

Monthly Highlights

No. 8 / 2022

E U M O F A

European Market Observatory for
Fisheries and Aquaculture Products

In this issue

According to data collected by EUMOFA from 11 EU Member States, in May 2022 blue whiting and European hake together accounted for 60% of the total first-sales value of the commodity group “groundfish”,

Over the 36-month observation period (June 2019 to May 2022), the weighted average first-sales price of blue whiting in France was 2,17 EUR/kg, 191% higher than in the Netherlands (0,75 EUR/kg), and 147% greater than that of Spain (0,88 EUR/kg).

In May 2022, compared with May 2021, household consumption of fresh fisheries and aquaculture products decreased in volume in each Member State analysed.

In 2020, EU landings of dogfish amounted to 1.650 tonnes, with Portugal, France, and Spain being the main landing countries. The EU market is also supplied by imports, mainly from the USA (1.633 tonnes in 2021).

Fisheries and aquaculture production in Singapore increased by 38,6% from 2010 to 2019, growing from 5.231 tonnes live weight equivalent (LWE) to 7.249 LWE tonnes.

The EU and Norway concluded fisheries consultations that will modernise the exchange of fisheries data for control purposes. They agreed to use a common software platform for data exchanges developed by the European Commission



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1. First sales in Europe

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

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

Increases in value and volume: France was the only country that recorded an increase in both first-sales value and volume. Scallop, octopus and hake were mainly responsible for this increase.

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

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

Country	January - May 2020		January - May 2021		January - May 2022		Change from January - May 2021	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Bulgaria	678	0,4	1.357	0,9	1.041	0,6	-23%	-37%
Cyprus	118	0,9	163	1,2	139	1,0	-15%	-18%
Estonia	31.776	8,1	37.671	9,4	35.129	8,8	-7%	-7%
France	78.534	224,3	91.767	265,8	101.743	311,7	11%	17%
Italy	30.080	113,4	33.884	140,9	28.851	139,6	-15%	-1%
Latvia	21.101	4,3	25.068	5,4	19.696	4,3	-21%	-20%
Lithuania	1.032	0,5	1.424	0,8	720	0,5	-49%	-42%
Netherlands	101.436	142,7	82.725	114,9	102.051	98,6	23%	-14%
Portugal	26.653	77,7	32.130	95,3	31.962	115,0	-1%	21%
Spain	204.735	534,7	197.973	552,5	179.428	598,2	-9%	8%
Norway	1.499.139	1.286,8	1.475.681	1.244,8	1.401.352	1534,6	-5%	23%
United Kingdom	110.557	211,3	124.598	219,4	120.041	241,1	-4%	10%

Possible discrepancies in % changes are due to rounding.

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

¹ Bivalves and other molluscs and aquatic invertebrates, cephalopods, crustaceans, groundfish, freshwater fish, salmonids, tuna and tuna-like species, and other marine fish.

² First sales data updated on 25.07.2022.

1.2. May 2022 compared to May 2021

Increases in value and volume: First sales of both volume and value increased in Estonia, France, Portugal, Spain, and the United Kingdom. The largest increase was recorded in France, followed by Portugal. Octopus and hake facilitated the increase in France, while in Portugal it was mainly octopus and Atlantic horse mackerel.

Decreases in value and volume: First sales decreased in Cyprus, Latvia, and Lithuania, both in volume and value. Lithuania recorded the sharpest decrease due to lower sales of other groundfish and turbot.

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

Country	May 2020		May 2021		May 2022		Change from May 2021	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Bulgaria	352	0,1	637	0,4	658	0,3	3%	-27%
Cyprus	20	0,2	33	0,3	23	0,2	-30%	-27%
Estonia	9.205	2,0	8.126	2,3	8.634	2,4	6%	1%
France	18.198	38,9	21.160	48,8	30.554	61,6	44%	26%
Italy	7.559	27,7	8.099	34,9	7.435	36,2	-8%	4%
Latvia	2.901	0,7	4.256	1,1	3.211	0,8	-25%	-22%
Lithuania	74	0,0	138	0,1	80	0,1	-42%	-43%
Netherlands	20.808	28,2	16.891	26,2	23.530	17,4	39%	-34%
Portugal	8.035	17,0	9.840	22,6	11.727	29,5	19%	31%
Spain	48.478	125,1	41.662	127,1	44.253	152,1	6%	20%
Norway	259.229	155,5	267.728	179,0	253.962	221,3	-5%	24%
United Kingdom	12.582	25,9	12.342	37,3	13.940	40,0	13%	7%

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

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

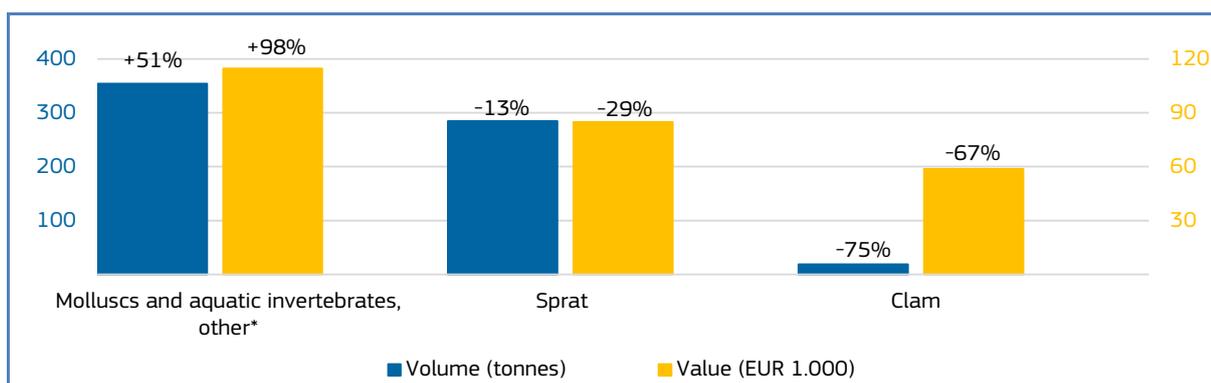
1.3. First sales in selected countries

First-sales data analysed in this section are extracted from EUMOFA³.

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

 Bulgaria	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2022 vs Jan-May 2021	EUR 0,6 million, -37%	1.041 tonnes, -23%	Clam, sprat, red mullet.
May 2022 vs May 2021	EUR 0,3 million, -27%	658 tonnes, +3%	Value: Clam, sprat, other marine fish*. Volume: Molluscs and aquatic invertebrates, other*.

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

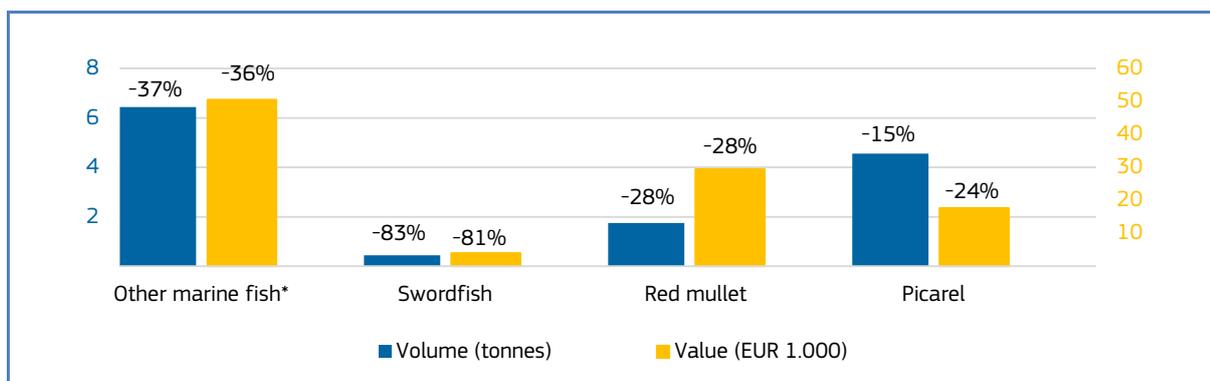


Percentages show change from the previous year. *EUMOFA aggregation for species

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

 Cyprus	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2022 vs Jan-May 2021	EUR 1 million, -18%	139 tonnes, -15%	Other seabream* (other than gilthead seabream), other marine fish*, red mullet.
May 2022 vs May 2021	EUR 0,2 million, -27%	23 tonnes, -30%	Other marine fish*, swordfish, red mullet, picarel.

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



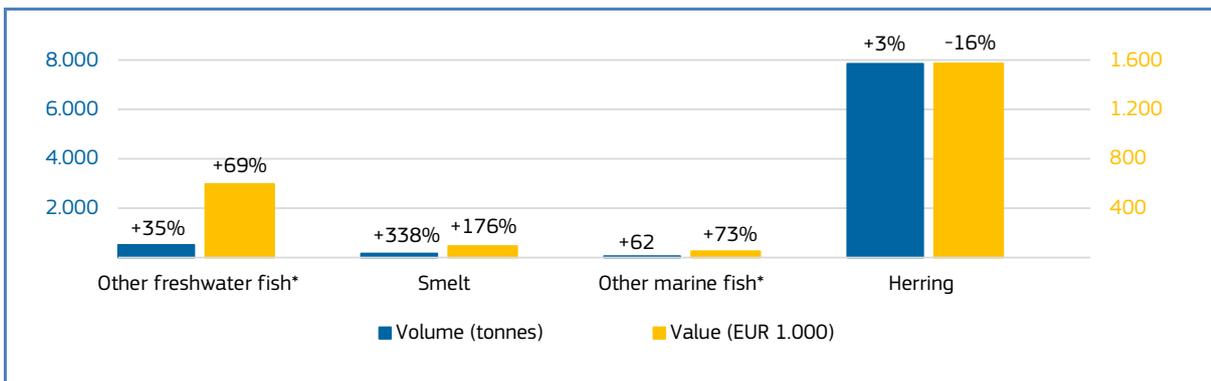
Percentages show change from the previous year. *EUMOFA aggregation for species. (Metadata 2, Annex 3: <http://eumofa.eu/supply-balance-and-other-methodologies>).

³ First-sales data updated on 01.8.2022.

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

 Estonia	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2022 vs Jan-May 2021	EUR 8,8 million, -7%	35.129 tonnes, -7%	Herring, smelt, pike-perch, pike.
May 2022 vs May 2021	EUR 2,4 million, +1%	8.634 tonnes, +6%	Other freshwater fish*, smelt, other marine fish*. Herring (value decrease, volume increase).

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

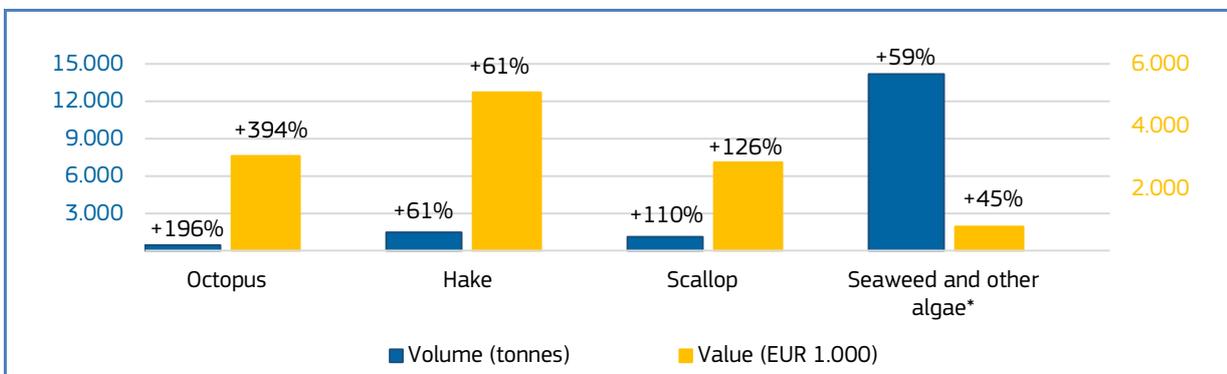


Percentages show change from the previous year. *EUMOFA aggregation for species.

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

 France	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2022 vs Jan-May 2021	EUR 311,7 million, +17%	101.743 tonnes, +11%	Scallop, octopus, hake, squid, seaweed and other algae*.
May 2022 vs May 2021	EUR 61,6 million, +26%	30.554 tonnes, +44%	Octopus, hake, scallop, seaweed and other algae*.

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

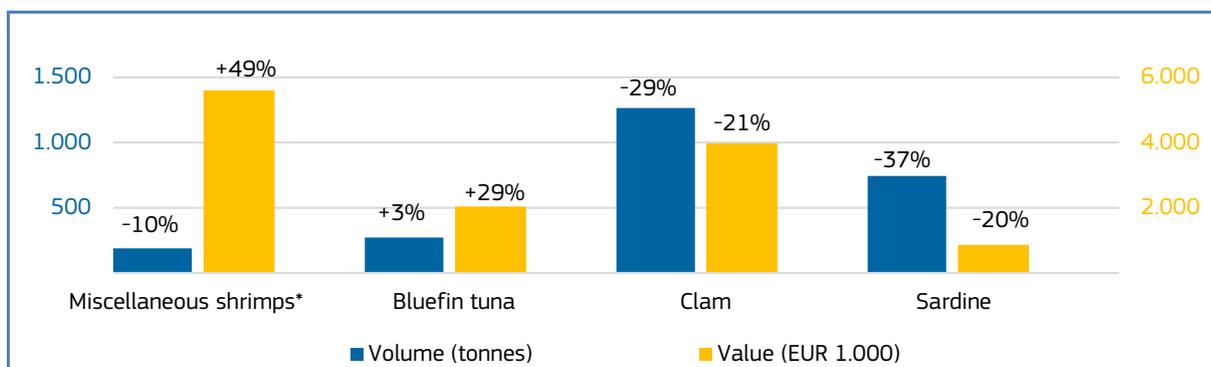


Percentages show change from the previous year. *EUMOFA aggregation for species.

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

 Italy	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2022 vs Jan-May 2021	EUR 139,6 million, -1%	28.851 tonnes, -15%	Clam, cuttlefish, sardine, octopus.
May 2022 vs May 2021	EUR 36,2 million, +4%	7.435 tonnes, -8%	Value: Miscellaneous shrimps*, bluefin tuna Volume: Clam, sardine.

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

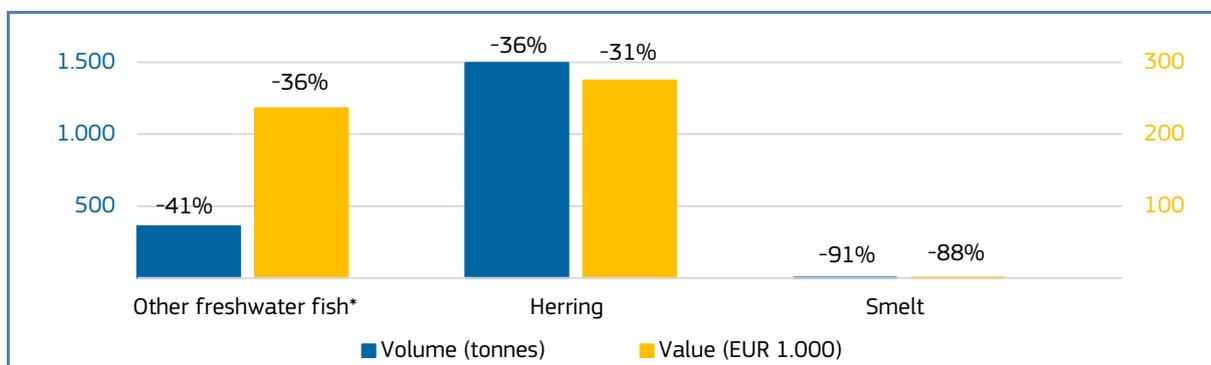


Percentages show change from the previous year. *EUMOFA aggregation for species

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

 Latvia	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2022 vs Jan-May 2021	EUR 4,3 million, -20%	19.696 tonnes, -21%	Herring, other freshwater fish*, sprat, smelt.
May 2022 vs May 2021	EUR 0,8 million, -22%	3.211 tonnes, -25%	Other freshwater fish*, herring, smelt.

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

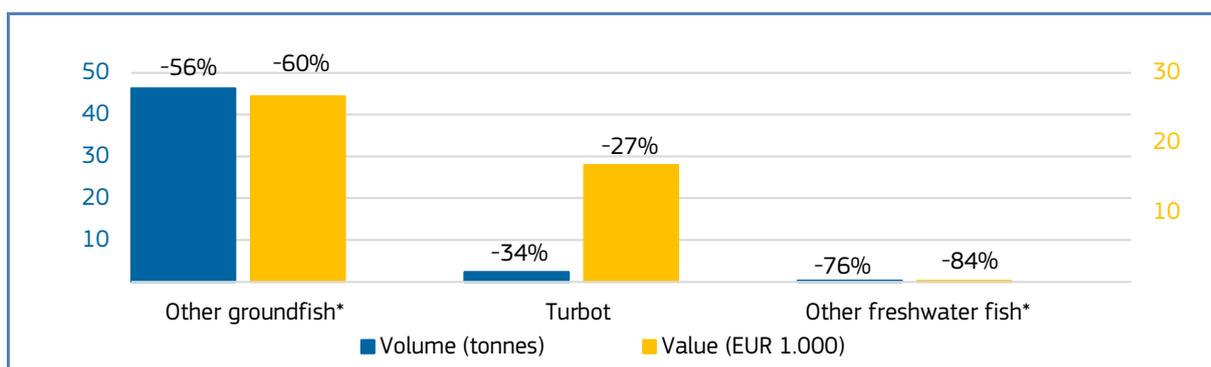


Percentages show change from the previous year. *EUMOFA aggregation for species.

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

 Lithuania	First-sales value / trend %	First-sales volume/ trend %	Main contributing species	Notes
Jan-May 2022 vs Jan-May 2021	EUR 0,5 million, -42%	720 tonnes, -49%	Herring, sprat, other groundfish, sprat*.	Smelt is a seasonal species fished in Lithuania, mainly in small-scale fisheries. The largest catches are made in the period from November to April. In April 2022, smelt catches were lower compared to April 2021 due to stock shortages. As a result of stock shortages, sales on the Lithuanian market decreased. The reasons for this are unclear to scientists. It should be noted as well that the protein value of smelt is lower in April than in winter. Therefore, prices are usually lower than in the period from November to February.
May 2022 vs May 2021	EUR 0,06 million, -43%	80 tonnes, -42%	Other groundfish*, turbot, other freshwater fish*.	

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



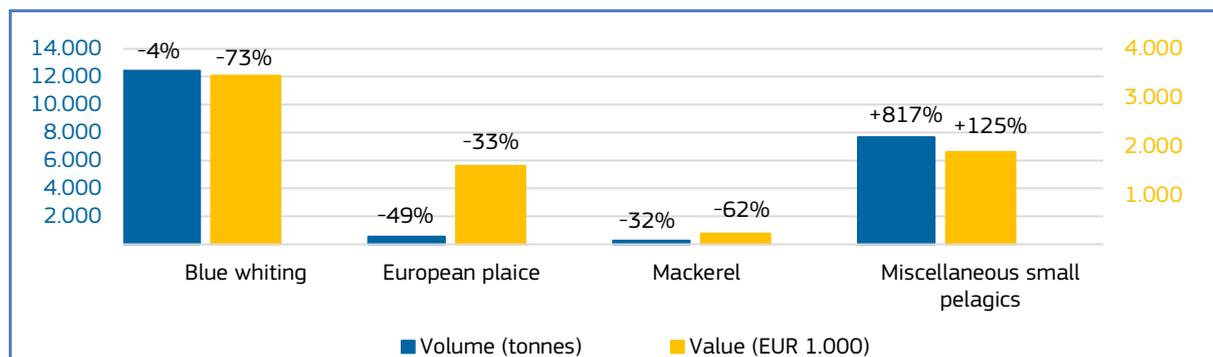
Percentages show change from the previous year. *EUMOFA aggregation for species.

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

 The Netherlands	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
Jan-May 2022 vs Jan-May 2021	EUR 98,6 million, -14%	102.051 tonnes, +23%	Value: Blue whiting, mackerel, sardine. Volume: Herring, miscellaneous small pelagics*, Atlantic horse mackerel.	According to ICES (2021) ⁴ , the status of the mackerel stock is fairly good, with spawning-stock size above Maximum Sustainable Yield. The production reported in April 2022 (around 738 tonnes) is down from the 1.659 tonnes observed in April 2021, but back to the production levels observed in April 2020 (around 502 tonnes), April 2019 (847 tonnes), and April 2018 (466 tonnes). April 2021 appears to be the exception, mostly due to changes in fishing strategies resulting from the post-Brexit negotiations and the closure of Norwegian waters during the first weeks of the year. First sales of miscellaneous small pelagics increased mainly due to greater argentine (the species which recorded the increase in annual quota for about +-300%).
May 2022 vs May 2021	EUR 17,4 million, -34%	23.530 tonnes, +39%	Value: Blue whiting, European plaice, mackerel. Volume: Miscellaneous small pelagics*.	

⁴ ICES Advice 2021 – mac27.nea – <https://doi.org/10.17895/ices.advice.7789>

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

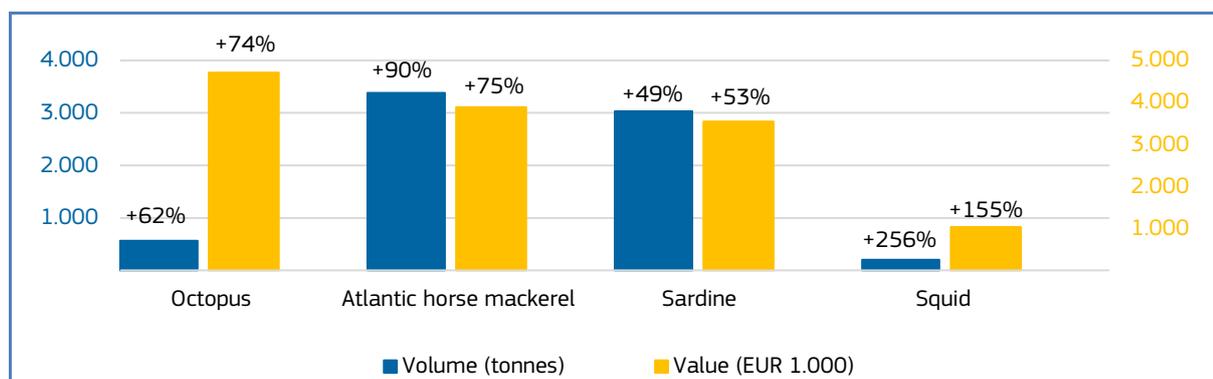


Percentages show change from the previous year. *EUMOFA aggregation for species.

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

Portugal	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2022 vs Jan-May 2021	EUR 115 million, +21%	31.962 tonnes, -1%	Value: Octopus, anchovy, squid. Volume: horse mackerel* (other than Atlantic horse mackerel), bigeye tuna, clam.
May 2022 vs May 2021	EUR 29,5 million +31%	11.727 tonnes, +19 %	Octopus, Atlantic horse mackerel, sardine, squid.

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

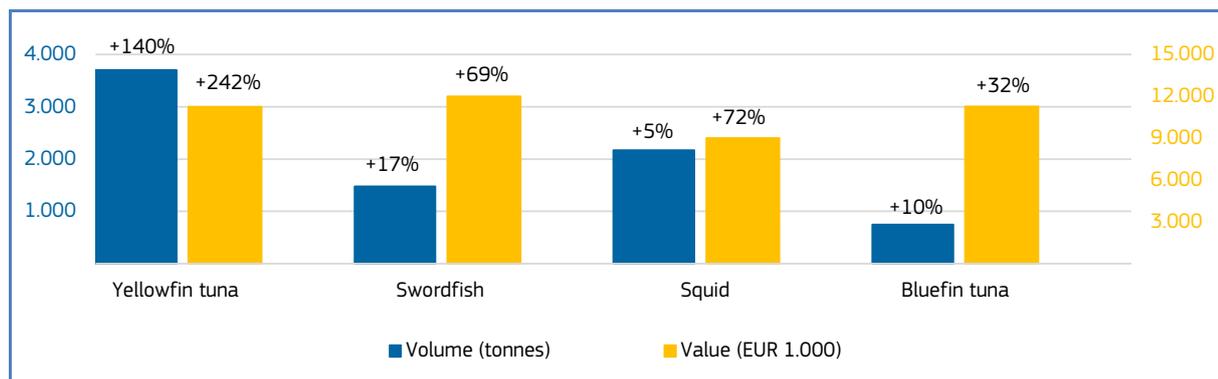


Percentages show change from the previous year. *EUMOFA aggregation for species

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

Spain	First-sales value / trend in %	First-sales volume / trend %	Main contributing species
Jan-May 2022 vs Jan-May 2021	EUR 598,2 million, +8%	179.428 tonnes, -9%	Value: Mackerel, swordfish, yellowfin tuna. Volume: Anchovy, hake.
May 2022 vs May 2021	EUR 152,1 million +20%	44.253 tonnes, +6%	Yellowfish tuna, swordfish, squid, bluefin tuna.

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

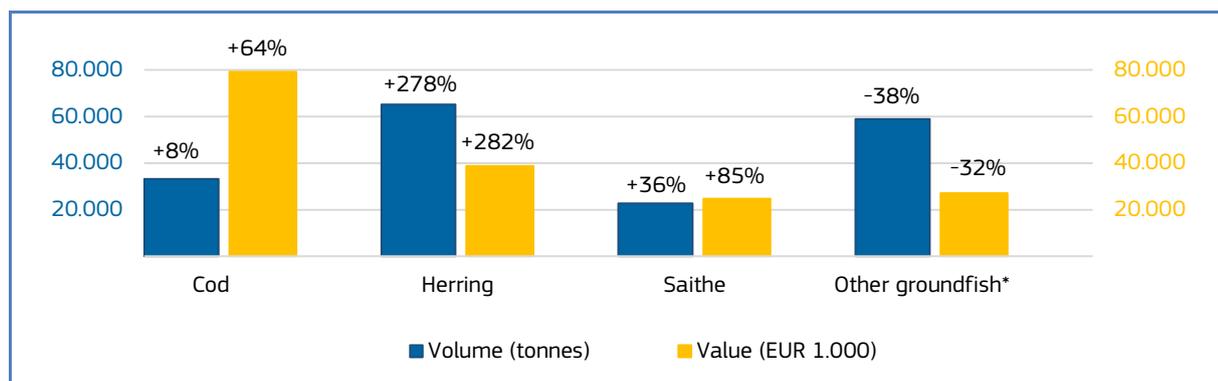


Percentages show change from the previous year.

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

 Norway	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-May 2022 vs Jan-May 2021	EUR 1,53 billion, +23%	1.401.352 tonnes, -5%	Value: Cod, saithe, herring. Volume: Other groundfish, blue whiting, cod.
May 2022 vs May 2021	EUR 221,3 million +24%	253.962 tonnes, -5%	Value: Cod, herring, saithe. Volume: Other groundfish*, other crustaceans*.

Figure 11. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN NORWAY, MAY 2022**

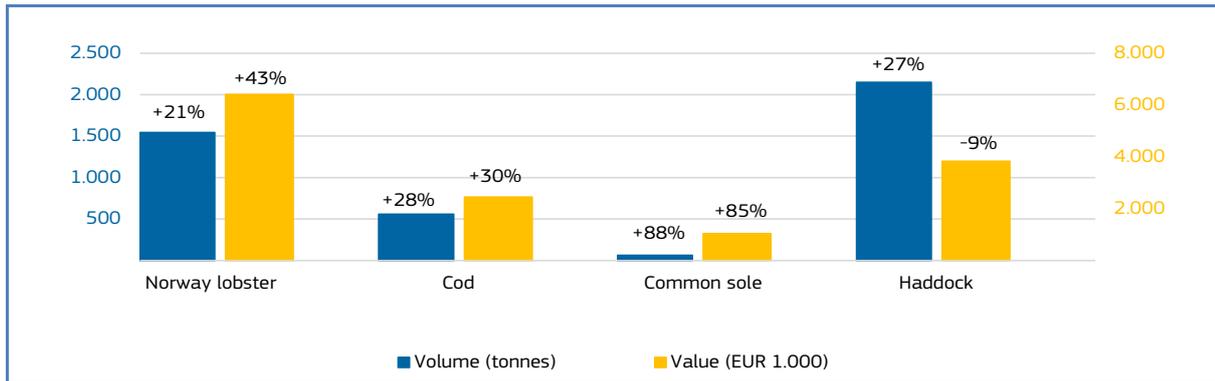


Percentages show change from the previous year. *EUMOFA aggregation for species

Table 14. **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 2022 vs Jan-May 2021	EUR 241,1 million, +10%	120.041 tonnes, -4%	Value: Mackerel, monkfish, common sole. Volume: Blue whiting, mackerel, other molluscs and aquatic invertebrates.
May 2022 vs May 2021	EUR 40 million, +7%	13.940 tonnes, +13%	Norway lobster, cod, common sole. Haddock recorded decrease in first-sales value.

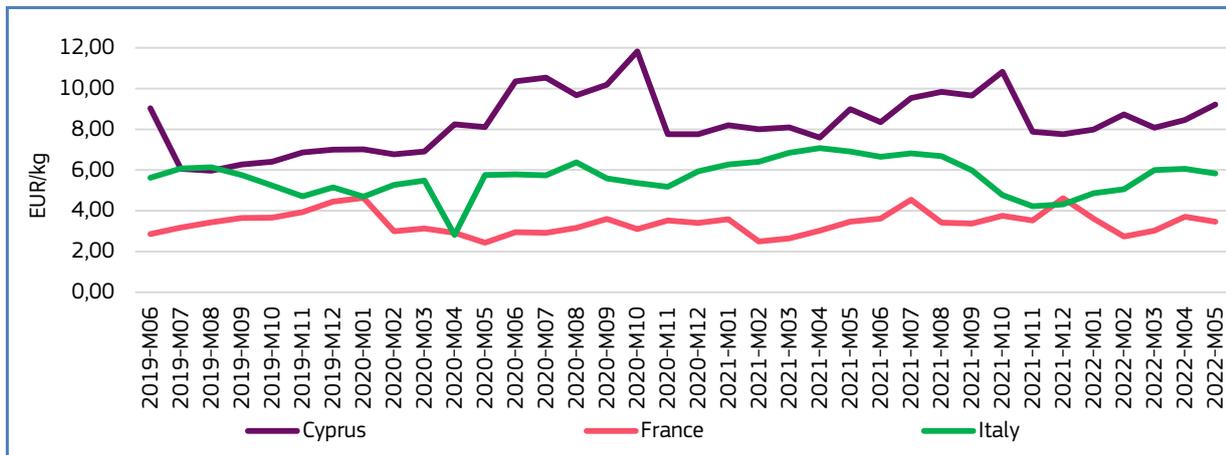
Figure 12. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN THE UNITED KINGDOM, MAY 2022**



Percentages show change from the previous year.

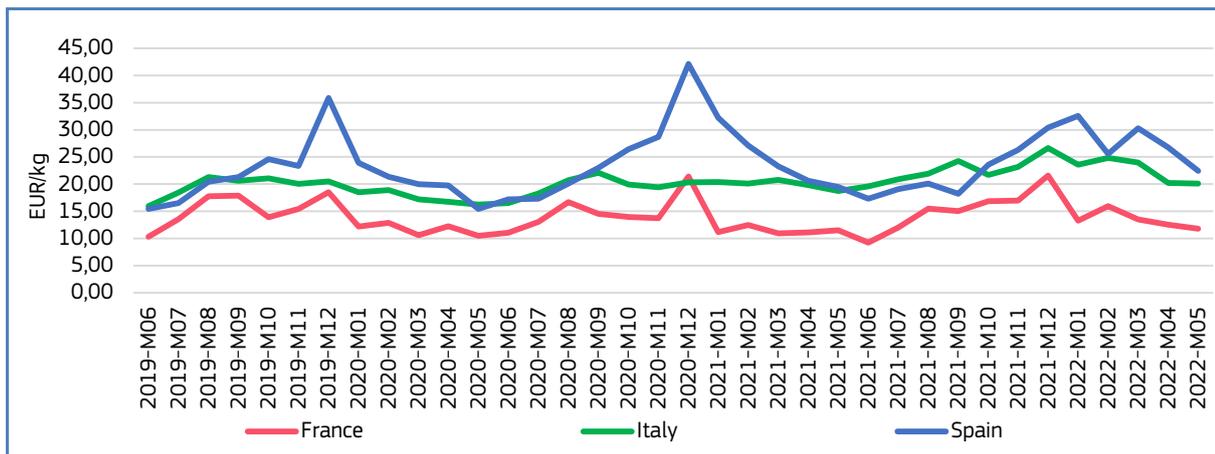
1.4. Comparison of first-sales prices of selected species in selected countries⁵

Figure 13. **FIRST-SALES PRICES OF HAKE IN CYPRUS, FRANCE, AND ITALY**



EU first sales of **hake** occur in several countries, including **Cyprus**, **France**, and **Italy**. In May 2022, the average first-sales prices of hake were 9,22 EUR/kg in Cyprus (up from both April 2022 and May 2021 by 9% and 3%, respectively); 3,46 EUR/kg in France (down from the previous month by 7%, and unchanged from the previous year); and 5,83 EUR/kg in Italy (down from both the previous month and year by 4% and 16%, respectively). In May 2022, supply increased in both France (+61) and Italy (+21%) and decreased in Cyprus (-10%), relative to the previous year. Supply is seasonal, with peaks in February and May–June in France. In the past couple of years, volumes sold in Cyprus seemed to peak in April and November. In Italy, supply does not appear to exhibit a clear seasonality. Over the past 36 months, both prices and volume showed an upward trend in France and Italy. At the same time, in Cyprus, supply went down while prices showed an opposite trend.

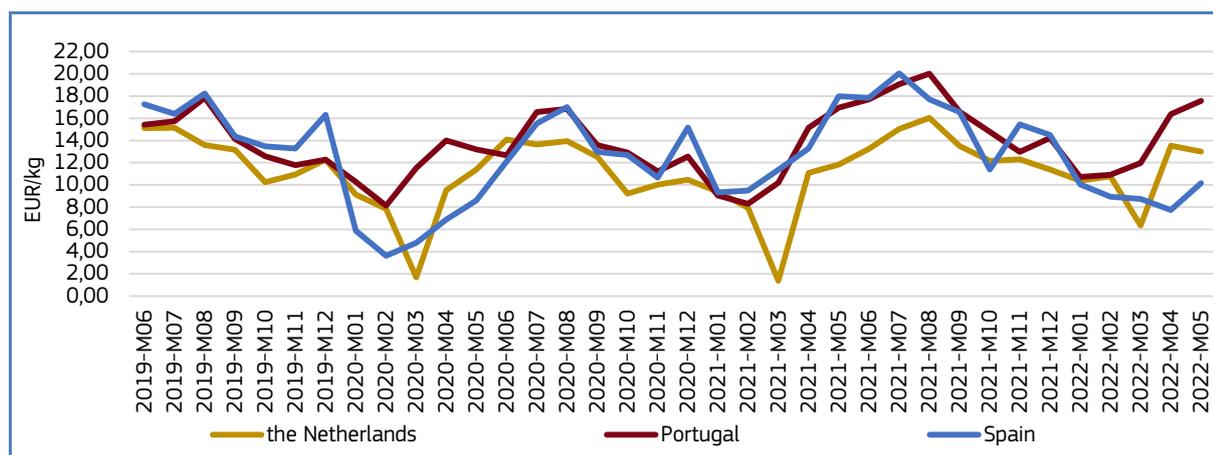
Figure 14. **FIRST-SALES PRICES OF NORWAY LOBSTER IN FRANCE, ITALY, AND SPAIN**



EU first sales of **Norway lobster** occur predominantly in **France**, as well as in **Italy** and **Spain**. In May 2022, the average first-sales prices of Norway lobster were: 11,81 EUR/kg in France (down from the previous month by 6% and up from the previous year by 3%); 20,09 EUR/kg in Italy (down from April 2022 by 1%, and up from May 2021 by 7%); and 22,43 EUR/kg in Spain (down from the previous month by 16%, and up from the previous year by 15%). In May 2022, supply decreased in all three markets: France (-9%), Italy (-17%), and Spain (-21%), relative to the previous year. Supply is seasonal, with peaks between April/May–June/July in France and Italy. In Spain, supply seems to peak most often in June–August. In all three markets, over the 36-month period observed, Norway lobster prices exhibited a stable trend. At the same time, volume went down in Italy and Spain, and the opposite in France.

⁵ First-sales data updated on 27.7.2022.

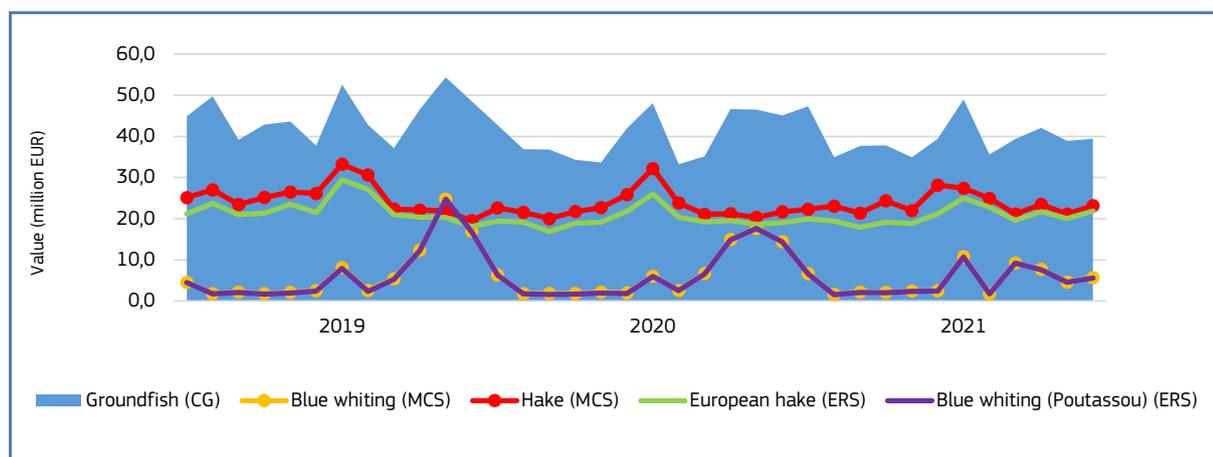
Figure 15. **FIRST-SALES PRICES OF SEABASS IN THE NETHERLANDS, PORTUGAL, AND SPAIN**



EU first sales of **seabass** occur in multiple countries, including **the Netherlands, Portugal, and Spain**. In May 2022, the average first-sales prices of seabass were 13,00 EUR/kg in the Netherlands (down from the previous month by 4%, and up from the previous year by 10%); 17,58 EUR/kg in Portugal (up from both the previous month and year by 7% and 4%, respectively); and 10,16 EUR/kg in Spain (up by 31% from April 2022, and down by 43% from May 2021). In May 2022, supply decreased in Portugal (-9%), and increased in both the Netherlands and Spain (+5% and +188%, respectively), relative to the previous year. Volumes sold in the Netherlands peak in April-May and September-October. In Portugal and Spain supply peaks in January-February. Over the past three years, prices exhibited a stable trend in the Netherlands and Spain, and an upward trend in Portugal; at the same time, supply decreased in all three markets.

1.5. Commodity group of the month: groundfish⁶

Figure 16. **FIRST-SALES COMPARISON AT CG, MCS, AND ERS LEVELS FOR REPORTING COUNTRIES⁷, JANUARY 2019 - MAY 2022**



The “**groundfish**” commodity group (CG⁸) recorded the fifth-highest first-sales value and the second highest volume out of the 10 CGs recorded in May 2022⁹. Of reporting countries covered by the EUMOFA database, first sales of groundfish reached a value of EUR 39,4 million and a volume of 25.230 tonnes, representing a value decrease by 13% and a volume decrease by 1% compared to May 2021. In the past 36 months, the highest first-sales value of groundfish was registered at EUR 54,4 million (April 2020).

⁶ First sales data updated on 17.6.2022.

⁷ Norway and the UK excluded from the analyses.

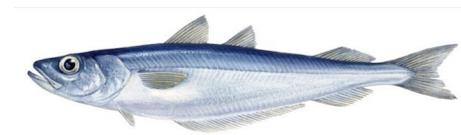
⁸ Annex 3: <http://eumofa.eu/supply-balance-and-other-methodologies>

⁹ More data on commodity groups can be found in Table 1.2 of the Annex.

The groundfish commodity group includes 14 main commercial species (MCS): Alaska pollock, blue whiting, cod, grenadier, haddock, hake, ling, pollack, pouting, redfish, saithe, toothfish, whiting, and the grouping of other groundfish species¹⁰.

At Electronic Recording and Reporting System (ERS) level, blue whiting (14%) and European hake (55%) together accounted for 69% of "groundfish" total first-sales value recorded in May 2022.

1.6. Focus on blue whiting



Blue whiting
Source: Scandinavian Fishing Year Book

Blue whiting (*Micromesistius poutassou*) is a bathypelagic species from the Gadidae family. It can be found over the continental slope and shelf to more than 1000 m, but is more common at 300-400 m. The species feeds mostly on small crustaceans, although large individuals also prey on small fish and cephalopods. The species has a diurnal vertical migration pattern, which means that it moves towards the surface after dusk and returns to deeper waters before dawn¹¹. Blue whiting occupies the Northeast Atlantic, the Barents Sea south through the eastern Norwegian Sea, around Iceland, and

in the western Mediterranean, and south along the African coast to Cape Bojador. It can also be observed in the north-west Atlantic, and off southern Greenland, southeast Canada and the north-eastern coast of the USA.

Based on the Regulation adopted by the European Parliament and the Council in 2019¹², the minimum mesh size specified for fishing of blue whiting is 55 mm in Southwestern Waters, 32 mm in the Baltic Sea, and 35 mm for the NEAFC Regulatory Area. Bottom trawling is used to fish for blue whiting¹³. This highly commercial species is sold fresh and frozen, and is also processed as oil and fishmeal.

Selected countries

Table 15. COMPARISON OF BLUE WHITING FIRST-SALES PRICES, MAIN PLACES OF SALE, AND CONTRIBUTION TO OVERALL SALES OF "GROUND FISH" IN SELECTED COUNTRIES

Blue whiting		Changes in blue whiting first sales Jan-May 2022 (%)		Contribution of blue whiting to total "groundfish" first sales in May 2022 (%)	Principal places of sale Jan-May 2022 in terms of first-sales value
		Compared to Jan-May 2021	Compared to Jan-May 2020		
France	Value	53%	+337%	3%	St Malo, Le Grau-du-Roi, Sète.
	Volume	+43%	+311%	4%	
The Netherlands	Value	-67%	-71%	92%	Amsterdam, Vlissingen, IJmuiden/Velsen.
	Volume	+10%	+7%	97%	
Spain	Value	+15%	+1%	9%	Santa Eugenia Ribeira, A Coruña, Aviles.
	Volume	-13%	-5%	37%	

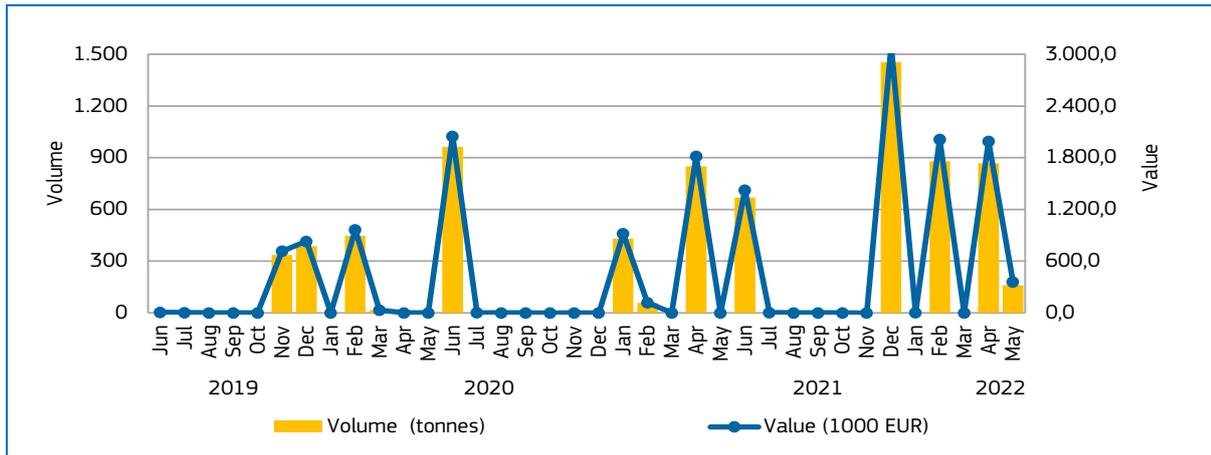
¹⁰ Most sold other groundfish species at ERS level include blackbelly rosefish, European conger, greater forkbeard, sandeels, etc.

¹¹ <https://www.fishbase.de/summary/31>

¹²¹² Regulation (EU) 2019/1241: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R1241&qid=1657530839684>

¹³ <https://www.fao.org/fishery/en/fishtech/1053/en>

Figure 17. **BLUE WHITING: FIRST SALES IN FRANCE, JUNE 2019 - MAY 2022**



In **France**, over the past 36 months, the highest first sales of blue whiting occurred in December 2021 when 1.452 tonnes were sold for about EUR 3 million.

Figure 18. **FIRST SALES: COMPOSITION OF "GROUND FISH" (ERS LEVEL) IN FRANCE IN VALUE AND VOLUME, MAY 2022**

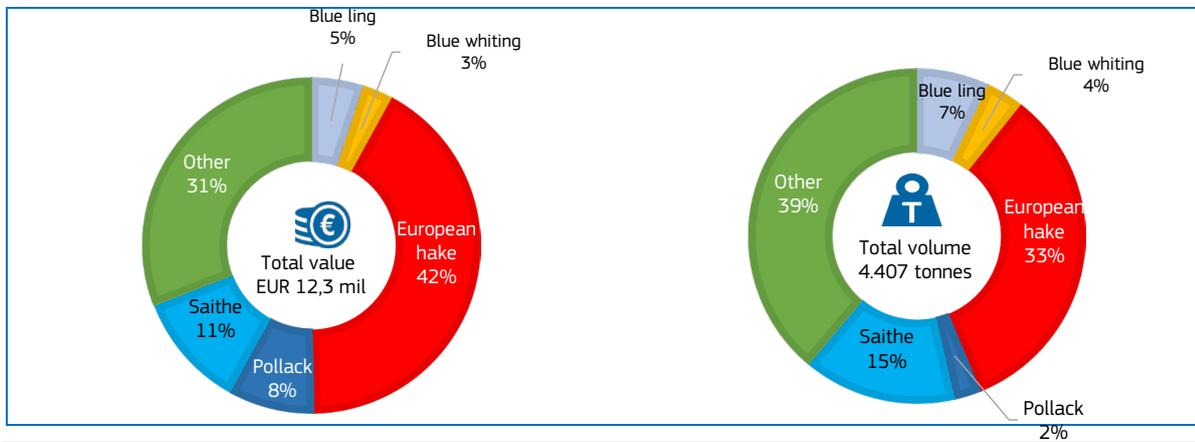
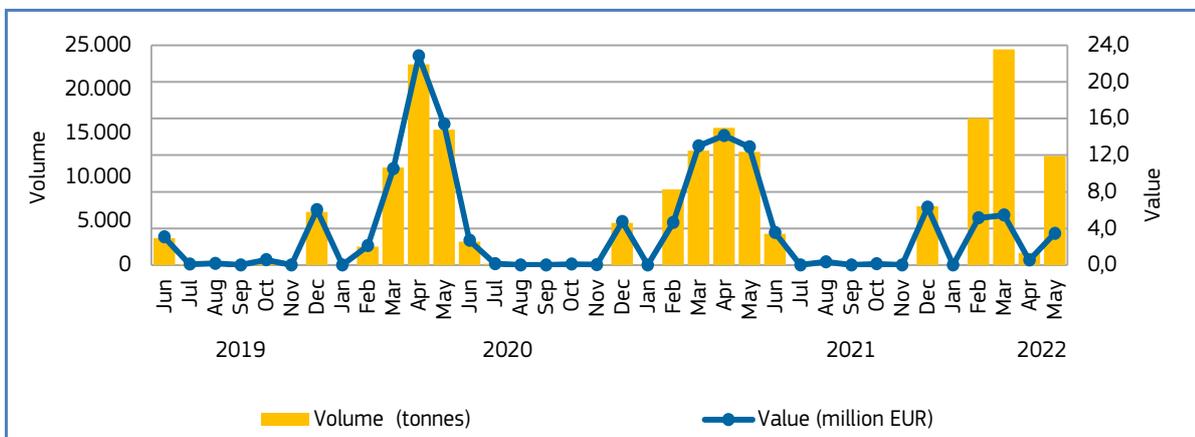


Figure 19. **BLUE WHITING: FIRST SALES IN THE NETHERLANDS, JUNE 2019 - MAY 2022**



Over the past 36 months in **the Netherlands**, the highest first sales volume of blue whiting of 24.530 tonnes valued at 5.4 million was recorded in March 2022. Typically, the blue whiting fishery season is during winter and spring, from January to June.

Figure 20. **FIRST SALES: COMPOSITION OF “GROUND FISH” (ERS LEVEL) IN THE NETHERLANDS IN VALUE AND VOLUME, MAY 2022**

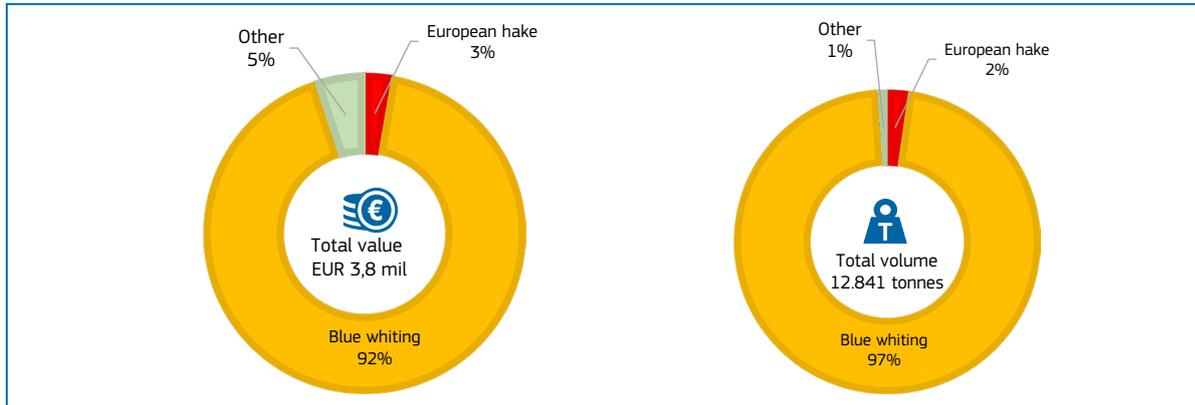
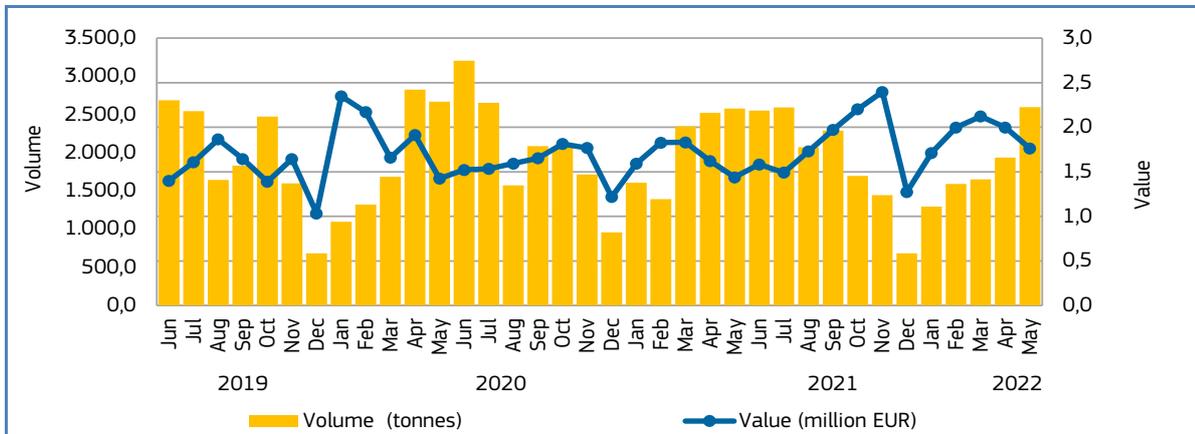
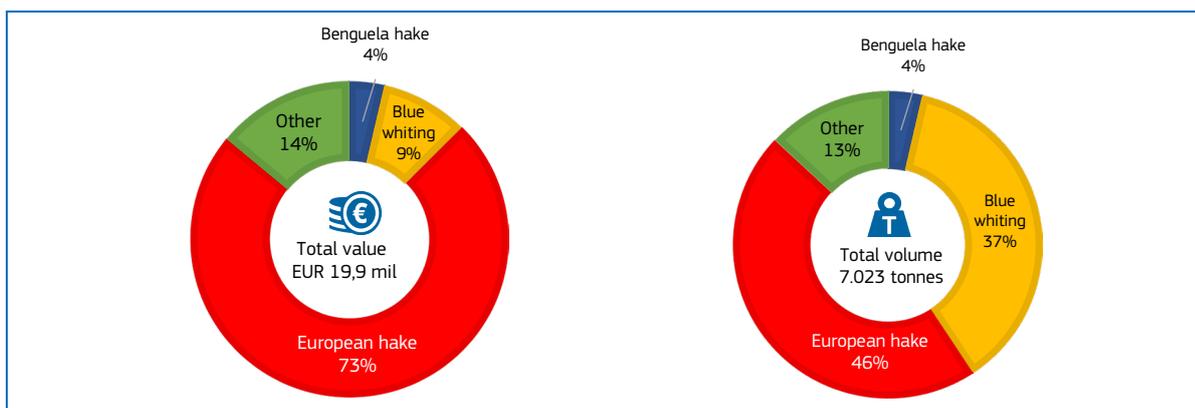


Figure 21. **BLUE WHITING: FIRST SALES IN SPAIN, JUNE 2019 - MAY 2022**



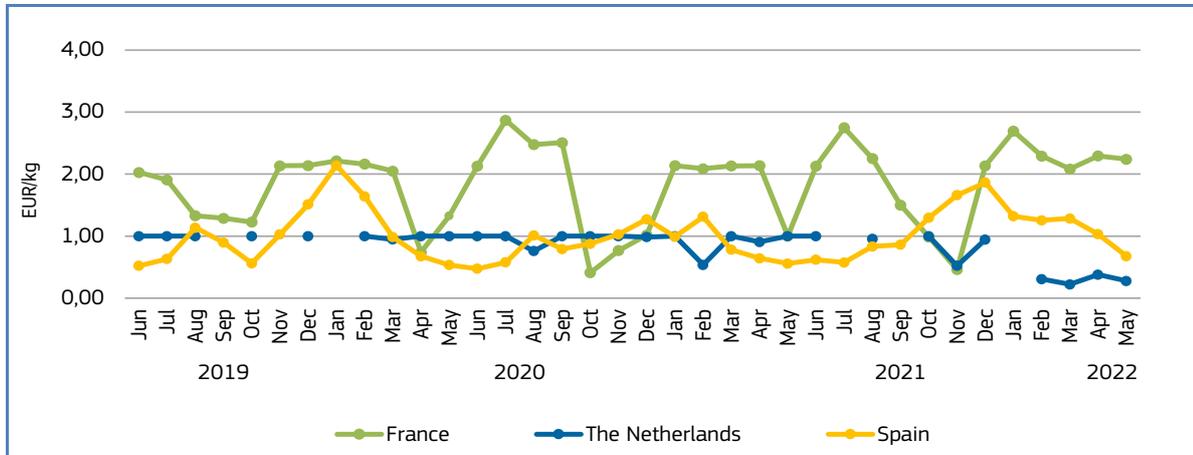
Over the past 36 months in **Spain**, the highest first-sales volume of blue whiting occurred in June 2020 when 3.206 tonnes were sold for EUR 1,5 million. The most intense fishery season occurs from April to July each year, while the lowest supply was recorded in December and January, which is linked to unfavourable weather conditions.

Figure 22. **FIRST SALES: COMPOSITION OF “GROUND FISH” (ERS LEVEL) IN SPAIN IN VALUE AND VOLUME, MAY 2022**



Price trend

Figure 23. **BLUE WHITING: FIRST-SALES PRICES IN SELECTED COUNTRIES, JUNE 2019 - MAY 2022**



Over the 36-month observation period (June 2019 to May 2022), the weighted average first-sales price of blue whiting in **France** was 2,17 EUR/kg, 191% higher than in **the Netherlands** (0,75 EUR/kg), and 147% greater than that of **Spain** (0,88 EUR/kg).

In **France** in May 2022, the average first-sales price of blue whiting (2,24 EUR/kg) increased by 123% compared with May 2021, and 69% compared with May 2020. Over the past 36 months, average price ranged from 0,41 EUR/kg for 0,3 tonnes in October 2020, to 2,87 EUR/kg for 0,9 tonnes in July 2020.

In **the Netherlands** in May 2022, the average first-sales price of blue whiting (0,28 EUR/kg) decreased by 72% compared to the same month in both 2021 and 2020. During the observed period, the lowest average price was recorded in March 2022 at 0,22 EUR/kg for 24.530 tonnes, while the highest average price was recorded in June 2019 at 1,00 EUR/kg for 3.053 tonnes.

In **Spain** in May 2022, the average first-sales price of blue whiting (0,68 EUR/kg) increased by 21% compared to May 2021 and by 27% compared to May 2020. During the observed period, the lowest average price of 0,48 EUR/kg for 3.206 tonnes was seen in June 2020, while the highest average price was recorded in January 2020, at 2,14 EUR/kg for 1.099 tonnes.

1.7. Focus on European hake



European hake (*Merluccius merluccius*) is a demersal fish that belongs to the Merlucciidae family. Hake is usually found between a depth of 70–370 m. Adults live close to the bottom during the day, but they move off-bottom at night. Adults feed mainly on fish (small hakes, anchovies, pilchard, herrings, cod fishes, sardines and gadoid species) and squids, while the juveniles consume crustaceans (especially euphausiids and amphipods). Hake can live for 20 years and reach a maximum size of 140 cm and 15 kg, but their average length is closer to 45 cm¹⁴. European hake is mainly found in the Eastern Atlantic: around Norway and Iceland, and southward to Mauritania. The species also occurs in the Mediterranean Sea and along the southern coast of the Black Sea.

There are two stocks of hake in EU waters which have been separately identified by scientists. The northern stock is found in the North Sea, Skagerrak, and off the Atlantic coasts of the UK, Ireland and France. The southern stock is located off the Atlantic coasts of Spain and Portugal¹⁵. European hake is a subject to Total Allowable Catches (TAC)¹⁶, Hake is also managed by Minimum Reference Size which is 27 cm in the North Sea, the North-western and the South-western Waters, while in the Mediterranean Sea it is 20 cm¹⁷.

European hake is caught with a wide range of gears, both as targeted catch and as bycatch¹⁸. It is almost entirely marketed as fresh, whole or filleted to specialised restaurants or retail markets. Hake is utilised fresh, dried or salted and frozen, and can be steamed, fried, microwaved, and baked.

Selected countries

Table 16. **COMPARISON OF EUROPEAN HAKE FIRST-SALES PRICES, MAIN PLACES OF SALE, AND CONTRIBUTION TO OVERALL SALES OF GROUND FISH IN SELECTED COUNTRIES**

European hake		Changes in European hake first sales Jan-May 2022 (%)		Contribution of European hake to total "groundfish" first sales in May 2022 (%)	Principal places of sales in Jan-May 2022 in terms of first-sales value
		Compared to Jan-May 2021	Compared to Jan-May 2020		
France	Value	+29%	+26%	41%	St Jean-de-Luz, Lorient, Les Sables-d'Olonne.
	Volume	+17%	+23%	33%	
Italy	Value	+13%	+18%	3%	Ancona, Civitanova Marche, Monopoli.
	Volume	+37%	-4%	2%	
Sweden	Value	+5%	-8%	73%	Cillero, Pasajes, Burela.
	Volume	-3%	-17%	46%	

¹⁴ <https://www.fishbase.se/summary/Merluccius-merluccius.html>

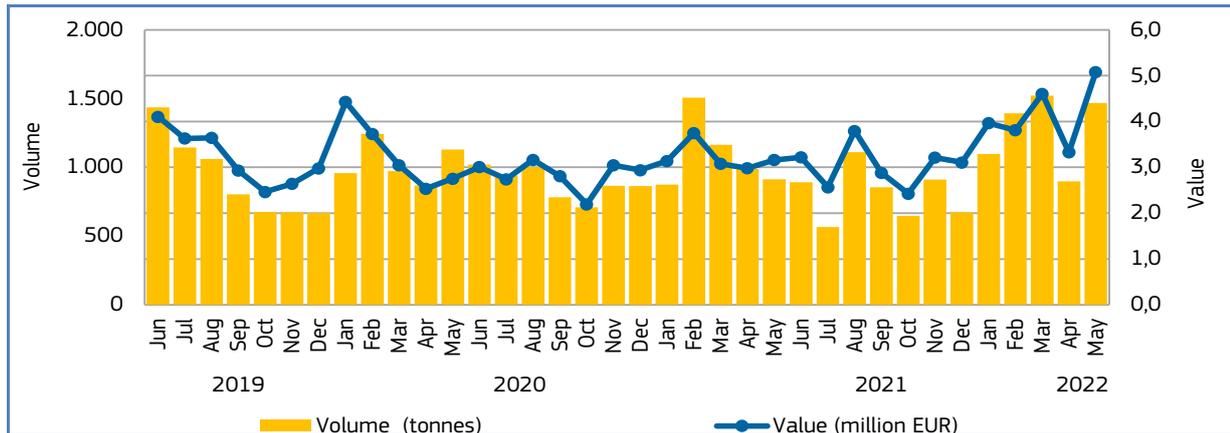
¹⁵ <https://www.eumofa.eu/documents/20178/110994/MH+2+2019.pdf>

¹⁶ <https://www.pubaffairsbruxelles.eu/eu-institution-news/council-agrees-fishing-opportunities-for-2022/>

¹⁷ Regulation (EU) 2019/1241: <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32019R1241&qid=1657488319092>

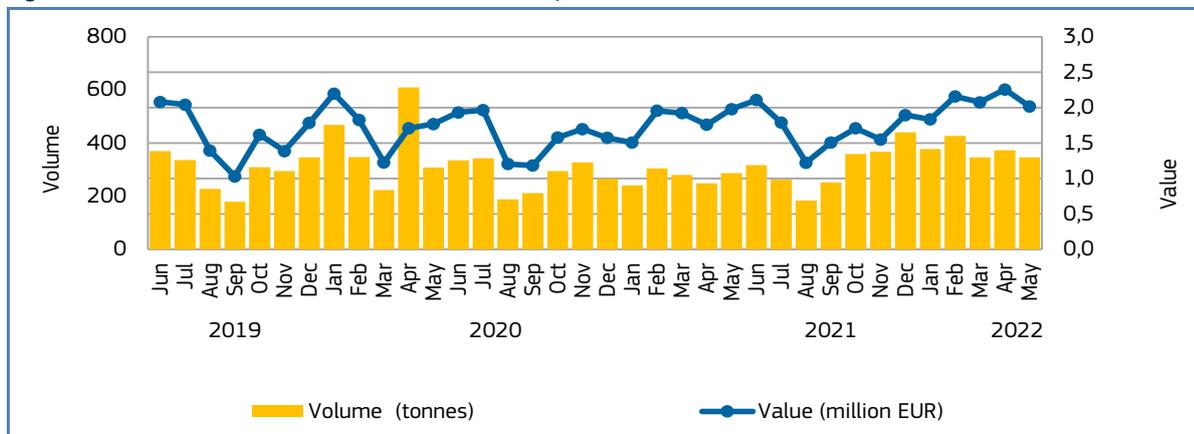
¹⁸ <https://www.eumofa.eu/documents/20178/110994/MH+2+2019.pdf>

Figure 24. **EUROPEAN HAKE: FIRST SALES IN FRANCE, JUNE 2019 - MAY 2022**



In **France**, over the observed 36-month period, the first-sales value and volume of European hake increased without significant spikes. The highest first-sales volume was recorded in March 2022 when 1.522 tonnes were sold for EUR 4,6 million. The fleet targeting European hake consists of trawlers and gillnetters¹⁹.

Figure 25. **EUROPEAN HAKE: FIRST SALES IN ITALY, JUNE 2019 - MAY 2022**



In **Italy**, monthly first sales of European hake were the lowest in terms of volume among the three surveyed countries. Over the past 36 months, the highest monthly first-sales volume was registered in April 2020 when 609 tonnes were sold for EUR 1,7 million while the highest first-sales value was in April 2022 when 372 tonnes were sold for 6,06 EUR/kg, amounting to a total of EUR 2,3 million.

¹⁹https://www.ices.dk/sites/pub/CM%20Documents/1986/ACFM/1986_ACFM_FC5_3_stocks%20in%20NEAFC%20regions%20and%203_fseries%20units%20in%20sub-areas%207%20and%208.pdf

Figure 26. **FIRST SALES: COMPOSITION OF “GROUND FISH” (ERS LEVEL) IN ITALY IN VALUE AND VOLUME, MAY 2022**

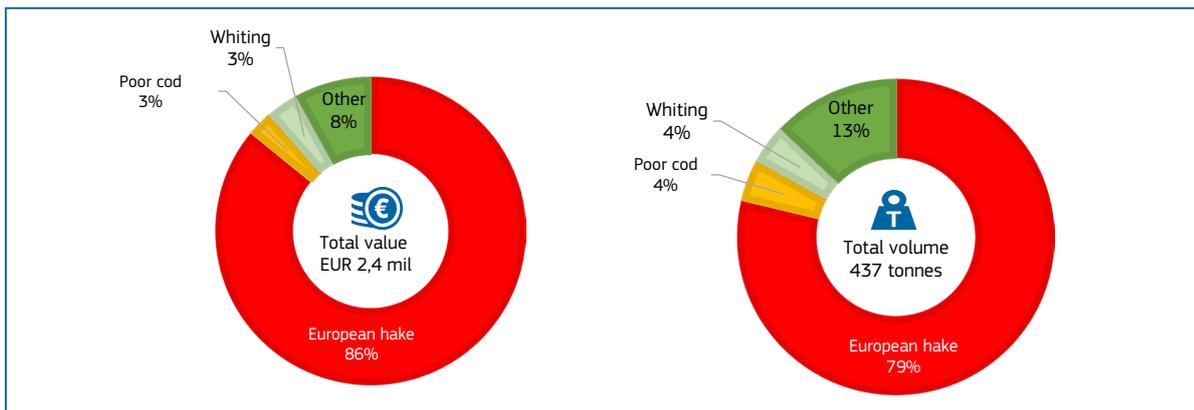
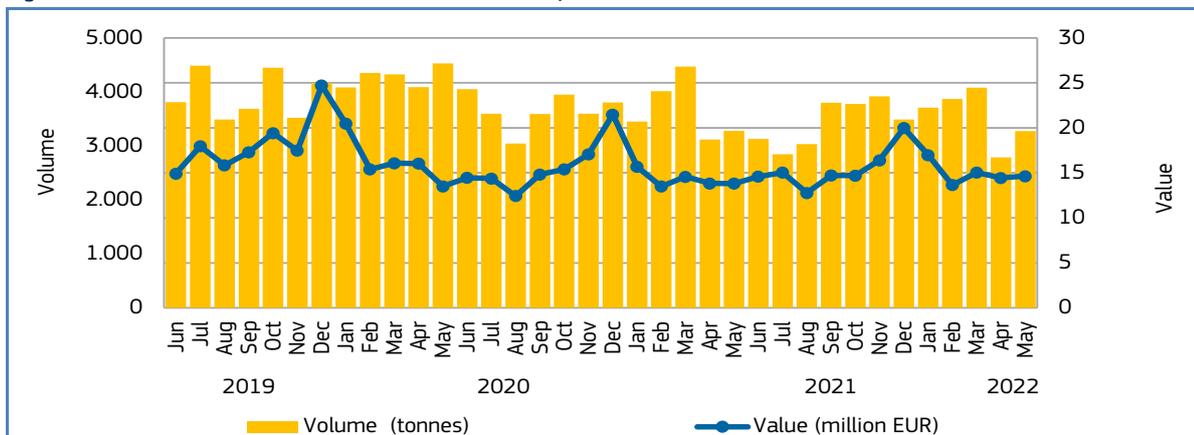


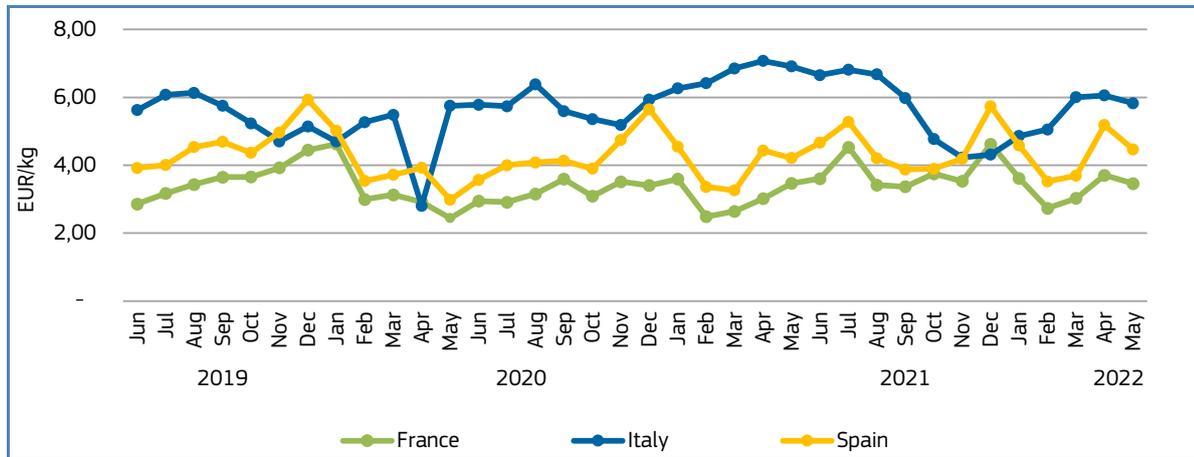
Figure 27. **EUROPEAN HAKE: FIRST SALES IN SPAIN, JUNE 2019 - MAY 2022**



In **Spain**, over the past 36 months, the highest first-sales volume for European hake at 4.527 tonnes sold for EUR 13,5 million and was registered in May 2020, while first-sales value reached its peak in December 2019 when approximately 4.167 tonnes were sold for EUR 24,1 million. In general, the overall value was the highest in December each year, which is closely linked to Christmas holidays and higher consumption of fisheries and aquaculture products in Spain.

Price trend

Figure 28. **EUROPEAN HAKE: FIRST-SALES PRICES IN SELECTED COUNTRIES, JUNE 2019 - MAY 2022**



Over the 36-month observation period (June 2019–May 2022) among the three surveyed countries, the weighted average first-sales price of European hake was the highest in **Italy** at 5,48 EUR/kg. That price was 66% higher than the price in **France** (3,31 EUR/kg), and 29% higher over the weighted average price in **Spain** (4,26 EUR/kg).

In **France** in May 2022, the average first-sales price of European hake (3,46 EUR/kg) remained the same compared to May 2021 and increased by 42% compared to May 2020. The lowest average price was registered in May 2020 at 2,44 EUR/kg for 1.130 tonnes, while the highest average price of 4,63 EUR/kg for 957 tonnes was registered in January 2020.

In **Italy** in May 2022, the average first-sales price of European hake was 5,83 EUR/kg, a 16% decrease and 1% increase compared to May 2021 and 2020, respectively. The lowest price in the past 36 months was registered in April 2020 at 2,81 EUR/kg for 609 tonnes, while the highest price (7,08 EUR/kg for 249 tonnes) was observed in April 2021.

In **Spain** in May 2022, the average first-sales price of European hake (4,47 EUR/kg) increased by 6% compared to May 2021 and increased by 50% compared to May 2020. The lowest average price was registered in May 2020, at 2,98 EUR/kg for a volume of 4.528 tonnes. The highest average price of 5,93 EUR/kg for about 4.167 tonnes was registered in December 2019.

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 “groundfish”, and the featured species are frozen fillets of cod from China, frozen meat of hake from Namibia, and frozen redfish from Iceland. The three randomly selected species this month are frozen squid from the United States, live lobsters from the United States, and live, fresh, or chilled squid from Morocco.

Data analysed in the section “Extra-EU imports” are extracted from EUMOFA, as collected from the European Commission²⁰.

Table 17. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF THE THREE MOST RELEVANT FISHERIES AND AQUACULTURE PRODUCTS IMPORTED INTO THE EU**

Extra-EU Imports		Week 25/2022	Preceding 4-week average	Week 25/2021	Notes
Fresh whole Atlantic salmon imported from Norway (<i>Salmo salar</i> , CN code 03021400)	Price (EUR/kg)	9,01	9,06 (-1%)	5,81 (+55%)	Since week 1 of 2022 prices had an upward trend, in line with the trend over the past three years. Prices ranged from 4,32 (week 44 of 2020) to 11,43 EUR/kg (week 16 of 2022), the highest observed in the past three years.
	Volume (tonnes)	11.303	11.038 (+2%)	12.286 (-8%)	Volumes ranged from 5.672 (week 15 of 2022) to 19.435 tonnes (week 50 of 2020) and had a downward trend over the past three years. Since week 1 of 2022 weekly volumes showed a downward trend.
Frozen Alaska pollock fillets imported from China (<i>Theragra chalcogramma</i> , CN code 03047500)	Price (EUR/kg)	3,63	3,54 (+3%)	2,54 (+43%)	Over the past three years weekly prices showed an upward trend, as well as since the beginning of 2022. Prices ranged from 2,26 (week 52 of 2020) to 3,63 EUR/kg (week 22 of 2022).
	Volume (tonnes)	1.909	2.168 (-12%)	2.097 (-9%)	Weekly volumes fluctuated from 345 (week 52 of 2019) to 5.433 tonnes (week 1 of 2020) over the past three years, following a downward trend, in line with the trend in 2022.
Frozen tropical shrimp imported from Ecuador (genus <i>Penaeus</i> , CN code 03061792)	Price (EUR/kg)	6,00	5,98 (0%)	5,42 (+11%)	Weekly prices showed a stable trend in 2022, in line with the trend over the past three years. Prices ranged from 4,27 (week 38 of 2020) to 6,56 EUR/kg (week 49 of 2021).
	Volume (tonnes)	2.485	3.598 (-31%)	3.875 (-36%)	Volumes exhibited an upward trend in 2022, in line with the trend over the past three years. Weekly volumes fluctuated from 713 (week 6 of 2020) to 4.925 tonnes (week 33 of 2021).

²⁰ Last update: 27.07.2022

Figure 29. **IMPORT PRICE OF FRESH AND WHOLE ATLANTIC SALMON FROM NORWAY, 2019 - 2022**

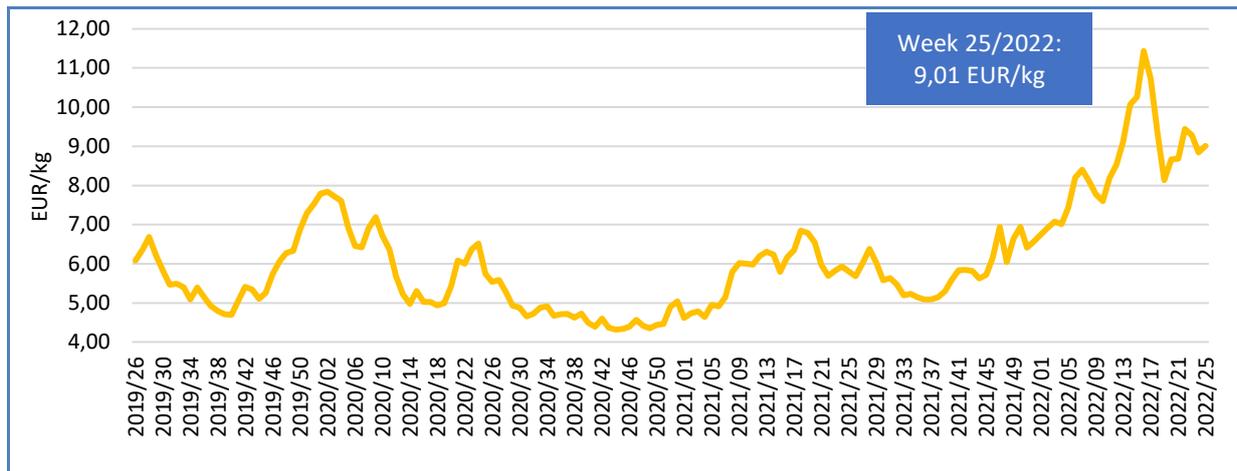


Figure 30. **IMPORT PRICE OF FROZEN ALASKA POLLOCK FILLETS FROM CHINA, 2019 - 2022**

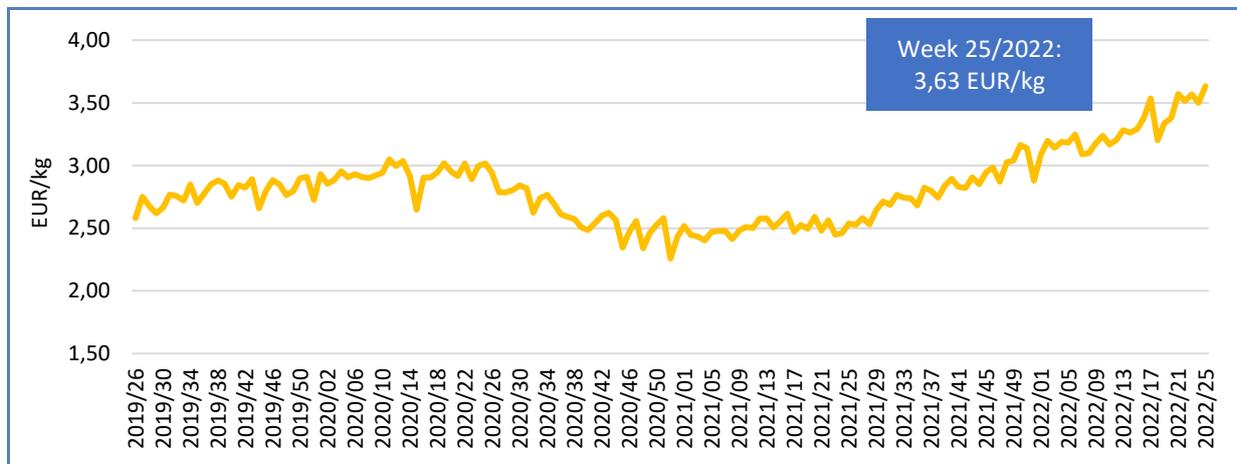


Figure 31. **IMPORT PRICE OF FROZEN TROPICAL SHRIMP FROM ECUADOR, 2019 - 2022**

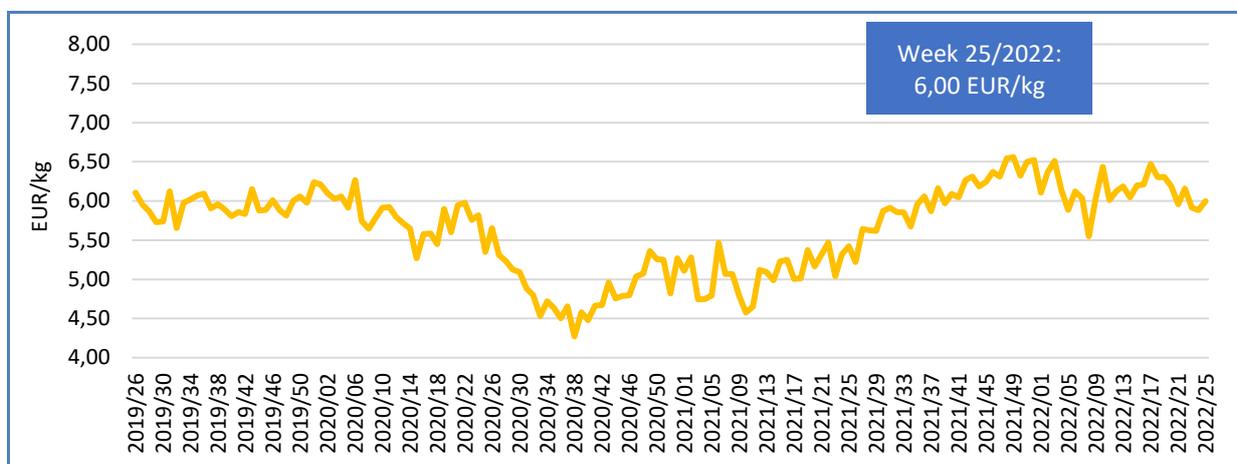


Table 18. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF THIS MONTH'S THREE FEATURED COMMODITY PRODUCTS IMPORTED INTO THE EU**

Extra-EU Imports		Week 25/2022	Preceding 4-week average	Week 25/2021	Notes
Frozen fillets of cod imported from China (<i>Gadus macrocephalus</i> , CN code 03047100)	Price (EUR/kg)	5,76	5,97 (-3%)	4,34 (+33%)	Stable trend over the past three years. Prices fluctuated from 2,82 (week 52 of 2020) to 6,59 EUR/kg (week 20 of 2022). 57% of the weekly prices were under 5,00 EUR/kg.
	Volume (tonnes)	339	151 (+124%)	317 (+7%)	Downward trend over the past three years. High fluctuations in supply from 17 (week 52 of 2019) to 578 tonnes (week 3 of 2020). 48% of the weekly supply was less than 200 tonnes.
Frozen meat, whether or not minced, of hake (excl. fillets and surimi) imported from Namibia (<i>Merluccius</i> spp., CN code 03049550)	Price (EUR/kg)	2,68	3,62 (-26%)	3,06 (-13%)	Upward trend from 2019 to 2022. Prices fluctuated from 1,76 (week 2 of 2020) to 5,49 EUR/kg (week 4 of 2021). 47% of the weekly prices were between 3,00 and 3,99 EUR/kg.
	Volume (tonnes)	730	198 (+269%)	565 (+29%)	High fluctuations in supply from 2019 to 2022, varying from 1 (week 4 of 2021) to 1.000 tonnes (week 48 of 2020). 62% of the weekly volumes were less than 200 tonnes. Overall upward trend.
Frozen redfish imported from Iceland (<i>Sebastes marinus</i> , CN code 03038931)	Price (EUR/kg)	3,03	3,11 (-3%)	2,50 (+21%)	Stable trend over the past three years. Prices ranged from 2,32 (week 28 of 2021) to 4,64 EUR/kg (week 52 of 2021). A correlation between supply and price is evident, where low supply often results in high prices and vice versa. 54% of the weekly prices were between 3,00 and 3,99 EUR/kg.
	Volume (tonnes)	106	81 (+31%)	134 (-21%)	Downward trend over the past three years. Fluctuations in supply from 0,16 (week 14 of 2020) to 292 tonnes (week 49 of 2020). 67% of the weekly volumes were less than 100 tonnes.

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

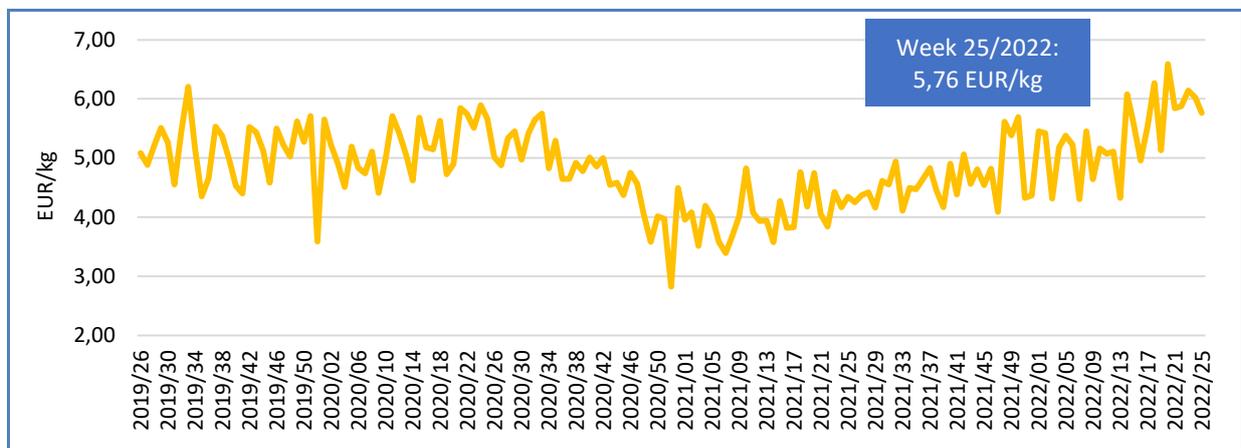


Figure 33. **IMPORT PRICE OF FROZEN MEAT OF HAKE FROM NAMIBIA, 2019 - 2022**

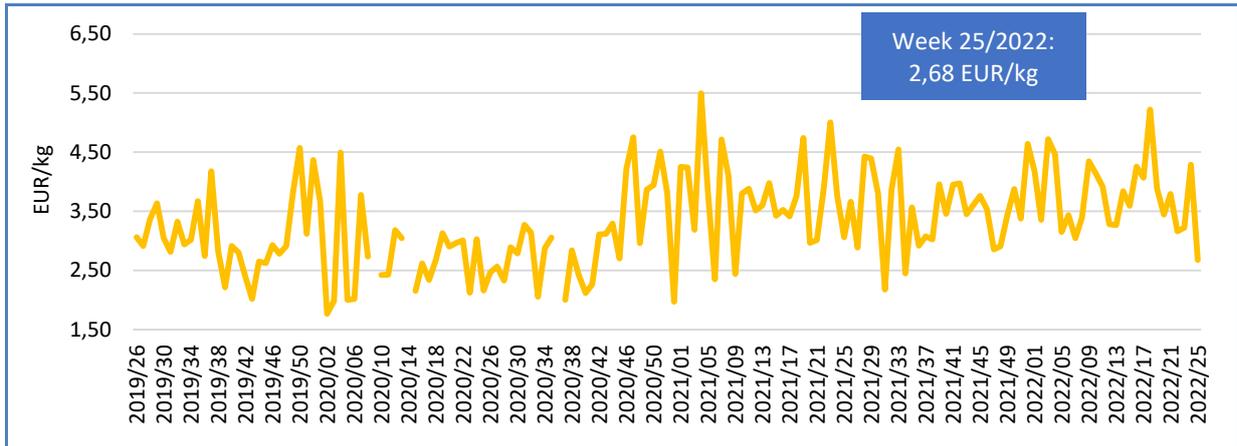
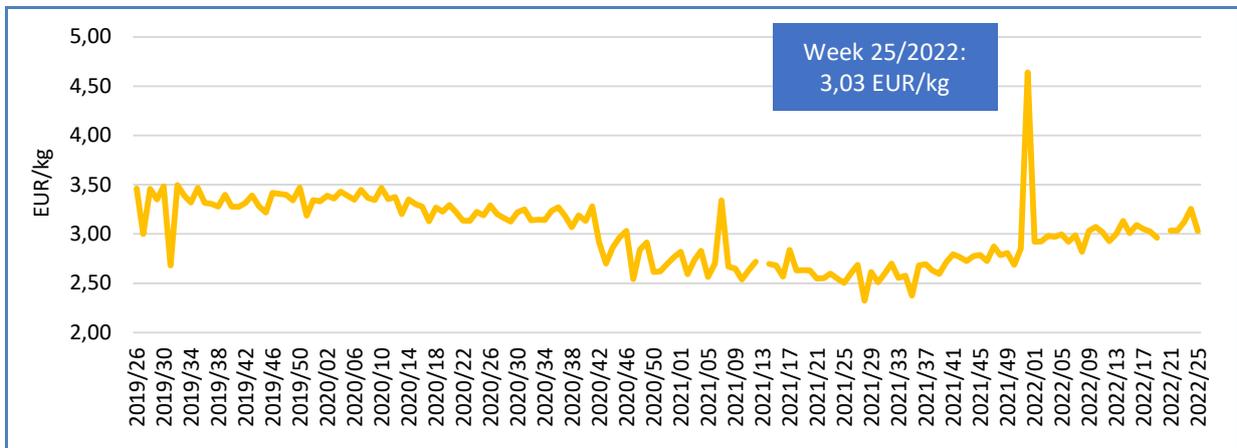


Figure 34. **IMPORT PRICE OF FROZEN REDFISH FROM ICELAND, 2019 - 2022**



In 2022, price of frozen fillets of **cod** from **China** has exhibited an upward trend. At the same time, volume showed a downward trend. Price ranged from 4,31 to 6,59 EUR/kg, and volume from 21 to 368 tonnes.

Since the beginning of the year, price of frozen meat of **hake** from **Namibia** had a downward trend. At the same time, volume exhibited an upward trend. Price ranged from 2,68 to 5,22 EUR/kg, and volume from 68 to 730 tonnes.

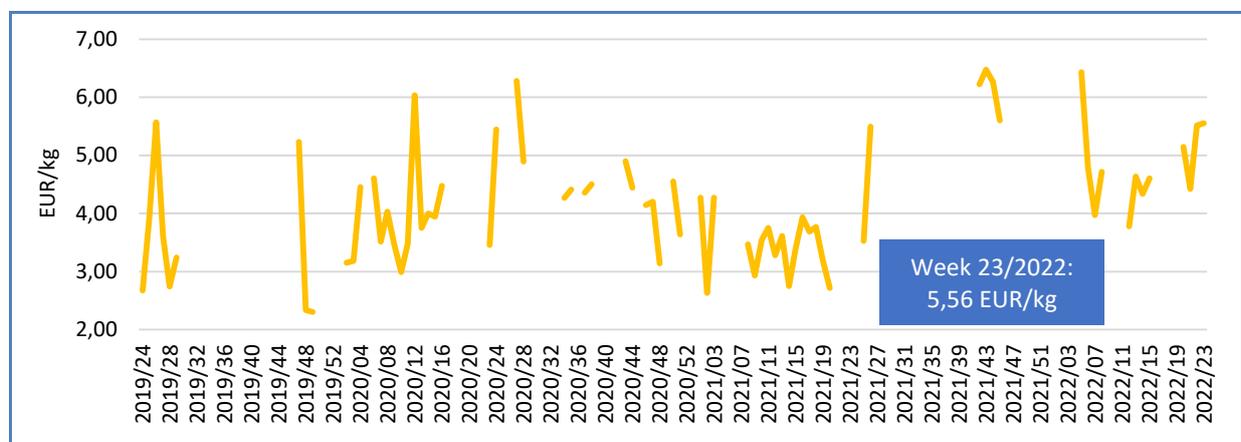
In 2022, both price and volume of frozen **redfish** from **Iceland** showed an upward trend. Price ranged from 2,82 to 3,25 EUR/kg, and volume from 12 to 154 tonnes.

Table 19. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF EU IMPORTS FROM THREE OTHER FISHERIES AND AQUACULTURE PRODUCTS RELEVANT TO THE EU MARKET**

Extra-EU Imports		Week 25/2022	Preceding 4-week average	Week 25/2021	Notes
Frozen squid imported from the United States ²¹ (<i>Loligo pealei</i> , CN code 03074333)	Price (EUR/kg)	5,56*	5,03** (+11%)	4,00*** (+39%)	Upward trend from 2019 to 2022. Prices fluctuated from 2,30 (week 49 of 2019) to 6,48 EUR/kg (week 43 of 2021). 51% of the weekly prices were greater than 4,00 EUR/kg.
	Volume (tonnes)	24	48 (-50%)	23 (+6%)	Fluctuations in supply, varying from 1 (week 27 of 2020) to 240 tonnes (week 7 of 2022). Overall upward trend. 76% of the weekly volumes were less than 50 tonnes.
Live lobsters imported from the United States (<i>Homarus spp.</i> , CN code 03063210)	Price (EUR/kg)	18,46	18,68 (-1%)	21,40 (-14%)	Upward trend over the past three years. Price fluctuations, varying from 12,17 (week 23 of 2020) to 33,71 EUR/kg (week 10 of 2022). 61% of the weekly prices were less than 20,00 EUR/kg.
	Volume (tonnes)	14	24 (-42%)	32 (-56%)	Upward trend over the past three years. High fluctuations in supply from 0,12 (week 13 of 2020) to 238 tonnes (week 50 of 2021). 72% of the weekly volumes were less than 50 tonnes.
Live, fresh, or chilled squid imported from Morocco (<i>Loligo spp.</i> , CN code 03074220)	Price (EUR/kg)	15,63	15,05 (+4%)	11,64(+34%)	Upward trend from 2019 to 2022. Prices ranged from 5,95 (week 1 of 2020) to 22,55 EUR/kg (week 52 of 2019). 65% of the weekly prices were over 10,00 EUR/kg.
	Volume (tonnes)	41	47 (-13%)	87(-53%)	From 2019 to 2022 volumes fluctuated from 0,035 (week 33 of 2019) to 135 tonnes (week 50 of 2020). Overall upward trend. 61% of the weekly volumes were less than 50 tonnes.

*Data refers to week 23 of 2022 (the most recent available). **Data refers to weeks 20 to 22 of 2022. ***Data refers to week 23 of 2021.

Figure 35. **IMPORT PRICE OF FROZEN SQUID FROM THE UNITED STATES, 2019 - 2022**



²¹ Trends are estimated on the available data (54%).

Figure 36. **IMPORT PRICE OF LIVE LOBSTERS FROM THE UNITED STATES, 2019 - 2022**

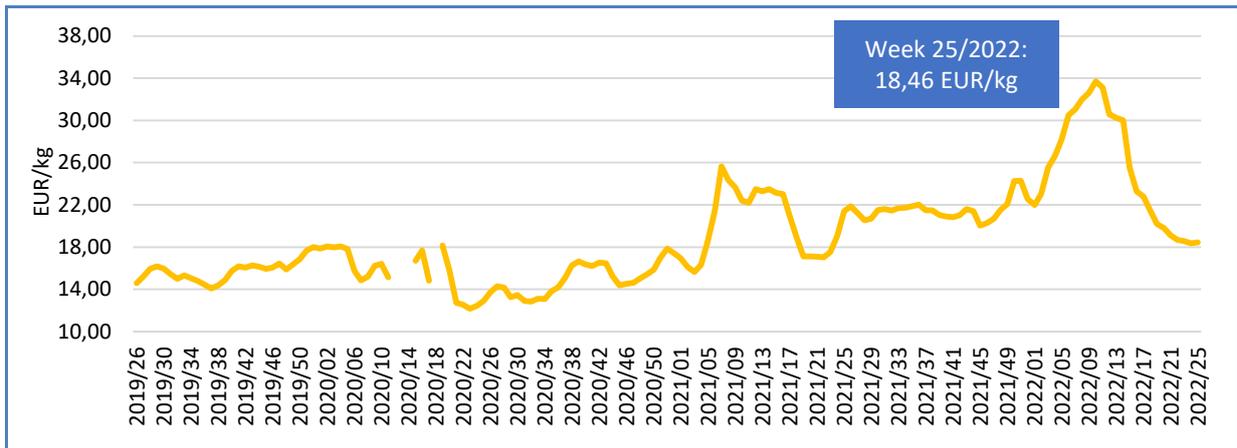
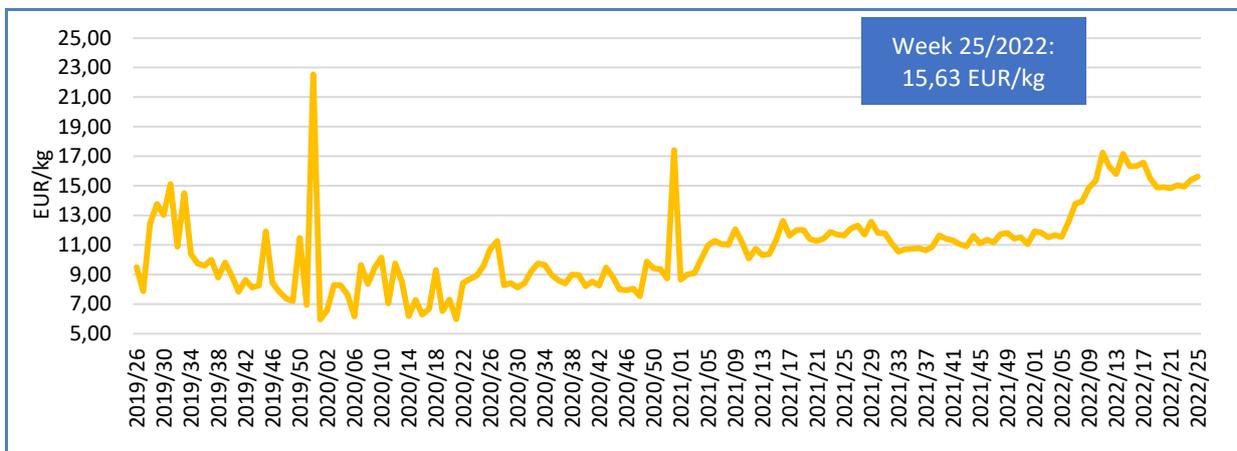


Figure 37. **IMPORT PRICE OF LIVE, FRESH, OR CHILLED SQUID FROM MOROCCO, 2019 - 2022**



In 2022, price of frozen **squid** from the **United States** exhibited an upward trend, while volume showed an opposite trend. Price ranged from 3,78 to 6,43 EUR/kg and supply from 24 to 240 tonnes.

Price and volume of live **lobsters** from the **United States** have exhibited a downward trend in 2022.

Price ranged from 18,35 to 33,71 EUR/kg and weekly supply from 10 to 44 tonnes.

Since the beginning of the year, both price and volume of live, fresh or chilled **squid** from **Morocco** had an upward trend. Price ranged from 11,52 to 17,26 EUR/kg and supply from 6 to 60 tonnes.

3. Consumption

Data analysed in the section “Consumption” are extracted from EUMOFA, as collected from Europanel²².

3.1. HOUSEHOLD CONSUMPTION IN THE EU

In May 2022 compared with May 2021, household consumption of fresh fisheries and aquaculture products decreased in volume in each Member State analysed. A similar decrease was observed in value as well, however, value slightly increased in Italy.

The value increase in Italy was mainly due to mussels, *Mytilus* spp. (171% in volume and 285% in value), and anchovy (26% in value and 36% in volume). Highest declines in household consumption were observed in Sweden, where flatfishes (volume -49%, value -63%) and salmonids (volume -61%, value -50%) were the main contributors to the observed decrease.

Table 20. **MAY OVERVIEW OF THE REPORTING COUNTRIES (volume in tonnes and value in million EUR)**

Country	Per capita consumption 2019* (live weight equivalent, LWE) kg/capita/year	May 2020		May 2021		April 2022		May 2022		Change from May 2021 to May 2022	
		Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Denmark	42,56	1.183	20,35	1.221	19,95	1.058	19,75	939	16,60	-23%	-17%
Germany	13,08	5.908	93,87	6.017	91,00	6.344	104,63	3.988	69,74	-34%	-23%
Hungary	6,28	292	1,45	436	2,67	305	1,86	269	1,97	-38%	-26%
Ireland	25,50	1.259	15,19	1.201	18,13	1.056	16,90	879	14,14	-27%	-22%
Italy	31,21	24.254	251,14	23.230	251,01	21.346	241,86	22.297	252,84	-4%	1%
The	20,60	2.606	45,85	2.769	48,61	2.493	50,40	2.425	46,96	-12%	-3%
Poland	13,11	3.047	20,49	3.463	23,77	3.563	27,10	2.655	19,84	-23%	-17%
Portugal	59,91	7.721	51,51	6.328	43,73	4.808	35,40	5.027	35,09	-21%	-20%
Spain	46,02	60.770	501,03	47.787	411,73	39.082	351,41	38.377	347,59	-20%	-16%
Sweden	25,16	1.038	12,83	797	10,26	802	11,40	400	5,96	-50%	-42%

*Data on per capita consumption of all fish and seafood products for all EU Member States can be found at: https://www.eumofa.eu/documents/20178/477018/EN_The+EU+fish+market_2021.pdf

Over the past three years, the average household consumption of fresh fisheries and aquaculture products in May in both volume and value has been below the annual average in most of the Member States analysed apart from Denmark and Portugal where it was above the average. In Ireland, only volume increased above the annual average level, while value remained at the annual average in Spain.

The most recent weekly consumption data (up to **week 37 of 2022**) are available on the EUMOFA website and can be accessed [here](#).

²² Last update: 02.09.2022

3.2. Fresh haddock

Habitat: The species belongs to the family of Gadidae. They are demersal, occupying a depth range of 10 - 450 m, and usually found at 10 - 200 m²³.

Catch area: Northeast and Northwest Atlantic; in the east from the Celtic Sea to Spitsbergen, the Barents Sea and around Iceland; in the west from Georges Bank to Newfoundland.²⁴

Production areas: Norway, Iceland, the UK, France, Ireland.

Production method: Caught.

Presentation: Whole, filleted.

Preservation: Fresh, chilled, frozen, smoked.

Ways of preparation: Grilled, baked.

3.2.1. Overview of household consumption in Ireland and Sweden

The per capita consumption of fisheries and aquaculture products of Ireland and Sweden are both above the EU average. In 2019, Ireland registered 25,50 kg of consumption, 6% more than the EU average of 23,97 kg. Sweden registered per capita consumption of 25,16 kg, 5% higher than the EU average and only 1% lower compared to Ireland. See more on EU per capita consumption in Table 21.

During the period June 2019–May 2022, retail prices of fresh haddock fluctuated more in Sweden than in Ireland, where prices registered in Ireland in 2022 (13,34 EUR/kg on average) were 23% lower than those in Sweden (17,37 EUR/kg on average). Consumed volume in the same period was nearly four times higher in Ireland (2.012 tonnes) than in Sweden (510 tonnes).

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

First Sales: Denmark 2/2018, 10/2013, France 2/2018, Norway 8/2015, Sweden 4/2014, United Kingdom 2/2018, 5/2016, 4/2013.

Consumption: Ireland 2/2019, 9/2017, Sweden 2/2019, 9/2017, 10/2013, United Kingdom 9/2017, 10/2013.

Extra-EU Imports: Norway 8/2021, 8/2020, 10/2018 Russian Federation 3/2019, 2/2018.

Topic of the month: Haddock in the EU 7/2017, Haddock in the UK 6/2015, 5/2013.

²³ <https://www.fishbase.se/summary/1381>

²⁴ <https://www.eumofa.eu/documents/20178/142325/MH+2+2019+EN.pdf>

Figure 38. **PRICES OF HADDOCK PURCHASED BY IRISH AND SWEDISH HOUSEHOLDS**

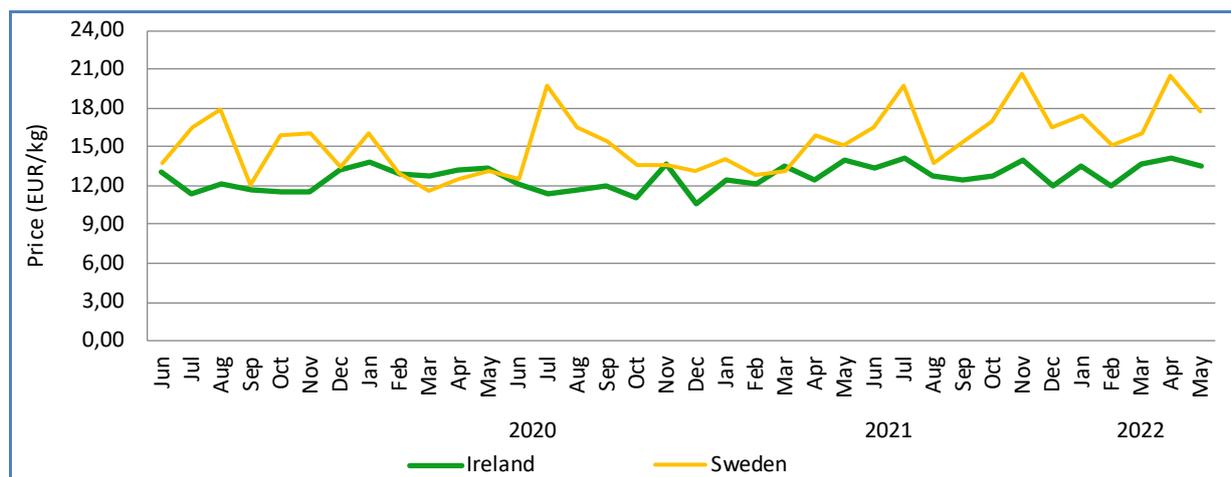
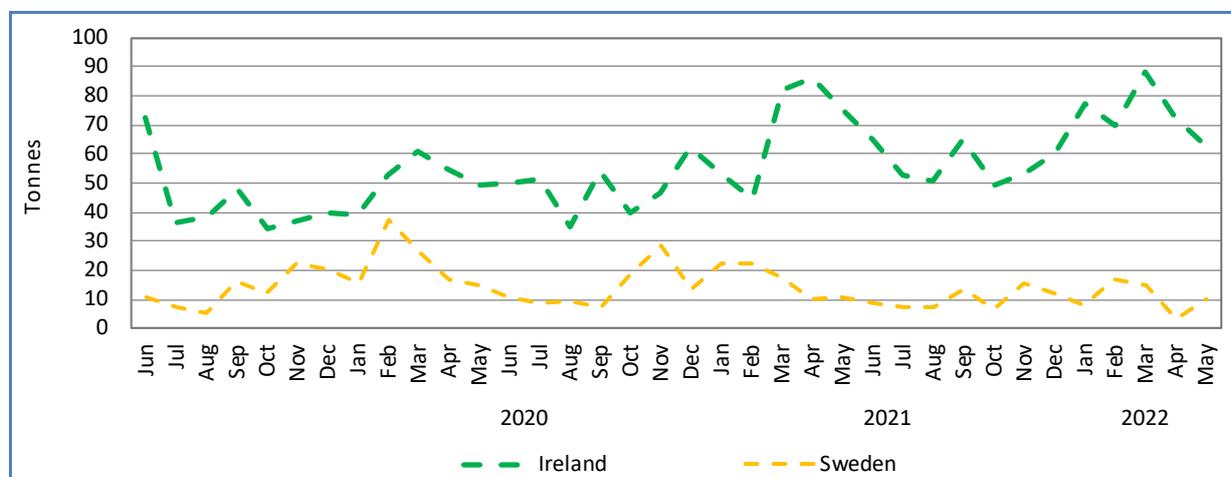


Figure 39. **HOUSEHOLD PURCHASES OF HADDOCK IN IRELAND AND SWEDEN**



3.2.2. Household consumption trends in Ireland

Long-term trend (Jun 2019 to May 2022): Upward trend both in price and volume.

Yearly average price: 12,47 EUR/kg (2019), 12,37 EUR/kg (2020), 12,99 EUR/kg (2021).

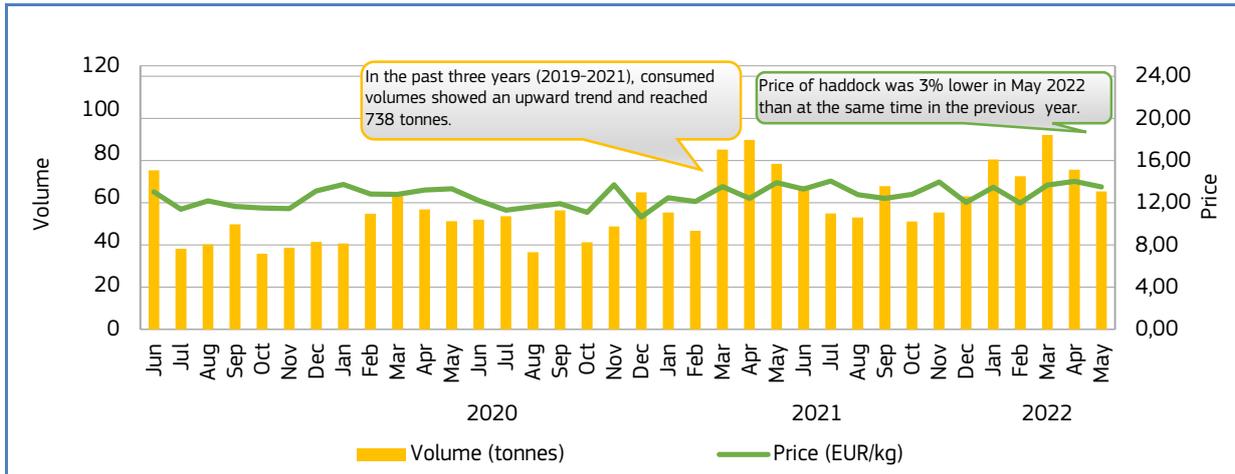
Yearly consumption: 560 tonnes (2019), 596 tonnes (2020), 738 tonnes (2021).

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

Price: 13,34 EUR/kg.

Consumption: 371 tonnes.

Figure 40. **RETAIL PRICE AND VOLUME OF HADDOCK PURCHASED BY HOUSEHOLDS IN IRELAND, JUNE 2019 – MAY 2022**



3.2.3. Household consumption trends in Sweden

Long-term trend (Jun 2019 to May 2022): Slight upward trend in prices and upward trend in volume.

Yearly average price: 14,61 EUR/kg (2019), 14,23 EUR/kg (2020), 15,87 EUR/kg (2021).

Yearly consumption: 202 tonnes (2019), 209 tonnes (2020), 154 tonnes (2021).

Short-term trend (January to May 2022): Upward trend in price and downward trend in volume.

Price: 17,37 EUR/kg.

Consumption: 54 tonnes.

Figure 41. **RETAIL PRICE AND VOLUME OF HADDOCK PURCHASED BY HOUSEHOLDS IN SWEDEN, JUNE 2019 – MAY 2022**



4. Case study: Dogfish in the EU

Dogfish species have several biological features making them vulnerable to overexploitation. As a result of a set of regulations implemented in the EU, there are no major target fisheries for dogfish species and most catches are taken as bycatch in mixed demersal fisheries. Thus, limited volumes are landed each year in the EU. In 2020, EU landings amounted to 1.650 tonnes, with Portugal, France, and Spain being the main landing countries. First-sales data show a high seasonality in France and a correlation between volumes and prices in both France and Portugal. The EU market is also supplied by imports, mainly from the USA (1.633 tonnes were imported to the EU in 2021). Despite the small supply volumes, some volumes of dogfish species are traded between EU countries (intra-EU exports amounted to 2.419 tonnes in 2021).

4.1 Biology resource and exploitation

Biology

Dogfish species are shark species, which belong to the elasmobranch taxa²⁵. This taxon has biological characteristics that make dogfish vulnerable to overexploitation, such as longevity, slow growth, late sexual maturation, aggregation behaviour, and low fecundity. The species considered in this case study include the species classified under the Main Commercial Species “dogfish” in EUMOFA²⁶. In particular, these species belong to the two following orders:



Source: *Scandinavian Fishing Year Book*

- The **Squaliformes**²⁷ which is the second most diverse order of sharks, mostly benthopelagic in habit, and preferentially living in cold, bathyal waters. Features shared by all elasmobranch taxa which make them particularly vulnerable to population depletion and overexploitation (as mentioned previously) are particularly pronounced in this shark group. Examples of species include Portuguese dogfish (*Centroscymnus coelolepis*), piked dogfish (*Squalus acanthias*), and arrowhead dogfish (*Deania profundorum*).
- The **Carcharhiniformes**²⁸ are also one of the most diverse groups of sharks, with species inhabiting virtually all marine habitats. Example of species include greater spotted dogfish or nursehound (*Scyliorhinus stellaris*), which is included in the dogfish species analysed in this case study.

The dogfish species caught by the EU fleet include:

- **Greater spotted dogfish or nursehound** (*Scyliorhinus stellaris*): present in all the Mediterranean and the Black Sea; beyond the Gibraltar Strait, it is also present along the eastern Atlantic coast up to Scandinavia and along the southern coast up to Senegal. This species can be 170 cm long, but the medium length is of 80-100 cm in the

²⁵ The term elasmobranch refers to the sharks, rays and skates which are cartilaginous fishes. These animals have a skeleton made of cartilage, rather than bone.

²⁶ The list of species studied in this case study: Needle dogfish (*Centrophorus acus*), Smallfin gulper shark (*Centrophorus moluccensis*), Black dogfish (*Centroscyllium fabricii*), Lowfin gulper shark (*Centrophorus lusitanicus*), Little gulper shark (*Centrophorus uyato*), Gulper sharks nei (*Centrophorus spp*), Portuguese dogfish (*Centroscymnus coelolepis*), Longnose velvet dogfish (*Centroscymnus crepidater*), Roughskin dogfish (*Centroscymnus owstoni*), Shortnose velvet dogfish (*Centroscymnus cryptacanthus*), Birdbeak dogfish (*Deania calcea*), Dogfishes and hounds nei (*Squalidae*, *Scyliorhinidae*), Picked dogfish (*Squalus acanthias*), Dogfish sharks nei (*Squalidae*), Dogfishes nei (*Squalus spp*), Shortnose spurdog (*Squalus megalops*), Gulper shark (*Centrophorus granulosus*), Leafscale gulper shark (*Centrophorus squamosus*), Longnose spurdog (*Squalus blainvillei*), Kitefin shark (*Dalatias licha*), Rough longnose dogfish (*Deania hystricosa*), Arrowhead dogfish (*Deania profundorum*), Dogfish sharks, etc. nei (*Squaliformes*), Velvet dogfish (*Scymnodon squamulosus*), Smallmouth knifetooth dogfish (*Scymnodon obscurus*), Knifetooth dogfish (*Scymnodon ringens*), greater spotted dogfish (*Scyliorhinus stellaris*), Centroscyllium dogfishes nei (*Centroscyllium spp*), *Centroscymnus spp*

²⁷ Verissimo, A., McDowell, J. R., and Graves, J. E. 2011. Population structure of a deep-water squaloid shark, the Portuguese dogfish (*Centroscymnus coelolepis*). – ICES Journal of Marine Science, 68: 555–563.

²⁸ <https://onlinelibrary.wiley.com/doi/full/10.1111/j.1475-4983.2008.00757.x>

Mediterranean, and 125 cm in the Atlantic ²⁹. It mainly eats crustaceans in addition to a variety of molluscs and bony fish³⁰.

- **Portuguese dogfish** (*Centroscymnus coelolepis*): medium-sized squaloid (<1,5 m) with an extensive geographic distribution including the Atlantic, Indian, and Pacific Oceans. Its bathymetric range extends from middle to lower bathyal depths but may vary according to region, size, sex, and maturity stage³¹.
- **Spiny dogfish or piked dogfish** (*Squalus acanthias*): small, gregarious shark inhabiting temperate waters of the western Atlantic Ocean, Indo-Pacific, Mediterranean and Black Sea. Possibly the most abundant living shark. It is mainly found between 10-200 m depth. At sexual maturity, males are 60-70 cm long and females are 75-90 cm long. The species feeds on a diversity of prey, ranging from jellyfish, squid, mackerel, and herring to a wide array of benthic fishes, shrimps, and crabs³².

Resource, exploitation, and management in the EU

Whilst there are currently no major target fisheries for dogfishes or sharks, a range of species are taken as bycatch in mixed demersal fisheries. Several management measures have been implemented in the EU waters, resulting in limited target fisheries of dogfish species.

Table 21. **SUMMARY OF RESOURCE EXPLOITATION, MANAGEMENT MEASURES AND CLASSIFICATION IN THE INTERNATIONAL UNION FOR CONSERVATION OF NATURE (IUCN) RED LIST**

Species	Fisheries and uses ³³	EU management measures
Greater spotted dogfish (<i>Scyliorhinus stellaris</i>)	Taken as bycatch in bottom-trawl and artisanal fisheries (particularly in the Mediterranean and Black Sea) and occasionally caught by anglers.	Not subject to any management measures.
Piked or spiny dogfish (<i>Squalus acanthias</i>)	One of the most heavily fished and traded sharks in the world. In Europe, it is taken as bycatch in trawl, gillnet, and longline fisheries.	Regulation (EU) 2018/120 ³⁴ prohibits the fishing, retaining on board, transhipment, or landing of piked dogfish, with the exception of avoidance programmes (e.g. limited quota is available for vessels engaged in bycatch avoidance programmes). It also prohibits non-EU vessels to fish, retain on board, and tranship the species in EU waters.
Portuguese dogfish (<i>Centroscymnus coelolepis</i>)	In Europe, the species is taken as bycatch in trawl, gillnet, and longline fisheries.	The 2010 European fisheries regulations implemented a zero Total Allowable Catch for a list of deep-water sharks, including this species. A limited TAC for deepwater shark bycatch in longline fisheries targeting black scabbardfish has been permitted from 2017 to 2020. ICES advises that, when the precautionary approach is applied, there should be zero catches of this species in each of the years 2020-2023 ³⁵ . Additional management measures include banned use of trawls and gillnets in waters <200m in the Azores, Madeira, and the Canary Islands, and international waters regulated by ICES; banned use of gillnets by EU vessels at depths <600m and closed areas to deep-water fishing, etc.

²⁹ <https://www.monaconatureencyclopedia.com/scyliorhinus-stellaris/?lang=en>

³⁰ http://species-identification.org/species.php?species_group=sharks&id=383

³¹ Verissimo, A., McDowell, J. R., and Graves, J. E. 2011. Population structure of a deep-water squaloid shark, the Portuguese dogfish (*Centroscymnus coelolepis*). – ICES Journal of Marine Science, 68: 555–563.

³² <https://www.fishbase.de/summary/Squalus-acanthias.html>

³³ https://sharkadvocates.org/sharks_in_the_baltic.pdf

³⁴ Council Regulation (EU) 2018/120 of 23 January 2018 fixing for 2018 the fishing opportunities for certain fish stocks and groups of fish stocks, applicable in Union Waters and, for Union fishing vessels, in certain non-Union waters.

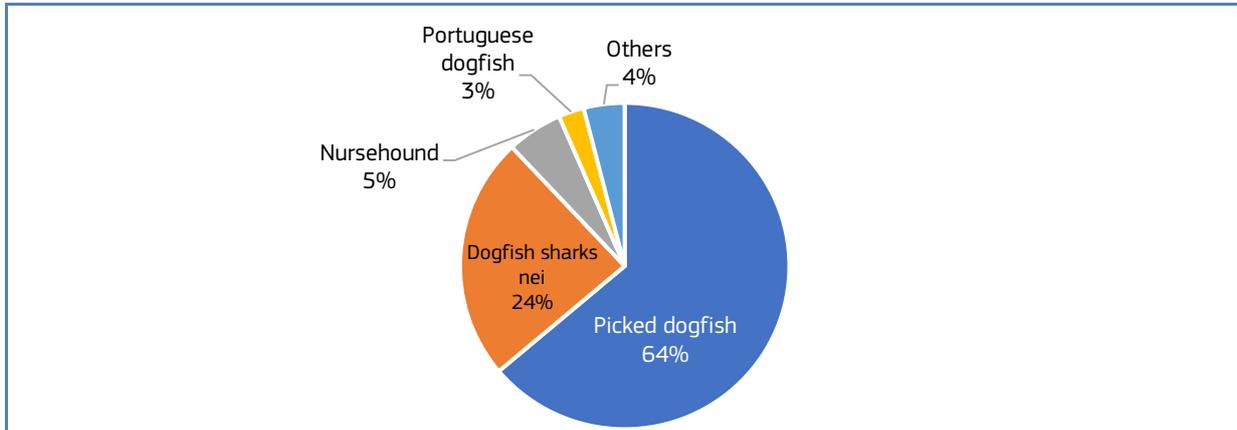
³⁵ <https://oap.ospar.org/en/versions/1742-en-1-0-1-portuguese-dogfish/>

4.2 Production

Catches

Global production of dogfish species amounted to 21.406 tonnes in 2020. The main species were piked dogfish (64%), and Dogfish sharks nei (24%). Catches of nursehound or greater spotted dogfish, which is the main species caught in the EU, accounted for 5% of global catches.

Figure 42. **WORLD CATCHES OF DOGFISH: BREAKDOWN BY MAIN SPECIES³⁶ IN 2020**



Source: FAO

In 2020, the leading producers by volume were the United States of America (37% of global catches), New Zealand (25%) and Libya (18%). Other producers include Spain (5%), Indonesia (5%), Portugal (3%), France (2%), and Norway (2%). In 2020, EU catches accounted for 12% of global catches of dogfish species.

Between 2011 and 2020, global catches of dogfish species overall decreased by 17%. Specifically, catches decreased in the USA (-23%), Libya (-13%), Indonesia (-33%), Portugal (-52%), France (-8%), Canada (-89%), and the United Kingdom (-78%), while they increased in New Zealand (32%), Spain (415%) and Norway (66%).

Table 22. **TOTAL WORLD CATCHES OF DOGFISH SPECIES (volume in tonnes)**

Country	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
USA	10.187	11.033	7.446	10.220	9.097	12.312	8.920	7.184	7.798	7.822
New Zealand	4.022	6.735	5.770	6.779	6.756	5.737	7.209	6.928	5.397	5.297
Libya	4.400	5.100	5.100	3.500	3.020	3.230	3.850	3.850	3.850	3.850
Spain	198	214	1.238	2.051	2.078	2.566	1.403	517	1.435	1.020
Indonesia	1.497	1.782	2.499	2.847	2.883	3.897	3.000	3.657	1.000	1.000
Portugal	1.367	1.399	1.358	809	595	647	613	660	749	660
France	520	285	256	326	301	406	353	467	519	480
Norway	247	285	250	314	217	270	222	270	370	410
United Kingdom	588	264	237	394	141	56	91	103	131	131
Canada	1.086	941	429	275	366	252	153	252	218	119
Others	1.541	1.748	1.251	1.413	1.569	783	587	510	619	617
Total	25.653	29.786	25.834	28.928	27.023	30.156	26.401	24.398	22.086	21.406

SOURCE: FAO.

Landings in the EU

In 2020, landings of dogfish species in the EU-27 amounted to 1.650 tonnes³⁷ for a total value of EUR 2,7 million. EU landings are mainly made of fresh landings which accounted for 84% of the total volume and 75% of the total value, while the rest was landed frozen.

Portugal, France, and Spain were the most important landing countries with 30%, 28%, and 21% of the EU-27 landings, respectively. Other landing countries of dogfish species included Croatia (6% of the EU-27 landings), Italy (3%), and Belgium (3%). The main landing countries in terms of value provide different rankings, suggesting different species compositions between countries. Spain ranked first in terms of value of dogfish species, with 42% of the value of EU-27 landings and was followed by France (17%). Landings in Spain were made of several dogfish species, including Portuguese dogfish (43% of landings volume), longnose spurdog (19%), dogfish sharks nei (13%) and arrowhead dogfish (11%), while landings in Portugal and France were monospecies with greater spotted dogfish constituting the totality of landings³⁸.

Between 2010 and 2019, EU-27 landings of dogfish species decreased by 31% in volume and 25% in value, as a result of the significant decrease of the Portuguese landings which decreased by 54% in volume and 30% in value in real terms³⁹ over the same period.

³⁷ EU landings are less than EU catches provided in the section below. This relates mainly to a share of the Spanish and Portuguese catches that are landed in third countries.

³⁸ EUROSTAT

³⁹ Values are deflated by using the GDP deflator (base=2015).

Table 23. **LANDINGS OF DOGFISH SPECIES IN THE EU (volume in tonnes)**⁴⁰

COUNTRY	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Portugal	1.082	981	950	395	435	476	502	481	522	498
France	497	268	232	262	284	390	343	449	505	463
Spain	220	256	606	696	728	668	520	541	475	351
Croatia	0	0	49	59	70	71	70	61	70	93
Italy	36	38	48	121	68	52	46	118	103	52
Belgium	0	0	0	27	37	40	57	41	61	51
Others	542	441	485	499	258	179	118	59	128	142
Total	2.376	1.983	2.369	2.059	1.880	1.875	1.656	1.750	1.864	1.650

Source: EUMOFA.

Marketing and consumption

Dogfish species used to be frequently consumed and sought after in the EU for their meat and fins. For instance, piked dogfish was used as smoked belly flaps in Germany, called “Schillerlocken”, and the fins were used in shark fin soup⁴¹. However, since the implementation of management measures and the resulting decrease of landings, both marketing and consumption of these species have been limited.

4.3 Dogfish: first sales in the EU

Dogfish first-sales data are available for the greater spotted dogfish (*Scyliorhinus stellaris*), which constitutes all dogfish landings in Portugal and France. Monthly first-sales data cover almost all greater spotted dogfish landings in the EU (99%) and thus provide a reliable source for this species. In 2021, first sales in reporting countries amounted to 950 tonnes (all fresh, whole) for a value of around EUR 0,9 million and an average price of 0,90 EUR/kg. Portugal accounted for 47% of the total volumes, followed by France (44%).

In France, first-sales data show a high seasonality, with the majority of first sales occurring during summer (mainly between June and September). The variations of first-sales prices seem correlated to first-sales volumes with the lowest prices recorded during the peak of volumes, i.e. during the summer. The seasonality is less pronounced in Portugal, even though the prices seem to be correlated with first-sales volumes.

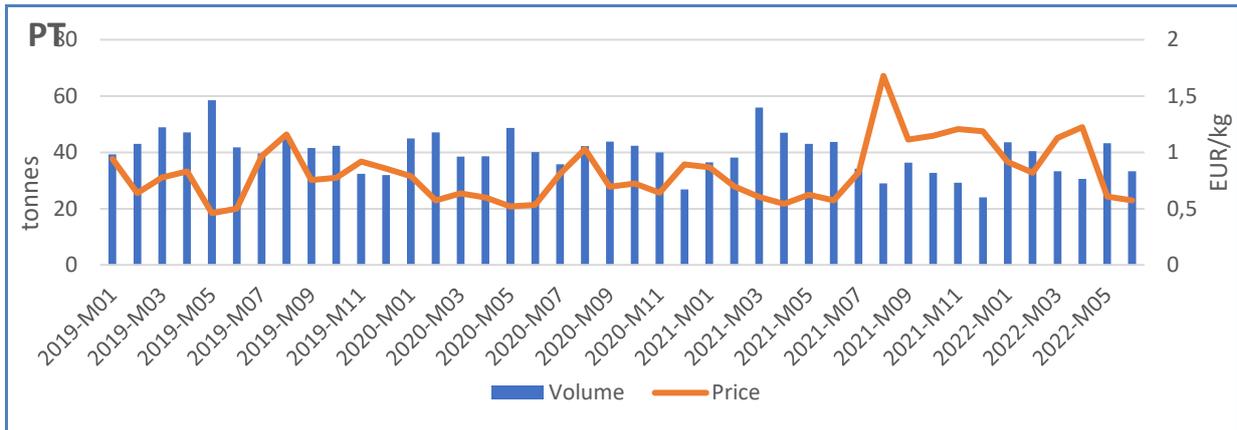
Prices recorded in France for whole, fresh greater spotted dogfish between January 2019 and June 2022 were higher on average than prices recorded in Portugal for the same product type (1,07 EUR/kg in France and 0,82 EUR/kg in Portugal).

The top three first-sales places for fresh whole greater spotted dogfish in the EU in 2021 were Cherbourg and Port-en-Bessin-Huppain in France, accounting for 13% each of the first sale value, and Nazaré in Portugal (12% in value and the major first sale place in volume in the EU).

⁴⁰ Totals do not correspond exactly to actual sums because of roundings.

⁴¹ https://sharkadvocates.org/sharks_in_the_baltic.pdf

Figure 43. **FIRST SALES: FRESH DOGFISH IN PORTUGAL**



Source: EUROSTAT

Figure 44. **FIRST SALES: FRESH DOGFISH IN FRANCE**



Source: EUROSTAT

4.4 International trade

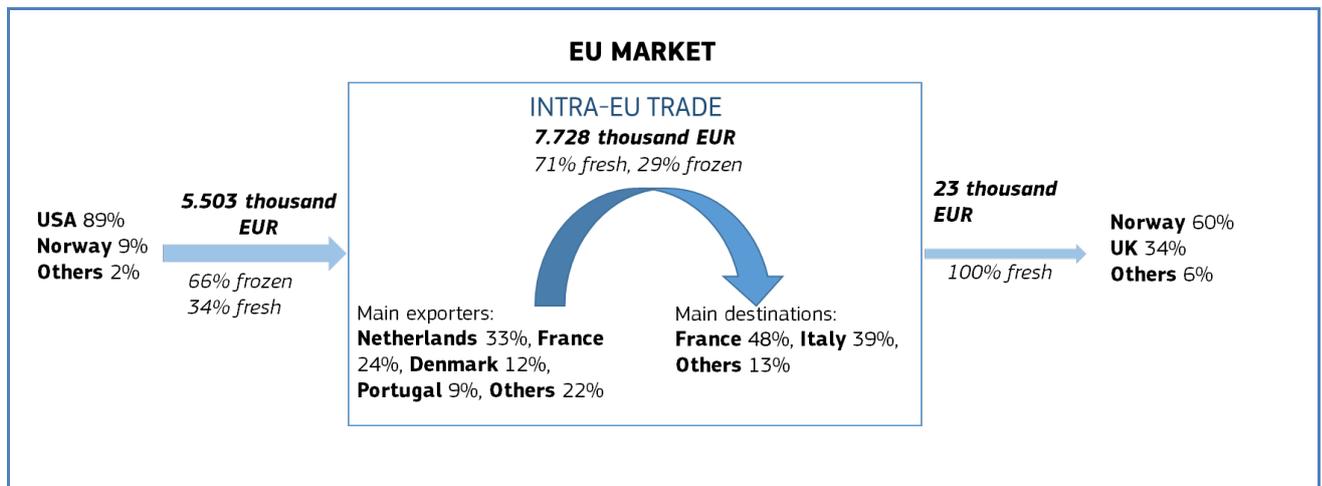
EU trade flows and supply

In the CN nomenclature⁴² used for registering EU import-export data, dogfish is specifically reported as live/fresh and frozen⁴³.

In 2021, the EU-27 trade deficit for dogfish products amounted to 5.479 thousand EUR. In the same year, the EU-27 imported 1.633 tonnes of dogfish for a value of 5,5 million EUR, mainly frozen (66% of the imports value), but also fresh (34%). The major provider of dogfish to the EU market was the United States of America, accounting for 89% of the imports value. EU exports to third countries were rather marginal, with less than 10 tonnes in 2021.

In 2021, intra-EU exports amounted to 2.419 tonnes of dogfish products for a value of EUR 7,7 million. The intra-EU trade was dominated by fresh products, which accounted for 71% of the trade value. The main exporting countries within the EU were the Netherlands (33% of the intra-EU export value), France (24%), Denmark (12%) and Portugal (9%). France and Italy were the main destinations with 48% and 39% respectively of the intra-EU exports.

Figure 45. **THE DOGFISH EU-TRADE MARKET IN 2021, IN VALUE**



Source: EUMOFA elaboration of EUROSTAT-COMEXT data.

⁴² The Combined Nomenclature (CN) is the EU's eight-digit coding system, comprising the Harmonised System (HS) codes with further EU subdivisions. It serves the EU's common customs tariff and provides statistics for trade within the EU and between the EU and the rest of the world.

⁴³ 03028115: Fresh or chilled piked dogfish "Squalus acanthias" and catsharks "Scyliorhinus spp.", 03038115: Frozen piked dogfish "Squalus acanthias" and catsharks "Scyliorhinus spp.", 03044710: Fresh or chilled fillets of piked dogfish "Squalus acanthias" and catsharks "Scyliorhinus spp.", 03045610: Fresh or chilled meat, whether or not minced, of piked dogfish "Squalus acanthias" and catsharks "Scyliorhinus spp." (excl. fillets), 03048811: Frozen fillets of piked dogfish "Squalus acanthias" and catsharks "Scyliorhinus spp.", 03049610: Frozen meat, whether or not minced, of piked dogfish "Squalus acanthias" and catsharks "Scyliorhinus spp."

5. Case study: Fisheries and aquaculture in Singapore

5.1. Introduction

The Republic of Singapore is a city/state island located in Southeast Asia. Singapore has a 193 km coastline and a total area of 697 square kilometres. The island is located between Malaysia and Indonesia, separated by the Singapore Strait in the south and the Johore Strait in the north. Singapore is a strongly urbanised country, with 100 % of its population of 6,2 million living in urban areas. The climate in Singapore is warm and humid, with little seasonal variation⁴⁴.

Singapore has a strong economy with a low unemployment rate and a high GDP per capita PPP (102.500 EUR)⁴⁵ in December 2021, the second highest in the world⁴⁶. Its major industries are electronics, chemicals, financial services, and oil drilling equipment. The industry sector makes up 24 % of the GDP, but service is the biggest sector with 76 % of the GDP. The currency used is Singapore Dollars (SGD). The most important trade partners are neighbouring countries in Asia and the USA. The economy relies on exports, especially of electronics and petroleum products⁴⁷.

Fisheries and aquaculture products are an important part of the Singaporean diet, as Singaporeans eat on average 22 kg (LWE) per capita annually, around two kilos more than the global average⁴⁸. Being a small country, Singapore relies on imports of food⁴⁹. In 2021 it imported 360.000 tonnes of fisheries and aquaculture products (FAPs) and exported 33.613 tonnes. The fisheries sector is much smaller than the aquaculture sector in volumes, with 310 tonnes locally landed seafood in 2021 compared to 4.900 tonnes of locally produced seafood from aquaculture⁵⁰. The government is supporting the development of a more self-sufficient and sustainable aquaculture sector⁵¹.



Source: The world factbook

5.2. Fisheries and aquaculture production

Fisheries and aquaculture production in Singapore has increased by 38,6% over the last 10 years, growing from 5.231 tonnes live weight equivalent (LWE) in 2010, to 7.249 LWE tonnes in 2019. The highest volume from fisheries and aquaculture production combined was registered in 2015 with 8.161 LWE tonnes. During this time, aquaculture production has seen an increasing trend while fisheries production has decreased, although volumes increased slightly between 2017 and 2019. Between 2019 and 2020, however, both sectors saw a significant drop in volumes. Aquaculture volumes decreased by 17%, and fisheries volumes decreased by 75% from 2019 to 2020.

⁴⁴ <https://www.countryreports.org/country/Singapore/facts.htm>

⁴⁵ To convert from USD to EUR, the yearly average exchange rate as published by the European Central Bank was used

⁴⁶ <https://tradingeconomics.com/country-list/gdp-per-capita-ppp?continent=world>

⁴⁷ <https://www.countryreports.org/country/Singapore/facts.htm>

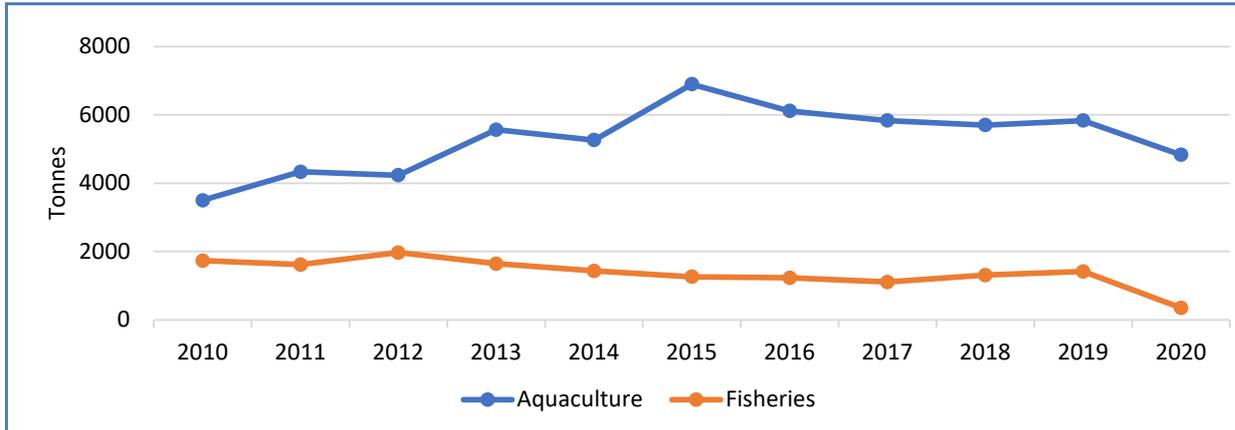
⁴⁸ <https://www.seasustainable.co/blogs/seasustainable-blog/sustainableseafood#:~:text=Singapore%20is%20well-known%20for%20our%20love%20for%20seafood,it%20surpasses%20even%20the%20global%20average%20of%2020kg%21>

⁴⁹ <https://www.psd.gov.sg/challenge/ideas/deep-dive/strengthening-singapore-s-food-security>

⁵⁰ <https://tablebuilder.singstat.gov.sg/table/T5/M890731>

⁵¹ https://www.sfa.gov.sg/docs/default-source/default-document-library/260421_sfa-awards-over-23-million-to-grant-call-for-r-d-in-sustainable-urban-food-production/a58a092d264c4c91acf57099a12046eb.pdf

Figure 46. **TOTAL PRODUCTION OF AQUACULTURE AND FISHERIES (volumes in tonnes)**

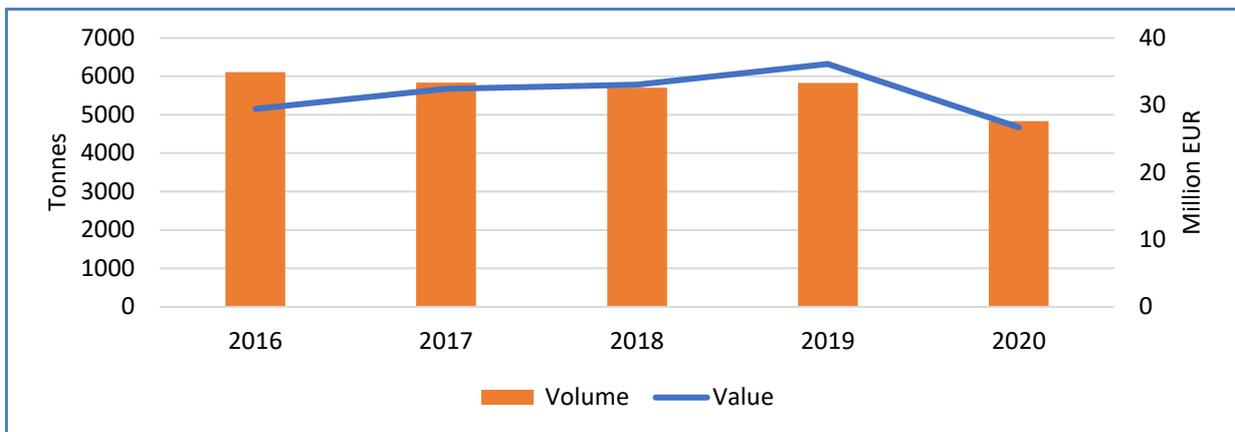


Source: FAO

Aquaculture

Due to sea and land constraints, aquaculture production in Singapore is relatively low. In 2020, the production volume from aquaculture was 4.829 tonnes LWE, showing a decreasing trend since 2016 (-20,9%). The value of production increased until 2019, from EUR 29,4 million in 2016 to EUR 36,1 million in 2019. From 2019 to 2020, however, the value plummeted by 26%.

Figure 47. **AQUACULTURE PRODUCTION IN SINGAPORE (volumes in tonnes, value in million EUR)**



Source: FAO

Due to small freshwater reserves in Singapore, 80,5% (3.891 tonnes) of the aquaculture production in 2020 was from marine aquaculture. Milkfish was the most produced species (by volume), covering 35% of total production in 2020. Freshwater aquaculture makes up 13,9% (673 tonnes) of the total production volume. It includes production of the American bull frog, Indonesian snakehead, and Mozambique tilapia. Production in brackish water made up 5,4% (265 tonnes) of total production in 2020. Aquaculture production in brackish water increased by 89,2% from 2016 to 2020, and includes species such as barramundi, groupers, and *Penaeus* shrimps.

The most produced species by volume are milkfish and barramundi. However, there is a significant difference in the value of these two species. In 2020, 1.358 tonnes of milkfish were produced at a value of EUR 2,36 million. In the same year, 831 tonnes of barramundi were farmed at a value of 7,2 million EUR. Flathead grey mullet, green mussel, and American bullfrog are next on the list of most produced species by volume in Singapore.

Table 24. **AQUACULTURE PRODUCTION VOLUMES (tonnes) AND VALUE (1.000 EUR) BY SPECIES**

Species	2016		2017		2018		2019		2020	
	Volume	Value								
Milkfish	2.210	3.543	2.094	3.396	2.020	3.438	1.571	2.844	1.358	2.363
Barramundi (Giant seaperch)	731	5.092	851	6.474	844	6.807	1.248	9.705	831	7.179
Flathead mullet grey	513	1.855	361	1.468	359	1.560	500	1.717	597	1.764
Green mussel	525	337	352	283	394	357	403	372	369	538
American bull frog	531	2.701	519	2.798	516	2.835	523	3.005	333	2.005
Other	1.602	15.918	1.657	18.025	1.568	18.041	1.585	18.492	1.340	12.861
Total	6.112	29.447	5.834	32.444	5.702	33.038	5.831	36.135	4.829	26.710

Source: FAO

Most of the aquaculture production in Singapore is from cage-based production sites in the sea. The 110 sea-based sites that are in coastal and southern waters contribute to 85% of fish production in Singapore⁵². Most of these coastal sites are open net-cage farms, with wood structures and 200-litre drums for flotation⁵³. Fish produced from aquaculture in Singapore makes up 10% of the total fish consumed in the country⁵⁴.

Aquaculture R&D

Despite relatively low aquaculture production, Singapore houses a dynamic aquaculture Research and Development (R&D) network with international institutes and companies. The Singapore Food Agency's (SFA) Marine Aquaculture Centre (MAC) provides research facilities and access to biological materials and undertakes research and development in tropical aquaculture production cycles. The development of aquaculture technology, such as genomic selection, biosecurity, and genomic improvements is accelerating and taking aquaculture from low-tech to high-tech. This development is supported by the government for the purpose of food security⁵⁵. To initiate self-sufficiency and sustainable growth, the SFA has set a "30 by 30" target which includes producing 30% of their nutritional needs by 2030. The "30 by 30" target was launched in February 2021 and was included in the Singapore Green Plan 2030. In order to reach this target, the SFA is funding 12 projects, eight of which focus on aquaculture, with more than 23 million USD⁵⁶.

In addition to these eight SFA-funded aquaculture projects, other innovative projects are planned. One company is planning to produce 1.000 tonnes of Atlantic salmon a year in recirculating aquaculture systems (RAS)^{57,58}. Additionally, an eight-story high land-based fish farm is in Lim Chu Kang in Singapore, which aims to produce 2.700 tonnes of fish (hybrid grouper and coral trout) with their own RAS technology by 2023⁵⁹.

Fisheries

In 2020, Singapore had a catch of 356 tonnes⁶⁰. The fisheries sector is a small but relatively stable sector in Singapore. The negative catch trend from 2012 to 2017 turned positive towards 2019. In 2020, however, the volumes dropped by 75% from 2019. Natantian decapods⁶¹ are the most dominant species by volume, with 15% of catches in 2019. Other most common species caught in the last five years were marine fishes (10%), snappers (8%), and rays, stingrays and mantas (5%).

⁵² <https://www.was.org/articles/The-Singapore-Aquaculture-Industry-Contributing-to-Singapores-Food-Security.aspx#.YrVpOKLP1aT>

⁵³ Ibidem

⁵⁴ <https://www.sciencedirect.com/science/article/abs/pii/S0044848620339168#ab0005>

⁵⁵ <https://www.psd.gov.sg/challenge/ideas/deep-dive/strengthening-singapore-s-food-security>

⁵⁶ https://www.sfa.gov.sg/docs/default-source/default-document-library/260421_sfa-awards-over-23-million-to-grant-call-for-r-d-in-sustainable-urban-food-production58a092d264c4c91acf57099a12046eb.pdf

⁵⁷ <https://www.singapore-ras.com/>

⁵⁸ Read more about RAS, in the EUMOFA publication here: <https://eumofa.eu/documents/20178/84590/RAS+in+the+EU.pdf/c9ee5f4c-a41d-160e-e9cc-17a19228d669?t=1606927186649>

⁵⁹ <https://worldnewsday.org/singapore-tallest-fish-farm-produce-2700-tonnes-fish-per-year-2023/>

⁶⁰ <https://tablebuilder.singstat.gov.sg/table/TS/M890731>

⁶¹ Group of decapod crustaceans, comprising those families that move predominantly by swimming including shrimp, prawns, and boxer shrimp

Table 25. **TOP SPECIES CAUGHT IN SINGAPORE (volumes in tonnes)**⁶²

Species	2015	2016	2017	2018	2019
Natantian decapods	275	276	220	254	218
Marine fishes	142	103	87	85	151
Snappers	73	62	43	98	115
Rays, stingrays, mantas	58	46	63	56	84
Barracudas	31	16	12	25	69
Sea catfishes	48	58	54	80	63
Scads	47	68	52	82	60
Butterfishes, pomfrets	43	45	44	49	51
Barramundi (giant seaperch)	18	20	32	42	46
Croakers, drums	30	33	52	54	43
Other	500	507	451	487	517
Total*	1.265	1.234	1.110	1.310	1.418

*There are also some catches of Estuarine Crocodile reported for Singapore. However, these catches are reported in terms of numbers not weight, and the total catch is therefore likely higher than presented in this total.

Source: FAO

The value of landings in Singapore during 2016-2020 were stable around EUR 10-12 million, except for 2017 and 2020 when lower volumes were landed.

In 2021, the SFA registered 23 licenced fishing vessels and 154 fish-farming vessels⁶³. The SFA operates 2 fishing ports in Singapore, namely Jurong and Senoko. Jurong Fishery Port (JFP) handled approximately 30% of all seafood imports in 2020. The port started service in 1969. The JFP serves as a docking and bunkering base for foreign fishing vessels from the Indian and Pacific Oceans. The main products received at JFP are chilled fish and transshipments of frozen tuna. Fisheries and aquaculture products sold from JFP primarily arrive from Indonesia by sea, Malaysia and Thailand by land, and Australia, Bangladesh, and China by air⁶⁴.

Senoko Fishery Port (SFP) is a local base for the Singapore fishing fleet (4 off-shore, 35 in-shore). The port started service in 1997. SFP handled approximately 4% of the seafood imported in 2020. The main products sold at SFP are chilled fish and chilled crustaceans. These products are from local fishing vessels and fish-farms, but also transported from Malaysia, China, Vietnam by land and/or air⁶⁵.

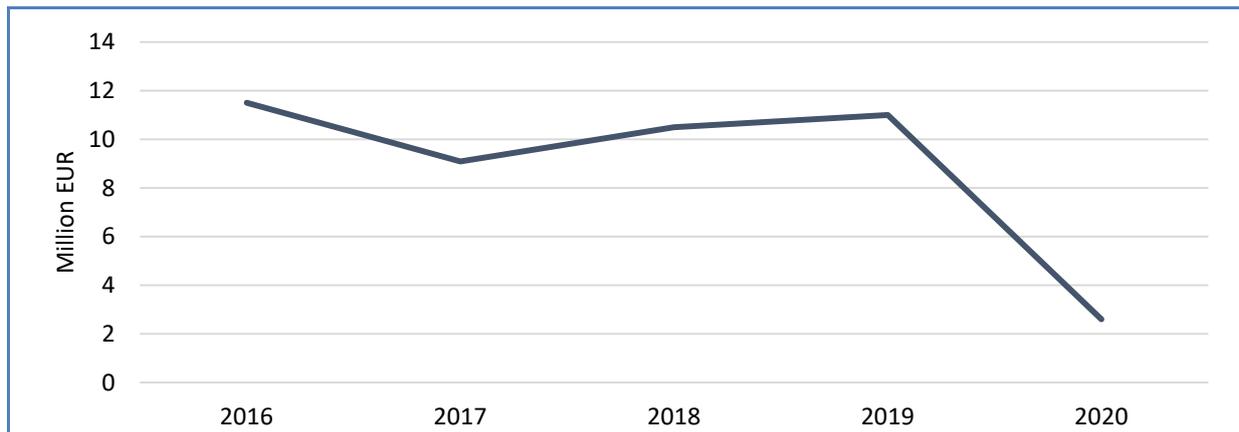
⁶² Although FAO has published catch data for 2020, the numbers presented for Singapore in 2020 are completely identical to those presented for 2019. As such there has likely been an error in the FAO database. Comparing FAO data with those available on the National statistics for Singapore we find that Singaporean catches in 2020 are significantly lower than those presented by FAO. As Singapore does not publish catch data disaggregated for species, catches for 2020 are not included in the table.

⁶³ <https://www.sfa.gov.sg/docs/default-source/food-farming/licenced-fishing-vessel.pdf>

⁶⁴ <https://www.sfa.gov.sg/wholesale-markets/fisheries/fishery-port-services>

⁶⁵ Ibidem.

Figure 48. **LOCAL LANDINGS OF SEAFOOD, VALUE (million EUR)**⁶⁶



Source: Singapore Food Agency⁶⁷

5.3. Processing

The food processing industry in Singapore is relatively small. Local food manufacturers are usually small-scale operators located in industrial areas, while larger fisheries and aquaculture product processors are often multinational companies. Due to its geographical location, Singapore serves as an important international trade hub and transshipment centre, connecting the Asia Pacific region via air and sea routes. Approximately 50% of all exports from Singapore are re-exports⁶⁸.

Processing in the fishery and aquaculture sector generated 46.357 tonnes (net product weight) in 2019⁶⁹. The volume of processed fisheries and aquaculture products has been stable over the last 10 years.⁷⁰ According to the Seafood Industries Association Singapore (SIAS), there are 61 registered fisheries and aquaculture processors, wholesalers, restaurants, retailers, importers and exporters located in Singapore⁷¹. According to official Singaporean statistics, however, there were licenced 139 seafood processing establishments in 2019. Three of these processors exported fisheries and aquaculture products to the EU⁷².

⁶⁶ To convert from USD to EUR, the yearly average exchange rate as published by the European Central Bank was used

⁶⁷ https://data.gov.sg/dataset/value-of-local-food-production?view_id=9875e91d-803e-4638-a418-2a86f21f1236&resource_id=3acd2a5a-6b11-4ec2-915d-54348b941aa6

⁶⁸ https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Exporter%20Guide_Singapore_Singapore_12-12-2016.pdf

⁶⁹ https://www.fao.org/fishery/statistics-query/en/trade_pp/trade_pp_quantity

⁷⁰ Ibidem.

⁷¹ <https://www.seafoodsingapore.org/members/>

⁷² https://www.singstat.gov.sg/-/media/files/publications/reference/yearbook_2019/yos2019.pdf

5.4. International trade

Export

Singapore's export of fisheries and aquaculture products in 2021 was just over 40.000 tonnes, a decrease of 82% from 2020. This follows a decreasing export trend, and between 2018 and 2021, volumes dropped by 63%. Vietnam was the main destination for Singapore's export of FAPs from 2018-2019. In 2020, Indonesia received 52% of Singapore's exported FAPs, most of this product contains no detail apart from being non-food use, so EUMOFA categorizes these items into the grouping "other non-food use". Malaysia was the biggest receiver of Singapore's export of FAPs in 2021, both in volumes and value, with 16% of the volumes and 18,5% of the value. Also, during the first 4 months in 2022, Singapore exported most seafood to Malaysia.

Table 26. **EXPORT VALUE (1.000 EUR) AND VOLUME (tonnes) BY MAIN DESTINATION**

	2018		2019		2020		2021		2022	
	Volume	Volume	Volume							
Indonesia	11.450	45.274	12.852	48.137	118.072	79.370	109.919	86.017	38.837	33.436
Vietnam	16.540	88.410	15.526	52.451	19.605	48.153	19.542	52.260	5.253	15.084
Malaysia	13.954	66.670	13.303	60.884	17.369	50.526	17.264	56.969	6.325	19.530
Korea, South	7.106	14.645	7.789	15.919	8.370	16.954	12.203	27.706	3.020	8.329
Philippines	10.953	33.444	10.849	31.592	9.869	23.194	10.577	24.999	2.779	9.521
Thailand	7.929	31.588	13.428	34.588	10.366	29.444	10.124	31.046	2.878	10.121
United States	2.477	19.979	3.551	25.925	4.868	29.320	5.707	40.304	1.250	11.934
British Indian Ocean Terr.	7.361	7.464	7.289	7.959	5.261	6.071	5.436	7.015	1.403	1.963
Taiwan	4.207	13.596	5.210	14.567	5.974	18.674	5.102	16.863	1.517	4.832
Japan	3.322	15.128	4.578	19.731	4.053	17.777	3.537	15.798	1.237	5.033
Others	24.681	159.277	24.833	171.678	22.401	140.797	25.820	157.814	9.726	63.457
Total	109.980	495.475	119.208	483.429	226.208	460.280	225.230	516.791	74.226	183.240

Source: EUMOFA elaboration of IHS Markit.

Alaska pollock was the main species exported making up 11 % of the exports in 2021. Most of the Alaska pollock (98 %) was exported to South Korea. Exports of Alaska pollock increased drastically between 2018-2021 and went from 3 tonnes in 2018 to 3.653 tonnes 2021. Exports of mackerel and freshwater catfish also increased during the period 2018-2021. The biggest recipients of mackerel were Indonesia and Malaysia, freshwater catfish was mainly exported to Vietnam and Indonesia. The export of shrimps makes up a large share of the value generated each year, despite relatively low volumes. In 2021, shrimp export made 5 % of the total value of seafood export. The largest recipients of shrimp from Singapore were Malaysia, Japan, and the USA.

Table 27. **EXPORT VOLUME (tonnes) AND VALUE (1.000 EUR) BY MCS**

	2018		2019		2020		2021		2022	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Other non-food use	80.149	232.390	84.627	242.877	195.443	283.003	191.618	307.361	64.701	110.328
Alaska pollock	3	13	7	27	375	1.053	3.653	8.806	10	21
Mackerel	1.314	2.570	2.456	6.050	2.505	6.258	3.606	8.166	710	1.455
Freshwater catfish	693	1.833	653	1.286	1.507	2.165	2.019	3.140	630	797
Miscellaneous shrimp	1.968	11.741	914	8.451	1.284	11.758	1.414	11.484	471	4.132
Other cephalopods	1.814	8.616	1.530	11.915	1.016	6.861	1.125	6.649	310	1.986
Swordfish	1.803	9.899	1.764	7.910	1.381	8.077	969	6.498	261	2.413
Yellowfin tuna	595	1.876	1.249	3.103	2.082	4.492	723	1.673	211	585
Salmon	442	5.421	597	6.917	490	4.672	708	8.132	242	3.720
<i>Homarus spp.</i> , lobster	567	4.085	604	4.556	113	1.175	514	4.504	197	2.166
Other	20.632	217.031	24.808	190.337	20.011	130.766	18.881	150.376	6.482	55.638
Total	109.980	495.475	119.208	483.429	226.208	460.280	225.230	516.791	74.226	183.240

Source: EUMOFA elaboration of IHS Markit

Import

In 2021, Singapore imported FAPs for almost EUR 1,048 billion, constituting more than 360.000 tonnes. The import volume had a stable increase of 49% between 2018-2020, although volumes only grew by 1% from 2020-2021. The same trend is not seen for the value of imports which decreased by 1% from 2018 to 2021 but increased by 11% in the period 2020-2021. Malaysia, Vietnam, China, and Indonesia have been the largest providers of FAPs to Singapore during the last five years. In terms of volume, Singapore imported most FAPs from Malaysia in 2021, covering 49% of the total volume and 20% of the total value. Between 2020 and 2021, the volume of imports from Malaysia increased by 20% and the value by 26%, while the volume and value of imports from Vietnam decreased by 21% and 8% respectively.

Table 28. **SINGAPORE IMPORTS OF FAPS BY MAIN ORIGIN (VOLUMES IN TONNES, VALUES IN 1.000 EUR)**

Country	2018		2019		2020		2021		Jan-Apr2022	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Malaysia	43.004	123.248	52.109	136.698	146.403	163.450	175.699	206.706	60.834	78.880
Vietnam	63.339	123.254	92.693	132.193	70.250	109.531	55.826	100.642	9.352	31.126
China	28.908	139.098	30.533	151.902	30.372	113.907	30.218	136.873	8.610	44.589
Indonesia	31.632	105.838	31.696	104.332	33.069	85.737	28.776	81.031	9.174	28.386
Thailand	15.423	48.330	14.355	47.725	16.409	50.435	12.024	37.029	3.502	11.769
Norway	9.324	71.265	9.336	71.397	8.598	62.652	9.646	73.414	3.253	32.949
India	8.276	35.539	7.299	32.332	6.085	26.542	7.386	32.704	2.225	10.839
Japan	5.623	61.375	5.282	71.483	4.852	59.669	5.658	79.551	2.126	31.788
Chile	4.057	24.062	4.519	26.270	4.955	23.924	4.258	21.451	1.254	11.194
Taiwan	2.781	17.331	2.831	17.466	2.665	14.248	3.329	21.329	529	3.900
Other	29.601	310.585	32.900	285.709	31.516	231.939	27.445	257.421	9.122	85.016
Total	241.969	1.059.925	283.551	1.077.506	355.173	942.035	360.265	1.048.152	109.982	370.437

Source: IHS Markit

Shrimp is the most imported seafood species, covering 7% of volume and 12% of value imported in 2021. Most of the shrimp imported in 2021 was from Malaysia, China, and Vietnam. The shrimp import had a 14% growth in volumes and 6% in value from 2018 to 2021. Fish oil was the second-largest import, making up 7% of total volumes but only 2% of the value. The import of fish oil decreased by 12% in volume from 2018 to 2021 but increased by 36% in value. Fish oil and freshwater catfish are mainly imported from Vietnam while salmon is primarily from Norway.

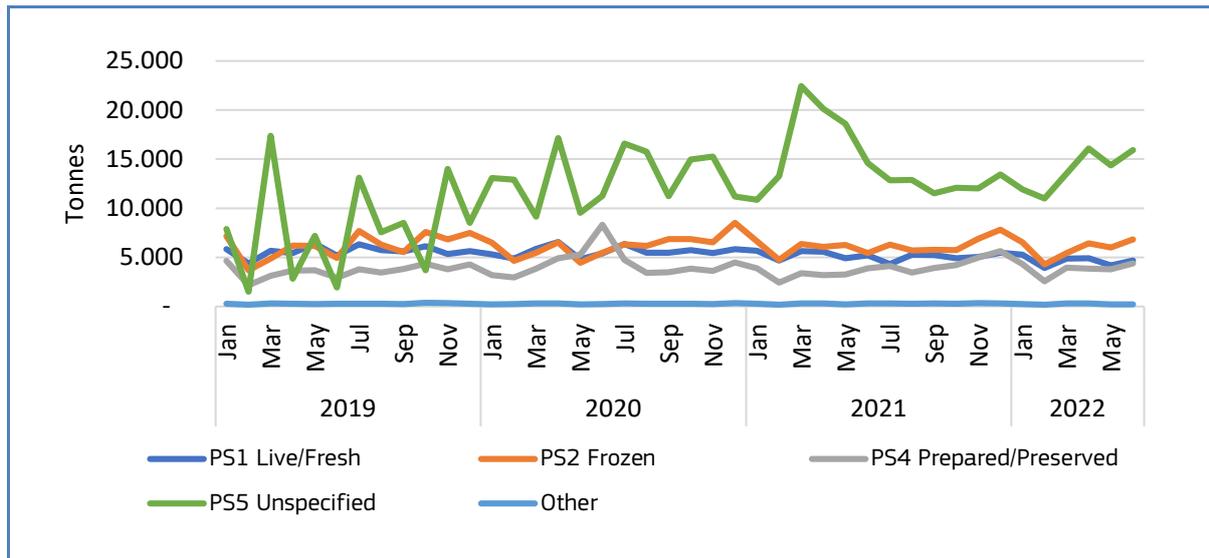
Table 29. **IMPORT VOLUMES (TONNES) AND VALUES (1.000 EUR) BY MCS**

MCS	2018		2019		2020		2021		Jan-Apr 2022	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Other non-food use	24.491	65.800	29.769	63.266	117.740	84.981	144.786	115.288	48.667	42.075
Miscellaneous shrimp	23.297	116.459	23.446	121.039	23.897	105.379	26.473	123.267	2.041	3.634
Fish oil	28.711	17.461	60.675	34.950	35.579	25.924	25.285	23.664	8.452	45.093
Freshwater catfish	17.208	35.510	17.428	32.524	19.735	28.409	15.939	23.699	4.166	8.661
Salmon	7.185	65.050	8.017	71.114	8.841	72.789	8.967	79.187	3.110	36.188
Other cephalopods	10.096	38.750	9.047	36.077	8.040	28.955	8.610	31.072	2.811	10.659
Other	130.993	720.988	135.180	718.633	141.342	595.598	130.204	651.973	40.734	224.127
Total	241.981	1.060.019	283.563	1.077.603	355.173	942.035	360.265	1.048.152	109.982	370.437

Source: EUMOFA elaboration of data from IHS Markit

During the second half of 2021 and the first four months of 2022, imports were dominated by frozen FAPs. In 2021, 33% of imported FAPs were frozen. The preservation trends for imports have been stable for live/fresh, frozen and prepared/preserved. The preservation unspecifieds has seen an increase, primarily due to an increase in the imports of the MCS “other non-food use”.

Figure 49. **SINGAPORE IMPORTS BY PRESERVATION STATES IN 2019-2022 (volumes in tonnes)**



Source: EUMOFA elaboration of data from IHS Markit

Trade with the EU

In 2021, the EU exported 4.121 tonnes of FAPs to Singapore for EUR 29,2 million. This was a 28% decrease in volume compared to 2020, however, value increased marginally by 0,2%. From 2018 to 2021 there was a stable positive trend in volume and value, with an overall 29% increase in volume and 4% increase in value despite some fluctuations. Fishmeal was the most common product exported to Singapore by volume, making up 20% of volumes in 2021. Salmon exports from the EU generated the highest value accounting for 8% of total value and 4% of the volume. Most of the FAPs exported by the EU to Singapore in 2021 was frozen (42%), while fresh product made up 6%. In 2021 the three main EU MS that exported to Singapore in terms of volume were Spain (34%), France (24%) and Latvia (23%). The most common product from these countries were frozen swordfish, fresh oyster, and fishmeal respectively.

Table 30. **EU EXPORT TO SINGAPORE BY MCS (VOLUME IN TONNES, VALUE IN 1.000 EUR)**

MCS	2018		2019		2020		2021		Jan-Apr 2022	
	Volume	Value								
Fishmeal			221	116	835	545	806	678	194	66
Salmon	244	3.079	163	2.014	133	1.925	183	2.297	29	439
Fish oil	59	224	663	638	450	419	181	269	1	18
Oyster	258	2.154	234	1.816	123	1.112	156	1.454	61	502
Swordfish	58	532	98	1.013	106	929	112	930	24	254
Octopus	68	983	81	959	80	819	112	1.304	63	884
Mackerel	89	186	31	78	34	96	75	168	0	1
Other	2.411	20.959	2.511	26.216	3.967	23.366	2.496	22.157	745	8.514
Total	3.186	28.117	4.002	32.851	5.728	29.211	4.121	29.257	1.117	10.678

Source: EUMOFA elaboration of EUROSTAT

In 2021, the EU imported 627 tonnes of FAPs from Singapore for EUR 11 million. This was a 29% increase in volume and 14% increase in value compared to 2020. In the period 2018 to 2021, EU imports of FAPs from Singapore increased by 75% in volume and 16% in value. Surimi was the most imported product by volume in 2021, with 45%. Within the EU, the largest importers in terms of volume in 2021 were the Netherlands (65%), France (12%), and Denmark (11%). The big share of the EU imports from Singapore going to the Netherlands can most likely be explained by the Netherlands acting as a big trade hub, from which products may be re-distributed. Alaskan pollock was the second-most imported product by volume in 2021, making up 11% of total volume. All Alaskan pollock was imported frozen by France. This product is most likely a re-export from Singapore, as Alaskan pollock has its habitat in the northern parts of the Pacific Ocean. 65% of imports from Singapore were in the preservation state “prepared/preserved” which mostly consisted of surimi (70%).

Table 31. **EU IMPORTS FROM SINGAPORE BY MCS (VOLUME IN TONNES, VALUE IN 1.000 EUR)**

MCS	2018		2019		2020		2021		Jan-Apr 2022	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Surimi	59	254	182	798	175	777	285	1.338	67	341
Alaska pollock	19	45	34	105	21	69	69	152		
Seaweed and other algae	1	2	0	0	0	0	10	35	0	0
Shrimp, miscellaneous	12	509	11	542	25	755	10	658	4	218
Other cephalopods	1	5	3	14	0	2	3	15	2	11
Molluscs and aquatic invertebrates, other	9	383	14	448	9	398	1	236	0	55
Other	256	8.530	275	8.462	254	7.913	249	8.849	98	2.954
Total	358	9.728	518	10.369	485	9.914	627	11.283	171	3.579

Source: EUMOFA elaboration of EUROSTAT

5.5. Consumption

Singapore has the highest per capita income in Asia and is an open economy with no tariffs on imported food. This enables consumers to enjoy a broad range of imported fisheries and aquaculture products. Singaporeans eat on average 22 kg LWE of fisheries and aquaculture products per year, which is two kilos more than the global average⁷³. A total of 120.000 tonnes of fisheries and aquaculture products is consumed per year in Singapore⁷⁴. Most of the imported fisheries and aquaculture products come from neighbouring countries, such as China, Malaysia, and Indonesia. Fisheries and aquaculture products are consumed both fresh and frozen, but fresh is more popular with the Singaporean consumer.

The food retail market in Singapore is dominated by a few big retailers, but also includes some smaller players such as the traditional “wet and dry” markets, “mom and pop” grocery stores, and online retailers. Fresh fish is typically bought at wet markets for home consumption, while fresh shellfish is usually enjoyed at restaurants⁷⁵. Drivers for an increasing retail market trend are a focus on convenience, online availability, demand for a premium product and home cooking interest⁷⁶. According to stakeholders, salmon and trout are a popular alternative to other fish species. The colour of the fish meat is important, as red is considered a lucky colour. When buying salmonid species, consumers prefer pre-cut portions or sashimi options as salmon and trout are often the only species eaten raw. The demographic of the salmon consumer is often slightly younger than for other fisheries and aquaculture products. The COVID-19 pandemic impacted consumer habits in Singapore, including that of seafood. With shutdowns and residents not allowed to leave their homes, shelf-stable cans of seafood became increasingly popular. During the pandemic, easy-to-open and ready-to-eat meal variants of seafood decreased in popularity as Singaporeans shifted demand to food essentials, such as canned seafood.

⁷³<https://www.seastainable.co/blogs/seastainable-blog/sustainableseafood#:~:text=Singapore%20is%20well-known%20for%20our%20love%20for%20seafood,it%20surpasses%20even%20the%20global%20average%20of%2020kg%21>

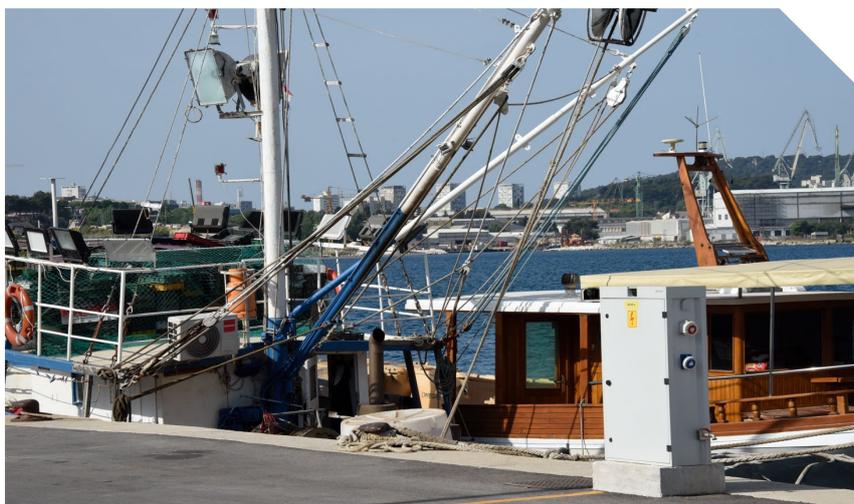
⁷⁴<https://www.wwf.sg/partner/marina-bay-sands/#:~:text=Singapore%20consumes%20120%20000%20tonnes%20of%20seafood%20per%20year%2C,%E2%80%93%20one%20of%20the%20biggest%20threats%20to%20oceans>

⁷⁵https://apps.fas.usda.gov/newgainapi/api/report/downloadreportbyfilename?filename=Exporter%20Guide_Singapore_Singapore_12-12-2016.pdf

⁷⁶ Ibidem

6. Global highlights

EU / STECF: The newly reconstituted Scientific, Technical and Economic Committee for Fisheries (STECF) has begun its work to support the scientific advisory process for the implementation of the common fisheries policy (CFP), complementing the advice given by the International Council for the Exploration of the Sea (ICES). It assists the Commission in the preparation of legislative proposals and policy monitoring. The new composition of the committee should also ensure balanced support for the European Green Deal and climate change related priorities, and support the Commission when preparing legislative proposals, delegated acts or policy initiatives in the area of fisheries, aquaculture and related matters. Names of the 35 members appointed by the Director-General of the European Commission's DG Maritime Affairs and Fisheries are published in the Register of Commission expert groups. The new members will serve for a period of three years⁷⁷.



EU / Aquaculture / Sustainability: The communication on international ocean governance sets the path of EU ocean policies for the coming years. Among the key policies, there are also EU commitments to support the innovation, sustainability and competitiveness of the aquaculture sector, as aquaculture is one of the most prominent food industry sectors in Europe and contributes to food security. To overcome obstacles to the expansion of the aquaculture sector, the EU supports innovative ideas and digitisation both at policy and technological levels. The SEASTAR (surveillance of aquaculture farm with networks of underwater sensors) project is one of the innovative ideas with the potential to change the way the aquaculture sector works. It addresses the lack of full digitalisation in the sector, which currently forces aquaculture operators to perform daily tasks and monitoring activities manually or with costly interventions, by exploiting innovative Internet of Underwater Things Technologies and integrating them with miniaturised wearable sensors to be placed on fish. The resulting system provides an underwater wireless monitoring infrastructure that will allow fish farmers to monitor the health of fish remotely, in real time, and to gather relevant data for accurate risk assessment, forecasting and management.⁷⁸

Norway / Fishery / Harmonisation: The EU and Norway concluded fisheries consultations that will modernise the exchange of fisheries data for control purposes. They agreed to use a common software platform for data exchanges, the FLUX Transportation Layer, developed by the European Commission. The software will be used to exchange vessel position data as of 1 January 2023, with other types of data to follow. In addition, a new format called UN/FLUX Standard will be applied, which harmonises the exchanges of fisheries control data internationally and is already used in the EU. Talks are underway with many international partners on its introduction, with the North-Atlantic Fisheries Convention having already reached an agreement. Norway is the third coastal state in the North-East Atlantic to adopt the standard, after the EU and the UK. The harmonisation of data exchange formats reduces costs, making fisheries control more accessible to public authorities.⁷⁹

Norway / Fishery / Fight against IUU: A recent UN report claims that over one third of the world's fish stocks are suffering from overfishing. Norway will do more to cooperate with developing countries to solve the problem of illegal fishing. It has developed a unique tool for satellite tracking and inter-agency cooperation to uncover illegal fishing and other forms of fisheries crime. Five state-owned Norwegian micro-satellites collect 5,7 million AIS-data tracks per day and 2,1 billion per year in total from all over the world. Developing countries and particularly small island states often lack tools to monitor their own waters. Norway already cooperates with other coastal states to detect illegal fishing through the Blue Justice initiative; thus, the Norwegian Coastal Administration has been asked to clarify if it is possible to share these data with other countries, and if so, to facilitate this⁸⁰.

⁷⁷ https://oceans-and-fisheries.ec.europa.eu/news/stecf-new-committee-appointed-2022-07-05_en

⁷⁸ https://oceans-and-fisheries.ec.europa.eu/news/seastar-brings-digitisation-underwater-sustainable-aquaculture-2022-07-04_en

⁷⁹ https://oceans-and-fisheries.ec.europa.eu/news/sustainable-fisheries-eu-and-norway-conclude-arrangements-modernise-exchange-fisheries-control-data-2022-07-05_en

⁸⁰ <https://www.regjeringen.no/en/aktuelt/norwegian-satellites-may-help-developing-countries-in-the-fight-against-illegal-fishing/id2921842/>

7. Macroeconomic Context

7.1. Marine fuel

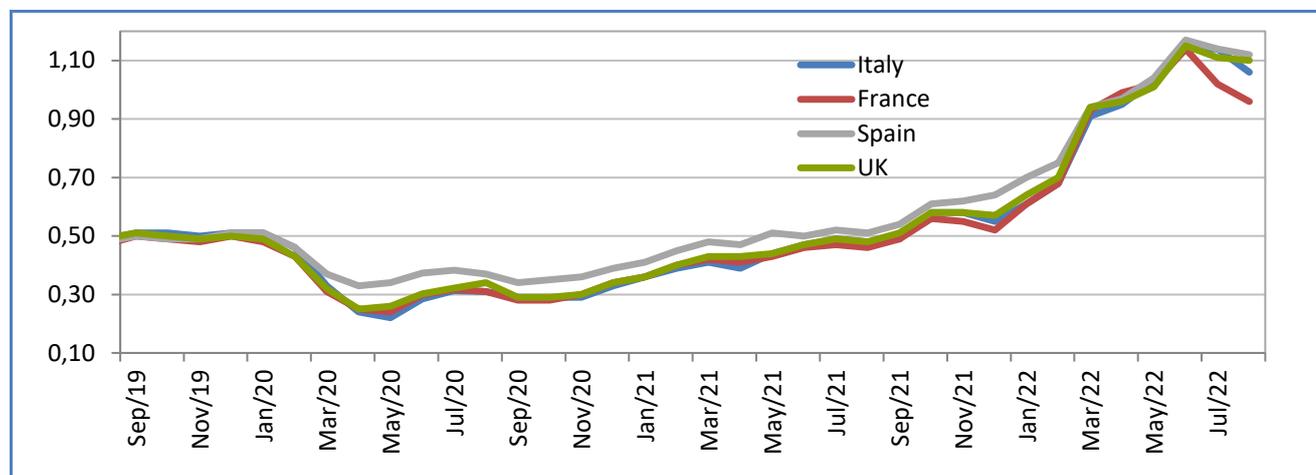
Average prices for marine fuel in **August 2022** ranged between 0,96 and 1,14 EUR/litre in ports in **France, Italy, Spain,** and the **UK**. Prices decreased by an average of about 3,9% compared with the previous month but increased by an average of 119,7% compared with the same month in 2021.

Table 32. **AVERAGE PRICE OF MAYINE DIESEL IN ITALY, FRANCE, SPAIN, AND THE UK (EUR/litre)**

Member State	Aug 2022	Change from Jul 2022	Change from Aug 2021
France <i>(ports of Lorient and Boulogne)</i>	0,96	-6%	109%
Italy <i>(ports of Ancona and Livorno)</i>	1,14	-7%	121%
Spain <i>(ports of A Coruña and Vigo)</i>	1,12	-2%	120%
The UK <i>(ports of Grimsby and Aberdeen)</i>	1,10	-1%	129%

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

Figure 50. **AVERAGE PRICE OF MAYINE DIESEL IN ITALY, FRANCE, SPAIN, AND THE UK (EUR/litre)**

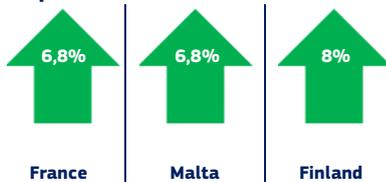


Source: Chamber of Commerce of Forlì-Cesena, Italy; DPMA, France; MABUX.

7.2. Consumer prices

The EU annual inflation rate was at 8,9% in July 2022, up from 8,6% in June 2022. A year earlier, the rate was 2,2%.

Inflation: lowest rates in July 2022, compared with June 2022.



Inflation: highest rates in July 2022, compared with June 2022.



Table 33. HARMONISED INDEX OF CONSUMER PRICES IN THE EU (2015 = 100)

	Jul 2020	Jul 2021	Jun 2022	Jul 2022	Change from Jun 2022		Change from Jul 2021	
Food and non-alcoholic beverages	109,30	110,98	123,88	125,21	↑	1,07%	↑	12,82%
Fish and seafood	112,66	114,9	126,78	128,18	↑	1,1%	↑	11,56%

Source: Eurostat.

7.3. Exchange rates

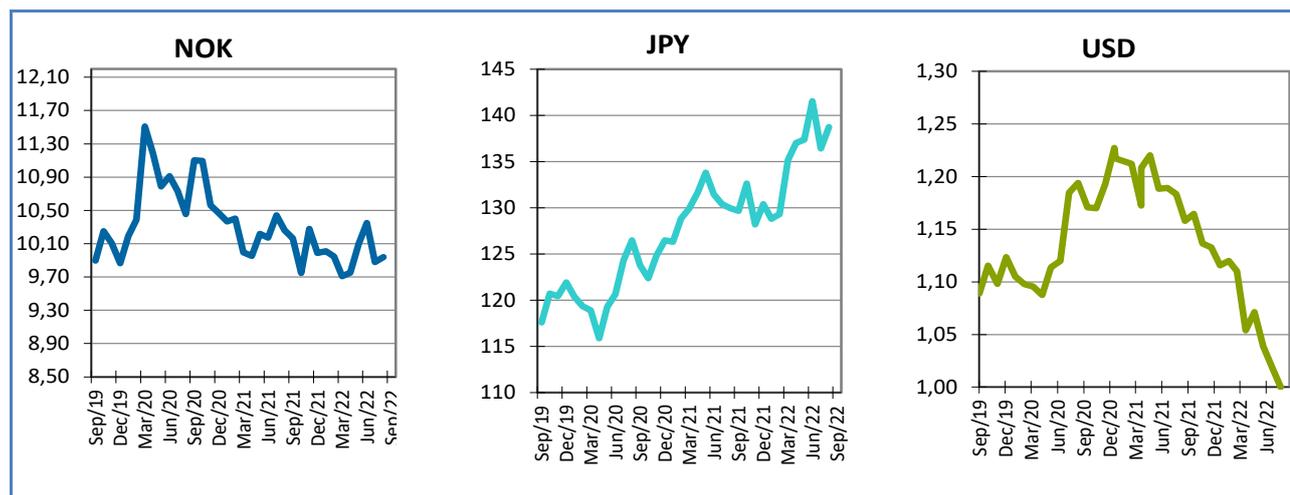
Table 34. EURO EXCHANGE RATES FOR SELECTED CURRENCIES

Currency	Aug 2020	Aug 2021	Jul 2022	Aug 2022
NOK	10,455	10,26	9,8773	9,9388
JPY	126,47	129,95	136,42	138,72
USD	1,194	1,1834	1,0198	1,0000

Source: European Central Bank.

In August 2022, the euro appreciated against the Norwegian krone (0,6%), the US dollar (1,7%), and against the Japanese yen (0,1%), relative to the previous month. For the past six months, the euro has fluctuated around 9,9544 against the Norwegian krone. Compared with August 2021, the euro has appreciated 6,7% against the Japanese yen and depreciated 3,1% against the Norwegian krone and 15,5% against the US dollar.

Figure 51. TREND OF EURO EXCHANGE RATES



Source: European Central Bank.

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

First sales: EUR-Lex, DG Mare – European Commission, FishBase, FAO, ICES, European Council,

Consumption: EUROPANEL, FishBase.

Case studies: FAO, ICES, IUCN, OSPAR, Shark Alliance, The Paleontology Association, Monaco Nature Encyclopedia, Marine Species Identification Portal, FishBase, Statistics Singapore, countryreports.org, Trading Economics, seastainable.com, Singapore Government Agency, World Aquaculture Society, Science Direct, Singapore RAS, World News Day, SIAS, Euromonitor International, USDA Foreign Agricultural Service.

Global highlights: European Commission, Norwegian government.

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

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

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

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

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

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