percentages show change from the previous year.

Table 7. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN GERMANY**


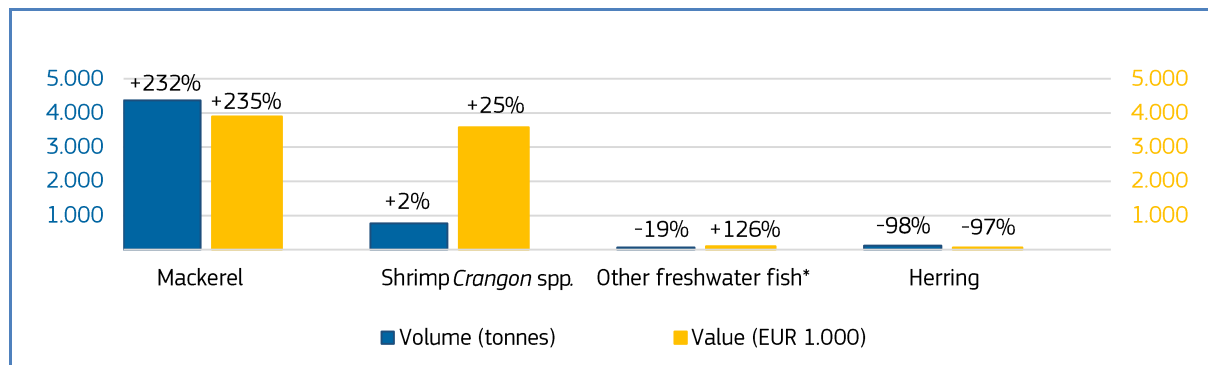

 Germany	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan Nov 2021 vs Jan-Nov 2022</b>	EUR 84,9 million, +3%	29.424 tonnes, -51%	<b>Value:</b> Shrimp <i>Crangon</i> spp., Greenland halibut, mackerel. <b>Volume:</b> Herring, sprat, cod.	In November 2022, first sales of <b>herring</b> decreased significantly compared to November 2021. The decrease is due to the big reduction in Total Allowable Catches (TACs) in the EU Regulation on fishing opportunities in the Baltic Sea <sup>4</sup> .
<b>Nov 2021 vs Nov 2022</b>	EUR 8,0 million, +13%	5.505 tonnes, -33%	<b>Value:</b> Mackerel, shrimp <i>Crangon</i> spp., other freshwater fish*. <b>Volume:</b> Herring, European plaice, dab.	

Figure 5. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN GERMANY, NOVEMBER 2022**



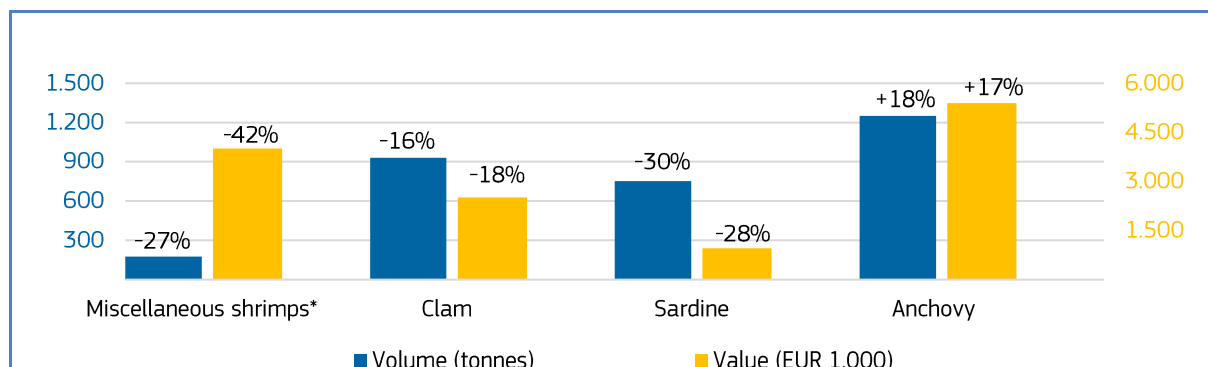
Percentages show change from the previous year. \*EUMOFA aggregation for species.

Table 8. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN ITALY**

 Italy	First-sales value / trend %	First-sales volume / trend %	Main contributing species
<b>Jan Nov 2021 vs Jan-Nov 2022</b>	EUR 337,4 million, +1%	75.160 tonnes, -6%	<b>Value:</b> Miscellaneous shrimps*, hake, swordfish, bluefin tuna. <b>Volume:</b> Clam, sardine, other molluscs and aquatic invertebrates*.
<b>Nov 2021 vs Nov 2022</b>	EUR 32,1 million, -1%	6.995 tonnes, +5%	<b>Value:</b> Miscellaneous shrimps*, clam, sardine. <b>Volume:</b> Anchovy, red mullet, squillid.

<sup>4</sup> Council Regulation (EU) 2022/109 of 27 January 2022 <https://eur-lex.europa.eu/eli/reg/2022/109/oj>

Figure 6. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN ITALY, NOVEMBER 2022**

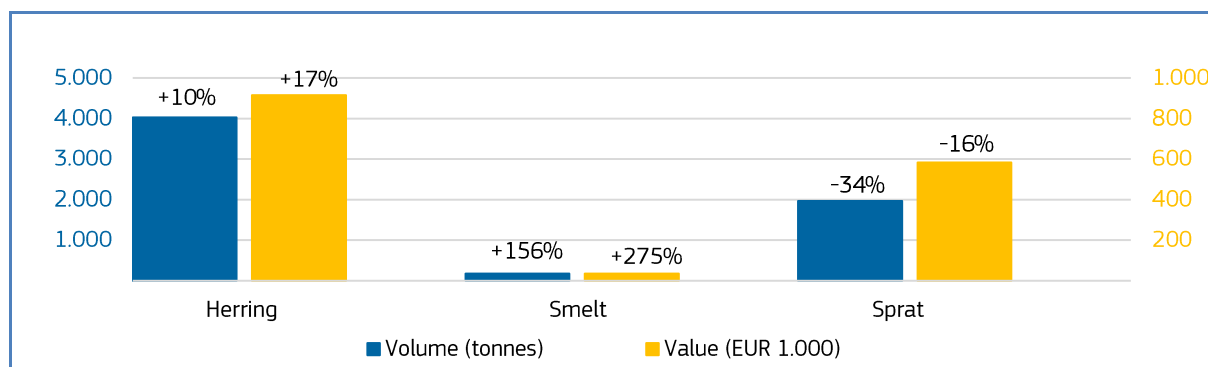


Percentages show change from the previous year. \*EUMOFA aggregation for species.

Table 9. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN LATVIA**

Latvia	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Nov 2021 vs Jan-Nov 2022</b>	EUR 9,0 million, 0%	40.072 tonnes, -5%	Sprat, herring, other freshwater fish*, smelt.	In November 2022, <b>smelt</b> showed the most significant first sales increase compared to November 2021. Smelt is a seasonal species in the Baltic Sea. The main Latvian supplies come from fisheries in the Gulf of Riga. The largest catches occur during November to April. Total catches of smelt in 2022 decreased by 67% compared with 2021. As smelt is not subject to Total Allowable Catches and quotas, the supply was due to reasonable weather conditions in November 2022, existing resources in fishing capacity and to Latvian companies gaining customer demand. It is noticeable that the price increased by 46% despite a significant increase in the quantity of smelt supplied to the market. The reason for the increase in price might be due to increased energy and petrol costs, as well as increased business chain service costs.
<b>Nov 2021 vs Nov 2022</b>	EUR 1,6 million, +3%	6.232 tonnes, -8%	<b>Value:</b> Herring, smelt, <b>Volume:</b> sprat.	

Figure 7. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN LATVIA, NOVEMBER 2022**



Percentages show change from the previous year. \*EUMOFA aggregation for species.

Table 10. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN LITHUANIA**


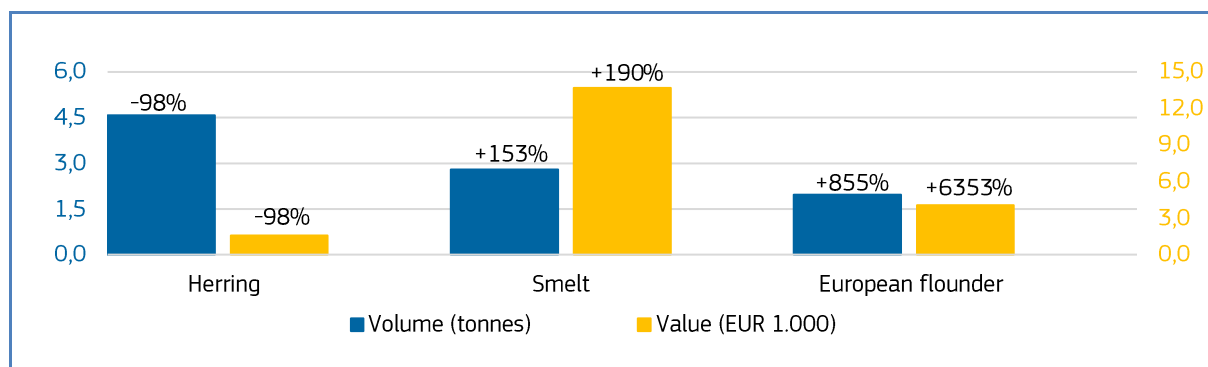
 Lithuania	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Nov 2021 vs Jan-Nov 2022</b>	EUR 0,5 million, -47%	777 tonnes, -68%	Herring, other groundfish*, smelt, sprat.	Herring recorded a sharp decrease in first sales in November 2022 compared to the same month in 2021. The main cause for this is that a few Lithuanian companies which previously supplied the Lithuanian market are undergoing reorganisation due to company mergers. Fishing activities have thus temporarily ceased. Landing and supplies from Lithuania may also have relocated to foreign countries. It is noticeable that in November 2021 most of the herring landed and sold in Lithuania was transferred to other countries for further production. Moreover, average prices showed a 30% increase in November 2022 compared with 2021. Such increases are due to a higher quality of herring provided to the market from coastal fishing areas.
<b>Nov 2021 vs Nov 2022</b>	EUR 0,02 million, -76%	12 tonnes, -96%	Herring, smelt, European flounder.	

Figure 8. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN LITHUANIA, NOVEMBER 2022**



Percentages show change from the previous year. \*EUMOFA aggregation for species.

Table 11. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN THE NETHERLANDS**


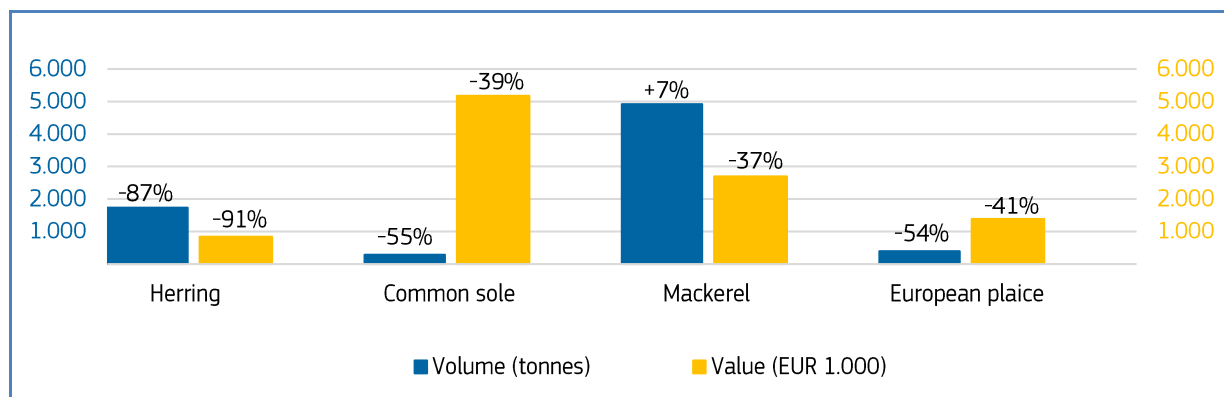
 The Netherlands	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Nov 2021 vs Jan-Nov 2022</b>	EUR 233,4 million, -21%	197.293 tonnes, +2%	<b>Value:</b> Blue whiting, herring, mackerel. <b>Volume:</b> Herring, miscellaneous small pelagics*, Atlantic horse mackerel.	First sales of <b>herring</b> decreased in November 2022 from November 2021. This is a direct consequence of the strong increase observed in November 2021 compared to the same month in previous years.
<b>Nov 2021 vs Nov 2022</b>	EUR 24,4 million, -34%	14.856 tonnes, -40%	Herring, common sole, mackerel, European plaice.	

Figure 9. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN THE NETHERLANDS, NOVEMBER 2022**

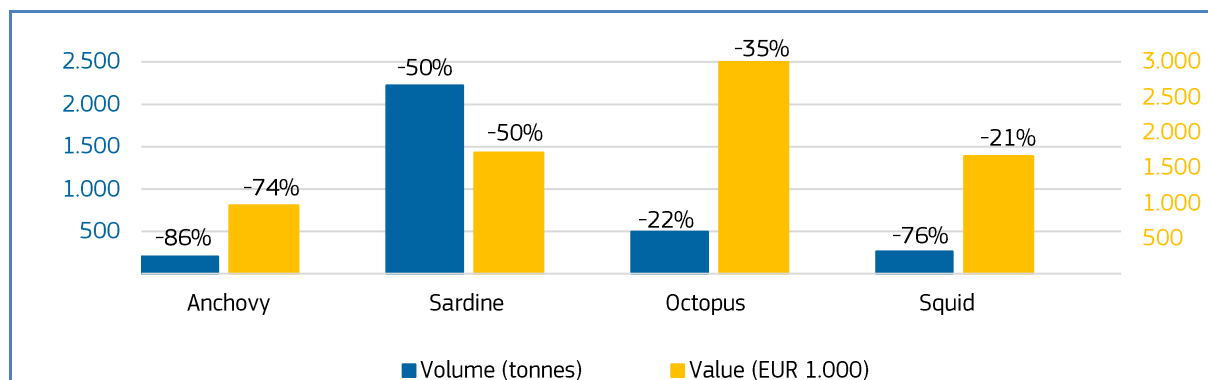


Percentages show change from the previous year. \*EUMOFA aggregation for species.

Table 12. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN PORTUGAL**

Portugal	First-sales value / trend %	First-sales volume / trend %	Main contributing species
<b>Jan-Nov 2021 vs Jan-Nov 2022</b>	EUR 277,3 million, +1%	108.295 tonnes, -14%	<b>Value:</b> Octopus, squid, Atlantic horse mackerel. <b>Volume:</b> Anchovy, other horse mackerel*, sardine.
<b>Nov 2021 vs Nov 2022</b>	EUR 21 million, -26%	9.082 tonnes, -35%	Anchovy, sardine, octopus, squid.

Figure 10. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN PORTUGAL, NOVEMBER 2022**



Percentages show change from the previous year. \*EUMOFA aggregation for species.

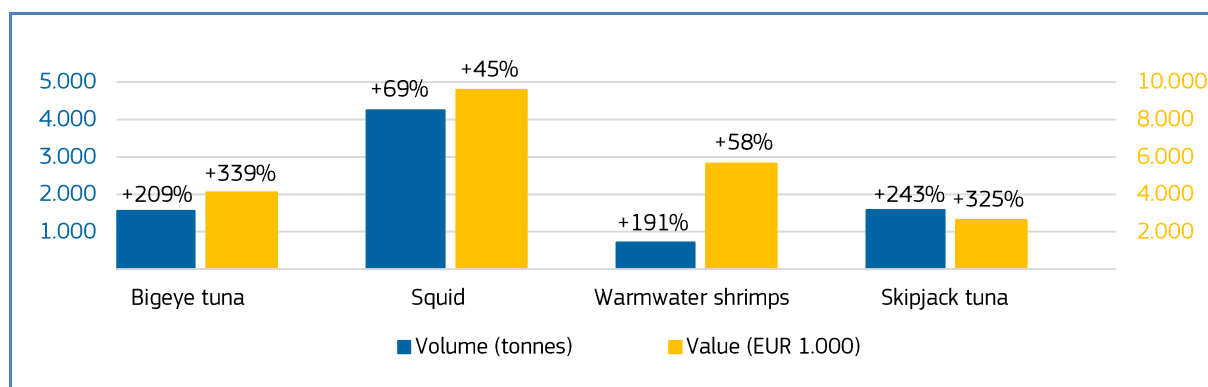
Table 13. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN SPAIN**

Spain	First-sales value / trend in %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Nov 2021 vs Jan-Nov 2022</b>	EUR 1,5 billion, +5%	429.410 tonnes, -7%	<b>Value:</b> Yellowfin tuna, squid, mackerel, swordfish. <b>Volume:</b> Hake, Atlantic horse mackerel, anchovy.	<b>Skipjack tuna</b> recorded high increases in first sales in November 2022 compared to November 2021. The stock status of this species is positive with slight improvements which stabilize fishing opportunities for 2023 <sup>5</sup> . The quantity reported in November 2022 differs significantly to November 2021 but is a normal quantity compared to other years (2020, 2019 or 2018). When grouping the total landings from August to
<b>Nov 2021 vs Nov 2022</b>	EUR 139,6 million, +3%	39.042 tonnes, +1%	Bigeye tuna, squid, warmwater shrimps, skipjack tuna.	

<sup>5</sup> [https://www.mapa.gob.es/es/prensa/221122iccat\\_tcm30-636479.pdf](https://www.mapa.gob.es/es/prensa/221122iccat_tcm30-636479.pdf)

				<p>November for the period 2018-2022), there is no difference in the volumes landed.</p> <p><b>Bigeye tuna</b> also experienced an increase in first sales in November 2022 compared to November 2021. The stock status of the species was stable, and no relevant factors affected its abundance. For a clearer view on first sales trend, it was necessary to analyse a longer period of first sales. When grouping the total volumes sold from August to November 2018-2022, no abrupt changes were noted.</p>
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Figure 11. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN SPAIN, NOVEMBER 2022**

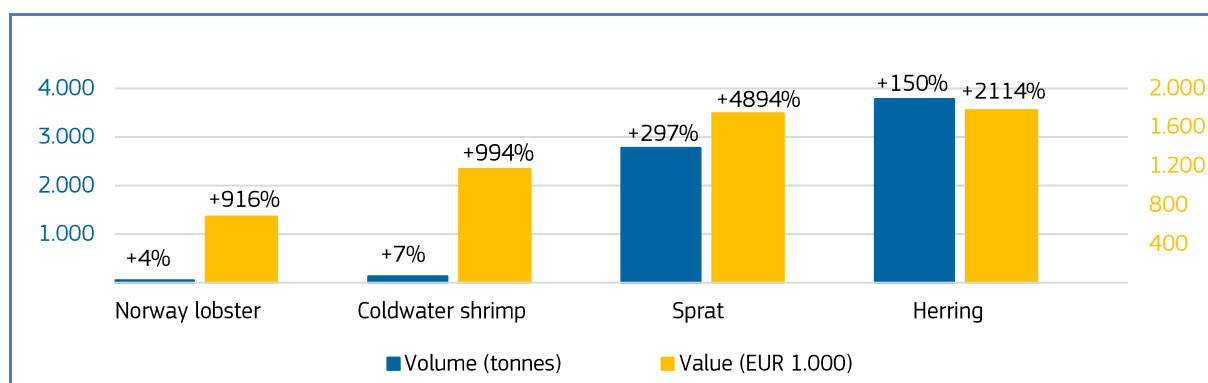


Percentages show change from the previous year.

Table 14. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN SWEDEN**

Sweden	First-sales value / trend in %	First-sales volume / trend in %	Main contributing species
Jan-Nov 2021 vs Jan-Nov 2022	EUR 54,5 million, +41%	78.118 tonnes, -27%	<b>Value:</b> Norway lobster, coldwater shrimp, herring. <b>Volume:</b> Herring, sprat, other groundfish*.
Nov 2021 vs Nov 2022	EUR 6,3 million, +1772%	6.984 tonnes, +181%	Norway lobster, coldwater shrimp, sprat, herring, sprat.

Figure 12. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN SWEDEN, NOVEMBER 2022**



Percentages show change from the previous year. \*EUMOFA aggregation for species.

Table 15. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN NORWAY**


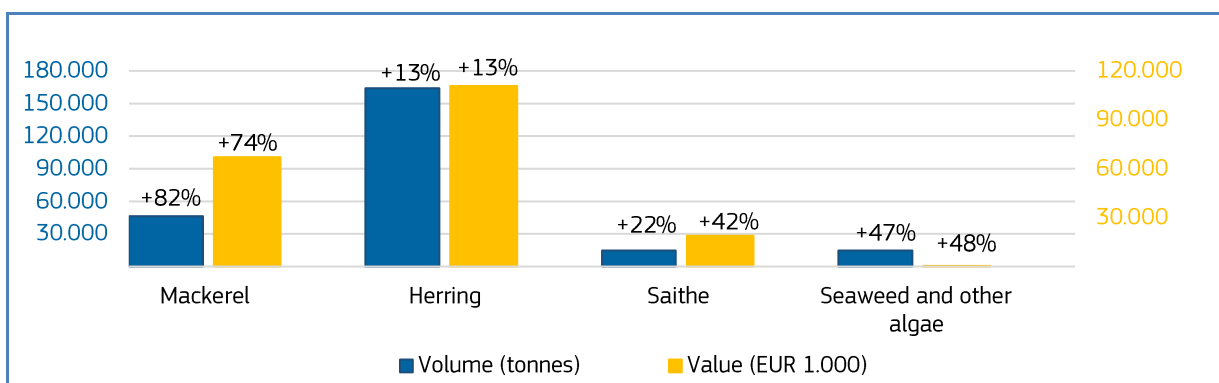
 Norway	First-sales value / trend %	First-sales volume <sup>6</sup> / trend %	Main contributing species
<b>Jan-Nov 2021 vs Jan-Nov 2022</b>	EUR 3,1 billion, +24%	2,8 million tonnes, +1%	Cod, saithe, mackerel, herring, miscellaneous small pelagics*.
<b>Nov 2021 vs Nov 2022</b>	EUR 291 million, +19%	284.137 tonnes, +18%	Mackerel, herring, saithe, seaweed and other algae.

Figure 13. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN NORWAY, NOVEMBER 2022**



Percentages show change from the previous year. \*EUMOFA aggregation for species.

Table 16. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN THE UNITED KINGDOM**


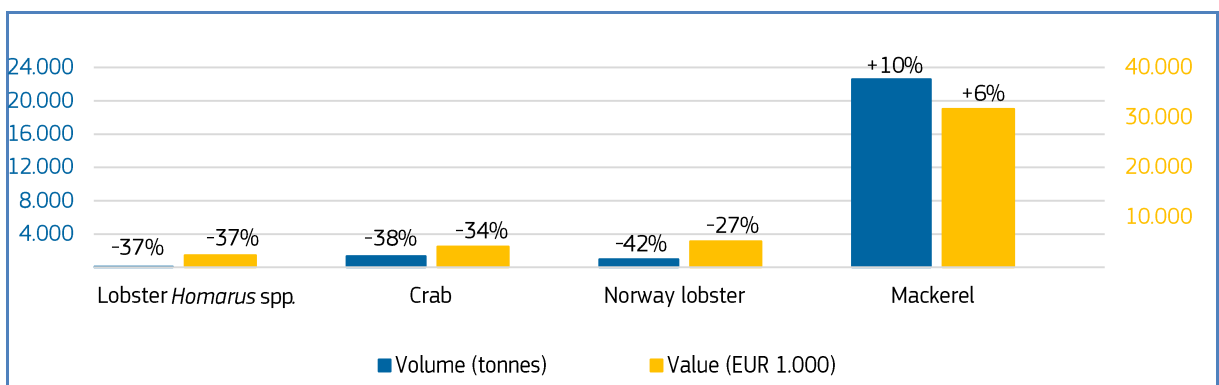
 The United Kingdom	First-sales value / trend %	First-sales volume / trend %	Main contributing species
<b>Jan-Nov 2021 vs Jan-Nov 2022</b>	EUR 621 million, +4%	298.160 tonnes, -6%	<b>Value:</b> Norway lobster, mackerel, cod, herring. <b>Volume:</b> Norway lobster, blue whiting, other molluscs and aquatic invertebrates.
<b>Nov 2021 vs Nov 2022</b>	EUR 70,2 million, -5%	36.121 tonnes, 0%	Mackerel, Norway lobster, lobster <i>Homarus</i> spp., crab.

Figure 14. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN THE UNITED KINGDOM, NOVEMBER 2022**



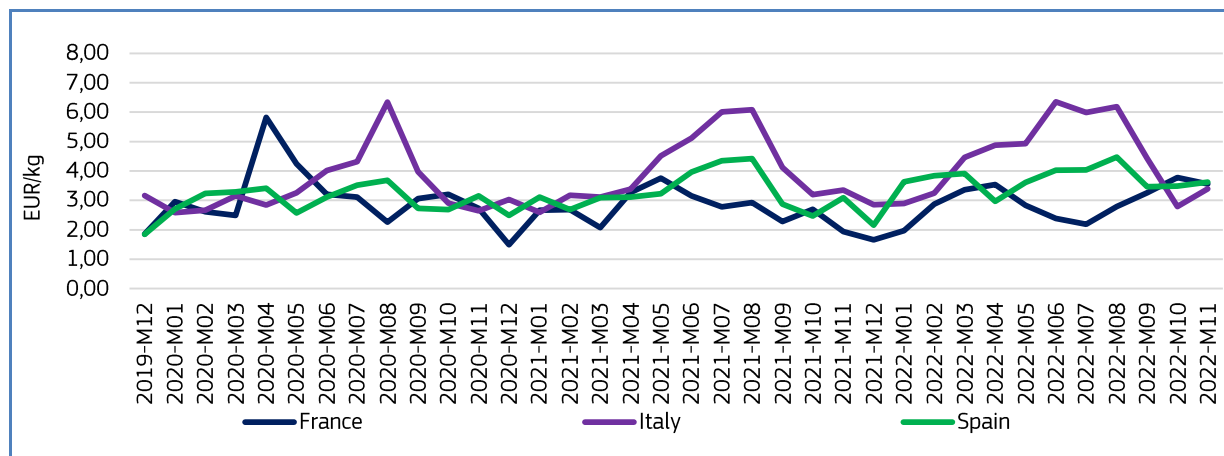
Percentages show change from the previous year. \*EUMOFA aggregation for species.

<sup>6</sup> Volume reported in live weight equivalent (LWE)



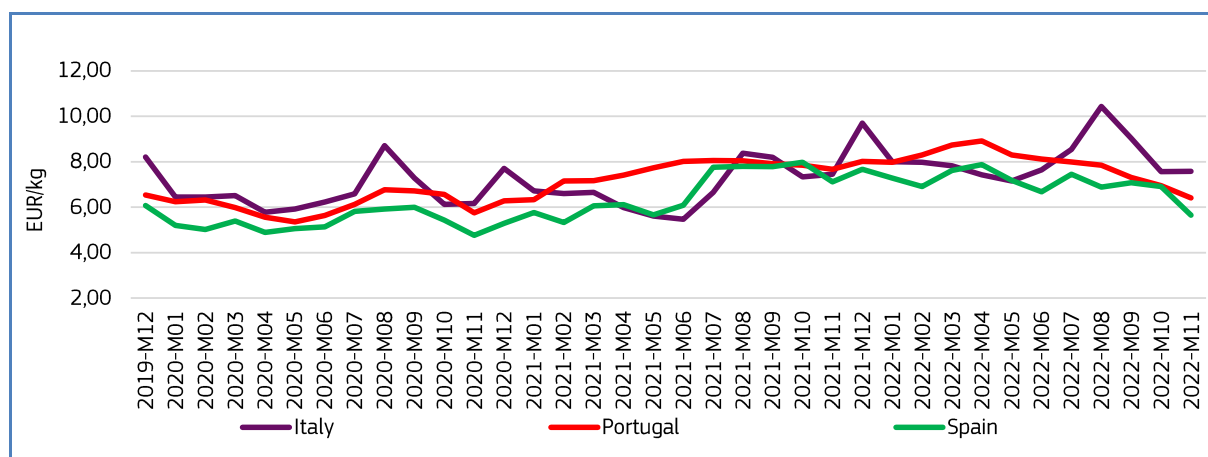
## 1.4. Comparison of first-sales prices of selected species in selected countries<sup>7</sup>

Figure 15. **FIRST SALES PRICES OF OTHER FLOUNDERS IN FRANCE, ITALY AND SPAIN**



EU first sales of **other flounders**<sup>8</sup> (other than European flounder) occur in several countries, including **France, Italy** and **Spain**. In November 2022, the average first-sales prices in France were 3,55 EUR/kg (down by -6% from October 2022 and up by 83% from November 2021); in Italy 3,40 EUR/kg (up from the previous month and November 2021 by 22% and 1% respectively); and in Spain 3,62 EUR/kg (up from October 2022 and November 2021 by 4% and 17% respectively). In November 2022 compared to the previous year, supply increased in Italy (5%), and decreased France (-51%), while it remained stable in Spain. Supply is seasonal, with peaks in France between December and February. Volumes sold in Italy appear to peak between January and March and June/July. In Spain supply does not appear to follow a clear seasonality. Over the past 36 months, prices showed a stable trend in all countries surveyed. At the same time, supply decreased slightly in Italy and decreased in Spain, while it was stable in France.

Figure 16. **FIRST SALES PRICES OF OCTOPUS, IN ITALY, PORTUGAL AND SPAIN**



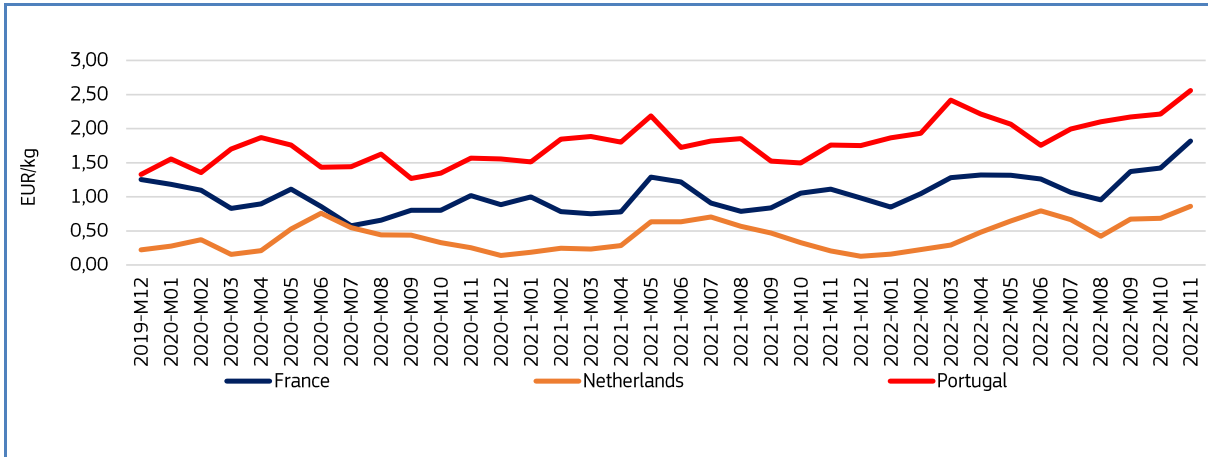
EU first sales of **octopus** occur predominantly in **Italy**, as well as **Portugal** and **Spain**. In November 2022, the average first-sales prices of octopus were: 7,58 EUR/kg in Italy (stable price from the previous month and up by 2% from the previous year); 6,41 EUR/kg in Portugal (down from October 2022 and November 2021 by -8% and -16% respectively); and 5,65 EUR/kg in Spain (down from previous month and November 2021 by -18% and -21% respectively). In November 2022 compared to the previous year, supply decreased in Portugal and Spain (-22%, and -14% respectively), and increased in Italy (+28%). Supply is seasonal in Portugal, with peaks between January and March, in July and November. Volumes sold in Spain peak more often in January, as well as in November. In Italy supply does not appear to follow a clear seasonality. Over the

<sup>7</sup> First-sales data updated on 16.01.2023.

<sup>8</sup> The most important species at ERS level grouped under „other flounders“ are witch flounder, lefteye flounders nei in France; Mediterranean scaldfish, spotted flounder in Italy; spotted flounder, witch flounder in Spain.

36-month period observed, octopus prices showed a stable trend in all three countries. During the same time, volumes went down in Italy and decreased slightly in Spain, while supply increased in Portugal.

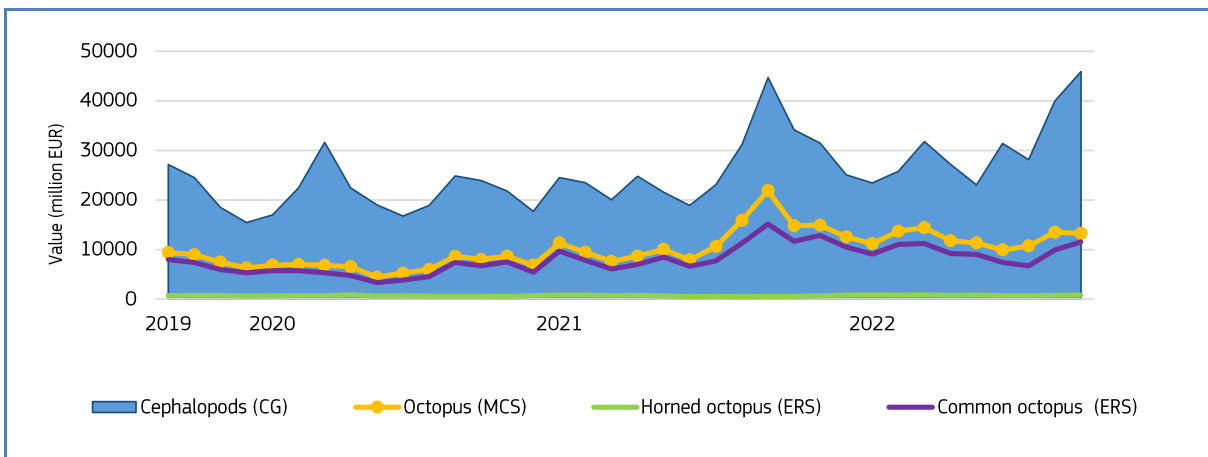
Figure 17. **FIRST SALES PRICES OF POUTING IN FRANCE, THE NETHERLANDS AND PORTUGAL**



EU first sales of **pouting (=bib)** occur in many countries, as well as **France, the Netherlands and Portugal**. In November 2022, average first-sales prices of pouting were 1,82 EUR/kg in France (up from both the previous month and year by 28%, and 63% respectively); 0,86 EUR/kg in the Netherlands (up by 26% from October 2022 and up by 315% from November 2021); and 2,56 EUR/kg in Portugal (up by 16% from October 2022 and up by 46% from November 2021). In November 2022, supply decreased on all three markets: in France (-27%), in the Netherlands (-77%) and in Portugal (-53%), compared to the previous year. Volumes sold in Portugal peaked in January while in France they peaked in January as well as between June and July. Supply in the Netherlands peaked in between November and January. Over the past three years, prices have shown a stable trend in all countries surveyed, while at the same time supply has gone down in Portugal and has been stable in France and the Netherlands.

### 1.5. Commodity group of the month: Cephalopods<sup>9</sup>

Figure 18. **FIRST SALES COMPARISON AT CG, MCS, AND ERS LEVELS FOR REPORTING COUNTRIES<sup>10</sup>, DECEMBER 2019 – NOVEMBER 2022**



The **“cephalopods”** commodity group (CG<sup>11</sup>) recorded the second highest first sales value and fourth highest first sales volume of the 10 CGs recorded in November 2022. Across the reporting countries covered by the EUMOFA database, first sales of cephalopods reached a value of EUR 45,9 million and a volume of 10.788 tonnes, representing a 3% increase in value % and 21% increase in volume compared to November 2021. In the past 36 months, the highest first-sales value of

<sup>9</sup> First-sales data updated on 24.01.2023.

<sup>10</sup> Norway and the UK excluded from the analyses.

<sup>11</sup> Annex 3: <http://eumofa.eu/supply-balance-and-other-methodologies>

cephalopods was recorded at EUR 45,9 million in November 2022, while the lowest was recorded at EUR 15,4 million in March 2020.

The “cephalopods” CG includes four main commercial species (MCS): cuttlefish, octopus, squid and other cephalopods<sup>12</sup>. At the Electronic Recording and Reporting System (ERS) level, common octopus (25%) and horned octopus (2%) together accounted for 27% of total “cephalopods” first-sales value recorded in November 2021.

## 1.6. Focus on common octopus



Common octopus (*Octopus vulgaris*) is a member of the family Octopodidae. It inhabits rocky, sandy and muddy bottoms off the coastline to the edge of the continental shelf. Male and female adults usually die shortly after spawning and brooding. Embryos hatch into the planktonic stage and live before they grow larger and take up a benthic existence as adults. Adults feed mainly on crabs and other crustaceans, although some are plankton feeders, and they are preyed upon by a number of several marine fishes. The species is thought to be the most intelligent of all invertebrate animals<sup>13</sup>. The species is distributed in temperate and tropical seas. The common octopus is the most important commercially harvested octopus species in the EU<sup>14</sup>.

For conservation of the species, a minimum conservation reference size of 750 g is established in the EU for both areas of the North-Western waters and Southwestern waters, as well as for the North Sea<sup>15</sup>. Common octopus is a very popular commercial species, particularly in the Mediterranean countries, and is fished in both artisanal and commercial fisheries. Gears commonly used to catch octopus are hooks and lines, pots, spears and otter trawls. The species is marketed fresh, frozen, dried, salted, smoked and canned<sup>16</sup>. They have long been considered a culinary delicacy by people of the Mediterranean, East Asia and other parts of the world.

We have covered **common octopus** in previous *Monthly Highlights*:

**First sales:** MH February 2013 (Portugal); MH August-September 2013 (Portugal), MH 1/2015 (Portugal), MH 3 2016 (Portugal), MH 6/2017 (Italy, France, Portugal), MH 8/2018 (France, Italy, Portugal), MH 1/2021 (Italy, Portugal, Spain).

**Topic of the month:** MH Jun/2013 “Octopus in Portugal”, MH 10/2018 “Octopus in the EU”.

**Trade:** 4/2015, 11/2016 Extra-EU import.

## Selected countries

Table 17. **COMPARISON OF COMMON OCTOPUS FIRST SALES, MAIN PLACES OF SALE, AND CONTRIBUTION TO OVERALL SALES OF “CEPHALOPODS” IN SELECTED COUNTRIES**

Common octopus		Changes in common octopus first sales Jan-Nov 2022 (%)		Contribution of common octopus to total “cephalopods” first sales in Oct 2022 (%)	Main places of sale in Jan-Nov 2022 in terms of first-sales value
		Compared to Jan-Nov 2021	Compared to Jan-Nov 2020		
France	Value	+54%	+336%	15%	Le Grau-du-Roi, Concarneau, Brest.
	Volume	+54%	+315%	12%	
Portugal	Value	+17%	+107%	62%	Olhão, Portimao, Sesimbra.
	Volume	+11%	+58%	61%	
Spain	Value	+9%	+55%	27%	Isla Cristina, Santa Eugenia Ribeira, Vigo,
	Volume	+1%	+15%	13%	

<sup>12</sup> \*EUMOFA aggregation for species (Metadata 2, Annex 3: <http://eumofa.eu/supply-balance-and-other-methodologies>)

<sup>13</sup> <https://www.sealifebase.ca/summary/octopus-vulgaris.html>

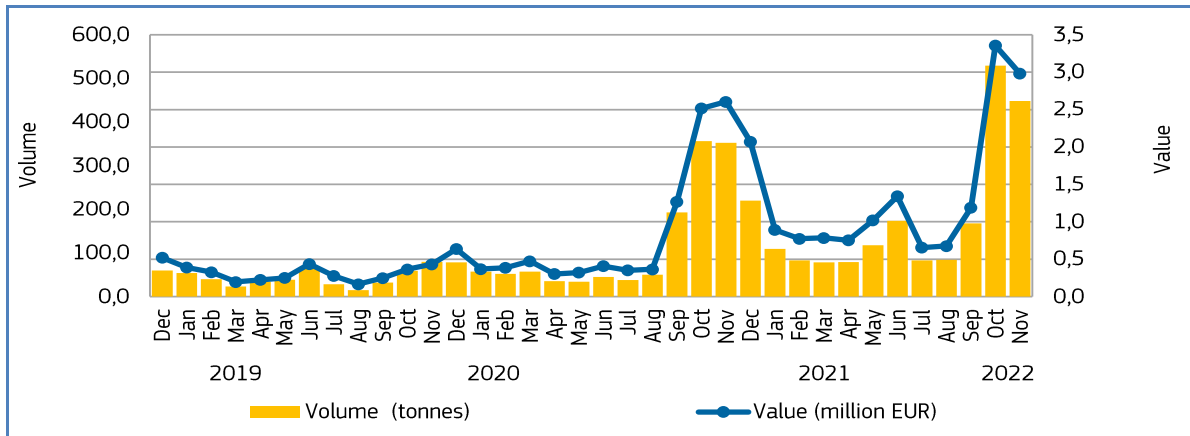
<sup>14</sup> <https://www.sciencedirect.com/science/article/abs/pii/S0165783620303374?via%3Dihub>

<sup>15</sup> Regulation (EU) 2019/1241 of the European Parliament and of the Council: <https://eur-lex.europa.eu/eli/reg/2019/1241/oj>

<sup>16</sup> <https://www.eumofa.eu/documents/20178/131001/MH+8+2018.pdf>



Figure 19. **COMMON OCTOPUS: FIRST SALES IN FRANCE, DECEMBER 2019 – NOVEMBER 2022**



In **France**, from December 2019 to November 2022, the first-sales volume of common octopus peaked in October-November 2022, ranging from 448 tonnes to 529 tonnes. Typically, first sales are highest in the autumn when the common octopus fishery is at its most intense. High sales in the last months of 2022 as well as 2021 were due to a sudden increase in its resources along the Atlantic coast, whereas most of the French catches used to occur predominantly on the Mediterranean seaboard. The production cycles of cephalopods, which includes those of common octopus, fluctuate greatly on a yearly basis, which influences in catches and first sales.

Figure 20. **FIRST SALES: COMPOSITION OF “CEPHALOPODS” (ERS LEVEL) IN FRANCE, IN VALUE AND VOLUME, NOVEMBER 2022**

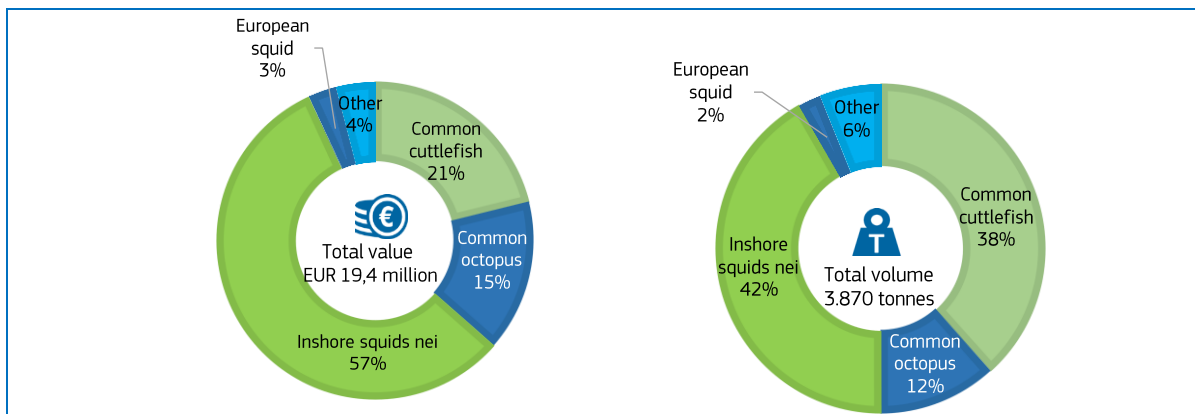
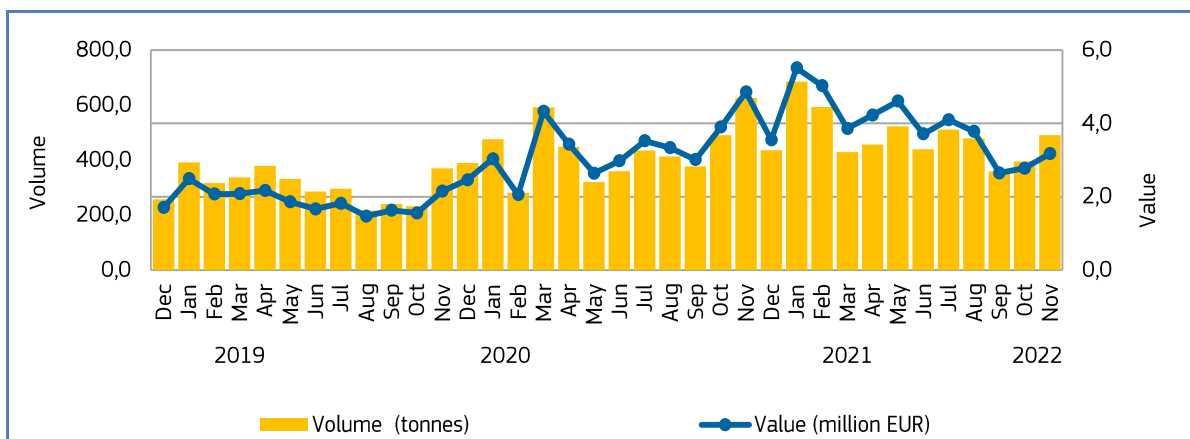


Figure 21. **COMMON OCTOPUS: FIRST SALES IN PORTUGAL, DECEMBER 2019, NOVEMBER 2022**



Common octopus in one of the most important fishing resources for the small-scale fishing fleet in **Portugal**. Over the past 36 months (December 2019–November 2022), the highest first sales of occurred in January 2022 when 685 tonnes were sold.

Figure 22. **FIRST SALES: COMPOSITION OF “CEPHALOPODS” (ERS LEVEL) IN PORTUGAL, IN VALUE AND VOLUME, NOVEMBER 2022**

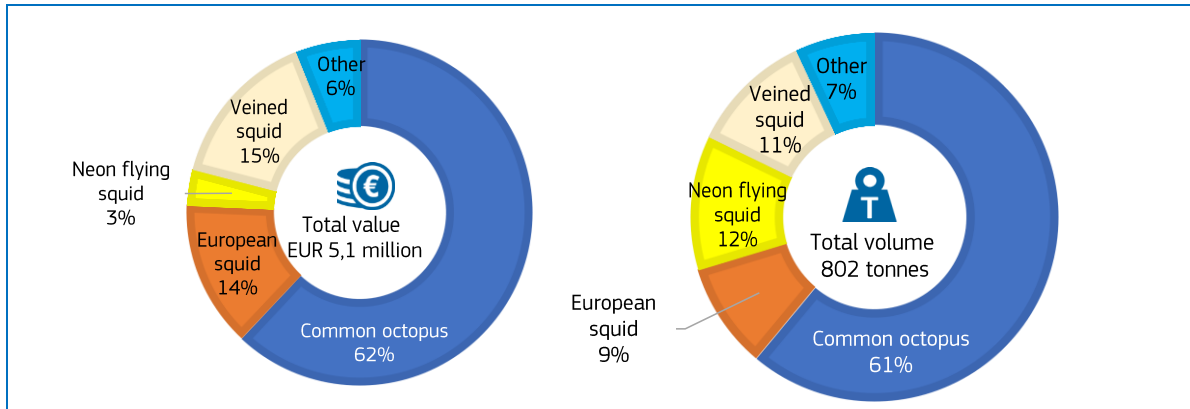
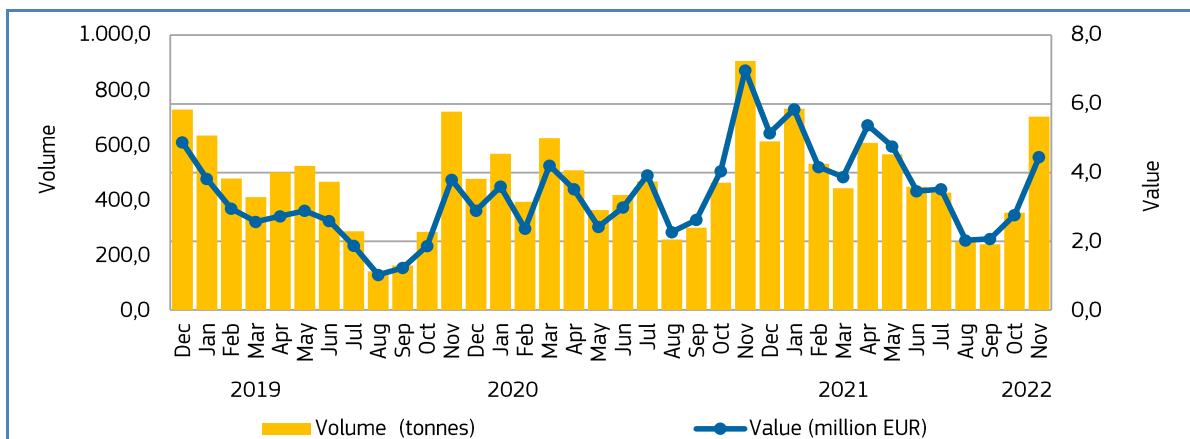
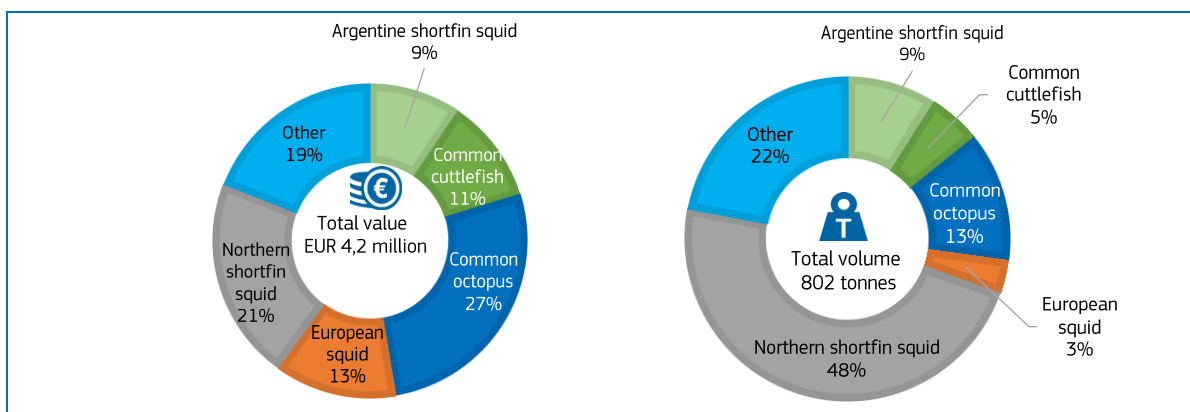


Figure 23. **COMMON OCTOPUS: FIRST SALES IN SPAIN, DECEMBER 2019 - NOVEMBER 2021**



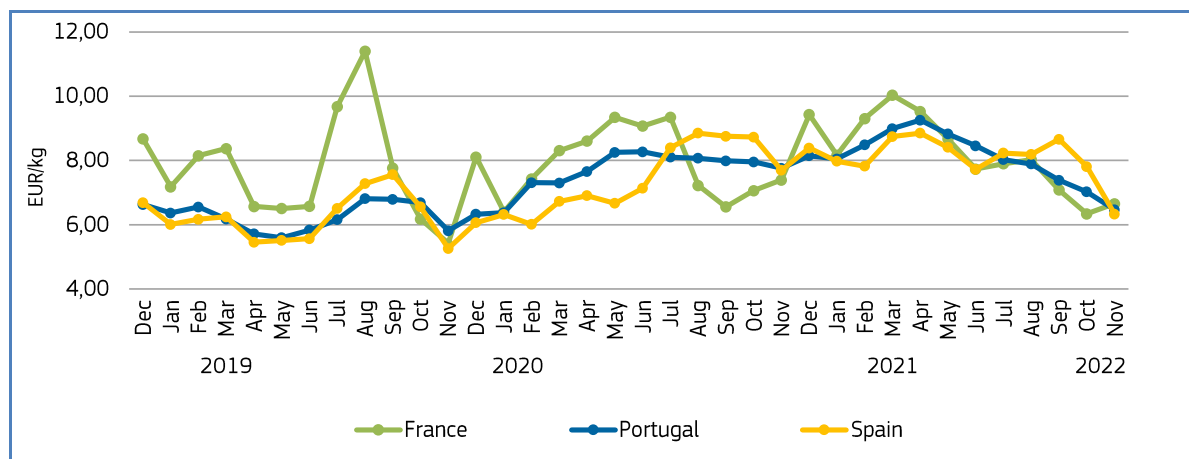
From December 2019 to November 2022 in **Spain**, the highest first sales of common octopus occurred during winter, peaking in November 2021 when 906 tonnes were sold. Fishery is at its low level during the summer season.

Figure 24. **FIRST SALES: COMPOSITION OF “CEPHALOPODS” (ERS LEVEL) IN SPAIN, IN VALUE AND VOLUME, NOVEMBER 2022**



## Price trend

Figure 25. **COMMON OCTOPUS: FIRST SALES PRICES IN SELECTED COUNTRIES, DECEMBER 2019, NOVEMBER 2022**



Over the 36-month observation period from December 2019 to November 2022, the weighted average first-sales price of common octopus in **France** was 7,48 EUR/kg, nearly the same as in **Portugal** (7,45 EUR/kg), and 5% higher than **Spain** (7,14 EUR/kg).

In **France** in November 2022, the average first-sales price of common octopus (6,65 EUR/kg) fell by 10% compared with November 2021 and increased by 23% compared with November 2020. Over the observation period from November 2019 to November 2022, the average price ranged from 5,43 EUR/kg for 80 tonnes in November 2020 to 11,40 EUR/kg for 15 tonnes in August 2022.

In **Portugal** in November 2022, the average first-sales price of common octopus (6,47 EUR/kg) fell by 17% and increased by 11% compared to the same months in 2021 and 2020 respectively. During the period observed, the lowest average price (5,60 EUR/kg for 332 tonnes) was in May 2020, while the highest average price was recorded in April 2022, at 9,25 EUR/kg for 457 tonnes.

In **Spain** in November 2022, the average first-sales price of common octopus (6,33 EUR/kg) fell by 18% compared to November 2021 and increased by 20% compared to November 2020. During the period observed, the lowest average price of 5,26 EUR/kg for 722 tonnes was in November 2020, while the highest average price was recorded in August 2021, at 8,85 EUR/kg for 256 tonnes.

## 1.7. Focus on horned octopus



Horned octopus (*Eledone cirrhosa*) is a member of the Octopodidae family. The body of the species is usually pale yellow with diffuse orange and brown patches on the dorsal side. Like other octopuses, it can change colour rapidly to match the surroundings if it feels threatened. The skin is covered by clearly visible tubercles. Horned octopus may reach a total length of 50 cm. It is usually found on sand, mud and rocky coasts, from the sublittoral zone and deeper<sup>17</sup>. Horned octopus is widespread in the north-east Atlantic Ocean and the Mediterranean<sup>18</sup>.

The Commission Delegated Decision establishing from 2022 the multiannual Union programme for the collection and management of biological, environmental, technical, and socioeconomic data in the fisheries and aquaculture sectors, includes a request to collect data on horned octopus in the Mediterranean Sea and Black Sea, under GFCM Sub-region GSA 1-23.<sup>19</sup>

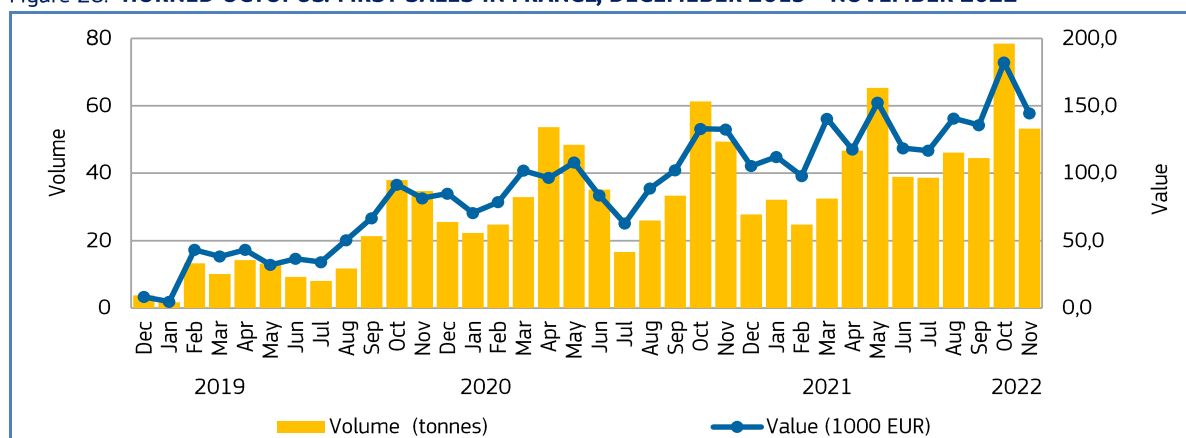
Horned octopus is a highly commercial species. In European waters it is caught mostly by purse seining or small-scale trawling<sup>20</sup>.

### Selected countries

Table 18. **COMPARISON OF HORNED OCTOPUS FIRST SALES, MAIN PLACES OF SALE, AND CONTRIBUTION TO OVERALL SALES OF CEPHALOPODS IN SELECTED COUNTRIES**

Horned octopus		Changes in horned octopus first sales Jan-Nov 2022 (%)		Contribution of horned octopus to total “cephalopods” first sales in Nov 2022 (%)	Main places of sale in Jan-Nov 2022 in terms of first-sales value
		Compared to Jan-Nov 2021	Compared to Jan-Nov 2020		
France	Value	+38%	+179%	1%	Guilvinec, Lorient, La Turballe.
	Volume	+24%	+186%	1%	
Italy	Value	-12%	-26%	4%	Molfetta, Civitavecchia, San Benedetto del Tronto.
	Volume	-33%	-41%	5%	
Spain	Value	+47%	+28%	3%	Vigo, Tarragona, Isla Cristina.
	Volume	+35%	+9%	3%	

Figure 26. **HORNED OCTOPUS: FIRST SALES IN FRANCE, DECEMBER 2019 - NOVEMBER 2022**



<sup>17</sup> <http://www.seawater.no/fauna/mollusca/cirrhosa.html>

<sup>18</sup> <https://www.sealifebase.ca/summary/Eledone-cirrhosa.html>

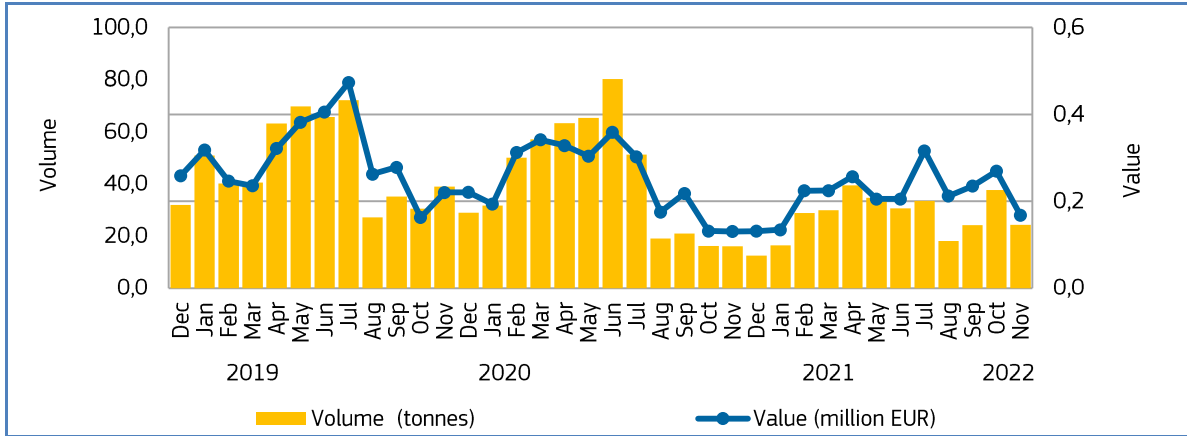
<sup>19</sup> Commission Delegated Decision (EU) 2021/1167: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32021D1167>

<sup>20</sup> <https://britishseafishing.co.uk/european-anchovy/>



In **France**, over the observed 36-month period (December 2019–November 2022), the highest first-sales of horned octopus occurred in October 2022 when 78 tonnes were sold. First sales occurred throughout the year with increasing trends in the later months.

Figure 27. **HORNED OCTOPUS: FIRST SALES IN ITALY, DECEMBER 2019 - NOVEMBER 2022**



In **Italy** from December 2019 to November 2022, the highest first sales volume of horned octopus were registered in June 2021, when 80 tonnes were sold. In general, first sales of horned octopus are usually higher in the first half of the year.

Figure 28. **FIRST SALES: COMPOSITION OF “CEPHALOPODS” (ERS LEVEL) IN ITALY IN VALUE AND VOLUME, NOVEMBER 2022**

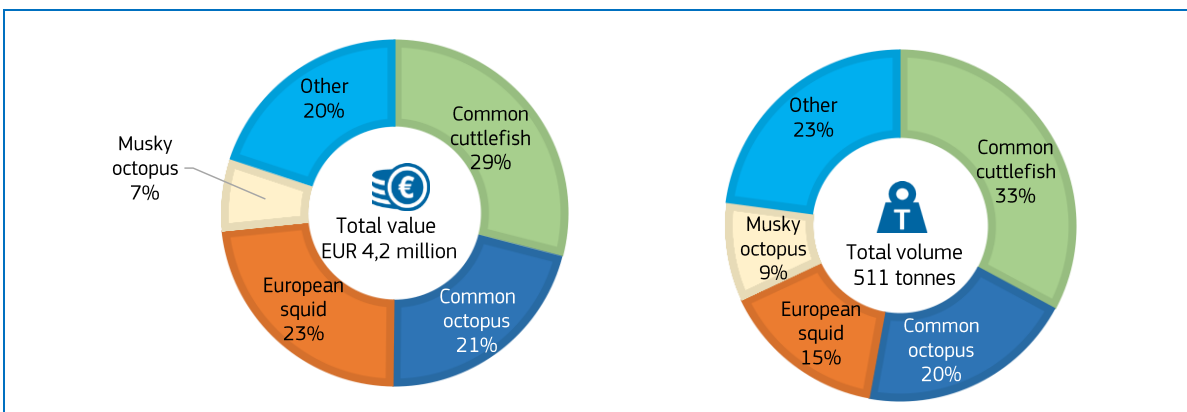
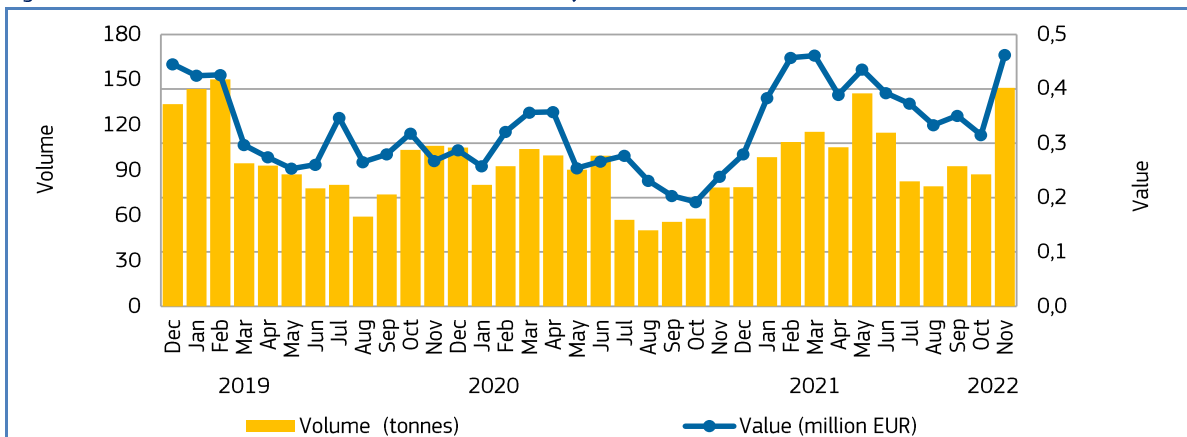


Figure 29. **HORNED OCTOPUS: FIRST SALES IN SPAIN, DECEMBER 2019 - NOVEMBER 2022**

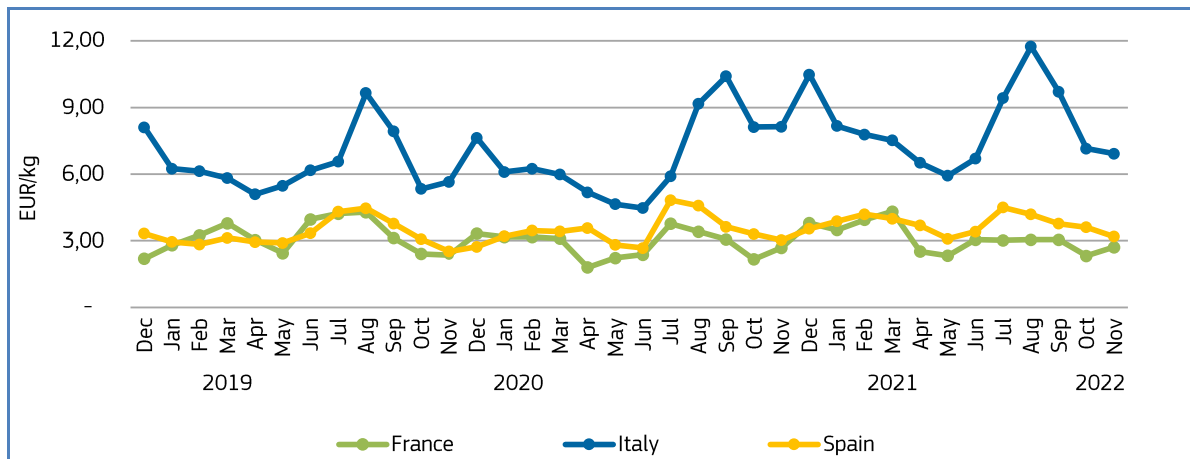




In **Spain**, over the 36-month observation period from December 2019 to November 2022, the highest first sales volume of horned octopus was registered in October 2022 when 150 tonnes were sold. When analysing reported first sales it can be observed that the horned octopus fishery is more active in spring and autumn when more sales are reported.

## Price trend

Figure 30. **HORNED OCTOPUS: FIRST-SALES PRICE IN SELECTED COUNTRIES\* (DECEMBER 2019 - NOVEMBER 2022)**



Over the 36-month observation period from December 2019 to November 2022, the weighted average first-sales price of horned octopus in **Italy** was 6,56 EUR/kg. This was 131% higher than in **France** (2,85 EUR/kg), and 92% above that in **Spain** (3,42 EUR/kg).

In **France** in November 2022, the average first-sales price of horned octopus was 2,71 EUR/kg, 1% higher than in November 2021, and 16% up compared to November 2020. The lowest price in the past 36 months was registered in April 2021, at 1,80 EUR/kg for 54 tonnes, while the highest price of 4,32 EUR/kg for 33 tonnes was observed in March 2022.

In **Italy** in November 2022, the average first-sales price of horned octopus was 6,92 EUR/kg, which is a 15% decrease compared to November 2021 and 22% higher compared to November 2020. The lowest price experienced in the 36-month observation period was registered in June 2021 at 4,47 EUR/kg for 80 tonnes, while the highest price of 11,74 EUR/kg for 18 tonnes was observed in August 2022.

In **Spain** in November 2022, the average first-sales price of horned octopus was 3,20 EUR/kg. This was 5% above November 2021 and 27% above November 2020. During the period observed, the lowest price was registered in November 2020 at 2,52 EUR/kg for 106 tonnes, while the highest price of 4,83 EUR/kg for 57 tonnes was observed in July 2021.

## 2. Extra-EU imports

The weekly extra-EU import prices (weighted average values per week, in EUR per kg) for nine different species are examined every month. The three most relevant species in terms of value and volume remain consistent: fresh whole Atlantic salmon from Norway, frozen Alaska pollock fillets from China, and frozen tropical shrimp (*Penaeus* spp.) from Ecuador. The other six species change each month; three are chosen from the commodity group of the month, and three are randomly selected. The commodity group for this month is “cephalopods”, and the featured species are frozen squid from the Falkland Islands, frozen octopus from Morocco, and prepared or preserved octopus from Indonesia. The three randomly selected species this month are frozen meat of herring from Norway, frozen surimi of Alaska pollack from the United States, and fresh or chilled fillets of cod from Iceland.

Data analysed in this section, “Extra-EU imports”, are extracted from EUMOFA, as collected from the European Commission<sup>21</sup>.

Table 19. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF THE THREE MOST RELEVANT FISHERIES AND AQUACULTURE PRODUCTS IMPORTED INTO THE EU**

Extra-EU Imports		Week 51/2022	Preceding 4-week average	Week 51/2021	Notes
Fresh whole <b>Atlantic salmon</b> imported from <b>Norway</b> ( <i>Salmo salar</i> , CN code 03021400)	<b>Price (EUR/kg)</b>	7,80	7,39 (+6%)	6,41 (+22%)	From week one of 2022 prices showed a stable trend, which was also the case for the past three years. Prices ranged from 4,32 EUR/kg (week 44 of 2020) to 11,28 EUR/kg (week 16 of 2022), the highest observed in the past three years.
	<b>Volume (tonnes)</b>	8.768	16.811 (-48%)	9.350 (-6%)	Volumes ranged from 5.672 tonnes (week 15 of 2022) to 19.518 tonnes (week 35 of 2022) and showed an upward trend over the past three years. Since week one of 2022 weekly volumes showed an upward trend.
Frozen <b>Alaska pollock</b> fillets imported from <b>China</b> ( <i>Theragra chalcogramma</i> , CN code 03047500)	<b>Price (EUR/kg)</b>	3,76	2,21 (+70%)	3,14 (+20%)	Over the past three years, including 2022, weekly prices showed a stable trend, ranging from 1,67 EUR/kg (week 48 of 2022) to 4,03 EUR/kg (week 41 of 2022). The drop in value in weeks 48 and 49 was related to an unusually high recorded catch.
	<b>Volume (tonnes)</b>	1.771	5.620 (-68%)	1.420 (+25%)	Weekly volumes fluctuated from 345 tonnes (week 52 of 2019) to 7.058 tonnes (week 48 of 2022) and showed an upward trend over the past three years as well as in 2022.
Frozen <b>tropical shrimp</b> imported from <b>Ecuador</b> (genus <i>Penaeus</i> , CN code 03061792)	<b>Price (EUR/kg)</b>	6,39	6,11 (+5%)	6,50 (-2%)	Weekly prices were stable in 2022, as well as over the past three years. Prices ranged from 4,27 EUR/kg (week 38 of 2020) to 7,19 EUR/kg (week 41 of 2022).
	<b>Volume (tonnes)</b>	1.171	2.305 (-49%)	2.163 (-46%)	Volumes had a downward trend in 2022 in contrast to the past three years. Weekly volumes fluctuated from 713 tonnes (week six of 2020) to 4.925 tonnes (week 33 of 2021).

<sup>21</sup> Last update: 19.01.2023

Figure 31. **IMPORT PRICE OF FRESH AND WHOLE ATLANTIC SALMON FROM NORWAY, 2019 - 2022**

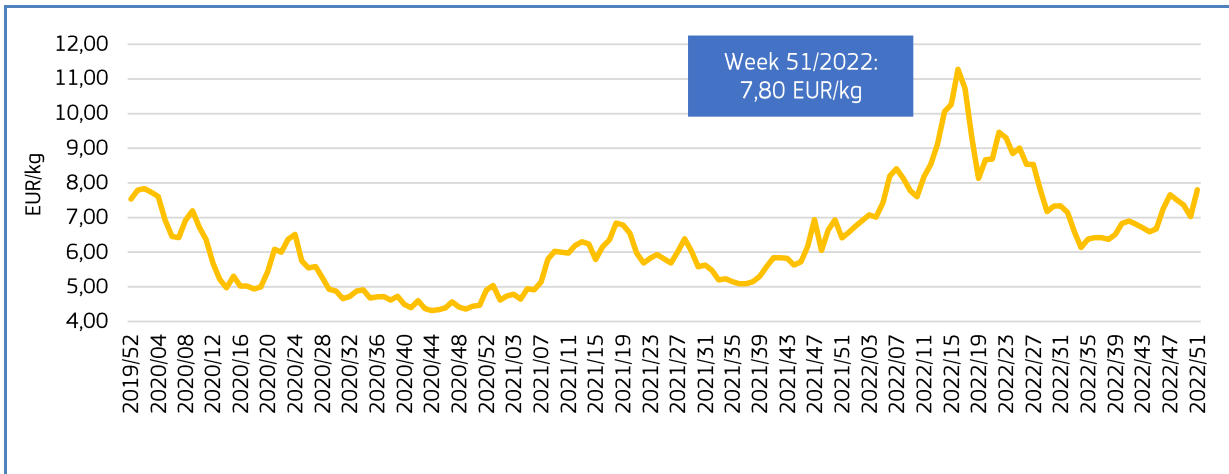


Figure 32. **IMPORT PRICE OF FROZEN ALASKA POLLOCK FILLETS FROM CHINA, 2019 - 2022**

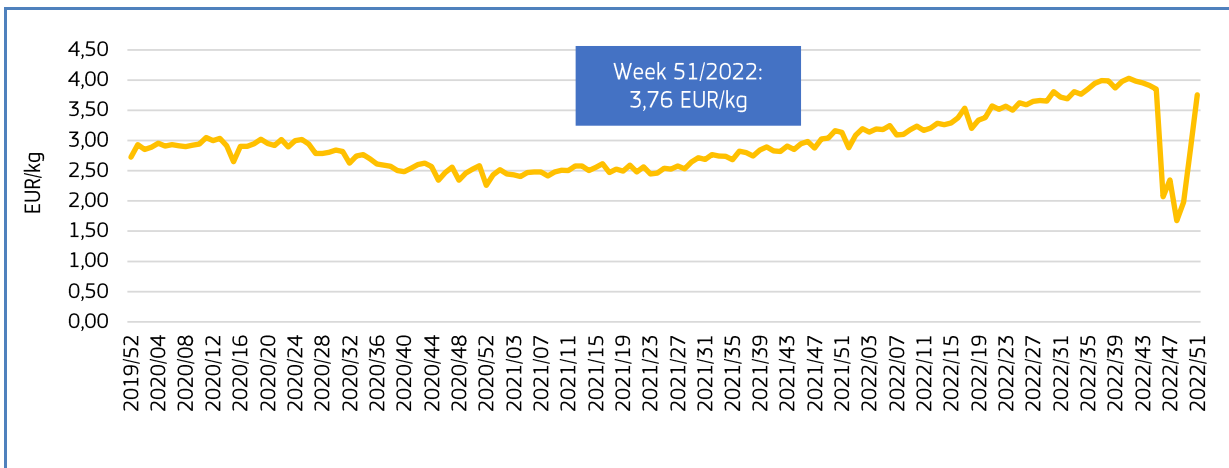


Figure 33. **IMPORT PRICE OF FROZEN TROPICAL SHRIMP FROM ECUADOR, 2019 - 2022**

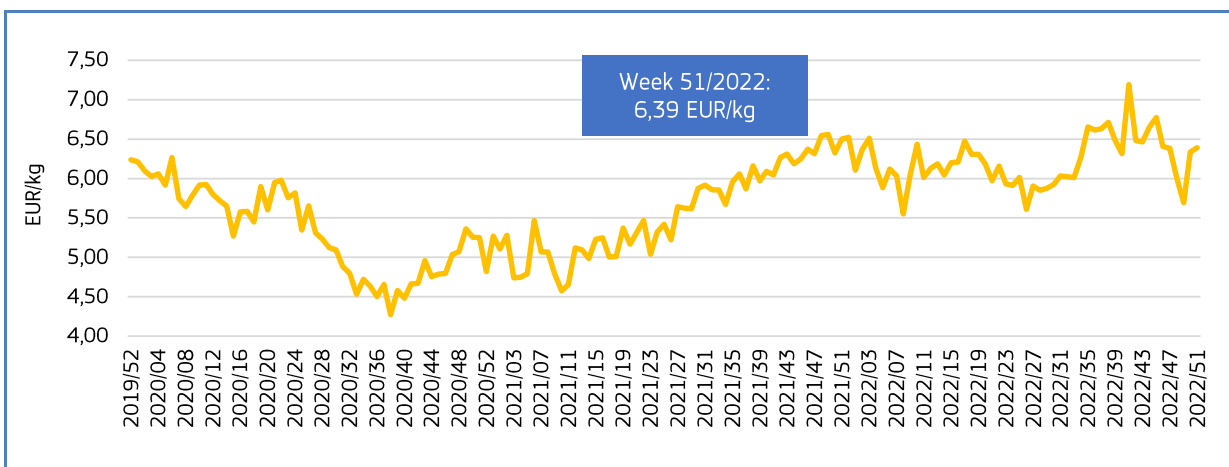


Table 20. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF THIS MONTH'S THREE FEATURED COMMODITY PRODUCTS IMPORTED INTO THE EU**

Extra-EU Imports		Week 51/2022	Preceding 4-week average	Week 51/2021	Notes
Frozen squid imported from the <b>Falkland Islands</b> ("Loligo gahi" CN code 03074335)	<b>Price (EUR/kg)</b>	4,99	4,26 (+17%)	4,10 (+22%)	Prices showed a stable trend over the past three years. Prices fluctuated from 2,87 EUR/kg (week 18 of 2021) to 6,65 EUR/kg (week 1 of 2020). 64% of the weekly prices were between 3,00 and 4,00 EUR/kg.
	<b>Volume (tonnes)</b>	292	1.085 (-73%)	1.048 (-72%)	Volumes followed an increasing trend over the past three years, with high fluctuations in supply from 0,5 tonnes (week 13 of 2021) to 5.138 tonnes (week 48 of 2020). 46% of the weekly supply was less than 1000 tonnes.
Frozen <b>octopus</b> imported from <b>Morocco</b> (Octopus spp, CN code 03075200)	<b>Price (EUR/kg)</b>	9,73	9,34 (+4%)	13,12 (-26%)	Stable trend from 2019 to 2022. Prices fluctuated from 6,27 EUR/kg (week 31 of 2020) to 13,75 EUR/kg (week 21 of 2022). 47% of the weekly prices were lower than 10 EUR/kg.
	<b>Volume (tonnes)</b>	96	48 (+101%)	309 (-69%)	High fluctuations in supply from 2019 to 2022, varying from 3 tonnes (week 45 of 2022) to 2.134 tonnes (week 6 of 2022). Overall decreasing trend. 56% of the weekly volumes were less than 800 tonnes.
Prepared or preserved <b>octopus</b> (excl. minced smoked) imported from <b>Indonesia</b> (CN code 16055500)	<b>Price (EUR/kg)</b>	19,04*	17,51 (+9%)**	12,29 (+55%***)	Stable trend over the past three years. Prices ranged from 3,61 EUR/kg (week 30 of 2020) to 33,12 EUR/kg (week 44 of 2022). The price spike could be attributed to a drop in supply. 70% of the weekly prices were below 15,00 EUR/kg.
	<b>Volume (tonnes)</b>	4*	1 (+190%)**	19 (-79%***)	Stable trend over the past three years. Fluctuations in supply from 0,005 tonnes (week 42 of 2022) to 45 tonnes (week 34 of 2021). 42% of the weekly volumes were less than 1 tonne.

\*Data refers to week 50 2022 (the most recently available). \*\*Data refers to week 50 of 2021. \*\*\*Data refers to weeks 46, 47 and 49 of 2022.

Figure 34. **IMPORT PRICE OF FROZEN SQUID FROM THE FALKLAND ISLANDS, 2019 - 2022**

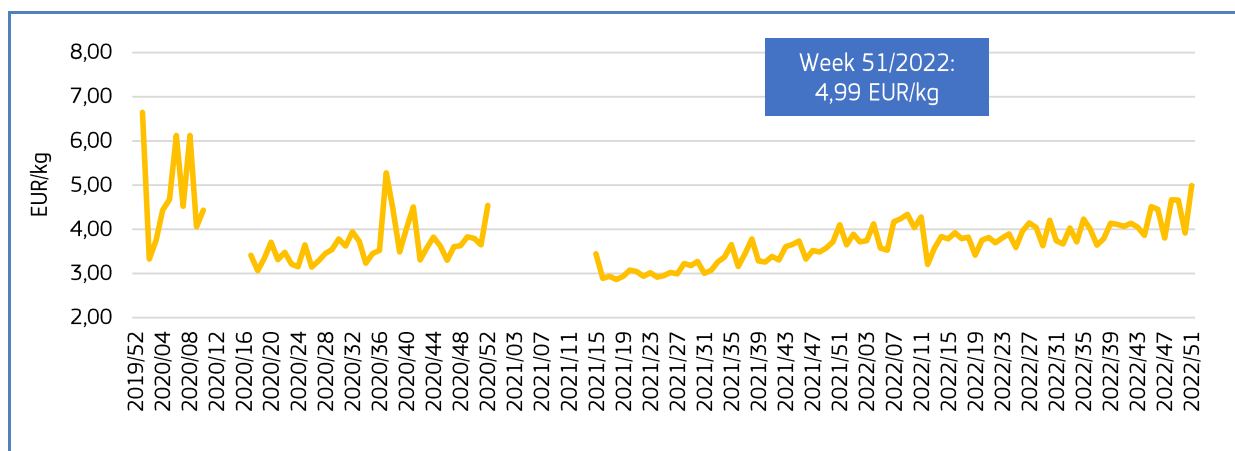


Figure 35. **IMPORT PRICE OF FROZEN OCTOPUS FROM MOROCCO, 2019 - 2022**

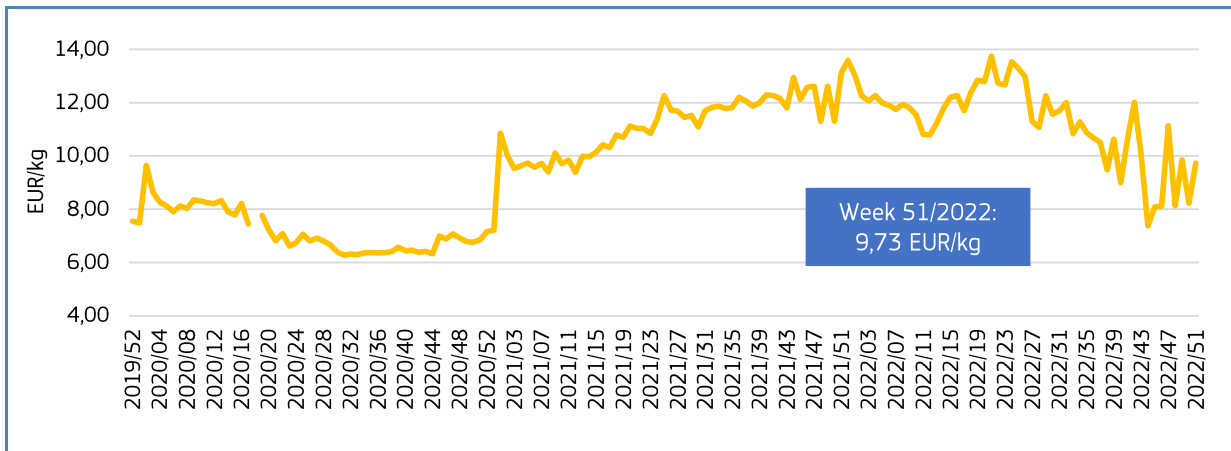
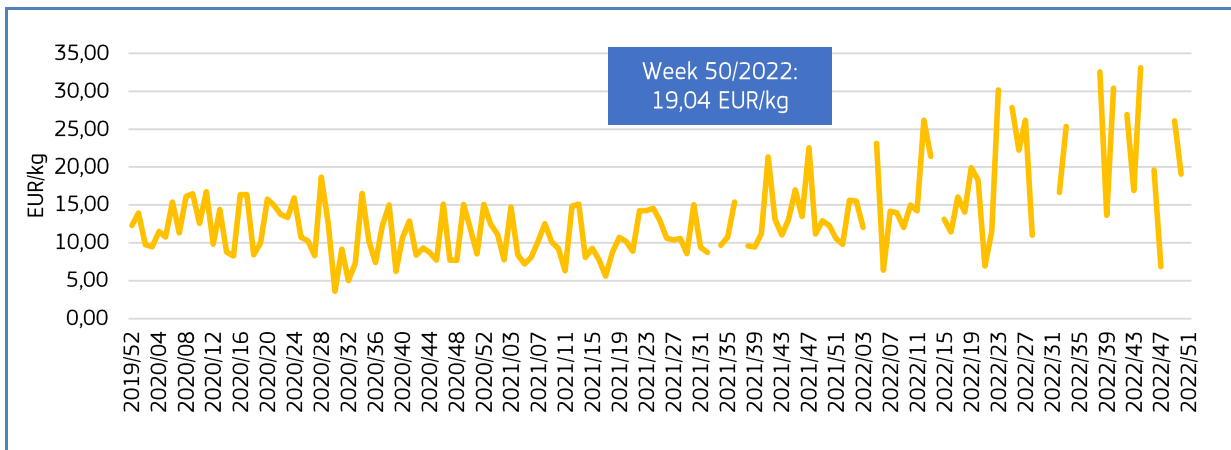


Figure 36. **IMPORT PRICE OF PREPARED OR PRESERVED OCTOPUS FROM INDONESIA, 2019 - 2022**



The volume of frozen **squid** from the **Falkland Islands** showed a slightly upward trend in 2022. The price was stable ranging from 3,21 to 4,99 EUR/kg, with weekly supply from 292 to 4.123 tonnes.

Since the beginning of the year, the price of frozen **octopus** from **Morocco** had a stable trend. At the same time, the volume exhibited a downward trend. Price ranged from 7,37 to 13,75 EUR/kg, and supply from 3 to 2.134 tonnes.

Since week one of 2022 the price of prepared or preserved **octopus** from **Indonesia** showed a slightly upward trend, while at the same time weekly supplies were stable. Prices ranged from 6,39 to 33,12 EUR/kg, and volume from 0,005 to 30 tonnes.

Table 21. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF EU IMPORTS OF THREE OTHER FISHERIES AND AQUACULTURE PRODUCTS RELEVANT TO THE EU MARKET**

Extra-EU Imports		Week 51/2022	Preceding 4-week average	Week 51/2021	Notes
Frozen meat of <b>herring</b> imported from <b>Norway</b> ( <i>Clupea harengus</i> , <i>Clupea pallasii</i> , CN code 03049923)	<b>Price (EUR/kg)</b>	1,57	1,58 (-1%)	1,56 (+1%)	Stable trend from 2019 to 2022. Prices fluctuated from 1,08 EUR/kg (week 10 of 2020) to 1,75 EUR/kg (week 35 of 2022). 60% of the weekly prices were between 1,25 EUR/kg and 1,50 EUR/kg. High fluctuations in supply, varying from 20 tonnes (week 52 of 2019) to 3.016 tonnes (week 3 of 2021). Overall downward trend. 65% of the weekly supply was lower than 800 tonnes.
	<b>Volume (tonnes)</b>	139	588 (-76%)	137 (+2%)	
Frozen surimi of <b>Alaska pollack</b> imported from <b>United States</b> ( <i>Theragra chalcogramma</i> , CN code 03049410)	<b>Price (EUR/kg)</b>	4,89	3,92 (+25%)	2,76 (+77%)	Stable trend over the past three years. Price ranged from 1,93 EUR/kg (week 52 of 2020) to 4,89 EUR/kg (week 51 of 2022). 68% of the weekly prices were between 2,00 EUR/kg and 3,00 EUR/kg. Stable trend over the past three years. High fluctuations in supply from 33 tonnes (week 51 of 2022) to 2.400 tonnes (week 49 of 2021). 55% of the weekly supply was lower than 500 tonnes.
	<b>Volume (tonnes)</b>	33	431 (-92%)	448 (-93%)	
Fresh or chilled fillets of <b>cod</b> from <b>Iceland</b> ( <i>Gadus morhua</i> , <i>Gadus ogac</i> , <i>Gadus macrocephalus</i> and of <i>Boreogadus saida</i> CN code 03044410)	<b>Price (EUR/kg)</b>	15,64	13,39 (+17%)	10,90 (+43%)	Stable trend from 2019 to 2022. Prices ranged from 8,34 EUR/kg (week 7 of 2021) to 16,06 EUR/kg (week 33 of 2022). 46% of the weekly prices were between 10,00 and 12,00 EUR/kg. From 2019 to 2022 weekly supply fluctuated from 107 tonnes (week 52 of 2019) to 638 tonnes (week 46 of 2020). Overall decreasing trend. 41% of the weekly volumes were below 350 tonnes.
	<b>Volume (tonnes)</b>	245	376 (-35%)	254 (-4%)	

Figure 37. **IMPORT PRICE OF FROZEN MEAT OF HERRING FROM NORWAY, 2019 – 2022**

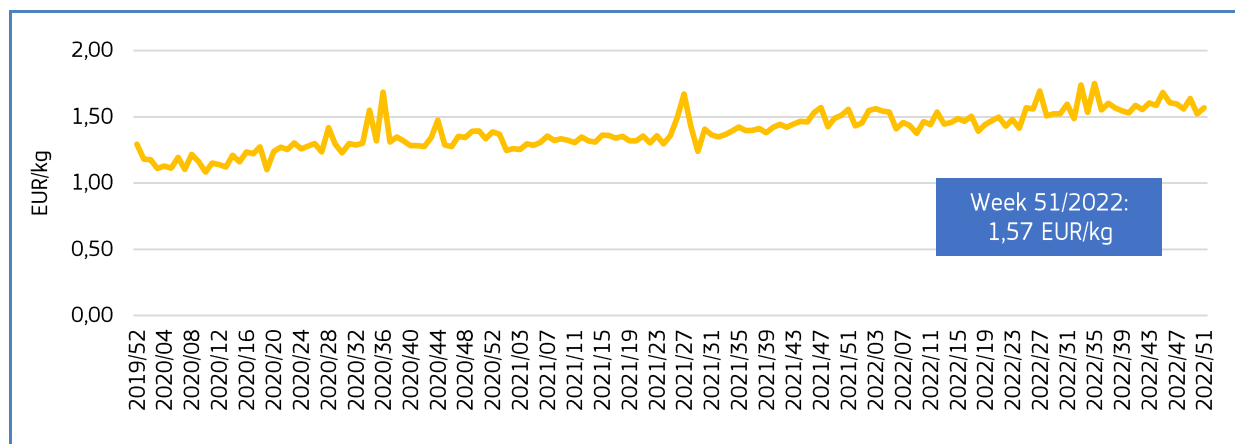




Figure 38. **IMPORT PRICE OF FORZEN SURIMI OF ALASKA POLLACK FROM UNITED STATES, 2019 - 2022**

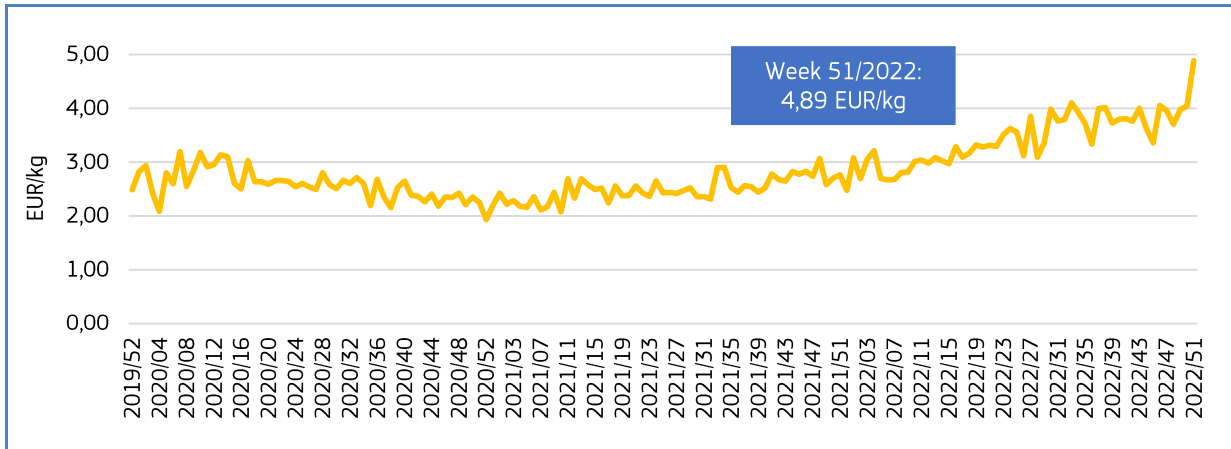
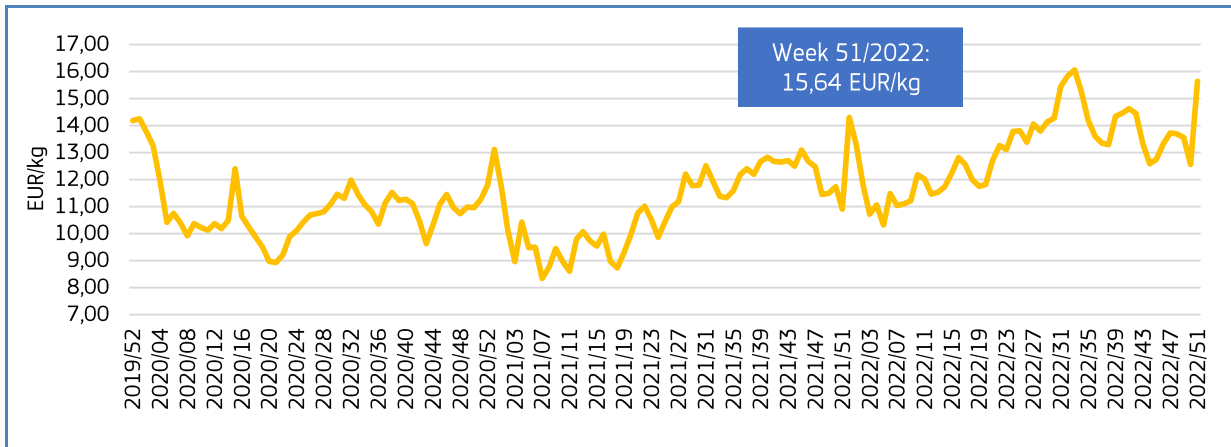


Figure 39. **IMPORT PRICE OF FRESH OR CHILLED FILLETS OF COD FROM ICELAND, 2019 - 2022**



In 2022, volume of frozen meat of **herring** from **Norway** showed a downward trend, while price was stable. Price ranged from 1,38 EUR/kg to 1,75 EUR/kg and volume from 139 tonnes to 2.875 tonnes.

Price, as well as volume of frozen surimi of **Alaska pollack** from **United States** had a stable trend in 2022. Price ranged from 2,67 EUR/kg to 4,89 EUR/kg and weekly supply from 33 tonnes to 1.647 tonnes.

Since the beginning of the year, price of fresh or chilled fillets of **cod** from **Iceland** had a stable trend. At the same time weekly supply went down. Price ranged from 10,32 EUR/kg to 16,06 EUR/kg and supply from 180 tonnes to 573 tonnes.

## 3. Consumption

### 3.1. HOUSEHOLD CONSUMPTION IN THE EU

Data analysed in this section, “Consumption”, are extracted from EUMOFA, as collected from Europanel<sup>22</sup>.

In November 2022 compared to November 2021, household consumption of fresh fisheries and aquaculture products declined in both volume and value in nearly all Member States analysed. The only exception was Hungary, where both volume and value experienced an increase (5% and 26%, respectively).

The highest drop was observed in Denmark, with a 26% decrease in volume and 15% in value. Dab, flounder and cod were the main species responsible for the decline, as the volume consumed of these species fell by 75%, 51% and 50% respectively, while their decrease in value was 68%, 40% and 43%.

Table 22. **NOVEMBER OVERVIEW OF THE REPORTING COUNTRIES (volume in tonnes and value in million EUR)**

Country	Per capita consumption 2020* (live weight equivalent, LWE) kg/capita/year	November 2020		November 2021		October 2022		November 2022		Change from November 2021 to November 2022	
		Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Denmark	35,17	1.041	16,80	1.073	17,97	988	18,21	826	15,19	23%	15%
France	32,56	21.963	240,58	18.968	217,92	22.035	257,96	17.944	215,20	5%	1%
Germany	12,81	7.809	106,94	6.437	84,46	5.697	81,89	5.028	77,08	22%	9%
Hungary	6,50	417	2,54	320	2,09	339	2,42	335	2,64	5%	26%
Ireland	21,22	1.002	15,08	882	13,43	798	13,14	771	12,65	13%	6%
Italy	29,99	24.224	251,61	22.933	257,05	18.262	218,83	18.701	228,78	18%	11%
Netherlands	20,70	3.091	44,43	2.501	41,75	2.158	39,61	2.240	39,29	10%	6%
Poland	13,33	4.152	26,55	3.799	26,17	3.139	24,77	3.124	24,60	18%	6%
Portugal	57,67	6.811	46,15	5.137	36,91	5.345	39,94	4.552	35,56	11%	4%
Spain	44,21	57.453	458,51	48.004	423,47	40.521	377,27	39.219	382,33	18%	10%
Sweden	23,99	923	11,07	697	9,80	787	11,39	631	8,93	10%	9%

Source: EUMOFA, based on Europanel (updated 23.11.2022).

\*Data on per capita consumption of all fish and seafood products for all EU Member States can be found at: [https://www.eumofa.eu/documents/20178/521182/EFM2022\\_EN.pdf/](https://www.eumofa.eu/documents/20178/521182/EFM2022_EN.pdf/)

Over the past three years, the average household consumption of fresh fisheries and aquaculture products in November has been below the annual average in both volume and value terms in most Member States, except for Spain, where there have been no significant statistical changes in volume or value.

The most recent weekly consumption data (up to **week 3 of 2023**) are available on the EUMOFA website and can be accessed [here](#).

<sup>22</sup> Last update: 14.12.2023.

## 3.2. Fresh mackerel

**Habitat:** The species belongs to the family Scombridae. Mackerel inhabits temperate waters in a depth range of 0-1000 m but can usually be found at 0-200 m. They overwinter in deeper waters but move closer to shore in spring when the water temperatures range between 11-14 °C. They form large schools near the surface. The species is mainly diurnal, and feeds on zooplankton and small fish<sup>23</sup>.

**Catch area:** North Atlantic: including the Mediterranean.

**Catching countries in the EU:** the UK, Spain, Portugal, the Netherlands, the Faroe Islands and Ireland<sup>24</sup>.

**Production method:** Caught.

**Main consumers in the EU:** Ireland, Sweden, Denmark.

**Presentation:** Whole, gutted, filleted.

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

**Means of preparation:** Grilled, baked.

### 3.2.1. Overview of household consumption in Denmark, Ireland, the Netherlands, Poland, Portugal, and Spain

Portugal, Spain and Denmark are the EU Member States with the highest per capita apparent consumption<sup>25</sup> of fisheries and aquaculture products. In 2020, per capita apparent consumption was highest in Portugal, 57,67 kg LWE<sup>26</sup>, despite a 4% decrease from 2019. The second highest consumption was estimated for Spain, 44,21 kg LWE, while the third was Denmark with 35,17 kg LWE. These were 148%, 90% and 51% higher than the EU average (23,28 kg LWE), respectively.

In 2020, per capita apparent consumption of fisheries and aquaculture products in Ireland, the Netherlands and Poland was below the EU average, with 21,22 kg LWE in Ireland, 20,70 kg LWE in the Netherlands, and 13,33 kg LWE in Poland, respectively.

See more on per capita apparent consumption in the EU in Table 22.

During the period December 2019–November 2022, retail prices of mackerel highest in Denmark (12,93 EUR/kg), with a total 1.401 tonnes sold. In Spain there was considerable monthly variation in volume, but the country registered the highest sales, with a total amount of 36.076 tonnes within the three years, and an average price of 5,75 EUR/kg.

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

**First Sales:** Denmark 5/2020; France 1/2019; Italy 11/2022; the Netherlands 11/2022, 5/2020; Portugal 1/2019, 3/2016, 8/2013; Spain 5/2020; Sweden 11/2022, 1/2019; Norway 8/2015, 5/2014; the UK 9/2016, 4/2013.

**Consumption:** Denmark 3/2020, 9/2016; France 8/2019; Italy 10/2015; Ireland 3/2020, 9/2016; Latvia 3/2014; Lithuania 3/2014; the Netherlands 3/2020, 9/2016; Poland 3/2014; Portugal 8/2019, 9/2016; Spain 9/2016, 10/2015; the UK 8/2019, 9/2016.

**Extra-EU Imports:** the Faroe Islands 11/2021, 11/2020, 9/2019, 1/2019; Iceland 11/2022, 5/2022, 5/2020; Morocco 2/2022, 5/2020, 7/2019; Norway 7/2020, 3/2019

**Topic of the month:** Atlantic mackerel in the EU 7/2022, 7/2019; Horse mackerel 2/2021.

<sup>23</sup> <https://www.fishbase.se/summary/Scomber-scombrus.html>

<sup>24</sup> <https://www.eumofa.eu/documents/20178/373449/MH+3+EN++final.pdf/3c2f5013-3990-f0ae-9136-39bd66748dcc?t=1585739418682>

<sup>25</sup> Apparent consumption<sup>1</sup> is calculated by using the supply balance sheet that provides an estimate of the supply of fisheries and aquaculture products available for human consumption at EU level. The calculation of the supply balance sheet is based on the equation: *Apparent consumption = ((total catches – industrial catches) + aquaculture + imports) – exports*. Catches targeted for fishmeal (industrial catches) are excluded. Non-food use products are also excluded from imports and exports. It is worth underlining that the methodologies for estimating apparent consumption at EU and Member State levels are different, the first based on data and estimates as described in the Methodological background, the latter also requiring the adjustment of abnormal trends due to the higher impact of stock changes.

<sup>26</sup> Live Weight Equivalent

Figure 40. **PRICES OF FRESH MACKEREL PURCHASED BY DANISH, IRISH, DUTCH, POLISH, PORTUGUESE AND SPANISH HOUSEHOLDS**

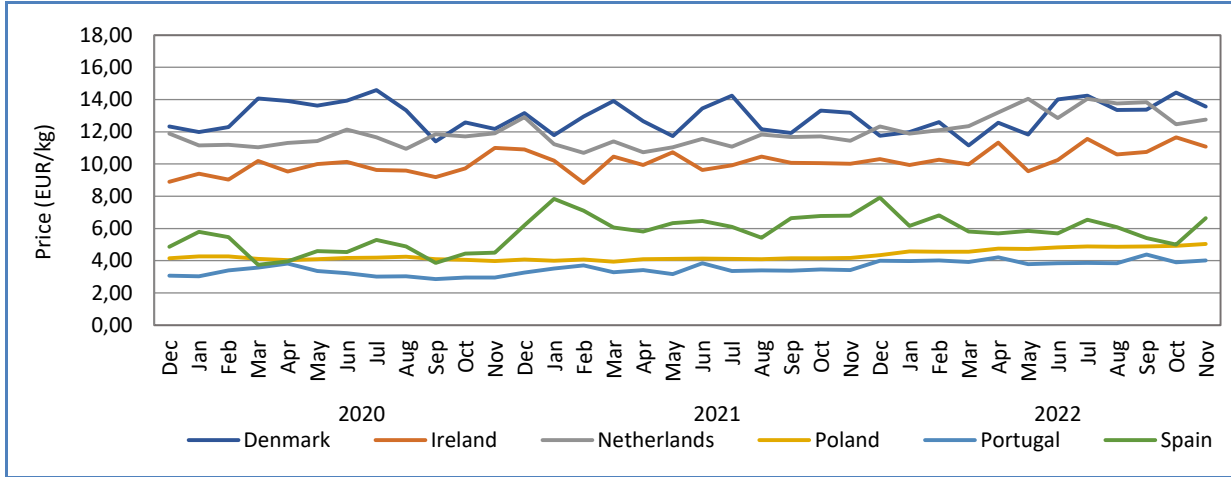
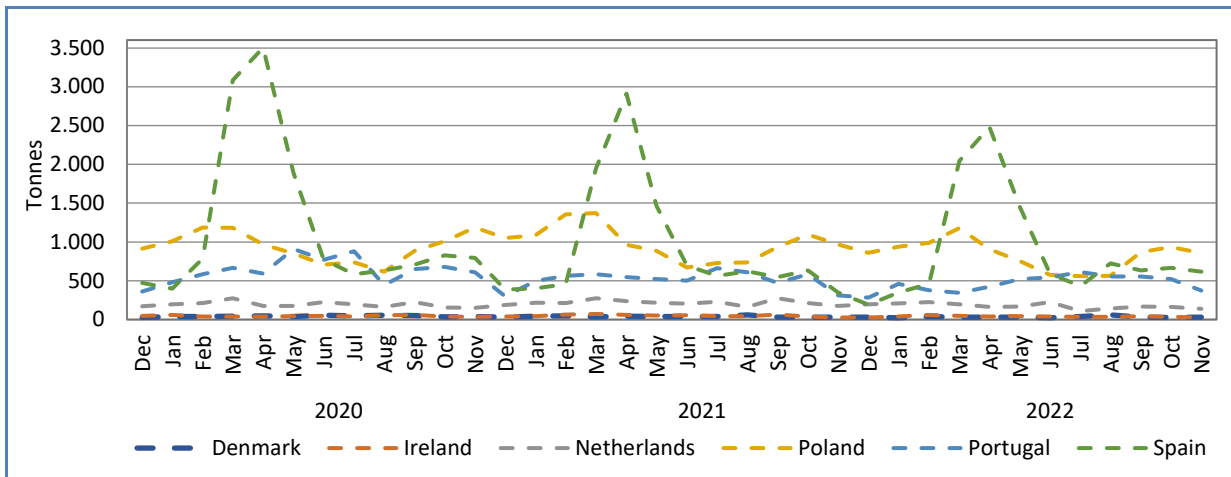


Figure 41. **HOUSEHOLD PURCHASES OF FRESH MACKEREL IN DENMARK, IRELAND, THE NETHERLANDS, POLAND, PORTUGAL AND SPAIN**



### 3.2.2. Household consumption trends in Denmark

**Long-term trend (December 2019 to November 2022):** Fluctuating prices and volumes.

**Yearly average price:** 12,45 EUR/kg (2019), 13,09 EUR/kg (2020), 12,75 EUR/kg (2021).

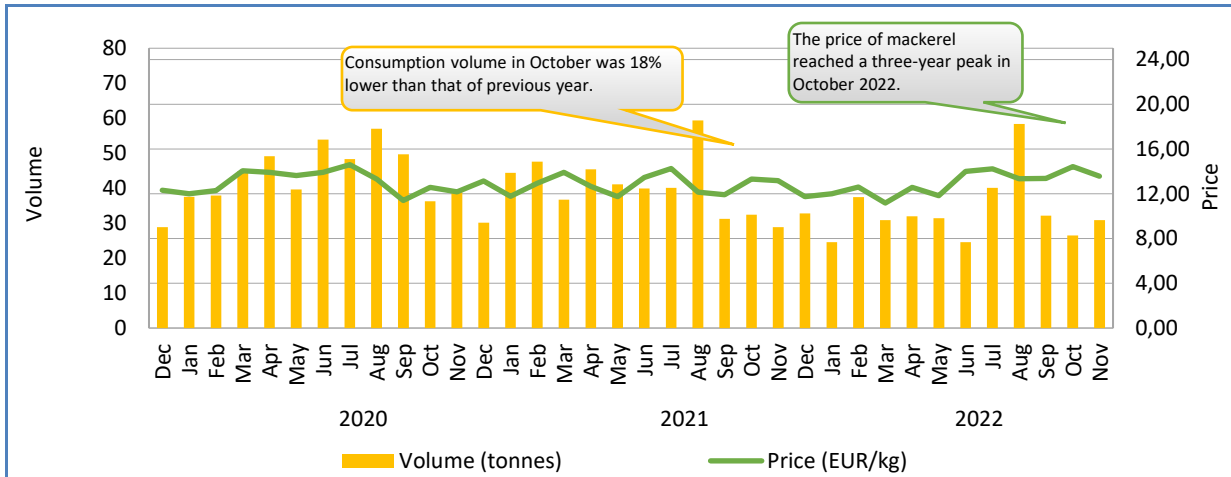
**Yearly consumption:** 399 tonnes (2019), 523 tonnes (2020), 480 tonnes (2021).

**Short-term trend (January to November 2022):** Fluctuating prices and volumes.

**Average price:** 13,01 EUR/kg (2022).

**Consumption:** 369 tonnes (2022).

Figure 42. **RETAIL PRICE AND VOLUME OF FRESH MACKEREL PURCHASED BY HOUSEHOLDS IN DENMARK, DECEMBER 2019 – NOVEMBER 2022**



### 3.2.3. Household consumption trends in Ireland

**Long-term trend (December 2019 to November 2022):** Fluctuating prices and volumes.

**Yearly average price:** 9,00 EUR/kg (2019), 9,86 EUR/kg (2020), 10,05 EUR/kg (2021).

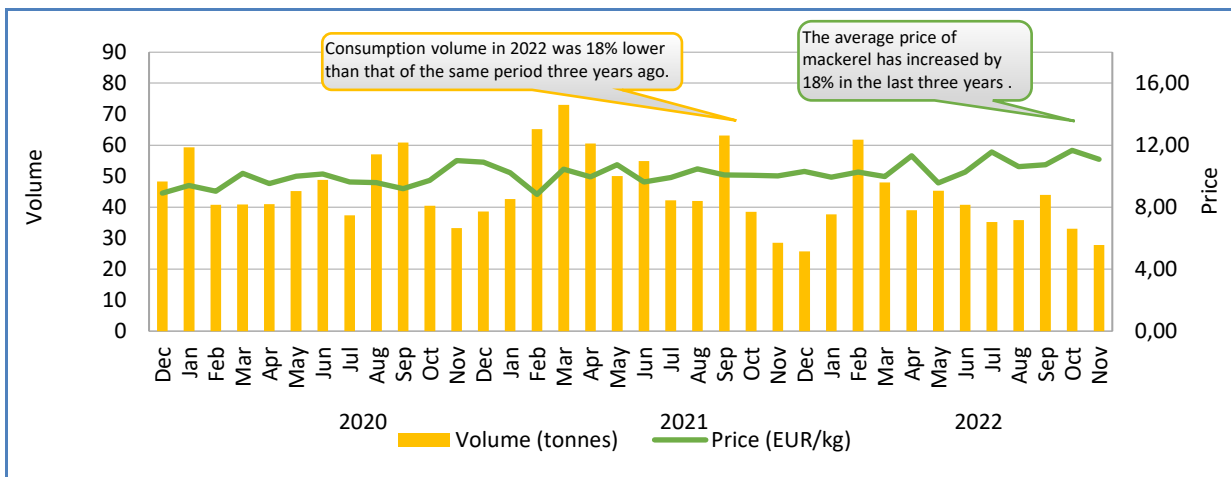
**Yearly consumption:** 579 tonnes (2019), 543 tonnes (2020), 586 tonnes (2021).

**Short-term trend (January to November 2022):** Fluctuating prices and downward trend in volume.

**Average price:** 10,63 EUR/kg (2022).

**Consumption:** 448 tonnes (2022).

Figure 43. **RETAIL PRICE AND VOLUME OF FRESH MACKEREL PURCHASED BY HOUSEHOLDS IN IRELAND, DECEMBER 2019 – NOVEMBER 2022**



### 3.2.4. Household consumption trends in the Netherlands

**Long-term trend (December 2019 to November 2022):** Fluctuating prices and downward trend in volume.

**Yearly average price:** 10,86 EUR/kg (2019), 11,60 EUR/kg (2020), 11,39 EUR/kg (2021).

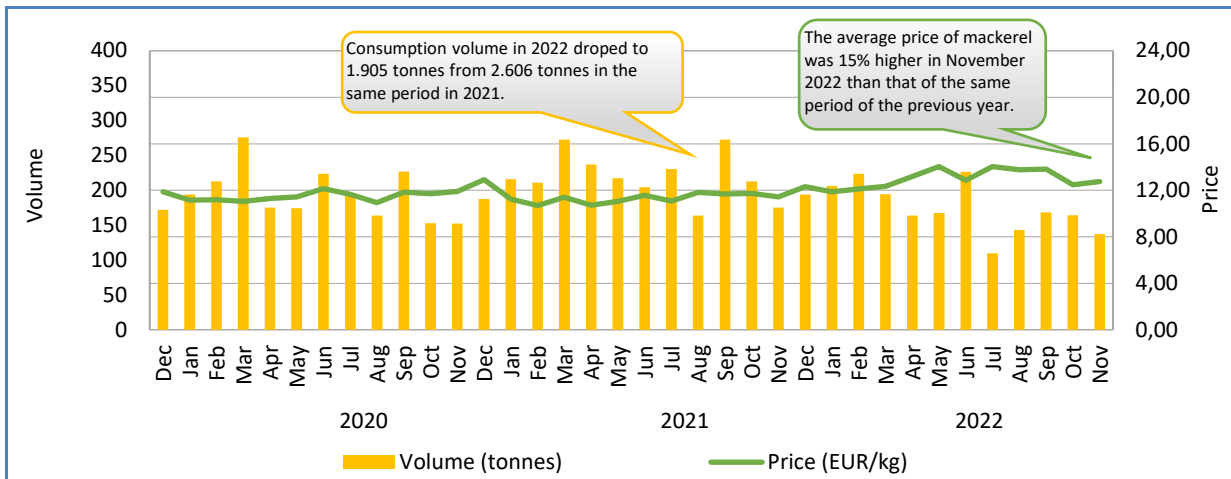
**Yearly consumption:** 2.197 tonnes (2019), 2.333 tonnes (2020), 2.606 tonnes (2021).

**Short-term trend (January to November 2022):** Fluctuating prices and downward trend in volume.

**Average price:** 13,03 EUR/kg (2022).

**Consumption:** 1.905 tonnes (2022).

Figure 44. **RETAIL PRICE AND VOLUME OF FRESH MACKEREL PURCHASED BY HOUSEHOLDS IN THE NETHERLANDS, DECEMBER 2019 – NOVEMBER 2022**



### 3.2.5. Household consumption trends in Poland

**Long-term trend (December 2019 to November 2022):** Fluctuating prices and downward trend in volume.

**Yearly average price:** 4,03 EUR/kg (2019), 4,13 EUR/kg (2020), 4,11 EUR/kg (2021).

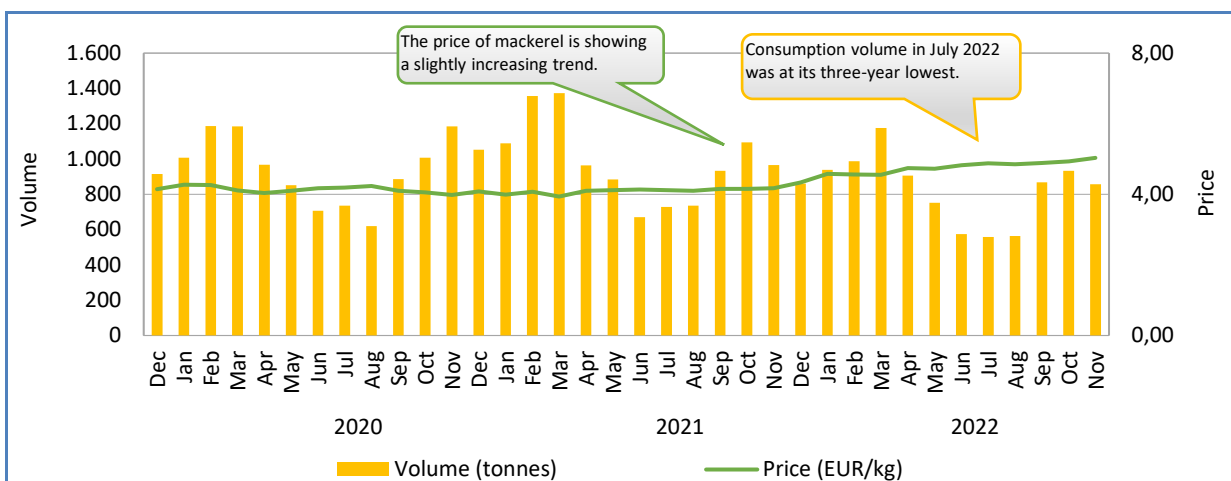
**Yearly consumption:** 10.572 tonnes (2019), 11.387 tonnes (2020), 11.655 tonnes (2021).

**Short-term trend (January to November 2022):** Fluctuating prices and downward trend in volume.

**Average price:** 4,78 EUR/kg (2022).

**Consumption:** 9.114 tonnes (2022).

Figure 45. **RETAIL PRICE AND VOLUME OF FRESH MACKEREL PURCHASED BY HOUSEHOLDS IN POLAND, DECEMBER 2019 – NOVEMBER 2022**



### 3.2.6. Household consumption trends in Portugal

**Long-term trend (December 2019 to November 2022):** Fluctuating prices and downward trend in volume.

**Yearly average price:** 2,99 EUR/kg (2019), 3,21 EUR/kg (2020), 3,49 EUR/kg (2021).

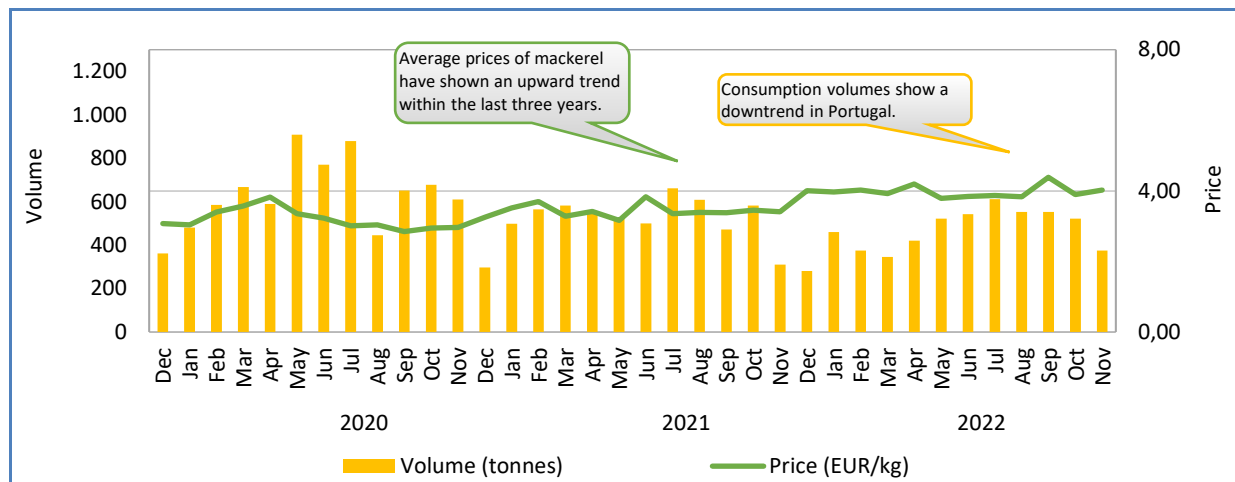
**Yearly consumption:** 6.984 tonnes (2019), 7.565 tonnes (2020), 6.133 tonnes (2021).

**Short-term trend (January to November 2022):** Fluctuating prices and volumes.

**Average price:** 3,98 EUR/kg (2022).

**Consumption:** 5.286 tonnes (2022).

Figure 46. **RETAIL PRICE AND VOLUME OF FRESH MACKEREL PURCHASED BY HOUSEHOLDS IN PORTUGAL, DECEMBER 2019 – NOVEMBER 2022**



### 3.2.7. Household consumption trends in Spain

**Long-term trend (December 2019 to November 2022):** Fluctuating prices and downward trend in volume.

**Yearly average price:** 4,52 EUR/kg (2019), 4,77 EUR/kg (2020), 6,60 EUR/kg (2021).

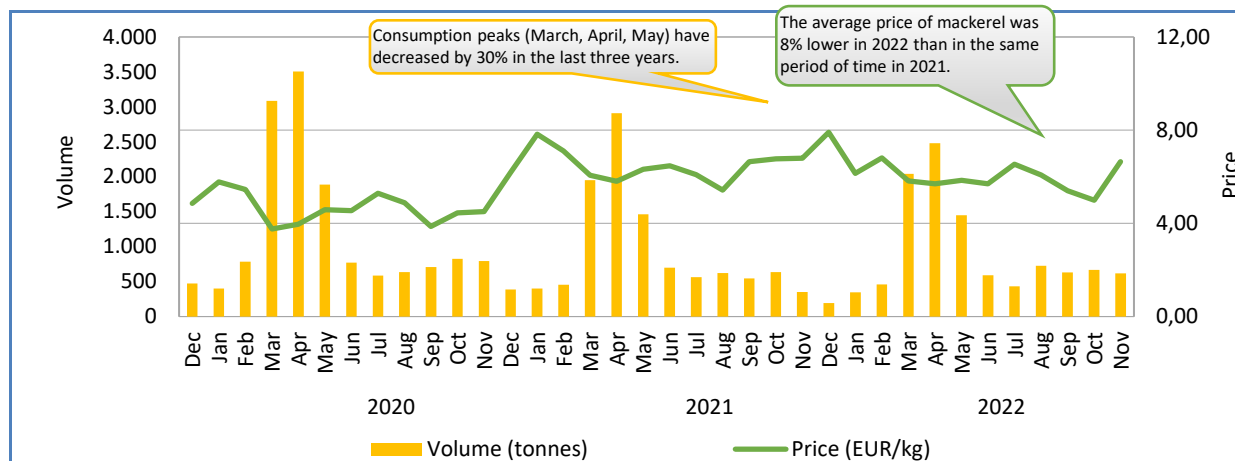
**Yearly consumption:** 13.761 tonnes (2019), 14.372 tonnes (2020), 10.789 tonnes (2021).

**Short-term trend (January to November 2022):** Fluctuating prices and downward trend in volume.

**Average price:** 5,97 EUR/kg (2022).

**Consumption:** 10.443 tonnes (2022).

Figure 47. **RETAIL PRICE AND VOLUME OF FRESH MACKEREL PURCHASED BY HOUSEHOLDS IN SPAIN, DECEMBER 2019 – NOVEMBER 2022**





## 4. Case study – Fisheries and aquaculture in Canada

Canada is the second largest country in the world with a land area of about 10 million square kilometres and a coastline that stretches for more than 200.000 kilometres – the biggest coastline of any country in the world<sup>27</sup>.

The main industries in Canada are related to the country's wealth of natural resources and include agriculture, forestry, mineral extraction and fisheries<sup>27</sup>.

In 2020, combined production from fisheries and aquaculture in Canada amounted to 923.655 tonnes LWE at a value of EUR 2,8 billion<sup>28,29</sup>. American lobster, herring, queen crab and hake made up most of the captured volume, while Atlantic salmon made up most of the farmed volume.

Canada is a net exporter of fishery and aquaculture products (FAPs). Up to and including October 2022, Canada exported 488.905 tonnes of FAPs at a value of EUR 5,5 billion and imported 505.726 tonnes of FAPs at a value of EUR 3,2 billion<sup>30</sup>. Most exports from Canada went to the USA, while the majority of imports came from the USA, China, Vietnam, and Thailand. Predominant species exported were salmon, lobster and crab, while imports mainly consisted of salmon, miscellaneous shrimp<sup>31</sup>, other marine fish<sup>32</sup>, fishmeal and other non-food use<sup>33</sup>.

From January to November 2022, the EU exported 33.707 tonnes of FAPs at a value of EUR 161 million to Canada and imported 42.250 tonnes of FAPs at a value of EUR 407 million from Canada<sup>34</sup>. The most important main commercial species (MCSs) exported to Canada from the EU in terms of volume were fishmeal, mackerel, skipjack tuna and salmon, while the most important MCSs imported into Canada from the EU were lobster, *Homarus spp.*, Greenland halibut and coldwater shrimp.

Canada's domestic market of FAPs is mainly supplied by imports (70%)<sup>35</sup>. The top five consumed FAPs by Canadians are salmon, tuna, shrimp, cod and crab<sup>36</sup>.

### 4.2 Fisheries and aquaculture in Canada

#### Fisheries production

The Canadian fleet consists of approximately 20.100 vessels, mainly made up of small and medium sized owner-operated vessels with 1-3 crew members<sup>37</sup>. Most popular gear types are hook and line, including handlines and jiggers, longlines with baited hooks and hooks towed through the water in trolling; nets, including gillnets, trawls, and seines; traps, e.g., lobster traps.

In 2021, fisheries production in Canada amounted to 733.272 tonnes LWE at a value of EUR 3,3 billion<sup>28</sup>. Compared to 2020, this was a 3% decrease in volume but a 61% increase in value. The increase in value came mainly from American lobster (72%), queen crab (130%) and other crab (65%), where both price and captured volume increased compared to 2020 (Figure 48). American lobster



Source: CIA, the world factbook.

<sup>27</sup> Thuesen, N.P. (2022). Canada. *The Great Norwegian Encyclopaedia*. <https://snl.no/Canada>

<sup>28</sup> Department of Fisheries and Oceans (2022). Zonal Interchange File [database]. Ottawa. <https://www.dfo-mpo.gc.ca/stats/commercial/land-debarq/sea-maritimes/s2021pq-eng.htm>

<sup>29</sup> FAO statistics.

<sup>30</sup> *Global Trade Atlas - IHS Markit*.

<sup>31</sup> This was an aggregation of five CN-6 codes, namely 030617, 030636, 030695 (unspecified frozen shrimps and prawns), 160521, and 160529 (unspecified shrimps and prawns, prepared or preserved, in different packaging).

<sup>32</sup> This was an aggregation of 16 CN-6 codes, namely 030199 (unspecified live fish), 030249, 030289 (unspecified fresh fish), 030359, 030389 (unspecified frozen fish), 030449, 030459, 030489, 030499 (fresh and frozen fillets from unspecified fish), 030539, 030549, 030554, 030559, 030569 (unspecified fish, dried, salted, or smoked, including fillets), 160419, and 160420 (unspecified fish, prepared or preserved, whole or in pieces).

<sup>33</sup> This was an aggregation of four CN-6 codes, namely 030111, 030119 (unspecified live ornamental fish), 051191 (products of fish and crustaceans, molluscs, or other aquatic invertebrates), and 121229 (seaweeds and other algae, not fit for human consumption).

<sup>34</sup> Eurostat-Comext.

<sup>35</sup> Fisheries Council of Canada. Seafood dashboard. [https://fisheriescouncil.ca/wp-content/uploads/2021/08/Seafood-Dashboard\\_vf.pdf](https://fisheriescouncil.ca/wp-content/uploads/2021/08/Seafood-Dashboard_vf.pdf)

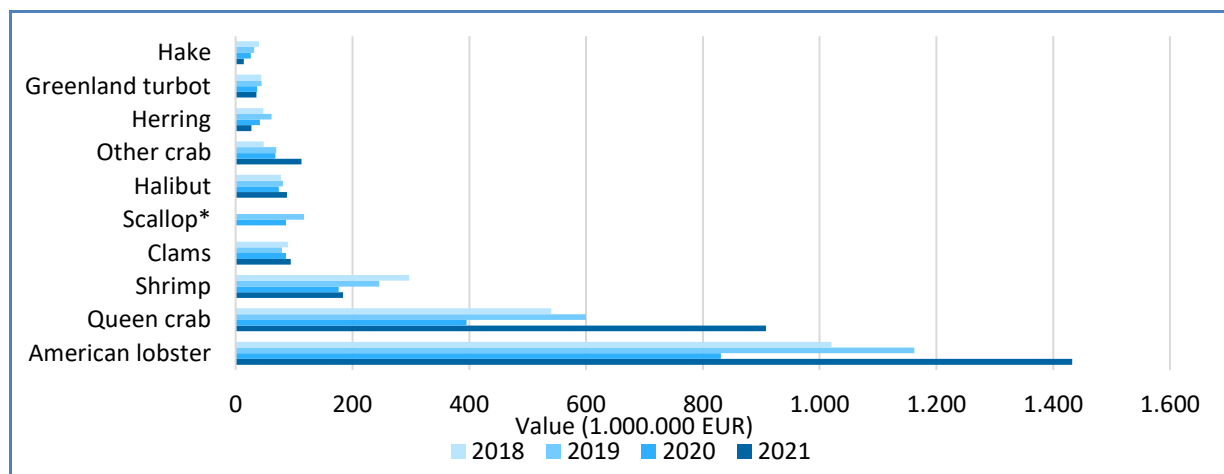
<sup>36</sup> Hu, X.F. and Chan, H.M. (2021). Seafood consumption and its contribution to nutrients intake among Canadians in 2004 and 2015. *Nutrients*. doi: **10.3390/nu13010077**.

<sup>37</sup> Canadian Council of Professional Fish Harvesters. <http://www.fishharvesterspecheurs.ca/fishing-industry/fleet>

(15%), herring (11%), queen crab (11%) and hake (10%) made up most of the captured volume in 2021, followed by shrimp (9%) and clams (7%).

The majority of commercial catches in 2021 were landed in Atlantic provinces (79%), mainly in Nova Scotia (43%) and in Newfoundland and Labrador (34%), while 21% of commercial catches were landed in British Columbia<sup>28</sup>. Shellfish made up most of the catches in the Atlantic provinces (67%), while catches in British Columbia mainly consisted of groundfish (73%).

Figure 48. TOP 10 FISHERY SPECIES IN CANADA BY VALUE



Source: Department of Fisheries and Oceans (2022). \*Scallop includes meat with roe. Data from 2018 and 2021 were suppressed to meet confidentiality requirements.

During the period 2018-2021, fisheries production in Canada experienced a downward trend in catch volume (10%) but an upward trend in value (25%). Reduced production volume was mainly due to decreased catches of hake (33%), herring (31%) and shrimp (20%). Increased value was mainly related to increased catch volumes (6% and 14%, respectively) and profits from sales (40% and 68%) of lobster and queen crab. Other crabs also contributed to the increased value of fisheries production, with increases in both catch volume (34%) and value (136%) but contributed less than lobster and queen crab to the total increase in value.

### Aquaculture production

The foundation for Canadian aquaculture was established by small-scale initiatives that date back to the mid-1800s<sup>38</sup>. Among the initiatives that began during this period were hatchery operations for Atlantic salmon, brook trout, Atlantic oyster and rainbow trout. The industry remained relatively small (a few thousand tonnes) until about 30-40 years ago, when advances in fish and shellfish husbandry combined with a more favourable market and regulatory conditions resulted in substantial growth in the number of species being farmed and produced (Figure 49).

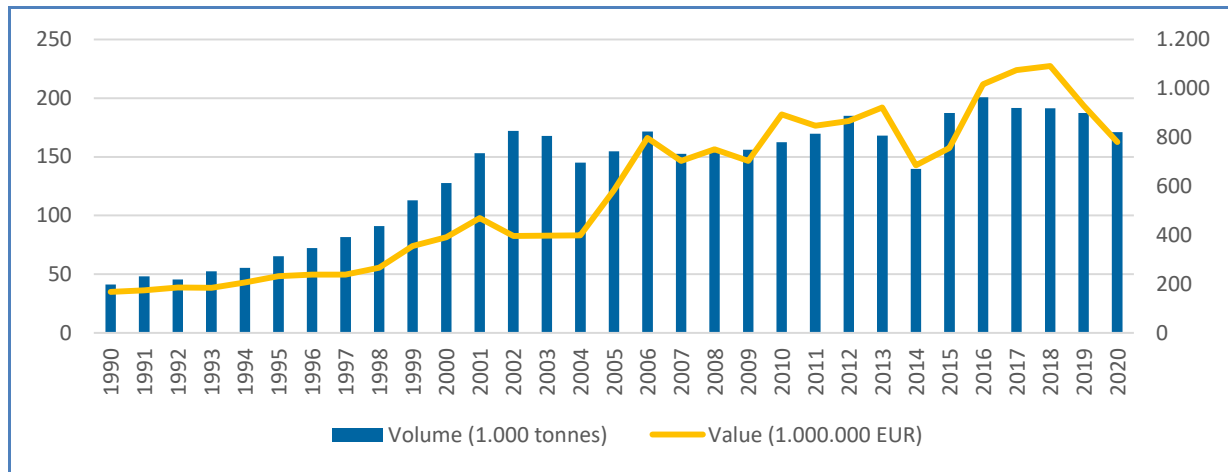
The main types of production systems used in aquaculture production are freshwater net pens and land-based systems, bottom culture shellfish operations in intertidal zones, long-lines, net pens, and restocking operations in open water, and bottom culture shellfish grow-out areas in sub-tidal zones<sup>39</sup>.

Today, about 45 species of finfish (26), shellfish (16), and aquatic plants (3) are commercially cultivated in Canada<sup>39</sup>. Since the 1990s, finfish have comprised the largest component of the aquaculture sector, with Atlantic salmon accounting for most of the production volume (accounted for more than 50% of production volume annually since 1994)**Errore. Il segnalibro non è definito.** In 2020, aquaculture production in Canada amounted to 171.007 tonnes at a value of EUR 781 million**Errore. Il segnalibro non è definito.** Compared to 2019, this was a decrease in volume and value of 9% and 16%, respectively. The decrease in value was mainly related to a reduction in average price per kg (12%) of Atlantic salmon and other salmonids, as well as reduced production volume of other salmonids and blue mussel.

<sup>38</sup> Noakes, D.J. (2018). Oceans of opportunity: a review of Canadian aquaculture. *Marine Economics and management*. ISSN: 2516-158X.

<sup>39</sup> Government of Canada (2021). Farmed species profiles. <https://www.dfo-mpo.gc.ca/aquaculture/sector-secteur/species-especes/index-eng.htm>

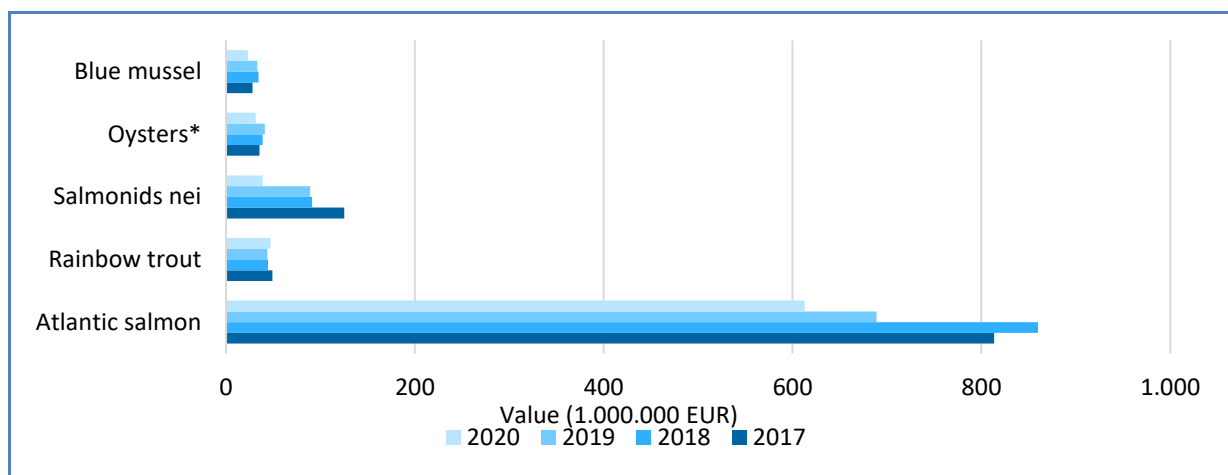
Figure 49. CANADIAN AQUACULTURE PRODUCTION VOLUME AND VALUE



Source: FAO.

Aquaculture production takes place in all Canadian provinces and in the Yukon Territory, with the majority of production volume in 2020 from British Columbia (62%), New Brunswick, (13%) and Prince Edward Island (11%)<sup>40</sup>. In British Columbia and New Brunswick, the predominant species farmed was Atlantic salmon (91% in both provinces), followed by oysters (5% and 9%, respectively), while in Prince Edward Island, blue mussels (73%) and oysters (20%) were the main species farmed (Figure 50).

Figure 50. TOP 5 AQUACULTURE SPECIES IN CANADA BY VOLUME



Source: FAO. \*Two commercial species make up this group: American cupped oyster and Pacific cupped oyster.

During the period 2017-2020, aquaculture production in Canada experienced a downward trend in both production volume (9%) and value (27%). Reduced production volume was mainly due to decreased production of other salmonids (60%), blue mussel (31%) and oysters (23%). Decreased production value was mainly related to reduced profits from sales of Atlantic salmon (25%), as the price per kg decreased during the period while production volume remained stable, and other salmonids (69%), where both production volume and value decreased considerably.

In December 2020, the former fisheries minister in Canada refused licence renewals for net-pen farming of Atlantic salmon in a region within British Columbia (Pacific coast). The political ambition is a “transition” of net-pen farming in the region into some form of closed containment by 2025<sup>41</sup>. Refusal of renewal of licences as in the 2<sup>nd</sup> half of 2022 led to lower production quantities of Atlantic salmon from the province.

<sup>40</sup> Statistics Canada. Table 32-10-0107-01: Aquaculture, production and value.

<sup>41</sup> Fish farming expert. <https://www.fishfarmingexpert.com/british-columbia-canada-steelhead-salmon/bc-net-pen-salmon-industry-gone-within-four-years/1175128>

## 4.3 International trade

### Export

In 2021, Canada exported 626.209 tonnes of FAPs at a value of EUR 6 billion (Table 23), which represented 2% and 5% of global export volume and value of FAPs respectively<sup>30</sup>. Compared to 2020, this was a 7% increase in volume and a 41% increase in value. In 2022 (up to and including October), Canada exported 488.960 tonnes of FAPs at a value of EUR 5,5 billion. Compared to the same period in 2021 (Jan-Oct), this was a 9% decrease in export volume but a 5% increase in export value. Most exports from Canada went to the USA (56%), followed by China (14%), the EU (9%) and Japan (4%).

Salmon (17%), lobster, *Homarus spp.* (15%), crab (14%), coldwater shrimp (8%) and other marine fish (8%) made up most of the Canadian export volume (62%) in 2022 (Jan-Oct), while lobster, *Homarus spp.* (27%), crab (26%), and salmon (14%) accounted for 67% of export value. Lobster, *Homarus spp.* was exported whole fresh (66%) at an average price of 15,52 EUR/kg and whole frozen (34%) at an average price of 27,97 EUR/kg. Crab was mainly exported whole frozen (86%) at an average price of 22,00 EUR/kg. Salmon was exported whole fresh (81%) at an average price of 8,82 EUR/kg.

Table 23. **TOTAL EXPORTS BY MAIN COMMERCIAL SPECIES FROM CANADA (volume in 1.000 tonnes, value in million EUR)**

MCS	2018		2019		2020		2021		2022*	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Salmon	109	819	97	737	97	677	105	775	84	795
Lobster, <i>Homarus spp.</i>	77	1.241	88	1.505	77	1.162	85	1.755	75	1.487
Crab	58	869	64	1.000	63	898	72	1.523	67	1.415
Coldwater shrimp	56	258	52	251	47	209	48	228	40	228
Other marine fish	59	236	64	258	58	228	58	254	37	238
Other non-food use**	214	225	203	258	25	29	33	39	23	35
Hake	64	76	57	76	59	68	43	56	21	36
Herring	31	62	34	69	32	71	35	70	21	61
Other halibut	14	117	16	128	13	109	18	150	14	165
Other mussel	14	36	15	38	10	29	14	38	12	37
Other	102	889	103	1.013	100	820	116	1.160	93	1.024
<b>Total</b>	<b>798</b>	<b>4.828</b>	<b>793</b>	<b>5.333</b>	<b>582</b>	<b>4.300</b>	<b>626</b>	<b>6.050</b>	<b>489</b>	<b>5.520</b>

Source: Global Trade Atlas - IHS Markit. \*Up to and including October 2022. \*\*The MCS "other non-food use" mainly consisted of "fish or marine mammal solubles" (74%) and "products of fish and crustaceans, molluscs or other aquatic invertebrates" (26%). No export of "fish or marine mammal solubles" after 2019.

### Import

In 2021, Canada imported 576.217 tonnes of FAPs at a value of EUR 3,1 billion (Table 24), which represented 2% and 3% of global import volume and value of FAPs respectively. Compared to 2020, this was a 12% increase in terms of volume and a 21% increase in terms of value. In 2022 (up to and including October), Canada imported 505.726 tonnes of FAPs at a value of EUR 3,2 billion. Compared to the same period in 2021 (Jan-Oct), this was a 6% increase in import volume and a 27% increase in import value. Most imports to Canada came from the USA (27%), followed by China (12%), Vietnam (8%), Thailand (7%), Norway (7%) and the EU (7%).

Salmon (12%), miscellaneous shrimp (12%), other marine fish (10%), fishmeal (9%) and other non-food use (9%) made up most of the Canadian import volume (52%) in 2022 (Jan-Oct), while salmon (20%), miscellaneous shrimp (18%), other marine fish (10%), lobster, *Homarus spp.* (5%) and miscellaneous tuna (5%) accounted for 58% of import value. Salmon was mainly imported whole fresh and frozen (41%), as fresh and frozen fillets (37%), and prepared/preserved other cuts (21%). Miscellaneous shrimp was imported whole frozen (67%) and prepared/preserved (32%), while lobster, *Homarus spp.* was imported whole fresh (96%) and miscellaneous tuna was imported prepared/preserved (95%). Other marine fish were mostly imported as prepared/preserved other cuts (31%) and frozen other cuts (28%), but also as whole fish (25%) either frozen, fresh, salted or dried.

Table 24. **TOTAL IMPORTS BY MAIN COMMERCIAL SPECIES TO CANADA (volume in 1.000 tonnes, value in million EUR)**

MCS	2018		2019		2020		2021		2022*	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Salmon	54	444	60	505	62	505	75	627	61	640
Miscellaneous shrimp	57	447	56	449	54	431	60	484	59	585
Other marine fish	54	235	58	267	56	252	56	275	51	312
Fishmeal	48	66	61	94	56	85	59	87	48	89
Other non-food use**	335	270	337	304	31	42	40	56	45	80
Fish oil	44	99	50	112	49	120	55	127	39	127
Miscellaneous tuna	34	148	35	152	38	152	32	138	32	166
Cod	14	54	19	62	22	67	21	69	17	78
Lobster, <i>Homarus spp.</i>	29	261	25	296	19	193	26	388	16	174
Other cephalopods	13	65	13	73	10	53	12	61	15	98
Other	136	737	121	826	115	680	141	803	125	846
<b>Total</b>	<b>817</b>	<b>2.828</b>	<b>835</b>	<b>3.140</b>	<b>513</b>	<b>2.579</b>	<b>576</b>	<b>3.114</b>	<b>506</b>	<b>3.195</b>

Source: Global Trade Atlas - IHS Markit. \*Up to and including October 2022. \*\*The MCS "other non-food use" mainly consisted of "fish or marine mammal solubles" (76%) and "products of fish and crustaceans, molluscs or other aquatic invertebrates" (24%). No import of "fish or marine mammal solubles" after 2019.

#### 4.4 Trade flows in the EU

Canada and the EU entered into a progressive trade agreement in 2017, the EU-Canada Comprehensive Economic and Trade Agreement (CETA)<sup>42</sup>. CETA features some of the strongest commitments ever included in an EU trade agreement, including promoting labour rights, protecting the environment, and sustainable development. Most of the trade agreement now applies and its benefits include the following:

- It eliminates duties on 99% of all tariff lines, of which 98% were scrapped when it provisionally entered into force.
- It defends the EU's Geographical Indications.
- It improves and secures access by EU companies to the Canadian services market.

#### EU exports to Canada

In 2021, the EU exported to Canada 38.941 tonnes of FAPs at a value of EUR 150 million (Table 25). Compared to 2016, this was a 67% increase in volume and a 63% increase in value. The increase in volume was mainly related to import of fishmeal (60%), mackerel (141%), other products<sup>43</sup> (155%), and other non-food use<sup>44</sup> (132%), while salmon, fishmeal, skipjack tuna, and mackerel accounted for 57% of the total value increase of imports.

From Jan-Nov 2022, the EU exported to Canada 33.707 tonnes of FAPs at a value of EUR 161 million. Compared to the same period in 2016, this was a 60% increase in volume and a 96% increase in value. Increase in export volume was mainly related to higher export of mackerel (197%), skipjack tuna (221%), and redfish (281%), while the increased export value was mainly related to export of salmon (97%), skipjack tuna (178%), and mackerel (386%). The export of FAPs from the EU to Canada accounted for less than 1% of total exports of FAPs from the EU in 2021 and 2022.

The most important MCSs exported to Canada from the EU in terms of volume in 2022 were fishmeal (25%), mackerel (16%), skipjack tuna (8%), and salmon (8%). The same MCSs generated the most value, but with a different ranking: salmon accounted for 28% of export value, fishmeal, and skipjack tuna each accounted for 11%, and mackerel accounted for 8%. Fishmeal was mainly exported

<sup>42</sup> European Commission. EU-Canada agreement. [https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/canada/eu-canada-agreement\\_en](https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/canada/eu-canada-agreement_en)

<sup>43</sup> Other products consisted of products categorised as „frozen fish fins, heads, tails, maws, and other edible fish offal (excl. livers, roes, milt, and shark fins)“.

<sup>44</sup> Other non food use was comprised of products categorised as „fish or marine mammal solubles“ and „products of fish and crustaceans, molluscs, or other aquatic invertebrates (excl. fish waste) unfit for human consumption“.



from Denmark (94%), mackerel from Spain (80%), skipjack tuna from Italy (99%), while salmon was exported from the Netherlands (41%), Lithuania (26%) and Denmark (12%).

Mackerel was mainly exported frozen whole (95%), while skipjack tuna was exported as prepared/preserved other cuts (100%). Salmon from the Netherlands was mainly exported smoked (47%), followed by fresh fillets (29%), and fresh and frozen whole salmon (20%). All salmon exported from Lithuania was exported smoked, while salmon exports from Denmark were all fresh (85%) and frozen (15%) fillets.

Table 25. **TOTAL EXPORTS FROM EU MS TO CANADA (volume in tonnes, value in 1.000 EUR)**

MCS	2016		2017		2018		2019		2020		2021		2022	
	Vol	Val	Vol	Val	Vol	Val	Vol	Val	Vol	Val	Vol	Val	Vol	Val
Fishmeal	7.095	12.363	8.449	14.208	8.143	13.889	11.193	20.060	10.031	17.191	11.366	19.968	8.333	17.001
Mackerel	1.868	2.682	1.667	2.499	2.593	3.877	3.933	7.207	3.939	6.786	4.495	7.688	5.544	13.024
Skipjack tuna	806	6.540	1.025	7.295	1.296	9.633	1.558	10.277	2.039	12.134	2.540	14.960	2.588	18.160
Other non-food use	1.340	1.340	2.050	2.314	2.319	2.172	8.420	12.114	1.942	1.983	3.109	2.482	2.529	2.841
Salmon	2.102	22.578	3.020	33.983	2.424	31.068	2.867	40.023	1.925	27.836	2.337	34.603	2.519	44.379
Redfish	527	1.163	684	1.354	1.199	1.663	1.189	1.982	1.014	1.958	885	1.937	2.009	3.683
Other products	1.225	3.786	1.508	4.247	2.419	9.092	3.119	11.504	2.995	9.830	3.119	7.646	1.838	5.686
Sardine	792	2.290	1.298	3.726	1.397	5.019	1.135	4.255	1.013	3.203	1.123	3.813	1.087	3.855
European seabass	105	713	87	629	119	781	695	3.251	594	2.902	903	5.651	1.032	6.642
Gilthead seabream	52	359	55	336	64	399	379	1.938	408	2.481	488	2.893	694	4.654
Other MCS	7.468	38.073	7.851	41.066	8.212	43.397	7.784	41.275	8.136	38.754	8.575	48.368	5.535	41.116
<b>Total</b>	<b>23.379</b>	<b>91.887</b>	<b>27.695</b>	<b>111.658</b>	<b>30.185</b>	<b>120.991</b>	<b>42.273</b>	<b>153.884</b>	<b>34.034</b>	<b>125.058</b>	<b>38.941</b>	<b>150.008</b>	<b>33.707</b>	<b>161.041</b>

Source: Eurostat-Comext. \*Up to and including November.

## EU imports from Canada

In 2021, the EU imported from Canada 47.560 tonnes of FAPs at a value of EUR 380 million (Table 26). Compared to 2016, this was an 18% decrease in volume and a 16% decrease in value. Decreased import volume and value were mainly related to reduced import of miscellaneous shrimp (83% and 85% respectively) and salmon (92% and 85% respectively), and to a lesser extent herring (65% and 59% respectively) and cod (58% and 47% respectively).

Over the Jan-Nov 2022 period, the EU imported from Canada 42.250 tonnes of FAPs at a value of EUR 407 million. Compared to the same period in 2016, this was a decrease of 19% in volume and a 1% increase in value. Decrease in volume was mainly related to reduced import of the same species as in 2021, as well as decreased import of coldwater shrimp (18%) and other non-food use (26%). The value increase was related to import of lobster (*Homarus spp.*) (57%), scallop (83%), and Greenland halibut which was introduced as a new import species in 2017/2018. Prior to CETA, import volumes of Greenland halibut were negligible. Import of FAPs from Canada to the EU accounted for less than 1% of total import of FAPs to the EU in 2021 and 2022.

The most important MCSs imported from Canada to the EU in terms of volume in 2022 were lobster, *Homarus spp.* (24%), Greenland halibut (16%), coldwater shrimp (13%), other flatfish (11%) and hake (10%). In terms of value, the most important MCSs imported from Canada were lobster, *Homarus spp.* (52%), scallop (13%), Greenland halibut (10%) and coldwater shrimp (4%). Lobster, *Homarus spp.* mainly entered the EU through Spain (29%), Belgium (23%) and France (16%), while Greenland halibut (99%), coldwater shrimp (80%) and miscellaneous shrimp (71%) mainly entered through Denmark. Other flatfish entered the EU through the Netherlands (61%), Poland (17%) and Spain (14%). Hake entered through Romania (49%) and Bulgaria (23%), while scallops mainly entered through France (64%).

Lobster *Homarus spp.* and hake were mainly imported whole frozen (50% and 78% respectively) and fresh (37% and 13% respectively). Greenland halibut (100%), coldwater shrimp (100%), other flatfish (99%) and scallops (97%) were imported whole frozen, while miscellaneous shrimp was imported prepared/preserved (99%).

Table 26. **TOTAL IMPORTS BY EU MS FROM CANADA (volume in tonnes, value in 1.000 EUR)**

MCS	2016		2017		2018		2019		2020		2021		2022	
	Vol	Val	Vol	Val	Vol	Val	Vol	Val	Vol	Val	Vol	Val	Vol	Val
Lobster, <i>Homarus spp.</i>	9.064	134.251	8.717	130.302	10.872	168.213	11.775	189.487	9.447	135.791	9.958	189.153	10.021	210.246
Greenland halibut	5	30	400	2.186	4.227	22.759	5.709	31.053	6.060	27.307	6.951	33.129	6.580	40.419
Coldwater shrimp	6.571	27.681	6.952	25.933	8.691	30.294	6.801	22.971	7.627	21.968	9.110	26.172	5.392	18.144
Other flatfish	1.260	1.966	1.034	1.707	1.572	2.716	1.566	3.028	1.181	2.142	1.232	2.012	4.446	7.510
Hake	5.095	9.127	5.745	9.547	5.999	9.179	5.298	8.610	5.397	7.822	5.823	9.356	4.413	8.783
Scallop	1.399	29.530	1.640	37.434	1.502	30.202	2.445	47.254	2.580	46.211	2.036	42.744	1.865	54.145
Misc. shrimp	16.414	154.950	16.654	151.681	13.220	123.888	8.339	86.218	3.433	28.870	2.777	22.720	1.303	12.296
Fish oil	521	7.943	666	8.832	1.370	10.533	1.781	6.015	1.089	7.969	1.714	8.374	1.121	7.814
Other freshwater fish	1.063	4.211	1.029	4.095	1.058	4.398	1.057	4.239	1.345	5.035	1.123	3.998	1.091	4.959
Cod	2.231	9.802	3.483	15.310	3.101	13.900	2.397	12.611	860	4.585	926	5.175	884	6.334
Other MCS	14.499	73.043	13.727	67.185	14.330	74.402	10.559	57.356	7.726	37.278	5.909	36.858	5.135	36.116
<b>Total</b>	<b>58.122</b>	<b>452.534</b>	<b>60.048</b>	<b>454.211</b>	<b>65.943</b>	<b>490.485</b>	<b>57.726</b>	<b>468.841</b>	<b>46.745</b>	<b>324.978</b>	<b>47.560</b>	<b>379.690</b>	<b>42.250</b>	<b>406.769</b>

Source: Eurostat-Comext. \*Up to and including November.

## 4.5 Consumption

Canadians are surrounded by a wealth of natural resources, including copious amounts of wild and farmed aquatic species. However, most of their domestic production of FAPs is exported internationally, while their domestic market of FAPs is mainly supplied by imports (70%)<sup>35</sup>. In 2019, more than half of this supply was imported from China, Vietnam and Thailand, and 33% was imported from the USA. Salmon, shrimp and prawns, lobster and tuna accounted for 76% of total imports by value. In 2021, a study on consumption patterns of FAPs in Canada reported that salmon, tuna, shrimp, cod and crab were the top five consumed FAPs both in 2004 and 2015<sup>36</sup>. This suggests that Canadian consumption patterns have not changed considerably over the years and the same is true when it comes to estimated per capita consumption of FAPs. According to Statistics Canada, estimated per capita consumption of FAPs in 2022 was 8,4 kg, which is only slightly higher than estimated per capita consumption in 2015 (8,2 kg) and significantly above the global average consumption of FAPs per capita.

## 5. Case study – Mussels in the EU

This case study summarises an extensive analysis conducted by EUMOFA on the EU market for mussels and the price transmission of fresh mussels, with specific focus on Spain, France, Italy and Ireland<sup>45</sup>. Spain is the largest market for mussels in the EU. It is both the main producer and consumer, followed by France and Italy. The Irish market is small, even though the country is an important producer in the EU. The value chains for mussels are still very country specific. The production in France and Italy mainly goes to the domestic market and is completed by imports, while the Spanish production supplies both the domestic market and other EU MS. The Irish production is mainly export-oriented.

### 5.1 Mussels: global supply

Global mussel production is mainly from aquaculture (97% in 2020). Total production amounted to 2,2 million tonnes in 2020, which was 7% more than in 2011. China is the main producer, providing 43% of the global mussel production in 2020. China was followed by the EU-27 and Chile, both providing 20% and 19% respectively of the global production in the same year. While the Chinese and Chilean productions have increased by 24% and 38% respectively between 2011 and 2020, EU-27 production has decreased by 12%.

Table 27. **TOTAL WORLD PRODUCTION OF MUSSELS (volume in 1.000 tonnes)**

Country	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
China	762	819	812	856	899	953	998	963	929	943
EU-27	493	476	428	484	502	519	505	542	490	431
Chile	296	250	252	245	219	314	353	379	390	409
New Zealand	101	87	84	98	77	94	100	86	99	102
Thailand	127	103	128	117	116	115	50	34	38	69
Republic of Korea	80	70	41	58	60	64	83	56	60	68
Others	52	48	49	49	49	49	47	44	49	47
<b>Total</b>	<b>2.019</b>	<b>1.972</b>	<b>1.920</b>	<b>2.020</b>	<b>2.022</b>	<b>2.206</b>	<b>2.223</b>	<b>2.235</b>	<b>2.175</b>	<b>2.169</b>

SOURCE: FAO.

### 5.2 The EU market for mussels

#### EU production

EU mussel production amounted to 430.748 tonnes in 2020, of which 94% was from aquaculture. Between 2011 and 2020, EU production has fluctuated with a 13% downward trend. The overall decreasing trend is observed in almost all producing EU MS (except for Greece and other MS with small volumes such as Sweden, Bulgaria and Portugal). Italy, Ireland and Germany have recorded the most significant decreases (by 36% for Italy and 35% for both Ireland and Germany).

Both fishery and aquaculture production have overall decreased by 11% and 39% respectively between 2011 and 2020. The decrease in fishery production is attributed to the decrease in Danish production, which accounts for almost all the EU mussel fishery (95% of the EU fishery production in 2020).

Spain is by far the main producing country within the EU, with a production of 204.492 tonnes in 2020, accounting for almost half of EU mussel production (47%). This is followed by France (61.378 tonnes, 14% of EU mussel production), Italy (50.913 tonnes, 12%), the Netherlands (32.420 tonnes, 8%), Denmark (28.548 tonnes, 7%), Greece (19.155 tonnes, 4%) and Ireland (14.729 tonnes; 3%).

<sup>45</sup> [https://www.eumofa.eu/documents/20178/523877/PTAT\\_Mussels\\_FV\\_EN.pdf/553ae567-b9a2-b6fc-0197-74e80eb6120a?t=1671097561649](https://www.eumofa.eu/documents/20178/523877/PTAT_Mussels_FV_EN.pdf/553ae567-b9a2-b6fc-0197-74e80eb6120a?t=1671097561649)



Table 28. **EU PRODUCTION OF MUSSELS BY MAIN PRODUCING MS (volume in tonnes)**

EU MS	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
ES	208.849	203.890	162.249	220.644	225.566	216.023	241.871	242.733	228.222	204.492
FR	69.098	81.659	77.958	63.385	59.913	51.027	51.668	49.109	60.721	61.378
IT	79.520	63.257	64.235	63.700	52.526	57.806	62.502	61.941	53.324	50.913
NL	36.700	40.000	37.112	54.100	54.211	53.175	43.969	45.482	38.094	32.420
DK	34.983	39.963	38.300	43.093	47.089	44.943	43.058	42.248	43.630	28.548
EL	17.240	16.679	18.720	16.752	18.645	23.359	19.240	22.003	23.733	19.155
IE	22.671	19.984	18.949	12.222	16.250	16.156	17.110	13.889	15.184	14.729
DE	20.830	13.883	5.036	5.280	25.476	66.748	16.856	15.864	22.037	13.490
Others	6.156	6.153	7.618	6.945	7.720	9.118	7.936	5.681	7.513	5.624
<b>EU-27</b>	<b>496.047</b>	<b>485.468</b>	<b>430.177</b>	<b>486.121</b>	<b>507.396</b>	<b>538.355</b>	<b>504.210</b>	<b>498.950</b>	<b>492.458</b>	<b>430.749</b>

SOURCE: FAO.

## Import-export

Mussel is one of the few fisheries and aquaculture products for which the EU has a trade surplus.

In 2021, **extra-EU imports** amounted to approx. 43.000 tonnes (product weight) at a value of EUR 114 million. Mussel imports from third countries comprise mainly preserved mussels, representing 91% of the extra-EU imports in volume and 87% in value in 2021. Almost all prepared mussels imported to the EU come from Chile, likely to be cooked mussels. Between 2012 and 2021, import value increased by 27% (13% in real terms), while import volume decreased by 7%. The decrease in volume is related to the decrease of imports of fresh and frozen mussel (-85% and -50% respectively). In contrast, imports of preserved mussels have increased in volume by 25%.

In 2021, **extra-EU exports** of mussels amounted to 6.770 tonnes at EUR 26,3 million. This consisted mainly of fresh mussels (47% of export volume and 33% of value), followed by prepared-preserved mussels (42% of export volume and 57% of value). Spain and Belgium were the main exporting MS of prepared mussels to third countries (48% and 15% of the export value of prepared mussels in 2021), while Italy and France were the main exporters of live mussels to third countries (40% and 27% respectively of export value of live mussels). The main destinations were Switzerland and the United Kingdom (30% and 20% of the extra-EU export value respectively). Extra-EU exports increased between 2012 and 2021 by 9% in volume and 15% in value in nominal terms (1% in real terms).

In terms of **intra-EU trade**, the Netherlands was by far the main mussel exporter, at a value of over EUR 131 million in 2021 (mainly fresh mussel). Spain was the second largest exporter with approx. EUR 77 million (main exporter of prepared-preserved mussels). Other major exporters within the EU included Denmark, Germany, Ireland, France and Italy. The main importer was Belgium followed by France and the Netherlands.

## EU supply and apparent consumption

In 2020, the **total supply** of mussels in the EU-27 (production + imports) was 552.636 tonnes LWE. The EU supply in mussels was mainly based on EU production which represented 78% of the EU supply and to a lesser extent on imports which represented 22% of the EU supply. Since exports represented 15.424 tonnes LWE, **apparent consumption** at EU-27 level (production + imports – exports) was estimated at 537.212 tonnes LWE.

The main MS in terms of apparent consumption in 2020 were Spain, France and Italy (apparent consumption higher than 100.000 tonnes LWE). Apparent consumption in each other MS was under 25.000 tonnes LWE.

## 5.3 The Spanish market

### Production, trade and supply

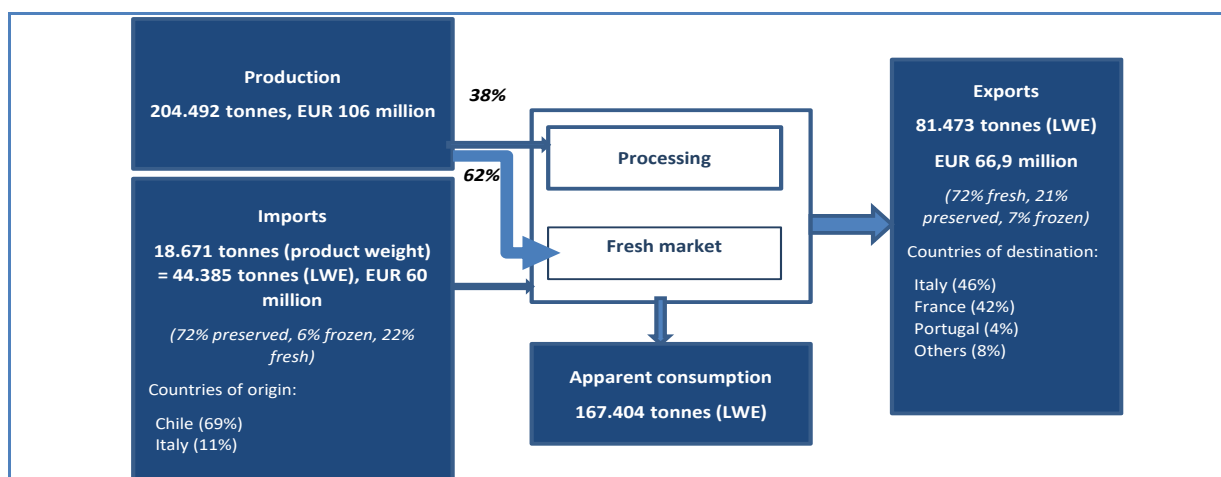
Mussel production in Spain amounted to 204.492 tonnes in 2020, almost all from aquaculture. Mediterranean mussels, *Mytilus galloprovincialis*, is the largest species produced in Spain with 75% of the Spanish aquaculture total production in volume. Mussel production from aquaculture was estimated at almost EUR 106 million in 2020, which is a 6% decrease (13% in real terms) from 2011 to 2020, while the production volume has remained relatively stable (-2%). Mussel production is concentrated in Galicia (97% of the Spanish production in 2020)<sup>46</sup>.

In 2021, Spanish **imports** amounted to 21.213 tonnes (product weight) at a value of EUR 60 million. Mussels were imported prepared-preserved (77% of imports in value), frozen (11%), fresh (11%) and smoked (1%). Chile is by far the main supplier to the Spanish market (72% of imports in value in 2021), exclusively with prepared-preserved mussels. New Zealand is the second main supplier of the Spanish market (9% of imports in value), supplying mainly frozen mussels.

The same year, mussel **exports** from Spain reached 63.738 tonnes (product weight) at a value of EUR 85 million. Mussels are exported fresh (49% of exports in value), prepared-preserved (39%) and to a lesser extent frozen (13%). In 2021, Italy and France were the main destinations, representing 42% and 32% respectively of export value.

In 2020, the total supply of mussels in Spain amounted to 248.876 tonnes LWE, 82% from national production and 18% from imports. 33% of this supply was exported. Thus apparent consumption can be estimated at 67% of the national supply, i.e., 167.403 tonnes LWE. In 2020, the volume of canned mussels produced in Spain was 15.112 tonnes.

Figure 51. **SUPPLY BALANCE FOR MUSSEL IN SPAIN (2020, TONNES, LWE)**



Source: EUMOFA elaboration based on national statistics, EUROSTAT-COMEXT and interviews with stakeholders. % show the shares in volume.

### Market, consumption and prices

Consumers primarily purchase fresh or preserved mussels. Of mussels consumed at home, fresh mussels comprise 71% of the volumes and 46% of the value, and preserved mussels comprise 25% of the volumes (in product weight) and 49% of the value. Frozen mussels account for only 3% of the volume and 5% of the value of the domestic consumption at home<sup>47</sup>. National production is completed by imports from France or Italy, in particular between August and October.

The ex-farm price is the price paid by purification plants to mussel producers. The mussel ex-farm price showed a slightly increasing trend over the 2012-2016 period, followed by a decrease until 2020. Feedback gathered from the sector, at all stages of the supply chain, indicate that prices increased significantly in 2021 and 2022 for all size segments and markets.

<sup>46</sup> APROMAR aquaculture report 2021.

<sup>47</sup> Annual at home consumption data, 2010-2020, MAPA

Table 29. **NOMINAL EX-FARM PRICES OF MUSSELS IN SPAIN (2012-2020, EUR/kg)**

	2012	2013	2014	2015	2016	2017	2018	2019	2020
Price (EUR/kg)	0,49	0,49	0,50	0,51	0,55	0,54	0,55	0,52	0,52

SOURCE: based on Eurostat.

At retail stage, the average purchase price of fresh mussel in 2021 was 3,66 EUR/kg, confirming the increasing trend observed since 2016. However, canned mussel stayed relatively stable over the period.

Table 30. **NOMINAL RETAIL PRICES OF MUSSELS IN SPAIN (2016-2021, EUR/kg)**

Species	2016	2017	2018	2019	2020	2021
Fresh mussel, average price	2,52	2,55	2,58	2,62	2,81	3,66
Canned mussel, average price	8,33	8,48	8,43	8,54	8,51	8,64

SOURCE: MAPA, Food Consumption Panel.

## 5.4 The French market

### Production, trade and supply

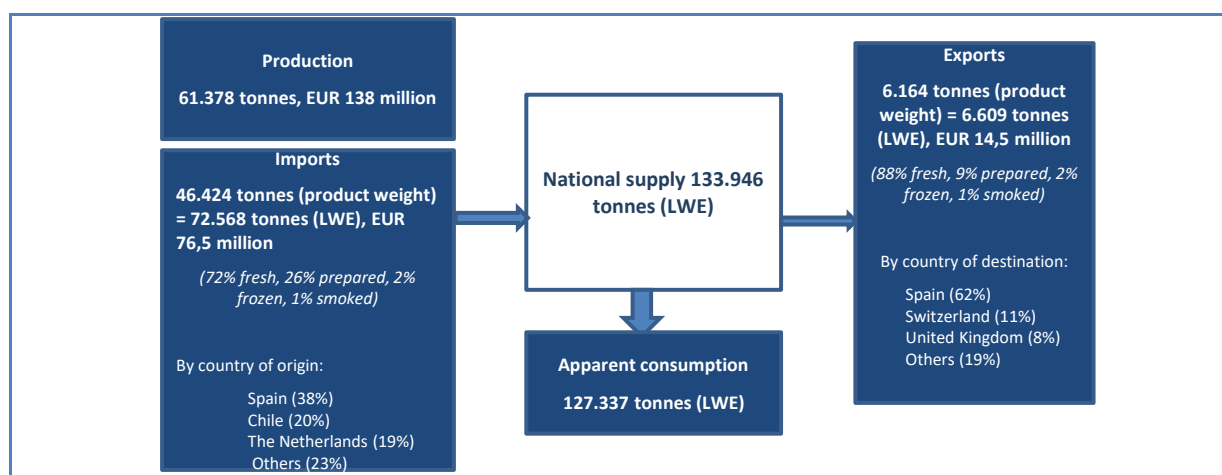
French mussel production from aquaculture has decreased since 2011, from over 69.000 tonnes to around 61.000 tonnes in 2020. Catches have been variable over the same period: between 159 tonnes and 5.752 tonnes because of irregular spat recruitment, but with an overall significant decreasing trend (-96% between 2011 and 2020). Blue mussel accounted for 90% of the national production (10% for Mediterranean mussel).

The French market of mussels is highly dependent on **imports**. On average, France imports 55.000 tonnes each year. Mussels are imported mainly fresh (72% in 2021) and prepared-preserved (26%). Fresh mussels are imported from other EU countries, mainly Spain, the Netherlands and Ireland, while prepared mussels are mainly imported from Chile, probably cooked mussels imported for the French processing industry.

Mussel **exports** from France remain relatively low in comparison to supply. In 2021, 6.164 tonnes were exported, of which the greatest share was exported fresh (88% of the export volume). Spain is the main destination, with more than half of the French exports volume in 2021, followed by the Netherlands (19%).

In 2020, the French mussel **supply** reached 133.946 tonnes (LWE), of which 46% came from national production and 54% from imports. Only 5% of the French supply of mussels is exported. The national **apparent consumption** is thus estimated at 127.337 tonnes (LWE), i.e., 95% of the national supply in mussels.

Figure 52. **THE FRENCH SUPPLY CHAIN FOR MUSSELS (2020)**



Source: EUMOFA elaboration based on national statistics (production) and EUROSTAT-COMEXT. % shows the shares in volumes LWE.

## Market, consumption and prices

Mussels are sold live fresh to be cooked and consumed at home or at restaurants. For final consumers, mussels are available in the market in bulk or in bags (2, 5, 10, and 15 kg bags), after being cleaned and purified. The French market is highly segmented according to several criteria: species, production method, origin, certifications (Geographical Indications, organic, Label Rouge, etc.).

The blue mussel species has higher first sale prices than the Mediterranean mussel (2,27 EUR/kg versus 2,08 EUR/kg in 2020).<sup>48</sup> First sale prices of blue mussel have decreased between 2016 and 2020 (by 8%) while prices of Mediterranean mussel have increased during the same period (by 8%). Segmentation plays an important role in pricing. Blue mussel on «*bouchot*», the most valuable segment, which represented 92% of the blue mussel production in 2020, is on average sold at 2,30 EUR/kg.

Table 31. **FIRST SALE PRICES OF MUSSELS IN FRANCE (2019/2020) – EUR/KG**

		2019		2020	
		Price	%	Price	%
Blue mussel	Bouchot	2,2	90%	2,3	92%
	Long-line	2,9	8%	2,4	7%
	Table	2,6	1%	2,8	0,5%
	Others	2,8	1%	2,1	0,5%
Mediterranean mussel	Table	1,8	35%	2,1	41%
	Others	1,7	65%	2,0	59%

SOURCE: Enquête aquacole Agreste (2019/2020).

Kantar Worldpanel also provides prices for fresh mussels by market. These show that mussels are sold at higher prices when in open market stalls (4,4-5,3 EUR/kg between 2016 and 2020) and in specialised retailers such as fishmongers (4,9-5,1 EUR/kg) than at large retail stores (3,5-4,0 EUR/kg).

Table 32. **PRICES OF FRESH MUSSELS AT RETAIL STAGE BY MARKET BETWEEN 2016 AND 2020 (EUR/KG)**

Channels	2016	2017	2018	2019	2020
Large retailers	3,5	3,6	3,7	3,7	4,0
Open market stalls	4,4	4,7	4,9	4,9	5,3
Specialised retailers	4,9	5,0	5,0	5,0	5,1

SOURCE: based on Eurostat.

## 5.5 The Italian market

### Production trade and supply

Italian production of mussels has fluctuated over the past decade but tends towards an overall decrease, from over 79.000 tonnes in 2011 to less than 51.000 tonnes in 2020. It is almost entirely supplied by aquaculture, with some minor catches from fishery reported over the last three years (575 tonnes in 2020).

In 2021, Italian **imports** amounted to 41.001 tonnes (product weight) at a value of approx. EUR 60 million. Mussels are mainly imported fresh (68% of the Italian imports volume) and prepared-preserved (28% of the Italian imports volume). Fresh mussels are imported mainly from Spain and to a lesser extent from Greece, while prepared-preserved mussels are mainly imported from Chile.

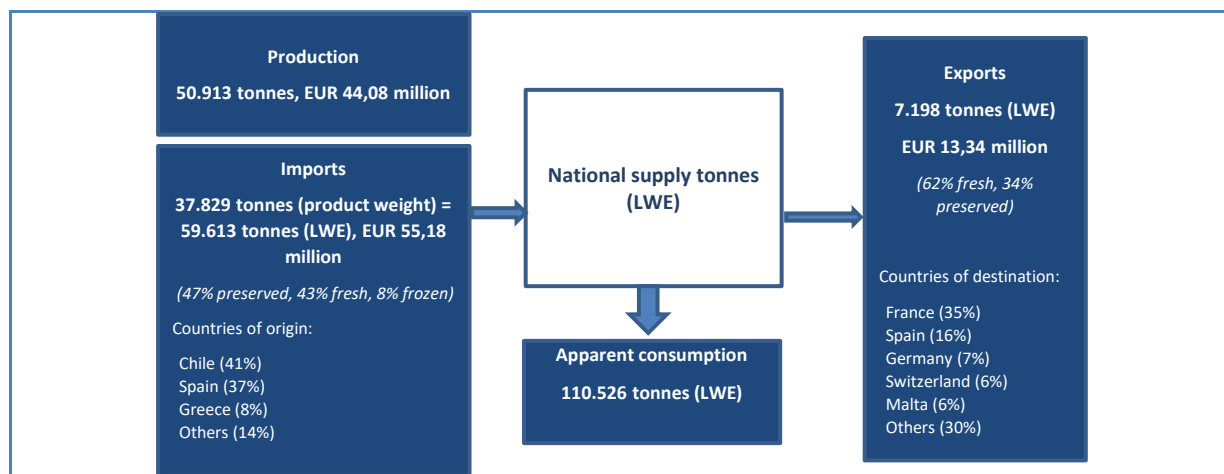
In 2021, Italian **exports** amounted to 6.531 tonnes, of which 5.748 tonnes were fresh mussels (88%). Exports of fresh mussels represented a value of over EUR 10 million (68% of total export value). In 2021, the main destinations were Switzerland (23% of export value), France (23%), the Netherlands (12%) and Germany (11%).

In 2020, the total **supply** (production + imports) of mussels in Italy amounted to 110.526 tonnes LWE, in a relatively balanced ratio between national production (46% of volume) and imports (54%). 7% of this supply was exported, thus **apparent consumption** can

<sup>48</sup> Source: Eurostat aquaculture production dataset [fish\_aq2a]

be estimated at 93% of the total supply, i.e., 103.328 tonnes LWE. Exports are limited compared to national supply.

Figure 53. **THE ITALIAN SUPPLY CHAIN FOR MUSSELS (2020)**



Source: EUMOFA elaboration of EUROSTAT-COMEXT and FAO data. % shows the shares in volumes LWE.

### Market, consumption and prices

In Italy, mussels are mostly sold live fresh to be cooked and consumed at home or at restaurants. For final consumers, mussels are available in the market in nets of 1 to 5 kg, after being cleaned, purified and sorted. The Italian mussel market is characterised by a high level of consumption, as mussels are among the cheapest seafood products and are prepared in many Italian dishes. Final consumers primarily purchase fresh mussels. The Italian production fully supplies the demand for fresh mussels between April and September and is completed by imports from Spain and Greece between October and March.

According to Europanel, household consumption of fresh mussels is estimated at 26.244 tonnes of products in 2021 and 27.760 tonnes in 2020. Household consumption continuously decreased over the past decade, with a 32% fall in volume and 26% fall in nominal value (33% in real terms<sup>49</sup>) between 2012 and 2021. However, based on interviews, HORECA accounts for a large share of the national consumption, in particular during summer in tourist areas.

Table 33. **HOUSEHOLD CONSUMPTION OF FRESH MUSSEL PRODUCTS 2012-2021**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Price (EUR/kg)	2,69	2,37	2,34	2,41	2,41	2,46	2,64	2,66	2,61	2,91
Volume (t)	38.570	37.594	39.817	31.619	30.210	29.650	28.649	28.881	27.760	26.244
Value (EUR 1.000)	103.858	89.269	93.239	76.262	72.854	73.005	75.554	76.801	72.400	76.368

SOURCE: EUMOFA based on Europanel.

According to EUROSTAT, national economic studies<sup>50</sup> and operators interviewed, first sale prices of Mediterranean mussel have remained broadly stable over the period 2016–2020, ranging from 0,84 EUR/kg (2016) to 0,90 EUR/kg (2017) and reaching 0,88 EUR/kg in 2020 (before purification).

At retail stage, GFK consumer panel provides detailed data on Italian household consumption of fresh mussels and average prices of fresh mussels at retail stage. According to BMTI's elaboration on these data since 2018, the average price for fresh mussels (all product categories included) was 2,59 EUR/kg in 2018, 2,60 EU/Kg in 2019 and decreased to 2,54 EUR/Kg in 2020<sup>51</sup>.

<sup>49</sup> In the report, values are real terms by using the GDP deflator (base=2015)

<sup>50</sup> COZZA O MITILO - ANALISI ECONOMICA E PROSPETTIVE DI CONSUMO, MIPAAFT and Unioncamere, 2020

<sup>51</sup> Annuario sul settore ittico – 2020 and 2019 BMTI

## 5.6 The Irish market

### Production, trade and supply

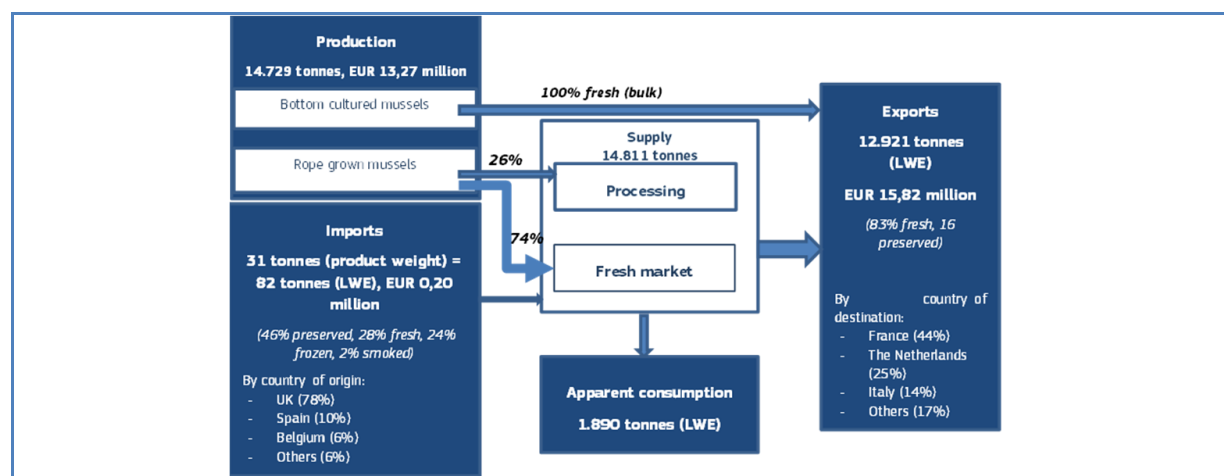
With a national production of 14.729 tonnes in 2020, the mussel industry in Ireland is the largest aquaculture sector in terms of volume and third largest in terms of value after salmon and oysters. Rope mussel accounted for 68% of the total and bottom cultured mussel for 32%.

Total **exports** were estimated at 9.007 tonnes at a value of EUR 17,62 million in 2021. The bulk of mussels is exported fresh (77% of exports in volume and 73% in value), but an increasing share of mussels is being exported prepared-preserved (20% in 2021 compared to than 1% in 2017 in volume). Given the total volume of mussel produced in Ireland and the relatively small domestic consumption, the industry is heavily export-oriented. The EU-27 and UK markets constitute almost the only markets for Irish mussels. France, the Netherlands, Italy and the United Kingdom took 47%, 26%, 13%, and 9% respectively of export volume.

Mussel **imports** to Ireland are negligible. In 2021, 67 tonnes (product weight) were imported at a value of EUR 0,4 million.

The Irish mussel sector is export-oriented. In 2020, 87% of the mussel **supply** is exported to the EU market and the UK, either fresh or processed. In 2020, 83% of exports were fresh and 16% were preserved. The domestic market for mussels is small. This was estimated at 1.890 tonnes (LWE) in 2020. As already mentioned, France is the main market of the Irish mussels. According to interviews, mussels are mainly sent in bulk to France by Irish exporters. The French buyers are mainly producers/wholesalers who import, clean, grade, pack and sell mussels on the French market.

Figure 54. **THE IRISH SUPPLY CHAIN FOR MUSSELS (2020)**



Source: EUMOFA elaboration based on national statistics, EUROSTAT-COMEXT and interviews with stakeholders. % shows the shares in volumes LWE.

### Market, consumption and prices

The Irish mussel production is export-oriented. However, there is a small consumption of mussels in Ireland, with a significant decreasing trend of apparent consumption in recent years, from 3.214 tonnes (LWE) in 2012 to 1.890 tonnes in 2020 (LWE), i.e., a 41% decrease.

According to EUMOFA data, first sale prices have followed an overall increasing trend between 2016 and 2020 from 0,79 EUR/kg to 0,90 EUR/kg, i.e., a 14%-increase. These prices hide a significant variability according to the production method and the end market.

Table 34. **FIRST SALE PRICES OF MUSSELS OF IRISH MUSSELS (2015/2019) – EUR/KG**

Production type	Market	2015	2016	2017	2018	2019
Rope grown	Long-line	0,7-0,75	0,7-0,75	0,65-0,76	0,49-0,76	0,65-0,75
	Table	/	/	/	0,60	0,5-0,6
Bottom cultured	Others	/	/	1,18	0,8-1,9	1,61

SOURCE: BIM annual aquaculture reports.

**First-sale** price drivers are market specifications, health and safety, competition with other producing countries in Europe, and increasing labour costs.

At **export** stage, since 2017, the exported prices have fluctuated, with a clear impact of volumes on prices. In 2021, fresh mussels were exported at an average price of 1,84 EUR/kg.

Table 35. **IRISH EXPORTS OF FRESH MUSSELS**

Year	Volume (tonnes)	Value (1.000 euros)	Export price (EUR/kg)
2019	9.545	13.481	1,41
2020	8.416	12.116	1,44
2021	6.964	12.823	1,84

SOURCE: based on Eurostat.



## 6. Global highlights

**EU / Fisheries:** On 17 January, the European Fisheries Control Agency (EFCA) presented three new patrol vessels that will strengthen fisheries inspections in European and international waters. The vessels will reinforce EFCA's operational capacity in the monitoring, control and surveillance of fisheries, as required by the common fisheries policy (CFP). They will be deployed primarily as fisheries patrol vessels to support the EU Member States in the various joint deployment plans. Named *Ocean Guardian*, *Ocean Protector* and *Ocean Sentinel* and flying the Portuguese flag, the vessels will also support other coast guard functions including maritime surveillance and pollution response<sup>52</sup>.



**EU / Spain / Fisheries:** On 17 January the Spanish Minister for Agriculture, Fisheries and Food met in Strasbourg with the chairmen of the European Parliament's Agriculture and Rural Development and Fisheries Committees and informed them of Spain's main objectives for the last six months of 2023. The agenda of priorities during the presidency of the European Union will also include progress on the sustainability of agricultural and fishing activities, and food systems will be at the heart of the issues<sup>53</sup>.

**UK / Fishery:** On 9 December 2022, the UK reached agreements with the EU and Norway and wider coastal states to secure valuable fishing opportunities for the UK fishing industry. The UK managed to secure fishing catch limits worth £202 million to the UK fishing industry, a £33 million increase from last year. Throughout the negotiations, the UK Government worked closely with the devolved administrations to ensure that fishing communities across the UK will benefit from the agreement<sup>54</sup>.

**EU / Fishery / Algae:** On 15 November the Commission adopted the Communication '**Towards a strong and sustainable EU algae sector**', a pioneering initiative to unlock the potential of algae in the European Union. The Communication proposes 23 actions to create opportunities for the industry to help it grow into a robust, sustainable and regenerative sector capable of meeting the growing EU demand. The EU is one of the biggest importers of seaweed products globally, and demand is expected to reach €9 billion in 2030, especially in food, cosmetics, pharmaceuticals and energy production<sup>55</sup>.

**EU / UK / Fisheries:** On 20 December 2022 the EU concluded an agreement with the United Kingdom on fishing opportunities for 2023 for fish stocks shared bilaterally with the UK in the Northeast Atlantic. The deal closes the third annual consultations on fishing opportunities between the EU and the UK under the terms of the **EU-UK Trade and Cooperation Agreement** (TCA). The agreement is based on the best available scientific advice regarding the state of fish stocks, provided by the International Council for the Exploration of the Sea (ICES).

**Iceland / Statistics:** The Icelandic Directorate of Fisheries has compiled information on the combined catch share of fishing vessels owned by individuals and legal entities. According to data of the Icelandic Directorate of Fisheries, no single company or individual exceeds the 12% allowable total value of the catch share of all species. Data can be consulted [here](#)<sup>56</sup>.

<sup>52</sup>[https://oceans-and-fisheries.ec.europa.eu/news/sustainable-fisheries-efca-presents-new-patrol-vessels-2023-01-17\\_en](https://oceans-and-fisheries.ec.europa.eu/news/sustainable-fisheries-efca-presents-new-patrol-vessels-2023-01-17_en)

<sup>53</sup>[https://www.lamoncloa.gob.es/lang/en/gobierno/news/paginas/2023/20230117\\_eu-agri-fish-committees.aspx](https://www.lamoncloa.gob.es/lang/en/gobierno/news/paginas/2023/20230117_eu-agri-fish-committees.aspx)

<sup>54</sup><https://www.gov.uk/government/news/uk-reaches-agreement-on-key-fish-stocks-for-2023>

<sup>55</sup>[https://ec.europa.eu/commission/presscorner/detail/en/ip\\_22\\_6899](https://ec.europa.eu/commission/presscorner/detail/en/ip_22_6899)

<sup>56</sup><https://island.is/s/fiskistofa/frett/samanloeg-aflahlutdeild-fiskiskipa-i-eigu-fyrirtaekja-og-einstaklinga>



## 7. Macroeconomic Context

### 7.1. Marine fuel

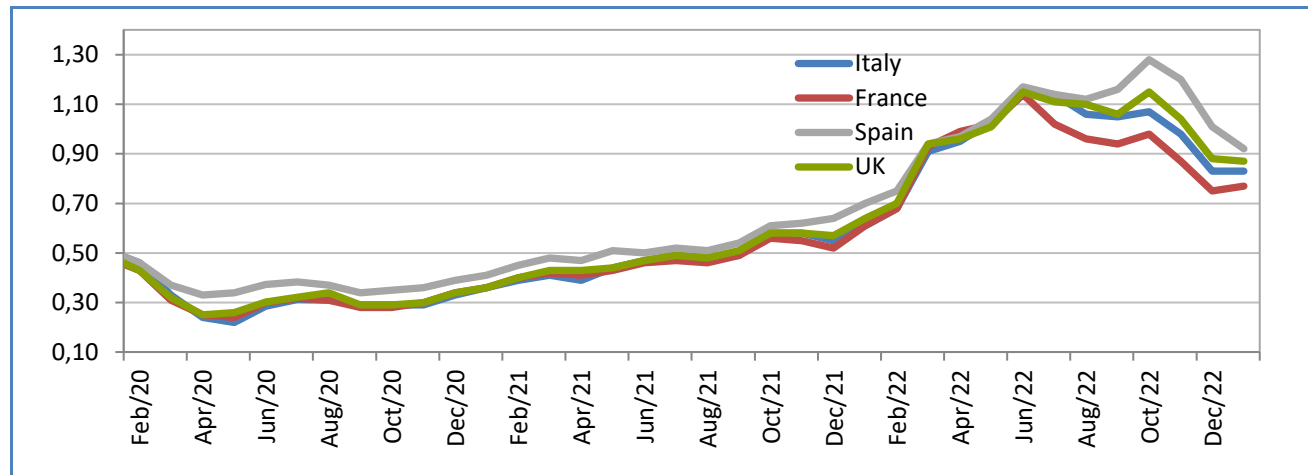
Average prices for marine fuel **January 2023** ranged from 0,77 to 0,92 EUR/litre in ports in **France, Italy, Spain** and the **UK**. Average prices decreased by 2,3% compared with the previous month and increased by an average of 32,4% compared with the same month in 2021.

Table 38. **AVERAGE PRICE OF MARINE DIESEL IN ITALY, FRANCE, SPAIN, AND THE UK (EUR/litre)**

Member State	Jan 2023	Change from Dec 2022	Change from Jan 2022
France <i>(ports of Lorient and Boulogne)</i>	0,77	3%	26%
Italy <sup>57</sup> <i>(ports of Ancona and Livorno)</i>	0,83	0%	36%
Spain <i>(ports of A Coruña and Vigo)</i>	0,92	-9%	31%
The UK <i>(ports of Grimsby and Aberdeen)</i>	0,87	-1%	36%

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

Figure 55. **AVERAGE PRICE OF MARINE DIESEL IN ITALY, FRANCE, SPAIN, AND THE UK (EUR/litre)**

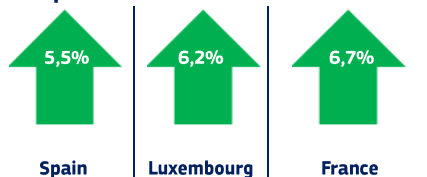


Source: Chamber of Commerce of Forlì-Cesena, Italy; DPMA, France; MABUX.

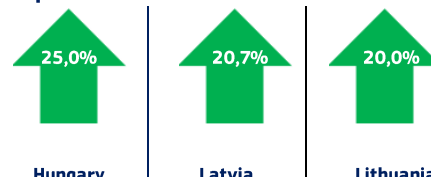
### 7.2. Consumer prices

The EU annual inflation rate was 10,4% in December 2022, down from 11,1% in November 2022. A year earlier, the rate was 5,3%.

**Inflation: Lowest rates in December 2022, compared with November 2022.**



**Inflation: Highest rates in December 2022, compared with November 2022.**



<sup>57</sup> Between September 2022-December 2022 no data was received from Ravenna port in Italy, thus the port has not been considered in the analysis in that period of time.

Table 39. HARMONISED INDEX OF CONSUMER PRICES IN THE EU (2015 = 100)

	Dec 2020	Dec 2021	Nov 2022	Dec 2022	Change from Nov 2022		Change from Dec 2021	
<b>Food and non-alcoholic beverages</b>	108,67	113,30	132,33	133,49	↑	0,9%	↑	17,8%
<b>Fish and seafood</b>	113,03	117,25	131,65	132,90	↑	0,9%	↑	13,3%

Source: Eurostat.

### 7.3. Exchange rates

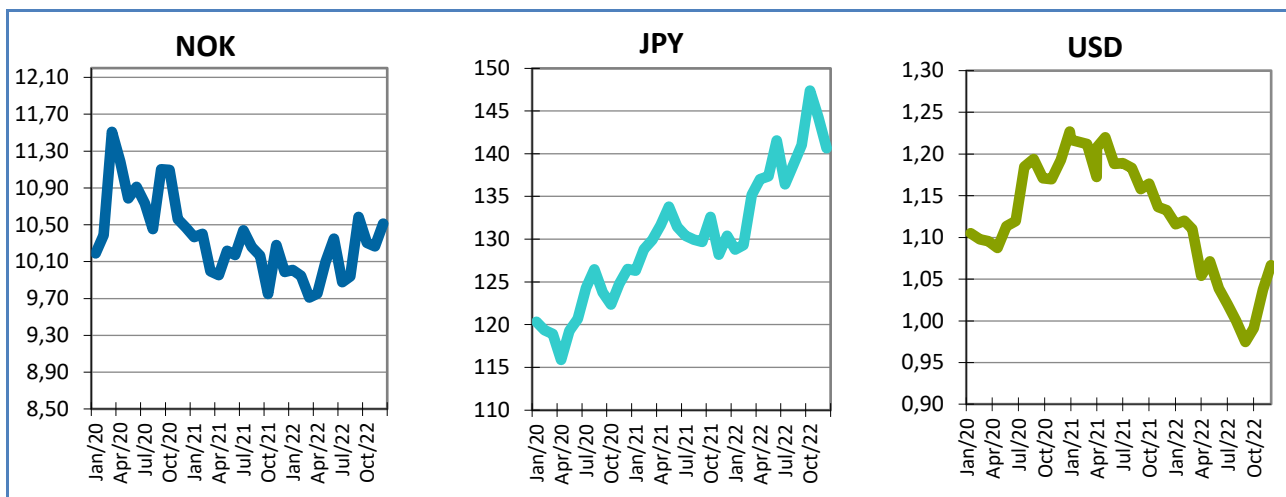
Table 40. EURO EXCHANGE RATES FOR SELECTED CURRENCIES

Currency	Dec 2020	Dec 2021	Nov 2022	Dec 2022
NOK	10,4703	9,9888	10,2648	10,5138
JPY	126,49	130,38	144,28	140,66
USD	1,2271	1,1326	1,0376	1,0666

Source: European Central Bank.

In December 2022, the euro appreciated against the US dollar (2,8%) and the Norwegian krone (2,4%), while it depreciated against the Japanese yen (2,5%), relative to the previous month. For the past six months, the euro has fluctuated around 1,015 against the US dollar. Compared with December 2021, the euro has appreciated 7,9% against the Japanese yen and 5,3% against the Norwegian krone, however, it depreciated 5,8% against the US dollar.

Figure 56. TREND OF EURO EXCHANGE RATES



Source: European Central Bank.

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

**First sales:** EUR-Lex, DG MARE– European Commission, mapa.gob.es, Sealifebase, ScienceDirect, Seawatch.no, Britishseafishing.co.uk.

**Consumption:** EUROPANEL, FishBase.

**Case studies:** Store Norske Leksikon, Government of Canada, Global Trade Atlas, Eurostat-Comext, Fisheries Council of Canada, Nutrients, Canadian Council of Professional Fish Harvesters, Marine Economics and management, Statistics Canada, Fish farming expert, European Commission. EU-Canada agreement, MAPA, APROMAR, Eurostat, FAO, MIPAAFT and Unioncamere, BMTI, Kantar, Agreste, BIM.

**Global highlights:** European Commission, gov.uk., island.is.

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

The underlying first-sales data is in an 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 and 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.

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

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