European Commission

Monthly Highlights

No. 8 / 2023

EUMOFA
European Market Observatory for Fisheries and Aquaculture Products

In May 2023 in reporting EU MS, first sales of CG freshwater fish totalled EUR 46,7 million and 39.433 tonnes, representing an 8% increase in value and a 4% increase in volume compared to May 2022.

Over the 36-month observation period (June 2020 – May 2023), the weighted average first-sales price of European perch in Sweden was 2,49 EUR/kg, 8% higher than that of Germany (2,31 EUR/kg), and 13% above the average price in Estonia (2,21 EUR/kg).

In week 23/2023, the supply of frozen tropical shrimp from Ecuador fell by 17% compared with week 23/2022, while its unit value of 5,93 EUR/kg has been stable.

In Italy in May 2023, the average first-sales price of European eel (1,65 EUR/kg) plummeted by 79% compared with the same month in 2022 and by 88% from May 2021. Italian eel fisheries target the yellow and the silver eel stage only.

Herring is among the most consumed fresh fish species in Germany, the Netherlands and Sweden, with the highest values and prices observed in the Netherlands.

In 2021 fisheries production in India amounted to 5.024.905 tonnes.

The Commission responded to the European citizens' initiative 'Stop finning – Stop the trade' which calls for an end to international trade in loose shark fins.

Contents

Find all data, information, and more at:
www.eumofa.eu
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1. First sales in Europe

During **January–May 2023**, 12 EU Member States (MS), Norway and the United Kingdom reported first-sales data for 10 commodity groups[1]. 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 EUMOFA[2].

1.1. January-May 2023 compared to the same period in 2022

Increases in value and volume: Cyprus, Estonia, Germany, Latvia, Portugal and the United Kingdom recorded an increase in both first-sales value and volume. Highest increases were observed in Estonia and Latvia. In both countries herring and sprat were principally responsible for the increases.

Decreases in value and volume: Bulgaria, France, the Netherlands, Spain and Sweden recorded decreases in first-sales value and volume. Bulgaria and Sweden stood out with the most significant drops in absolute terms. In Bulgaria these were due to lower first-sales of clam and species listed under other marine fish. In Sweden they were mainly due to sprat and herring.

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

	January – May 2021		January – May 2022		January – May 2023		Change from January – May 2022	
Country	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**
Bulgaria	1.357	0,9	1.041	0,6	843	0,4	-19%	-31%
Cyprus	163	1,2	139	1,0	143	1,0	3%	8%
Estonia	37.671	9,4	25.784	7,0	40.988	13,4	59%	93%
France	91.767	265,8	101.847	312,0	92.336	298,6	-9%	-4%
Germany	21.562	28,5	13.658	22,0	17.608	22,3	29%	1%
Italy	33.884	140,9	29.365	141,4	29.673	140,6	1%	-1%
Latvia	25.068	5,4	19.696	4,3	23.373	6,3	19%	46%
Lithuania	1.424	0,7	722	0,5	231	0,5	-68%	17%
Netherlands	82.725	114,9	102.051	98,6	87.735	83,3	-14%	-16%
Portugal	32.130	95,3	31.962	115,0	34.701	116,2	9%	1%
Spain	202.500	568,3	190.730	638,2	180.130	587,3	-6%	-8%
Sweden	90.718	36,6	66.248	32,5	35.662	25,1	-46%	-23%
Norway	1.475.681	1.244,8	1.404.254	1.591,3	1.447.754	1.442,6	3%	-9%
United Kingdom	133.624	213,3	120.752	243,1	141.914	256,6	18%	6%

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, other molluscs and aquatic invertebrates, cephalopods, crustaceans, flatfish, freshwater fish, freshwater fish, other Marine fish, salmonids, small pelagics, tuna and tuna-like species.
[2] First sales data updated on 13.07.2023.

1.2. May 2023 compared to May 2022

Increases in value and volume: First sales increased in Cyprus, Estonia, Latvia, Lithuania, Sweden and the United Kingdom. The highest increase was observed in Cyprus and Lithuania. In Cyprus swordfish and picarel were behind the increase, while in Lithuania they were due to turbot and miscellaneous small pelagic species.

Decreases in value and volume: First sales decreased in Bulgaria, France, Germany, Italy, the Netherlands, Spain and Norway. The most significant decreases were observed in Germany and the Netherlands. Germany saw decreases due to blue whiting and shrimps *Crangon* spp., while in the Netherlands it was mainly due to blue whiting and miscellaneous small pelagics

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

	May 2021		May 2022		May 2023		Change from May 2022	
Country	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**
Bulgaria	637	0,4	658	0,3	466	0,2	-29%	-25%
Cyprus	33	0,3	23	0,2	32	0,2	37%	31%
Estonia	8.126	2,3	8.634	2,4	8.773	3,4	2%	44%
France	21.160	48,8	30.657	61,9	24.716	57,1	-19%	-8%
Germany	4.663	5,2	4.444	6,3	2.582	3,3	-42%	-48%
Italy	8.099	34,9	7.711	37,0	7.370	35,1	-4%	-5%
Latvia	4.256	1,1	3.211	0,8	3.626	1,1	13%	39%
Lithuania	138	0,10	82	0,062	99	0,094	20%	52%
Netherlands	16.891	26,2	23.530	17,4	7.945	12,0	-66%	-31%
Portugal	9.840	22,6	11.727	29,5	13.137	28,3	12%	-4%
Spain	42.405	131,0	48.168	161,7	45.605	140,3	-5%	-13%
Sweden	17.931	8,6	14.571	6,0	15.359	8,1	5%	36%
Norway	267.728	179,0	255.977	246,9	147.587	150,1	-42%	-39%
United Kingdom	14.456	37,1	14.651	42,0	15.866	44,2	8%	5%

Possible discrepancies in % changes are due to rounding.
** Volumes are reported in net weight for EU Member States and the UK, and in live weight equivalent (LWE) for Norway. Prices are reported in EUR/kg (without VAT). For Norway, prices are reported in EUR/kg of live weight.*

The most recent weekly first-sales data **(up to week 37 of 2023)** are available via the EUMOFA website and can be accessed **here**.
The most recent monthly first-sales data **for July 2023** are available via the EUMOFA website and can be accessed **here**.

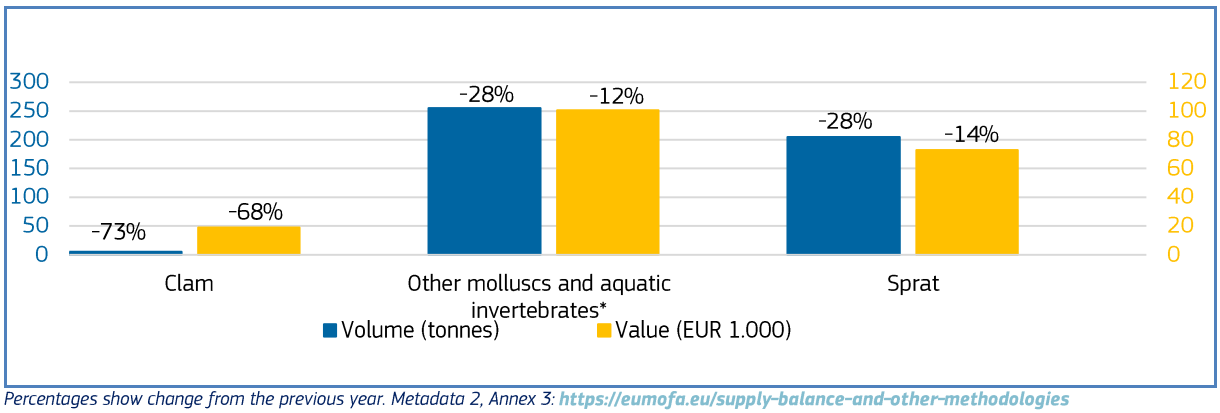
1.3. First sales in selected countries

First sales data analysed in this section are extracted from EUMOFA[3].

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

Bulgaria	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2023 vs Jan-May 2022	EUR 0,4 million, -31%	843 tonnes, -19%	Clam, other marine fish*, sprat
May 2023 vs May 2022	EUR 0,2 million, -25%	466 tonnes, -29%	Clam, other molluscs and aquatic invertebrates*, sprat.

Figure 1. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN BULGARIA, MAY 2023**



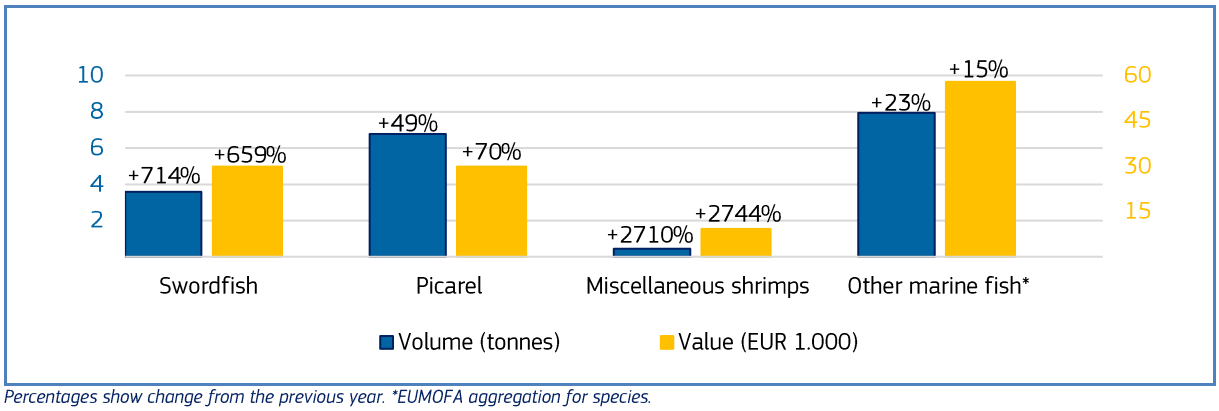
Percentages show change from the previous year. Metadata 2, Annex 3: https://eumofa.eu/supply-balance-and-other-methodologies

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

Cyprus	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
Jan-May 2023 vs Jan-May 2022	EUR 1,0 million, +8%	143 tonnes, +3%	Swordfish, squid, other seabream*, miscellaneous shrimps.	In May 2023 compared to May 2022, the MCS grouping of **miscellaneous shrimps** recorded an increase in first sales. The category "Shrimp, miscellaneous" landed in Cyprus is mainly related to the two species of deep-water shrimps (*Aristeomorpha foliacea* and *Aristeus antennatus*). According to the Global Fishing Watch data no fishing activity of miscellaneous shrimps was recorded in May 2022, whereas there was some fishing for deep water shrimps during May 2023.
May 2023 vs May 2022	EUR 0,2 million, +31%	32 tonnes, +37%	Swordfish, picarel, miscellaneous shrimps, other marine fish*.	

[3] First-sales data updated on 13.07.2023.

Figure 2. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN CYPRUS, MAY 2023**

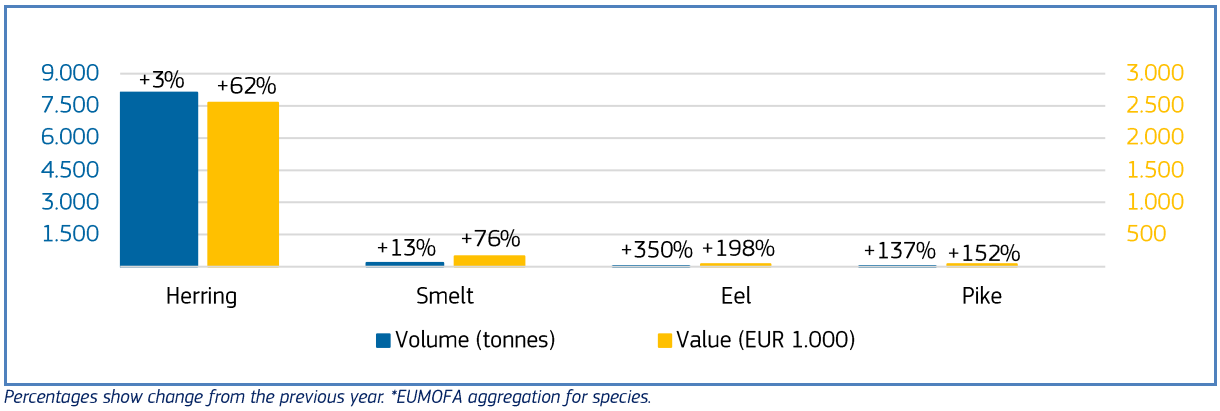


*Percentages show change from the previous year. *EUMOFA aggregation for species.*

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

Estonia	**First-sales value / trend %**	**First-sales volume / trend %**	**Main contributing species**	**Notes**
Jan-May 2023 vs Jan-May 2022	EUR 13,4 million, +93%	40.988 tonnes, +59%	Herring, sprat, other freshwater fish*, smelt.	In May 2023 first sales of **eel** increased significantly compared to May 2022. Supply to the market depends more on weather conditions and available capacity to carry out the fisheries. Catches are from inland waters. The price decreased by around 33% when comparing May 2023 with 2022. In May 2023, it might be considered that available resources, mild weather conditions and capacity of suppliers enabled the provision of a higher quantity of eel to the market and at a lower price than in May 2022. It may also be suspected that market demand was lower than supply. In May 2023 existing fishing capacity and available fish stocks enabled a significant increase in the volume of landings of **pike** compared with May 2022. In the Baltic Sea the stock is concentrated in the coastal areas and is caught by the small-scale fisheries segment. Pike is not subject to TAC and catches are not regulated. An unexpected and significant increase in volumes of pike supplied to the market did not cause price reductions. The price in May 2023 was 6% higher compared with May 2022. Pike is popular for local consumption and an acceptable price increased consumption.
May 2023 vs May 2022	EUR 3,4 million, +44%	8.773 tonnes, +2%	Herring, smelt, eel, pike.	

Figure 3. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN ESTONIA, MAY 2023**

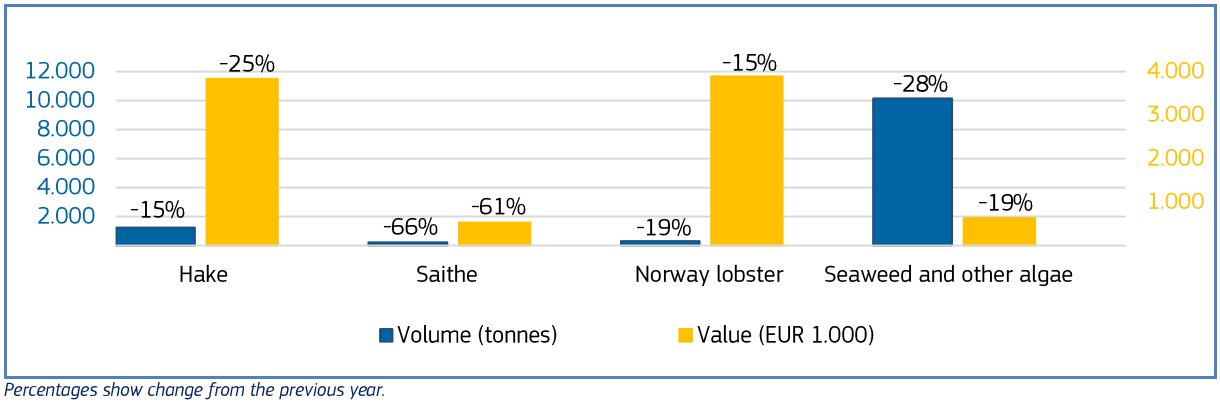


*Percentages show change from the previous year. *EUMOFA aggregation for species.*

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

France	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2023 vs Jan-May 2022	EUR 298,6 million, -4%	92.336 tonnes, -9%	Eel, hake, Norway lobster, seaweed and other algae.
May 2023 vs May 2022	EUR 57,1 million, -8%	24.716 tonnes, -19%	Hake, saithe, Norway lobster, seaweed and other algae.

Figure 4. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN FRANCE, MAY 2023**

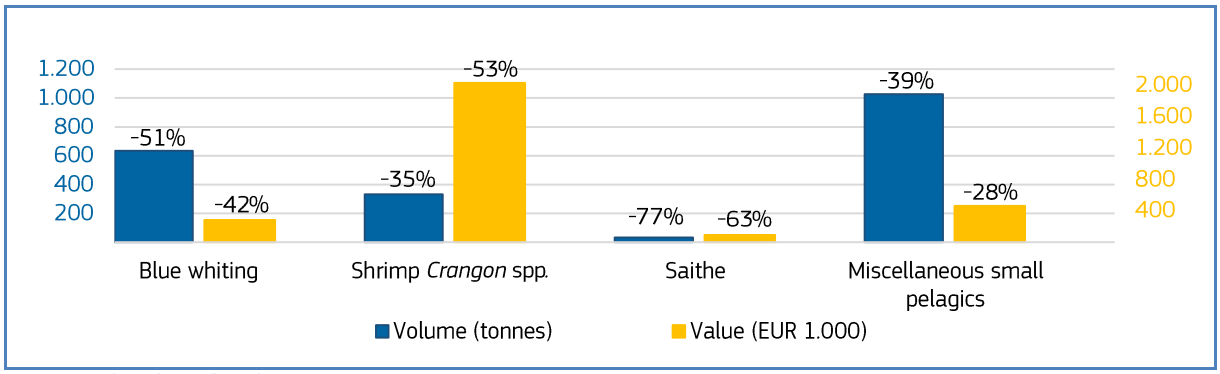


Percentages show change from the previous year.

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

Germany	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2023 vs Jan-May 2022	EUR 22,3 million, +1%	17.608 tonnes, +29%	Mackerel, blue whiting, Greenland halibut, cod.
May 2023 vs May 2022	EUR 3,3 million, -48%	2.582 tonnes, -42%	Blue whiting, shrimp *Crangon* spp., saithe, miscellaneous small pelagics.

Figure 5. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN GERMANY, MAY 2023**

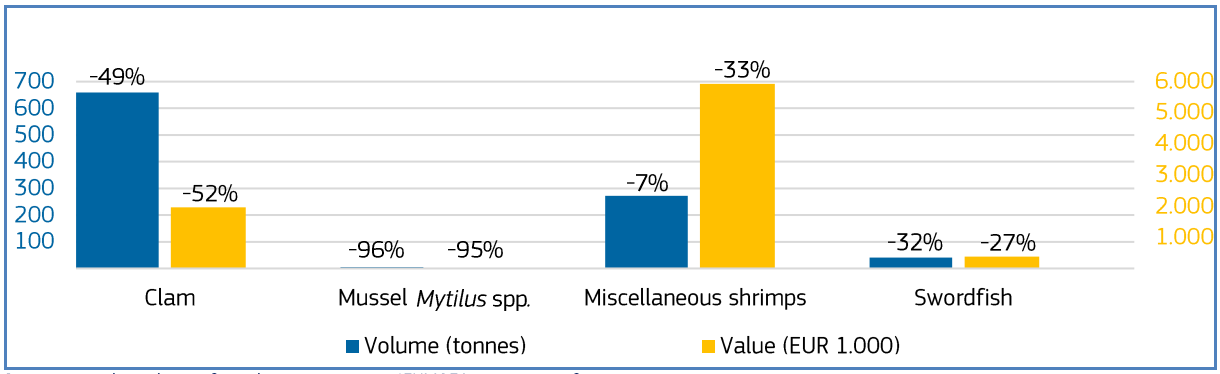


Percentages show change from the previous year.

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

Italy	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
Jan-May 2023 vs Jan-May 2022	EUR 140,6 million, -1%	29.673 tonnes, +1%	**Value:** Miscellaneous shrimp, clam, anchovy, sardine. **Volume:** Other marine fish*, hake, octopus, cuttlefish.	In May 2023 first sales of **mussel *Mytilus* spp.** decreased significantly compared to May 2022. Drought and the absence of rain in April and May caused lack of fresh water to ensure water exchange, and the increase in salinity along the coast suffocated mussel production in lagoons and coastal waters. In particular, mussels of the Gulf of Taranto, one of the most important areas of mussel production in Italy, were stressed by higher sea water temperatures than in previous years, and this affected their productivity.
May 2023 vs May 2022	EUR 35,1 million, -5%	7.370 tonnes, -4%	Clam, mussel *Mytilus* spp., miscellaneous shrimps, swordfish.	

Figure 6. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN ITALY, MAY 2023**

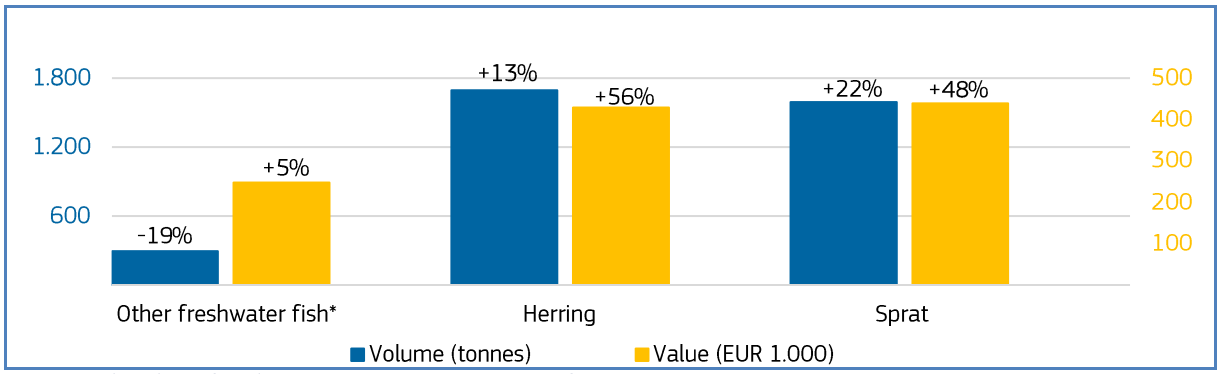


*Percentages show change from the previous year. *EUMOFA aggregation for species.*

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

Latvia	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2023 vs Jan-May 2022	EUR 6,3 million, +46%	23.373 tonnes, +19%	Herring, sprat, other marine fish*, European flounder.
May 2023 vs May 2022	EUR 1,1 million, +39%	3.626 tonnes, +13%	Other freshwater fish*, herring, sprat.

Figure 7. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN LATVIA, MAY 2023**

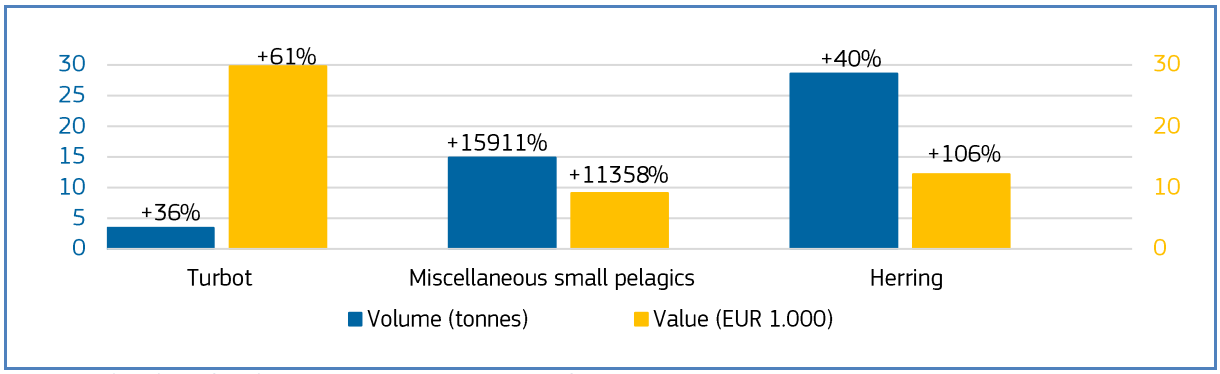


*Percentages show change from the previous year. *EUMOFA aggregation for species.*

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

Lithuania	First-sales value / trend %	First-sales volume/ trend %	Main contributing species	Notes
Jan-May 2023 vs Jan-May 2022	EUR 0,5 million, +17%	231 tonnes, -68%	**Value**: Smelt, turbot, miscellaneous small pelagics. **Volume:** Herring, sprat, other groundfish*.	First sales of **miscellaneous small pelagics** registered a high increase in May 2023 compared to May 2022. The miscellaneous small pelagic group consists of the Twait Shad species. In the Baltic Sea it is concentrated in the coastal area and is caught by the small-scale fisheries. Twait Shad is not covered by TAC and catches are not regulated. Current fishing capacity and fish stock availability enabled a significant increase in volumes of landings in May 2023 compared with May 2022. The unexpected and significant increase in volumes of Twait Shad supplied to the market has led to price reductions. In May 2023 the price was approx. 28% lower compared with May 2022, which shows that supply satisfied the market. Local consumption of Twait Shad is growing and its affordable price makes this species popular.
May 2023 vs May 2022	EUR 0,094 million, +52%	99 tonnes, +20%	Turbot, miscellaneous small pelagics, cod.	

Figure 8. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN LITHUANIA, MAY 2023**

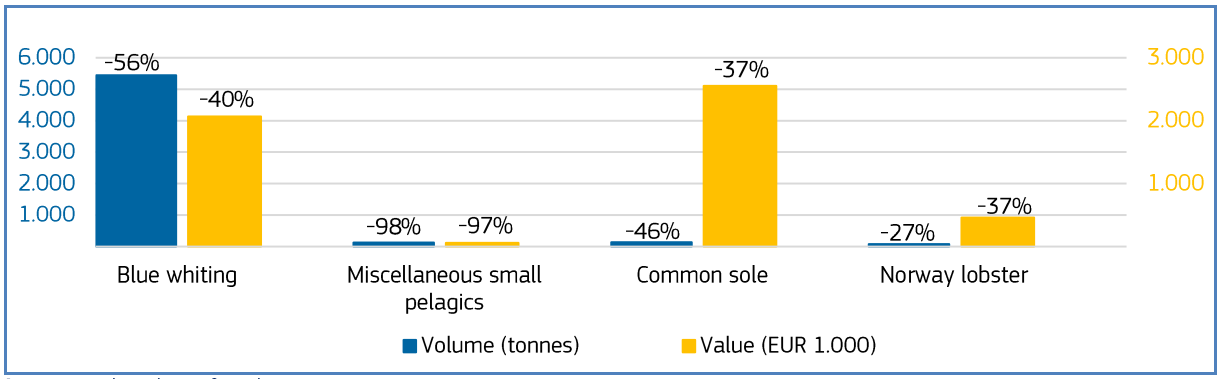


*Percentages show change from the previous year. *EUMOFA aggregation for species.*

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

the Netherlands	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2023 vs Jan-May 2022	EUR 83,3 million, -16%	87.735 tonnes, -14%	Atlantic horse mackerel, common sole, herring, miscellaneous small pelagics.
May 2023 vs May 2022	EUR 12,0 million, -31%	7.945 tonnes, -66%	Blue whiting, miscellaneous small pelagics, common sole, Norway lobster.

Figure 9. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN THE NETHERLANDS, MAY 2023**

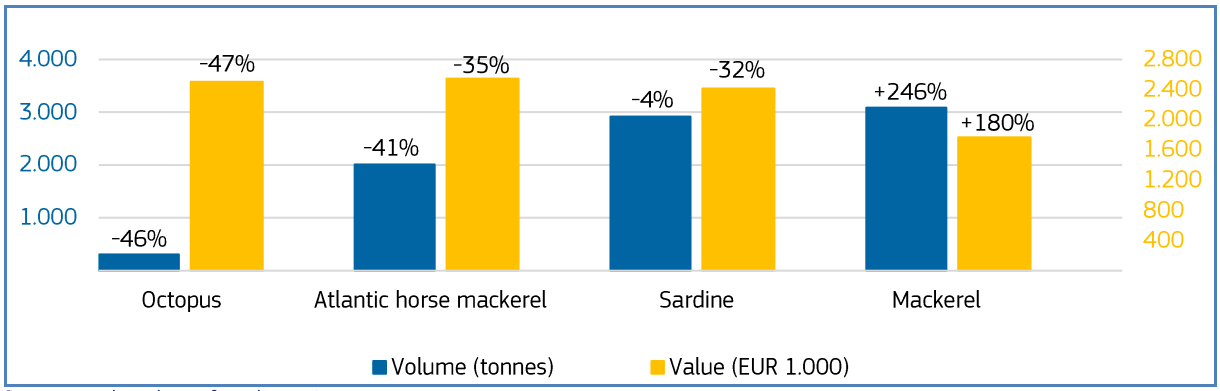


Percentages show change from the previous year.

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

Portugal	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2023 vs Jan-May 2022	EUR 116,2 million, +1%	34.701 tonnes, +9%	Bigeye tuna, scabbardfish, mackerel, cuttlefish.
May 2023 vs May 2022	EUR 28,3 million, -4%	13.137 tonnes, +12%	**Value:** Octopus, Atlantic horse mackerel, mackerel sardine, squid. **Volume:** Mackerel, bigeye tuna, blue whiting.

Figure 10. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN PORTUGAL, MAY 2023**

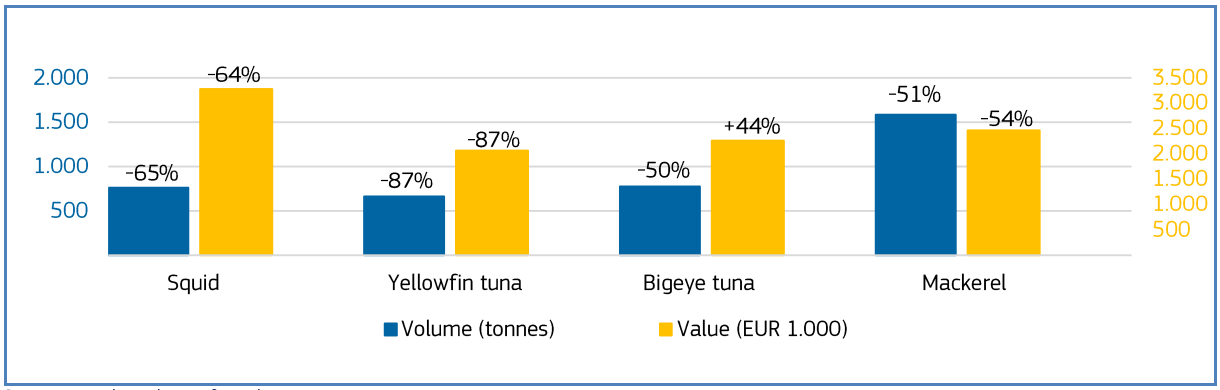


Percentages show change from the previous year.

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

Spain	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2023 vs Jan-May 2022	EUR 587,3 million, -8%	180.130 tonnes, -6%	Swordfish, mackerel, yellowfin tuna, octopus.
May 2023 vs May 2022	EUR 140,3 million -13%	45.605 tonnes, -5%	Squid, yellowfin tuna, bigeye tuna mackerel.

Figure 11. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN SPAIN, MAY 2023**

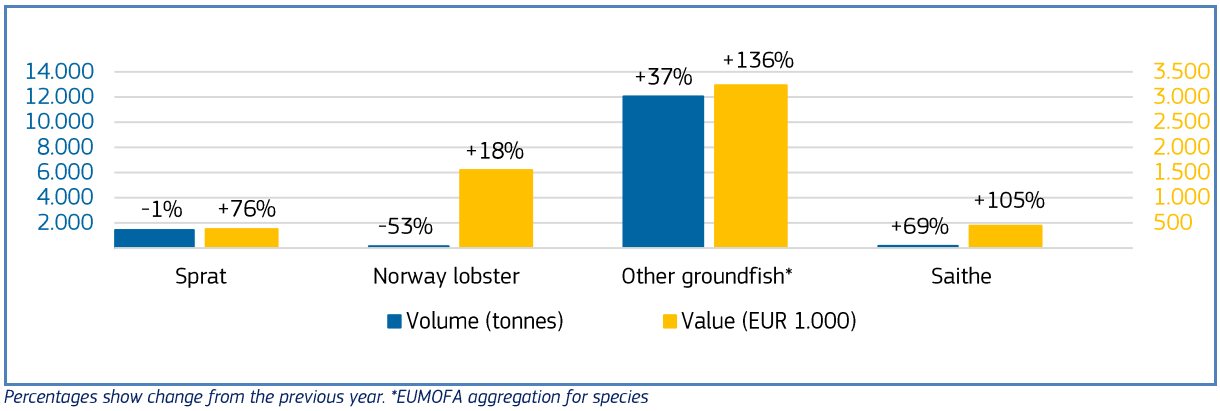


Percentages show change from the previous year.

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

Sweden	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
Jan-May 2023 vs Jan-May 2022	EUR 25,1 million, -23%	35.662 tonnes, -46%	Sprat, herring, cold-water shrimps, mackerel.	First sales of **saithe** registered a high increase in May 2023 compared to May 2022. It was observed that sales in May 2023 exceeded catches of all the Swedish fleet by 48% whilst catches in May 2022 represented 47% of sales. It might be assumed that the market was partly supplied by foreign suppliers in May 2023. The supply of saithe from January to April 2023 was lower than during the same period in 2022. In May 2023, a 105% increase in volume did not reduce prices which were approx. 21% higher. This may indicate that due to low supply in previous periods, market demand was quite high in May 2023. Weather conditions, fishing capacity and resources enabled an increase in fishing effort in order to increase supply to the market in May 2023. It was observed that prices of all species of **other groundfish** were higher when comparing May 2023 with 2022. The biggest increase in value was for sales of sand eel. Lack of supply of sand eel in April 2023 meant that demand on the fish market was higher than usual. Price increases and volumes supplied had a major effect in terms of a significant increase in value.
May 2023 vs May 2022	EUR 8,1 million, +36%	15.359 tonnes, +5%	Sprat, Norway lobster, other groundfish*, saithe.	

Figure 12. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN SWEDEN, MAY 2023**

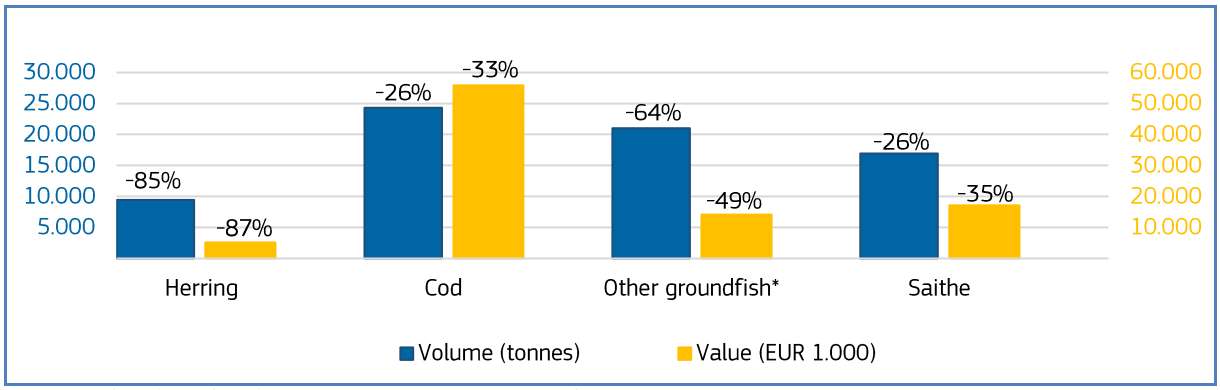


*Percentages show change from the previous year. *EUMOFA aggregation for species*

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

Norway	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2023 vs Jan-May 2022	EUR 1.442,6 million, -9%	1.447.754 tonnes, +3%	**Value:** cod, crab, haddock, herring. **Volume:** blue whiting, seaweed and other algae*, saithe.
May 2023 vs May 2022	EUR 150,1 million -39%	147.587 tonnes, -42%	Herring, cod, other groundfish*, saithe.

Figure 13. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN NORWAY, MAY 2023**

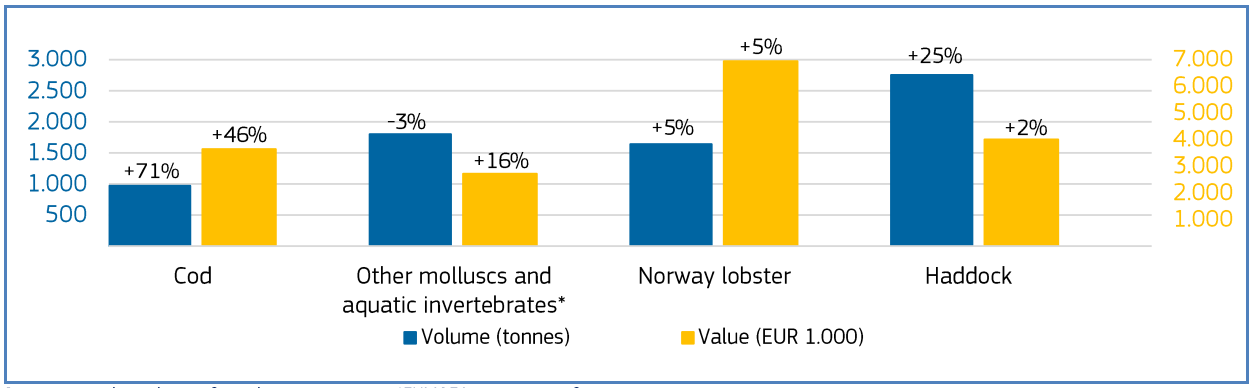


*Percentages show change from the previous year. *EUMOFA aggregation for species.*

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

The United Kingdom	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2023 vs Jan-May 2022	EUR 256,6 million, +6%	141.914 tonnes, +18%	Norway lobster, cod, blue whiting, mackerel.
May 2023 vs May 2022	EUR 44,2 million, +5%	15.866 tonnes, +8%	Cod, other molluscs and aquatic invertebrates*, Norway lobster, haddock.

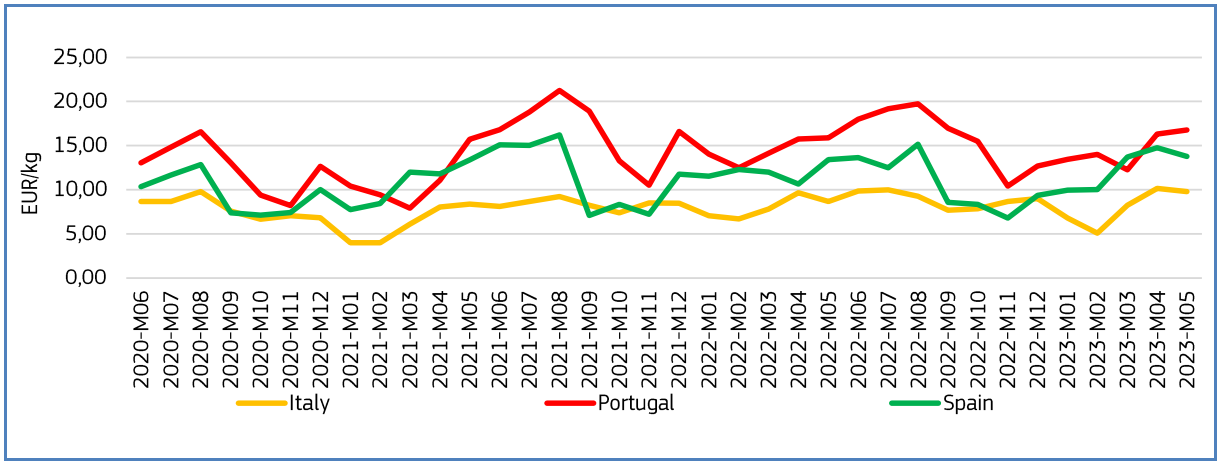
Figure 14. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN THE UNITED KINGDOM, MAY 2023**



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

1.4. Comparison of first sales prices of selected species in selected countries[4]

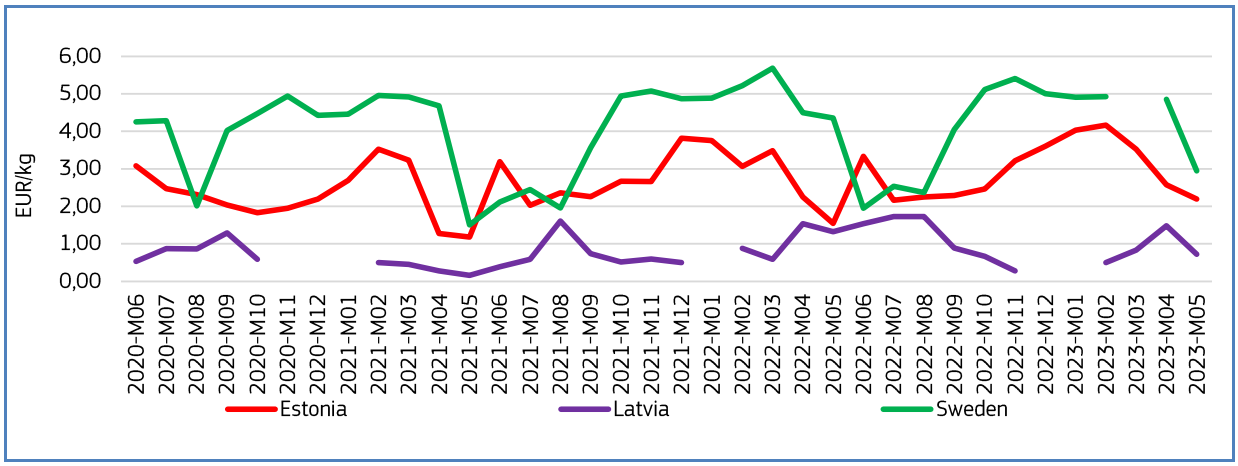
Figure 15. **FIRST SALES PRICES OF GILTHEAD SEABREAM IN ITALY, PORTUGAL AND SPAIN**



EU first sales of **gilthead seabream** occur in several countries including **Italy**, **Portugal** and **Spain**. In May 2023, the average first-sales prices of gilthead seabream were 9,78 EUR/kg in Italy (down by 4% from the previous month and up by 13% from the previous year); 16,76 EUR/kg in Portugal (up from both April 2023 by 3% and from May 2022 by 6%); and 13,79 EUR/kg in Spain (down from the previous month by 7% and up from the previous year by 3%). In May 2023, supply relative to the previous year increased in Spain (+11%), while it decreased in Italy (-2%) and in Portugal (-12%). In the three countries analysed, volume seems to peak in similar periods of the year, specifically between January - February and October - November in Italy and in November in Spain and Portugal. Between months 06/2020 to 05/2023, prices fluctuated greatly in the three markets analysed where the lowest peaks in prices correspond to high supply. These events occurred in November in Portugal and Spain. In Italy prices dropped to the lowest price of 3,98 EUR/kg in February/2021, while in Portugal the highest price of 21,25 EUR/kg was reached in August 2021.

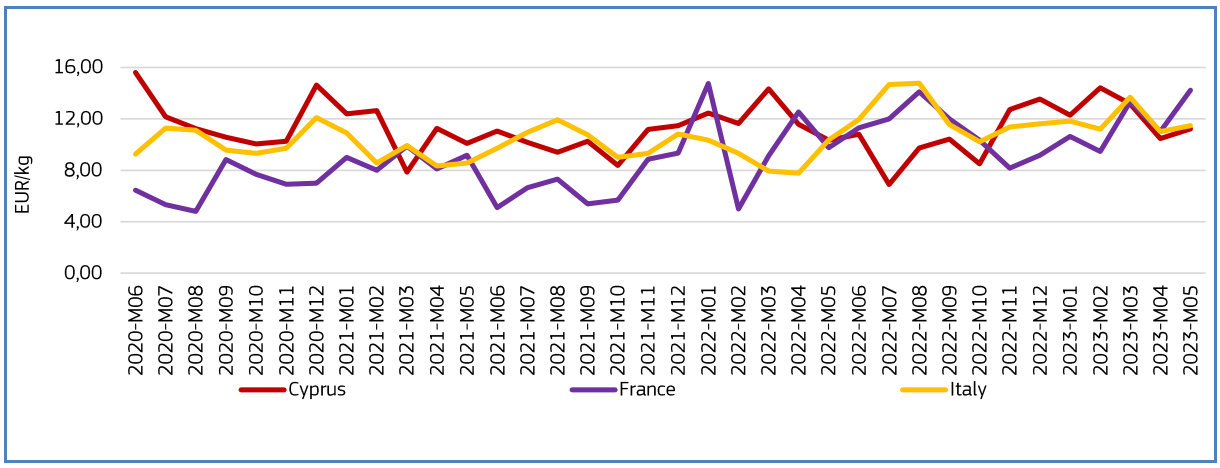
[4] First sales data updated on 12.07.2023.

Figure 16. **FIRST SALES PRICES OF EUROPEAN PERCH IN ESTONIA, LATVIA, AND SWEDEN**



EU first sales of **European perch** occur among several countries but most notably in **Estonia**, **Latvia** and **Sweden**. In May 2023, the average first-sales prices of European perch were: 2,19 EUR/kg in Estonia (down by 15% from the previous month and up by 42% from May 2022); 0,72 EUR/kg in Latvia (down by 51% from the previous month and by 45% from May 2022) and 2,94 EUR/kg in Sweden (down by 39% from the previous month and by 32% from the previous year). In May 2023, supply increased in Latvia (+132%) and Sweden (+71%) while it decreased in Estonia (-45%), relative to the previous year. Supply fluctuates strongly in the three countries analysed. Supply is strongly seasonal in Latvia with peaks between May and June. While peaks in Estonia are in May and between July and September. In Sweden peaks occur in June and August. Between months 06/2020 to 05/2023, prices fluctuated strongly in the markets assessed. In Estonia seasonal drops in prices seem to occur in May. In Sweden seasonal peaks in supply correspond to seasonal drops in prices, while the highest price of 5,69 EUR/kg was reached in March 2022. In Latvia seasonal peaks in prices seem to occur in April and August.

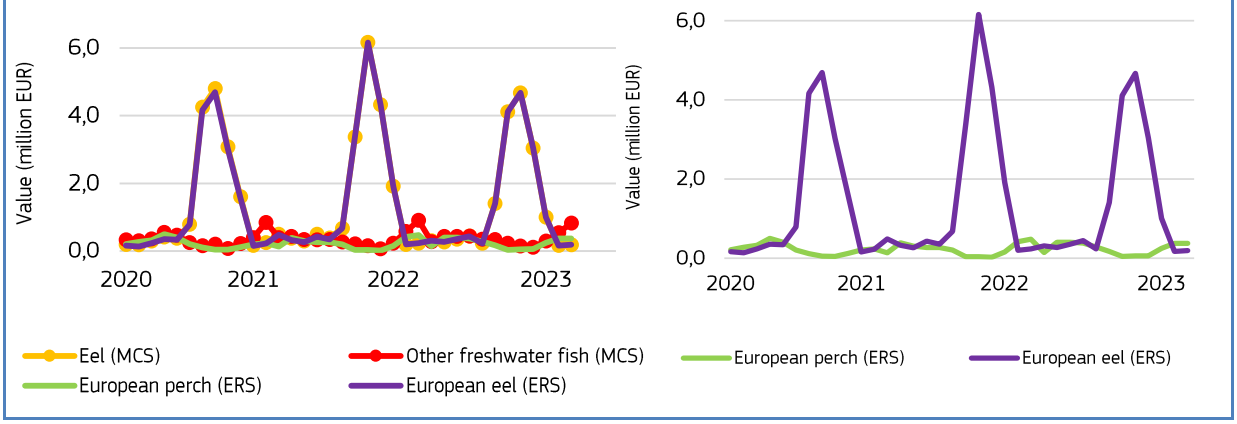
Figure 17. **FIRST SALES PRICES OF GREATER AMBERJACK IN FRANCE, THE NETHERLANDS AND SPAIN.**



EU first sales of **greater amberjack** occur in several countries as well as in **Cyprus, France** and **Italy**. In May 2023, the average first-sales prices of greater amberjack were 11,22 EUR/kg in Cyprus (up from the previous month by 7% and up from the previous year by 9%); 14,24 EUR/kg in France (up from the previous month by 29% and up from May 2022 by 46%); and 11,48 EUR/kg in Italy (up by 4% from April 2023, and up by 11% from May 2022). In May 2023, supply increased in Cyprus (+69%) and in France (+127%) while it decreased in Italy (–68%), relative to the previous year. Supply is strongly seasonal with the highest peaks occurring between September and December in France, and in August in Italy. Highest peaks in volume in Cyprus seem to occur between August and January. Between months 06/2020 to 05/2023, prices fluctuated strongly and increased in France and Italy, while they decreased in Cyprus.

1.5. Commodity group of the month: freshwater fish[5]

Figure 18. **FIRST-SALES COMPARISON AT CG, MCS, AND ERS LEVELS FOR REPORTING COUNTRIES[6], APRIL 2020 - MAY 2023**



In May 2023, the "**freshwater fish**" commodity group (CG[7]) recorded the 9th highest level in both first sales value and volume out of the 10 CGs in the countries monitored by EUMOFA[8]. In the reporting countries covered by the EUMOFA database, first sales of "freshwater fish" totalled a value of EUR 1,1 million and a volume of 783 tonnes, representing an 11 % decrease in value and a 26% decrease in volume compared to May 2022. In the past 36 months, the highest first-sales value of freshwater fish was registered in January 2021 at EUR 6,8 million.

Freshwater fish includes six main commercial species (MCS): carp, eel, freshwater catfish, pike, pike-perch and the grouping other freshwater fish[9].

At the Electronic Recording and Reporting System (ERS) level, European eel (18%) and European perch (35%) together accounted for 53% of the total first-sales value for "freshwater fish" recorded in May 2023.

1.6. Focus on European eel

European eel (*Anguilla anguilla*) is a member of the Anguillidae family. It is an amphihaline, catadromous fish, so only found naturally in water bodies connected to the sea. It migrates to the depths of the Sargasso Sea in the western Atlantic to spawn. Eel larvae are transparent and ribbon-like, brought by the Gulf Stream over 7 to 11 months to the coasts of Europe. During this time, they develop into glass eels: 6-8 cm in length, cylindrical in shape and transparent to slightly pigmented in colour. They enter the estuaries and colonize rivers and lakes. Some individuals remain in estuaries and coastal waters to grow into adults. The glass eel stage is followed by a long feeding period - from the yellow to the silver eel stage - which lasts 6-12 years in males and 9-20 years in females. At the end of their growth period, they become sexually mature, migrate to the sea and cover great distances during their spawning migration (5,000-6,000 km). The average life span of the species is usually 15-20 years. Its diet includes the whole aquatic fauna (freshwater as well as marine), augmented with animals living out of water, e.g. worms[10]. European eel inhabits the Atlantic Ocean, from the Atlantic coast from Scandinavia to Morocco, the Baltic, Black and Mediterranean Seas. It has also been introduced to Asia and South and Central America. The international trade in European eel is restricted (CITES Appendix II, since 13.3.2009).

The status of the European eel is monitored regularly, and the International Council for the Exploration of the Seas (ICES) provides scientific advice to support the development and implementation of measures for stock recovery. Scientific advice

[5] First sales data updated on 17.7.2023.
[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.
[9] European conger accounts for the highest first-sales value and volume within the grouping of „other freshwater fish species".
[10] https://www.fishbase.se/summary/Anguilla-anguilla.html

confirms that the status of eels at all life stages remains critical[11]. In 2007[12], the EU adopted the Eel Regulation which provides a framework for the recovery of the eel stock. As a result, eel fisheries are now managed under long-term plans drawn up by EU Member States at river-basin level. The plans also provide for non-fisheries conservation measures, e.g. related to habitat restoration. In December 2010 EU Member States decided not to allow the trade of European eel outside the EU. Since 2018, a 3-month fishing closure has been introduced at EU level. The measure applies to commercial and recreational fishing for eels at all life stages in the Atlantic, North and Baltic Seas, as well as in the Mediterranean[13]. In 2023, it was recommended to increase the fishing closure period to 6 months[14].

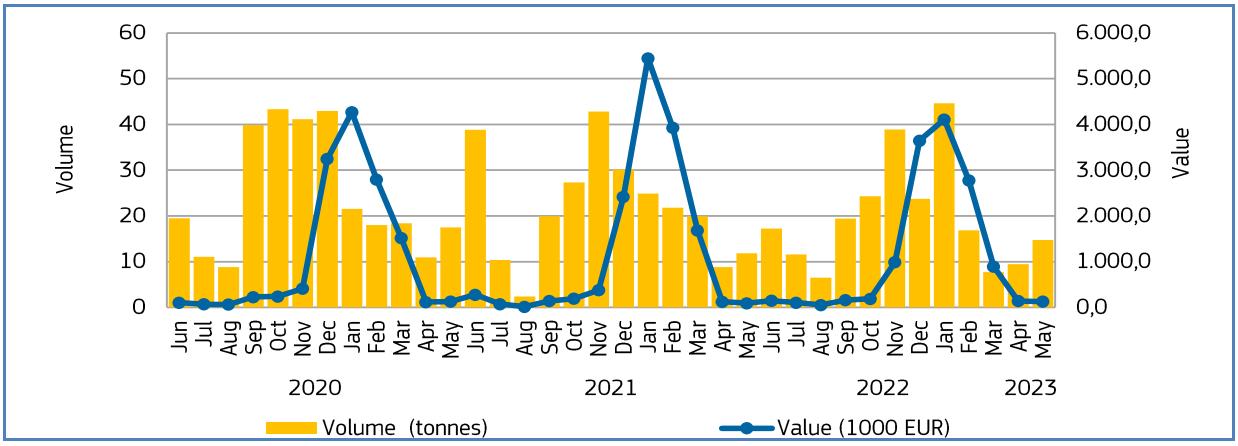
We have covered **European eel** in the following *Monthly Highlights*:
First sales: MH 7/2021 (France, the Netherlands, Portugal), MH 7/2020 (Italy, Spain, Sweden), MH 7/2019 (Denmark, Poland), MH 11/2016 (Denmark).

Selected countries

Table 17. **COMPARISON OF EUROPEAN EEL FIRST-SALES PRICES, MAIN PLACES OF SALE, AND CONTRIBUTION TO OVERALL SALES OF "FRESHWATER FISH" IN SELECTED COUNTRIES**

European eel		Changes in European eel first sales Jan-May 2023 (%)		Contribution of European eel to total "freshwater fish" first sales in May 2023 (%)	Principal places of sale Jan-May 2023 in terms of first-sales value
		Compared to Jan-May 2022	Compared to Jan-May 2021		
France	**Value**	-29%	-9%	91%	Cordemais, Charron, Arzal.
	Volume	+7%	+8%	75%	
Italy	**Value**	-17%	-46%	1%	Orbetello, Sciacca, Fano.
	Volume	-24%	-18%	1%	
Portugal	**Value**	+7%	+16%	97%	Viana do Castelo, Peniche, Vila Real de Santo António.

Figure 19. **EUROPEAN EEL: FIRST SALES IN FRANCE, JUNE 2020 - MAY 2023**



Over the past 36 months in **France**, the highest first-sales of European eel were in January 2023 when 44,7 tonnes were sold for EUR 4,1 million. Based on available data, it can be concluded that higher first sales in winter are of glass eel, while during the rest of the year first sales are of yellow and silver eel. Commercial fisheries in the Atlantic area target glass eel and yellow eel, while silver eel is allowed only in some freshwater areas. In the Mediterranean area commercial fisheries target yellow and silver eel in freshwaters and the sea.

[11] https://oceans-and-fisheries.ec.europa.eu/ocean/marine-biodiversity/eel_en
[12] Council Regulation (EC) No 1100/2007: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32007R1100
[13] https://oceans-and-fisheries.ec.europa.eu/ocean/marine-biodiversity/eel_en
[14] Council Regulation (EU) 2023/194: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32023R0194

Figure 20. **FIRST SALES: COMPOSITION OF "FRESHWATER FISH" (ERS LEVEL) IN FRANCE IN VALUE AND VOLUME, MAY 2023**

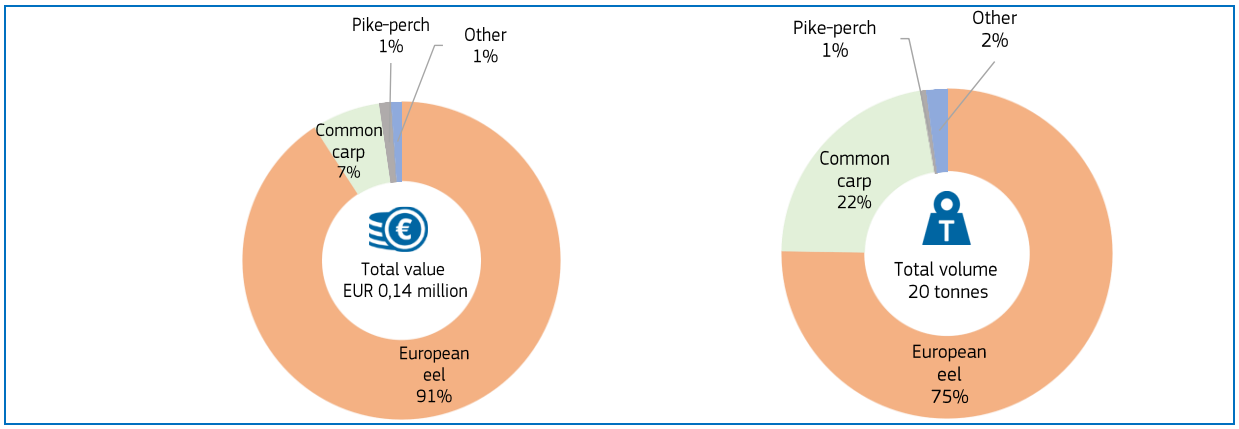
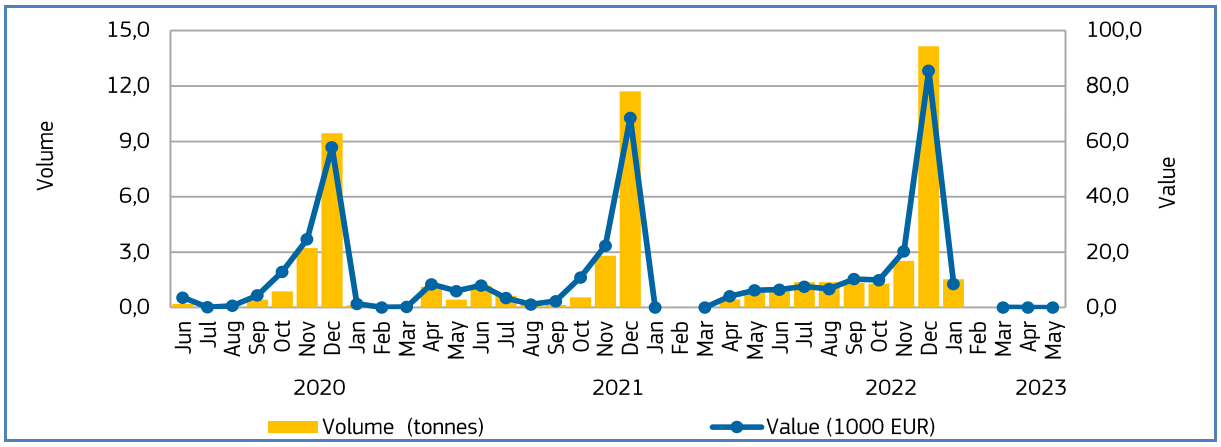
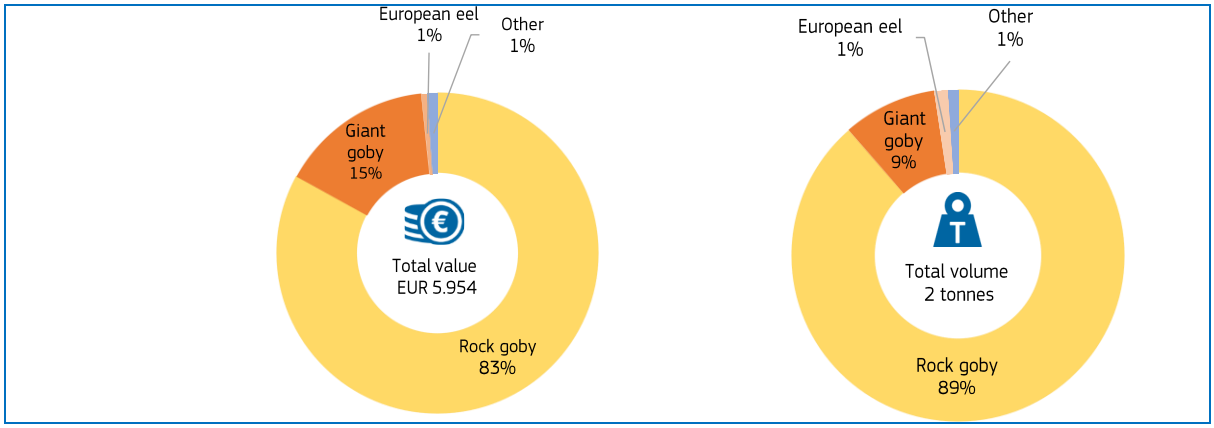


Figure 21. **EUROPEAN EEL: FIRST SALES IN ITALY, JUNE 2020 – MAY 2023**



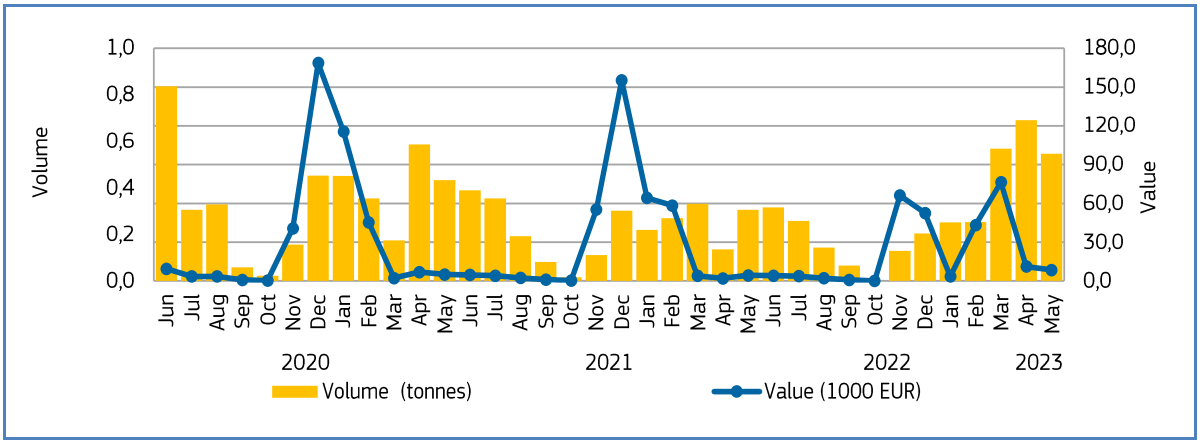
Over the past 36 months in **Italy**, the highest first-sales of European eel were in December of each observed year, peaking in December 2022 when 14,2 tonnes were sold for EUR 85.600. In Italy, eel fisheries target the yellow and the silver eel stage. These are exploited by fishers on a seasonal basis[15].

Figure 22. **FIRST SALES: COMPOSITION OF "FRESHWATER FISH" (ERS LEVEL) IN ITALY IN VALUE AND VOLUME, MAY 2023**



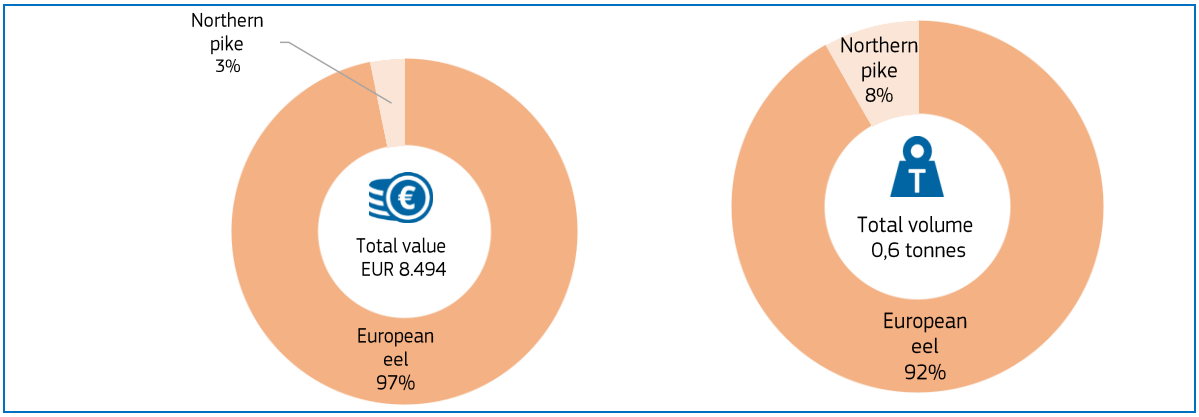
[15] https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/Fisheries%20Resources%20Steering%20Group/2019/WGEEL/CRs_2019.pdf

Figure 23. **EUROPEAN EEL: FIRST SALES IN PORTUGAL, JUNE 2020 – MAY 2023**



Over the past 36 months in **Portugal**, first sales volume of European ell peaked in June 2020 when 837 kg were sold for EUR 9.400. The highest first-sales value was recorded in December 2020 when 452 kg mainly glass eel were sold for about EUR 169.000.

Figure 24. **FIRST SALES: COMPOSITION OF "FRESHWATER FISH" (ERS LEVEL) IN PORTUGAL IN VALUE AND VOLUME, MAY 2023**



Price trend

Figure 25. **EUROPEAN EEL: FIRST-SALES PRICES IN PORTUGAL AND FRANCE, JUNE 2020 – MAY 2023**

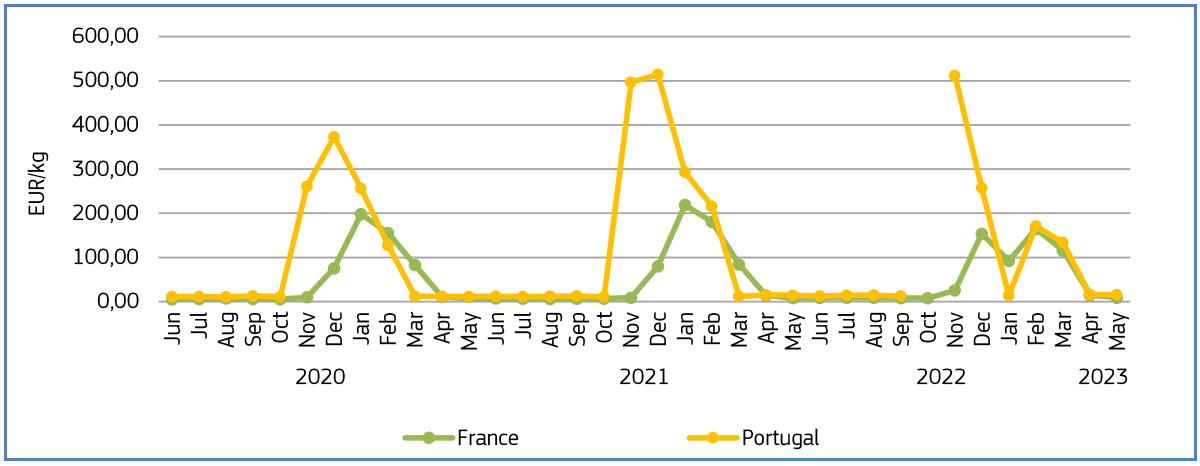
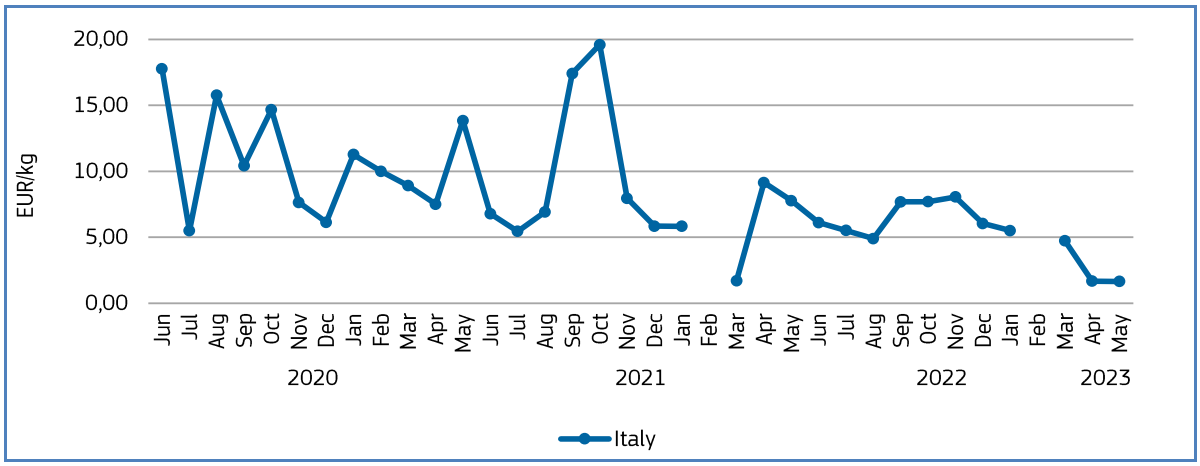


Figure 26. **EUROPEAN EEL: FIRST-SALES PRICES IN ITALY, JUNE 2020 – MAY 2023**



Over the 36-month observation period (July 2020 to May 2023), the weighted average first-sales price of European eel in **Portugal** was 99,90 EUR/kg, 90% higher than in **France** (52,46 EUR/kg), and 1.365% higher than in **Italy** (6,82 EUR/kg). EUMOFA first-sales average prices in **France** and **Portugal** refer to European eel without indication of the life stage of eel which can be either the most valued glass eel, or less valued silver eel and yellow eel. Based on available analysed first sales data and average first-sales prices reported by these countries, the main assumption is that first-sales reported in winter (mainly from December to February) are for glass eel as the price spiked, while during the rest of the year sales refer to silver or yellow eel stage. In **Italy**, eel fisheries target the yellow and the silver eel stage only. These are exploited by fishers on a seasonal basis[16].

In **France** in May 2023, the average first-sales price of European eel (8,74 EUR/kg) increased by 11% compared with May 2023 and by 21% compared with May 2021. Over the past 36 months, the average price ranged from 5,30 EUR/kg for 20 tonnes of eel in June 2020 to 218,80 EUR/kg for 25 tonnes of mainly glass eel in January 2022.

In **Italy** in May 2023, the average first-sales price of European eel (1,65 EUR/kg) decreased by 79% compared to the same month of 2022 and by 88% from May 2021. During the period observed, the lowest average price (1,65 EUR/kg for 23 kg) was in May 2023, while the highest average price (19,60 EUR/kg for 555 kg) was recorded in October 2021.

In **Portugal** in May 2023, the average first-sales price of European eel (15,53 EUR/kg) increased by 10% compared to May 2022 and by 34% compared to May 2021. During the period observed, the average price ranged from 10,57 EUR/kg for 329 kg in August 2020 to 514,21 EUR/kg for 11,7 tonnes of mostly glass eel sold in December 2021.

[16] https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/Fisheries%20Resources%20Steering%20Group/2019/WGEEL/CRs_2019.pdf

1.7. Focus on European perch

Source: Kohout, Jan, Institute of Animal Physiology and Genetics AS CR - Laboratory of Fish Genetics

European perch (*Perca fluviatilis*) is a member of the family Percidae. It inhabits a very wide range of habitats from estuarine lagoons, lakes of all types to medium-sized streams. Feeding larvae of the species occur in open water. European perch is an opportunistic diurnal feeder which preys mainly during sunrise and sunset, consuming all available prey. Larvae and small juveniles usually feed on planktonic invertebrates. During their first summer, many juveniles move near to shores to feed on benthic prey. Males attain first sexual maturity at 1-2 years and females at 2-4 years. The species spawns in February-July andmay also undertake short spawning migrations. Eggs are grouped in long white ribbons (up to 1 m) and are usually found over submerged objects[17].

European perch occupies most of Eurasia, throughout Europe to the northernmost extremity of Scandinavia, except for the Iberian Peninsula, central Italy and Adriatic basin. It can also be found in the Aegean Sea basin in Matriza and from Struma to Aliakmon drainages, the Aral Sea basin, or in Siberia in rivers draining the Arctic Ocean eastward to Kolyma. It is a widely introduced species, although several countries have reported adverse ecological impacts after its introduction.

In countries of the European Union maximum levels of perfluoroalkyl substances, which due to their non-stick and grease, oil, and water-resistant properties are used in food processing, are specified for certain foodstuffs. Maximum values have also been specified for certain synthetic chemicals of PFAs for European perch, but together cannot exceed 45 µg/kg wet weight of the muscle meat[18].

The flesh of perch is excellent and not so bony. It is utilized fresh and frozen, and is eaten pan-fried and baked. The species can be caught with natural or artificial bait[19].

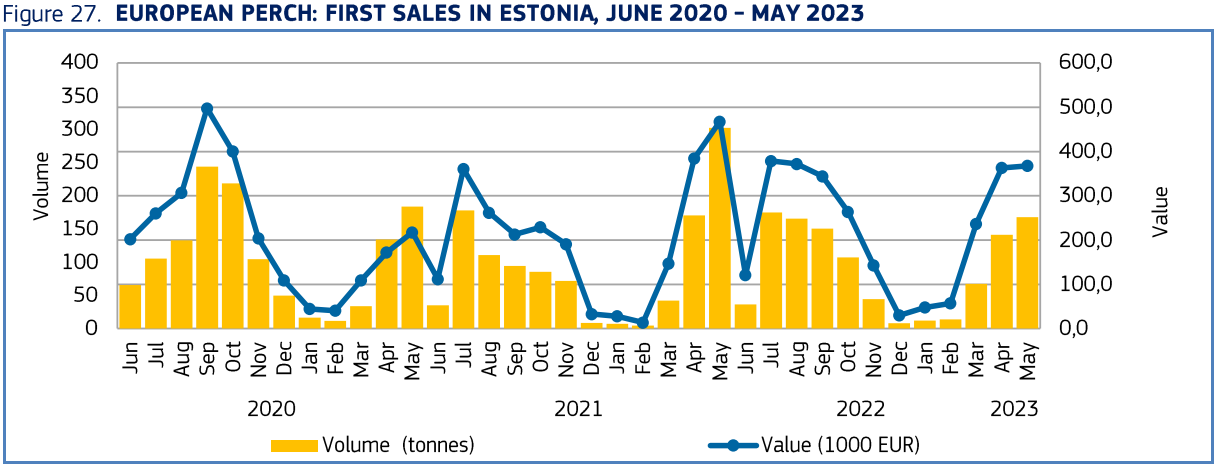
Selected countries

Table 18. **COMPARISON OF EUROPEAN PERCH FIRST-SALES PRICES, MAIN PLACES OF SALE, AND CONTRIBUTION TO OVERALL SALES OF "FRESHWATER FISH" IN SELECTED COUNTRIES**

European perch		Changes in European perch first sales Jan-May 2023 (%)		Contribution of European perch to total "freshwater fish" first sales in May 2023 (%)	Principal places of sales in Jan-May 2023 in terms of first-sales value
		Compared to Jan-May 2022	Compared to Jan-May 2021		
Estonia	**Value**	+3%	+84%	59%	Japsi kalasadam, Lindi, Liiva Meierei.
	Volume	-24%	+6%	40%	
Germany	**Value**	-58%	-48%	3%	Freest, Lietzow, Stralsund.
	Volume	-70%	-67%	1%	
Sweden	**Value**	-28%	-69%	14%	Not available.
	Volume	-8%	-85%	5%	

[17] https://www.fishbase.se/summary/melanogrammus-aeglefinus.html
[18] Commission Regulation (EU) 2022/2388: https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32022R2388
[19] https://www.fishbase.se/summary/melanogrammus-aeglefinus.html

Figure 27. **EUROPEAN PERCH: FIRST SALES IN ESTONIA, JUNE 2020 – MAY 2023**



In **Estonia**, over the observed 36-month period, the highest first sales volume of European perch occurred in May 2022 when 302 tonnes were sold for EUR 467.000. Lower sales were observed in winter each year (December-February) when they ranged from about 4 to 16 tonnes. In Estonia, the species is fished in both Lake Peipus and the Baltic Sea coastal fisheries. Catches are seasonal, occurring mainly in spring and autumn. However, during mild winters, when the water in Pärnu Bay and Lake Peipus does not freeze, the fish can be caught all year round. The Baltic Sea fisheries are regulated by the number of nets and the mesh size. In addition, in certain coastal areas fishing is prohibited throughout the year[20].

Figure 28. **FIRST SALES: COMPOSITION OF "FRESHWATER FISH" (ERS LEVEL) IN ESTONIA IN VALUE AND VOLUME, MAY 2023**

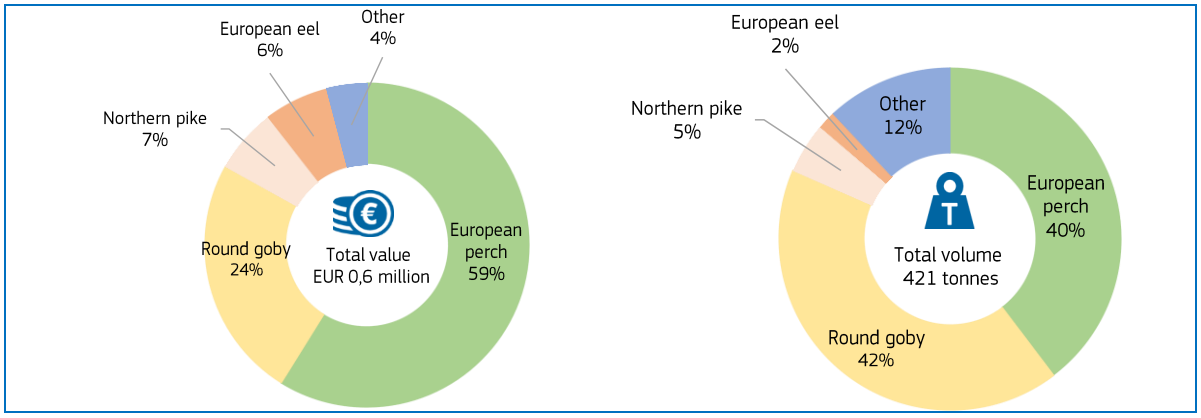
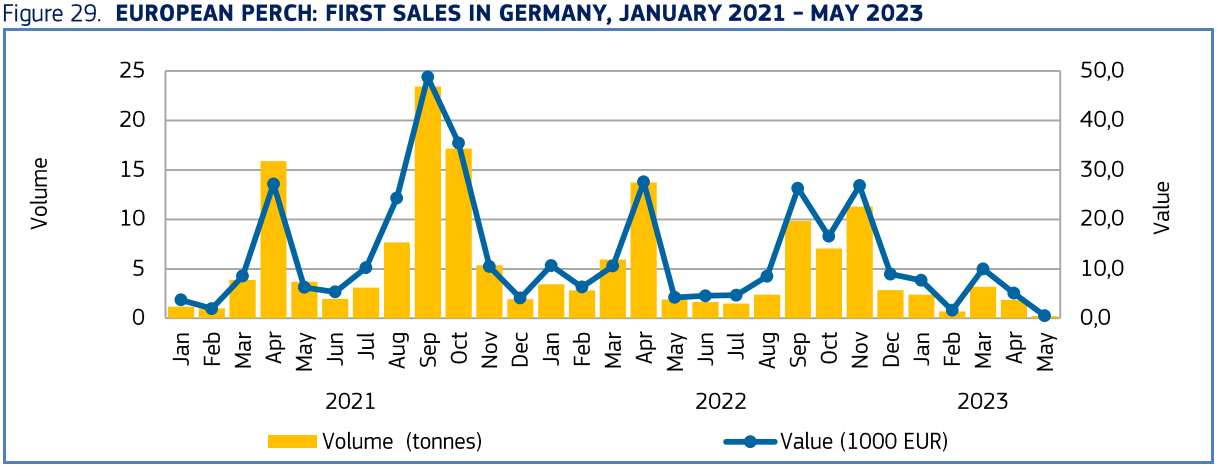


Figure 29. **EUROPEAN PERCH: FIRST SALES IN GERMANY, JANUARY 2021 – MAY 2023**



[20] https://www.riigiteataja.ee/en/eli/513062016002/consolide

In **Germany** from January 2021 to May 2023, first sales volume was highest in September 2021 with 23,4 tonnes sold for EUR about EUR 50.000. There were no first sales data available for the period June-December 2020. The lowest supply in the observed period occurred in May 2023 when 231 kg were sold.

Figure 30. **FIRST SALES: COMPOSITION OF "FRESHWATER FISH" (ERS LEVEL) IN GERMANY IN VALUE AND VOLUME, MAY 2023**

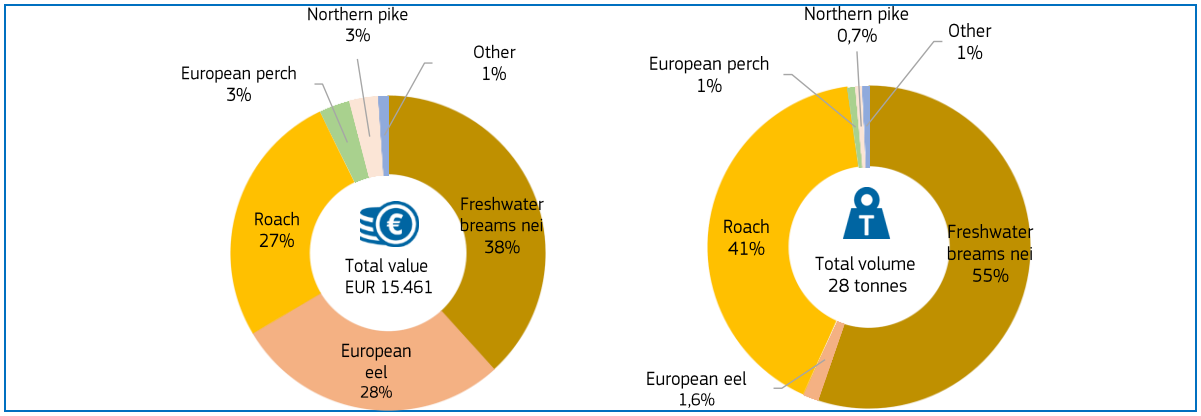
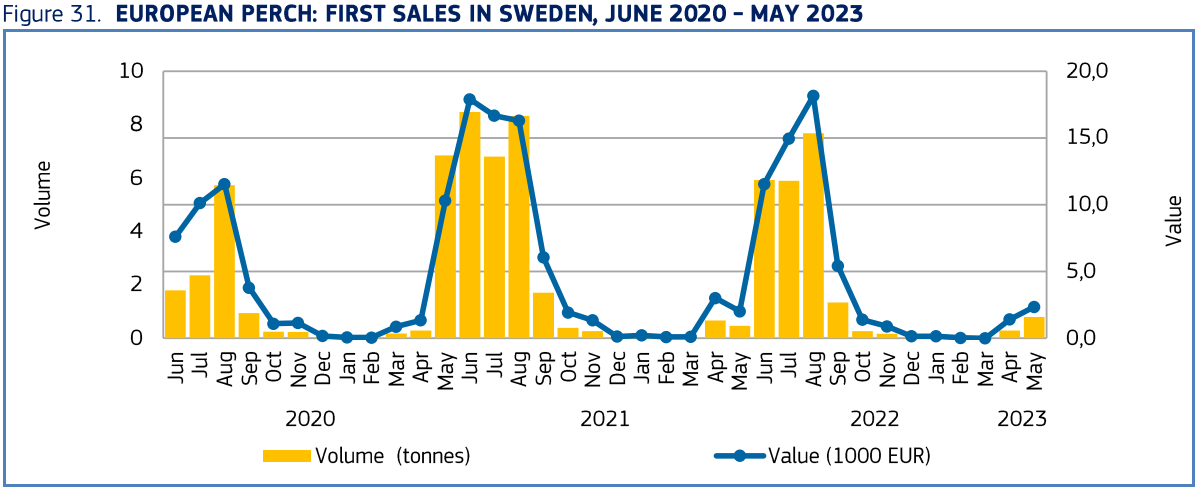
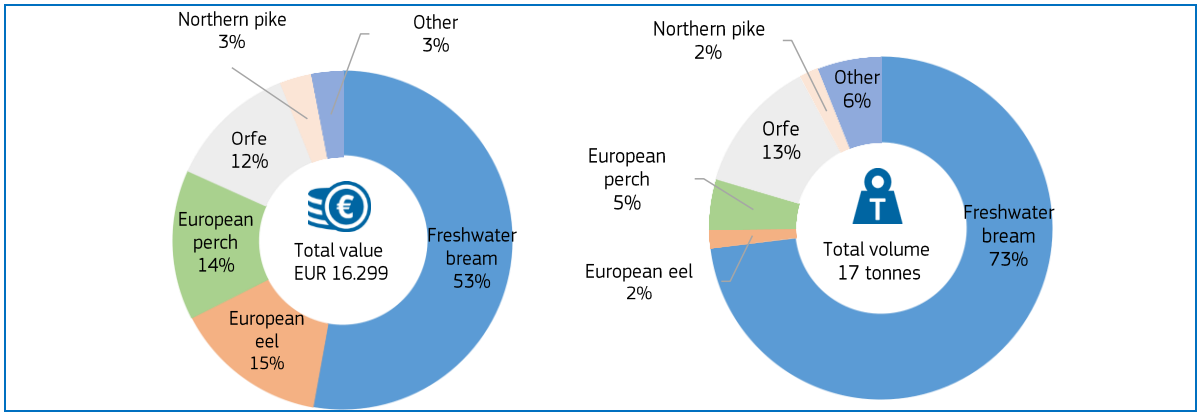


Figure 31. **EUROPEAN PERCH: FIRST SALES IN SWEDEN, JUNE 2020 – MAY 2023**



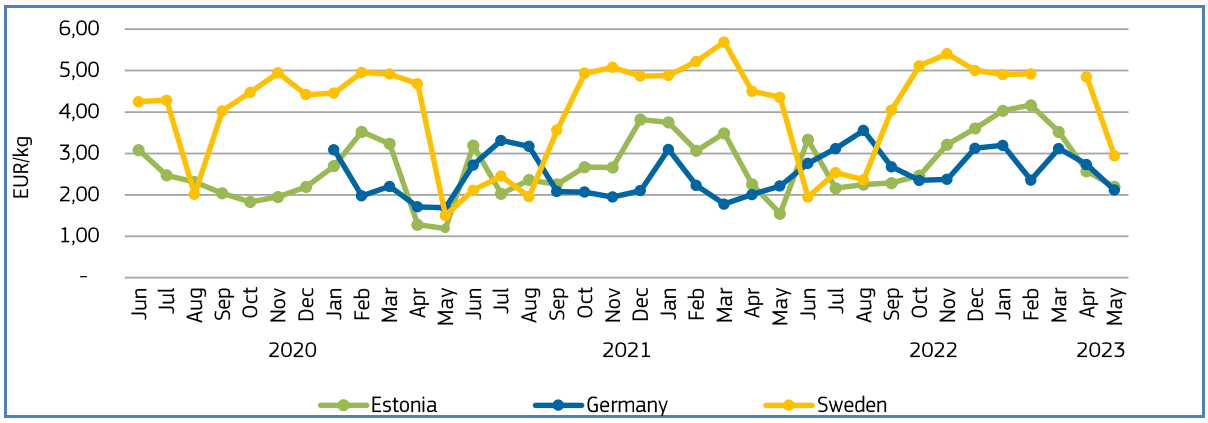
In **Sweden** over the past 36 months, the highest first sales were registered from June and August 2021, when 8,3 and 8,5 tonnes were sold. In general, the main European perch fishery occurs in the warmer period from May to September, while during the rest of the year catches are minimal.

Figure 32. **FIRST SALES: COMPOSITION OF "FRESHWATER FISH" (ERS LEVEL) IN SWEDEN IN VALUE AND VOLUME, MAY 2023**



Price trend

Figure 33. **EUROPEAN PERCH: FIRST-SALES PRICES IN SELECTED COUNTRIES, JUNE 2020 – MAY 2023**



Over the 36-month observation period (June 2020 – May 2023), the weighted average first-sales price of European perch in **Sweden** was 2,49 EUR/kg, 8% higher than **Germany** (2,31 EUR/kg), and 13% above the average price in **Estonia** (2,21 EUR/kg).

In **Estonia** in May 2023, the average first-sales price of European perch (2,19 EUR/kg) increased by 42% compared to May 2022 and by 86% compared to May 2021. The lowest average price was recorded in May 2021 at 1,18 EUR/kg for 184 tonnes, while the highest average price of 4,17 EUR/kg for 14 tonnes was recorded in February 2023.

In **Germany** in May 2023, the average first-sales price of European perch was 2,11 EUR/kg, 5% lower compared to May 2022, and 25% more than in 2021. From June to December 2020 there was no available data on first sales of European perch. The lowest price from January 2021 to May 2023 was recorded in May 2021 at 1,69 EUR/kg for 3,7 tonnes. The highest price (3,56 EUR/kg for 2,4 tonnes) was recorded in August 2022.

In **Sweden** in May 2023, the average first-sales price of European perch was 2,94 EUR/kg. That was 32% less than the first sales price in May 2022 and 96% higher than in May 2021. The lowest average price was recorded in May 2021, at 1,51 EUR/kg for 6,8 tonnes. The highest average price at 5,69 EUR/kg for 21 kg was recorded in March 2022.

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 "freshwater fish"[21].

Data analysed in the section "Extra-EU imports" are extracted from EUMOFA, as collected from the European Commission[22].

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

Extra-EU Imports		Week 23/2023	Preceding 4-week average	Week 23/2022	Notes
Fresh whole **Atlantic salmon** imported from **Norway** (*Salmo salar*, CN code 03021400)	**Price (EUR/kg)**	8,23	9,18 (-10%)	9,30 (-11%)	Over the past three years prices have been increasing reaching the maximum value of 11,28 EUR/kg (week 16/2022) to then decrease until week 35/2022 which corresponded to the maximum supply registered (week 35/2022). The lowest price registered in the analysed period was 4,32 EUR/kg (week 44/2020).
	Volume (tonnes)	11.959	9.957 (+20%)	11.139 (+7%)	Supply is seasonal and shows strong fluctuations with values ranging between 5.672 tonnes (week 15/2022) and 19.497 tonnes (week 35/2022). Peaks in supply occur most often in weeks 35/37, 40/42 and 49/50. Lowest peak seems to occur in weeks 13/15, 19 and 51/52.
Frozen **Alaska pollock** fillets imported from **China** (*Theragra chalcogramma*, CN code 03047500)	**Price (EUR/kg)**	3,21	3,32 (-4%)	3,57 (-10%)	Between weeks 01/2023 and 19/2023 prices showed some fluctuations. Prices increased until week 41/2022 reaching the maximum value of 4,03 EUR/kg and then decreased to the minimum value of 1,84 (week 48/2022). Between week 01 and week 23 of 2023 prices have been decreasing.
	Volume (tonnes)	1.817	2.227 (-18%)	1.764 (+3%)	Supply shows fluctuations but does not seem to follow a clear seasonality. Over the last three years weekly volumes ranged between 843 tonnes (week 17/2022) to 6.758 tonnes (week 48/2022).
Frozen **tropical shrimp** imported from **Ecuador** (genus *Penaeus*, CN code 03061792)	**Price (EUR/kg)**	5,93	5,78 (+3%)	5,93 (0%)	From week 01 and week 23 of 2023 prices fluctuated and showed an increasing trend, while they were quite stable over the past three years. Prices ranged between 4,27 EUR/kg (week 38/2020) to 7,19 EUR/kg (week 41/2022).
	Volume (tonnes)	2.805	2.533 (+11%)	3.361 (-17%)	Over the past three years volumes fluctuated strongly between 891 tonnes (week 09/2023) and 4.925 tonnes (week 33/2021). Peaks in supply seem to occur most often between weeks 10/11, 14/17, 31/33 and 45/46.

[21] The featured species of the commodity group of the month are frozen fillets of catfish from Viet Nam, prepared or preserved eels from China and frozen carp from Myanmar. The three randomly selected species of this month are cod salted or in brine from Norway, prepared or preserved anchovies from Morocco and fresh or chilled haddock from Norway..
[22] Last update: 10.07.2023

Figure 34. **IMPORT PRICE OF FRESH AND WHOLE ATLANTIC SALMON FROM NORWAY, 2020 – 2023**

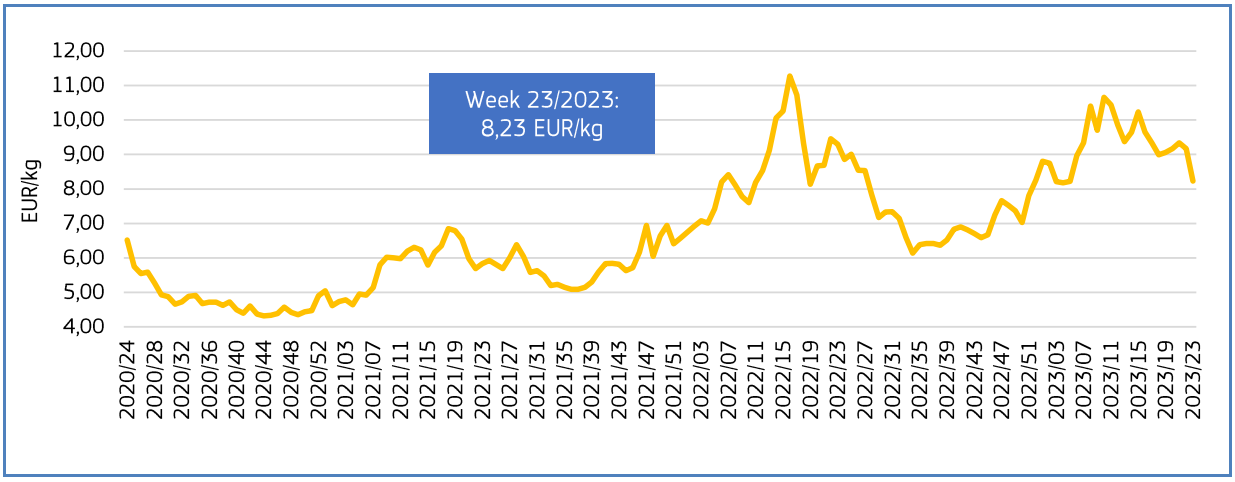


Figure 35. **IMPORT PRICE OF FROZEN ALASKA POLLOCK FILLETS FROM CHINA, 2020 – 2023**

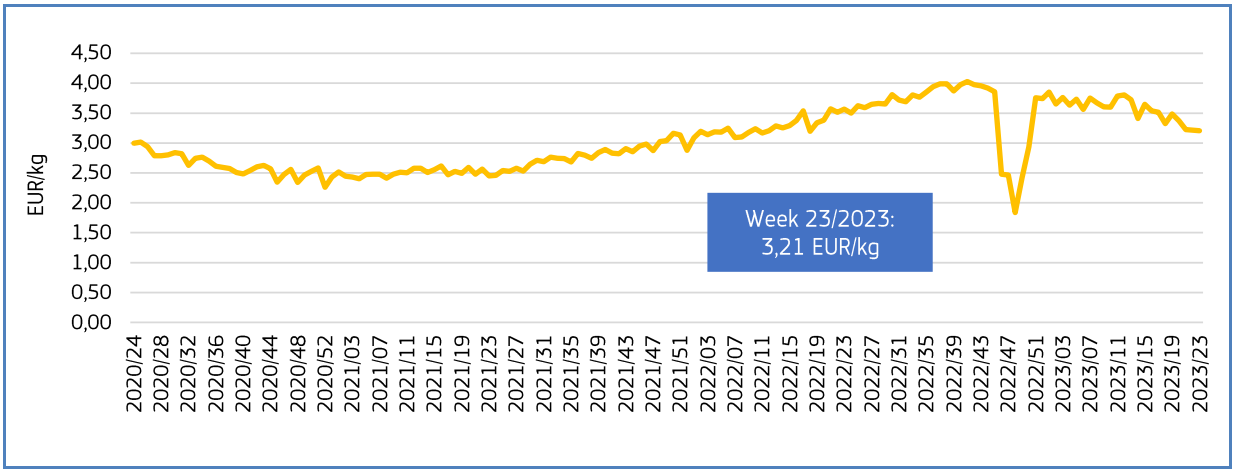


Figure 36. **IMPORT PRICE OF FROZEN TROPICAL SHRIMP FROM ECUADOR, 2020 – 2023**

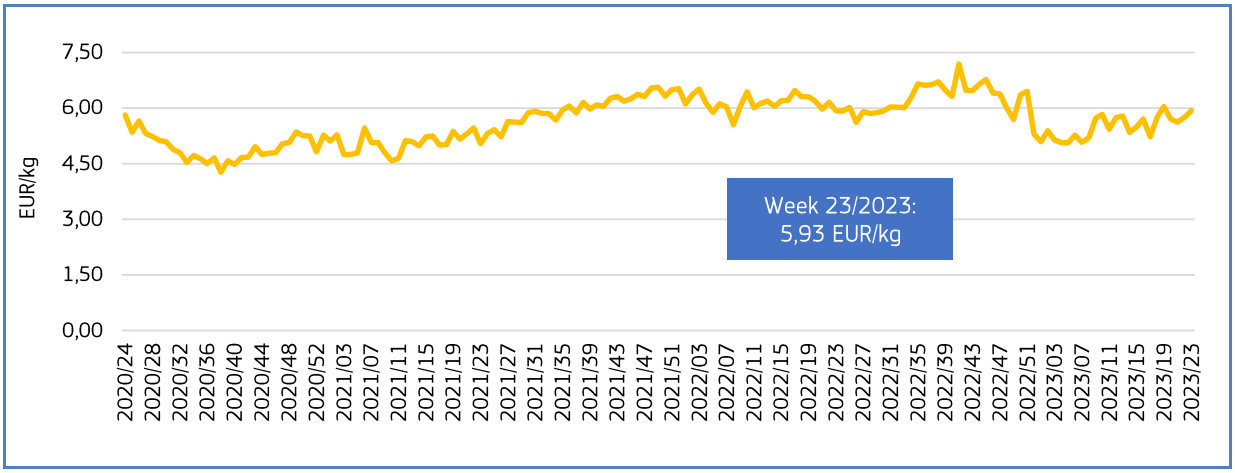


Table 20. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF THIS MONTH'S THREE FEATURED COMMODITY PRODUCTS IMPORTED INTO THE EU**

Extra-EU Imports		Week 23/2023	Preceding 4-week average	Week 23/2022	Notes
Frozen fillets of **catfish** from **Viet Nam** (*Pangasius* spp., *Silurus* spp., *Clarias* spp., *Ictalurus* spp. CN code 03046200)	**Price (EUR/kg)**	3,09	2,77 (+11%)	3,31 (-7%)	Between weeks 24/2020 to 23/2023 prices reached the minimum value of 1,44 EUR/kg in week 44/2020 to then show an increasing trend until reaching the maximum value of 3,95 in week 33/2022, followed by a decreasing trend. 49% of the weekly prices were between 2,00 EUR/kg and 3,00 EUR/kg.
	Volume (tonnes)	967	1.009 (-4%)	1.118 (-14%)	Supply fluctuates strongly and does not seem to follow a clear seasonality. Volumes ranged between 110 tonnes (week 52 of 2022) to 1.632 tonnes (week 29 of 2022). 34% of the weekly supply was more than 1.000 tonnes.
Prepared or preserved **eels**, whole or in pieces (excl. minced) from **China** (CN code 16041700)	**Price (EUR/kg)**	14,94	19,10 (-22%)	20,89 (-29%)	Between weeks 24/2020 and 23/2023 prices fluctuated strongly between 8,36 EUR/kg (week 39 of 2020) to 28,19 EUR/kg (week 05 of 2023). 48% of the weekly prices were between than 16,00 EUR/kg and 20,00 EUR/kg.
	Volume (tonnes)	36	14 (+163%)	42 (-15%)	Volumes fluctuate strongly and the highest peaks seem to occur most often in weeks 17/18, 23, 37/38, 47/50. Volumes range between 10 kg (week 34/2022) to 70 tonnes (week 38/2021). 46% of the weekly volumes were less than 10 tonnes.
Frozen **carp** from **Myanmar** (*Cyprinus* spp., *Carassius* spp., *Ctenopharyngodon idellus, Hypophthalmichthys* spp., *Cirrhinus* spp., *Mylopharyngodon piceus, Catla catla, Labeo* spp., *Osteochilus hasselti, Leptobarbus hoeveni, Megalobrama* spp., CN code 03032500)	**Price (EUR/kg)**	2,03	2,41 (-16%)	2,37 (-14%)	Prices fluctuated reaching the minimum price of 0,77 EUR/kg (week 08/2021) to then follow an increasing trend up to the maximum price of 3,19 in week 02/2023. 32% of the weekly prices were between 2,00 and 2,50 EUR/kg.
	Volume (tonnes)	68	36 (+92%)	18 (+284%)	Strong fluctuations in supply from 1 tonne (week 22/2023) to 194 tonnes (week 45/2021). Supply shows high fluctuations and seems to increase from week 25 with the highest peaks occurring between weeks 36/39 and 44/48. 47% of the weekly supply was less than 40 tonnes.

Figure 37. **IMPORT PRICE OF FROZEN FILLETS OF CATFISH FROM VIET NAM, 2020 – 2023**

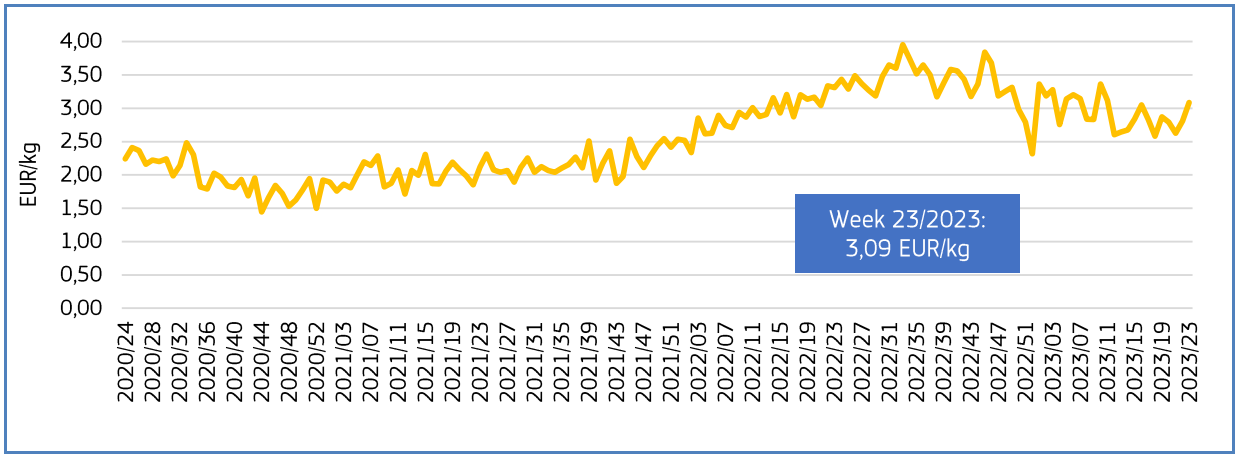


Figure 38. **IMPORT PRICE OF PREPARED OR PRESERVED EELS FROM CHINA, 2020 - 2023**

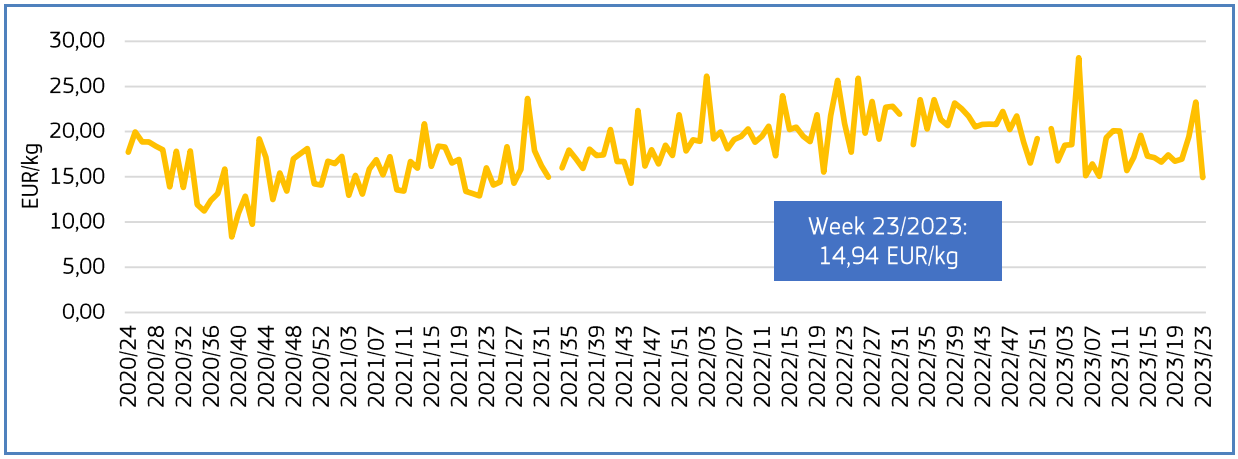
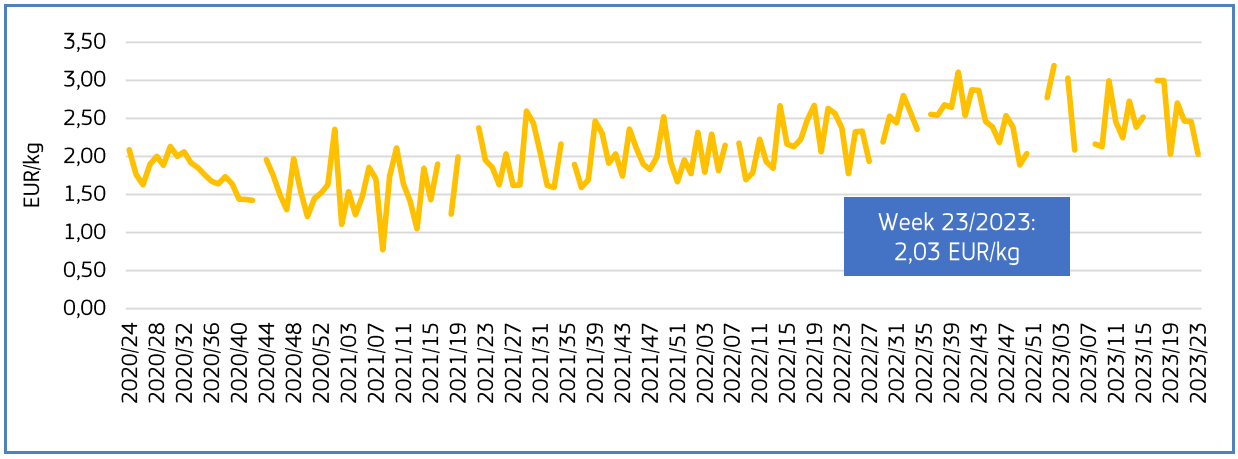


Figure 39. **IMPORT PRICE OF FROZEN CARP FROM MYANMAR, 2020 - 2023**



Between weeks 01/2023 and 23/2023, the price of frozen fillets of **catfish** from **Viet Nam** has shown a downward trend. The price ranged from 2,58 to 3,36 EUR/kg, and volume highly fluctuated between 482 to 1.468 tonnes.

Between week 01 and week 23 of 2023, the price of prepared or preserved **eels** from **China** fluctuated strongly and decreased. The price ranged from 14,94 to 28,19 EUR/kg. Supply fluctuated strongly between 375 kg and 56 tonnes.

In 2023, price of frozen **carp** from **Myanmar** showed a downward trend. Price ranged from 2,03 to 3,19 EUR/kg, and volume fluctuated strongly between 1 and 108 tonnes.

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

Extra-EU Imports		Week 23/2023	Preceding 4-week average	Week 23/2022	Notes
Cod salted or in brine only (excl. fillets and offal) from **Norway** ("*Gadus morhua, Gadus ogac, Gadus macrocephalus*", CN code 03056200)	**Price (EUR/kg)**	7,55	7,84 (-4%)	7,45 (+1%)	Between weeks 24/2020 and 23/2023 prices showed strong fluctuations reaching the minimum value of 3,85 EUR/kg in week 52/2021, followed by an increasing trend until the maximum value of 9,08 in week 29/2022. Prices then fluctuated between 8,38 EUR/kg and 6, 81 EUR/kg until the latest week analysed (23/2923). 57% of the weekly prices were below 7,00 EUR/kg.
	Volume (tonnes)	833	968 (-14%)	530 (+57%)	Supply fluctuates highly ranging from 18 tonnes (week 29/2022) to 1.777 tonnes (week 16/2022). Supply shows strong fluctuations with the highest peaks occurring most often in weeks 14/16, 18/19, and 22. The highest peaks were registered in 2022. 36% of the weekly supply was less than 200 tonnes.
Prepared or preserved **anchovies**, whole or in pieces (excl. minced). from **Morocco** (CN code 16041600)	**Price (EUR/kg)**	10,09	9,84 (+2%)	8,32 (+21%)	In the period analysed prices fluctuated and followed an upward trend ranging between 6,77 EUR/kg (week 26/2021) and 11,01 EUR/kg (week 51 of 2022). 52% of the weekly prices were between 7,50 and 8,50 EUR/kg.
	Volume (tonnes)	258	229 (+13%)	295 (-13%)	Volumes show high fluctuations ranging from 19 tonnes (week 52 of 2022) to 415 tonnes (week 31/2020). 62% of the weekly supply were higher than 200 tonnes.
Fresh or chilled **haddock** from **Norway** (*Melanogrammus aeglefinus*, CN code 03025200)	**Price (EUR/kg)**	2,14	2,61 (-18%)	1,53 (+40%)	Between weeks 24/2020 and 23/2023 prices have been increasing showing strong fluctuations ranging from 1,13 EUR/kg (week 23 of 2021) to 3,70 EUR/kg (week 06 of 2023). 42% of the weekly prices were between 1,50 EUR/kg and 2,00 EUR/kg.
	Volume (tonnes)	93	73 (+28%)	353 (-74%)	Supply has been decreasing over the period analysed. The highest peaks were registered in 2020. Volumes show very high fluctuations ranging from 5 tonnes (week 51/2021) to 620 tonnes (week 33/2020). 51% of the weekly supply was less than 100 tonnes.

Figure 40. **IMPORT PRICE OF SALTED OR IN BRINE COD FROM NORWAY, 2020 - 2023**

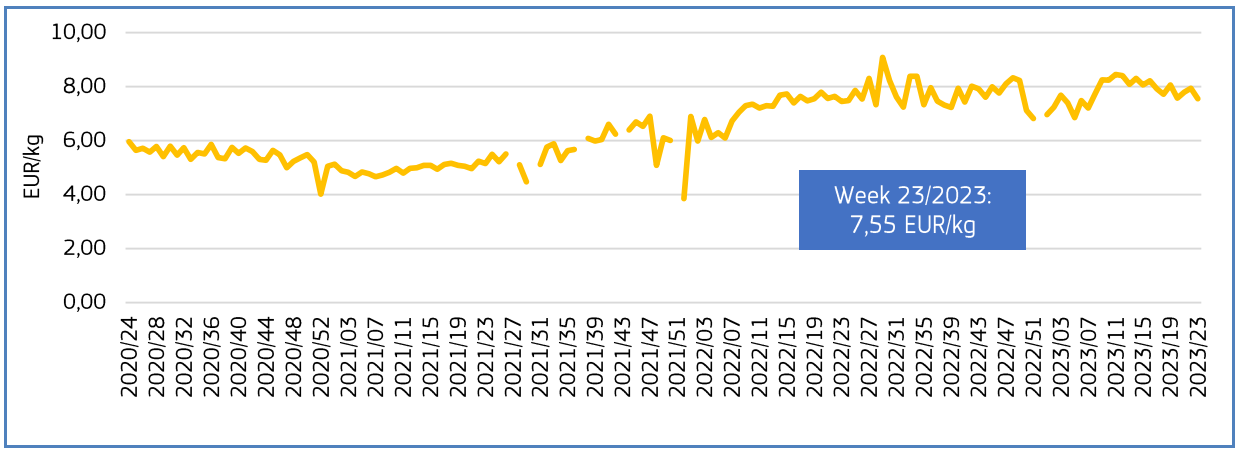


Figure 41. **IMPORT PRICE OF PREPARED OR PRESERVED ANCHOVIES FROM MOROCCO, 2020 – 2023**

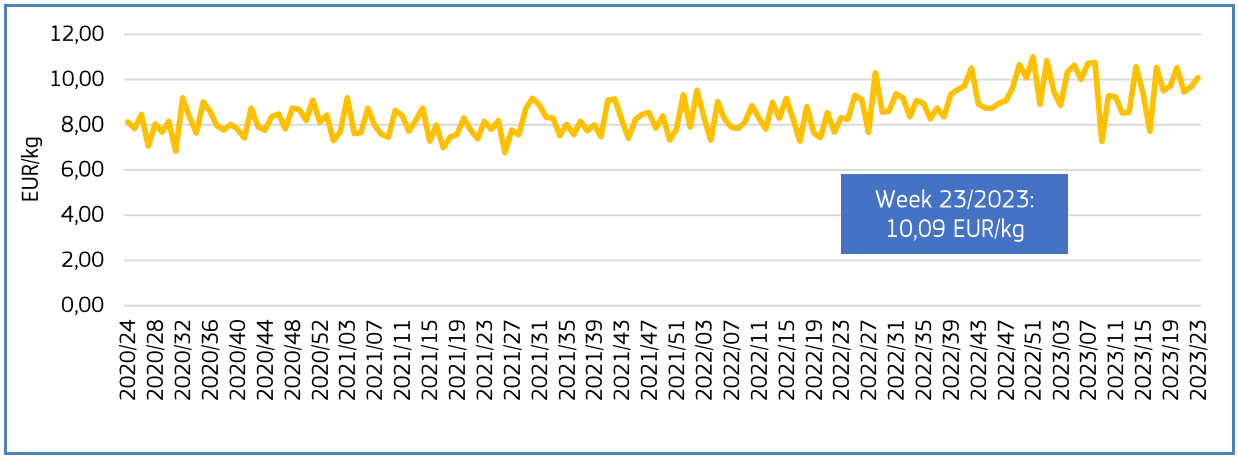
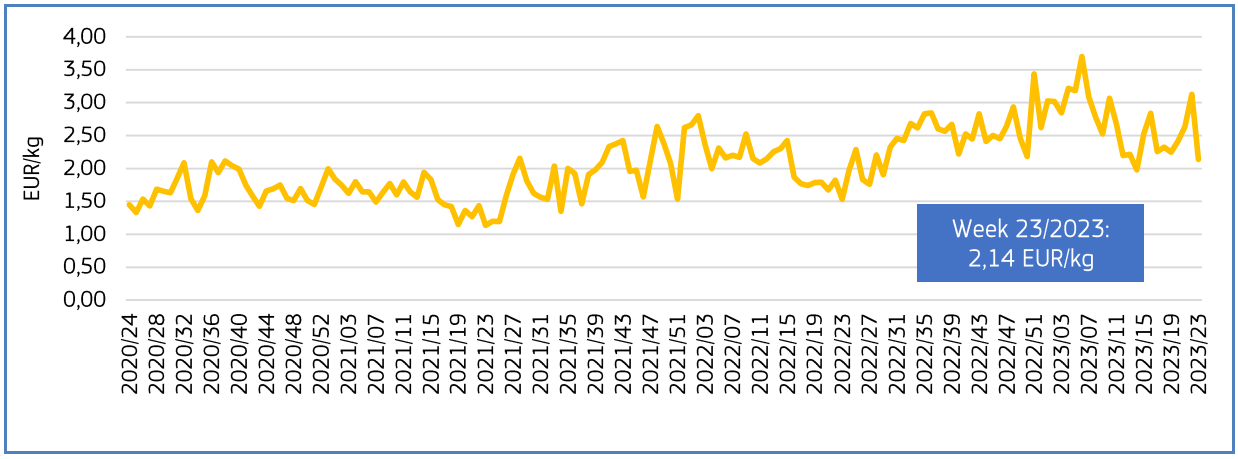


Figure 42. **IMPORT PRICE OF FRESH OR CHILLED HADDOCK FROM NORWAY, 2020 – 2023**



Since the beginning of the year, the price of salted or in brine only **cod** from **Norway** has been increasing fluctuating between 6,85 to 8,45 EUR/kg. At the same time, volume increased and fluctuated greatly ranging from 85 to 1.240 tonnes.

The price of prepared or preserved **anchovies** from **Morocco** showed a decreasing trend between week 01/2023 and 24/2023. The price ranged from 7,26 to 10,84 EUR/kg while weekly supply increased and highly fluctuated ranging from 80 to 329 tonnes.

In 2023, the price of fresh or chilled **haddock** from **Norway** has been decreasing fluctuating between 1,98 to 3,70 EUR/kg. At the same time, volume highly fluctuated ranging from 36 to 246 tonnes.

3. Consumption

3.1. HOUSEHOLD CONSUMPTION IN THE EU

Data analysed in the section "*Consumption*" are extracted from EUMOFA, as collected from Europanel[23].

In May 2023 compared with May 2022, household consumption of fresh fisheries and aquaculture products decreased in both volume and value in Hungary, Italy and the Netherlands, while in Denmark, Germany, Poland, Spain and Sweden an increase was observed in both parameters. In Ireland, consumed volume remained the same, although value increased.

Tuna (22% of volume and 35% of value) and cod (18% of volume and 3% of value) were the main species behind the highest increase in volume observed in Spain, while in Sweden, where the highest increase in value was observed, mainly trout (-5% of volume and 33% of value), salmon (1% of volume and 23% of value) and other unspecified products (7% of volume and 25% of value) contributed to the increase. The highest decrease was detected in Hungary due to lower consumption of other unspecified products (59% of volume and 42% of value).

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

Country	Per capita consumption 2020* (live weight equivalent, LWE) kg/capita/year	May 2021		May 2022		February 2023		May 2023		Change from May 2022 to May 2023	
		Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Denmark	35,17	1.221	19,95	939	16,60	989	21,52	947	19,95	1%	4%
France	32,56	17.228	224,41	13.819	180,45	15.043	205,77	13.245	187,2	4%	20%
Germany	12,81	6.528	99,89	3.642	64,67	5.133	97,52	3.827	73,20	5%	13%
Hungary	6,50	436	2,67	269	1,97	170	1,66	110	1,15	59%	42%
Ireland	21,22	1.039	16,11	879	14,14	960	16,97	877	15,56	0%	10%
Italy	29,99	23.230	251,01	22.297	252,84	18.090	222,57	18.087	220,5	19%	13%
Netherland	20,70	2.769	48,61	2.425	46,96	2.224	48,05	2.065	43,81	15%	7%
Poland	13,33	3.463	23,77	2.655	19,84	3.397	31,94	2.695	24,42	1%	23%
Portugal	57,67	6.070	40,55	4.994	35,41	3.583	28,82	4.919	37,22	2%	5%
Spain	44,21	47.787	411,73	38.377	347,59	38.886	370,83	40.786	391,0	6%	12%
Sweden	23,99	797	10,26	400	5,96	467	8,11	412	6,45	3%	8%

**Data on per capita consumption of all fish and seafood products for all EU Member States can be found at:*

Over the past three years, the average household consumption of fresh fisheries and aquaculture products in May has been below the annual average in both volume and value in all countries except Denmark, where despite the decrease in value, volume slightly increased by 1%.

The most recent weekly consumption data (up to **week 35 of 2023**) are available on the EUMOFA website and can be accessed **here**.

[23] Last update: 24.07.2023.

3.2. Fresh herring

Habitat: The name herring refers to either the Atlantic herring (*Clupea harengus harengus*) or the Pacific herring (*C. harengus pallasii*). Although once considered a separate species, they are now believed to be only sub-specifically distinct[24]. Herring is abundant on the Pacific and Atlantic coasts, and also occur occasionally in Arctic waters[25].
Catch area: Most important fishing grounds are the North Sea, the Baltic Sea, and the coastal waters of Britain, Norway, Iceland and Canada[26].
Producing countries in the EU: Sweden, Denmark, Ireland[27].
Production method: Caught.
Main consumers in the EU: Sweden, Denmark, Germany, Latvia, Lithuania.
Presentation: Whole, filleted.
Preservation: Fresh, dried, salted, smoked, canned, frozen[28].
Means of preparation: Fried, broiled, baked.

3.2.1. Overview of household consumption in Germany, the Netherlands and Sweden

In 2020, according to EUMOFA estimates, the per capita apparent consumption of fishery and aquaculture products in Sweden was above the EU average, while it was below the average in Germany and the Netherlands. In Sweden, it was estimated at 23,99 kg per capita, which was 3% higher than the EU average (23,28 kg). Consumption in the Netherlands was 20,7 kg, while in Germany it was 12,81 kg, which was 11% and 45% lower than the EU average, and 14% and 47% lower that the consumption of Sweden. See more on EU per capita consumption in Table 22.

In 2020, five species of fish represented more than half of Europe's total fishery production, where besides Alaska pollock, blue whiting, cod and mackerel, herring was the most significant with 1,9 million tonnes of production. However, in the same year the self-sufficiency of herring dropped to 79%, a remarkable decline from 93% in 2019. The drop was due to decreased quotas, which resulted in decreased catches.

Herring is among the most consumed fresh fish species in Germany, the Netherlands and Sweden, with both the highest values and prices observed in the Netherlands, where the average price for the last three years was 17,39 EUR/kg, with an average consumption of 3.237 tonnes per year.

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

First Sales: Denmark 1/2018, 3/2015, 4/2014, Mar/2013; Latvia 5/2016, 5/2015; Lithuania 5/2022; the Netherlands 5/2022; Poland 1/2018; Sweden 5/2022, 1/2016, Nov-Dec/2013; the UK 1/2018.

Consumption: Estonia 6/2015; Germany 5/2020, 2/2018, 2/2016; Latvia Nov-Dec/2013; Lithuania 6/2015, Nov-Dec/2013; the Netherlands 5/2020, 2/2018; Poland 6/2015, Nov-Dec/2013; Sweden 5/2020, 2/2018, 2/2016; the UK 2/2016, 6/2015.

Extra-EU Imports: Iceland 1/2018; Norway 7/2023, 2/2023, 1/2023, 11/2021, 10/2021, 7/2021, 5/2021, 11/2020, 3/2020, 1/2020, 10/2019, 3/2019,9/2018, 1/2018.

Topic of the month: Herring in the EU 6/2022, Atlantic herring in the EU 4/2018, Preserved herring in glass jars in Sweden 12/2016.

[24] https://www.britannica.com/animal/herring
[25] https://www.thecanadianencyclopedia.ca/en/article/herring
[26] https://www.fao.org/3/x5933e/x5933e01.htm
[27] https://www.eumofa.eu/documents/20178/384858/MH+5+EN+27.05.pdf
[28] https://www.fishbase.se/summary/24, https://www.fishbase.se/summary/1520

Figure 43. **PRICES OF FRESH HERRING PURCHASED BY GERMAN, DUTCH AND SWEDISH HOUSEHOLDS**

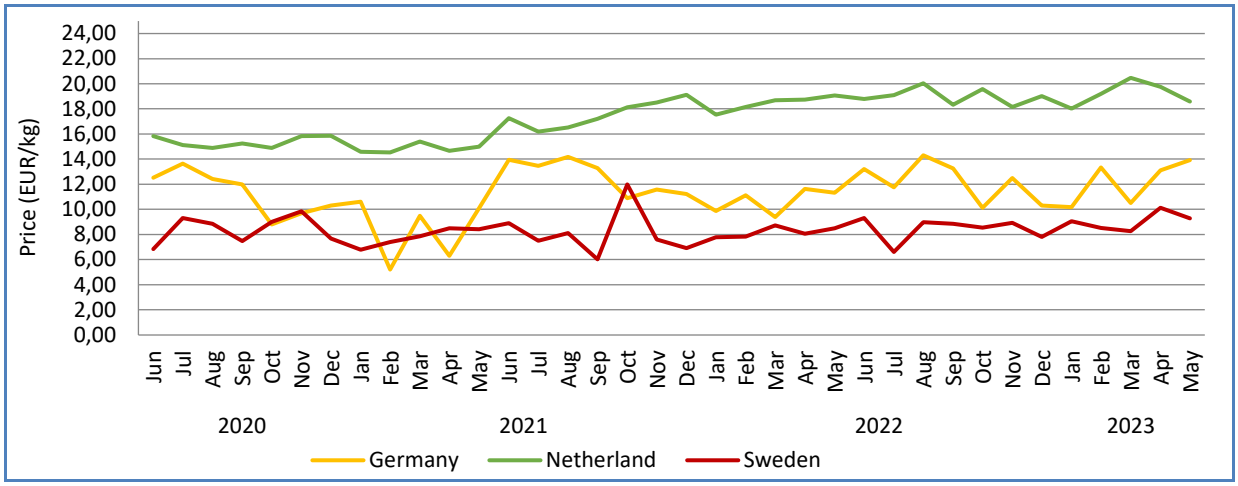
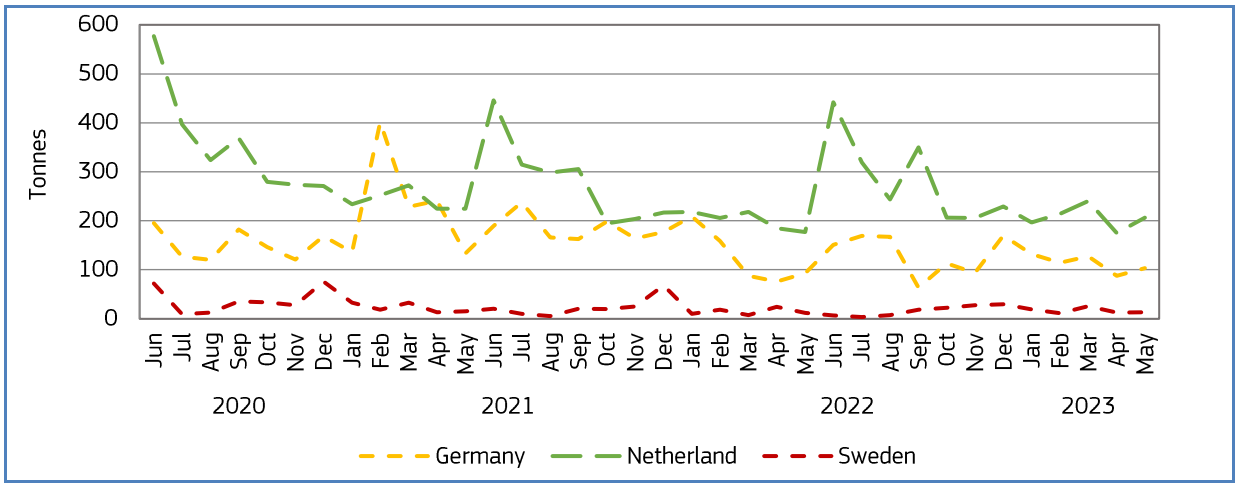


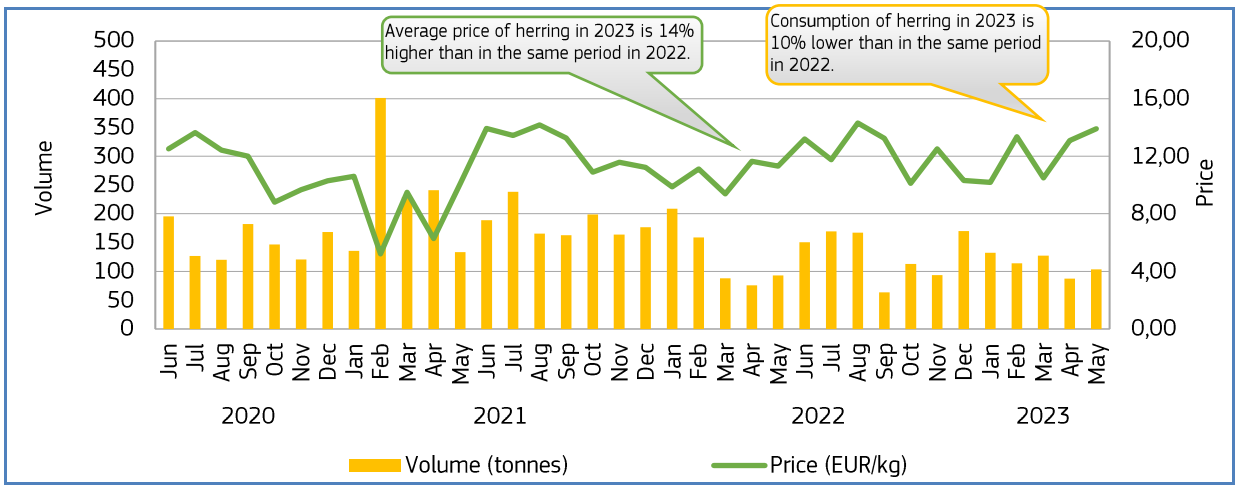
Figure 44. **HOUSEHOLD PURCHASES OF FRESH HERRING IN GERMANY, THE NETHERLANDS AND SWEDEN**



3.2.2. Household consumption trends in Germany

Long-term trend (June 2020 to May 2023): Fluctuating volumes and prices.
Yearly average price: 10,76 EUR/kg (2020), 10,85 EUR/kg (2021), 11,56 EUR/kg (2022).
Yearly consumption: 1.938 tonnes (2020), 2.435 tonnes (2021), 1.551 tonnes (2022).
Short-term trend (January to May 2023): Downward trend in volume and fluctuating prices.
Price: 12,21 EUR/kg.
Consumption: 565 tonnes.

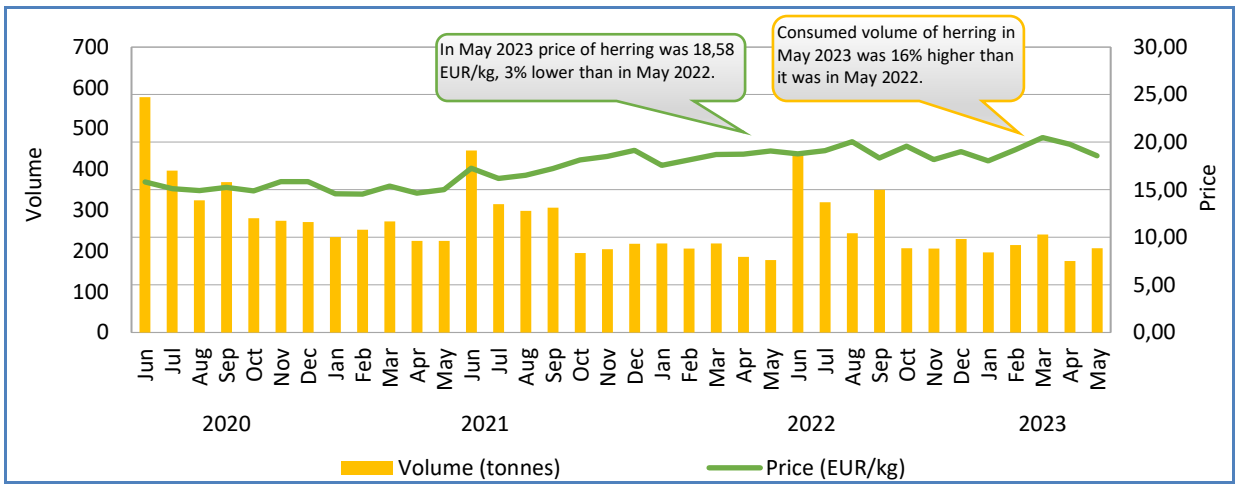
Figure 45. **RETAIL PRICE AND VOLUME OF FRESH HERRING PURCHASED BY HOUSEHOLDS IN GERMANY JUNE 2020 – MAY 2023**



3.2.3. Household consumption trends in the Netherlands

Long-term trend (June 2020 to May 2023): Downward trend in volume and upward trend in price.
Yearly average price: 15,22 EUR/kg (2020), 16,43 EUR/kg (2021), 18,77 EUR/kg (2022).
Yearly consumption: 3.736 tonnes (2020), 3.188 tonnes (2021), 3.000 tonnes (2022).
Short-term trend (January to May 2023): Relatively stable volume and fluctuating prices.
Price: 19,21 EUR/kg.
Consumption: 1.033 tonnes.

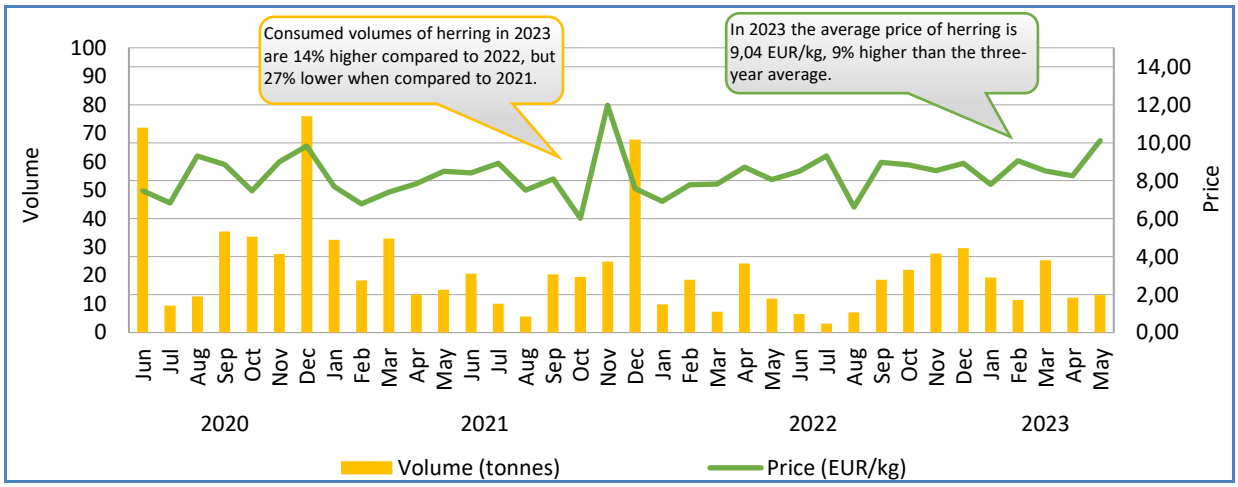
Figure 46. **RETAIL PRICE AND VOLUME OF FRESH HERRING PURCHASED BY HOUSEHOLDS IN THE NETHERLANDS JUNE 2020 – MAY 2023**



3.2.4. Household consumption trends in Sweden

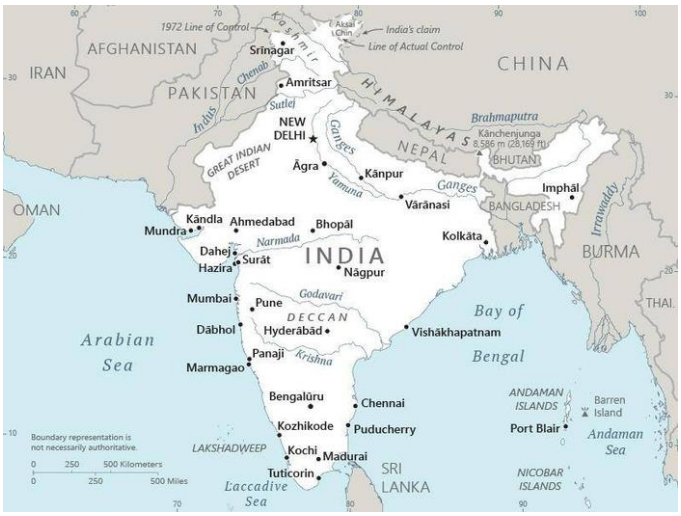
Long-term trend (June 2020 to May 2023): Downward trend in volume and fluctuating prices.
Yearly average price: 8,03 EUR/kg (2020), 8,00 EUR/kg (2021), 8,32 EUR/kg (2022).
Yearly consumption: 419 tonnes (2020), 282 tonnes (2021), 187 tonnes (2022).
Short-term trend (January to May 2023): Downward trend in volume and fluctuating prices.
Price: 9,04 EUR/kg.
Consumption: 82 tonnes.

Figure 47. **RETAIL PRICE AND VOLUME OF FRESH HERRING PURCHASED BY HOUSEHOLDS IN SWEDEN JUNE 2020 – MAY 2023**



4. Case study: Fisheries and aquaculture in India

India is in the southern part of Asia. It encompasses the entire Deccan peninsula in the south and spreads to the Himalayas in the north, with a total land area of nearly 3,3 million km^2[29]. India borders six countries: China, Nepal, Bangladesh, Bhutan, Pakistan and Myanmar.



Source: CIA, the world factbook.

The Deccan peninsula is surrounded by the Bay of Bengal and the Arabian sea, which makes the Indian coastline 7.516 km[30]. The country has numerous freshwater resources consisting of reservoirs, ponds, canals and 15 major rivers flowing into either the Bay of Bengal or the Arabian sea. When the glaciers in the Himalayas melt, the melted ice erodes the rivers and great amounts of nutrients flow with the rivers into the north-east coastal parts of the Bay of Bengal, stimulating plankton growth. Because of the good light conditions and the availability of plankton, the foundation for fisheries in this area is great, especially for pelagic fish[30].

Based on estimates from the United Nations, India will become the most populous country in the world in 2023 with 1.429 billion inhabitants[29]. India is a diverse country, containing a variety of different ethnicities and languages. The capital of India, New Delhi, is situated in the north-central part of India and is part of Delhi, the second biggest city in India, with Mumbai being the most populous city.

In 2021 India's gross national product (GNP) was $ 3,0 billion[31]. Fisheries and aquaculture accounted for around 1%[32], and numbers have shown a steady increase in the country's GNP since the turn of the millennium[33]. Three of India's biggest trading partners are the USA, China and the EU, respectively accounting for 11,6%, 11,4% and 10,8% of total Indian trade[34].

In coastal areas, fisheries have been and still are an important source of income and food, but due to a low proportion of mechanised fishing crafts and low productivity per person employed in fisheries[32], total catch volume is modest, which contributes to the low per capita consumption in India. In 2022, the Indian per capita consumption of fisheries and aquaculture products was estimated at 7,70 kg[35]. Aquaculture production of fish and shrimp has increased over the last few years, and shrimp in particular has become an important export product[36].

4.1. Fisheries and aquaculture in India

India has a long history of aquaculture with fish cultures in small ponds. The industry was modernized in the mid-19th century and production tanks for aquaculture species such as carp were utilised. Access to credit and finance, which is crucial for both growth and sustainability, is one of the major challenges to the aquaculture industry in India. In 2018, the Ministry

[29] UN. (2023). https://www.fn.no/Land/india
[30] Saha, A. et al. (2017) Impact of Plate Tectonics to The Coastal Fisheries and Environmental Dynamics in The North-East Coast of India
[31] World bank data.
[32] Tofler (2023). *Fishing sector in India | Fish farming in 2023.* https://www.tofler.in/blog/indian-company-basics/fishing-sector-in-india-fish-farming-in-2023/
[33] MacroTrends. (2022). https://www.macrotrends.net/countries/IND/india/gnp-gross-national-product
[34] European Commission. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/india_en
[35] OECD-FAO Agricultural Outlook 2019-2028.
[36] Ministry of Fisheries, Animal Husbandry and Dairying. (2023). Annual report.

of Fisheries, Animal Husbandry and Dairying launched the Fisheries and Aquaculture Infrastructure Development Fund, with the intention of achieving sustainable growth and increasing the country's fish production[37].

Fisheries in India have traditionally taken place along the coast in unmotorised wooden boats. Recently, more fishing vessels have been mechanised and new fishing areas that could not be reached earlier have become accessible with the new vessels. Around the start of the new millennium, inland fisheries overtook marine fisheries as the dominant contributor to total production and has since increased its share of total production to about 70%[38]. The dominance of inland fisheries is largely explained by a shift from capture to culture-based fisheries[39], with around 50% of inland fish production coming from culture fisheries. Post-harvest infrastructure and management, especially maintaining a proper cold chain from harvest to consumer, are challenges the Indian fishery and aquaculture sector struggle with. To tackle these challenges, the Ministry of Fisheries, Animal Husbandry and Dairying launched a variety of schemes and initiatives, such as Pradhan Mantri Matsya Sampada Yojana[41] (PMMSY), an initiative launched in 2020 under the Aatmanirbhar Bharat Covid-19 relief package[40]. PMMSY aims at addressing the gaps between the fisheries value chain and establishing a proper framework for fisheries management and securing the socio-economic prosperity of fishers and fish farmers[41]. Today, the states play an important role in fisheries governance, while the role of the central government is to complement the efforts by states in this regard under the guiding principles of cooperative federalism. Inland fisheries are fully managed by state governments, while marine fisheries are a shared responsibility between the central and coastal state governments. Coastal states are responsible for development, management and regulation of fisheries in waters inside the 12 nautical mile (NM) territorial limit and the central government is responsible for development, management and regulation of fisheries in the exclusive economic zone (EEZ) waters between 12 NM and 200 NM[42]. In 2021, India produced about 14,7 million tonnes[43] of fishery and aquaculture products (FAPs).

Fisheries production

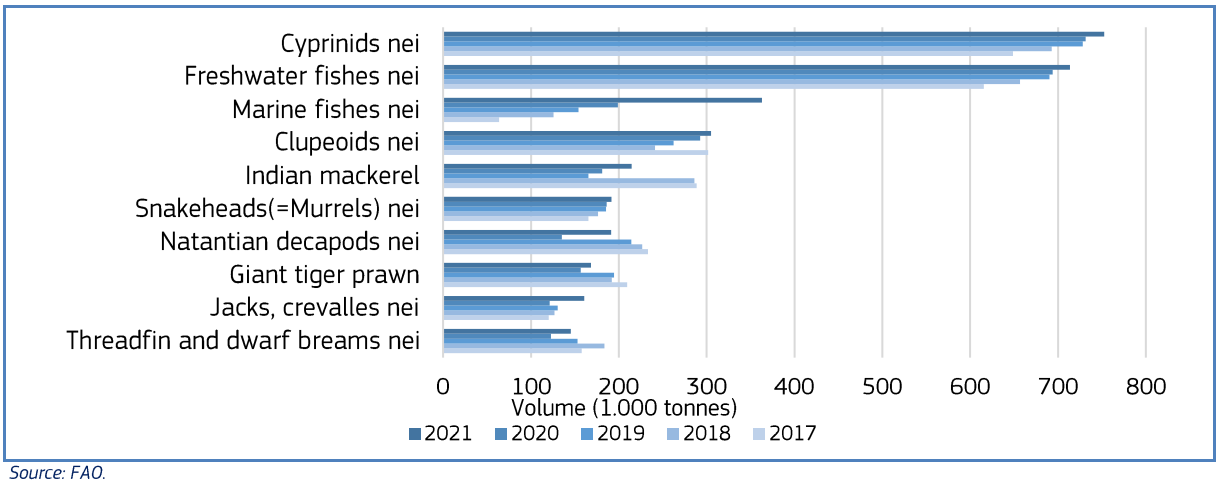
Fisheries in India are mainly carried out in coastal and inland waters as only a small amount of India's fleet is mechanised. Offshore fisheries are also practiced to some extent, but both the coastal and offshore fisheries are carried out within the Indian Exclusive Economic Zone (EEZ). For marine fishing, long line and trawling are the most used methods, whilst for inland fisheries nets, cages and seines are common fishing methods. In total, the Indian fishery provides jobs for about 28 million people. In December 2021 the Indian fleet totalled 1.463 vessels[44] with a gross tonnage (GT) of 13.011 which represented 1,2% of the world's total fleet[44].

Over the last years, the Indian fishing industry has had an increasing focus on sustainability and green certification. To obtain such certification, the Marine Aquarium Council has set four standards that must be followed: the Ecosystem and Fishery Management Standard (EFM), the Collection, Fishing and Holding Standard (CFM), the Handling, Husbandry and Transport Standard (HHT) and the Mariculture and Aquaculture Management Standard (MAM)[45].

In 2021 fisheries production in India amounted to 5.024.905 tonnes[46]. The catch volume in 2021 showed an increase of 8% from the previous year. According to FAO statistics, catches of marine fishes nei have steadily increased from 2017-2021, going from a total volume of 63.544 tonnes in 2017 to 363.103 tonnes in 2021, which represents a total increase of 471% from 2017 to 2021.

[37] Ministry of Fisheries, Animal Husbandry and Dairying. (2021). Fisheries and Aquaculture Infrastructure Development Fund
[38] Kumar, V. (2020). *Growth and trade performance of Indian fisheries: trends and constraints.*
https://www.nabard.org/auth/writereaddata/tender/2501230333growth-and-trade-performance-of%20indian%20fisheries.pdf
[39] Culture based fisheries are practices to enhance fish stocks in waters that don't have enough natural recruitment to sustain a fishery. This involves only limited interventions of stocking fish seeds and subsequent recapturing of the stocked fish at desired size. Capture fisheries harvest naturally occurring fish stocks.
[40] Government of India – Department of Fisheries. https://www.dof.gov.in/inland-fisheries
[41] Department of Fisheries. (2023). https://www.pmmsy.dof.gov.in
[42] FAOLEX. https://faolex.fao.org/docs/pdf/ind201321.pdf
[43] Ministry of Fisheries, Animal Husbandry and Dairying. (2021). Annual report 2021
[44] Government of India - Ministry of Finance. (2022). Economic Survey 2021-2022
[45] Johnson, B. Management of Indian Fisheries – Regulation and Compliance
[46] FAO statistics.

Figure 48. **TOP TEN CAPTURED SPECIES IN INDIA BY VOLUME**



Source: FAO.

Aquaculture production

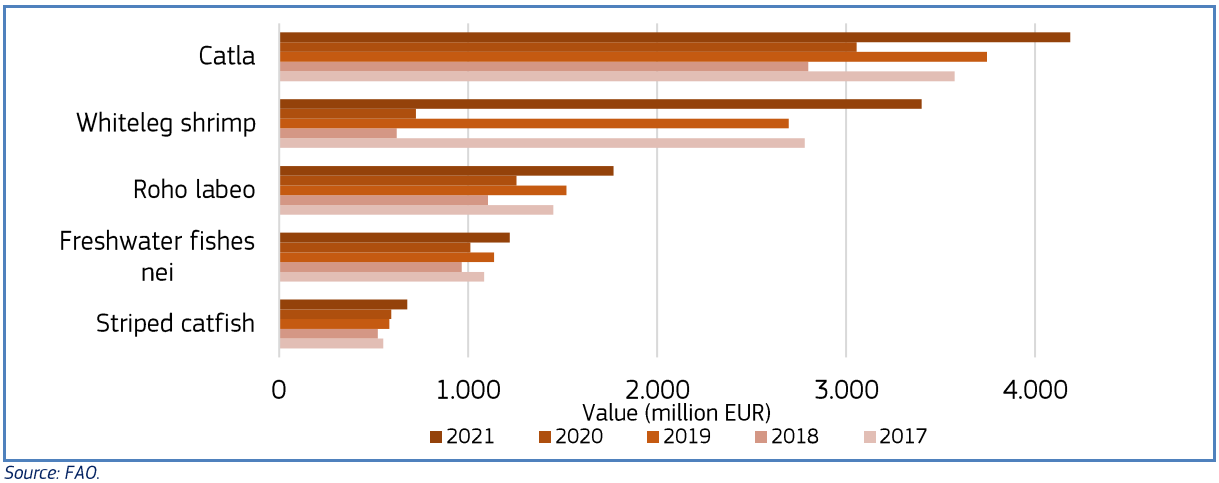
Aquaculture in India dates back more than 2.000 years, when fish were kept in tide pools in areas flooded by the monsoon and tidal waters[47]. Pond systems are the traditional and most common method used for aquaculture in India, followed by culture based in wetlands and reservoirs[43]. In recent years, cage cultures have also become more frequently used in freshwater farming.

India follows the Code of Conduct for Responsible Fisheries (CCRF) adopted by the FAO. The CCRF is a voluntary code, covering both aquaculture and fisheries, and its purpose is to set international standards of behaviour to facilitate a sustainable and responsible practice, whilst providing guidelines for conservation and management of aquatic animals with respect to biodiversity and ecosystems[48].

According to FAO statistics, total aquaculture production volume in 2021 was 9.408.300 tonnes at a value of EUR 17,3 billion [49]. The volume of produced species in 2021 showed a 9% increase since 2020, while the value increased by 11%. The volume and value increase mainly came from catla (*Labeo catla*, 7% increase in volume and value), freshwater fishes nei[50] (15% increase in volume and 16% increase in value) and whiteleg shrimp (11% increase in volume and 15% increase in value), which together accounted for 68% of the volume increase and 74% of the value increase.

[47] FAO. Evolution of Rural Aquaculture
[48] FAO. Code of Conduct for Responsible Fisheries
[49] FAO statistics.
[50] No detail is available in terms of species.

Figure 49. **TOP FIVE AQUACULTURE SPECIES IN INDIA BY VALUE**



Source: FAO.

4.2. International trade

On a global scale, India was the 5th largest exporter of fishery and aquaculture products (FAPs) in 2020 and exported goods worth EUR 5,2 billion[51]. India is a net exporter of FAPs and exported FAPs worth EUR 7,3 billion in 2022. The major contributor to India's export volume was miscellaneous shrimp species[52].

India is part of the Association of Southeast Asian Nations (ASEAN) – India Free Trade Area, creating a free trade arena between the ten member states of ASEAN[53] and India. ASEAN consists of Brunei, Cambodia, Indonesia, Laos, Malaysia, Myanmar, the Philippines, Singapore, Thailand and Vietnam. In addition to the ASEAN trade agreement, India also has a trade agreement with the Southern Common Market (MERCOSUR)[54]. MERCOSUR is a trade bloc with the four state parties Brazil, Uruguay, Paraguay, and Argentina, since Venezuela is currently suspended.

Export

In 2022, India exported 1.434.484 tonnes of FAPs at a value of EUR 7,3 billion, which represented a 5% increase in volume and a 15% increase in value compared to 2021[55]. Miscellaneous shrimp[56] (49%), other marine fish[57] (30%) and other cephalopods[58] (10%) accounted for most of the export volume, together representing 89% of total exported volume. The same three categories also made up most of the export value, with 72%, 12% and 10% respectively of the total export value.

[51] FAO. (2022). https://www.fao.org/3/cc0461en/online/sofia/2022/trade-of-aquatic-products.html
[52] No detail is available in terms of species. However, this was an aggregation of 5 HS items, namely 030617 (frozen unidentified shrimps and prawns), 030636 (fresh or chilled unidentified shrimps and prawns), 030695 (other unidentified shrimps and prawns), 160521 (prepared or preserved shrimps and prawns, not in airtight containers) and 160529 (other prepared or preserved shrimps and prawns).
[53] ASEAN. (2003). https://asean.org/framework-agreement-on-comprehensive-economic-cooperation-between-the-republic-of-india-and-the-association-of-southeast-asian-nations-bali/
[54] MERCOSUR. https://www.mercosur.int/en/about-mercosur/mercosur-countries/
[55] Trade Data Monitor.
[56] Based on FAO statistics on aquaculture production, it is assumed that shrimp exports mainly consisted of shrimps and prawns of the species whiteleg shrimp, giant tiger prawn, giant river prawn and Indian white prawn.
[57] No or limited detail is available in terms of species. However, this was an aggregation of 16 HS items, namely 030199 (unidentified live fish), 030249, 030289 (unidentified fresh fish, excl. edible offal), 030359, 030389 (unidentified frozen fish, excl. edible offal), 030449, 030459, 030489, 030499 (fresh and frozen fillets and other cuts of unidentified fish) 030539, 030549, 030554, 030559, 030569 (unidentified fish (incl. fillets) dried, salted or in brine, or smoked, excl. edible offal), 160419 (unidentified fish whole or in pieces, but not minced, prepared or preserved), and 160420 (unidentified prepared or preserved fish).
[58] No detail is available in terms of species. However, this was an aggregation of 4 HS items, namely 030742 (live, fresh or chilled cuttlefish and squid), 030743 (frozen cuttlefish and squid), 030749 (other unidentified cuttlefish and squid), 160554 (prepared or preserved cuttlefish and squid).

Miscellaneous shrimp, other marine fish and other cephalopods were mainly exported frozen whole/gutted, accounting for 89%, 64% and 97% respectively of the export volume of these main commercial species. Other marine fish mainly consisted of frozen whole unidentified[59] fish (64%) and frozen other cuts of unidentified fish (28%).

According to statistics from Trade Data Monitor for the first five months of 2023, India's export volume of FAPs amounted to 1.635.464 tonnes at a value of EUR 5,7 billion[55]. Miscellaneous shrimp represented a large part of the total volume (32%) and value (59%) of exported FAPs.

In 2022, most Indian exports went to the USA (21%), China (21%) and the EU (13%), while the USA (35%) and China (17%) accounted for most of the value, followed by the EU (15%). This was also the case in 2023, but China imported the largest volume, while the USA accounted for most of the value of exports.

In the first three months of 2023, Japan's export volume and value of FAPs amounted to 107.131 tonnes at a value of EUR 548 million. Compared to the same period in 2022, this was a 19% decrease in volume but a 2% increase in value. Other Marine fish (30%) and scallop (24%), followed by sea cucumber (7%), made up most of the value of exports.

In 2022, most Japanese exports went to China (25%), Thailand (21%) and Vietnam (14%), while exports to China (24%), the USA (15%), Hong Kong (14%) and Taiwan (9%) accounted for most of the value. This was also the case for the first three months of 2023. Of exported FAPs from Japan, 1% of the volume and 3,5% of the value went to the EU in 2022.

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

	2019		2020		2021		2022		2023*	
MCS	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**
Miscellaneous shrimp[1]	671	4.405	579	3.745	737	4.862	707	5.278	520	3.385
Other marine fish[2]	303	681	262	548	283	583	425	865	388	734
Other cephalopods[3]	171	580	123	425	135	529	140	719	111	512
Fish oil	2	3	1	2	1	2	28	70	41	122
Skipjack tuna	29	30	28	27	31	30	24	27	30	40
Octopus	16	49	12	33	17	52	22	85	18	63
Other groundfish[4]	5	3	6	4	9	4	16	9	43	16
Yellowfin tuna	15	27	11	16	5	8	9	20	14	31
Crab	8	76	6	53	7	90	9	99	6	71
Other sole[5]	6	9	6	9	5	6	6	8	10	14
Other	265	466	103	197	131	224	49	164	454	703
Total	**1.492**	**6.330**	**1.138**	**5.059**	**1.362**	**6.390**	**1.434**	**7.344**	**1.635**	**5.691**

Source: EUMOFA elaboration of figures from Trade Data Monitor.
**Up to and including May. [1]In 2022, the MCS miscellaneous shrimp was an aggregation of 5 HS items and most of the value came from frozen unidentified shrimps and prawns (89%). [2]In 2022, the MCS other marine fish was an aggregation of 16 HS items and most of the value came from frozen unidentified fish (34%), other fish of the genus herrings, anchovies, sardines, sardinella, mackerel, brisling or sprats (29%) and frozen meat from unidentified fish (28%) .[3]In 2022, the MCS other cephalopods was an aggregation of 4 HS items and most of the value came from frozen cuttlefish and squid (97%). [4]In 2022, the MCS other groundfish was an aggregation of 4 HS items and most of the value came from fresh or chilled fish from the families Bregmacerotidae, Euclichthyidae, Gadidae, Macrouridae, Melanonidae, Merlucciidae, Moridae and Muraenolepididae (98%). [5]In 2022, the MCS other sole was an aggregation of 2 HS items and most of the value came from frozen sole (99%).*

[59] Unidentified fish in the main commercial species "other marine fish" are marine species not included in other commodity groups (e.g., lumpfish, Norway pout, and sandeels). Other marine fish is part of commodity group 07 (other marine fish) which includes the species gilthead seabream, seabass, monk, sharks, ray, red mullet, gurnard, scabbardfish, cusk-eel, dogfish, pickerel, John Dory, smelt, ray's bream, weever, and marine species not included in other commodity groups. For more information, please consult the "Harmonisation" page of the EUMOFA website at the link https://www.eumofa.eu/harmonisation

Import

In 2022, India imported 48.860 tonnes of FAPs at a value of EUR 171,2 million, which was a 42% decrease in volume and an 11% decrease in value compared to 2021[60]. Freshwater catfish[61] (24% of value, 39% of volume), other marine fish (24% of value, 14% of volume), other groundfish[62] (4% of value, 14% of volume) and miscellaneous shrimp (8% of value, 22% of volume) made up most of the value and volume of imported FAPs. Most of the freshwater catfish was imported as frozen fillets (57%) and fresh whole/gutted (42%).

In the first five months of 2023, India's import volume and value of FAPs amounted to 149.020 tonnes at a value of EUR 448,2 million. The biggest contributor to these numbers was other non-food use[63], accounting for 111.966 tonnes worth EUR 330,6 million, which represented 75% of the total volume and 74% of the total value of India's imports in 2023.

In 2022, most imports came from Bangladesh (31%), Vietnam (25%) and Oman (18%), while imports from Bangladesh (28%), the USA (22%) and Vietnam (14%) accounted for most of the value. Of imported FAPs, 2,7% of the volume and 4,8% of the value came from the EU in 2022.

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

	2019		2020		2021		2022		2023*	
MCS	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**
Freshwater catfish[1]	13.805	14.908	9.617	13.609	14.214	21.433	19.108	40.593	12.836	27.233
Other marine fish[2]	12.664	35.353	16.601	57.795	15.957	53.049	7.052	29.875	4.335	9.797
Other groundfish[3]	2.665	1.564	10.903	7.593	12.812	8.636	6.914	6.057	743	787
Miscellaneous shrimp[4]	3.413	22.555	2.819	16.736	4.603	28.940	3.828	37.223	2.899	31.642
Carp	404	870	297	661	195	371	2.740	6.771	3.631	8.619
Other freshwater fish[5]	4.640	9.624	242	274	227	182	2.384	5.320	1.978	4.384
Fish oil	910	12.552	923	9.023	2.276	11.674	1.724	12.840	1.228	7.778
Miscellaneous small pelagics[6]	3.870	2.112	12.040	6.710	6.471	3.592	1.068	721	146	150
Other cephalopods[7]	934	3.381	934	2.903	878	2.884	843	3.385	473	2.146
Other non-food use[8]	175.011	365.267	609	5.693	1.701	9.393	93	1.587	111.966	330.556
Other	17.829	43.118	42.873	71.353	24.383	53.233	3.105	26.829	8.784	25.026
Total	**236.145**	**511.305**	**97.857**	**192.350**	**83.718**	**193.387**	**48.860**	**171.201**	**149.020**	**448.118**

Source: EUMOFA elaboration of figures from Trade Data Monitor.
**Up to and including May. [1]In 2022, the MCS freshwater catfish was an aggregation of 4 HS items and most of the value came from frozen catfish fillets (51%). [2]In 2022, the MCS other marine fish was an aggregation of 10 HS items and most of the value came from fresh or chilled unidentified fish (49%) and frozen meat from unidentified fish (29%). [3]In 2022, the MCS other groundfish was an aggregation of 2 HS items and most of the value came from frozen fish from the families Bregmacerotidae, Euclichthyidae, Gadidae, Macrouridae, Melanonidae, Merlucciidae, Moridae and Muraenolepididae (98%). [4]In 2022, the MCS miscellaneous shrimp was an aggregation of 4 HS items and most of the value came from frozen unidentified shrimps and prawns (59%). [5]In 2022, the MCS other freshwater fish was an aggregation of 2 HS items and most of the value came from fish of the genus tilapias, catfish and carp (82%). [6]In 2022, the MCS miscellaneous small pelagic was an aggregation of 2 HS items and most of the value came from frozen sardines, sardinella, brisling or sprats (86%). [7]In 2022, the MCS other cephalopods was an aggregation of 2 HS items and most of the value came from frozen cuttlefish and squid (84%). [8]In 2023, the MCS other non-food use was an aggregation of 4 HS items and most of the value came from fish or marine mammal solubles (99%).*

4.3. Trade flows with the EU

In 2021, Indian's trade in goods with the EU amounted to EUR 88 billion[64], making the EU India's 3rd largest trading partner after the USA and China, while for the EU India was its 10th largest trading partner. In 2021 Indian exports to the EU accounted for 2,1% of the EU's total trade in goods, with China, the USA and the UK being the largest trading partners[64].

[60] Trade Data Monitor.
[61] Of the species *Pangasius spp., Silurus spp., Clarias spp.,* and *Ictalurus spp.*
[62] Fish of the families Bregmacerotidae, Euclichthyidae, Gadidae, Macrouridae, Melanonidae, Merlucciidae, Moridae and Muraenolepididae
[63] Of which 99,5% consisted of marine mammal solubles.

Over the last decade, the trade in goods between India and the EU has increased by about 30%[64]. The EU and India are currently negotiating a Free Trade Agreement, Investment Protection Agreement and Geographical Indications Agreement[64]. The trade negotiations will, amongst other things, help small firms export more by removing barriers and ensure protection of geographical indications, while the investment protection negotiations aim to provide the investors, both from India and the EU, with a secure investment environment[65].

EU exports to India

In 2022, the EU exported 4.484 tonnes of FAPs at a value of EUR 9,4 million to India. Compared to 2021, this was a decrease of 22% in terms of volume and 36% in terms of value[66]. In the first four months of 2023, export from the EU to India amounted to 1.207 tonnes at a value of EUR 2,2 million. Compared to the same period in 2022 this was a 41% decrease in volume and a 33% decrease in value.

In terms of volume, more than 90% of EU exports of fishery and aquaculture products to India in 2022 included products for non-food use. They also covered the highest share in value (64%), followed by salmon (20%) and warmwater shrimps (8%). Exports of non-food use products mainly exited the EU from Ireland (94%) while salmon was mainly exported from Denmark (99%). Salmon exports mainly consisted of frozen fillets (53%) and smoked salmon (47%). Shrimp was exported frozen whole from the Netherlands (28%), Belgium (27%), France (24%) and Ireland (21%).

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

	2019		2020		2021		2022		2023*	
Country	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**
Ireland	3.162	2.806	4.489	5.481	5.243	6.094	3.891	2.463	967	507
Netherlands	28	172	294	1.532	75	401	160	1.415	31	275
Belgium	102	2.573	99	2.787	129	6.051	126	2.345	21	495
Denmark	22	275	116	783	60	613	110	1.830	0	0
Spain	590	705	634	798	57	201	75	283	53	238
France	29	177	105	853	76	577	68	636	5	27
Germany	50	337	34	180	25	210	35	302	0	1
Poland	10	120	17	8	22	138	14	29	86	205
Slovenia	1	0	1	3	17	83	5	34	0	0
Italy	137	535	25	418	41	262	0	10	0	0
Other	390	2.768	15	94	0	10	0	6	44	410
Total	**4.521**	**10.468**	**5.829**	**12.937**	**5.744**	**14.640**	**4.484**	**9.353**	**1.207**	**2.158**

*Source: EUMOFA elaboration of figures from Eurostat-Comext. *Up to and including April.*

[64] European Commission. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/india_en
[65] European Commission. https://policy.trade.ec.europa.eu/eu-trade-relationships-country-and-region/countries-and-regions/india/eu-india-agreement_en
[66] Eurostat-Comext.

EU imports from India

In 2022, the EU imported 181.445 tonnes of FAPs from India at a value of EUR 1,2 billion[67]. Compared to 2021, this was an increase of 21% in terms of volume and 56% in terms of value. In the first four months of 2023, imports from India to the EU amounted to 52.697 tonnes at a value of EUR 304,3 million. Compared to the same period in 2022, this was a decrease in volume of 16% and a decrease in value of 19%.

In terms of both volume and value, the most important species imported from India to the EU in 2022 were warmwater shrimp (25% of total volume and 35% of total value), squid (24% of total volume and 21% of total value), other cephalopods (19% of both total volume and value) and miscellaneous shrimp (19% of total volume and 17% of total value).

Warmwater shrimp were imported frozen whole mainly through Belgium (29%), the Netherlands (22%) and France (21%), while squid were mainly imported frozen whole though Spain (43%) and Italy (28%). Imports of other frozen whole cephalopods entered the EU through Spain (53%) and Italy (24%). Miscellaneous shrimps were mainly imported through the Netherlands (22%), Italy (21%) and Belgium (20%).

Table 26. **TOTAL IMPORTS BY MCS FROM INDIA (volume in tonnes, value in 1.000 EUR)**

	2019		2020		2021		2022		2023	
Country	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**	**Volume**	**Value**
Spain	35.617	144.893	34.371	143.443	36.358	159.611	43.887	263.657	10.837	59.960
Italy	29.418	131.726	23.040	100.716	30.456	139.889	33.385	196.332	10.788	60.176
Belgium	14.282	93.009	14.649	92.091	16.994	103.507	23.468	178.564	8.147	49.235
France	15.276	90.390	13.571	82.511	16.518	105.400	20.901	163.056	4.903	32.321
Greece	8.536	34.823	6.564	26.743	9.431	40.642	10.146	56.391	4.639	23.617
Netherlands	14.450	84.660	12.472	74.363	16.400	98.985	20.227	144.746	4.590	29.480
Portugal	12.974	53.550	9.746	37.243	11.647	46.344	12.272	63.651	3.230	15.824
Germany	3.615	23.191	3.667	21.985	4.014	24.395	6.602	56.052	2.064	15.989
Poland	1.569	9.148	2.083	9.296	2.732	10.661	2.331	10.567	1.152	5.632
Lithuania	1.398	3.362	864	2.614	1.183	3.778	3.238	10.395	940	2.650
Other	3.113	16.981	2.687	15.121	3.698	21.632	4.988	34.326	1.407	9.391
Total	**140.248**	**685.733**	**123.714**	**606.126**	**149.431**	**754.844**	**181.445**	**1.177.737**	**52.697**	**304.275**

*Source: EUMOFA elaboration of figures from Eurostat-Comext. *Up to and including April.*

4.4. Consumption

Due to changing dietary preferences, increasing incomes and urbanisation, demand and consumption of fishery and aquaculture products (FAPs) are increasing in India. From 2012 to 2016 there was a steady and steep increase in the value of consumed FAPs in India, going from EUR 845,6 billion in 2012 to EUR 1.571,5 billion in 2016 – an increase of approx. 100%[68]. Indian consumers are increasingly opting for processed FAPs, due to their ease of preparation. However, there is also an increasing focus on the safety and quality of products. Consumers want fresh and properly handled products, increasing pressure on producers to create healthy and safe products of good quality[69].

[67] Eurostat-Comext.
[68] Statista. (2022). https://www.statista.com/statistics/912289/india-consumption-value-of-fish-and-seafood/
[69] Kumar, G. S., Kulkarni, M., Rathi, N. (2022) Evolving Food Choices Among the Urban Indian Middleclass: A Qualitative Study

5. Case study: Warmwater shrimps in the EU

Warmwater shrimps are among the most produced, traded and consumed species in the world and in the EU. Global production of warmwater shrimps has continued to increase over the last decade, driven by a production increase in India, Vietnam and Ecuador. In 2022, extra-EU imports of frozen *Penaeus* shrimp reached 328.674 tonnes at a total value of EUR 2,5 billion.

5.1. Biology and production methods

Biology

Most produced and traded warmwater shrimps belong to the genus *Penaeus*. The two main species produced are the whiteleg shrimp (*Penaeus vannamei*) and the giant tiger prawn (*Penaeus monodon*).

The whiteleg shrimp is native to the Eastern Pacific coast from Sonora, Mexico through Central and South America as far south as Tumbes in Peru, in areas where water temperatures are normally above 20°C throughout the year. This species lives in tropical marine habitats. Adult whiteleg shrimps live and spawn in the open ocean, while post larvae migrate inshore to spend their juvenile, adolescent and sub-adult stages in coastal estuaries, lagoons or mangrove areas[70].

Giant tiger prawns mature and breed in tropical marine habitats and spend their larval, juvenile, adolescent and sub-adult stages in coastal estuaries, lagoons or mangrove areas. In the wild, they show marked nocturnal activity, burrowing into bottom substratum during the day and emerging at night to search for food as benthic feeders. Giant tiger prawns live along the coasts of Australia, Southeast Asia, South Asia and East Africa.

Production methods

These two *Penaeus* species are both wild-caught and farmed. For many years, farmed production has significantly exceeded wild-caught production. There are three growing culture practices for shrimp farming: extensive, semi-intensive and intensive, which corresponds to low, medium and high stocking densities, respectively.

For ***Penaeus vannamei***, captured wild seeds were used in Latin America for extensive pond culture until the late 1990s. Domestication and genetic selection programmes then provided more consistent supplies of high-quality, disease-free and/or disease-resistant varieties, which were cultured in hatcheries. Recent research conducted in the USA has focused on growing *P. vannamei* in super-intensive raceway systems enclosed in greenhouses, using no water exchange (only the replacement of evaporation losses) or discharge, stocked with specific pathogen free post larvae. These setups are bio secure, have a small ecological footprint and can produce cost-efficient, high-quality shrimp close to areas of consumption areas[71]. Several similar projects are also being developed in Europe.

Penaeus monodon was originally harvested together with other shrimp species from traditional trapping-growing ponds or as a significant by-product of extensive milkfish ponds. Due to their larger size and better survival, captured wild seeds were once commonly used in southern Asia for extensive ponds, which requires a minimal number of seed for stocking. However, the use of wild seeds has been reduced, due to overfishing and the outbreak of white spot disease in shrimp nursery grounds. Consequently, most grow-out farms now rely solely on hatchery-produced seeds[72].

Post-harvesting process: after sorting, the shrimps are washed, weighed and immediately stunned in iced water at 0–4 °C. Sodium metabisulphite is often added to the chilled water to prevent melanosis and red-head[73]. The shrimps are then

[70] Source: https://www.fao.org/fishery/docs/DOCUMENT/aquaculture/CulturedSpecies/file/en/en_whitelegshrimp.htm
[71] Ibidem
[72] Source: https://www.fao.org/fishery/zh/culturedspecies/penaeus_monodon?lang=en
[73] **Melanosis** (or blackspot), in shrimp, is a harmless but objectionable discoloration or darkening, occurring primarily along the swimmerets, head, tail and nearby shell areas. Usually "**red heads**" turn up during harvest or when shrimp are being transported to the packing plant. It occurs when the hepatopancreas bursts open inside the cephalothorax. These colorations usually lower the price of the products.

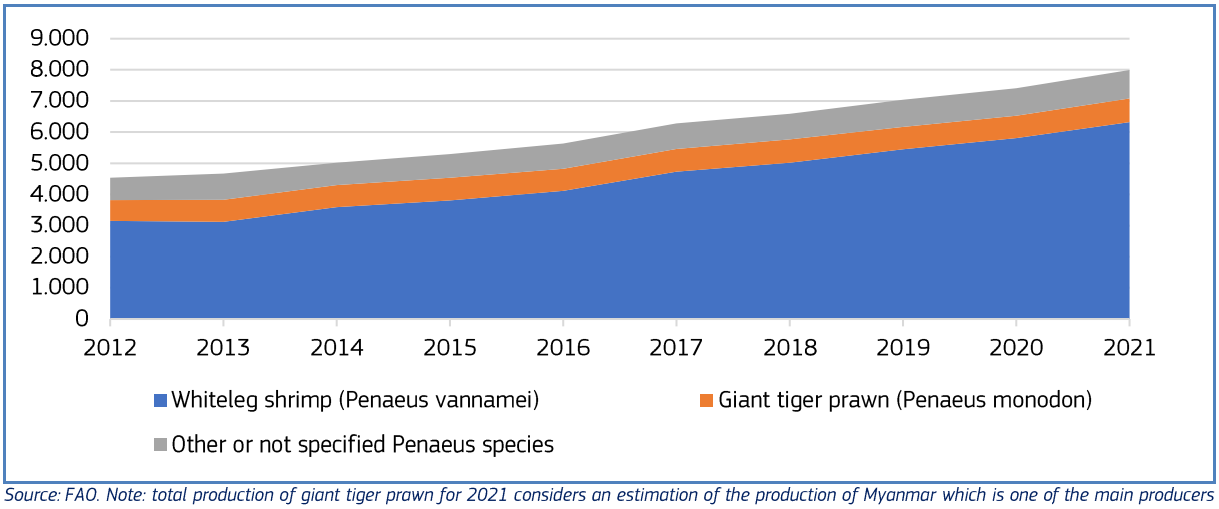
kept on ice in insulated containers and transported by truck either to processing plants or domestic shrimp markets. In processing plants, the shrimps are placed in iced bins and cleaned and sorted according to standard export sizes. The shrimps are processed, quickly frozen at -10 °C and stored at -20 °C for export, mostly by ship.

5.2. Production

Aquaculture

From the early 2000s, Asian countries have started progressively developing whiteleg shrimp (*P. vannamei)* production instead of giant tiger prawn (*P. monodon),* which could be explained by the fact that this species is less profitable and more prone to diseases[74]. Production of *P. monodon* has remained relatively stable globally, increasing by only 13% from 2012 to 2021, reaching over 755.000 tonnes in 2021. In the same period, *P. vannamei* production has strongly increased, becoming by far the main farmed shrimp species globally, facilitated by lower production costs and better disease control. Production rose from 14% of world production of farmed *Penaeus* species in 2000 to 79% in 2021, with a global production exceeding 6 million tonnes.

Figure 50. **EVOLUTION OF WORLD PRODUCTION OF FARMED PENAEUS SHRIMP 2012-2021 (in 1.000 tonnes)**



Source: FAO. Note: total production of giant tiger prawn for 2021 considers an estimation of the production of Myanmar which is one of the main producers (production data for 2021 was not available).

In 2021, China was the leading producer of farmed **whiteleg shrimp** (*P. vannamei*), supplying 31% of the global production. The same year, China was followed by India (16%), Ecuador (14%), Indonesia (12%) and Vietnam (11%). Other important producers were Thailand (6%) and Mexico (3%). Over the period between 2012 and 2021, global production of farmed whiteleg shrimp has increased significantly by 101%. India and Vietnam have experienced the most spectacular production increase (632% and 350% respectively), while Chinese production has grown by 45%. According to a recent Globefish report[75], shrimp industry leaders anticipate a 10% rise in farmed shrimp production in 2022. However, the market outlook remains uncertain worldwide in view of the current global issues and the rise in fuel and logistics costs.

According to FAO, EU production of farmed whiteleg shrimp (*P. vannamei*) consists of a small production volume in Spain (45 tonnes in 2021). There is also some EU production of Kuruma prawn (*Penaeus japonicus*) in France (about 64 tonnes in 2021).

[74] Source: https://maritimefairtrade.org/indonesia-to-revive-giant-tiger-prawn-farming/
[75] Source: https://www.fao.org/3/cc1350en/cc1350en.pdf

Table 27. **WORLD PRODUCTION OF FARMED P. VANNAMEI SHRIMP (VOLUME IN 1.000 TONNES)**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
China	1.360	1.339	1.473	1.519	1.629	1.672	1.760	1.816	1.863	1.977
India	136	211	305	416	461	583	622	724	895	997
Ecuador	281	304	340	403	422	460	560	680	761	890
Indonesia	239	376	442	410	498	758	709	678	697	759
Vietnam	148	236	353	339	380	439	475	586	621	666
Thailand	588	311	263	282	314	346	358	379	374	371
Mexico	100	60	87	130	128	150	158	170	189	182
Others	292	284	332	303	287	324	376	418	405	481
Total	**3.145**	**3.122**	**3.596**	**3.804**	**4.119**	**4.733**	**5.017**	**5.450**	**5.804**	**6.325**

Source: FAO.

Giant tiger shrimp (P. *monodon*) is mostly farmed in Asian countries. In 2017, the leading producer of farmed *P. monodon* shrimp was Vietnam which provided 38% of the world production, followed by Indonesia (19%), China (15%) and Bangladesh (10%). Other important producers were Myanmar (6%), and India (5%).

Over the last decade (2012-2021), the world production of farmed giant tiger prawn (*P. monodon)* has remained stable, with a 4% increase. The leading producers, Vietnam, Indonesia and China have increased their production by 62%, 15% and 69% respectively, while many others have experienced an increase in production (e.g., Philippines, India and Thailand).

Table 28. **WORLD PRODUCTION OF FARMED P. MONODON SHRIMP (VOLUME IN TONNES)**

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Vietnam	164.189	186.467	240.248	250.879	244.087	262.936	290.000	262.981	263.139	266.348
Indonesia	116.311	175.318	129.231	127.626	131.556	128.046	161 903	133.187	133.237	133.676
China	61.860	68.920	71.554	72.492	71.894	75.227	75 356	84.066	84.529	104.665
Bangladesh	57.785	68.948	71.430	75.274	68.217	68.272	61 709	63.171	64.688	68.704
Myanmar*	52.693	52.000	40.000	49.891	54.179	55.310	19 042	51.796	59.650	59.650
Philippines	48.197	49.467	47.843	49.527	49.139	46.068	44 780	45.733	42.093	41.701
India	131.900	78.500	70.389	82.043	57.330	58.450	59 000	34.615	31.032	37.945
Malaysia	6.577	4.483	4.205	4.286	5.655	10.133	9 906	14 633	13.525	18.120
Thailand	20.558	14.279	16.292	12.098	13.047	12.962	16 146	17.954	14.820	16.752
Others	9 255	10.530	10.570	11.087	10.756	10.849	13 655	10.809	10.512	7.771
Total	**669.325**	**708.913**	**701.763**	**735.203**	**705.859**	**728.252**	**751 497**	**718.945**	**717.225**	**755.333**

*Source: FAO. *As 2021 production data in Myanmar was not available, it was estimated that 2021 production was equal to 2020. Total production of giant tiger shrimps considers this estimation.*

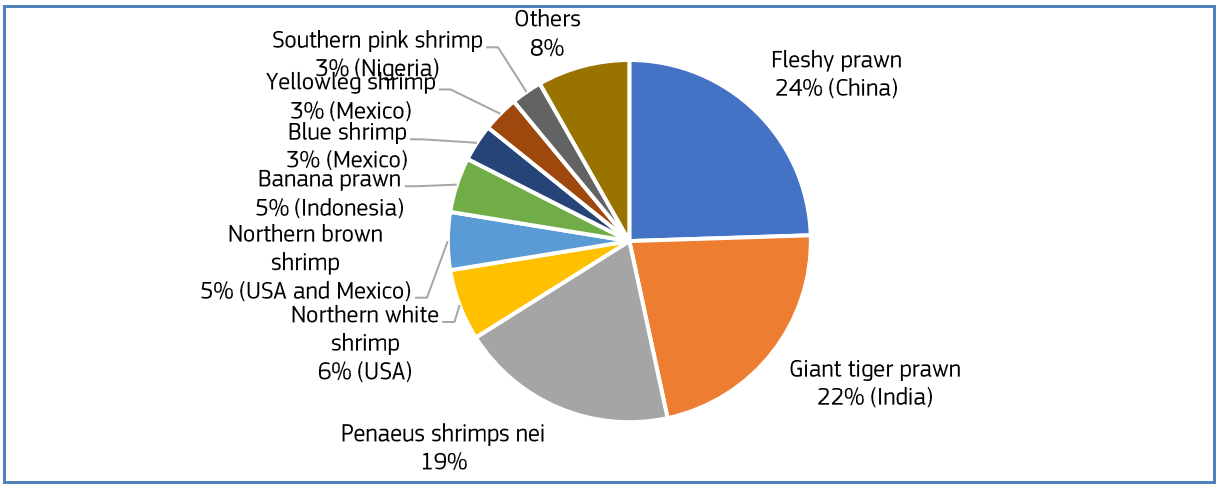
Catches

In 2021 global wild catches of *Penaeus* shrimp (all species), amounted to 849.457 tonnes. The main species caught were:

- Fleshy prawn (*Penaeus chinensis*) which amounted to 25% of the total production, mostly caught by China.
- Giant tiger prawn (*Penaeus monodon*) which amounted to 22% of the total production, 90% of which was caught by India.
- Not specified *Penaeus* species (20%), reported in catches of many countries all over the world.

Between 2012 and 2021, the world production of wild-caught *Penaeus* shrimp experienced a 10% increase, mostly attributable to fleshy prawn (+58%), blue shrimp (+66%), and yellowleg shrimp (+134%).

Figure 51. **WORLD CATCHES OF PENAEUS SHRIMP IN 2021: BREAKDOWN BY MAIN SPECIES AND RELATED MAIN PRODUCER**



Source: FAO.

According to FAO, EU catches of *Penaeus* shrimp species mostly included shrimp caught in the Mediterranean. EU catches of *Penaeus* species in 2021 amounted to about 2.600 tonnes: 52% of caramote prawn (*Melicertus kerathurus,* mostly caught by Italy, Greece and Spain) and 45% of not specified *Penaeus* shrimp (mostly caught by Spain). Since 2012, EU catches of *Penaeus* shrimp have slightly increased by 8%, with strong fluctuations over the decade.

In addition, 17.241 tonnes of deep-water rose shrimp were caught by the EU fleet in 2021 (*Parapenaeus longirostris,* mostly caught by Italy, Spain and Greece and in lesser extent by Croatia). During the period between 2012 and 2021, EU production of deep-water rose shrimp has significantly increased by 39%, driven by an increase in French, Croatian and Spanish production (410%, 335% and 65%).

Processing and marketing

Warmwater shrimps are mostly imported whole and frozen to be cooked and sold as chilled products (whether head-on or head-off and sometimes peeled). A share of these imports is also sold through the frozen products market. There are different segment types in the shrimp cooking market, based on the size, presentation and preservation, and certification of the shrimps.

Consumer preferences vary according to country. Various presentation forms for shrimps are available in the market. These include head on shell on (HOSO), peeled tail on (PTO), peeled undeveined (PUD) or peeled and deveined (P&D) and tail-on (TO). In southern Europe (e.g., Spain, France, Portugal and Italy), raw HOSO shrimp are preferred for the cooking industry. In northern Europe (e.g., the Netherlands, Germany, Belgium, Sweden, Finland, Denmark), retail PUD shrimps are popular. In the EU, *P. vannamei* shrimps are measured by pieces per kilogramme (pc/kg). The size categories of 40-50 pc/kg and 50-60 pc/kg are preferred by EU consumers. 10% of glazing is usually declared on packaging. However, *Penaeus* shrimps caught by the EU fleet are mostly marketed fresh and reach much higher prices.

Despite the increased demand for the product, the shrimp farming sector, particularly in Asia, is perceived negatively by European consumers. Aquaculture has been criticized, through the media, for its negative impact on local communities and the environment such as pollution of groundwater and agricultural land[76]. To meet increasing consumer demand for more environmentally friendly products, European buyers integrate sustainability criteria to their sourcing requirements. In recent years, organic and eco-labelled shrimp production has started in all major production regions (Madagascar, Vietnam, Honduras, Ecuador, China, India, etc.). The first example was *Penaeus monodon* from Madagascar, the first 'Label Rouge' and certified organic shrimp, historically marketed on the French market.

[76] Source : https://www.globalseafood.org/advocate/europeans-need-a-new-shrimp-narrative/

While organic *P. vannamei* are mostly sourced from Ecuador, organic *P. monodon* is farmed in several Asian countries (e.g., Bangladesh, Madagascar, India, Indonesia and Vietnam). The availability of certified shrimp in Europe has grown rapidly. In recent years numerous shrimp farms in Asia and Latin American countries have gained the environmental ASC certification[77]

5.3. Import – Export

Given the small production of shrimps in the EU, the EU shrimp market is mostly dependent on imports. Shrimps are mostly imported raw and frozen to be cooked near to areas of consumption. Countries such as Spain, Italy and France import to a large extent raw materials, mostly head on shell on, as a source for domestic shrimp cooking plants. Northern and western European countries, on the other hand, import cooked or peeled shrimps.

EU imports of frozen *Penaeus* shrimp[78] are under an Autonomous Tariff Quota (ATQ) to support the EU cooking sector. The annual quota for the period 2021-2023 is 48.000 tonnes[79].

In 2022, **extra-EU imports** of frozen *Penaeus* shrimp reached 328.674 tonnes for EUR 2,5 billion, marking a significant increase since 2013 (43% in volume and 71% in value). The same year, the main importing countries in value terms were France (23%), Spain (20%), the Netherlands (16%) and Belgium (14%). The main countries of origin in value terms were Ecuador (39%), India (26%) and Vietnam (14%).

It should be noted that other frozen shrimp (excluding *Penaeus* species, *Pandalus* species, *Crangon* species and deep-water rose shrimp)[80] are imported to the EU. In 2022, these imports reached 128.131 tonnes for EUR 975 million. The main importing countries in terms of value were Spain (53%) and Italy (18%). The main countries of origin in value terms were Argentina (49%), India (18%) and China (12%). A large share of Spanish imports comprises wild-caught Argentinian red shrimp.

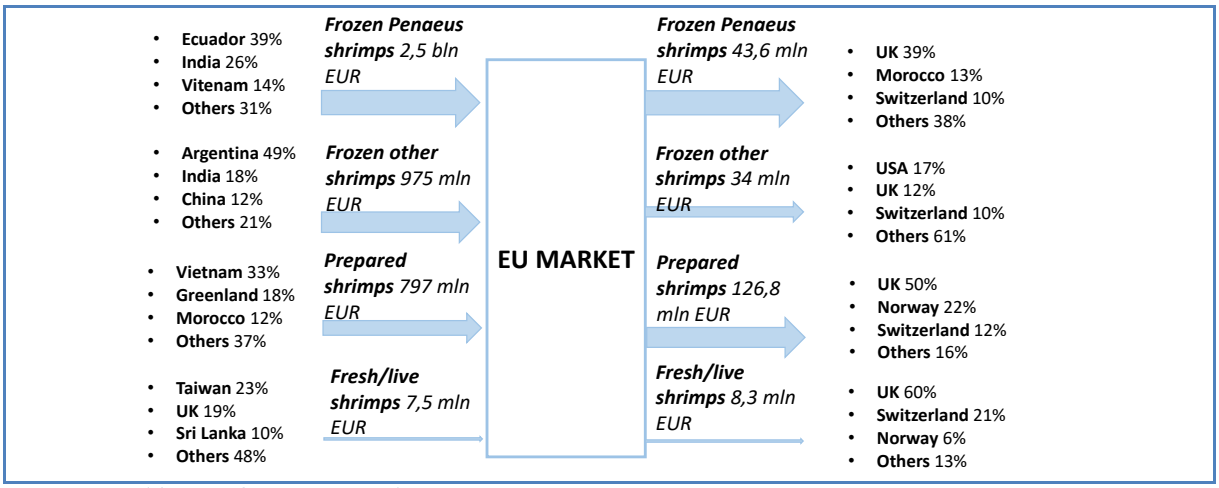
CN codes for other preservation types do not make it possible to distinguish *Penaeus* shrimp, but considering their importance in world shrimp production and trade it is likely that they account for a significant share. In 2022, for prepared/preserved shrimp[81], extra-EU imports reached 90.481 tonnes at EUR 797 million. The main importing countries in value terms were Denmark (28%), the Netherlands (26%) and to a lesser extent Sweden (12%) and Germany (11%). The main suppliers to the EU were Vietnam (33%), Greenland (18%, likely to be cold water shrimp species) and Morocco (12%). Imports from Morocco are most probably Crangon shrimps caught by the EU fleet, sent to Morocco to be peeled in specialised units and then re-exported to the EU market.

Extra-EU imports of chilled/fresh shrimp[82] are very limited (194 tonnes for EUR 7,5 million in 2021).

Extra-EU exports remained limited, with 4.983 tonnes of frozen *Penaeus* shrimp for EUR 43,6 million exported in 2022. The main destinations of the EU exports in value terms were the United Kingdom (39%), Morocco (13%) and Switzerland (10%). For prepared and preserved shrimp, extra-EU exports reached 13.203 tonnes for EUR 126,8 million in 2022. The same year, the main destinations in value terms were the UK (50%), Norway (22%) and Switzerland (12%).

[77] Source: https://www.sciencedirect.com/science/article/pii/S2666049021000451
[78] CN code03061792: Frozen shrimps of the genus "Penaeus", even smoked, whether in shell or not, incl. shrimps in shell, cooked by steaming or by boiling in water.
[79] Council Regulation (EU) 2020/1706 opening and providing for the management of autonomous Union tariff quotas for certain fishery products for the 2021-2023 period.
[80] CN code: 03061799: Frozen shrimps and prawns, even smoked, whether in shell or not, incl. shrimps and prawns in shell, cooked by steaming or by boiling in water (excl. "Pandalidae", "Crangon", deepwater rose shrimps "Parapenaeus longirostris" and "Penaeus")
[81] CN codes 16052110: Shrimps and prawns, prepared or preserved, in immediate packings of a net content of <= 2 kg (excl. merely smoked, and in airtight containers); 16052190: Shrimps and prawns, prepared or preserved, in immediate packings of a net content of > 2 kg (excl. merely smoked, and in airtight containers); 16052900: Shrimps and prawns, prepared or preserved, in airtight containers (excl. smoked)
[82] CN code 03063690: Shrimps and prawns, whether in shell or not, live, fresh or chilled (excl. "Pandalidae" and "Crangon")

Figure 52. **EXTRA-EU TRADE FLOWS FOR SHRIMP PRODUCTS IN 2022**

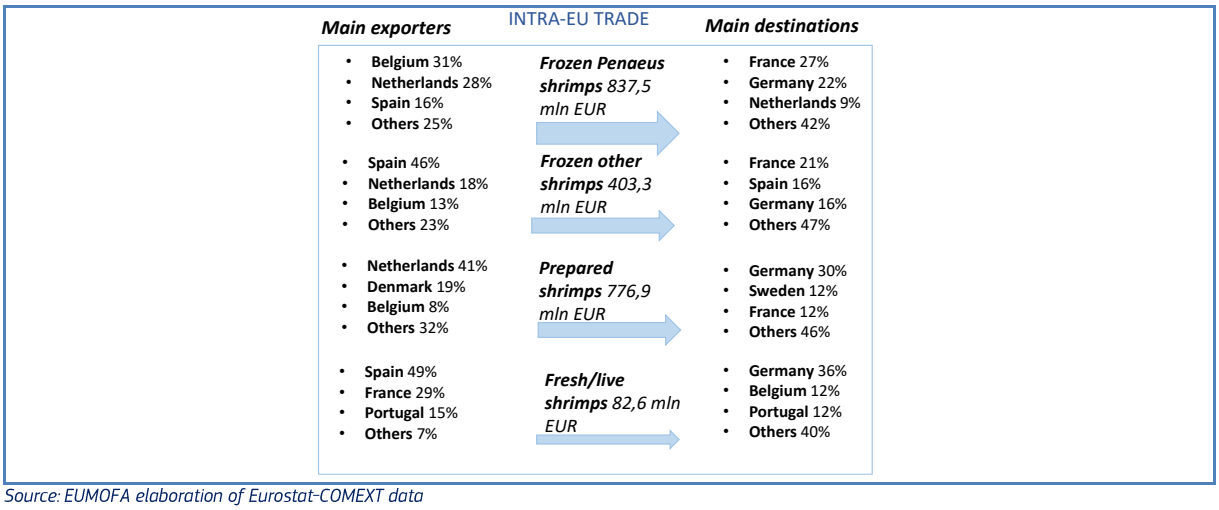


Source: EUMOFA elaboration of Eurostat-COMEXT data

In 2022, **intra-EU exports** of frozen *Penaeus* shrimp reached 89.176 tonnes for EUR 837,5 million. Main exporting countries in value terms were Belgium (31%) and the Netherlands (28%), which are hubs for extra-EU imports. They were followed by Spain (16%) and Germany (8%). The main destinations were France (27%) and Germany (22%) and the Netherlands (9%).

Fresh/chilled shrimp intra-EU exports reached 9.304 tonnes for EUR 82,6 million, a significant share being cooked and chilled shrimp moving from Spain to Portugal.

Figure 53. **INTRA EU EXPORT FLOWS FOR SHRIMP PRODUCTS IN 2022**

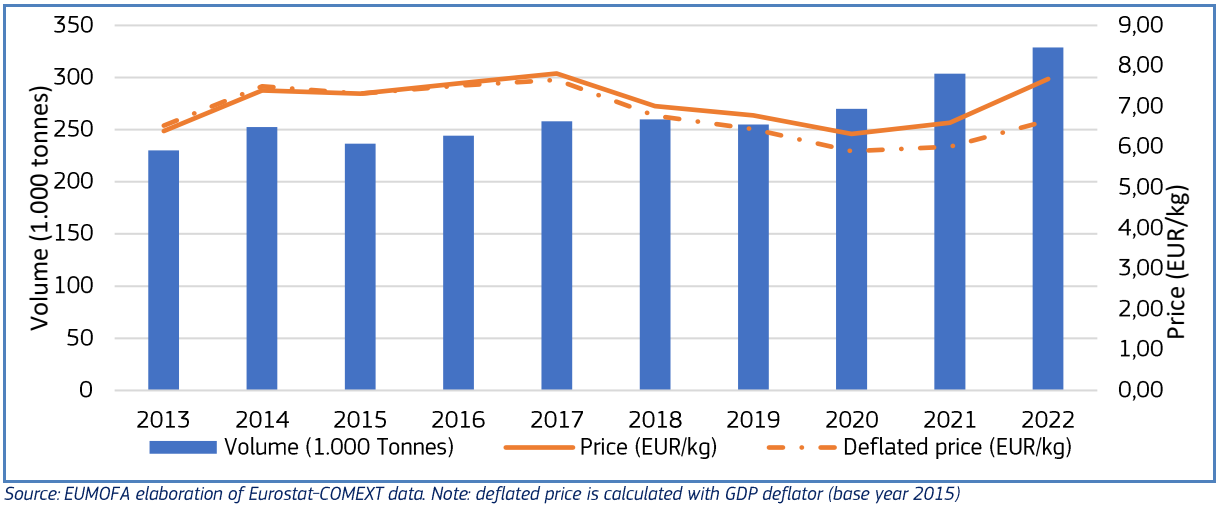


Source: EUMOFA elaboration of Eurostat-COMEXT data

5.4. Latest trends on the shrimp market

Extra-EU imports of frozen *Penaeus* shrimp have increased significantly in the period between 2013 and 2022. Imports have increased particularly since 2021, following the re-opening of restaurants and catering which increased overall demand for both raw and prepared shrimps throughout the EU. Prices have remained relatively stable between 2020 and 2021 (+4%) but increased significantly in 2022 (by 16% in comparison to 2021 and by 21% in comparison to 2020), due to the rise in costs for freight, labour and packing[83]. According to a recent report, the export industry in Asia and Latin America is concerned about possible weakening in demand in Europe in relation to the pressure on prices[84].

Figure 54. **EXTRA EU IMPORTS OF FROZEN PENAEUS SHRIMP 2013-2022**



Source: EUMOFA elaboration of Eurostat-COMEXT data. Note: deflated price is calculated with GDP deflator (base year 2015)

[83] Source: https://www.fao.org/3/cc1350en/cc1350en.pdf
[84] Ibidem

6. Global highlights

EU / Maritime transport: The Commission welcomed the agreement reached on 7 July at the International Maritime Organization (IMO) to revise its 2018 strategy on reducing greenhouse gas (GHG) emissions from ships. The agreement is a milestone to cut the carbon footprint of international maritime transport and ensure that the shipping sector makes a fair contribution to achieving the Paris Agreement targets, commensurate to its 3% share of global emissions. Now that the agreement has been reached, it is important to start implementation as soon as possible[85].

EU / Fishery: On 5 July, the Commission responded to the European citizens' initiative **'Stop finning – Stop the trade'** which calls on the Commission to take action to end international trade of loose shark fins. The cruel and illegal practice of 'finning' means fins have been cut off the animal and the shark is thrown back to sea while it may still be alive. The Commission welcomed the initiative and planned to take action in three areas, including examining the opportunity of initiating legislation to end trade in loose fins, starting an impact assessment and improving relevant statistics. The Commission would also step up the enforcement of EU traceability measures and engage with international partners[86].

EU / Madagascar / Fishery: On 30 June, the EU and Madagascar signed a new sustainable fisheries **partnership agreement** (SFPA), and its implementing protocol. This new agreement represents a milestone in fisheries governance, since it restores the fisheries partnership between the EU and Madagascar that had been interrupted since 2018 and will contribute to good fisheries governance. The signature marks the start of the application of the agreement and protocol, so that fishing vessels from EU Member States may apply to fish in Madagascar again[87].

GFCM / Black Sea: On 17 July, the General Fisheries Commission for the Mediterranean (GFCM) of the Food and Agriculture Organization (FAO) of the United Nations launched a major scientific database on Black Sea fisheries. The **platform**, which was created collaboratively within the **BlackSea4Fish** project, is planned to act as a research hub and bring together scientists, students, administrators and members of the public interested in fisheries-related topics[88].

Iceland / Fishery: The catch of Icelandic vessels in June 2023 was about 35.000 tonnes, 1% less than in June 2022. Demersal catch was 30.000 tonnes and pelagic catch was only 2.000 tonnes. In the 12-month-period from July 2022 to June 2023 the overall catch was 1.346.000 tonnes which is 10% less than in the same period one year earlier[89].

UK / Fishery control: UK authorities moved a step closer on the introduction of remote electronic monitoring (REM) for fishing vessels to ensure compliance in helping to sustain fish stocks and prevent the overfishing of quotas. The UK Government is considering automatic cameras and sensors to enable officials to conduct audits, also including EU-registered vessels. A number of boats are involved in pilot schemes in British waters, and include cameras and officials examining the use of sensors to detect or measure fishing operations such as the movement of net[90].

EU / Vigo: During the afternoon of 16 July, one of the three EFCA offshore patrol vessels (OPVs), the Ocean Guardian, opened its doors to receive the citizens of Vigo to visit it. The aim of this event, organised with the collaboration of the European Commission Office in Spain, was to raise awareness about the EU as part of the activities under the EU Spanish Presidency[91].

[85] https://ec.europa.eu/commission/presscorner/detail/en/IP_23_3745
[86] https://ec.europa.eu/commission/presscorner/detail/en/IP_23_3676
[87] https://oceans-and-fisheries.ec.europa.eu/news/new-sustainable-fisheries-partnership-agreement-signed-between-eu-and-madagascar-2023-06-30_en
[88] https://www.fao.org/gfcm/news/detail/en/c/1644702/
[89] https://statice.is/publications/news-archive/fisheries/fish-catch-in-july-2023/
[90] https://thefishingdaily.com/featured-news/ministers-to-unveil-plans-for-rem-to-stop-overfishing-in-british-waters/
[91] https://www.efca.europa.eu/en/content/pressroom/patrol-vessel-ocean-guardian-chartered-european-fisheries-control-agency-opens-its

7. Macroeconomic Context

7.1. Marine fuel

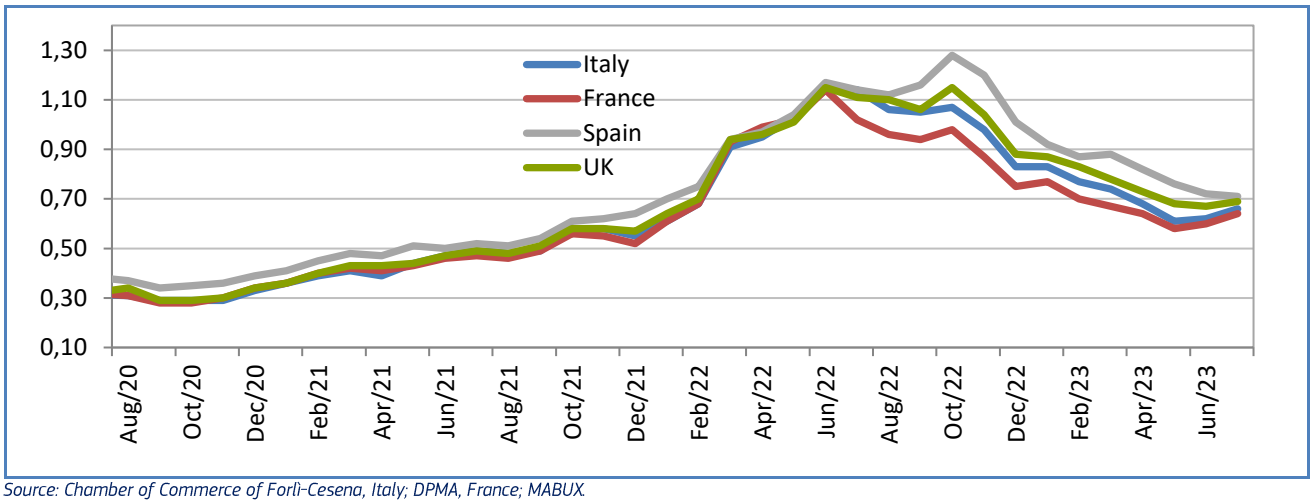
Average prices for Marine fuel in **July 2023** ranged between 0,64 and 0,71 EUR/litre in ports in **France, Italy, Spain,** and the **UK**. Prices increased by an average of about 3,4% compared with the previous month, and they decreased by an average of 38,8% compared with the same month in 2022.

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

Member State	July 2023	Change from June 2023	Change from July 2022
France *(ports of Lorient and Boulogne)*	0,64	7%	-37%
Italy *(ports of Ancona and Livorno)*	0,66	6%	-42%
Spain *(ports of A Coruña and Vigo)*	0,71	-1%	-38%
The UK *(ports of Grimsby and Aberdeen)*	0,69	3%	-38%

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

Figure 58. **AVERAGE PRICE OF MARINE DIESEL IN ITALY, FRANCE, SPAIN, AND THE UK (EUR/litre)**

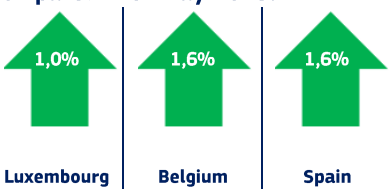


Source: Chamber of Commerce of Forlì-Cesena, Italy; DPMA, France; MABUX.

7.2. Consumer prices

The EU annual inflation rate was at 6,4% in June 2023, down from 7,1% in May 2023. A year earlier, the rate was 9,6%.

Inflation: lowest rates in June 2023, compared with May 2023.



Inflation: highest rates in June 2023, compared with May 2023.

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

	Jun 2021	Jun 2022	May 2023	Jun 2023	Change from May 2023	Change from Jun 2022
Food and non-alcoholic beverages	111,03	123,88	140,78	140,99	↑ 0,1%	↑ 13,8%
Fish and seafood	114,36	126,78	138,99	139,18	↑ 0,1%	↑ 9,8%

Source: Eurostat.

7.3. Exchange rates

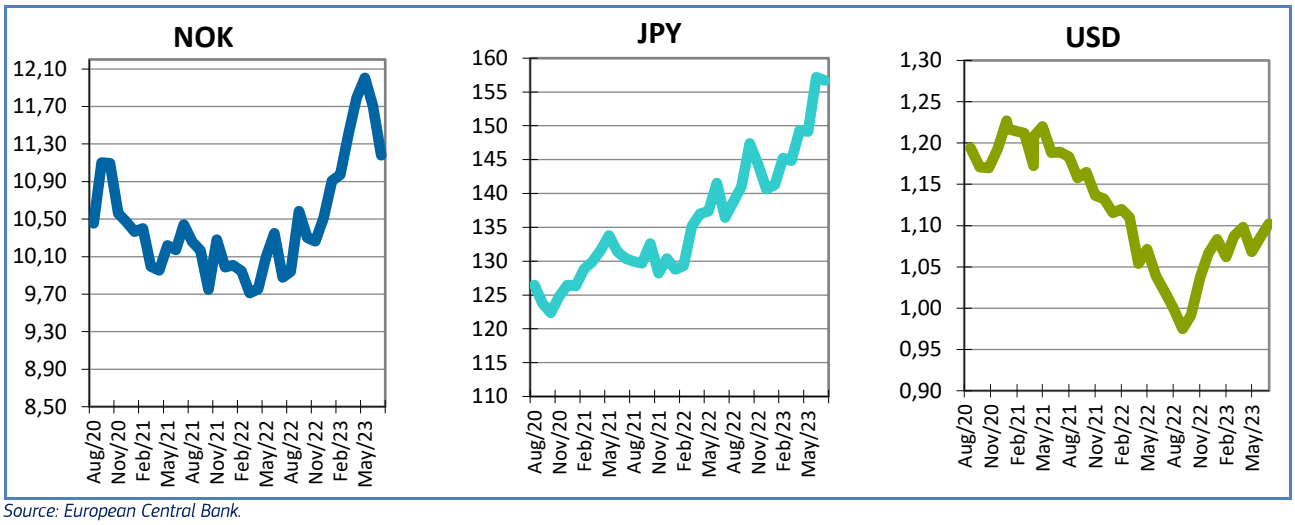
Table 31. **EURO EXCHANGE RATES FOR SELECTED CURRENCIES**

Currency	Jul 2021	Jul 2022	Jun 2023	Jul 2023
NOK	10,4405	9,8773	11,704	11,1805
JPY	130,39	136,42	157,16	156,73
USD	1,1891	1,0198	1,0866	1,1023

Source: European Central Bank.

In July 2023, the euro appreciated against the US dollar (1,4%) and depreciated against the Norwegian krone (4,5%) and the Japanese yen (0,3%), relative to the previous month. For the past six months, the euro has fluctuated around 150,41 against the Japanese yen. Compared with July 2022, the euro has appreciated 14,9% against the Japanese yen, 13,2% against the Norwegian krone, and 8,1% against the US dollar.

Figure 59. **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.se, ICES, Riigi Teataja.

Consumption: Britannica, the Canadian Encyclopedia, FAO, FishBase

Case studies: UN Association of Norway, Tofler, MacroTrends, European Commission, OECD-FAO, FAO, Ministry of Finance and Ministry of Fisheries, Animal Husbandry and Dairying of India, Nabard, Department of Fisheries of the Government of India, FAOLEX, Management of Indian Fisheries, ASEAN, MERCOSUR, Trade Data Monitor, Eurostat-Comext, Statista, Frontiers in Nutrition, Maritime Fairtrade, Eurostat-Comext, Sciencedirect, GlobalSeafood.

Global highlights: European Commission Oceans and Fisheries, FAO GFCM, Statistics Iceland, The Fishing Daily, European Fisheries Control Agency

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].

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