

Monthly Highlights

No. 6 / 2022

E U M O F A

European Market Observatory for
Fisheries and Aquaculture Products

In this issue

According to data collected by EUMOFA from 11 EU Member States, in March 2022 common sole and European plaice together accounted for 60% of the total first-sales value of the commodity group “flatfish”.

Over the 36-month observation period (April 2018 to March 2022), the weighted average first-sales price of common sole in Spain was 16,67 EUR/kg, 9% higher than in France (15,18 EUR/kg), and 78% greater than that of Italy (9,31 EUR/kg).

During the three years from April 2019 to March 2022, the volume of average yearly household consumption of squid in Italy was 13.244 tonnes. Italian consumers spent on average 12,79 EUR for 1 kg of squid during the same period of time.

Herring catches in the EU can be destined for both human consumption and non-food use. In 2020, 78% of EU herring landings was used for human consumption, while the remaining volume was mainly utilised for the production of fishmeal and fish oil.

In 2020, the total organic aquaculture production in the EU-27 is estimated at 74.032 tonnes, accounting for 6,8% of the total EU aquaculture production.

In late April, Norway and the EU reached a political understanding in relation to the fisheries in the Northeast Arctic, in ICES subareas 1 and 2.



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1. First sales in Europe

During **January–March 2022**, 11 EU Member States (MS), Norway, and the United Kingdom reported first-sales data for 10 commodity groups¹. First-sales data are based on sales notes and data collected from auction markets. First-sales data analysed in the section “*First sales in Europe*” are extracted from EUMOFA² as collected from national administrations.

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

Increases in value and volume: The Netherlands, Portugal, and the United Kingdom were the countries that recorded an increase in both first-sales value and volume. Common sole and herring were mainly responsible for the increase in the Netherlands, while in Portugal it was octopus and anchovy.

Decreases in value and volume: Bulgaria, Cyprus, Estonia, Italy, Latvia, Lithuania, and Spain recorded decreases in first-sales value and volume. Lithuania stood out with the most significant relative drop, which was due to a lower supply of smelt, herring, and sprat.

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

Country	January - March 2020		January - March 2021		January - March 2022		Change from January - March 2021	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Bulgaria	136	0,3	179	0,3	99	0,2	-45%	-23%
Cyprus	78	0,6	92	0,6	82	0,5	-11%	-15%
Estonia	16.966	4,5	24.356	5,4	21.876	4,9	-10%	-8%
France	45.465	150,9	52.569	165,1	52.538	188,4	-0,1%	14%
Italy	16.611	64,9	19.234	77,4	14.960	70,6	-22%	-9%
Latvia	13.380	2,6	16.227	3,4	12.516	2,7	-23%	-21%
Lithuania	648	0,3	1.025	0,6	461	0,3	-55%	-43%
Netherlands	54.244	81,8	45.868	63,1	74.463	69,4	62%	10%
Portugal	14.006	47,7	14.150	51,6	14.483	64,1	2%	24%
Spain	115.288	313,1	105.823	295,4	86.301	293,7	-18%	-1%
Sweden	42.258	1,7	47.483	5,0	28.484	5,2	-40%	3%
Norway	925.199	898,0	957.548	835,9	884.401	1012,6	-8%	21%
United Kingdom	86.099	164,4	85.873	142,3	87.795	158,9	2%	12%

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.

¹ 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.

² First sales data updated on 25.05.2022.

1.2. March 2022 compared to March 2021

Increases in value and volume: First sales of both volume and value increased only in Estonia and the United Kingdom. Sprat and herring facilitated the increase in Estonia, while in the United Kingdom it was mainly mackerel and monkfish.

Decreases in value and volume: First sales decreased in Bulgaria, Cyprus, Italy, Latvia, Lithuania, Portugal, and Spain. Bulgaria recorded the sharpest decrease due to lower sales of clam, sprat, and red mullet.

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

Country	March 2020		March 2021		March 2022		Change from March 2021	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Bulgaria	43	0,1	126	0,2	31	0,1	-76%	-66%
Cyprus	29	0,2	44	0,3	39	0,2	-10%	-13%
Estonia	6.754	1,5	7.384	1,5	9.446	2,0	28%	30%
France	14.529	42,5	20.585	58,4	20.281	65,4	-1%	12%
Italy	3.658	14,7	7.582	31,4	5.374	26,3	-29%	-17%
Latvia	5.672	1,2	6.843	1,4	6.220	1,3	-9%	-6%
Lithuania	323	0,1	299	0,2	208	0,2	-31%	-19%
Netherlands	20.381	29,5	19.010	26,7	29.768	21,3	57%	-20%
Portugal	4.381	13,7	6.350	23,0	4.360	20,0	-31%	-13%
Spain	53.631	110,5	56.858	131,4	38.537	113,9	-32%	-13%
Sweden	20.258	0,7	2.998	3,6	2.804	4,0	-6%	12%
Norway	358.656	305,3	370.545	306,0	343.036	434,4	-7%	42%
United Kingdom	23.330	31,6	23.476	41,7	25.942	43,2	11%	4%

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 25 of 2022**) are available via the EUMOFA website, and can be accessed [here](#).

The most recent monthly first-sales data **for April 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 EUMOFA³.

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


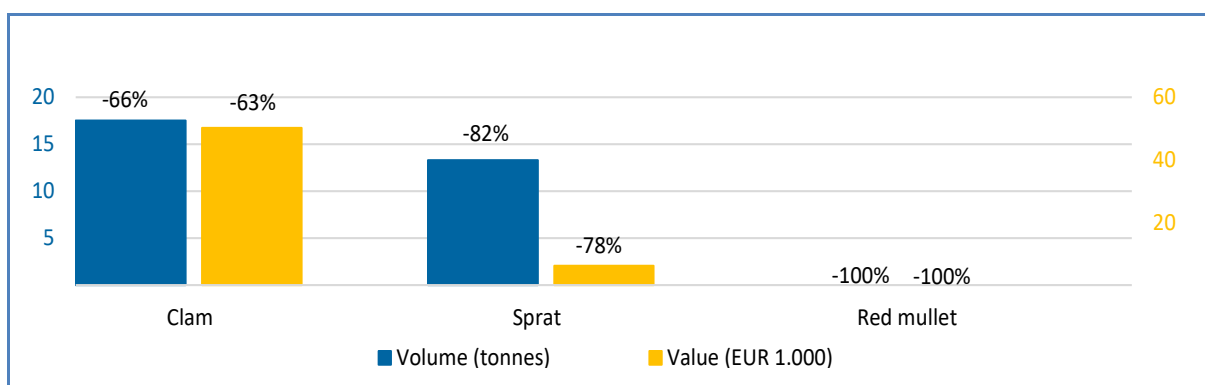
 Bulgaria	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-Mar 2022 vs Jan-Mar 2021	EUR 0,2 million, -23%	99 tonnes, -45%	Clam, sprat, red mullet.
Mar 2022 vs Mar 2021	EUR 0,06 million, -66%	31 tonnes, -76%	Clam, sprat, red mullet (there were no red mullet sales registered in March 2022).

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



Percentages show change from the previous year.

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


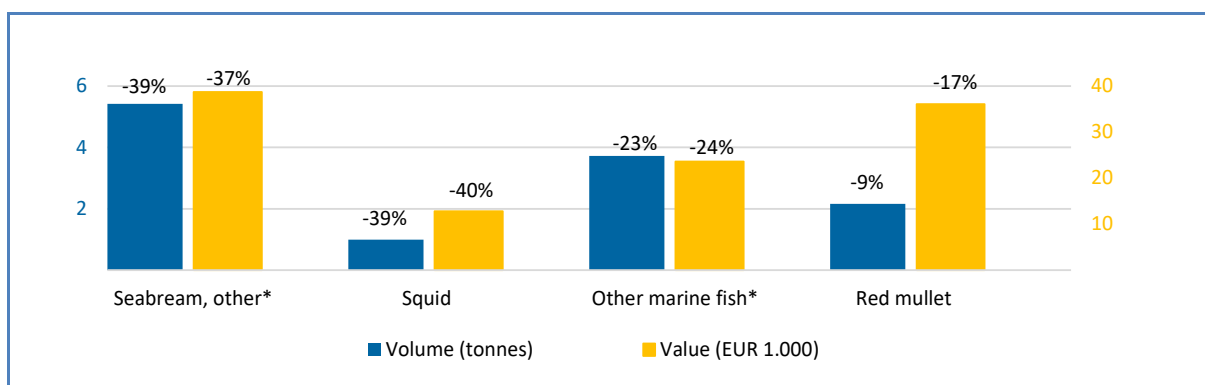
 Cyprus	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-Mar 2022 vs Jan-Mar 2021	EUR 0,5 million, -15%	82 tonnes, -11%	Other seabream (other than gilthead seabream)*, red mullet, squid.
Mar 2022 vs Mar 2021	EUR 0,2 million, -13%	39 tonnes, -10%	Other seabream (other than gilthead seabream)*, squid, other marine fish*, red mullet.

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



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

³ First-sales data updated on 17.5.2022.

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


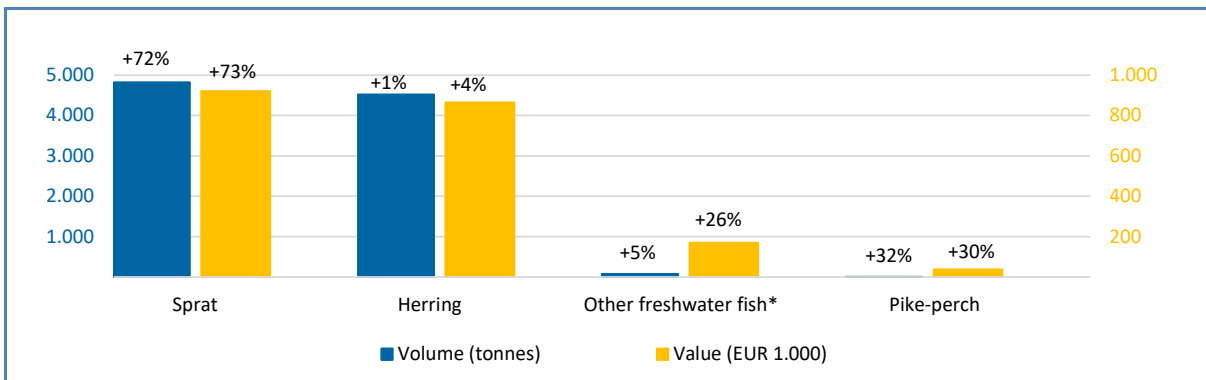
 Estonia	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-Mar 2022 vs Jan-Mar 2021	EUR 4,9 million, -8%	21.876 tonnes, -10%	Herring, pike-perch, smelt.
Mar 2022 vs Mar 2021	EUR 2,0 million, +30%	9.446 tonnes, +28%	Sprat, herring, other freshwater fish*, pike-perch.

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



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

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


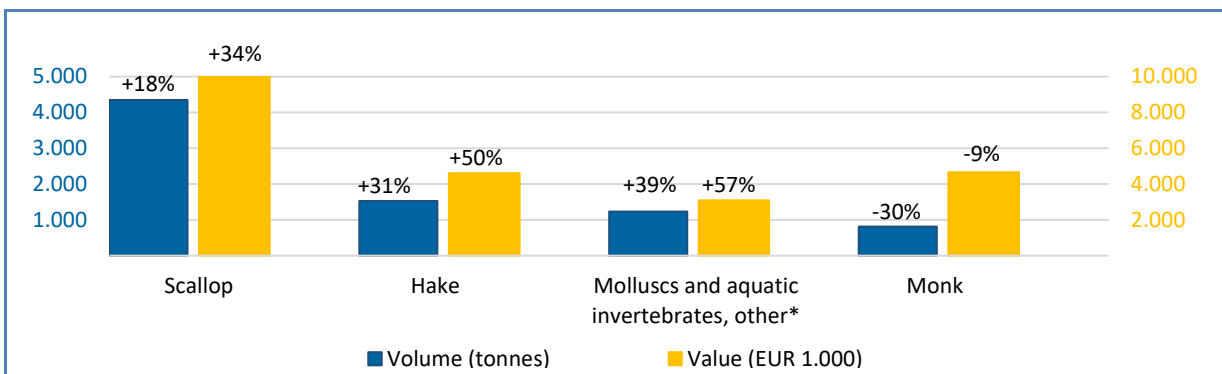
 France	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-Mar 2022 vs Jan-Mar 2021	EUR 188,4 million, +14%	52.538 tonnes, -0,1%	Value: Scallop, octopus, squid. Volume: Scallop, hake, seaweed and other algae*.
Mar 2022 vs Mar 2021	EUR 65,4 million, +12%	20.281 tonnes, -1%	Value: Scallop, hake, molluscs and aquatic invertebrates*. Volume: Monkfish, seaweed and other algae*.

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



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

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


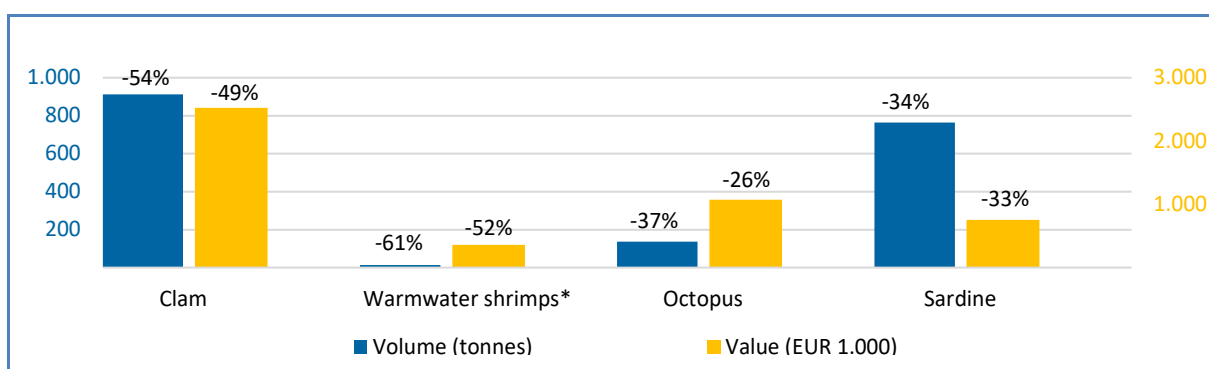
 Italy	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-Mar 2022 vs Jan-Mar 2021	EUR 70,6 million, -9%	14.960 tonnes, -22%	Clam, anchovy, sardine.
Mar 2022 vs Mar 2021	EUR 26,3 million, -17%	5.374 tonnes, -29%	Clam, warmwater shrimps, octopus, sardine.

Figure 5. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN ITALY, MARCH 2022**



Percentages show change from the previous year.

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


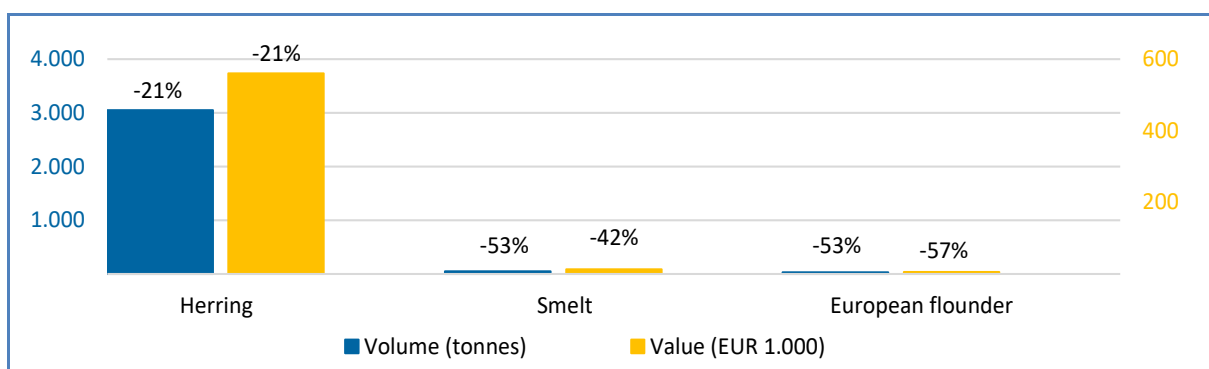
 Latvia	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-Mar 2022 vs Jan-Mar 2021	EUR 2,7 million, -21%	12.516 tonnes, -23%	Herring, smelt, other marine fish*.
Mar 2022 vs Mar 2021	EUR 1,3 million, -6%	6.220 tonnes, -9%	Herring, smelt, European flounder.

Figure 6. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN LATVIA, MARCH 2022**



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

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


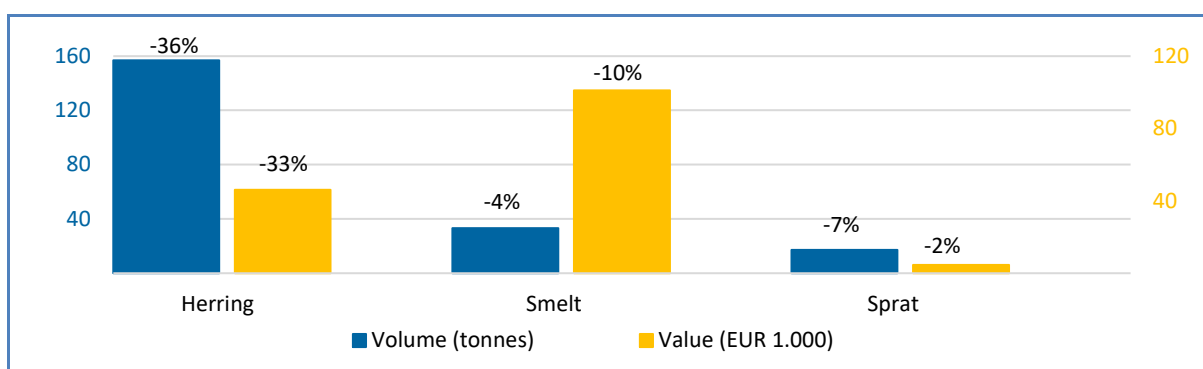
 Lithuania	First-sales value / trend %	First-sales volume/ trend %	Main contributing species
Jan-Mar 2022 vs Jan-Mar 2021	EUR 0,3 million, -43%	461 tonnes, -55%	Smelt, herring, sprat.
Mar 2022 vs Mar 2021	EUR 0,2 million, -19%	208 tonnes, -31%	Herring, smelt, sprat.

Figure 7. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN LITHUANIA, MARCH 2022**



Percentages show change from the previous year.

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


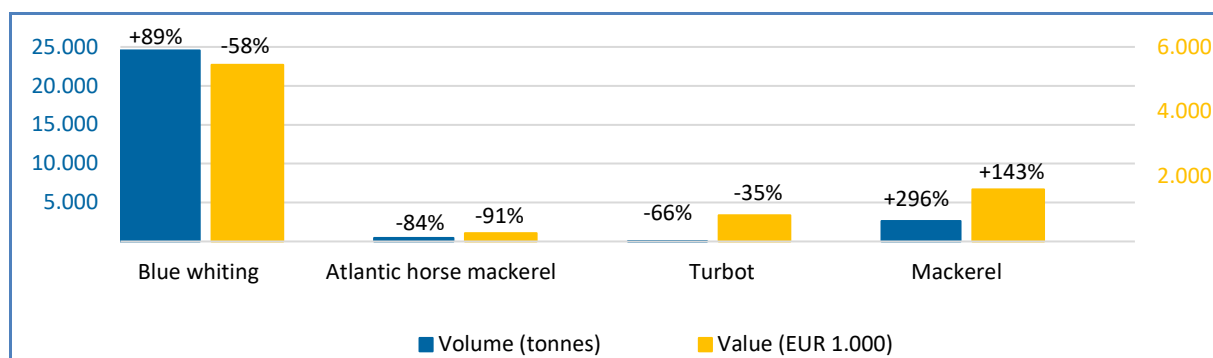
 The Netherlands	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
Jan-Mar 2022 vs Jan-Mar 2021	EUR 69,4 million, +10%	74.463 tonnes, +62%	Common sole, herring, shrimp <i>Crangon</i> spp., Atlantic horse mackerel.	The first-sales volume of blue whiting increased from 13.011 tonnes in March 2021 to around 24.530 tonnes in March 2022, because of the high productivity observed in Ireland's western waters during this period. In short, the fishing of blue whiting by the Dutch pelagic fleet took place this year earlier than usual. On the other hand, the value decreased from EUR 13 million to EUR 5,4 million, because of a large drop in the unit price reported by companies (from 1,00 EUR/kg to 0,22 EUR/kg), suggesting that the catch mainly entered the reduction industry. Similarly, the decrease in the production of horse mackerel observed in March 2022 compared to March 2021 is due to a change in fishing strategy, with the fishing starting earlier in 2022 (production of around 11.600 tonnes in February 2022 compared to 2.940 tonnes in February 2021).
Mar 2022 vs Mar 2021	EUR 21,3 million, -20%	29.768 tonnes, +57%	Value: Blue whiting, Atlantic horse mackerel, turbot. Volume: Blue whiting, mackerel, shrimp <i>Crangon</i> spp.	

Figure 8. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN THE NETHERLANDS, MARCH 2022**

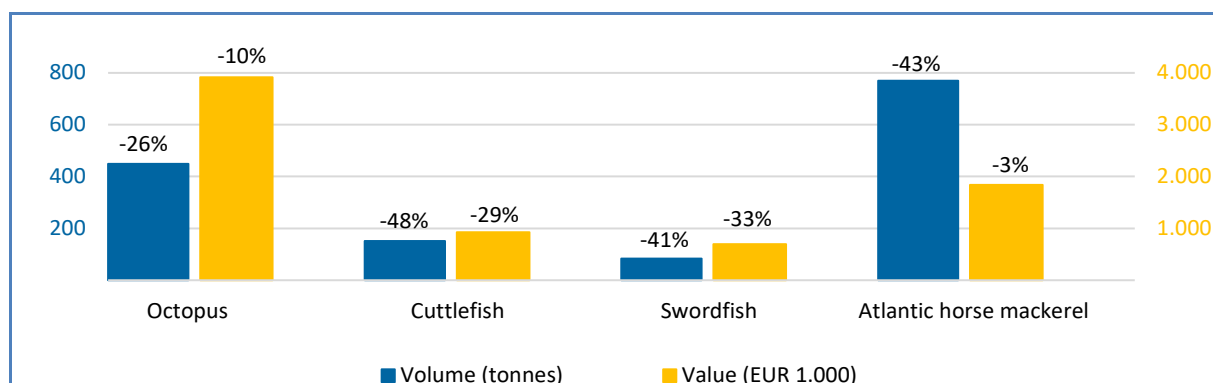


Percentages show change from the previous year.

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

Portugal	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-Mar 2022 vs Jan-Mar 2021	EUR 64,1 million, +24%	14.483 tonnes, +2%	Octopus, anchovy, squid, clam.
Mar 2022 vs Mar 2021	EUR 20,0 million -13%	4.360 tonnes, -31%	Octopus, cuttlefish, swordfish, Atlantic horse mackerel.

Figure 9. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN PORTUGAL, MARCH 2022**

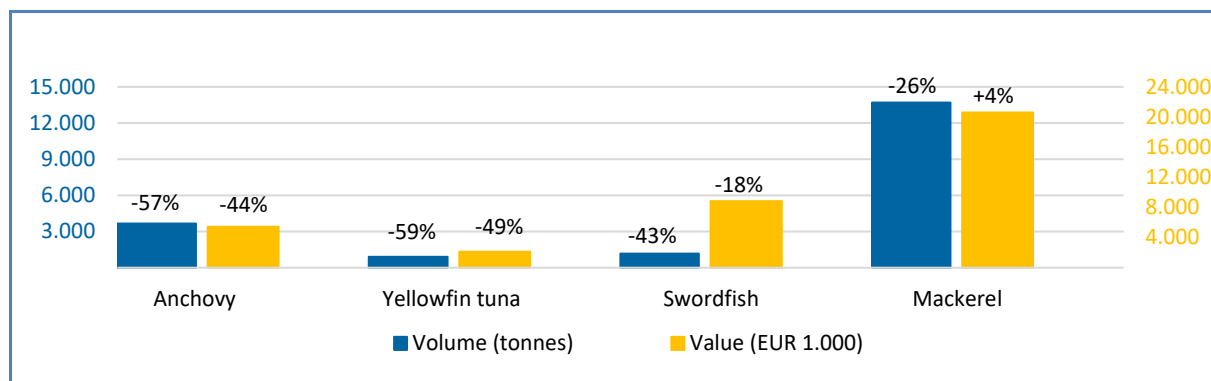


Percentages show change from the previous year.

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

Spain	First-sales value / trend in %	First-sales volume / trend %	Main contributing species
Jan-Mar 2022 vs Jan-Mar 2021	EUR 293,7 million, -1%	86.301 tonnes, -18%	Anchovy, yellowfin tuna, warmwater shrimp, mackerel.
Mar 2022 vs Mar 2021	EUR 113,9 million -13%	38.537 tonnes, -32%	Anchovy, yellowfin tuna, swordfish, mackerel.

Figure 10. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN SPAIN, MARCH 2022**



Percentages show change from the previous year.

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


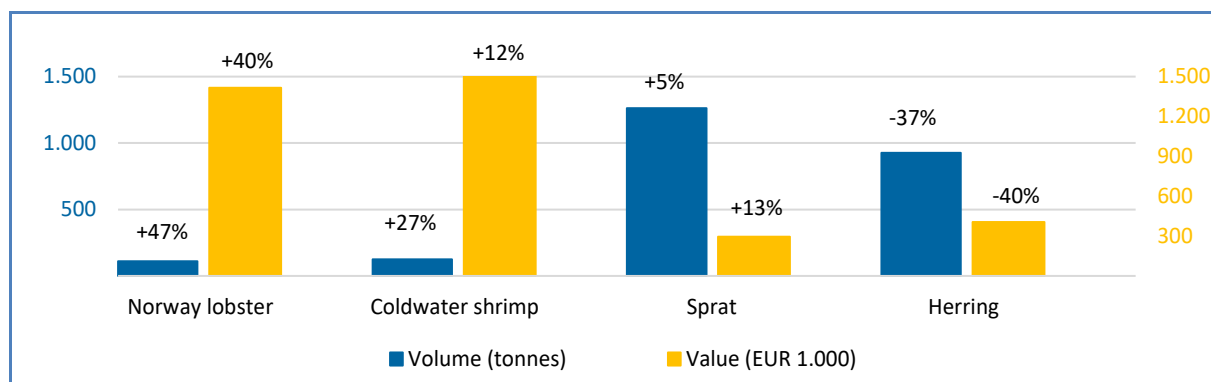
 Sweden	First-sales value / trend in %	First-sales volume / trend in %	Main contributing species
Jan-Mar 2022 vs Jan-Mar 2021	EUR 5,2 million, +3%	28.484 tonnes, -40%	Norway lobster, coldwater shrimp, mackerel, other marine fish*.
Mar 2022 vs Mar 2021	EUR 4,0 million, +12%	2.804 tonnes, -6%	Value: Norway lobster, coldwater shrimp, sprat. Volume: Herring.

Figure 11. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN SWEDEN, MARCH 2022**



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

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


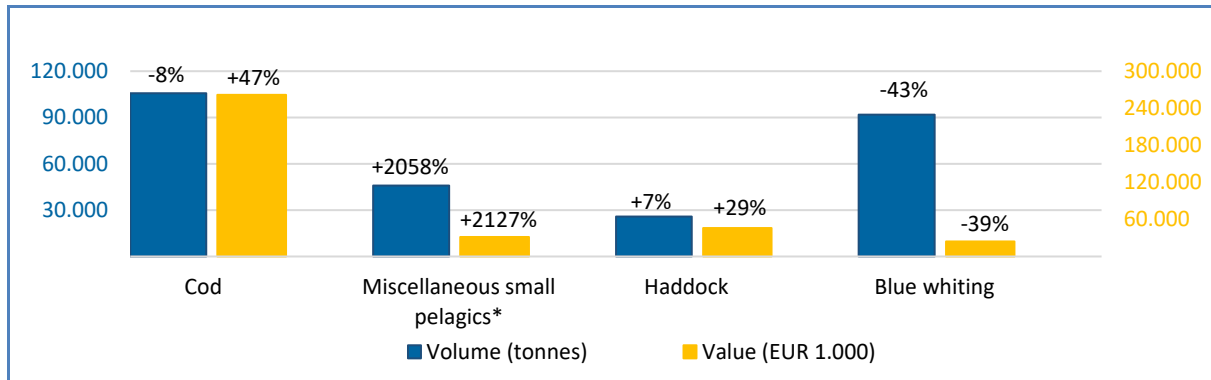
 Norway	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-Mar 2022 vs Jan-Mar 2021	EUR 1,01 billion, +21%	884.401 tonnes, -8%	Value: Cod, crab, saithe. Volume: Blue whiting, herring, mackerel.
Mar 2022 vs Mar 2021	EUR 434,4 million, +42%	343.036 tonnes, -7%	Value: Cod, miscellaneous small pelagics*, haddock. Volume: Blue whiting, cod, other crustaceans*.

Figure 12. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN NORWAY, MARCH 2022**



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

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


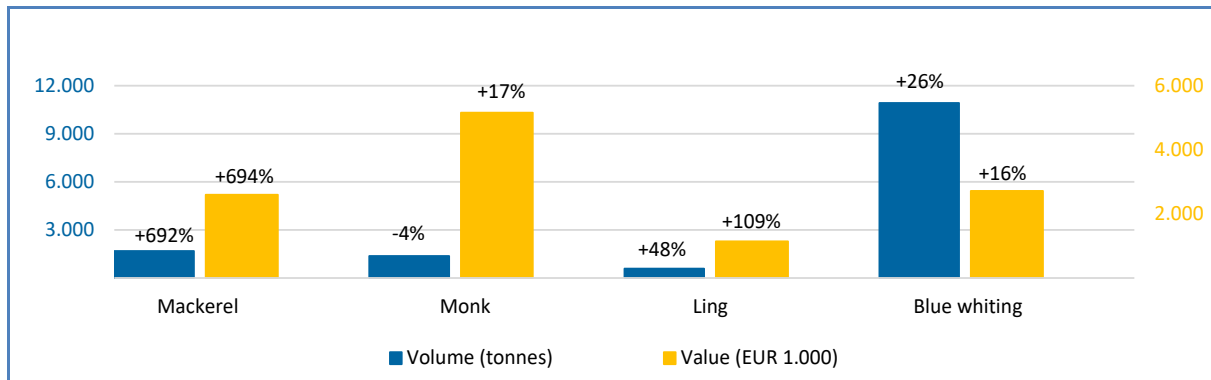
 The United Kingdom	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
Jan-Mar 2022 vs Jan-Mar 2021	EUR 158,9 million, +12%	87.795 tonnes, +2%	Mackerel, monkfish, squid, cod.	First sales of ling have increased in March 2022 compared to March 2021 because it has been targeted as a substitute for cod given its similar taste. Compared to cod, however, it has more bones and therefore produces a lower yield, which is why more fish are needed in terms of volume.
Mar 2022 vs Mar 2021	EUR 43,2 million, +4%	25.942 tonnes, +11%	Mackerel, monkfish, ling, blue whiting.	

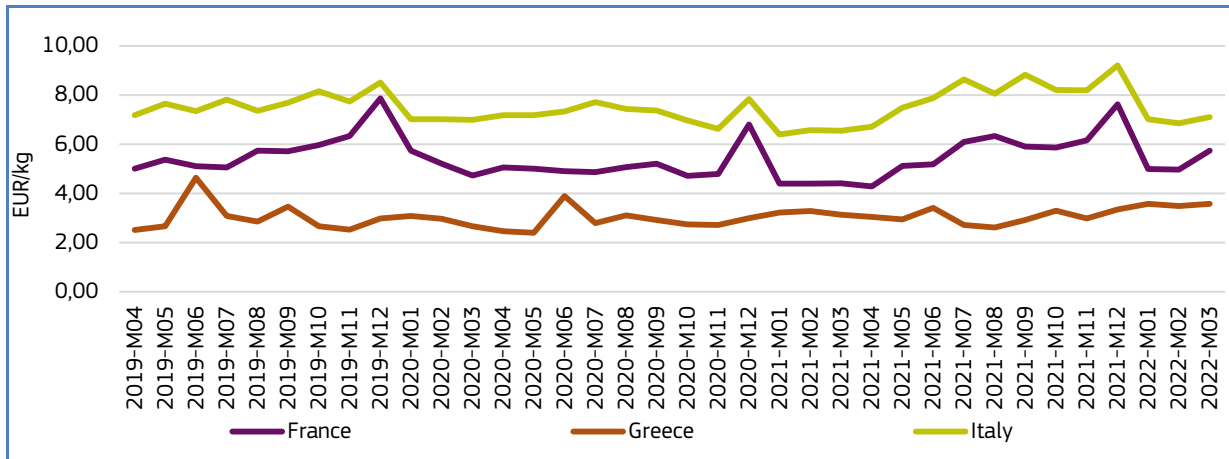
Figure 13. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN THE UNITED KINGDOM, FEBRUARY 2022**



Percentages show change from the previous year.

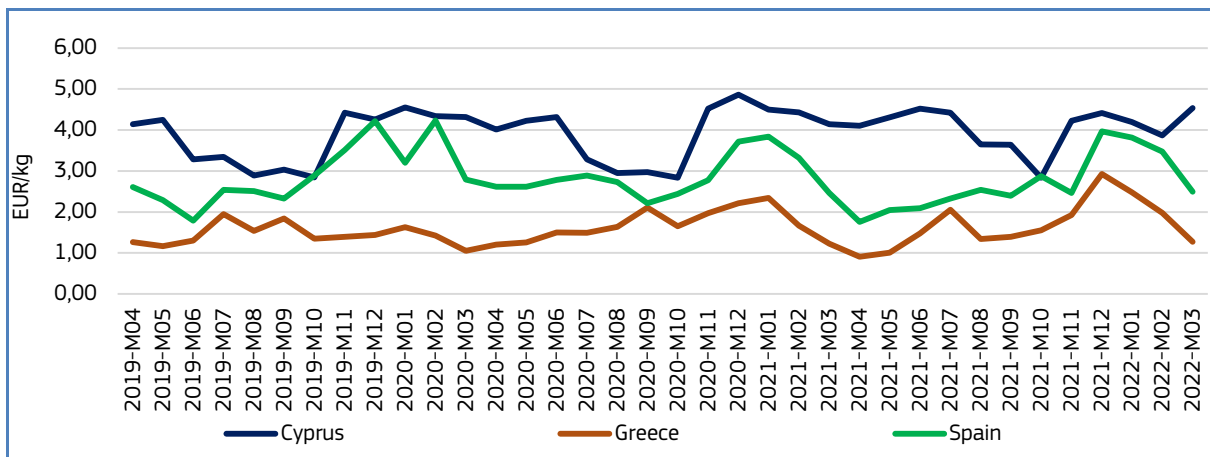
1.4. Comparison of first-sales prices of selected species in selected countries⁴

Figure 14. **FIRST-SALES PRICES OF MONKFISH IN FRANCE, GREECE, AND ITALY**



EU first sales of **monkfish** occur predominantly in **France**, as well as in **Greece** and **Italy**. In March 2022, the average first-sales prices of monkfish were 5,73 EUR/kg in France (up from both February 2022 and March 2021 by 15% and 30%, respectively); 3,57 EUR/kg in Greece (up from both the previous month and year by 2% and 14%, respectively); and 7,10 EUR/kg in Italy (up from the previous month by 4%, and up from the previous year by 8%). In March 2022, supply decreased in all three markets, relative to the previous year (-30% in France, -11% in Greece, and -16% in Italy). Volumes sold in the three markets exhibit a high seasonality with regard to peaks: March–April and June–August in France; October in Greece; and February–April and June in Italy. Over the past 36 months, monkfish prices showed a stable trend, while supply went down in all three markets.

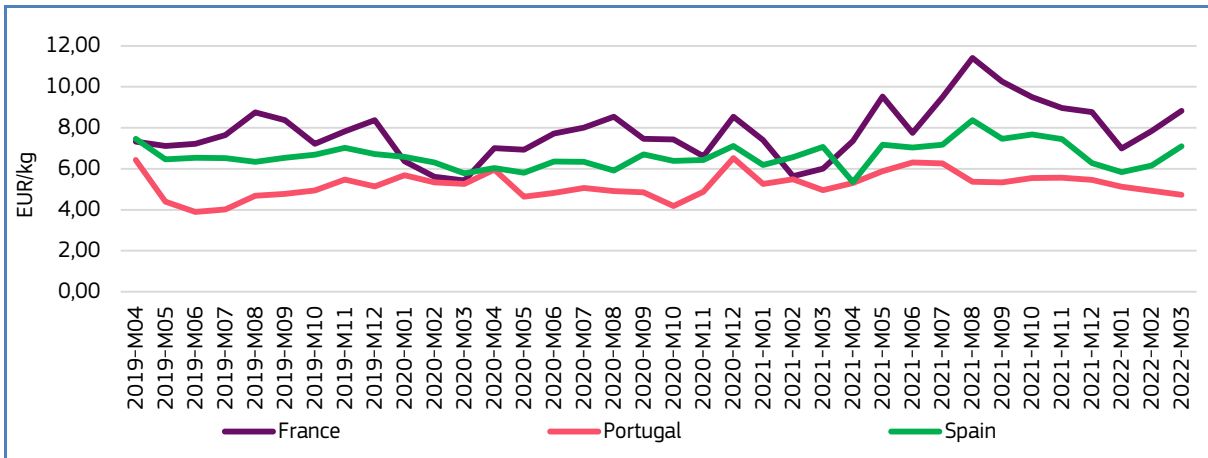
Figure 15. **FIRST-SALES PRICES OF PICAREL IN CYPRUS, GREECE, AND SPAIN**



EU first sales of **picarel** occur in several countries, including **Cyprus**, **Greece**, and **Spain**. In March 2022, the average first-sales prices of picarel were: 4,53 EUR/kg in Cyprus (up from both the previous month and year by 17% and 9%, respectively); 1,27 EUR/kg in Greece (down from the previous month by 36%, and up from the previous year by 4%); and 2,49 EUR/kg in Spain (down from February 2022 by 28%, and up from March 2021 by 1%). In March 2022, supply decreased in Spain (-55%), and increased in both Cyprus and Greece, relative to the previous year (+7% and +78%, respectively). Supply is seasonal, with peaks between March and April in Cyprus and Spain, while in Greece, supply most often peaks in October. Over the 36-month period observed, picarel prices exhibited a stable trend in Spain and an upward trend in Cyprus and Greece; at the same time, volume went down in Greece, and up in Cyprus and Spain.

⁴ First sales data updated on 17.5.2022.

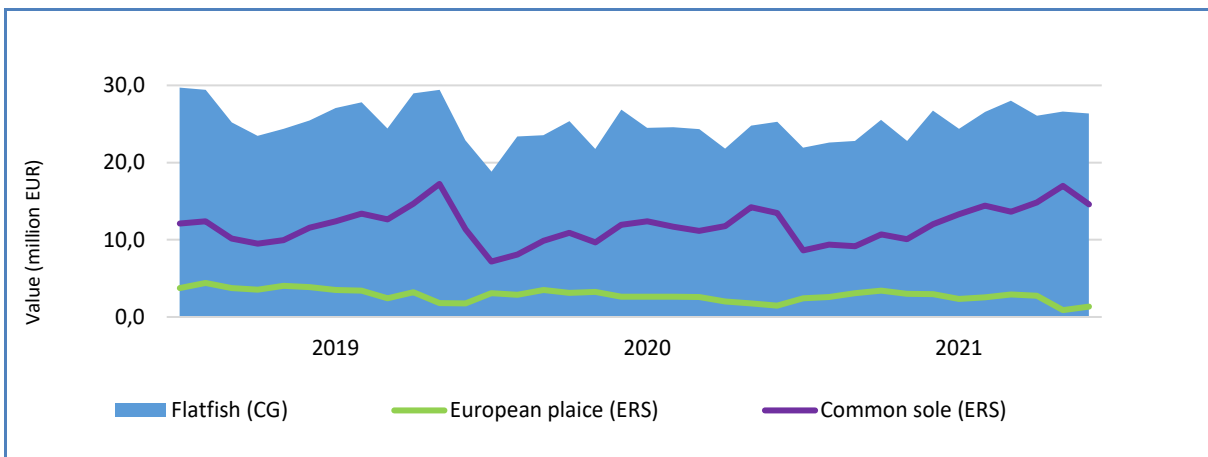
Figure 16. **FIRST-SALES PRICES OF POLLACK IN FRANCE, PORTUGAL, AND SPAIN**



EU first sales of **pollack** occur in multiple countries, including **France, Portugal, and Spain**. In March 2022, the average first-sales prices of pollack were 8,84 EUR/kg in France (up from both the previous month and year by 13% and 47%, respectively); 4,73 EUR/kg in Portugal (down by 4% from both February 2022 and March 2021); and 7,10 EUR/kg in Spain (up by 15% from the previous month and up by 1% from the previous year). In March 2022, supply decreased in France (-27%), and increased in both Portugal and Spain (+16% and +8%, respectively), relative to the previous year. Volumes sold in Portugal do not seem to exhibit a clear seasonality; in France, supply peaks in February and July; in Spain, in October–December/January. Over the past three years, prices exhibited an upward trend in all three markets, while supply went down in France, and the opposite in Portugal and Spain.

1.5. Commodity group of the month: flatfish⁵

Figure 17. **FIRST-SALES COMPARISON AT CG, MCS, AND ERS LEVELS FOR REPORTING COUNTRIES⁶, JANUARY 2018 – MARCH 2022**



The “**flatfish**” commodity group (CG⁷) recorded the fifth-highest first-sales value and the sixth-highest volume out of the 10 CGs recorded in March 2022⁸. Of reporting countries covered by the EUMOFA database, first sales of flatfish reached a value of EUR 26,4 million and a volume of 3.433 tonnes, representing a value increase of 4% and a volume decrease of 26% compared to March 2021. In the past 36 months, the highest first-sales value of flatfish was registered at EUR 29,7 million (April 2019).

⁵ First sales data updated on 17.5.2022.

⁶ Norway and the UK excluded from the analyses.

⁷ Annex 3: <http://eumofa.eu/supply-balance-and-other-methodologies>

⁸ More data on commodity groups can be found in Table 1.2 of the Annex.

Atlantic halibut, brill, common sole, other soles, dab, European flounder, other flounders, European plaice, other plaices, Greenland halibut, megrim, turbot, and the grouping “other flatfish”.

At Electronic Recording and Reporting System (ERS) level, common sole (55%) and European plaice (5%) together accounted for 60% of “flatfish” total first-sales value recorded in March 2022.

1.6. Focus on common sole



Common sole (*Solea solea*) is a flatfish that belongs to the Soleidae family. Usually, it is solitary and occurs at a temperature range of 8.0-24.0°C, burrowed into sandy and muddy bottoms. It retreats to deeper water during winters. Juveniles are found during the first 2 to 3 years in coastal nurseries (bays) before migrating to deeper waters. Adults feed on worms, molluscs, and small crustaceans at night⁹. Common sole can mainly be found in the Eastern Atlantic, southward from Trondheim Fjord (including the North Sea and western Baltic Sea) and the Mediterranean Sea (including Sea of Marmara, Bosphorus, and south-western Black Sea). It also occurs southward to Senegal, including Cape Verde.¹⁰

Common sole is managed through an EU multiannual management¹¹ which limits effort on sole stocks through quotas, a cap on days at sea, and gear restrictions. Commercial landings are subject to a minimum landing size of a total length of 24 cm for most EU waters under European Legislation¹², except for the Mediterranean, where it is 20 cm. In recent years, bycatch restrictions have also been introduced to reduce discarding. Since 2019 sole has been subject to the Landing Obligation¹³, with an amendment of Delegated Regulation (EU) 2019/2239 including a survivability exemption for common sole caught under specific conditions¹⁴,

The species has a highly esteemed flesh. It is caught with bottom trawls, usually by demersal bottom trawling and small flatfish (flounders, soles) bottom trawling. Common sole is marketed fresh and frozen; and is consumed steamed, fried, broiled, microwaved, and baked¹⁵.

Selected countries

Table 16. **COMPARISON OF COMMON SOLE FIRST-SALES PRICES, MAIN PLACES OF SALE, AND CONTRIBUTION TO OVERALL SALES OF “FLATFISH” IN SELECTED COUNTRIES**

Common sole		Changes in common sole first sales Jan-Mar 2022 (%)		Contribution of common sole to total “flatfish” first sales in March 2022 (%)	Principal places of sale Jan-Mar 2022 in terms of first-sales value
		Compared to Jan-Mar 2021	Compared to Jan-Mar 2020		
France	Value	-1%	-6%	63%	Les Sables-d'Olonne, Arcachon, Lorient.
	Volume	-32%	-16%	39%	
Italy	Value	-3%	-6%	81%	Chioggia, Rimini, Ancona.
	Volume	+3%	-2%	74%	
Spain	Value	-11%	-16%	9%	Vigo, Santa Eugenia Ribeira, Santa Pola.
	Volume	-24%	-27%	3%	

⁹ <https://www.fishbase.de/summary/solea-solea.html>

¹⁰ <https://www.fao.org/fishery/en/aqspecies/3367/en>

¹¹ Regulation (EU) 2019/472 <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32019R0472>

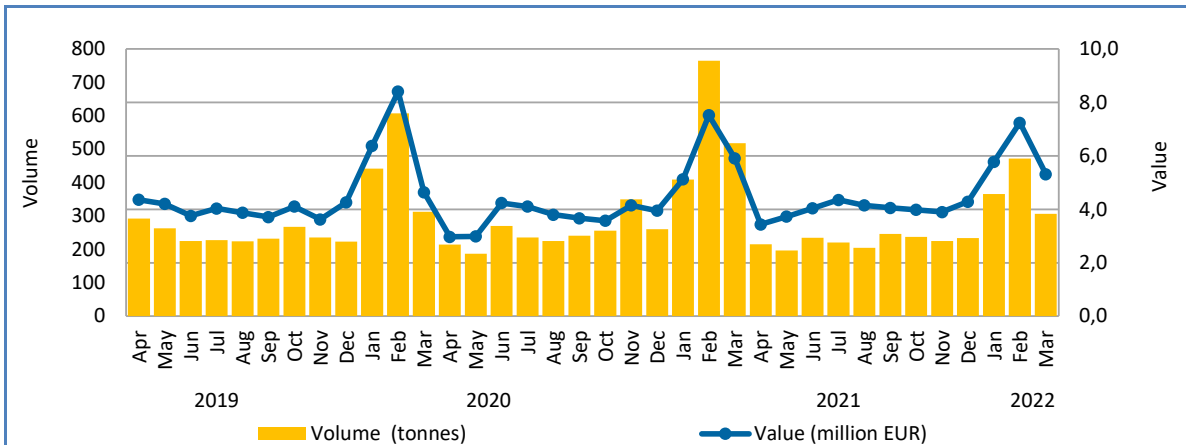
¹² Regulation (EU) 2019/1241 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R1241>

¹³ Regulation (EU) 2020/2015 <https://eur-lex.europa.eu/legal-content/en/TXT/?uri=CELEX:32020R2015>

¹⁴ Regulation (EU) 2019/2239: <https://eur-lex.europa.eu/legal-content/GA/TXT/?uri=CELEX:32019R2239>

¹⁵ <https://www.fao.org/fishery/en/aqspecies/3367/en>

Figure 18. **COMMON SOLE: FIRST SALES IN FRANCE, APRIL 2018 - MARCH 2022**



In France, over the past 36 months, the highest first sales of common sole occurred from January to March each year. The highest value of EUR 8,4 million was recorded in February 2020, while the peak in volume was observed in February 2021 when 765 tonnes were sold.

Figure 19. **FIRST SALES: COMPOSITION OF “FLATFISH” (ERS LEVEL) IN FRANCE IN VALUE AND VOLUME, MARCH 2022**

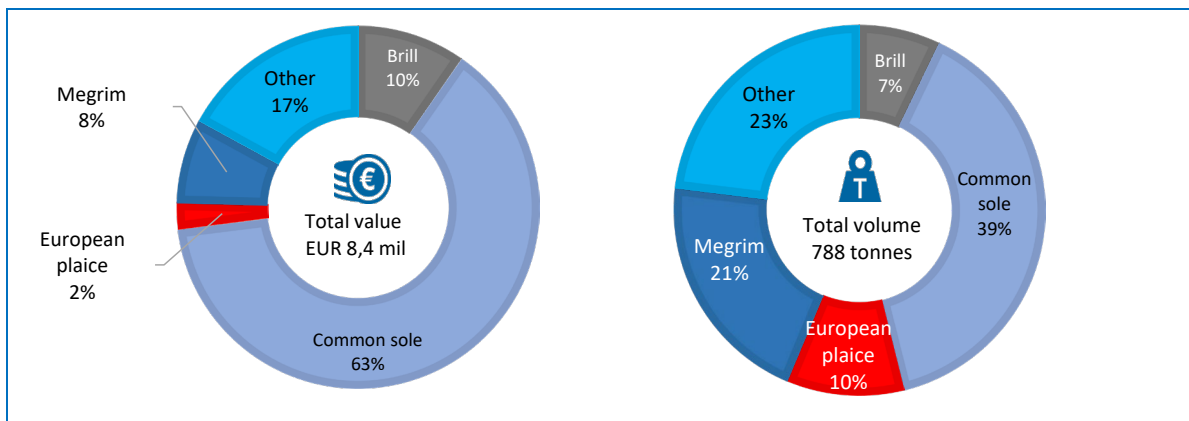
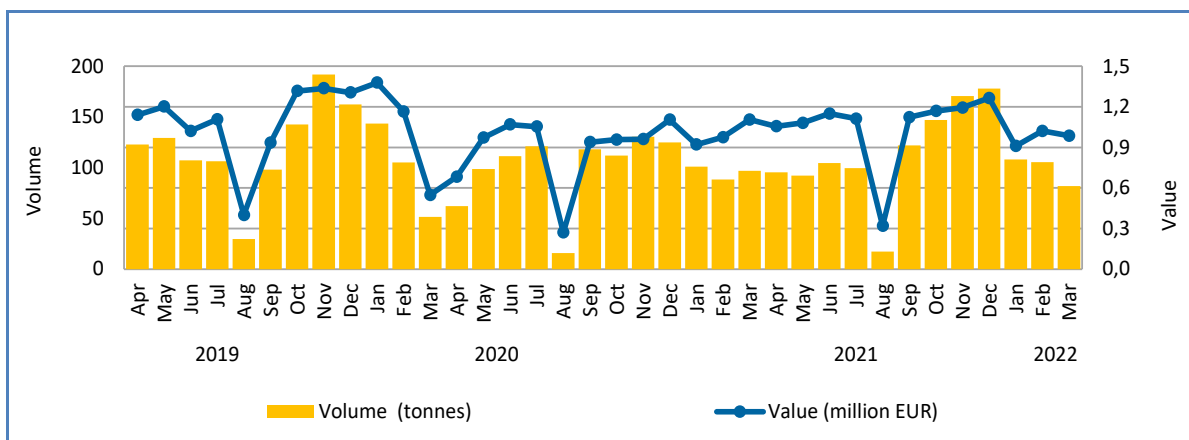


Figure 20. **COMMON SOLE: FIRST SALES IN ITALY, APRIL 2018 - MARCH 2022**



Over the past 36 months in **Italy**, the highest first-sales value of common sole at EUR 1,4 million was recorded in January 2020, and first-sales volume in November 2019 when 192 tonnes were sold. Typically, the common sole fishery season is most intense in autumn and winter.

Figure 21. **FIRST SALES: COMPOSITION OF “FLATFISH” (ERS LEVEL) IN ITALY IN VALUE AND VOLUME, MARCH 2022**

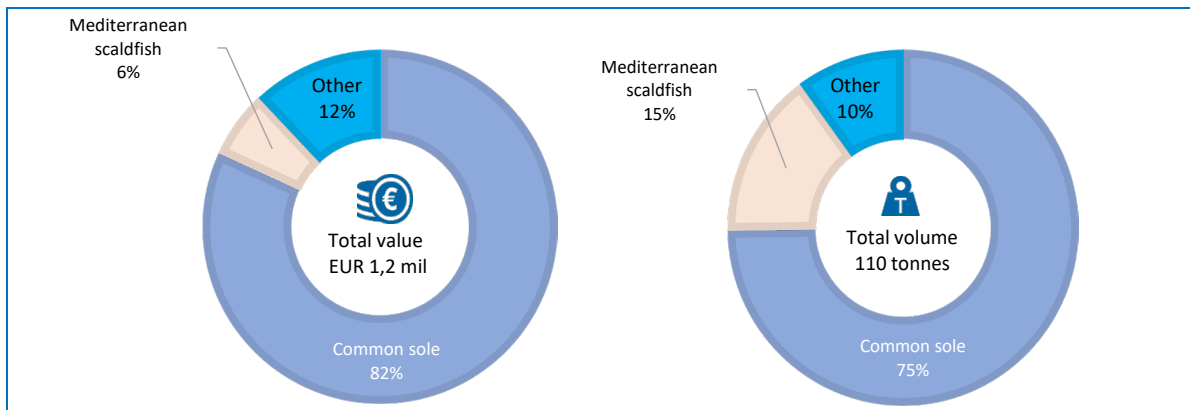
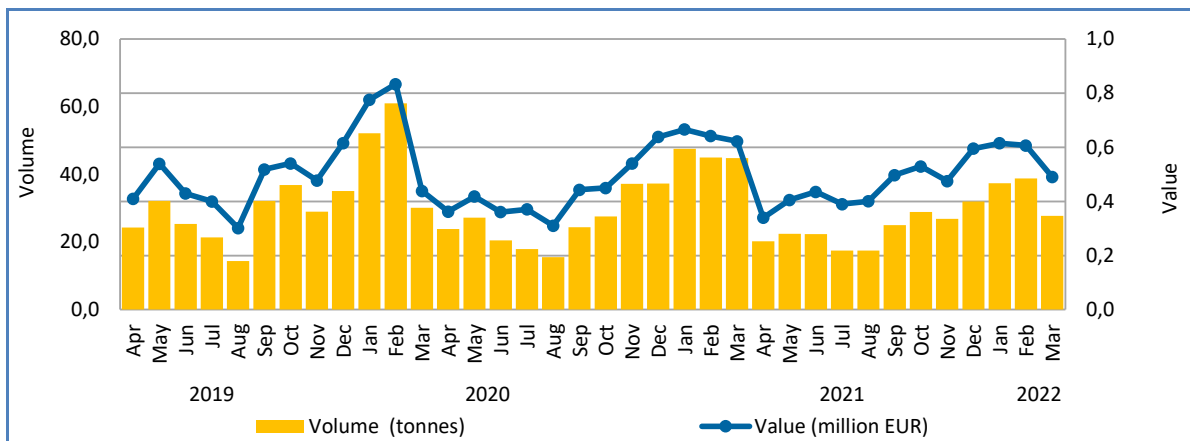
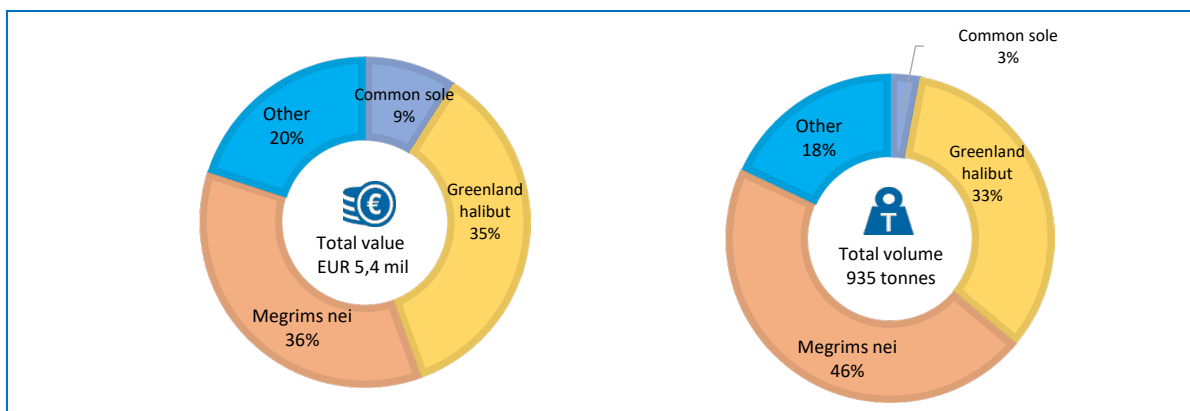


Figure 22. **COMMON SOLE: FIRST SALES IN SPAIN, APRIL 2018 - MARCH 2022**



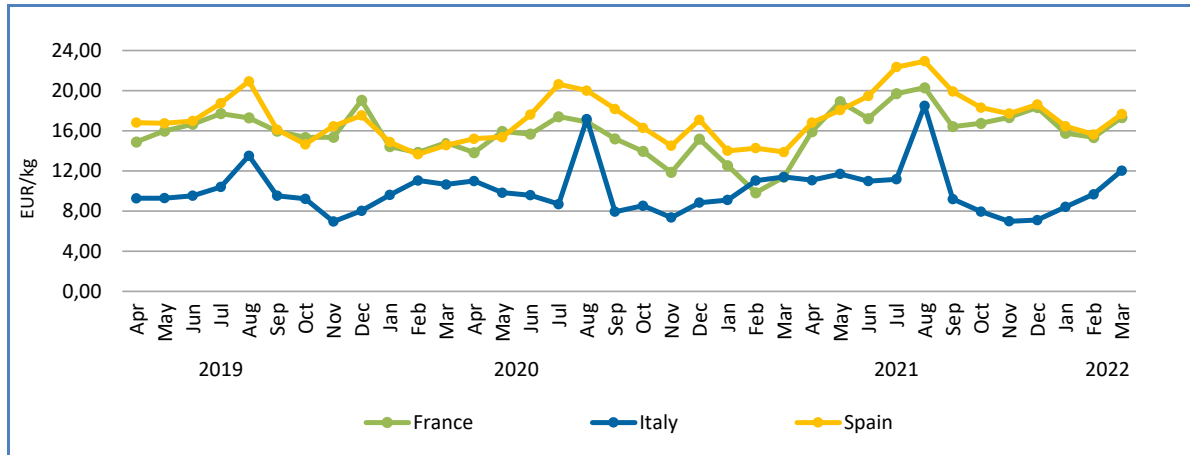
Over the past 36 months in **Spain**, the highest first-sales value volume of common sole occurred in February 2020 when 61 tonnes were sold for EUR 0,8 million. The most intense fishery season occurs in the winter, with the highest supply from January to March each year.

Figure 23. **FIRST SALES: COMPOSITION OF “FLATFISH” (ERS LEVEL) IN SPAIN IN VALUE AND VOLUME, MARCH 2022**



Price trend

Figure 24. **COMMON SOLE: FIRST-SALES PRICES IN SELECTED COUNTRIES, APRIL 2018 - MARCH 2022**



Over the 36-month observation period (April 2018 to March 2022), the weighted average first-sales price of common sole in **Spain** was 16,57 EUR/kg, 9% higher than in **France** (15,18 EUR/kg), and 78% greater than that of **Italy** (9,31 EUR/kg).

In **France** in March 2022, the average first-sales price of common sole (17,32 EUR/kg) increased by 52% compared with March 2021, and 17% compared with March 2020. Over the past 36 months, average price ranged from 9,84 EUR/kg for 765 tonnes in February 2021, to 20,30 EUR/kg for 204 tonnes in August 2021.

In **Italy** in March 2022, the average first-sales price of common sole (12,03 EUR/kg) increased by 6% and 13%, compared to the same month in 2021 and 2020 respectively. During the observed period, the lowest average price (6,97 EUR/kg for 192 tonnes) was seen in November 2019, while the highest average price was recorded in August 2021 at 18,50 EUR/kg for 17 tonnes.

In **Spain** in March 2022, the average first-sales price of common sole (17,66 EUR/kg) increased by 27% compared to March 2021 and by 21% over March 2020. During the observed period, the lowest average price of 13,66 EUR/kg for 61 tonnes was seen in February 2020, while the highest average price was recorded in August 2021, at 22,94 EUR/kg for 18 tonnes.

1.7. Focus on European plaice



European plaice (*Pleuronectes platessa*) is a species of flatfish from the Pleuronectidae family. It lives mostly on sandy bottoms, although can also be found on gravel and mud and is often seen on sandy patches in rocky areas. They are most common between depths of 10-50 m, but occur over depths of 0-200 m. Juvenile fish in their first year live mostly in very shallow water and can often be found in sandy tidal pools; they only start to move into deeper water in their second year. Plaice feed on bottom-living animals, particularly shellfish such as cockles and razor shells, but they also consume worms, crustaceans, brittlestars, and sandeels. Their spawning season principally runs from January to March¹⁶.

European plaice is found primarily in the North Sea. It may have been present in some areas of the Mediterranean in the past as a result of climatic changes related to the Ice Ages, but in modern times are absent from the area¹⁷.

The species is subject to Total Allowable Catches (TACs) established on the basis of maximum sustainable yield (MSY) advice from the International Council for the Exploration of the Sea (ICES). The European Council has adopted a regulation updating the EU's fishing rights for 2022 to incorporate the agreement reached with the UK, which also includes a 70% increase for European plaice in the waters around southern Ireland. This regulation¹⁸ marks the final step in the annual process of setting fishing opportunities in EU and non-EU waters¹⁹.

Common gears used in the plaice fishery are trammel gillnet, fixed gillnet, Danish seine, beam, and demersal trawl²⁰. European plaice appears in the market as fresh and frozen products, and they are consumed steamed, fried, boiled, microwaved, and baked²¹.

Selected countries

Table 17. **COMPARISON OF EUROPEAN PLAICE FIRST-SALES PRICES, MAIN PLACES OF SALE AND CONTRIBUTION TO OVERALL SALES OF FLATFISH IN SELECTED COUNTRIES**

European plaice		Changes in European plaice first sales Jan-Mar 2022 (%)		Contribution of European plaice to total "flatfish" first sales in March 2022 (%)	Principal places of sales in Jan-Mar 2022 in terms of first-sales value
		Compared to Jan-Mar 2021	Compared to Jan-Mar 2020		
France	Value	+5%	-35%	2%	Boulogne-sur-Mer, Port-en-Bessin-Huppain, Les Sables-d'Olonne.
	Volume	-4 %	-49%	10%	
Netherlands	Value	-5%	-25%	11%	Urk, IJmuiden/Velsen, Scheveningen.
	Volume	-27%	-32%	34%	
Sweden	Value	+57%	+237%	11%	Göteborg, Smögen.
	Volume	-16%	-53%	2%	

¹⁶ <https://www.marlin.ac.uk/species/detail/2172>

¹⁷ <https://www.fishbase.se/summary/pleuronectes-platessa.html>

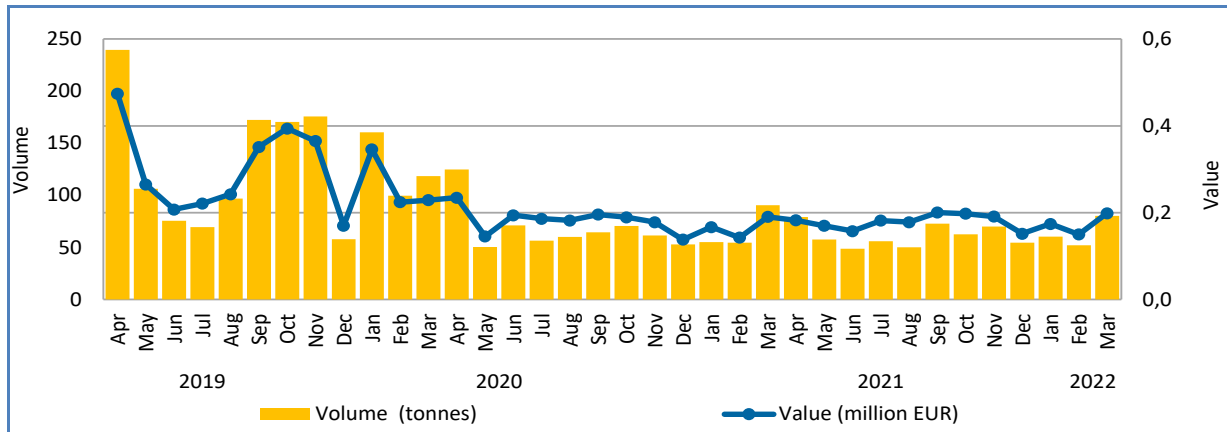
¹⁸ Regulation (EU) 2022/109 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32022R0109>

¹⁹ <https://www.consilium.europa.eu/en/press/press-releases/2022/03/31/council-updates-eu-fishing-rights-for-2022-to-reflect-agreement-with-uk/>

²⁰ <https://www.eumofa.eu/documents/20178/135270/MH+11+2018+EN.pdf>

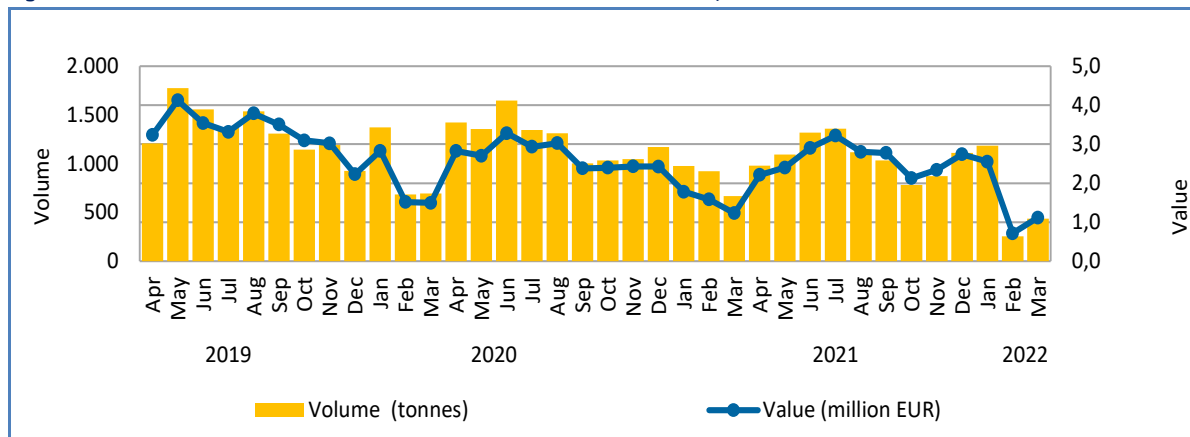
²¹ <https://www.fishbase.se/summary/pleuronectes-platessa.html>

Figure 25. EUROPEAN PLAICE: FIRST SALES IN FRANCE, APRIL 2018 - MARCH 2022



In **France**, over the observed 36-month period, the highest monthly first-sales value and volume of European plaice occurred in April 2019 when 240 tonnes were sold for EUR 0,5 million. During the rest of the analysed period, monthly first-sales volume ranged from 49 tonnes in June 2021 to 240 tonnes in April 2019.

Figure 26. EUROPEAN PLAICE: FIRST SALES IN THE NETHERLANDS, APRIL 2018 - MARCH 2022



In **the Netherlands**, monthly first sales of European plaice were the highest in terms of volume among the three surveyed countries. Over the past 36 months, fishing activity was seasonal, with the highest monthly first sales registered in January 2020 when 1.774 tonnes were sold for EUR 4,1 million. In general, in terms of catches, the plaice fishery is most intense from April to August.

Figure 27. FIRST SALES: COMPOSITION OF “FLATFISH” (ERS LEVEL) IN THE NETHERLANDS IN VALUE AND VOLUME, MARCH 2022

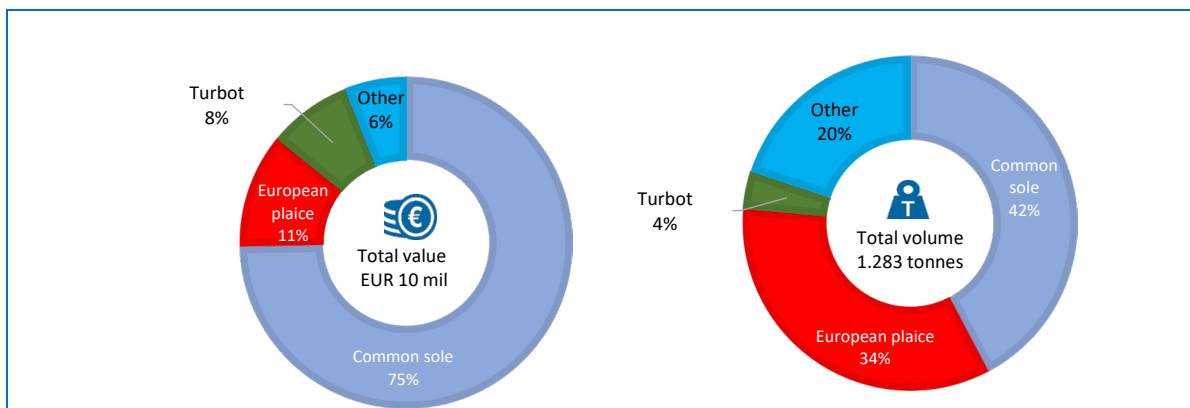
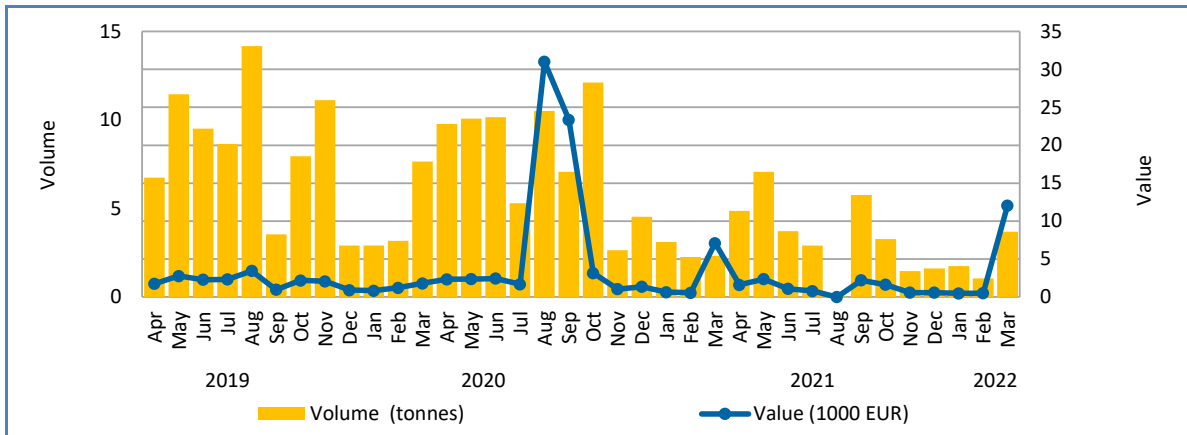
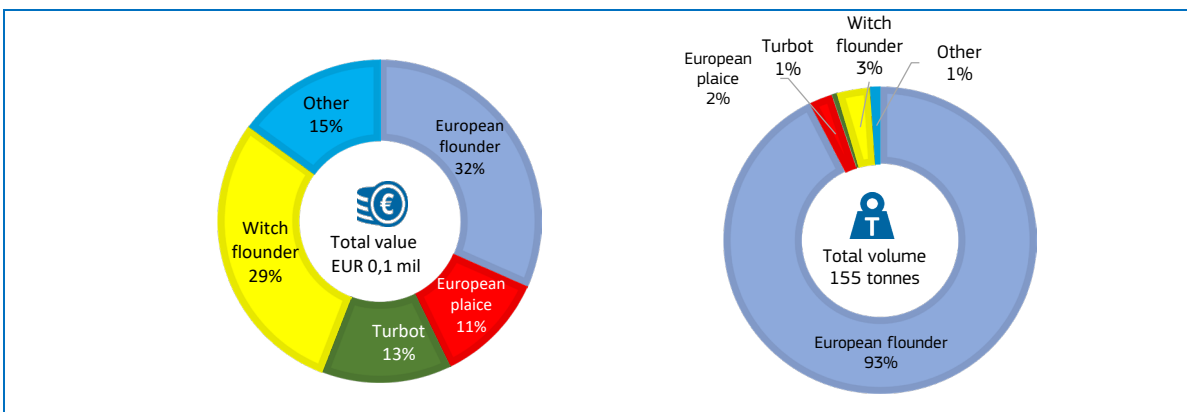


Figure 28. **EUROPEAN PLAICE: FIRST SALES IN SWEDEN, APRIL 2018 - MARCH 2022**



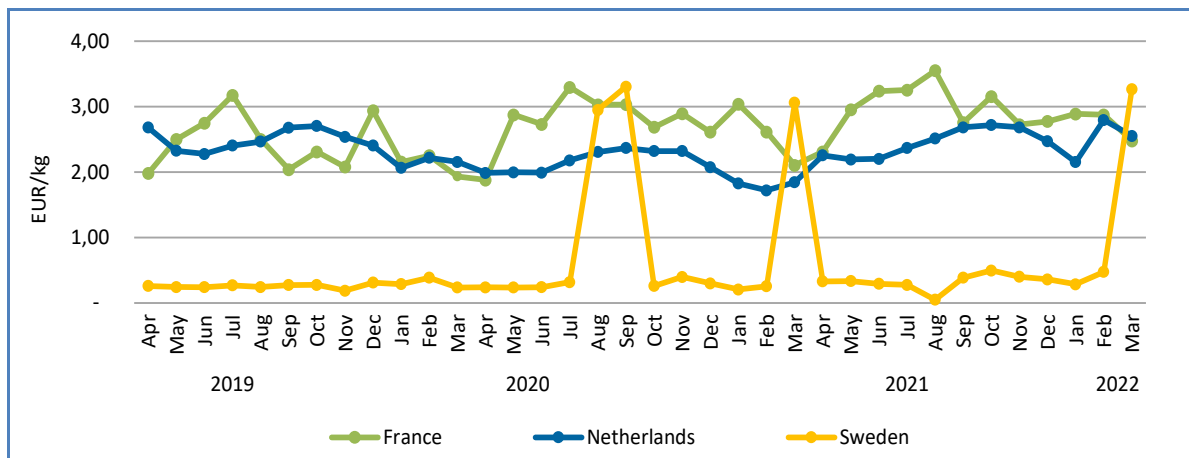
In **Sweden**, over the past 36 months, the highest first-sales value for European plaice at EUR 31 million was registered in August 2020, while first-sales volume reached its peak in August 2019 when approximately 14 tonnes were sold. The Swedish fishing fleet catches European plaice mainly as bycatch in the cod fishery; therefore, plaice first sales are dependent on various regulations applied to the cod fishery such as total allowable catches or closure areas.

Figure 29. **FIRST SALES: COMPOSITION OF “FLATFISH” (ERS LEVEL) IN SWEDEN IN VALUE AND VOLUME, MARCH 2022**



Price trend

Figure 30. **EUROPEAN PLAICE: FIRST-SALES PRICES IN SELECTED COUNTRIES, APRIL 2018 - MARCH 2022**



Over the 36-month observation period (April 2018–March 2022) among the three surveyed countries, the weighted average first-sales price of European plaice was the highest in **France** at 2,51 EUR/kg. That price was 9% over that in **the Netherlands** (2,30 EUR/kg), and more than three times higher (319%) over the weighted average price in **Sweden** (0,60 EUR/kg). This price difference is because in the Baltic, European plaice is mainly caught as bycatch in the cod fishery, meaning that there is no organised market for fresh plaice and that the product is of lower quality.

In **France** in March 2022, the average first-sales price of European plaice (2,48 EUR/kg) increased by 18% compared to March 2021 and 28% compared to March 2020. The lowest average price was registered in April 2020 at 1,88 EUR/kg for 125 tonnes, while the highest average price of 3,55 EUR/kg for 50 tonnes was registered in August 2021.

In **the Netherlands** in March 2022, the average first-sales price of European plaice was 2,55 EUR/kg, a 38% and 18% increase compared to March 2021 and 2020 respectively. The lowest price in the past 36 months was registered in February 2021 at 1,72 EUR/kg for 922 tonnes, while the highest price (2,80 EUR/kg for 256 tonnes) was observed in February 2022.

In **Sweden** in March 2022, the average first-sales price of European plaice (3,27 EUR/kg) increased by 7% compared to March 2021 and by 1280% compared to March 2020. Apart from the price of 0,05 EUR/kg for 1 kg recorded in August 2021, the lowest average price²² was registered in November 2019, at 0,19 EUR/kg for a volume of 11 tonnes. The highest average price of 3,31 EUR/kg for about 7 tonnes was registered in September 2020.

²² Average price of 0,05 EUR/kg in August

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 “flatfish”, and the featured species are fresh or chilled turbot from Norway, fresh or chilled plaice from Iceland, and frozen sole from Morocco. The three randomly selected species this month are frozen crawfish tails from the Bahamas, frozen striped venus clam or other Veneridae from Chile, and prepared or preserved crab from Vietnam.

Data analysed in the section “Extra-EU imports” are extracted from EUMOFA, as collected from the European Commission²³.

Table 18. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF THE THREE MOST RELEVANT FISHERIES AND AQUACULTURE PRODUCTS IMPORTED INTO THE EU**

Extra-EU Imports		Week 18/2022	Preceding 4-week average	Week 18/2021	Notes
Fresh whole Atlantic salmon imported from Norway (<i>Salmo salar</i> , CN code 03021440)	Price (EUR/kg)	9,31	10,62 (-12%)	6,85 (+36%)	Since week 1 of 2022, prices exhibited an upward trend in line with the trend over the past three years. Prices ranged from 4,32 (week 44 of 2020) to 11,43 EUR/kg (week 16 of 2022), the highest observed in the past three years.
	Volume (tonnes)	12.479	9.191 (+36%)	10.056 (+24%)	Volumes ranged from 5.672 to 19.435 tonnes and had a stable trend over the past three years. Since week 1 of 2022, weekly volumes showed a downward trend.
Frozen Alaska pollock fillets imported from China (<i>Theragra chalcogramma</i> , CN code 03047500)	Price (EUR/kg)	3,21	3,37 (-5%)	2,52 (+27%)	Over the past three years and since the beginning of 2022, weekly prices showed an upward trend. Prices ranged from 2,26 (week 52 of 2020) to 3,54 EUR/kg (week 17 of 2022).
	Volume (tonnes)	1.319	1.536 (-14%)	2.180 (-39%)	Weekly volumes fluctuated from 345 to 5.433 tonnes over the past three years, following a downward trend, in line with the trend in 2022.
Frozen tropical shrimp imported from Ecuador (genus <i>Penaeus</i> , CN code 03061792)	Price (EUR/kg)	6,28	6,22 (+1%)	5,01 (+25%)	Weekly prices showed a stable trend in 2022, in line with the trend over the past three years. Prices ranged from 4,27 (week 38 of 2020) to 6,56 EUR/kg (week 49 of 2021).
	Volume (tonnes)	2.886	3.750 (-23%)	2.484 (+16%)	Volumes exhibited and upward trend in 2022, in line with the trend over the past three years. Weekly volumes fluctuated from 713 to 4.925 tonnes.

²³ Last update: 26.05 2022

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

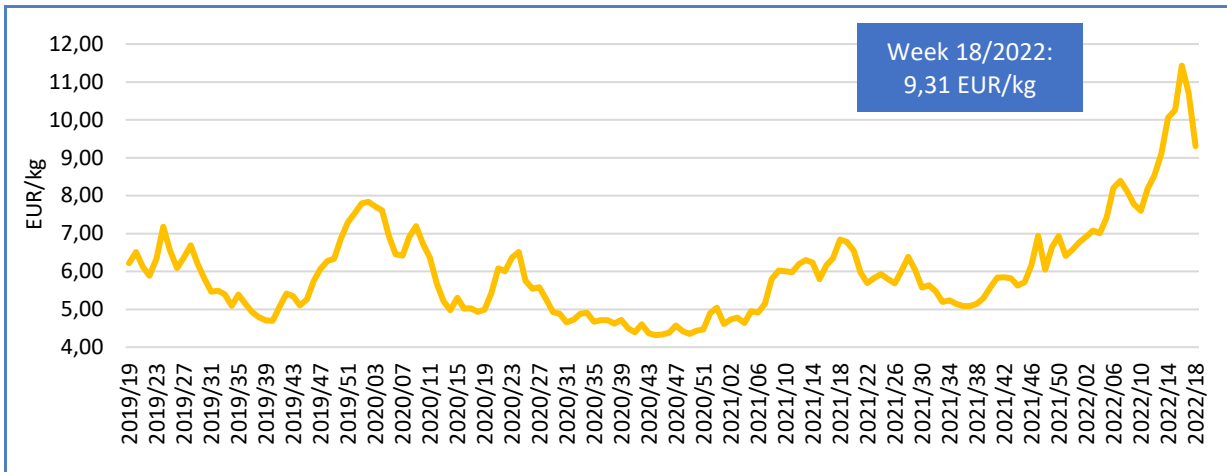


Figure 32. **IMPORT PRICE OF FROZEN ALASKA POLLOCK FILLETS FROM CHINA, 2019 - 2022**

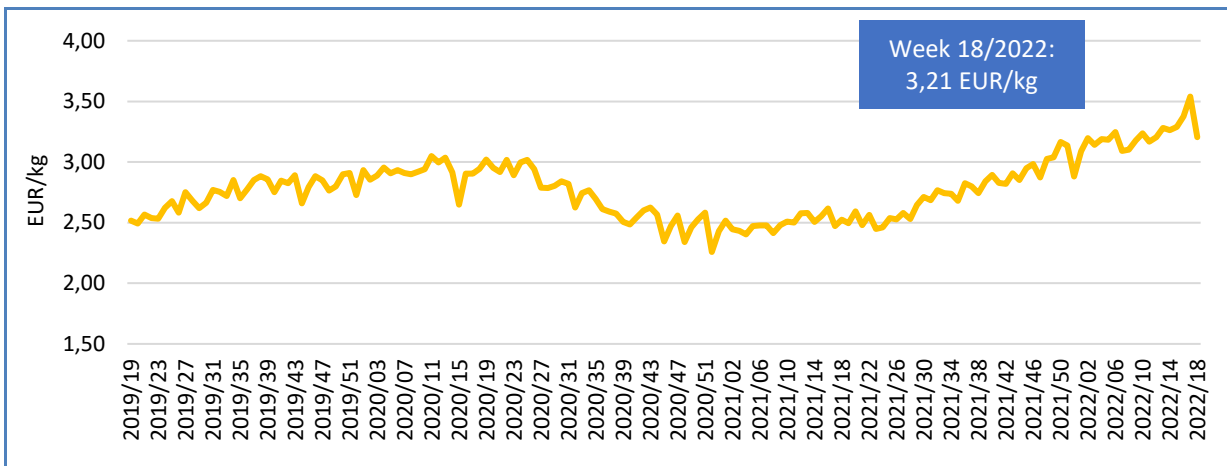


Figure 33. **IMPORT PRICE OF FROZEN TROPICAL SHRIMP FROM ECUADOR, 2019 - 2022**

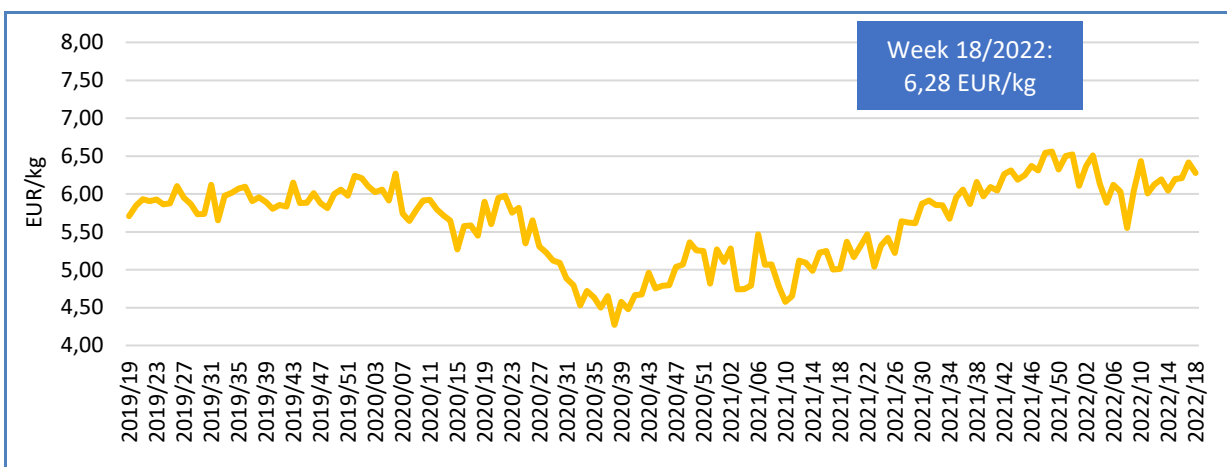
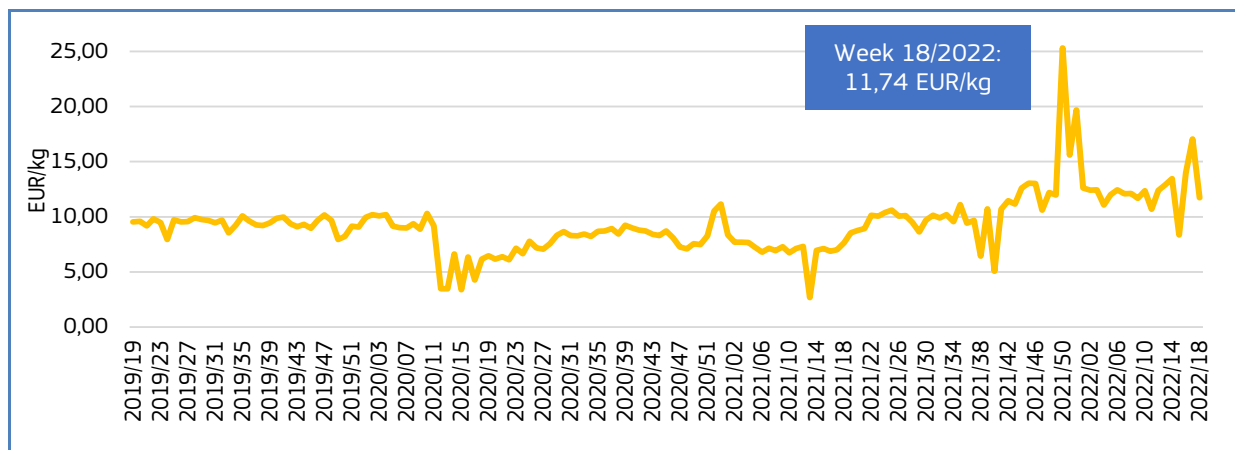


Table 19. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF THIS MONTH'S THREE FEATURED COMMODITY PRODUCTS IMPORTED INTO THE EU**

Extra-EU Imports		Week 18/2022	Preceding 4-week average	Week 18/2021	Notes
Fresh or chilled turbot imported from Norway (<i>Psetta maxima</i> , CN code 03022400)	Price (EUR/kg)	11,74	13,21 (-11%)	7,64 (+54%)	Upward trend over the past three years. Prices fluctuated from 2,69 (week 12 of 2021) to 25,31 EUR/kg (week 50 of 2021).
	Volume (tonnes)	1,4	1,1 (31%)	4,0 (-65%)	Downward trend over the past three years. High fluctuations in supply from 0,001 (week 52 of 2021) to 10 tonnes (week 11 of 2022). 83% of the weekly supply was over 1 tonne.
Fresh or chilled plaice imported from Iceland (<i>Pleuronectes platessa</i> , CN code 03022200)	Price (EUR/kg)	3,37	3,59 (-6%)	2,33 (+45%)	Upward trend from 2019 to 2022. Prices fluctuated from 1,68 (week 19 of 2020) to 14,85 EUR/kg (week 52 of 2022). The price spikes correlated with a drop in supply from the previous week.
	Volume (tonnes)	289	95 (+204%)	200 (+44%)	High fluctuations in supply from 2019 to 2022, varying between 0,145 (week 15 of 2020) and 289 tonnes (week 18 of 2022). Overall upward trend.
Frozen sole imported from Morocco ²⁴ (<i>Solea</i> spp., CN code 03033300)	Price (EUR/kg)	7,83*	6,45** (+21%)	n/a ²⁵	Upward trend over the past three years. Prices ranged from 3,18 (week 30 of 2020) to 7,83 EUR/kg (week 17 of 2022). 36% of the weekly prices were less than 5,00 EUR/kg.
	Volume (tonnes)	3,2*	3,3** (-1%)	n/a ²⁶	Downward trend over the past three years. Fluctuations in supply from 0,167 (week 30 of 2020) to 169 tonnes (week 30 of 2020). 49% of the weekly volumes were less than 10 tonnes.

*Data refers to week 17 of 2022 (the most recent available);** data refers to weeks 13 and 14 of 2022.

Figure 34. **IMPORT PRICE OF FRESH OR CHILLED TURBOT FROM NORWAY, 2019 - 2022**



²⁴ Trends are estimated on the available data (53%).

²⁵ There were no sales recorded for week 17 of 2021.

²⁶ Ibidem.

Figure 35. **IMPORT PRICE OF FRESH OR CHILLED PLAICE FROM ICELAND, 2019 - 2022**

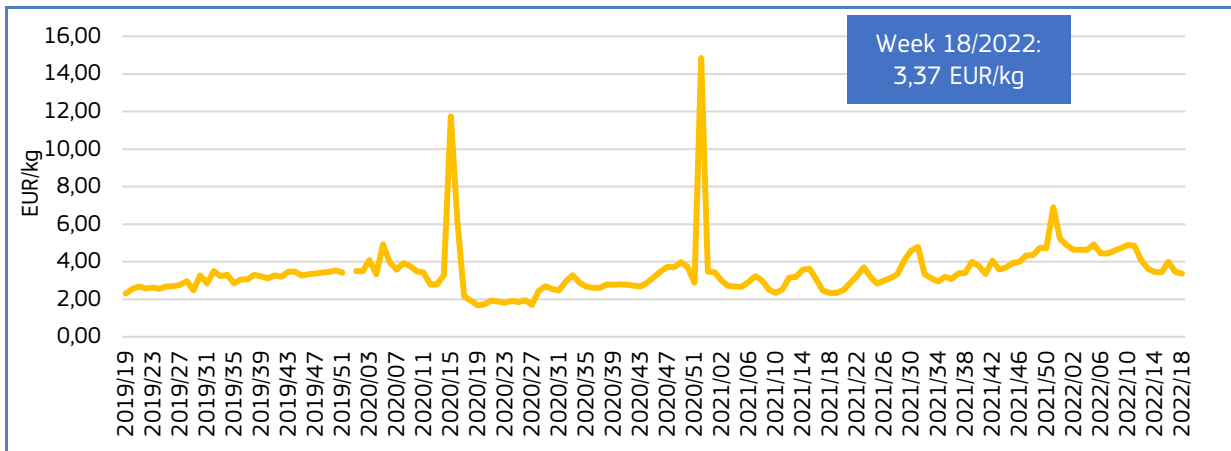
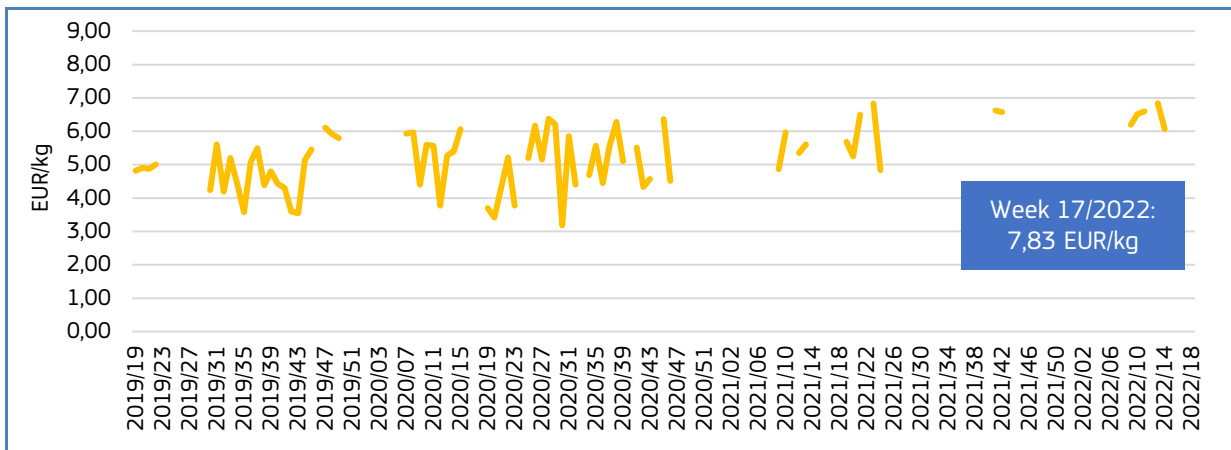


Figure 36. **IMPORT PRICE OF FROZEN SOLE FROM MOROCCO, 2019 - 2022**



Both price and volume of fresh or chilled **turbot** from **Norway** exhibited an upward trend in 2022. Price ranged from 8,35 to 17,05 EUR/kg, and volume ranged from 0,031 to 9,6 tonnes.

Since the beginning of the year, the price of fresh or chilled **plaice** from **Iceland** showed a downward trend. At the same time, volume showed the opposite trend. Price ranged from 3,37 to 4,92 EUR/kg, and supply ranged from 4 to 289 tonnes.

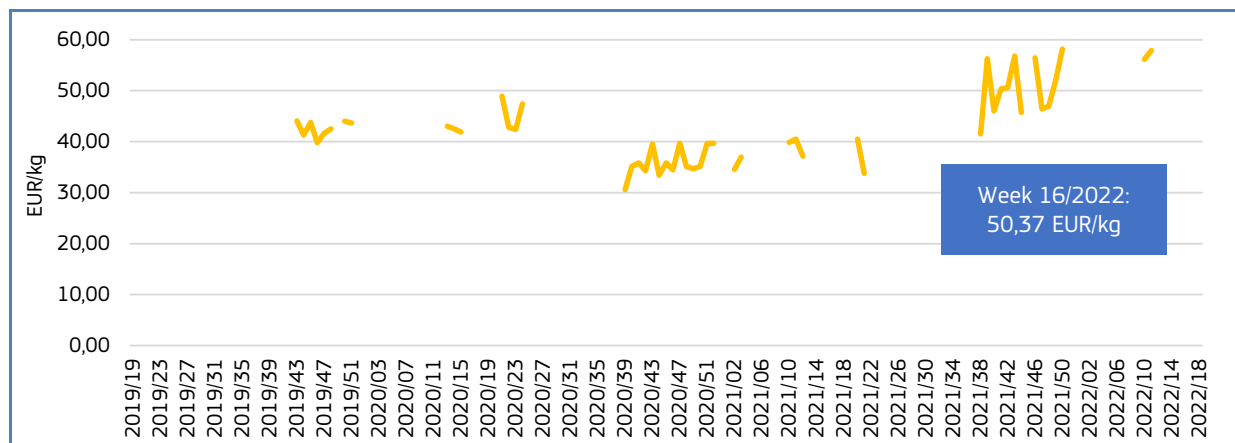
In 2022, the price of frozen **sole** from **Morocco** showed an upward trend. At the same time, volume showed a downward trend. Price ranged from 6,06 to 7,83 EUR/kg, and volume ranged from 1 to 12 tonnes.

Table 20. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF EU IMPORTS FROM THREE OTHER FISHERIES AND AQUACULTURE PRODUCTS RELEVANT TO THE EU MARKET**

Extra-EU Imports		Week 18/2022	Preceding 4-week average	Week 18/2021	Notes
Frozen crawfish tails , even smoked, whether in shell or not, incl. crawfish tails in their shell, cooked by steaming or by boiling in water imported from the Bahamas ²⁷ (<i>Palinurus</i> spp., <i>Panulirus</i> spp., <i>Jasus</i> spp., CN code 03061110)	Price (EUR/kg)	50,37*	n/a ²⁸	n/a ²⁹	Upward trend from 2019 to 2022. Prices fluctuated from 5,86 (week 24 of 2019) to 58,14 EUR/kg (week 50 of 2021). 84% of the weekly prices were less than 50,00 EUR/kg.
	Volume (tonnes)	79*	n/a ³⁰	n/a ³¹	Fluctuations in supply, varying from 0,127 (week 17 of 2021) to 112 tonnes (week 49 of 2020). Overall upward trend.
Frozen striped venus or other "Veneridae", even in shell imported from Chile ³² (CN code 03077210)	Price (EUR/kg)	2,01**	1,54*** (+31%)	n/a ³³	Stable trend over the past three years. Price fluctuations, varying from 0,90 (week 39 of 2019, week 08 and 22 of 2021) to 5,82 EUR/kg (week 24 of 2020). On average the weekly prices were 1,43 EUR/kg.
	Volume (tonnes)	24**	37*** (-34%)	n/a ³⁴	Downward trend over the past three years. Fluctuations in supply from 936 (week 39 of 2019) to 1.459 tonnes (week 24 of 2020).
Prepared or preserved crab imported from Vietnam (CN code 16051000)	Price (EUR/kg)	10,03	8,75**** (+15%)	8,71(+15%)	Stable trend from 2019 to 2022. Prices ranged from 3,59 (week 07 of 2021) to 38,56 EUR/kg (week 12 of 2022). 71% of the weekly prices were less than 10,00 EUR/kg.
	Volume (tonnes)	15	7**** (+104%)	44(-67%)	From 2019 to 2022 volumes fluctuated from 0,003 (week 12 of 2022) to 53 tonnes (week 05 of 2021). Overall upward trend.

*Data refers to week 16 of 2022 (the most recent available). **Data refers to week 15 of 2022 (the most recent available). ***Data refers to weeks 12 and 13 of 2022. ****Data refers to weeks 14 and 17 of 2022.

Figure 37. **IMPORT PRICE OF FROZEN CRAWFISH TAILS FROM THE BAHAMAS, 2019 - 2022**



²⁷ Trends are estimated on the available data (43%).

²⁸ There were no sales recorded for the preceding 4 weeks.

²⁹ There are no sales recorded for the week 16 of 2021.

³⁰ There were no sales recorded for the preceding 4 weeks.

³¹ There are no sales recorded for the week 16 of 2021.

³² Trends are estimated on the available data (58%).

³³ There were no sales recorded for week 15 of 2021

³⁴ Ibidem.

Figure 38. **IMPORT PRICE OF FROZEN STRIPED VENUS OR OTHER “VENERIDAE” FROM CHILE, 2019 - 2022**

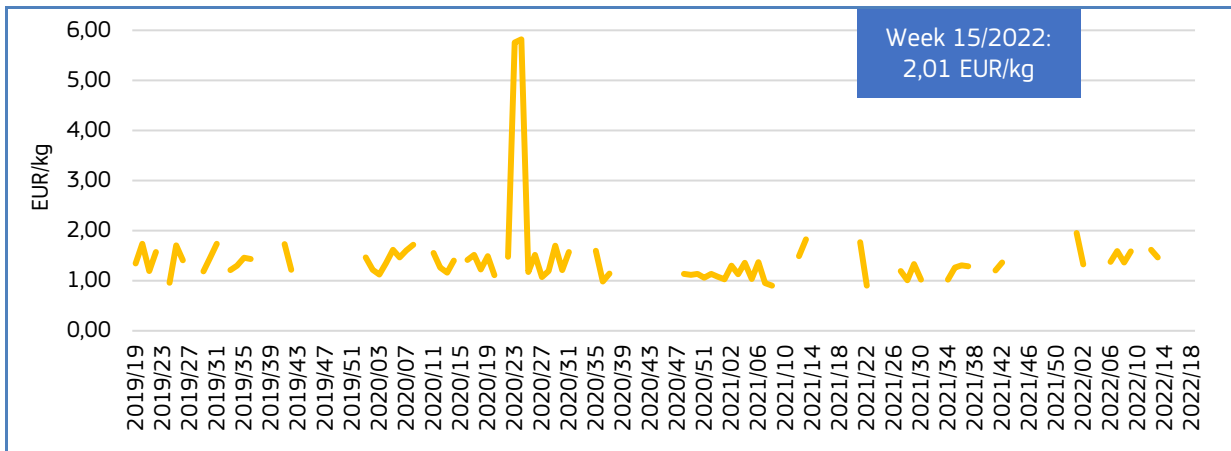
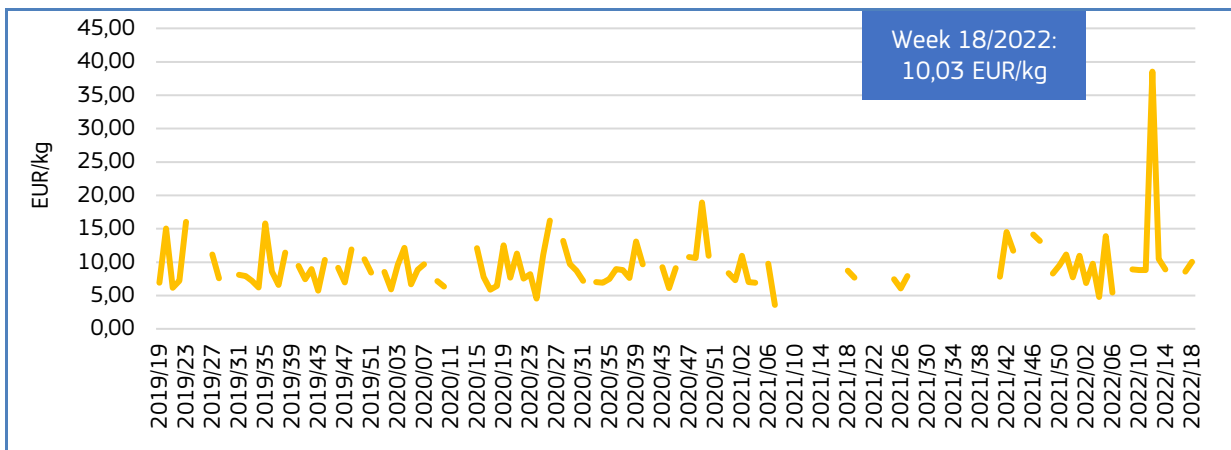


Figure 39. **IMPORT PRICE OF PREPARED OR PRESERVED CRAB FROM VIETNAM, 2019 - 2022**



Price and volume of frozen **crawfish tails** from the **Bahamas** exhibited an upward trend in 2022. Price ranged from 48,97 to 58,05 EUR/kg and weekly supply ranged from 0,4 to 79 tonnes.

Since the beginning of the year, both price and volume of frozen **striped venus** or **other “Veneridae”** from **Chile** had an upward trend. Price ranged from 1,33 to 2,01 EUR/kg and supply ranged from 7 to 63 tonnes.

In 2022, price of prepared or preserved **crab** from **Vietnam** exhibited an upward trend, while volume showed the opposite trend. Price ranged from 4,78 to 38,56 EUR/kg and supply ranged from 0,003 to 52 tonnes.

3. Consumption

Data analysed in the section “Consumption” are extracted from EUMOFA, as collected from Europanel³⁵.

3.1. HOUSEHOLD CONSUMPTION IN THE EU

In March 2022 relative to March 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 Ireland, where despite the decline in volume (4%), value still experienced some increase (+2%).

Haddock was the main species responsible for the slight value increase in Iceland (+9%). Even though its consumption has also increased in volume (+8%), it was not able to compensate for the decline in the volume of other fisheries and aquaculture products.

Table 21. **MARCH OVERVIEW OF THE REPORTING COUNTRIES (volume in tonnes and value in million EUR)**

Country	Per capita consumption 2019* (live weight equivalent, LWE) kg/capita/year	March 2020		March 2021		February 2022		March 2022		Change from March 2021 to March 2022	
		Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Denmark	42,56	1 191	19,20	1 380	25,33	996	16,93	1 042	18,31	24%	28%
France	33,26	13 851	179,05	20 026	244,25	15 442	199,67	14 882	196,99	26%	19%
Germany	13,08	5 355	87,10	8 899	131,29	6 210	95,63	6 369	103,62	28%	21%
Hungary	6,28	298	1,79	511	2,84	319	2,34	267	2,06	48%	28%
Ireland	25,50	960	13,55	1 251	18,33	1 087	16,79	1 204	18,64	4%	2%
Italy	31,21	22 794	240,59	30 638	333,08	22 473	252,25	27 793	317,56	9%	5%
Netherlands	20,60	3 176	54,35	3 860	67,70	2 588	45,84	2 880	51,39	25%	24%
Poland	13,11	3 679	23,19	4 731	31,49	3 566	25,95	4 186	29,46	12%	6%
Portugal	59,91	6 146	40,51	6 628	46,41	4 413	32,72	4 335	32,19	35%	31%
Spain	46,02	49 996	412,96	55 606	474,56	41 208	370,99	43 517	388,34	22%	18%
Sweden	25,16	759	10,21	1 179	14,78	627	8,10	457	6,65	61%	55%

*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/20178/477018/EN_The+EU+fish+market_2021.pdf

Over the past three years, the average household consumption of fresh fisheries and aquaculture products in March has been above the annual average in both volume and value terms in most of the Member States analysed. Only in France, Hungary, Portugal, and Sweden was it below the annual average in both volume and value. In Spain, value was slightly above the yearly average, however, volume was slightly below.

The most recent weekly consumption data (up to **week 25 of 2022**) are available on the EUMOFA website and can be accessed [here](#).

³⁵ Last update: 26.05.2022

3.2. Fresh squid

Habitat: Neither pelagic nor fully benthic; inhabits circumlittoral zone and upper bottoms of bathyal systems³⁶.

Catch area: Atlantic and the Mediterranean, from the North Sea and British Isles to southwest Africa³⁷.

Catching countries in the EU: France, Spain, Italy.

Production method: Caught.

Main consumers in the EU: Italy, Spain, France.

Presentation: Cut or in rings.

Preservation: Fresh, frozen.



3.1.1. Overview of household consumption in Italy

Italy is among the EU Member States with a high per capita apparent consumption³⁸ of fisheries and aquaculture products. In 2019, the country's per capita apparent consumption increased slightly by 0,6% from 2018 and reached 31,21 kg in LWE. This was 30% higher than the EU average (23,97 kg LWE). However, Italian apparent consumption was 48% less than that of Portugal, the Member State with the highest per capita apparent consumption (59,91 kg LWE) in 2019.

See more on per capita apparent consumption in the EU in Table 21.

Squid is among the top ten most-consumed fishery products within the EU. In Italy, beside a 2% increase in value, consumed volumes decreased by 2% in 2021, when compared to the previous year.

During the observed 36-months from April 2019 to March 2022 the volume of average yearly household consumption of squid in Italy was 13.244 tonnes. Italian consumers spent on average 12,79 EUR for 1 kg of squid during the same period.

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

First Sales: France 10/2015; Italy 1/2022, 1/2020, 1/2017; Portugal 1/2022, 1/2020; Spain 1/2022, 1/2020; the UK 10/2015, 1/2014.

Consumption: Italy 10/2017, 5/2014; Portugal 5/2014; the UK 5/2014.

Extra-EU Imports: China 1/2022, 10/2020; Falkland Islands 1/2020; Morocco 3/2021, 1/2021, 8/2019, 8/2018; India 1/2021; US 7/2020, 4/2019, 6/2018

Topic of the month: Squid in the EU 3/2022.

³⁶<https://www.sealifebase.ca/summary/Loligo-vulgaris.html>

³⁷<https://www.eumofa.eu/documents/20178/109202/MH+10+2017.pdf>

³⁸“Apparent consumption” 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.

Figure 40. PURCHASES AND PRICES OF SQUID IN ITALIAN HOUSEHOLDS

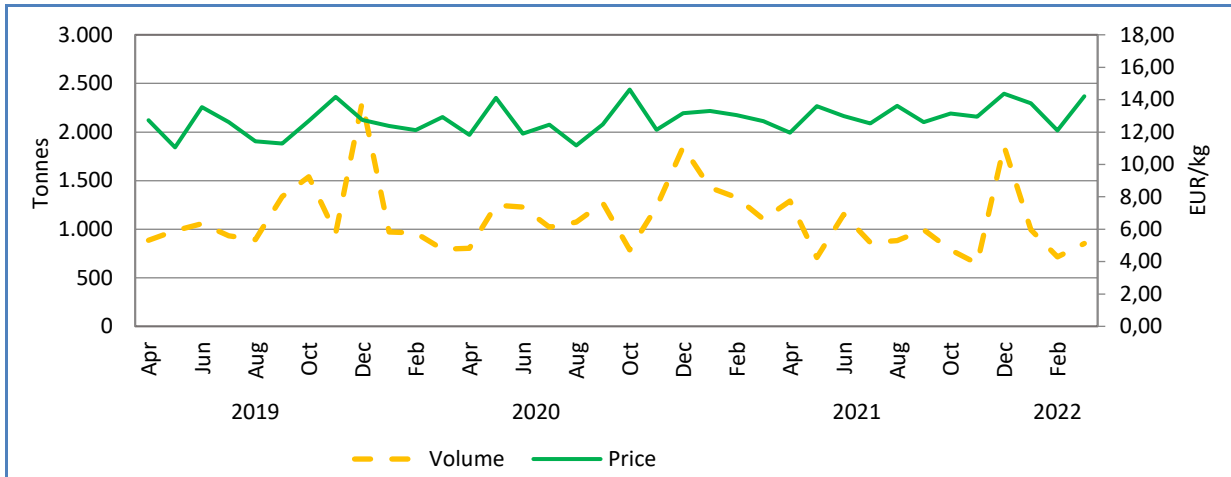
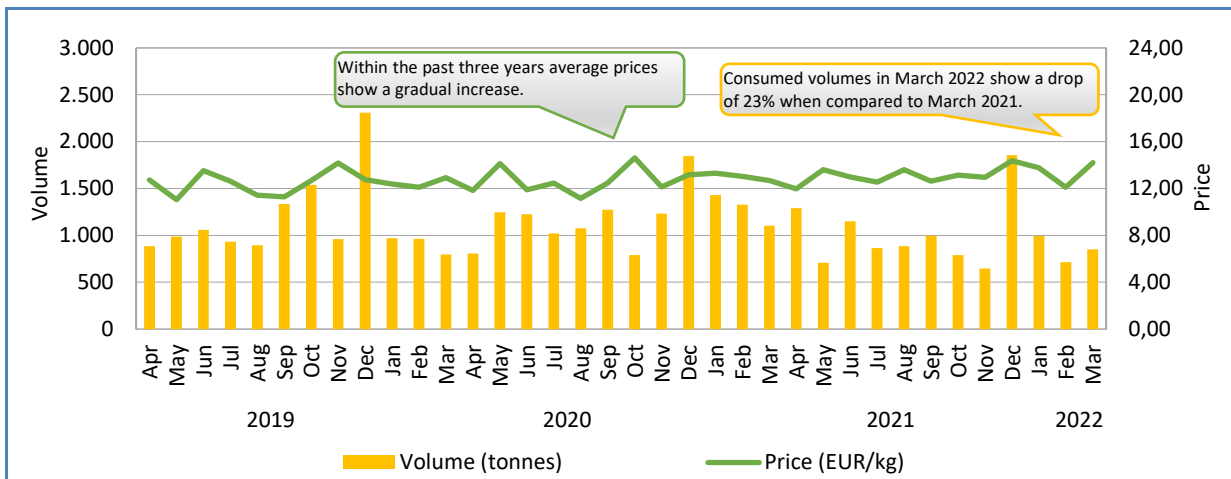
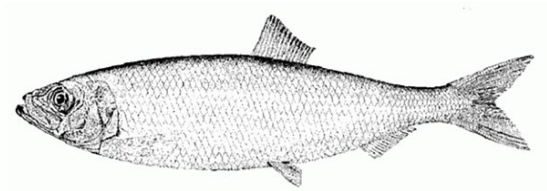


Figure 41. RETAIL PRICE AND VOLUME OF SQUID PURCHASED BY HOUSEHOLDS IN ITALY, APRIL 2019 – MARCH 2022



4. Case study: Atlantic herring in the EU

Atlantic herring (*Clupea harengus*) is one of the most caught species of fish. From 2001 to 2020, world catches have amounted to 1,97 million tonnes on average³⁹. Herring is a pelagic species (occurring in the open sea) and aggregates in large schools in late summer and early autumn⁴⁰. Economically, Atlantic herring is the most important species in the family Clupeidae and has been a part of the livelihood of many coastal areas for centuries, especially in Norway. Due to variations in the environment and human exploitation, the stocks have fluctuated greatly throughout the decades⁴¹. Atlantic herring is widely distributed in the North West and North East Atlantic. Within the North East Atlantic, they are distributed from the northern Bay of Biscay to Greenland, and east into the Barents Sea. In the North West Atlantic, they are distributed from South Carolina to Labrador⁴². Atlantic herring is mainly caught by pelagic trawlers (mid-water, pair, and otter trawl) and purse seiners. The main stocks fished in EU waters are found in the Baltic, the North Sea, and west of Scotland. Herring catches are seasonal and subject to total allowable catches (TACs). The TACs set are based on precautionary considerations.



Source: FAO

The EU and Norway are the largest herring catching nations in the world, with the EU accounting for 35% of global catches in 2020. The EU is also the largest market for Atlantic herring with strong preferences for fillets over other preparations. EU herring imports in 2021 was above 215.000 tonnes.

4.1 Biology

Atlantic herring can live for up to 10 years and reach 40 cm in length (with an average size of 20-30 cm) and almost 700 g in weight. They are demersal spawners, depositing their sticky eggs on coarse sand, gravel, shells, and small stones at depths of 15-40 m. After spending its first couple of years near the coast, the two-year-old herring migrate into deeper waters. The pelagic larvae feed on copepods and other small plankton organisms. Herring represents an important prey species for many predators, including cod, dogfish and other sharks, marine mammals, and seabirds⁴³.

4.2 Global Atlantic herring quotas and catches

Herring in various ocean areas differ from each other and they are therefore divided into different stocks based on spawning grounds. The combined Atlantic herring quotas experienced a decrease for several years until 2017, mainly due to the downward trend seen in the Norwegian Spring Spawning (NSS herring) quotas. Because of a 100% increase in the NSS herring quota in 2017, combined herring quotas increased by 19% in 2017. The three main herring stocks, constituting around 85-90% of the total stocks, are NSS herring, North Sea herring and Baltic herring. Global herring supply in 2022 is expected to increase due to a 45% increase in the North Sea herring quota⁴⁴. In 2022, the NSS herring quota decreased by 14% from last year.

World catches of Atlantic herring corresponds to a large degree to the quotas, although the fishing nations final quota from time to time has differed from the scientific advice. In 2020, global catches amounted to 1,6 million tonnes, a 5% increase from the sum of the total quotas. The EU and Norway were the largest fishing nations, accounting for 35% and 33% of the catches, respectively.

³⁹ FAO

⁴⁰ https://animaldiversity.org/accounts/Clupea_harengus/

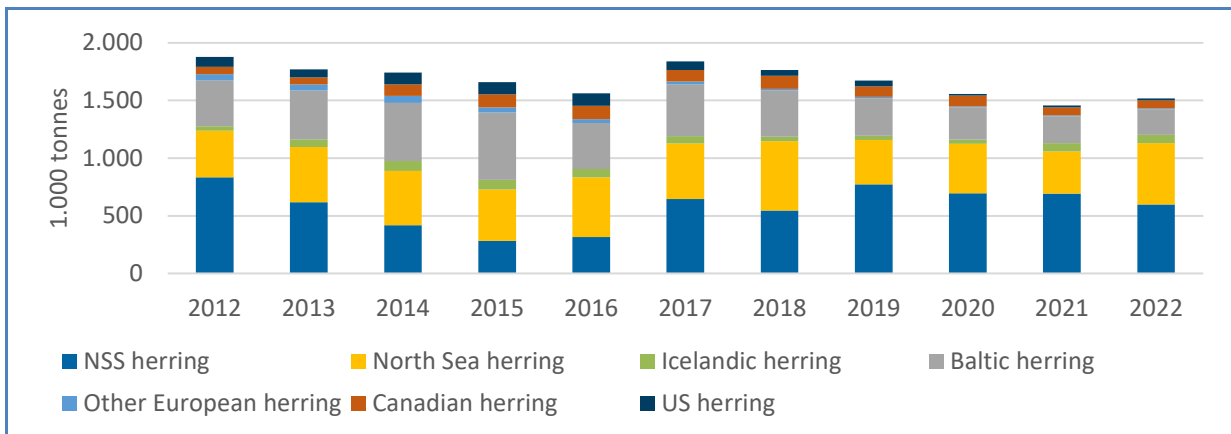
⁴¹ <https://www.ices.dk/about-ICES/projects/EU-RFP/EU%20Repository/ICES%20FishMap/ICES%20FishMap%20species%20factsheet-herring.pdf>

⁴² <https://www.sciencedirect.com/topics/agricultural-and-biological-sciences/herring>

⁴³ <https://www.ices.dk/about-ICES/projects/EU-RFP/EU%20Repository/ICES%20FishMap/ICES%20FishMap%20species%20factsheet-herring.pdf>

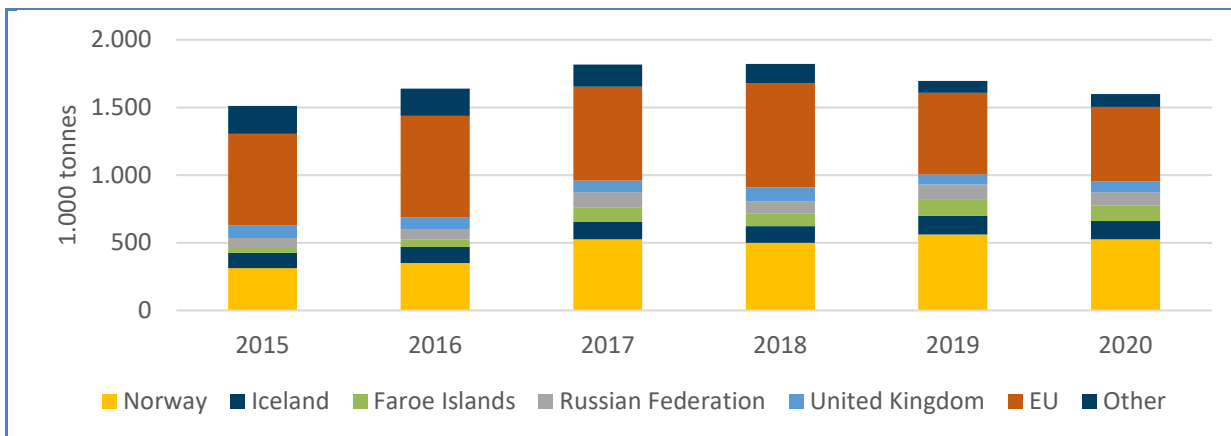
⁴⁴ www.ices.dk

Figure 42. ATLANTIC HERRING QUOTAS (volume in 1.000 tonnes)



Source: ICES

Figure 43. GLOBAL CATCHES BY FISHING NATION (volume in 1.000 tonnes)



Source: FAO

4.3 Atlantic herring in the EU

After a peak year for herring catches in 2018, mainly caused by increased quotas of Baltic herring and North Sea herring, landings dropped in 2019 and 2020. In 2020, herring landed in the EU reached 537.000 tonnes in volume and EUR 219 million in value. This was a 10% decrease in volume and a 12% increase in value compared to 2019. The increased values were a consequence of lower volumes and increased share landed for human consumption. Denmark is by far the largest fishing nation, accounting for 37% of the values and 30% of the volumes in 2020. The Netherlands ranked second, accounting for 31% of the values and 21% of the volumes.

Herring catches in the EU can be destined for both human consumption and non-food use. In 2020, 78% of EU herring landings was used for human consumption, while the remaining volume was mainly utilised for the production of fishmeal and fish oil. From 2019 to 2020, the total volumes for industrial use decreased by 24% to 120.000 tonnes, and the volumes for human consumption decreased by 5% to 417.000 tonnes.

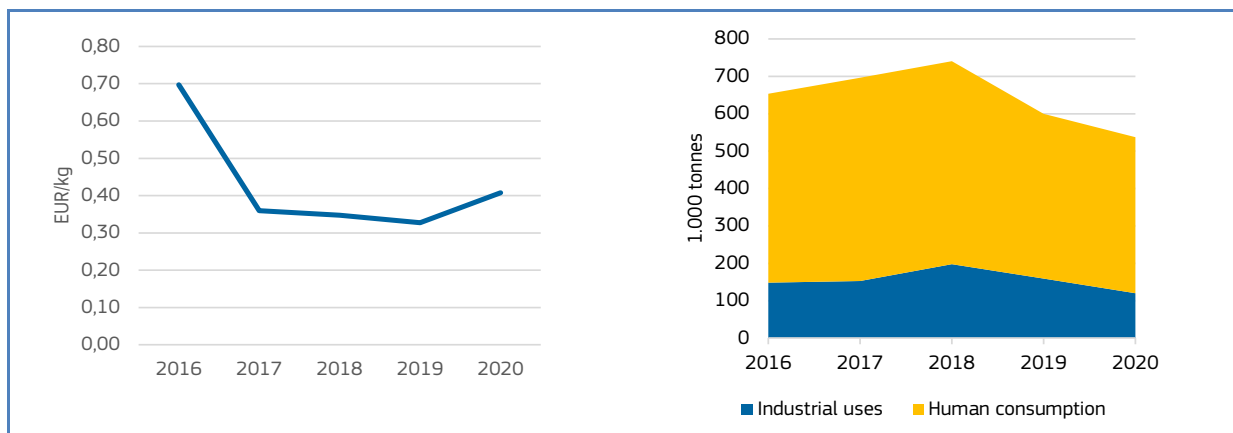
Table 22. **LANDINGS OF ATLANTIC HERRING BY MAIN EU MEMBER STATE (value in million EUR, volume in 1.000 tonnes)**

Landing nations	2016		2017		2018		2019		2020	
	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume
Denmark	104	185	78	187	86	227	84	192	80	161
The Netherlands	91	127	71	152	86	179	42	139	69	115
Finland	18	92	22	113	20	103	16	79	16	76
Sweden	40	63	13	60	19	67	12	41	13	43
Estonia	6	33	6	34	6	33	8	44	7	42
Poland	12	38	13	38	11	42	9	34	9	33
Germany	44	66	29	68	20	55	17	40	14	33
Other EU-27 MS	141	51	19	44	10	34	8	32	10	35
Total	456	654	250	696	257	741	196	600	219	537

Source: EUROSTAT

In 2020, the average first-sales price of herring in the EU was 0,41 EUR/kg. This was a 25% increase from the year before. The landings of herring in the EU originate from different stocks including North Sea herring, Norwegian Spring Spawning herring, and different Baltic stocks. Each of these have unique characteristics and go into different markets. The price may differ depending on herring species, size, and quality. Another factor affecting the price level is that the share of catches for industrial uses *versus* human consumption varies from year to year, which might result in large price differences⁴⁵.

Figure 44. **AVERAGE PRICE OF HERRING IN THE EU AT LANDING STAGE (left, EUR/kg), AND TOTAL EU LANDINGS OF HERRING BY DESTINATION USE (right, volume in 1.000 tonnes)**



Source: EUROSTAT

⁴⁵ https://www.eumofa.eu/documents/20178/477018/EN_The+EU+fish+market_2021.pdf/27a6d912-a758-6065-c973-c1146ac93d30?t=1636964632989

4.4 Processing

In 2020, the volumes of prepared or preserved herring processed in the EU was nearly 182.000 tonnes, valued at nearly EUR 628 million. The volumes were slightly below (-1%) the year before, and values increased by 4%. The volumes of smoked herring decreased by 22% to 4.273 tonnes, and values decreased by 13% to EUR 22 million.

Table 23. **HERRING PROCESSED IN THE EU (volume in tonnes, value in 1.000 EUR)**

Product	2017		2018		2019		2020	
	Value	Volume	Value	Volume	Value	Volume	Value	Volume
Smoked herring	29.695	6.103	28.171	6.009	25.652	5.478	22.306	4.273
Prepared or preserved herring, whole or in pieces	646.432	201.260	616.615	193.908	601.515	182.741	627.637	181.748

Source: EUMOFA elaboration of EUROSTAT PRODCOM database⁴⁶

4.5 EU-27 Trade

EU import

Germany is by far the largest EU importer in terms of volume, followed by Poland and Denmark. In 2021, intra-EU imports was 311.000 tonnes, where imports to Germany accounted for 26% of the volumes, the Netherlands 14%, and Denmark 12%.

In the period from 2017 to 2021, EU herring imports varied from 210.000 tonnes to around 237.000 tonnes per year, and values varied between EUR 230 million to above EUR 271 million. In 2021, imports amounted to 215.417 tonnes, valued at nearly EUR 272 million. This was a 9% decrease in volume and the same value as in 2020. The largest importer country in terms of volume and value was Poland, accounting for 30% of the values and 24% of the volumes in 2021. Sweden and Denmark were the second and third largest import markets, accounting for 22% and 14% of the values, and 21% and 19% of the volumes, respectively, in 2021.

Table 24. **EXTRA-EU IMPORT OF HERRING BY MEMBER STATES (value in 1.000 EUR, volume in tonnes)**

Country	2017		2018		2019		2020		2021	
	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume
Poland	69.116	44.464	59.929	47.337	58.944	45.612	66.157	48.845	80.243	51.252
Sweden	33.452	24.862	35.405	31.265	50.504	45.345	54.970	47.672	60.515	44.700
Denmark	41.942	52.818	30.876	42.083	31.698	41.951	30.231	34.848	37.349	40.104
The Netherlands	39.609	33.559	41.584	44.614	30.811	32.762	41.625	43.962	35.155	32.449
Germany	29.758	22.381	37.101	33.116	11.000	9.927	29.480	24.770	21.569	15.757
Lithuania	16.937	10.913	11.324	9.016	11.890	9.568	14.339	10.841	13.273	9.219
Spain	4.117	6.047	6.351	10.214	5.364	7.669	3.900	4.988	12.496	13.201
Other	25.471	15.637	26.871	18.323	29.697	23.719	30.632	21.279	10.996	8.736
Total EU	260.402	210.679	249.442	235.969	229.908	216.553	271.335	237.206	271.596	215.417

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

⁴⁶ <https://www.eumofa.eu/processing-ts-at-eu-and-ms-levels>

Most of the herring imported is round frozen or frozen fillets. In 2021, this category accounted for 78% of the values and 73% of the volumes. Norway is by far the largest supplier, accounting for 76% of the volumes and 77% of the values in 2021. Iceland and the UK are in second and third place, accounting for 10% and 7% of the volumes, and 12% and 4% of the values, respectively.

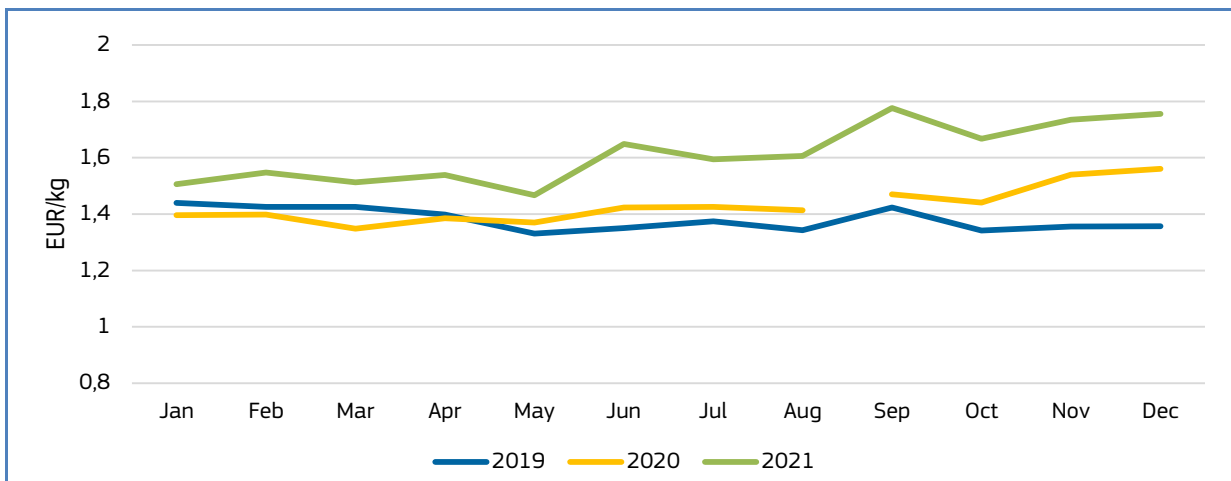
Table 25. **EXTRA-EU IMPORT OF HERRING BY PRESERVATION STATE (value in 1.000 EUR, volume in tonnes)**

Product category	2017		2018		2019		2020		2021	
	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume
Frozen	197.556	151.459	187.742	176.469	164.637	151.329	205.386	178.430	210.892	158.283
Prepared/preserved	40.935	22.545	43.427	27.081	45.328	31.582	47.716	33.219	38.623	26.482
Fresh	18.501	35.268	16.122	31.494	17.661	32.689	16.296	24.974	20.130	30.147
Dried/salted/smoked	3.410	1.407	2.151	926	2.282	952	1.937	583	1.952	505
Total	260.402	210.679	249.442	235.969	229.908	216.553	271.335	237.206	271.596	215.417

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

Between 2019 and 2021, import price of frozen herring fillet in the EU increased on average by 17%, and between 2020 and 2021 import price increased on average by 13%.

Figure 45. **PRICES OF FROZEN HERRING FILLET IMPORTED INTO THE EU (prices in EUR/kg)**



Source: EUMOFA elaboration of EUROSTAT-COMEXT data

4.6 Export

In the period from 2017 to 2021, EU exports of herring varied from 170.000 tonnes to around 209.000 tonnes a year and values varied between EUR 181 million to over EUR 276 million.

In 2021, EU MS exported a total of 170.726 tonnes of herring valued at nearly EUR 181 million. This was an 18% decrease in terms of volume and a 23% decrease in terms of value from 2020. The Netherlands is the largest exporter, accounting for

57% of the values and 55% of the volumes in 2021. Estonia and Latvia were the second and third largest exporters, accounting for 18% and 8% of the values, and 8% and 5% of the volumes, respectively. Nearly 90% of the exports are frozen and 6% are prepared or preserved. The largest destination countries are Nigeria (32%), Ukraine (19%), and Egypt (16%).

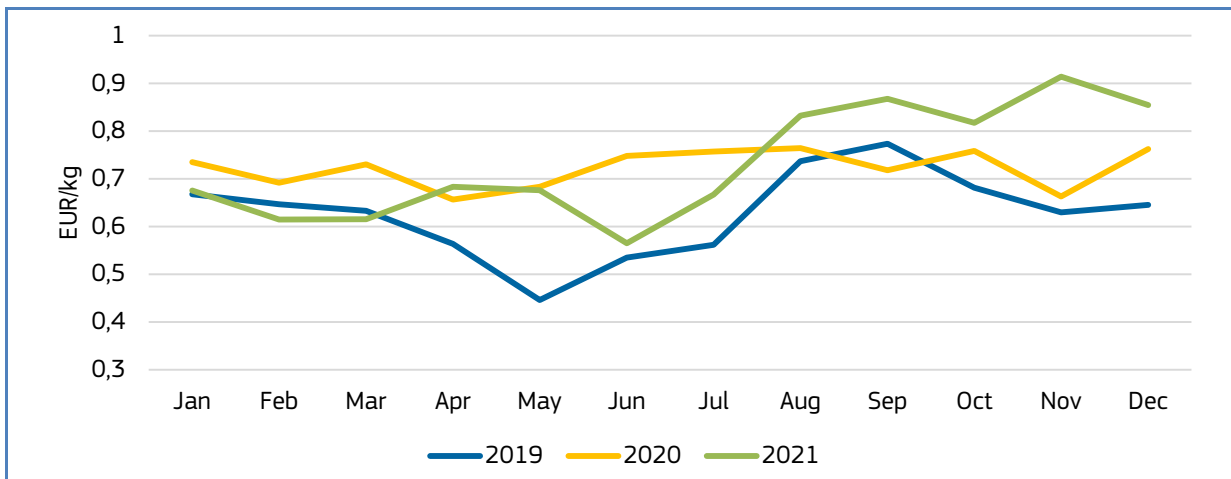
Table 26. **EXTRA-EU EXPORTS OF HERRING BY MEMBER STATES (values in 1.000 EUR, volume in tonnes)**

Country	2017		2018		2019		2020		2021	
	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume
The Netherlands	144.566	103.230	191.511	138.153	139.935	111.039	151.892	128.823	103.276	94.226
Estonia	28.233	9.881	32.982	10.676	38.047	12.850	34.824	13.224	32.855	13.579
Latvia	12.714	5.380	13.051	5.604	14.766	5.820	14.364	8.746	13.812	7.980
Finland	3.560	1.728	1.545	837	7.506	2.866	7.913	3.182	9.440	4.207
Denmark	16.995	15.069	14.058	9.132	12.437	8.821	7.190	6.567	7.433	7.693
Poland	6.315	20.278	5.246	14.634	5.332	15.078	7.106	19.835	6.289	19.525
Other	14.392	27.261	18.394	29.998	14.241	28.065	11.687	27.809	7.689	23.515
Total EU	226.776	182.827	276.786	209.034	232.264	184.539	234.976	208.185	180.795	170.726

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

Between 2019 and 2021, the export price of frozen herring from the EU increased on average by 17% and between 2020 and 2021, the export price increased on average by 1%.

Figure 46. **PRICES OF FROZEN HERRING EXPORTED BY THE EU-27 (PRICES IN EUR/KG)**



Source: EUMOFA elaboration of EUROSTAT-COMEXT data

4.7 Consumption

The EU is the largest herring consumer in the world. Most of the herring species in the world are caught in European waters, so the market was established centuries ago and has remained strong. Besides being cheap, herring is also a rich source of omega-3 fatty acids, which the consumers of today are increasingly aware of⁴⁷. In 2019, herring was estimated by EUMOFA to be the eighth-most consumed species in the EU, with 0,98 kg of per capita apparent consumption – a 17% decrease from 2018⁴⁸. The drop from 2018 was linked to a general decrease in herring catches caused by a decrease in herring quotas in the North Atlantic.

In 2020, the per capita consumption of herring in Poland was 2,73 kg which makes it the most popular fish to eat. In Poland, processed fish, canned and smoked are popular⁴⁹. Most of the herring imported to Poland are cuts and fillets, either frozen or prepared and preserved. Herring has been known in Poland for centuries both as healthy and tasty snacks and as basis for diets during periods of fasting. It is traditionally served on Christmas and is on the buffet on birthday celebrations or other special occasions. In Polish shops you can mostly find soured herring fillets which are served in oil, cream or in various salads⁵⁰.

Among German consumers, herring was the fourth most popular fish to eat in 2019 accounting for 8,9% of the seafood consumption in Germany.⁵¹ The per capita consumption of seafood was 13,5 kg in Germany in 2019. Most of the herring imported to Germany are prepared or preserved cuts and fillets and fresh whole herring. Germany has the highest volume of canned herring consumption in the EU. Another traditional way of eating herring is marinated fried herring served cold with fried potatoes or in sandwiches⁵². They also eat herring in different types of salads as well as smoked in bread or with potatoes. The tradition of eating matjes is also well known⁵³.

The per capita consumption of fish in the Netherlands is estimated at 21 kg per year. Herring is the third most popular fish after salmon and Tuna⁵⁴. Eating herring in the Netherlands has long traditions and the most known is the maatjes which is North Sea herring caught in spring and early summer before they spawn. This gives the herring a special quality that is highly valued in the Netherlands⁵⁵. Most of the herring imported to the Netherlands is frozen whole herring.

The per capita consumption of fish in Denmark was 22,1 kg in 2019. Cod, hake, herring, mackerel, and salmon were the most popular species⁵⁶. In Denmark, herring has long traditions all over the country and is popular served cold after being pickled, marinated, or curried. It is also served smoked, fried, or breaded. The herring is typically eaten at first course with onions and capers and sometimes egg and always with buttered rye bread⁵⁷.

⁴⁷ <https://www.mordorintelligence.com/industry-reports/herring-market>

⁴⁸ https://www.eumofa.eu/documents/20178/477018/EN_The+EU+fish+market_2021.pdf/27a6d912-a758-6065-c973-c1146ac93d30?t=1636964632989

⁴⁹ <https://tvpworld.com/56752899/poles-are-eating-more-and-more-fish-herring-still-a-favourite-report>

⁵⁰ <https://culture.pl/en/work/polish-food-101-herring>

⁵¹ <https://www.seafoodsource.com/news/foodservice-retail/german-seafood-sales-setting-new-retail-records-pandemic-drives-up-consumption>

⁵² <https://www.tasteatlas.com/brathering>

⁵³ <https://local-food-advice.com/german-fish-dishes/>

⁵⁴ https://apps.fas.usda.gov/newgainapi/api/Report/DownloadReportByFileName?fileName=The%202020%20Dutch%20Seafood%20Industry%20Report_The%20Hague_Netherlands_11-02-2020

⁵⁵ <https://dutchreview.com/culture/food/eating-herring-in-the-netherlands/>

⁵⁶ <https://eurofish.dk/member-countries/denmark/>

⁵⁷ https://eatyourworld.com/destinations/europe/denmark/copenhagen/what_to_eat/herring_sild

5. Case study: Organic aquaculture in the EU - main findings

The total organic aquaculture production at EU-27 level was estimated at 74.032 tonnes in 2020, accounting for 6,8% of the total EU aquaculture production. Production has increased by 60%⁵⁸ compared to 2015 (46.341 tonnes at EU-27 level in 2015), which was mainly due to a growth in organic mussel production. The main EU producers in organic aquaculture are Ireland (salmon and mussel), Italy (mussel and finfish), France (oyster, mussel, and trout), the Netherlands (mussel), Spain (mussel and sturgeon), and Germany, Denmark and Bulgaria (mussel).

5.1. Scope and methodology

In May 2022, EUMOFA published an update of the EUMOFA study on organic aquaculture released back in 2017⁵⁹, to provide an overview of the organic aquaculture sector in the EU.

It aimed to collect quantitative data available on organic aquaculture in the period 2016-2020. The data collection was based on EU statistics (EUROSTAT, EUMOFA, FAO) and national sources, including statistical offices, ministries in charge of aquaculture, and professional organisations.

The study also provides qualitative information to better understand the patterns of organic farming, the barriers and drivers for growth, and prospects for growth. Interviews were conducted with public and professional bodies in charge of the aquaculture and organic sector, as well as with selected stakeholders.

The full study can be found via the following link:

https://www.eumofa.eu/documents/20178/432372/Organic+aquaculture+in+the+EU_final+report_ONLINE.pdf

5.2. Production in EU Member States

Based on EU and national sources, the total organic aquaculture production in the EU-27 is estimated at 74.032 tonnes in 2020, accounting for 6,8% of the total EU aquaculture production. As a comparison, the EU organic aquaculture production in 2015 was estimated at 46.341 tonnes at EU-27 level (49.723 tonnes at EU-28 level), accounting for 4% of the EU aquaculture sector.

- The main producing MS is **Ireland** with 18.512 tonnes of organic aquaculture production, accounting for more than half of the total national aquaculture production. The species produced are salmon and mussel.
- In **Italy, France, the Netherlands, Spain, Germany** and **Denmark**, organic aquaculture production ranges from 5.000 to 10.000 tonnes. Shellfish (mainly mussel and oyster) and to a lesser extent finfish (trout, sturgeon) account for the largest volumes produced.
- In **Bulgaria** (mussel), **Hungary** (finfish) and **Greece** (European seabass and gilthead seabream), production ranges between 1.000 and about 3.000 tonnes.
- Production is below 1.000 tonnes in **Romania, Slovenia, Lithuania, Poland, Croatia, Austria**, and **Belgium**. Some organic aquaculture production has been reported in Czechia and Portugal but has ceased in recent years (however, there are on-going projects in Portugal).
- No production has been reported since 2015 in Finland, Malta, Sweden, Cyprus, Slovakia, Estonia, and Luxembourg.

⁵⁸ By comparison, EU total aquaculture production increased by 13% between 2015 and 2019 (source: EUROSTAT)

⁵⁹ https://www.eumofa.eu/documents/20178/84590/Study+report_organic+aquaculture.pdf

Table 27. **OVERVIEW OF THE EU PRODUCTION OF ORGANIC AQUACULTURE (volume in tonnes)**

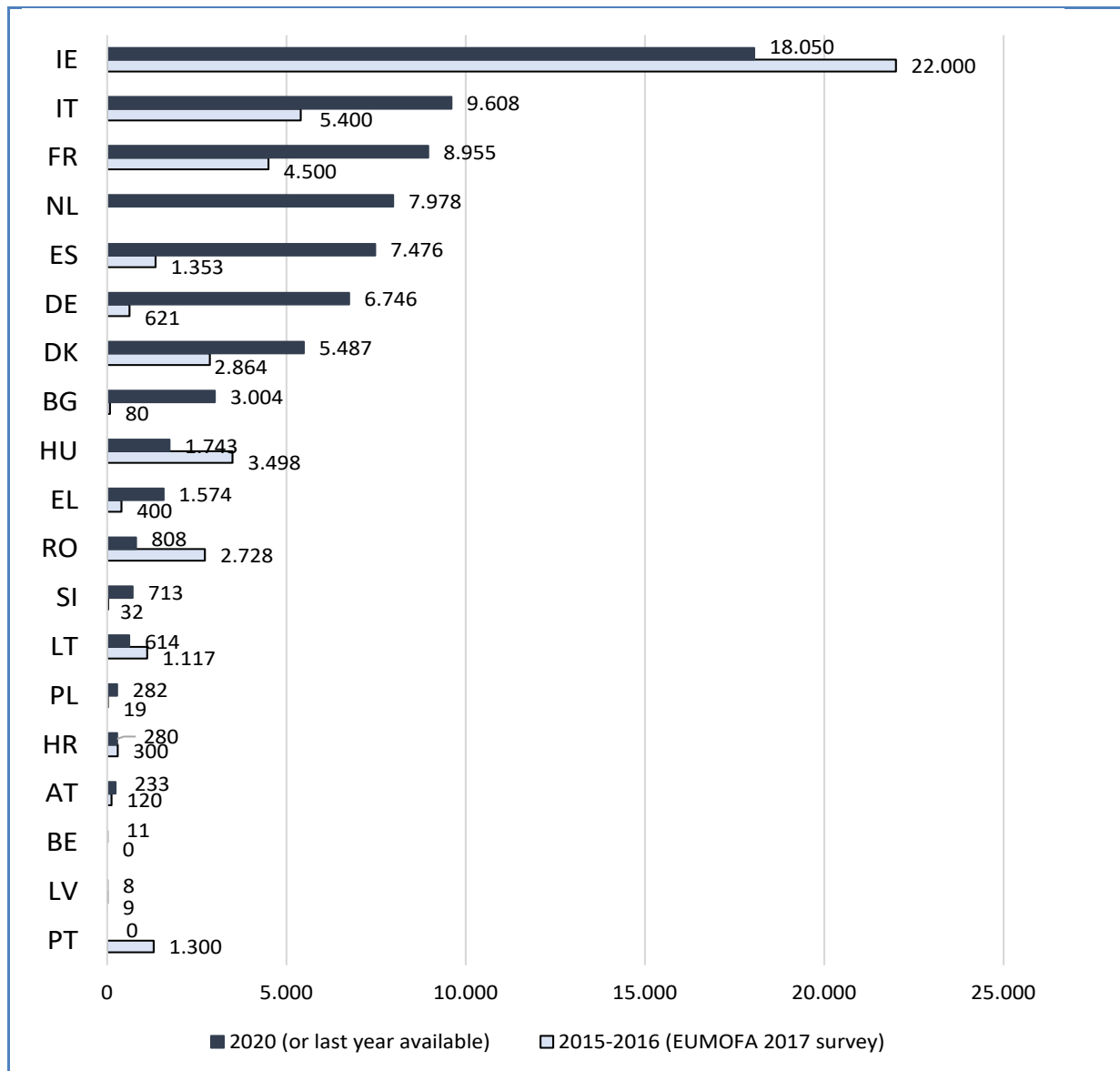
Country	Volume of organic production (2020 or last year available)	Total aquaculture production 2020 (FAO)	% organic / total production	Details on organic production
IE	18.050	37.709	47,9%	12.870 t of caged salmon, 4.685 t of rope mussel, and 495 t of bottom mussel (2020).
IT	9.608	122.778	7,8%	7.759 t of mussel, 1.320 t of Japanese carpet shell, 323 t of rainbow trout, 125 t of European seabass, 223 t of gilthead seabream, 13 t of oyster, and 4,5 t of shrimps (2018).
FR	8.955	191.000	4,7%	Oyster (3.178 t), mussel (3.135 t), trout (2.346 t), European seabass/gilthead seabream (250 t), pond fish (43 t), other shellfish (3 t), and trout eggs (16 t) (2020).
NL	7.978	39.940	20,0%	Data available for mussel only. Small production of oyster but no data available (2020).
ES	7.476	276.562	2,7%	3.104 tonnes of mussel, 2.520 t of sturgeon, 916 t of trout, 564 t of seaweeds, 210 t of European seabass, and 124 t of gilthead seabream (2020).
DE	6.746	32.258	20,9%	6.500 tonnes of mussel, 250 tonnes of trout, 15 tonnes of carp, and 35 t of other species (2020).
DK	5.487	42.607	12,9%	4.818 t of mussel growing trend), 642 t of trout (decreasing trend), and 22 t of algae (2020).
BG	3.004	15.047	20,0%	3.000 t of mussel and 4 t of algae (2019).
HU	1.743	18.373	9,5%	Chinese carps (silver carp, bighead carp, grass carp), common carp and predatory fishes (pike-perch, pike, wels catfish) (2020).
EL	1.574	131.645	1,2%	European seabass and gilthead seabream (data are not differentiated between the two species) (2020).
RO	808	12.200	6,6%	761 t of "carp, barbels, cyprinids" and 47 t of rainbow trout (2020).
SI	713	1.673	42,6%	623 t of mussel and 90 t of finfish (2020).
LT	614	4.477	13,7%	614 t in 2021, mainly carp (2019).
PL	282	47.700	0,6%	Mainly production of "carp, barbels and cyprinids" (2020).
HR	280	21.718	1,3%	145 t gilthead seabream, 100 t European seabass, and 35 t mussel (2020).
AT	233	4.527	5,1%	147 t of carp, 52 t of rainbow trout, and 2 t of sea trout (2018).
BE	11	209	5,3%	Production of trout.
LV	8	717	1,1%	No detail on species available.
CZ	0	20.401	0,0%	No production in 2020 and 1 t of "carp, barbels and cyprinids" in 2019.
PT	0	14.552	0,0%	No production in 2020. Last data reported in 2017: 1.100 t of mussel.
CZ	0	20.401	0,0%	No production in 2020 and 1 t of "carp, barbels and cyprinids" in 2019.
EU-27	74.032	1.093.796	6,8%	/

Source: EUMOFA elaboration based on FAO, EUMOFA and national sources.

Figure 47 compares the volume of organic aquaculture produced by MS in 2020 (or the last year available, see details in the previous table) and in 2015-2016 from the previous EUMOFA study on organic aquaculture⁶⁰. Strong growth of organic aquaculture is observed in Italy, France, Spain, Germany, Denmark, and Bulgaria, while a decrease is reported in Ireland and Hungary.

⁶⁰ https://www.eumofa.eu/documents/20178/84590/Study+report_organic+aquaculture.pdf

Figure 47. **COMPARISON OF ORGANIC AQUACULTURE IN VOLUME BY MS: 2020 (or last year available) AND 2015-2016 (EUMOFA survey 2017) IN TONNES**



Source: EUMOFA elaboration based on Eurostat, national sources and EUMOFA 2017 survey.

5.3. Production by main species

In 2020, the total production of organic aquaculture in the EU was 74.032 tonnes. This represents a 60% increase compared to 2015 figures. In 2020, the main species was mussel, accounting for 57% of the total volume, followed by salmon (17%). Compared to 2015, bivalves, especially mussel, became dominant in organic production, while production of most finfish species have either remained stable (salmon, trout) or decreased (carp) except for European seabass/gilthead seabream.

- **Mussel** is the main species produced, with 41.936 tonnes certified as organic in 2020 (10% of the EU's mussel production). Main producers are the Netherlands, Italy, Germany, Denmark, France, and Spain with production above 3.000 tonnes each. Production is particularly high in Denmark (organic accounts for 73% of the national production), Ireland (34%), and Germany (29%).
- **Salmon** is the second main species with 12.870 tonnes. It is only produced in Ireland. EU production has decreased since Brexit, as the UK is an important producer.

- **Trout** is the third species with 4.590 tonnes. France accounts for half of production (2.346 tonnes), followed by Spain (917 tonnes) and Denmark (642 tonnes). The share of organic trout production in the EU is 2%. Since 2015, EU production of organic farmed trout has decreased due to a strong reduction in Denmark and to a lesser extent in France and Italy.
- **Carp** is the fourth species with 3.562 tonnes (4% of EU production). The main MS are Hungary, Romania, and Lithuania. Production in 2020 was two times lower than in 2015.
- **Oyster** accounts for 3% of EU production (3.228 tonnes of organic oyster). Organic production is almost exclusively located in France. Production has increased since 2015.
- **European seabass/gilthead seabream**, with 2.750 tonnes (1,5% of EU production). The main producer is Greece with 57% of EU production.
- **Other main species** include clams in Italy, sturgeon in Spain, algae, pond fish, etc.

Table 28. **OVERVIEW OF EU PRODUCTION OF ORGANIC AQUACULTURE (volume in tonnes)**

Species	EU total production (2020)	Organic production (2020)	% organic / total	Evol. 2020/2015
Mussel	409.622	41.936	10%	+110%
Salmon	17.095	12.870	75%	-1%
Trout	187.936	4.590	2%	-8%
Carp	85.198	3.562	4%	-49%
Oyster	97.544	3.228	3%	na
European seabass/ gilthead seabream	174.501	2.750	2%	+38%
Other species	121.900	5.096	4%	na
Total	1.093.796	74.032	7%	+60%

Source: EUMOFA elaboration based on FAO, EUMOFA and national sources.

5.4. Drivers and obstacles for the future of organic aquaculture in the EU

DRIVERS

Consumer demand and awareness of the organic scheme at EU level (for all food products)

Across the EU, organic consumption is growing, and accounted for 4,7% of EU food consumption in 2020 (+15% compared to 2019).

The EU organic scheme is well known by EU citizens, ranking first in the Eurobarometer survey⁶¹ (compared to other initiatives including Fairtrade, protected geographical indication, protected designation of origin, and traditional specialty guaranteed) with a notable increase over the last five years. Awareness of the organic scheme was 27% in 2017, which rose to 56% in 2020.

The scheme is not “sector specific” and covers the entire food and drinks industry, allowing synergies with other value chains in terms of communication to foster consumer awareness.

High development potential for shellfish

There are no significant differences in the method of production between conventional and organic shellfish production. Thus, there is an important growth potential for the organic shellfish sector (if there is a market demand and business strategy).

⁶¹ <https://webgate.ec.europa.eu/ebsm/api/public/deliverable/download?doc=true&deliverableId=73752>

In this context, two strategies have been reported: a large-scale collective strategy to certify mussels under the EU's organic scheme (e.g. Denmark), or individual producers' strategies willing to comply with specific demand or for building a differentiation strategy (e.g. France). Strong growth of organic seafood could be achieved with the certification of a large share of mussel and oyster without significant changes in the method of production.

Public support for organic certification

The EU organic scheme is supported by public bodies through: ⁶²

- The objective set in the EU's Farm to Fork Strategy:
 - o 25% of the EU's agricultural land under organic farming by 2030 and a significant increase in organic aquaculture.
 - o Reduce overall EU sales of antimicrobials for farmed animals and in aquaculture by 50% by 2030.
- Possible support for conversion to the organic scheme (this will depend on MS for EMFAF⁶³).
- Communication/awareness campaign supported by public bodies (EU and national).

OBSTACLES

Finfish – Specific requirements and additional costs for organic production

Several barriers have been highlighted by stakeholders which are related to difficulties in complying with organic regulations for finfish (no technical barriers have been reported for shellfish). These specific organic requirements lead to additional costs, which must be compensated by a price premium in order to be profitable for producers.

The main issues raised by stakeholders are:

- Animal welfare: need for specific investments or additional labour;
- Separation of organic production from conventional production: need to develop specific production facilities and no mutualization of production costs between organic and conventional for producers;
- Availability and higher costs of organic feed, which must come from organic aquaculture or sustainably managed fisheries;
- Availability of organic certified juveniles;
- Management of parasites in a context of limited use of medicine;
- Lower density for organic than for conventional.

Finfish – Different interpretation of the EU organic requirements by MS and certification bodies

In a letter to the European Commission (October 2021), the Federation of European Aquaculture Producers (FEAP) reported different interpretations of the Regulation⁶⁴ between MS and certification bodies, specifically: definition of "closed recirculation aquaculture facility" (which is prohibited for on-growing purposes in the EU organic Regulation); and definition of juveniles and the use of some products in animal feed (e.g. astaxanthin).

Finfish – closed recirculation aquaculture systems (RAS) are not allowed for on-growing purposes in the EU Organic Regulation

Closed RAS is only allowed in the EU organic regulation for hatcheries and nurseries or facilities for the production of species used for organic feed organisms. RASs have several environmental advantages, but require significant input of external energy, high stocking densities (for economic reasons), advanced wastewater treatment devices, use of UV radiation, and use of pure oxygen. All the above, together with the disconnection of aquaculture production from the external natural aquatic environment, makes the closed RAS not in line with the principles of organic production. Thus, stakeholders who

⁶² https://ec.europa.eu/food/document/download/472acca8-7f7b-4171-98b0-ed76720d68d3_en?filename=f2f_action-plan_2020_strategy-info_en.pdf

⁶³ European Maritime, Fisheries and Aquaculture Fund.

⁶⁴ Regulation (EU) No 2018/848

invest in this method for on-growing purposes cannot be labelled as organic. In addition, FEAP highlighted in a letter to the European Commission (October 2021) that the definition of RAS is unclear in the EU Organic Regulation, which limits possible investments.

Finfish – Extensive polyculture in ponds with organic and non-organic is not allowed in the EU Organic Regulation

Stakeholders from Eastern EU MS produce finfish using extensive methods in ponds, through a polyculture system (several species in the same ponds). However, the EU Organic Regulation does not allow organic carp (which is the main species produced) to be farmed in the same pond as other conventional species.

From the producer side, this polyculture system is considered environmentally friendly, and the added value of organic is not clear for the market targeted by these producers.

Finfish – No coherence between EU Organic Regulation and national requirements in some MS

Danish public authorities have developed requirements for the largest finfish production sites which are not compatible with the EU organic requirements. This limits the development of organic aquaculture in Denmark.

Shellfish – Organic regulation for shellfish: classification of water quality

For shellfish, one of the main organic requirements is water quality. Since the Regulation 2018/848 entered into force on 1st of January 2022, only waters classified “A” from a health point of view or of high ecological status under the Water Framework Directive (WFD) (Directive 2000/60/EC) or of good environmental status under the Marine Strategy Framework Directive (MSFD) (Directive 2008/56/EC) are suitable for organic production. This leads to two difficulties for producers:

- Exclusion of some areas which are classified B and which have not achieved the good status under either the WFD or the MSFD.
- Increased uncertainty for producers to be able to develop a long-term and stable strategy based on organic products (dependent on the external factor of water quality in the growing areas).

Shellfish – Limited market incentive for organic shellfish

Based on qualitative feedback, there is limited (or even no) market incentive for organic shellfish production. This means limited market demand and a limited (or even no) price premium.

Shellfish/finfish – Competition with other sustainability schemes

Other sustainability schemes are available for wild-caught products, the main one being Marine Stewardship Council (MSC) certification, which applies only to wild-caught fish. It is well known (recognized by 49% of consumers)⁶⁵ according to MSC and is widely used in Northern EU. Other private schemes have also been developed for farmed products, for instance the Aquaculture Stewardship Council (ASC) scheme.

Only one situation of competition between the MSC and “organic” schemes for the same product has been identified at the EU level: some Dutch shellfish for which the production method (on-bottom culture and dredging) can be considered as both aquaculture and fishery. Therefore, the label used by producers depends on the marketing strategy.

Stakeholders must pay a fee to the scheme owner for some of these private schemes (there is no fee to the scheme owner for organic which is public).

Shellfish/finfish – “Organic seafood”: confusing message for consumers

The messages surrounding organic products are clear for agricultural products: mitigated impact on environment, increased animal welfare, and expected benefits for health.

⁶⁵ <https://www.msc.org/understanding-seafood-consumers>

For organic finfish, specific benefits may be highlighted to consumers: animal welfare, organic feed, and limited use of veterinary treatments and antibiotics. The impact of these arguments depends on the level of awareness of consumers with regards to the aquaculture farming method.

However, there are some communication barriers regarding the added value of “organic” aquaculture products to consumers:

- Wild-caught products are not covered by organic: while the “organic scheme” is well known by consumers⁶⁶, it only applies to aquaculture products and not to wild-caught products (except for algae)⁶⁷. Aquaculture accounts for 27% of EU seafood production and 24% of EU seafood consumption. Thus, some of the main species consumed at EU level are not covered by “organic”: tuna, cod, Alaska pollock, hake, herring, squid, sardine, mackerel, sprat, and saithe⁶⁸.
- Conventional shellfish production (mussel and oyster) is environmentally friendly, as it is already extensive with no inputs (no feed or antibiotics) and a low carbon footprint. The organic scheme is based on water quality. The added value may be difficult to highlight for consumers.

Shellfish/finfish – Licensing procedures (common to organic and conventional)

Licensing procedures for aquaculture sites are complex for fish farmers. This limits the development of new sites, both conventional and organic.

⁶⁶ Organic scheme known by 56% of the EU 27 citizens – Source Eurobarometer 504 - <https://webgate.ec.europa.eu/ebsm/api/public/deliverable/download?doc=true&deliverableId=73752>

⁶⁷ There are other indicators or schemes to assess the sustainability of wild caught fish, for instance maximum sustainable yield (MSY) or MSC scheme.

⁶⁸ Most consumed species from fishery, based on „The EU Fish Market – EUMOFA“

6. Global highlights

EU / Norway / Sustainable fishing: Norway and the EU reached a political understanding in relation to the fisheries in the North East Arctic, in ICES subareas 1 and 2. The area concerned includes the waters around the archipelago of Svalbard and the international waters of the Barents Sea. The understanding ensures sustainable fishing in the North East Arctic, while also providing certainty for EU fleets fishing in that area. Through the understanding, Norway and the EU reiterate their commitment to the continued sustainable management of marine living resources in the North East Arctic, in accordance with international law. The understanding allows EU fleets fishing for cod in the waters around the archipelago of Svalbard to continue fishing in line with their historic fishing rights. The reaching of this agreement also provides the opportunity for Norway and the EU to focus on other issues of common interest in the area of fisheries⁶⁹.



IOTC / Fishery / Sustainability: The Indian Ocean Tuna Commission (IOTC) has held its annual session, where the main priorities of the European Union were to discuss how to address the yellowfin tuna stock in the Indian Ocean, the adoption of a new management measure for drifting fish aggregating devices (FADs), and the adoption of catch reduction for skipjack tuna. The EU regrets that the IOTC could not agree on any of these items and considers this as a missed opportunity for the sustainable management of the Indian Ocean fisheries. However, the IOTC adopted a far-reaching management procedure on bigeye tuna – an important step forward for well-informed science-based management decisions for the management of the bigeye tuna stock in the future. In addition, an EU proposal on observer coverage – creating the basis for the introduction of more electronic monitoring system on board – was also adopted by the IOTC parties⁷⁰.

Spain / Fishery: Spain is the largest employer in the fishing sector in the EU with an estimated 38,000 workers. It is known for the huge amounts of fish not only consumed but also exported around the world. It is also a major importer of fisheries and aquaculture products generally, and prior to Brexit was one of the countries purchasing fishing licences from UK based fleets. The country has a fleet of some 8,000 commercial vessels, with the vast majority being used for fishing⁷¹.

Scotland / Aquaculture / Sustainability: Next steps in reforming Scotland's aquaculture regulatory system have been outlined by the Rural Affairs Secretary, Mairi Gougeon, who announced the formation of a consenting task group to make rapid progress on streamlining the aquaculture consenting system. The forum will advise on the development of the Scottish Government's Vision for sustainable aquaculture. The Vision, set to be published by the end of the year, will have enhanced emphasis on environmental protection and community benefit at its core⁷².

Norway / Maritime sector / Gender: In January 2022, the Ministry of Trade and Industry of Norway commissioned the Inland Norway University of Applied Sciences to map the status of diversity and gender equality in the maritime industry. The study, which now is published, presents the current situation and historical development for diversity and gender equality in the maritime sector, and sheds light on the factors that promote and hinder gender equality. It also assesses the socio-economic effects of increased diversity and gender equality in the sector. The study has shown that the share of women in the maritime sector remains low, and that structural, cultural and practical barriers can explain why few women work in the sector. The Minister of Fisheries and Ocean Policy, Bjørnar Skjæran, brings the parties in the maritime sector together to discuss the study and the government's work on an equality strategy for the sector⁷³.

⁶⁹https://ec.europa.eu/commission/presscorner/detail/en/IP_22_2722

⁷⁰https://ec.europa.eu/oceans-and-fisheries/news/iotc-annual-meeting-missed-opportunity-2022-05-23_en

⁷¹<https://euroweeklynnews.com/2022/05/22/spain-is-the-largest-employer-in-the-fishing-sector-in-the-eu/>

⁷²<https://www.gov.scot/news/next-steps-to-improve-regulation-of-aquaculture/>

⁷³ <https://www.regjeringen.no/en/aktuelt/ny-kunnskap-om-likestilling-i-maritim-naring/id2913403/>

7. Macroeconomic Context

7.1. Marine fuel

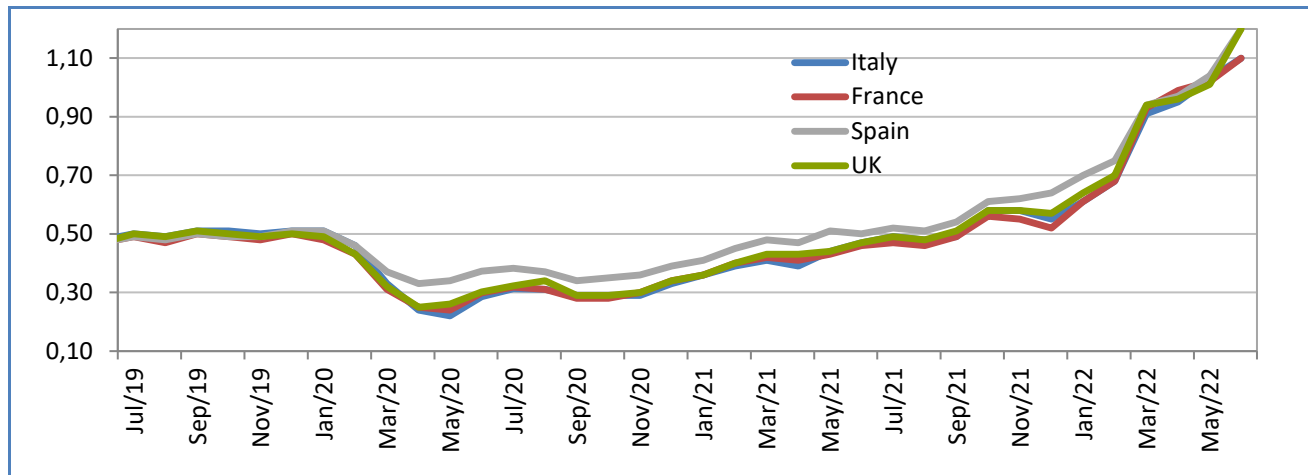
Average prices for marine fuel in **June 2022** ranged between 1,1 and 1,2 EUR/litre in ports in **France, Italy, Spain,** and the **UK**. Prices increased by an average of about 12,2% compared with the previous month, and they also increased by an average of 142,1% compared with the same month in 2021.

Table 29. **AVERAGE PRICE OF MARINE DIESEL IN ITALY, FRANCE, SPAIN, AND THE UK (EUR/litre)**

Member State	Jun 2022	Change from May 2022	Change from Jun 2021
France <i>(ports of Lorient and Boulogne)</i>	1,1	8%	139%
Italy <i>(ports of Ancona and Livorno)</i>	1,1	7%	134%
Spain <i>(ports of A Coruña and Vigo)</i>	1,2	15%	140%
The UK <i>(ports of Grimsby and Aberdeen)</i>	1,2	19%	155%

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

Figure 48. **AVERAGE PRICE OF MARINE DIESEL IN ITALY, FRANCE, SPAIN, AND THE UK (EUR/litre)**

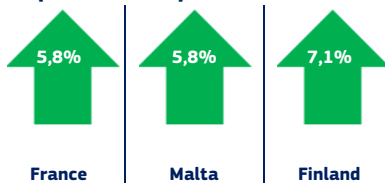


Source: Chamber of Commerce of Forlì-Cesena, Italy; DPMA, France; MABUX.

7.2. Consumer prices

The EU annual inflation rate was at 8,8% in May 2022, up from 8,1% in April 2022. A year earlier, the rate was 2,3%.

Inflation: lowest rates in May 2022, compared with April 2022.



Inflation: highest rates in May 2022, compared with April 2022.

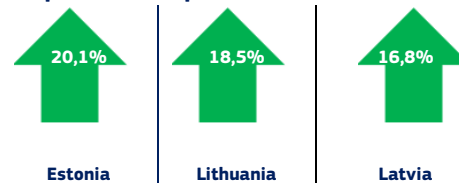


Table 30. HARMONISED INDEX OF CONSUMER PRICES IN THE EU (2015 = 100)

	May 2020	May 2021	Apr 2022	May 2022	Change from Apr 2022	Change from May 2021
Food and non-alcoholic beverages	110,58	110,81	119,99	121,90	↑ 1,6%	↑ 10,0%
Fish and seafood	113,72	114,35	122,85	125,37	↑ 2,1%	↑ 9,6%

Source: Eurostat.

7.3. Exchange rates

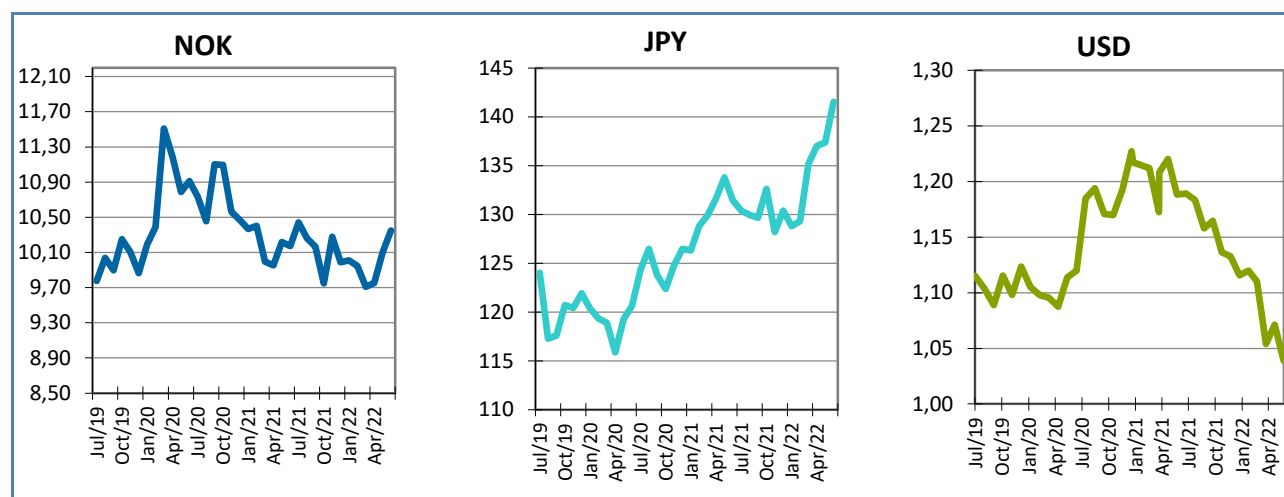
Table 31. EURO EXCHANGE RATES FOR SELECTED CURRENCIES

Currency	Jun 2020	Jun 2021	May 2022	Jun 2022
NOK	10,912	10,1717	9,0983	10,3485
JPY	120,66	131,43	137,36	141,54
USD	1,1198	1,1884	1,0713	1,0387

Source: European Central Bank.

In June 2022, the euro appreciated against the Norwegian krone (2,5%), the US dollar (0,1%), and against the Japanese yen (3,0%), relative to the previous month. For the past six months, the euro has fluctuated around 134,86 against the Japanese yen. Compared with June 2021, the euro has appreciated 1,7% against the Norwegian krone, 7,7% against the Japanese yen, and depreciated 12,6% against the US dollar.

Figure 49. 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, Fishbase, FAO, Inshore Fisheries and Conservation Authority, Marlin.ac.uk., European Council,

Consumption: EUROPANEL, SeaLifeBase.

Case studies: FAO, Eurostat, Blue Marine Foundation, guidedesespecies.org, North Western Inshore Fisheries and Conservation Authority of the UK, The State of Mediterranean and Black Sea Fisheries 2021 by FAO, GFCM, Eurofish Magazine, undercurrentnews.com, rungsinternational.com.

Global highlights: European Commission, Oceana, EuroWeekly, Scottish Government.

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

The underlying first-sales data is in 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 Highlight, 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.

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