

# Monthly Highlights

No. 11 / 2023

E U M O F A

European Market Observatory for  
Fisheries and Aquaculture Products

*In the reporting countries covered by the EUMOFA database, first sales of “Tuna and tuna-like species” in September 2023 totalled EUR 30,3 million and 9.340 tonnes, representing a 45% decrease in value and 44% decrease in volume compared to September 2022.*

*Over the 36-month observation period (October 2020 – September 2023), the weighted average first-sales price of bigeye tuna in France was 5,74 EUR/kg, 112% higher than in Portugal (2,70 EUR/kg), and 148% more than in Spain (2,32 EUR/kg).*

*Between weeks 43/2020 and 42/2023, 53% of the weekly prices of frozen fillets of tuna, skipjack and stripe-bellied bonito from the Republic of Korea were between 10 EUR/kg and 15 EUR/kg.*

*Over the past three years, average household consumption in Italy of the mussel *Mytilus* spp. was 2.099 tonnes/month.*

*Purchasing fish and raw material is the dominant cost item for the EU processing industry, accounting for over 70% of total production costs.*

*In 2021, EU catches of dogfish species amounted to 8.212 tonnes, while for ray they were 18.526 tonnes.*

*On 10 November 2023, the General Fisheries Commission for the Mediterranean (GFCM) successfully finalised 34 measures to promote the conservation and sustainable use of marine resources and to support the sustainable development of aquaculture in the Mediterranean and Black Sea.*



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## 1. First sales in Europe

During **January–September 2023**, 17 EU Member States (MS), Norway and the United Kingdom reported first-sales data for 10 commodity groups<sup>1</sup>. First-sales data are based on sales notes and data collected from auction markets. First-sales data analysed in the section “*First sales in Europe*” are extracted from EUMOFA<sup>2</sup>.

### 1.1. January–September 2023 compared to the same period in 2022

**Increases in value and volume:** Belgium, Denmark, Estonia, Finland, Latvia and the United Kingdom recorded an increase in both first-sales value and volume. Highest increases were observed in Estonia, due mainly to herring and sprat.

**Decreases in value and volume:** France, Germany, Italy, Spain, Sweden and Norway recorded decreases in first-sales value and volume. Sweden stood out with the most significant drops in absolute terms, due to lower first sales of sprat, herring and coldwater shrimp.

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

Country	January – September 2021		January – September 2022		January – September 2023		Change from January – September 2022	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Belgium	9.498	49,4	10.285	65,6	10.632	65,9	3%	1%
Bulgaria	3.502	2,2	1.852	1,2	2.338	1,2	26%	-5%
Cyprus	756	3,0	576	2,5	578	2,7	0%	7%
Denmark	566.083	324,0	516.966	355,8	610.795	405,4	18%	14%
Estonia	45.597	12,4	28.422	9,3	48.589	18,0	71%	94%
Finland	40.396	9,0	39.912	9,6	43.611	20,7	9%	117%
France	205.161	510,5	214.902	562,6	192.823	526,4	-10%	-6%
Germany	47.988	68,6	23.974	69,5	23.168	43,6	-3%	-37%
Italy	67.128	272,8	60.853	276,6	59.380	266,1	-2%	-4%
Latvia	31.083	6,6	28.748	6,2	30.480	8,2	6%	32%
Lithuania	1.791	0,9	761	0,5	290	0,6	-62%	21%
Netherlands	150.610	225,9	162.793	183,5	155.012	154,5	-5%	-16%
Portugal	95.047	215,51	88.898	233,88	94.252	231,88	6%	-1%
Spain	384.667	1.144,44	352.515	1.211,47	334.648	1.097,55	-5%	-9%
Sweden	116.889	67,48	105.134	63,86	42.602	42,57	-59%	-33%
Norway	2.239.060	1.997,49	2.035.191	2.308,83	1.987.692	2.000,32	-2%	-13%
United Kingdom	241.793	439,35	224.084	477,19	250.772	492,65	12%	3%

*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. Data for Denmark are subject to confidentiality measures, so they may not fully correspond to total first sales in the country.

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

<sup>2</sup> First sales data updated on 20. 11 2023.

## 1.2. September 2023 compared to September 2022

**Increases in value and volume:** First sales increased in Bulgaria, Denmark, Estonia, Finland, Lithuania and Portugal. In Finland herring, sprat and salmon were behind the increases, while in Bulgaria they were caused by other molluscs and aquatic invertebrates and red mullet.

**Decreases in value and volume:** First sales decreased in Belgium, France, Germany, Italy, the Netherlands, Spain, Norway and the United Kingdom. Germany presented the most significant drops. The sharp decrease in Germany was mainly due to falls in first sales of cod, the shrimp *Crangon* spp. and eel.

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

Country	September 2021		September 2022		September 2023		Change from September 2022	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Belgium	1.127	6,3	1.294	8,4	942	6,2	-27%	-26%
Bulgaria	320	0,3	99	0,1	138	0,136	40%	43%
Cyprus	33	0,2	37	0,2	31	0,2	-17%	18%
Denmark	62.440	46,2	33.613	42,5	59.464	54,9	77%	29%
Estonia	5.024	1,4	4.422	1,6	4.749	2,8	7%	70%
Finland	1.510	0,3	475	0,1	839	0,2	77%	99%
France	24.857	59,7	25.654	65,0	22.085	56,0	-14%	-14%
Germany	7.576	8,9	4.510	13,4	1.050	6,2	-77%	-53%
Italy	8.719	30,7	7.370	27,2	5.928	23,3	-20%	-14%
Latvia	2.154	0,4	3.824	0,9	3.657	1,1	-4%	32%
Lithuania	308	0,085	8	0,012	9	0,020	11%	65%
Netherlands	20.923	35,7	28.697	25,8	14.171	19,0	-51%	-27%
Portugal	17.896	31,4	12.838	25,1	15.396	28,6	20%	14%
Spain	39.635	125,6	40.101	133,4	32.079	101,7	-20%	-24%
Sweden	10.927	9,6	3.744	5,4	2.960	5,6	-21%	4%
Norway	202.603	211,2	221.150	298,0	162.211	206,6	-27%	-31%
United Kingdom	38.684	63,7	36.699	63,6	32.094	56,6	-13%	-11%

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. Data for Denmark are subject to confidentiality measures, so they may not fully correspond to total first sales in the country.

The most recent weekly first-sales data (up to week 49 of 2023) are available via the EUMOFA website and can be accessed [here](#).

The most recent monthly first-sales data for **October 2023** are available via the EUMOFA website and can be accessed [here](#).

### 1.3. First sales in selected countries

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

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


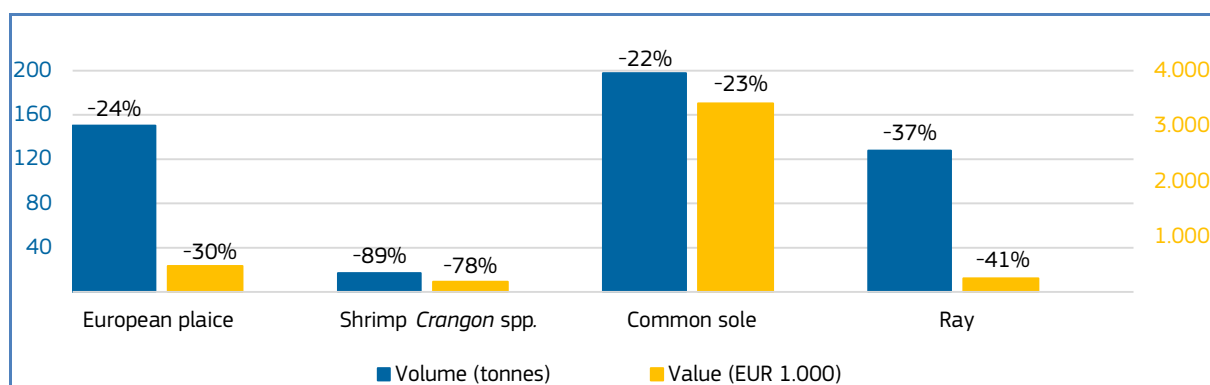
 Belgium	First-sales value / trend %	First-sales volume / trend %	Main contributing species
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 65,9 million, +1%	10.632 tonnes, +3%	Squid, cuttlefish, red mullet, other sole*.
<b>Sept 2023 vs Sept 2022</b>	EUR 6,2 million, -26%	942 tonnes, -27%	European plaice, shrimp <i>Crangon</i> spp., common sole, ray.

Figure 1. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN BELGIUM, SEPTEMBER 2023**



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

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


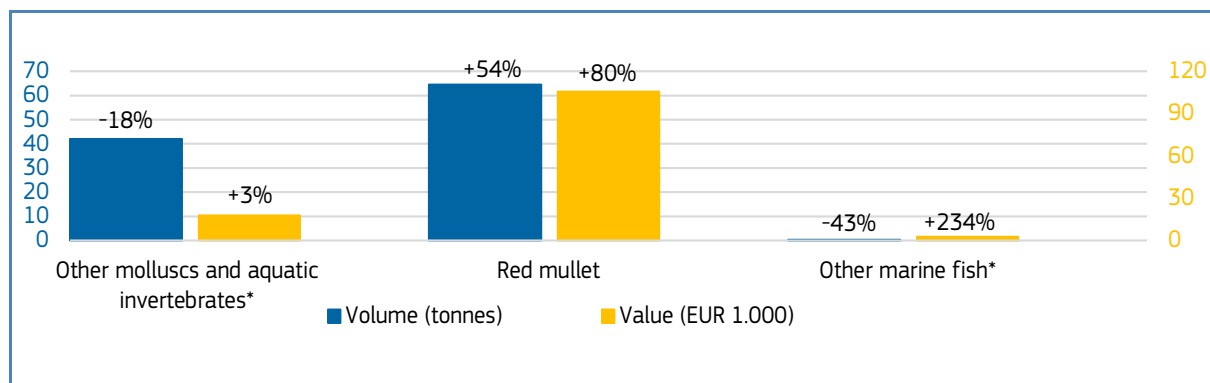
 Bulgaria	First-sales value / trend %	First-sales volume / trend %	Main contributing species
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 1,2 million, -5%	2.338 tonnes, +26%	<b>Value:</b> clam, other marine fish*. <b>Volume:</b> sprat, other molluscs and aquatic invertebrates*.
<b>Sept 2023 vs Sept 2022</b>	EUR 0,1 million, +43%	138 tonnes, +40%	Other molluscs and aquatic invertebrates*, red mullet, other marine fish*.

Figure 2. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN BULGARIA, SEPTEMBER 2023**



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

<sup>3</sup> First-sales data updated on 20.11.2023.

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


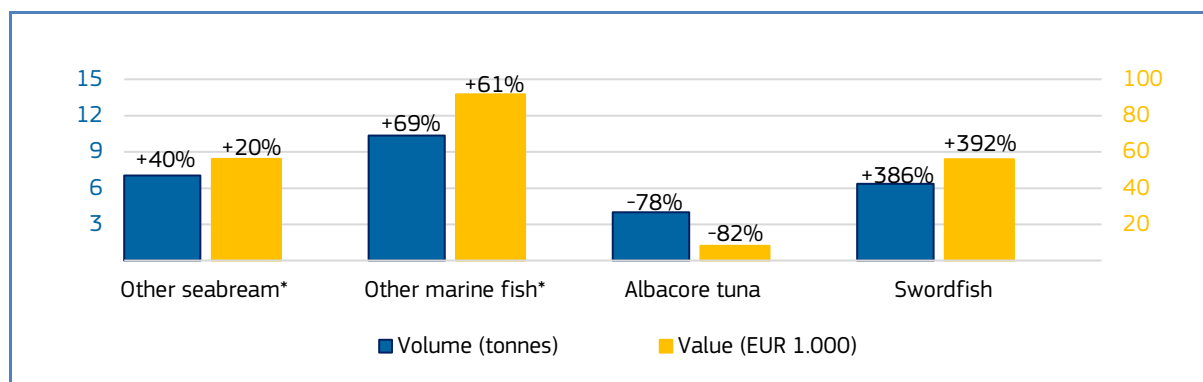

 Cyprus	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 2,7 million, +7%	578 tonnes, 0%	<b>Value:</b> swordfish, other seabream*, other marine fish*. <b>Volume:</b> albacore tuna, other seabream*, other marine fish*.	In September 2023, there was a substantial increase in first sales of <b>swordfish</b> compared to September 2022. The annual quota allocated to Cyprus was the same in 2022 and 2023 and is mainly fished by the longline fleet which targets both albacore tuna and swordfish. The swordfish fishery in Cyprus experiences moderate variations throughout the year, typically peaking in August and September. The albacore fishing season starts from mid-May and usually lasts until the end of July. However, the transition from one target stock to another can vary depending on yields, and fishermen do not adhere to a strict routine. So in 2023, the longline fleet was probably still fishing for albacore during August and concentrated most of the swordfish catches in September, contributing to the significant increase observed in both volume and value.
<b>Sept 2023 vs Sept 2022</b>	EUR 0,2 million, +18%	31 tonnes, -17%	Albacore tuna, other marine fish*, other seabream*, swordfish.	

Figure 3. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN CYPRUS, SEPTEMBER 2023**



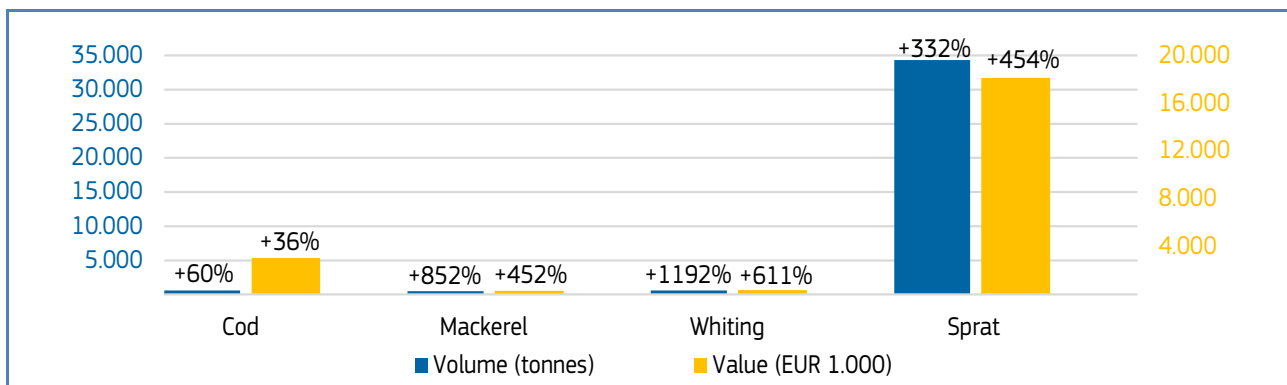
Percentages show change from the previous year. \*EUMOFA aggregation for species.

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

 Denmark	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 405,4 million, +14%	610.795 tonnes, +18%	Blue whiting, other groundfish*, sprat, cod.	In September 2023, the value of <b>sprat</b> increased significantly compared to September 2022. Like other short-life small pelagic species, the monthly abundance of sprat can vary greatly from year to year, due mostly to natural patterns. The production reported in September 2022 appears to be the exception. In April 2023, ICES advised to double the TAC for sprat in Skagerrak, Kattegat and the North
<b>Sept 2023 vs Sept 2022</b>	EUR 54,9 million, +29%	59.464 tonnes, +77%	Cod, mackerel, whiting, sprat.	

				<p>Sea for the period 1st July 2023 – 30 June 2024, because of stronger recruitment and better individual growth. However, it estimated that recruitment in 2021 and 2022 was historically low<sup>4</sup>.</p> <p>The first sales of <b>whiting</b> experienced a remarkable increase in September 2023 compared to September 2022. The abundance of this stock can vary from year to year and according to the most recent ICES advice (2023<sup>5</sup>), there are no conservation issues identified.</p> <p>First sales of <b>mackerel</b> increased significantly in September 2023 compared to September 2022. Like other short-life small pelagic species, the monthly abundance of mackerel can vary a lot from year to year, due mostly to natural patterns. Comparing the catches with the same month in 2019, 2020 and 2021, September 2022 appears to be the exception. The bulk of the Danish Mackerel production usually occurs during the October-November period, with, for example, around 12.000 tonnes being landed in October-November 2022, around 13.200 tonnes in October-November 2021, and around 12.900 tonnes in October-November 2020. In a context of rather good stock status<sup>6</sup>, the changes observed between September 2022 and September 2023 thus appear rather insignificant.</p>
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Figure 4. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN DENMARK, SEPTEMBER 2023**



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

<sup>4</sup> ICES (2022). Sprat (*Sprattus sprattus*) in Division 3.a and Subarea 4 (Skagerrak, Kattegat, and North Sea). ICES Advice: Recurrent Advice. Report. <https://doi.org/10.17895/ices.advice.19453859.v1>

<sup>5</sup> ICES Advice 2023 – whg.27.47d – <https://doi.org/10.17895/ices.advice.21864324>

<sup>6</sup> ICES Advice 2022 – mac.27.nea – <https://doi.org/10.17895/ices.advice.19772392>

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


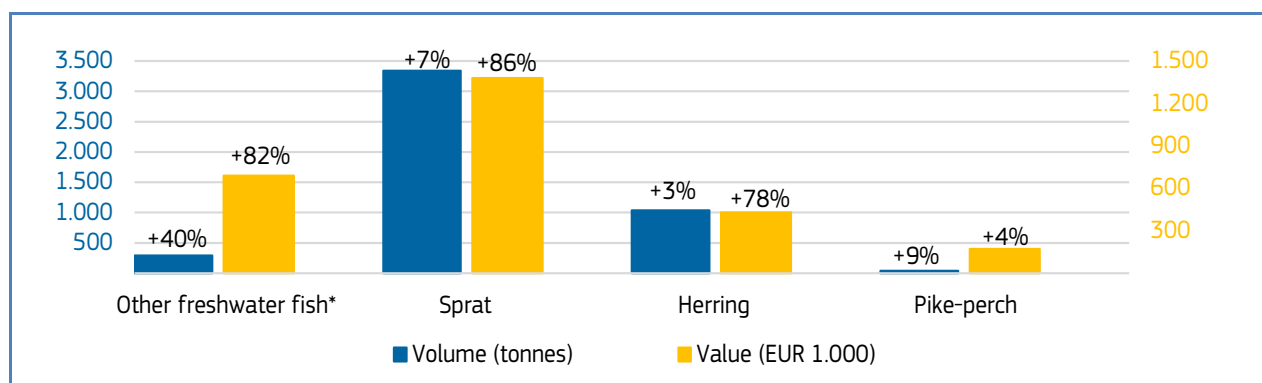

 Estonia	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 18,0 million, +94%	48.589 tonnes, +71%	Herring, sprat, other freshwater fish*, smelt.	In September 2023, fist sales of <b>other marine fish</b> increased significantly compared to September 2022. This is due mainly to an increase in value and volume of three-spined stickleback. Three-spined stickleback is not popular for human consumption in Estonia and in 2023, the largest supply of three-spined stickleback was for non-human consumption. Three-spined stickleback is not subject to restrictions for total available catches (TACs). The rise in the market demand of this species and the no TAC restriction has led suppliers to focus more on its supply. Weather conditions, fishing capacity and resources made it possible to increase fishing effort and increase supply to the market in September 2023. It is noticeable that due to the small quantities supplied, slight differences show significant discrepancies in percentage terms.
<b>Sept 2023 vs Sept 2022</b>	EUR 2,8 million, +70%	4.749 tonnes, +7%	Other freshwater fish*, sprat, herring, pike-perch.	

Figure 5. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN ESTONIA, SEPTEMBER 2023**



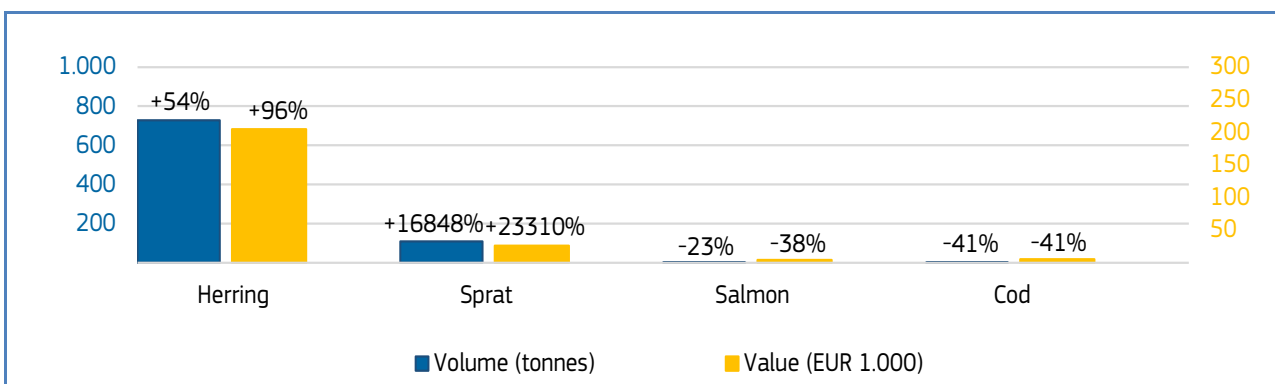
Percentages show change from the previous year. \*EUMOFA aggregation for species.

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

 Finland	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 20,7 million, +117%	43.611 tonnes, +9%	Herring, sprat, cod, salmon.	Increased first sales in Finland are due mainly to sprat and partly herring. First sales of <b>herring</b> increased substantially in September 2023 compared to September 2022. In the Baltic Sea region, an increase in herring catches was observed for September 2023. Catches by the Finnish fleet were up by around 90% when comparing September 2023 with September 2022. From the Finnish fleet operating in the Baltic Sea during September 2023, only 26% of catches were sold in Finland. Most of the catches were sold elsewhere such as Sweden and Estonia. It was also noted that herring landings by the Finnish
<b>Sept 2023 vs Sept 2022</b>	EUR 0,2 million, +99%	839 tonnes, +77%	Herring, sprat, salmon, cod.	

			<p>fleet in other countries did not differ between 2022 and 2023. It might thus be assumed that increased supply to the market was due only to higher herring catches. Weather conditions, fishing capacity and resources enabled an increase in fishing effort thus increasing supply to the market in September 2023. The first sales of <b>sprat</b> showed an extraordinary increase in September 2023 compared to September 2022. In the Baltic Sea region, no increase in catches of sprat was observed in September 2023. Catches by the Finnish fleet increased by only around 5% when comparing September 2023 with September 2022. Based on the Finnish fleet operating in the Baltic Sea during September 2023, only 5% of catches were sold in Finland. Most of the catches were sold elsewhere such as Sweden and Estonia. It was noted that landings of sprat by the Finnish fleet in other countries did not differ between 2022 and 2023. The pelagic fishery in the Baltic Sea always contains a mixture of sprat and herring.</p>
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Figure 6. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN FINLAND, SEPTEMBER 2023**



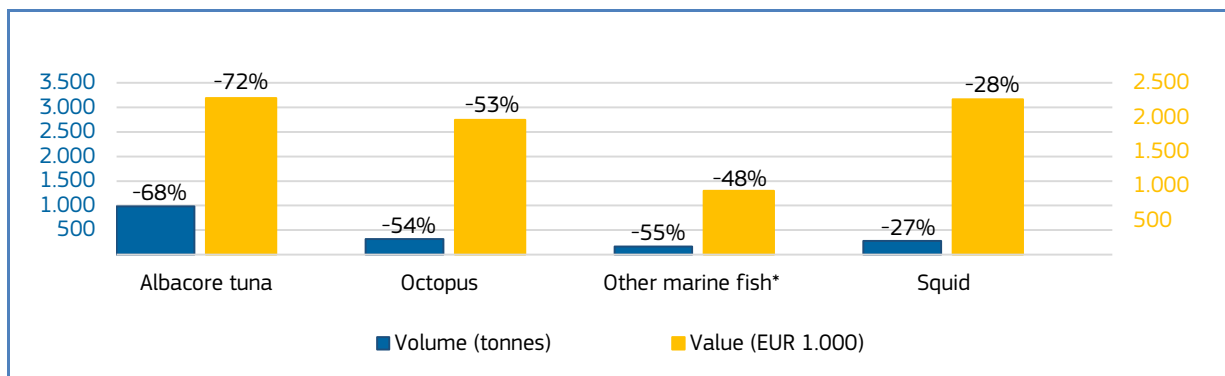
Percentages show change from the previous year. \*EUMOFA aggregation for species.

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

France	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-Sept 2023 vs Jan-Sept 2022	EUR 526,4 million, -6%	192.823 tonnes, -10%	Albacore tuna, hake, octopus, seaweed and other algae.
Sept 2023 vs Sept 2022	EUR 56,0 million, -14%	22.085 tonnes, -14%	Albacore tuna, octopus, other marine fish*, squid.




Figure 7. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN FRANCE, SEPTEMBER 2023**



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

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

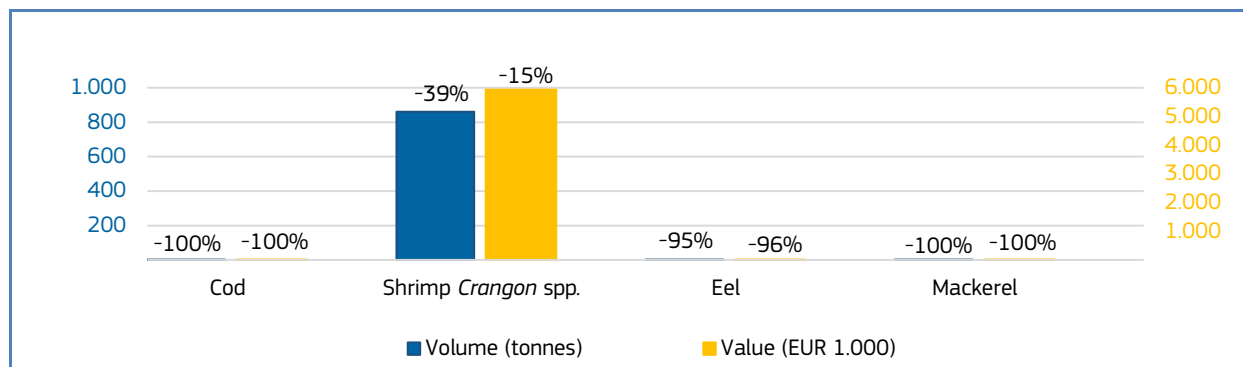
 Germany	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 43,6 million, -37%	23.168 tonnes, -3%	Shrimp <i>Crangon</i> spp., cod, herring, Greenland halibut.	In September 2023, first sales of <b>mackerel</b> decreased significantly compared to September 2022. Mackerel is a highly migratory species, whose abundance can vary greatly from year to year. The bulk of the German mackerel production usually occurs from November, with for example around 6.000 tonnes landed in November-December 2022, and around 5.000 tonnes landed in November-December 2018. In the context of rather good stock status, the changes observed between September 2022 and September 2023 appear rather insignificant. In September 2023, first sales of <b>cod</b> decreased significantly compared to September 2022. In Germany, the cod fisheries have been severely affected by several factors <sup>7</sup> , especially the decline in cod stocks across the Baltic Sea, while the state of the North Sea stocks is still complicated, especially the northwestern and Viking sub-stocks, where the Dutch (cutter) fleet mostly operates <sup>8</sup> . In this context, specific measures have affected the cod fisheries. <sup>9</sup> As a result, German cod production over the 9 first months of the year dropped from 3.500 tonnes in 2021 to 1.430 tonnes in 2022 and 596 tonnes in 2023.
<b>Sept 2023 vs Sept 2022</b>	EUR 6,2 million, -53%	1.050 tonnes, -77%	Cod, shrimp <i>Crangon</i> spp., eel, mackerel.	

<sup>7</sup> [https://oceans-and-fisheries.ec.europa.eu/system/files/2021-09/2020-fleet-capacity-report-action-plan-germany\\_en.pdf](https://oceans-and-fisheries.ec.europa.eu/system/files/2021-09/2020-fleet-capacity-report-action-plan-germany_en.pdf)

<sup>8</sup> ICES Advice 2023 – cod.27.46a7d20 – <https://doi.org/10.17895/ices.advice.21840765>

<sup>9</sup> 1. A decommissioning scheme was planned as from 2020, resulting in a reduction in the fishing fleet. 2. Remedial measures were established in the Kattegat (Article 17 of EC, 2023). 3. 2. Remedial measures were established in the North Sea (Article 16 of EC, 2023) In relation to Article 16 of EC, 2023 EC, 2023 : COUNCIL REGULATION (EU) 2023/194 of 30 January 2023 fixing for 2023 the fishing opportunities for certain fish stocks, applicable in Union waters and, for Union fishing vessels, in certain non-Union waters, as well as fixing for 2023 and 2024 such fishing opportunities for certain deep-sea fish stocks.

Figure 8. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN GERMANY, SEPTEMBER 2023**

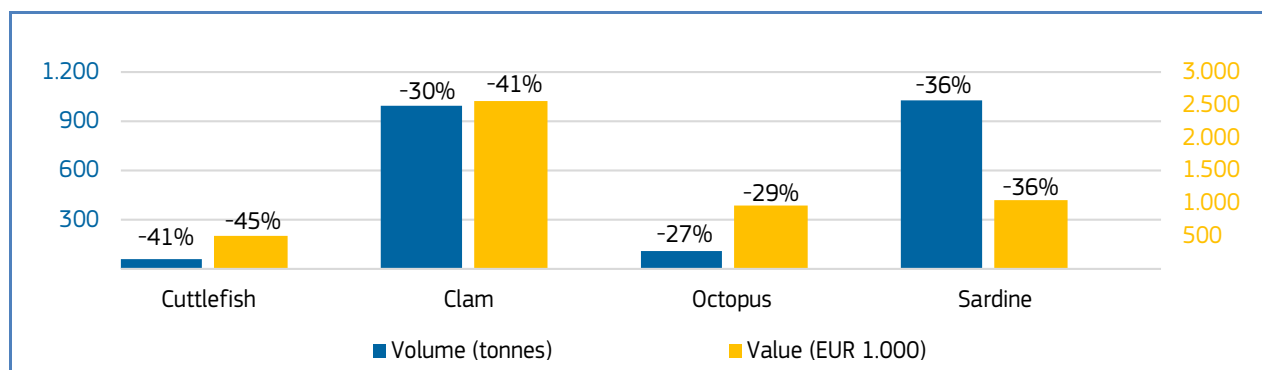


Percentages show change from the previous year.

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

Italy	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-Sept 2023 vs Jan-Sept 2022	EUR 266,1 million, -4%	59.380 tonnes, -2%	Miscellaneous shrimps*, clam, anchovy, sardine.
Sept 2023 vs Sept 2022	EUR 23,3 million, -14%	5.928 tonnes, -20%	Cuttlefish, clam, octopus, sardine.

Figure 9. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN ITALY, SEPTEMBER 2023**

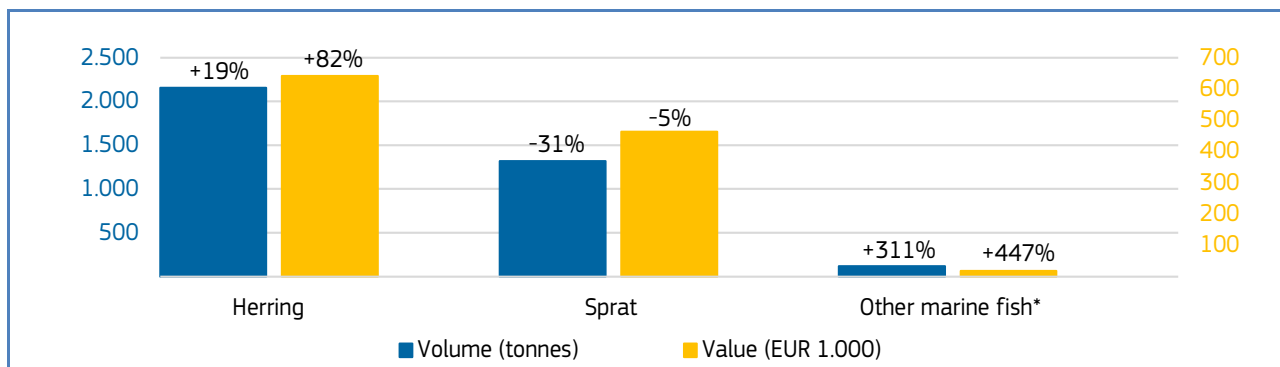


Percentages show change from the previous year. \*EUMOFA aggregation for species.

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

Latvia	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
Jan-Sept 2023 vs Jan-Sept 2022	EUR 8,1 million, +32%	30.480 tonnes, +6%	Herring, sprat, other marine fish*, European flounder.	In September 2023, the value of <b>other marine fish</b> increased compared to September 2022. The main species behind the increase in sales is three-spined stickleback. Similarly to Estonia, the most of supply of three-spined stickleback was for non-human consumption in Latvia too. Weather conditions, fishing capacity and resources enabled an increase in fishing efforts to increase supply to the market.
Sept 2023 vs Sept 2022	EUR 1,1 million, +32%	3.657 tonnes, -4%	<b>Value:</b> Herring, smelt, other marine fish*. <b>Volume:</b> sprat, smelt, European flounder.	

Figure 10. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN LATVIA, SEPTEMBER 2023**



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

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


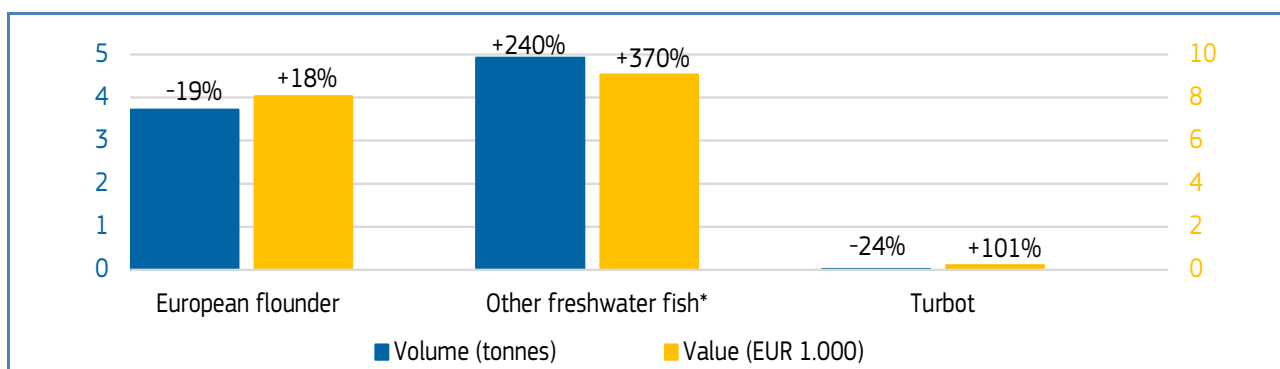
 Lithuania	First-sales value / trend %	First-sales volume/ trend %	Main contributing species	Notes
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 0,6 million, +21%	290 tonnes, -62%	<b>Value:</b> Smelt, turbot, miscellaneous small pelagics*. <b>Volume:</b> Herring, sprat, other groundfish*.	In September 2023, the value of <b>other freshwater fish</b> increased compared to September 2022. In Lithuania the fishery of freshwater fish only occurs in coastal areas of the Baltic Sea and subject to seasonal variation. Such species are very popular for local use. The freshwater stocks flow from Lagoon Bay to the Baltic Sea and stay in the coastal areas. Water temperature and wind direction are the determining factors for fishing these species. Catches of vimba bream contributed to increases in value and volume. Weather conditions, fishing capacity and resources enabled an increase in fishing effort and thus increased supply in September 2023. Since the quantities of these species supplied to the market are small, the slight differences show significant variations in relative terms.
<b>Sept 2023 vs Sept 2022</b>	EUR 0,02 million, +65%	9 tonnes, +11%	European flounder, other freshwater fish*, turbot.	

Figure 11. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN LITHUANIA, SEPTEMBER 2023**



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

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


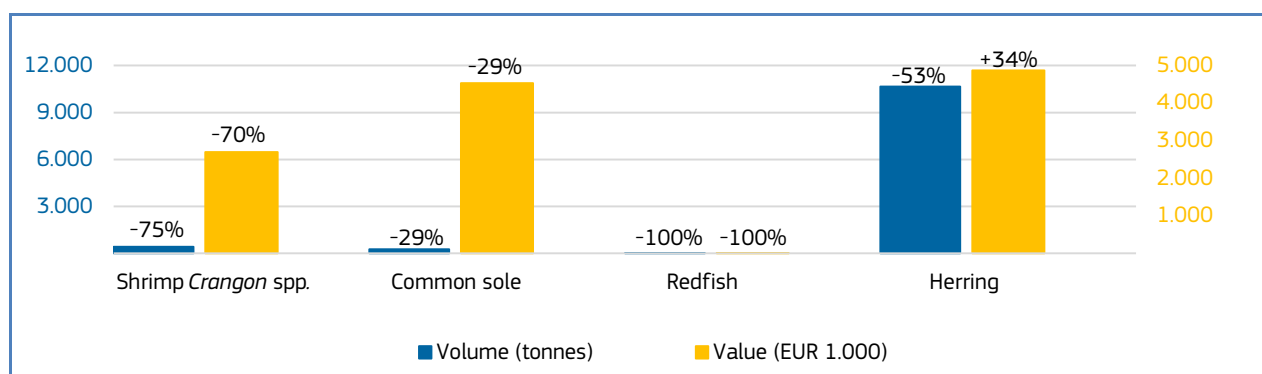

 the Netherlands	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 154,5 million, -16%	155.012 tonnes, -5%	Common sole, shrimp <i>Crangon</i> spp., Atlantic horse mackerel, European plaice.	In September 2023, there was a significant decrease in first sales of <b>redfish</b> . There is no targeted redfish fishery in the Netherlands, and only one production of 85 tonnes registered in August 2020 and no production over 1 tonne in any month since November 2018. In addition, ICES has advised (2021a <sup>10</sup> , 2021b <sup>11</sup> ) zero catch of beaked redfish ( <i>Sebastes mentella</i> ) in the years 2022, 2023 and 2024 in ICES subareas 5, 12, and 14 (Iceland and Faroes grounds, north of Azores, east of Greenland) and in NAFO subareas 1 and 2. The production of redfish recorded in September 2022 is thus likely to be as by-catch.
<b>Sept 2023 vs Sept 2022</b>	EUR 19,0 million, -27%	14.171 tonnes, -51%	Shrimp <i>Crangon</i> spp., herring, common sole, redfish.	

Figure 12. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN THE NETHERLANDS, SEPTEMBER 2023**



Percentages show change from the previous year.

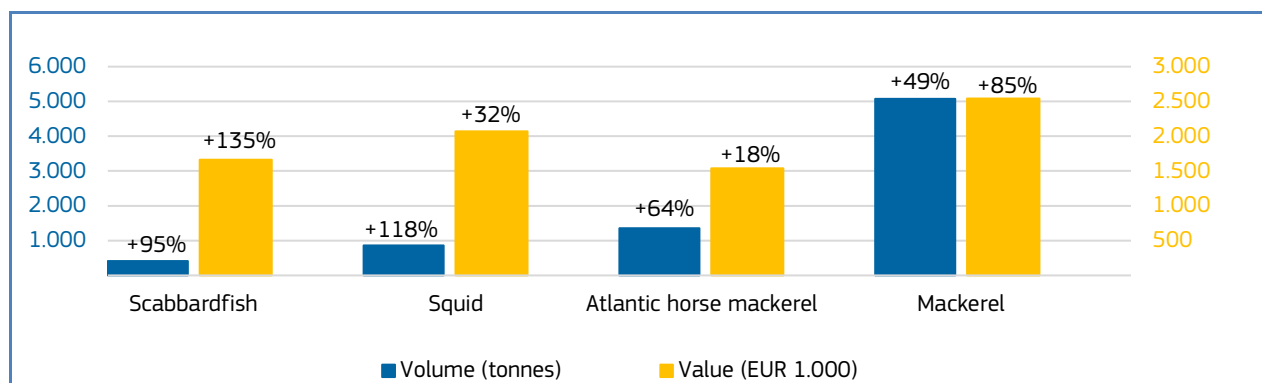
Table 15. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN PORTUGAL**

 Portugal	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 231,9 million, -1%	94.252 tonnes, +6%	<b>Value:</b> octopus, squid, sardine, Atlantic horse mackerel. <b>Volume:</b> mackerel, blue whiting, anchovy, miscellaneous tuna*.	In September 2023, first sales of <b>scabbardfish</b> increased significantly compared to September 2022. Catches of this deep-sea species have been stable since 2013. The increase in both volume and value is explained by the atypical landings in September 2022, when volume and value decreased by about 40%. Except in Madeira, this is not a usual target species for any fishing segment. Catches are thus influenced by the abundance of other species. In the special case of Madeira, a traditional, effective and sustainable fishing gear of drifting deep-water longline is used by small artisanal vessels. The unit price on this island has been stable, so the change seems to be only related to the month being compared.
<b>Sept 2023 vs Sept 2022</b>	EUR 28,6 million, +14%	15.396 tonnes, +20%	Scabbardfish, squid, Atlantic horse mackerel, mackerel.	

<sup>10</sup> ICES Advice 2021 – reb.2127.dp – <https://doi.org/10.17895/ices.advice.7838>

<sup>11</sup> ICES Advice 2021 – reb.2127.sp – <https://doi.org/10.17895/ices.advice.7839>

Figure 13. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN PORTUGAL, SEPTEMBER 2023**



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

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


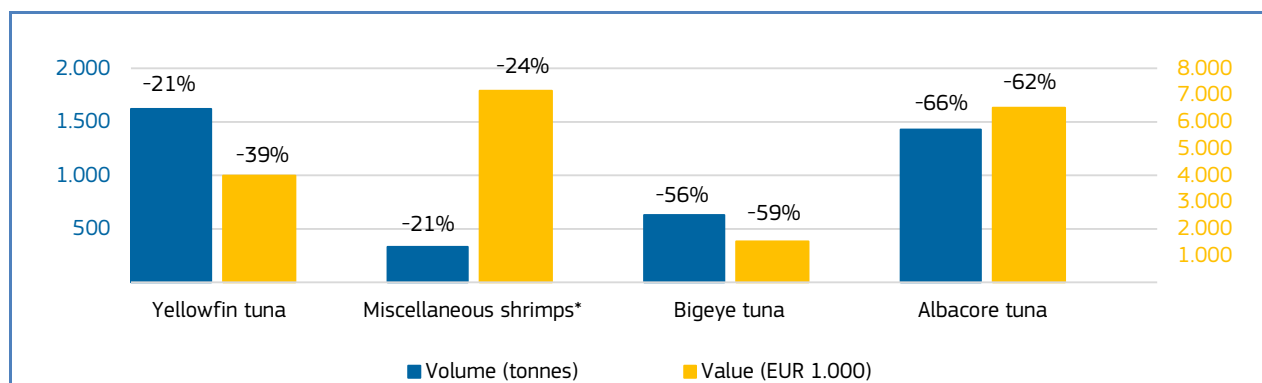

 Spain	First-sales value / trend %	First-sales volume / trend %	Main contributing species
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 1.097,6 million, -9%	334.648 tonnes, -5%	Swordfish, mackerel, squid, Atlantic horse mackerel.
<b>Sept 2023 vs Sept 2022</b>	EUR 101,7 million, -24%	32.079 tonnes, -20%	Yellowfin tuna, bigeye tuna, albacore tuna, miscellaneous shrimps*.

Figure 14. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN SPAIN, SEPTEMBER 2023**



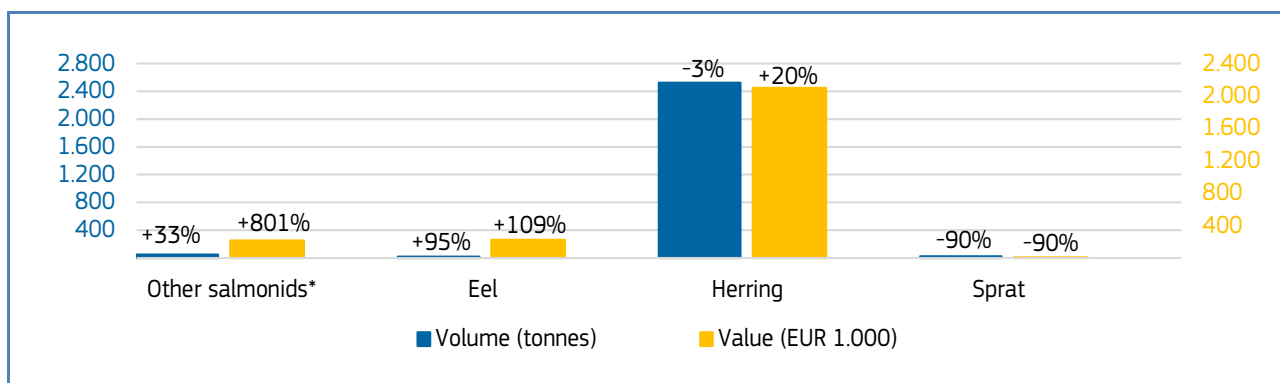
Percentages show change from the previous year. \*EUMOFA aggregation for species

Table 17. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN SWEDEN**

 Sweden	First-sales value / trend %	First-sales volume / trend %	Main contributing species	Notes
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 42,6 million, -33%	42.602 tonnes, -59%	Sprat, herring, cold-water shrimps, Norway lobster.	In September 2023, first sales of <b>other salmonids</b> increased dramatically compared to September 2022. The inclusion of roe in the calculation of value and volume of vendace (FVE) in September 2023, has led to high increases in value. First sales of <b>eel</b> in Sweden increased significantly in September 2023 compared to September 2022. Given its high fish oil content and other valuable properties of fish, the local consumer values that species. Supply to the
<b>Sept 2023 vs Sept 2022</b>	EUR 5,6 million, +4%	2.960 tonnes, -21%	<b>Value:</b> Herring, other salmonids*, eel. <b>Volume:</b> Sprat, European flounder, other marine fish*.	

				market depends more on weather conditions and available capacity to carry out the fisheries. It was observed that catches by the Swedish fleet in some subdivisions of the Baltic Sea were twice as high as usual. Despite the higher supply of eel to the market, the price increased by 7% when comparing September 2023 with September 2022. It might show that market demand is not satisfied since volumes of eel are insignificant. In the case of September 2023, available resources, mild weather conditions, and capacity of suppliers may have enabled the provision of more eel to the market. The difference is only around 10,5 tonnes.
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Figure 15. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN SWEDEN, SEPTEMBER 2023**

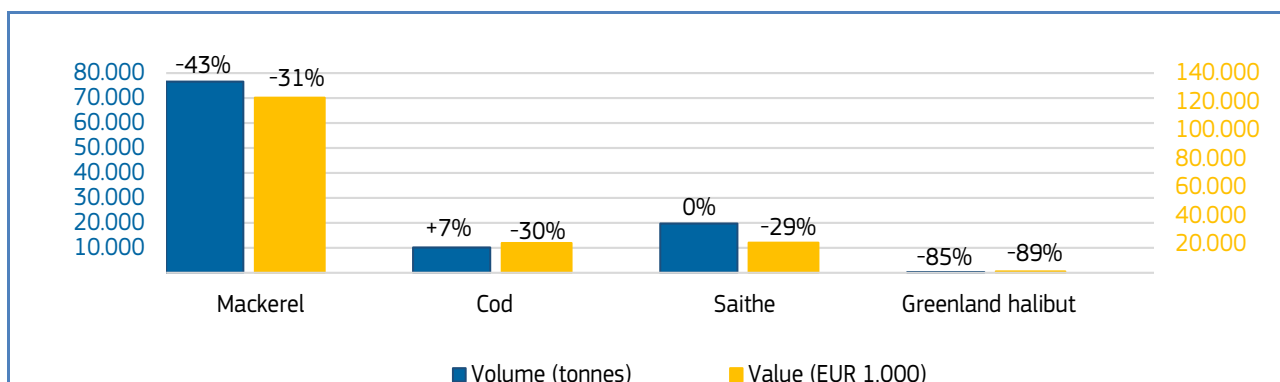


Percentages show change from the previous year. \*EUMOFA aggregation for species.

Table 18. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN NORWAY**

Norway	First-sales value / trend %	First-sales volume / trend %	Main contributing species
Jan-Sept 2023 vs Jan-Sept 2022	EUR 2.000,3 million, -13%	1.987.692 tonnes, -2%	Cod, mackerel, crab, haddock.
Sept 2023 vs Sept 2022	EUR 206,6 million -31%	162.211 tonnes, -27%	Cod, mackerel, saithe, Greenland halibut.

Figure 16. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN NORWAY, SEPTEMBER 2023**



Percentages show change from the previous year.

Table 19. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN THE UNITED KINGDOM**


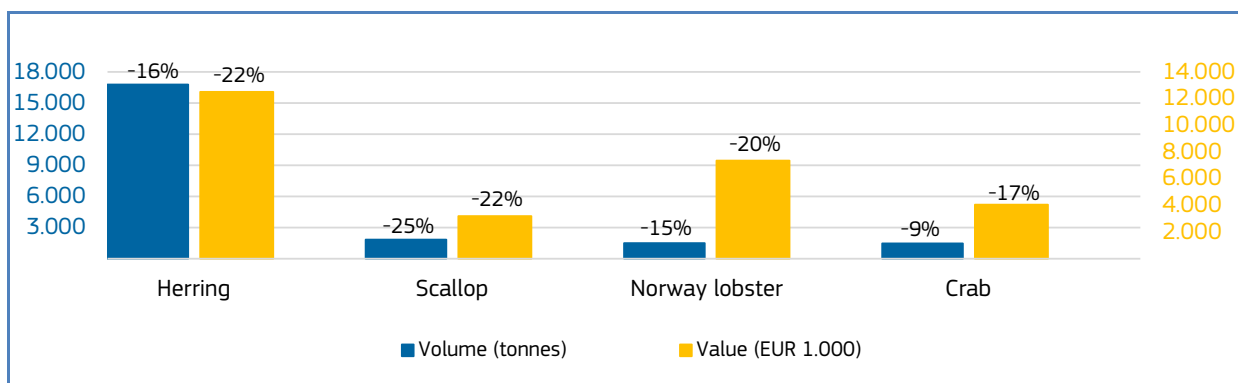
 The United Kingdom	First-sales value / trend %	First-sales volume / trend %	Main contributing species
<b>Jan-Sept 2023 vs Jan-Sept 2022</b>	EUR 492,6 million, +3%	250.772 tonnes, +12%	Cod, blue whiting, other molluscs and aquatic invertebrates*, mackerel.
<b>Sept 2023 vs Sept 2022</b>	EUR 56,6 million, -11%	32.094 tonnes, -13%	Herring, Norway lobster, scallop, crab.

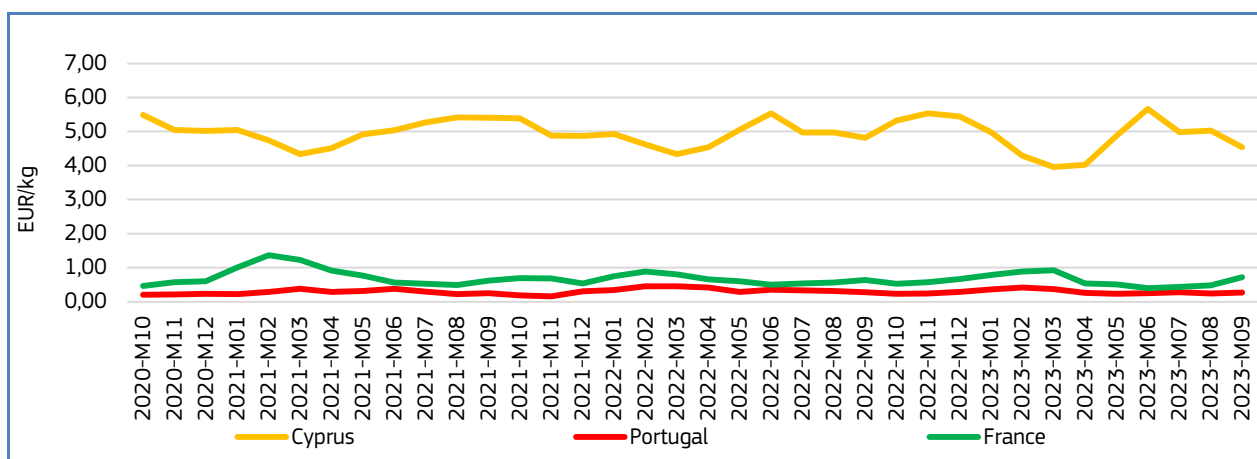
Figure 17. **FIRST SALES OF THE MAIN COMMERCIAL SPECIES IN THE UNITED KINGDOM, SEPTEMBER 2023**



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

#### 1.4. Comparison of first sales prices of selected species in selected countries<sup>12</sup>

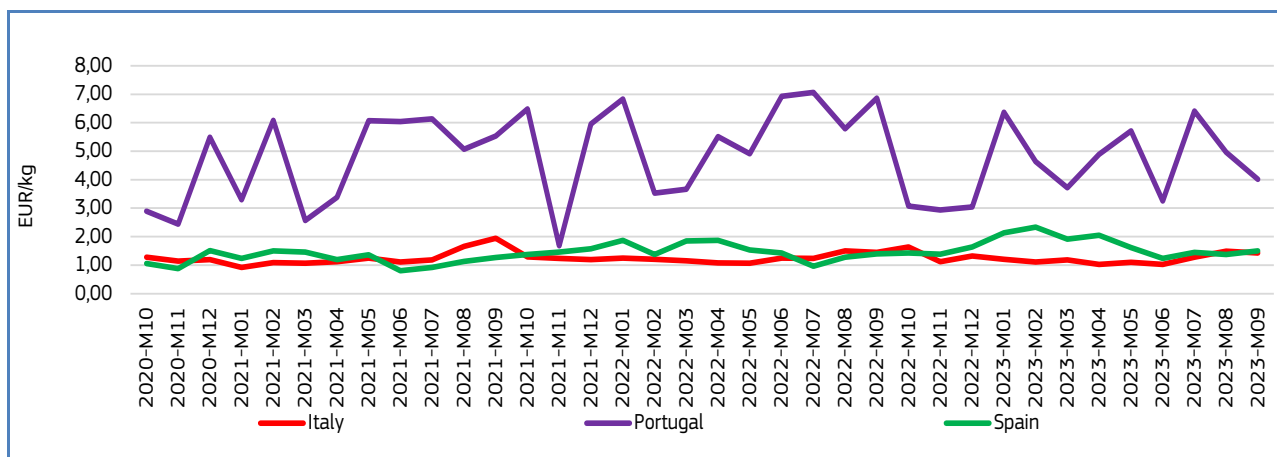
Figure 18. **FIRST SALES PRICES OF BOGUE IN CYPRUS, PORTUGAL AND ITALY**



EU first sales of **bogue** occur in several countries including **Cyprus**, **Portugal** and **France**. In September 2023, the average first-sales prices of bogue were 4,54 EUR/kg in Cyprus (down by 10% from the previous month and by 6% from the previous year); 0,27 EUR/kg in Portugal (up from August 2023 by 12% and down from September 2022 by 5%); and 0,72 EUR/kg in France (up from the previous month by 50% and from the previous year by 13%). In September 2023, supply relative to the previous year increased in the three markets analysed: Cyprus (+40%), Portugal (+146%) and France (+127%). In the three countries analysed, volume seems to peak in similar periods of the year: specifically, in January-February and July in Cyprus; in January, April-May and November in Portugal; between April and June and in November in France. Between months 10/2020 to 09/2023, prices increased in Portugal and France, while they decreased in Cyprus. In Cyprus prices ranged between 3,96 EUR/kg (M03-2023) and 5,66 EUR/kg (M06-2023), with lowest drops occurring in March. Highest peaks in prices in France occur between February and March.

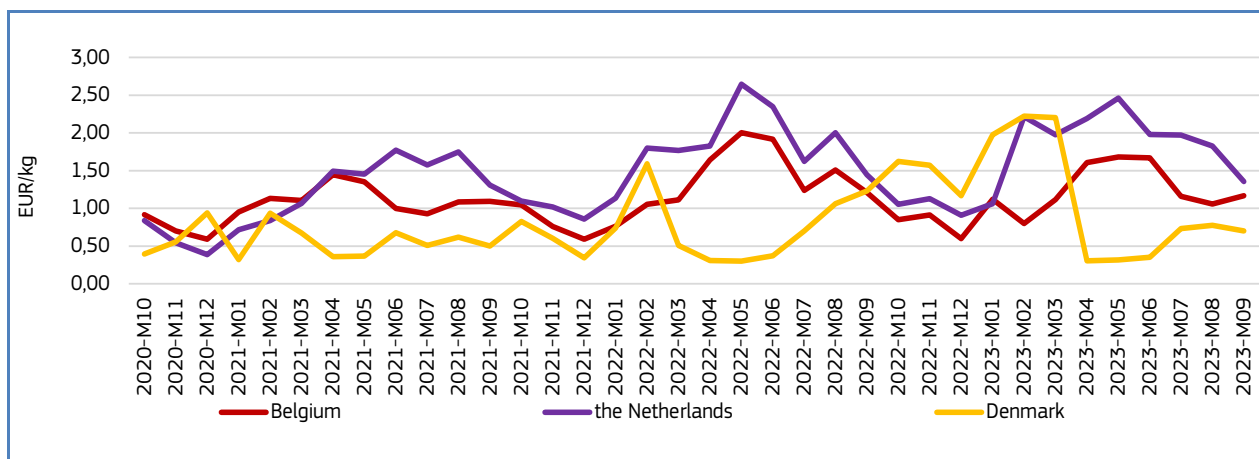
<sup>12</sup> First sales data updated on 21.11.2023.

Figure 19. **FIRST SALES PRICES OF MEDITERRANEAN HORSE MACKEREL IN ITALY, PORTUGAL AND SPAIN**



EU first sales of **Mediterranean horse mackerel** occur mainly in **Italy, Portugal** and **Spain**. In September 2023, the average first-sales prices of Mediterranean horse mackerel were: 1,43 EUR/kg in Italy (down by 4% from the previous month and down by 1% from September 2022); 4,01 EUR/kg in Portugal (down by 19% from the previous month and by 42% from September 2022) and 1,50 EUR/kg in Spain (up by 9% from the previous month and by 8% from the previous year). In September 2023, supply decreased in Italy (-13%) and in Spain (-1%), while it increased in Portugal (+196). Supply fluctuates strongly in the three countries analysed. In Italy supply seems to peak between March and May, similarly in Portugal in March and April, while in Spain supply seems to peak in June and July. Between months 10/2020 to 09/2023, prices fluctuated strongly and have been increasing in the three markets analysed. Prices fluctuated particularly strongly in Portugal ranging between 1,68 EUR/kg (M11-2021) and 7,06 EUR/kg (M07-2022). In Italy prices seem to peak between August and October. In Spain falls in prices occurred between June and July corresponding with peaks in supply.

Figure 20. **FIRST SALES PRICES OF GURNARD IN BELGIUM, THE NETHERLANDS AND DENMARK**

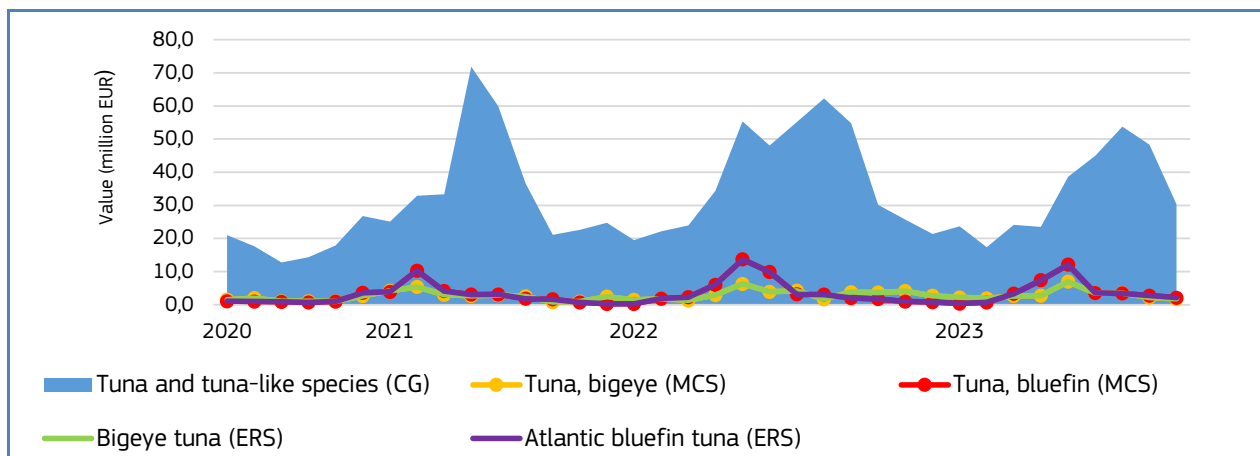


EU first sales of **gurnard** occur in several countries as well as in **Belgium, the Netherlands** and **Denmark**. In September 2023, the average first-sales prices of gurnard were 1,17 EUR/kg in Belgium (up from the previous month by 11% and down from the previous year by 3%); 1,35 EUR/kg in the Netherlands (down from the previous month by 26% and from September 2022 by 6%); and 0,70 EUR/kg in Denmark (down by 10% from August 2023, and by 43% from September 2022). In September 2023, supply decreased in Belgium (-33%), while it increased in the Netherlands (+3%) and in Denmark (+279%), relative to the previous year. Supply is strongly seasonal with the highest peaks occurring between January and March in Belgium, June-July in the Netherlands and between September-October and May in Denmark. Between months 10/2020 to 09/2023, prices fluctuated strongly and increased in the three countries analysed, with highest peaks in prices occurring between April and June in Belgium and in the Netherlands. In the Netherlands the highest peak in price of 2,65 EUR/kg was registered in May 2022. In Denmark strong falls in price were registered between April and June.



## 1.5. Commodity group of the month: Tuna and tuna-like species<sup>13</sup>

Figure 21. **FIRST-SALES COMPARISON AT CG, MCS, AND ERS LEVELS FOR REPORTING COUNTRIES<sup>14</sup>, OCT 2020 - SEPT 2023**



In September 2023, the “**Tuna and tuna-like species**” commodity group (CG<sup>15</sup>) recorded the 5<sup>th</sup> highest first-sales value and 4<sup>th</sup> highest volume out of the 10 CGs in the countries monitored by EUMOFA<sup>16</sup>. In the reporting countries covered by the EUMOFA database, first sales of this group of species in September 2023 totalled EUR 30,3 million and 9.340 tonnes, representing a 45% decrease in value and 44% decrease in volume compared to September 2022. In the past 36 months, the highest first-sales value of tuna and tuna-like species was registered in July 2021 at about EUR 71,9 million.

The tuna and tuna-like species commodity group includes 7 main commercial species (MCS): albacore, bigeye, bluefin, skipjack, yellowfin, miscellaneous tuna species<sup>17</sup>, and swordfish. Pelagic shark species, normally regarded as tuna-like species, are not included in the tuna and tuna-like species commodity group.

At the Electronic Recording and Reporting System (ERS) level, Atlantic bluefin tuna (7%) and bigeye tuna (6%) together accounted for 13% of the total first-sales value of CG tuna and tuna-like species recorded in September 2023.

## 1.6. Focus on Atlantic bluefin tuna



Atlantic bluefin tuna (*Thunnus thynnus*) is a migratory tuna species in the family Scombridae. It is native to both the western and eastern Atlantic Ocean, as well as the Mediterranean Sea. The species is warm-blooded and can live for up to 40 years and grow to over 4 metres in length and 600 kg in weight. Typical specimens are around 2,5 metres long and weigh around 350 kg. In the EU, bluefin is exploited using longlines, purse seines, assorted hook-and-line gear, heavy rods and reels, and harpoons. The Mediterranean industrial purse seine fishery accounts

for more than 70% of the annual EU catch. A significant share supplies the tuna ranching industry, while the first sales data include catches destined only for direct human consumption. The main EU fishing countries are Spain, France and Italy, and to a lesser extent Croatia, Portugal, Malta, Greece and Cyprus. The bluefin tuna fishery is regulated by the International Commission for the Conservation of Atlantic Tunas (ICCAT), to which the EU is a contracting party.

The fishing season for bluefin tuna in the eastern Atlantic Ocean and Mediterranean Sea by large-scale pelagic longlines vessels is from 1 January to 31 May, while purse seine fishing is allowed from 26 May until 1 July. However, Cyprus and Greece can apply for purse seiners flying their flag to fish for bluefin tuna in the eastern Mediterranean from 15 May until 1 July. Croatia can apply for its purse seiners to fish for farming purposes in the Adriatic Sea until 15 July. Bluefin tuna is managed by Total Allowable Catches (EU TAC in 2023 is 40.570 tonnes), a minimum conservation reference size - which is 30 kg in the Mediterranean (a derogation of

<sup>13</sup> First sales data updated on 20. 10. 2023.

<sup>14</sup> Norway and the UK excluded from the analyses.

<sup>15</sup> Annex 3: <http://eumofa.eu/supply-balance-and-other-methodologies>

<sup>16</sup> More data on commodity groups can be found in Table 1.2 of the Annex.

<sup>17</sup> EUMOFA aggregation for species - Metadata 2, Annex 3: <http://eumofa.eu/supply-balance-and-other-methodologies>

8 kg applies to artisanal fishing by bait boats, longliners and handlines in the Mediterranean Sea and in the Adriatic Sea fishery for farming purposes) and strict control and enforcement by national authorities and EU and international authorities.<sup>18</sup>

We have covered **Atlantic bluefin tuna** in previous *Monthly Highlights*:

First sales: **France, Italy, Spain (10/2020).**

Extra-EU export: **(11/2016)**

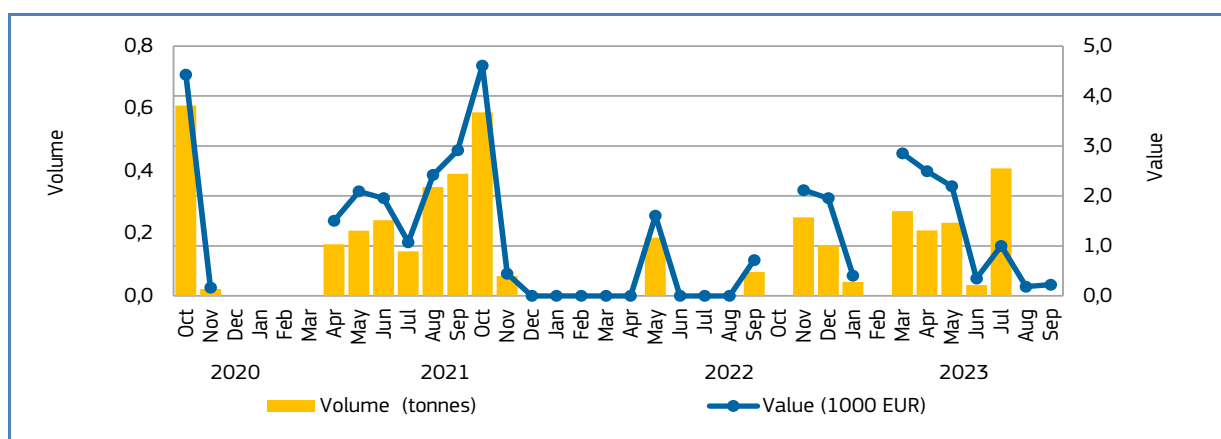
Topic of the month: **Atlantic bluefin tuna market in the EU (7/2016).**

## Selected countries

Table 20. **COMPARISON OF ATLANTIC BLUEFIN TUNA FIRST-SALES PRICES, MAIN PLACES OF SALE, AND CONTRIBUTION TO OVERALL SALES OF “TUNA AND TUNA-LIKE SPECIES” IN SELECTED COUNTRIES**

Atlantic bluefin tuna		Changes in Atlantic bluefin tuna first sales Jan-Sept 2023 (%)		Contribution of Atlantic bluefin tuna to total “tuna and tuna-like species” first sales in September 2023 (%)	Principal places of sale Jan-Sept 2023 in terms of first-sales value
		Compared to Jan-Sept 2022	Compared to Jan-Sept 2021		
Cyprus	Value	+318%	-19%	No first sales reported	Latchi Port, Limassol Old Port, Zygi Fishing Shelter.
	Volume	+358%	-20%	No first sales reported	
Italy	Value	+12%	+3%	8%	Pescara, Marsala, Porticello.
	Volume	+29%	+4%	4%	
France	Value	-5%	+20%	29%	St Jean-de-Luz, Les Sables-d'Olonne, La Turballe.
	Volume	+4%	+12%	10%	

Figure 22. **ATLANTIC BLUEFIN TUNA: FIRST SALES IN THE CYPRUS, OCTOBER 2020 – SEPTEMBER 2023**



Over the past 36 months in **Cyprus**, the highest first sales of Atlantic bluefin tuna were in 2021. The peak was registered in October 2021 when about 0,6 tonnes were sold for about EUR 4.400. In general, bluefin tuna fishery in Cyprus is limited to drifting longlines.<sup>19</sup>

<sup>18</sup> COUNCIL REGULATION (EU) 2023/194 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R0194>

<sup>19</sup> [https://oceans-and-fisheries.ec.europa.eu/document/download/ec5c4b5c-8241-40f2-850c-835d5beb876c\\_sl](https://oceans-and-fisheries.ec.europa.eu/document/download/ec5c4b5c-8241-40f2-850c-835d5beb876c_sl)

Figure 23. **FIRST SALES: COMPOSITION OF “TUNA AND TUNA-LIKE SPECIES” (ERS LEVEL) IN CYPRUS IN VALUE AND VOLUME, SEPTEMBER 2023**

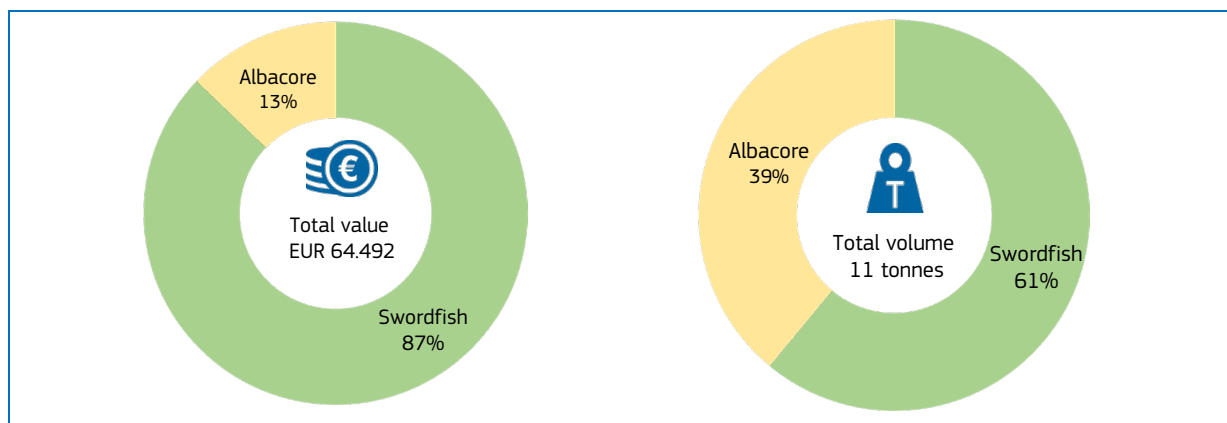
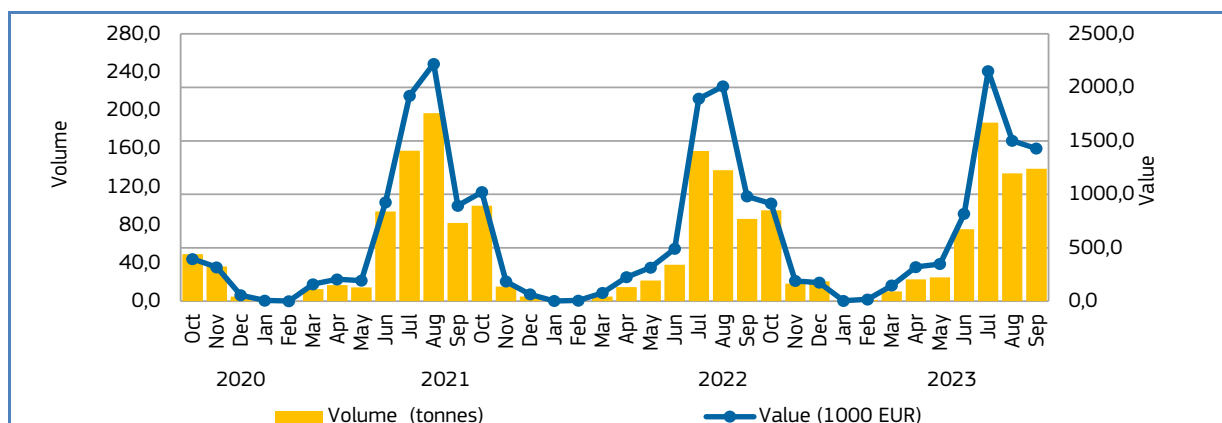
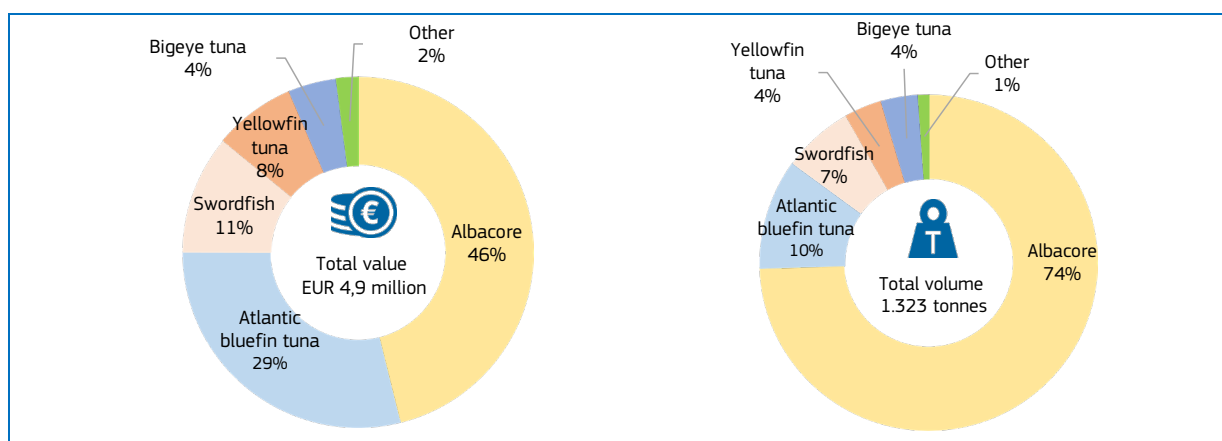


Figure 24. **ATLANTIC BLUEFIN TUNA: FIRST SALES IN THE FRANCE, OCTOBER 2020 – SEPTEMBER 2023**



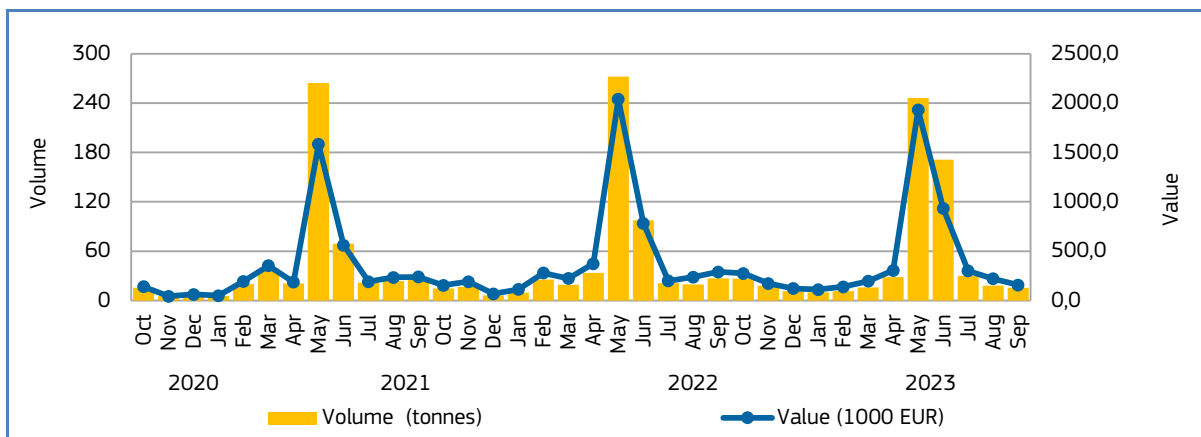
Over the past 36 months in **France**, the highest first sales of Atlantic bluefin tuna were during the purse seine fishing season from end of May to July each year observed. The peak was registered in August 2021 when about 197 tonnes were sold for about EUR 2,2 million. In 2023, with a TAC of 6.694 tonnes, France had the highest allocated bluefin tuna quota among the EU Member States.<sup>20</sup>

Figure 25. **FIRST SALES: COMPOSITION OF “TUNA AND TUNA-LIKE SPECIES” (ERS LEVEL) IN FRANCE IN VALUE AND VOLUME, SEPTEMBER 2023**



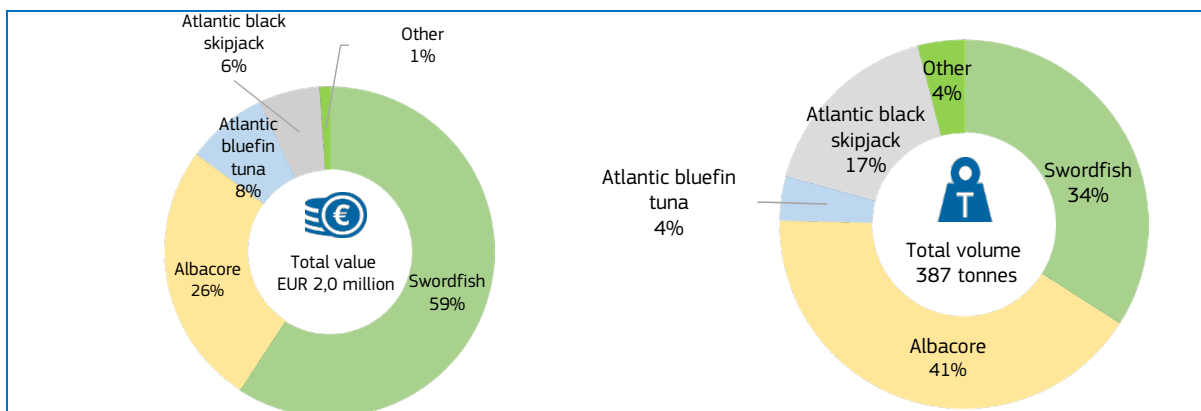
<sup>20</sup> Council Regulation (EU) 2023/194 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R0194>

Figure 26. ATLANTIC BLUEFIN TUNA: FIRST SALES IN ITALY, OCTOBER 2020 – SEPTEMBER 2023



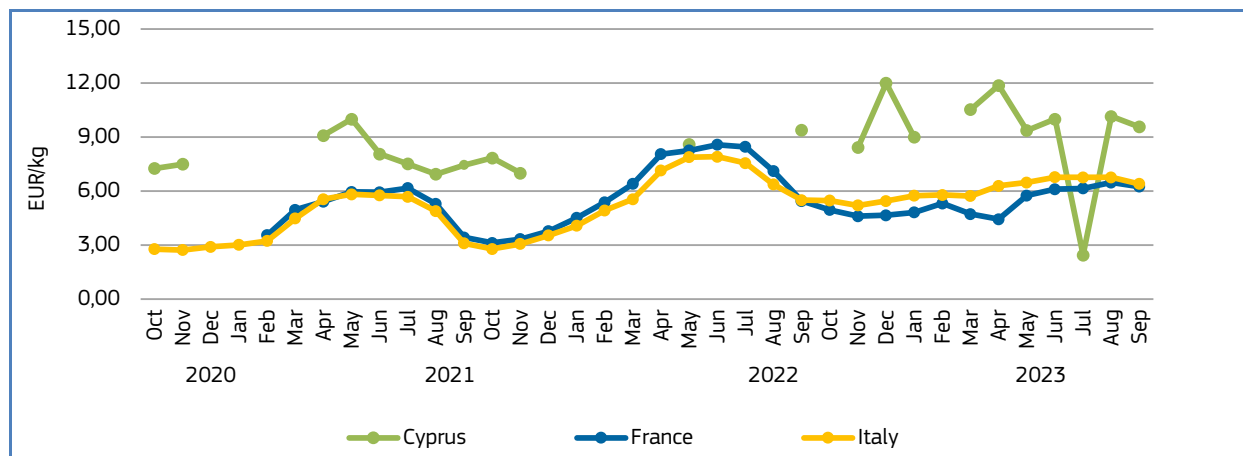
In **Italy** in the observed 36-month period, first sales of Atlantic bluefin tuna were highest in May 2022 when 272 tonnes were sold for about EUR 2,0 million. Like other countries surveyed, the bluefin tuna purse seine fishery is seasonal from May to July. First sales distributed in other months during the year originate from longliners.

Figure 27. FIRST SALES: COMPOSITION OF “TUNA AND TUNA-LIKE SPECIES” (ERS LEVEL) IN ITALY IN VALUE AND VOLUME, SEPTEMBER 2023



## Price trend

Figure 28. **ATLANTIC BLUEFIN TUNA: FIRST-SALES PRICES IN SELECTED COUNTRIES, OCTOBER 2020 - SEPTEMBER 2023**



Over the 36-month observation period (October 2020 to September 2023), the weighted average first-sales price of Atlantic bluefin tuna in **France** was 11,43 EUR/kg, 43% higher than in **Cyprus** (8,09 EUR/kg) and 41% higher than in **Italy** (8,13 EUR/kg).

In **Cyprus** in September 2023, there were no first sales of Atlantic bluefin tuna. Over the past 36 months, the average price ranged from 2,45 EUR/kg for 408 kg in July 2023 to 12,00 EUR/kg for 163 kg in December 2022.

In **France** in September 2023, the average first-sales price of Atlantic bluefin tuna (10,31 EUR/kg) decreased by 9% compared to September 2022 and by 6% from September 2021. In the observed 36-month period, the lowest average price at 8,01 EUR/kg for 49,4 tonnes was registered in October 2020, while the highest average price (18,97 EUR/kg for 405 kg) was recorded in February 2022.

In **Italy** in September 2023, the average first-sales price of Atlantic bluefin tuna (10,25 EUR/kg) decreased by 5% compared to September 2022 and increased by 9% compared to September 2021. During the period observed, the average price ranged from 5,45 EUR/kg for 171 tonnes in June 2023 to 12,44 EUR/kg for 16 tonnes in March 2023.

### 1.7. Focus on Bigeye tuna



© Scandinavian Fishing Year Book

The bigeye tuna (*Thunnus obesus*) is a tuna species belonging to the family Scombridae found in tropical and temperate oceans around the world and forms an important commercial fishery in many regions but is not present in the Mediterranean Sea. It spawns throughout the year, particularly in the tropics. Its life span is about 16 years, probably reaching sexual maturity between two and four years. The bigeye tuna is a popular target of commercial fisheries, with up to 500.000 tonnes landed globally each year. The stock has been exploited in the Atlantic region by three major gears (longline, bait boat and purse seine fisheries) and by many countries

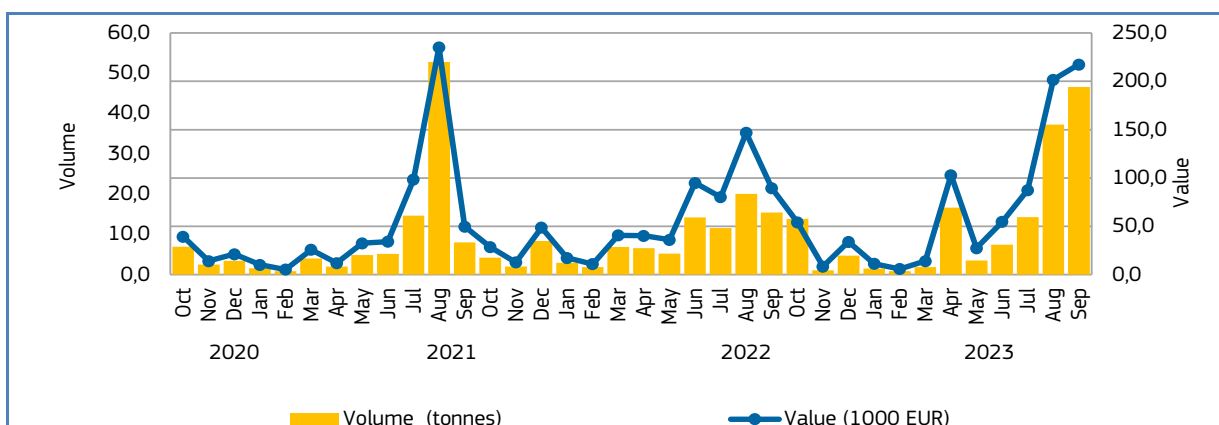
throughout the region. In the Indian Ocean catches are managed by the Indian Ocean Tuna Commission (IOTC) and in the Atlantic Ocean by the International Commission for the Conservation of Atlantic Tunas (ICCAT). In the European Union there are number of management measures introduced by the regional fisheries management organisations and which apply to vessels of particular size and fleets and include restrictions such as spatial and temporal closures, trip duration limits, observer requirements and annual Total Allowable Catches.<sup>21</sup>

### Selected countries

Table 21. COMPARISON OF BIGEYE TUNA FIRST-SALES PRICES, MAIN PLACES OF SALE, AND CONTRIBUTION TO OVERALL SALES OF "TUNA AND TUNA-LIKE" IN SELECTED COUNTRIES

Bigeye tuna		Changes in bigeye tuna first sales Jan-Sept 2023 (%)		Contribution of bigeye tuna to total "Tuna and tuna-like species" first sales in September 2023 (%)	Principal places of sale Jan-Sept 2023 in terms of first-sales value
		Compared to Jan-Sept 2022	Compared to Jan-Sept 2021		
France	Value	+30%	+44%	4%	Le Port (Reunion), St Jean-de-Luz, La Turballe.
	Volume	+53%	+38%	4%	
Portugal	Value	+5%	+28%	No first sales reported	Funchal (Madeira), Ribeira Grande, Santa Maria Island Apt.
	Volume	-10%	-8%	No first sales reported	
Spain	Value	-3%	-1%	7%	Bermeo, Santa Cruz de Tenerife, A Coruña.
	Volume	+4%	-18%	9%	

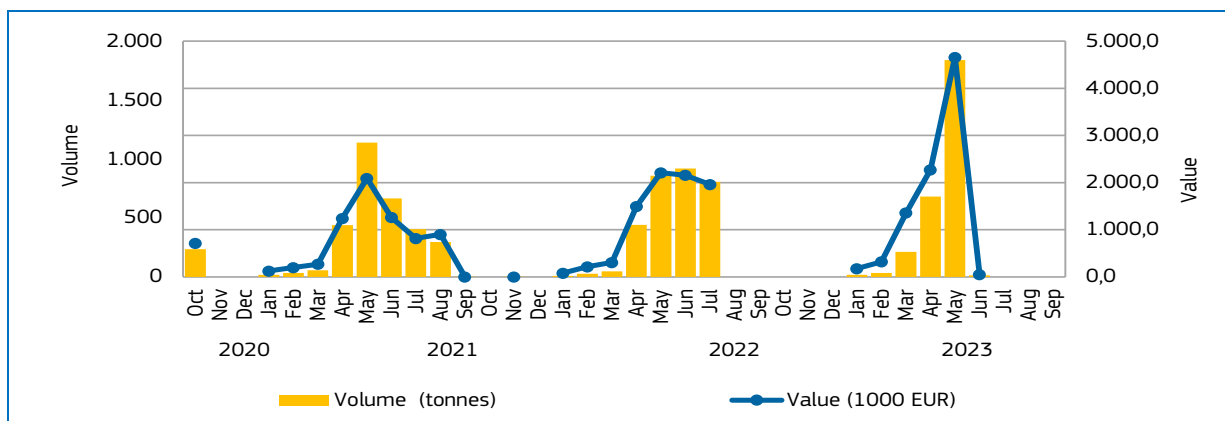
Figure 29. BIGEYE TUNA: FIRST SALES IN FRANCE, OCTOBER 2020 – SEPTEMBER 2023



<sup>21</sup> Council Regulation (EU) 2023/194 <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32023R0194>

In **France** over the observed 36-month period, the highest first-sales value and volume of bigeye tuna were recorded in August 2021 at about 53 tonnes sold for EUR 235.000. The bigeye season and first sales generally occur in the warmer period of the year.

Figure 30. **BIGEYE TUNA: FIRST SALES IN PORTUGAL, OCTOBER 2020 – SEPTEMBER 2023**



In **Portugal** over the observed 36-month period, the highest first-sales value and volume of bigeye tuna were recorded in May 2023 at about 1.840 tonnes sold for about EUR 4,7 million. The fishery season occurred in spring and summer, while there was no targeted fishery in the selected months due to fishery closures established on an annual basis by ICCAT.

Figure 31. **FIRST SALES: COMPOSITION OF “TUNA AND TUNA-LIKE SPECIES” (ERS LEVEL) IN PORTUGAL IN VALUE AND VOLUME, SEPTEMBER 2023**

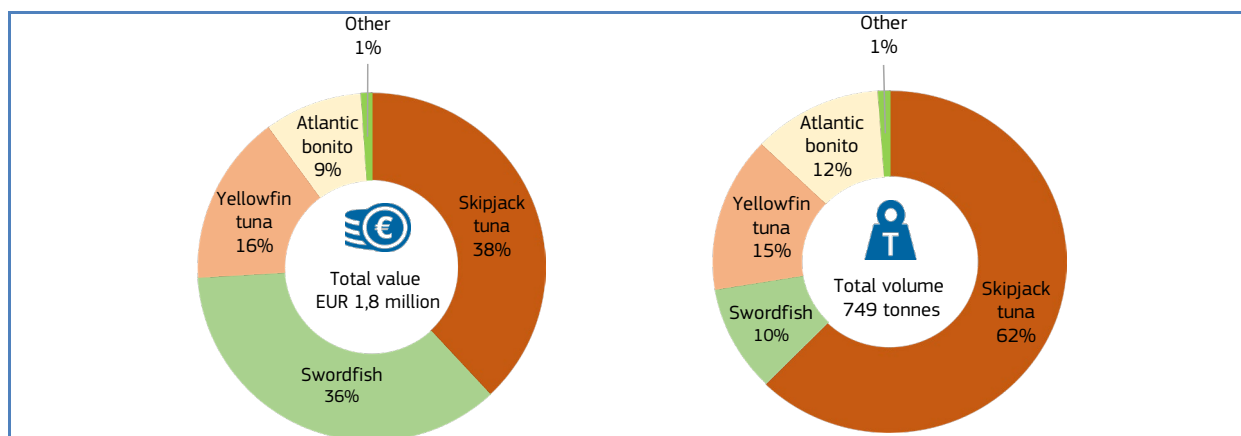
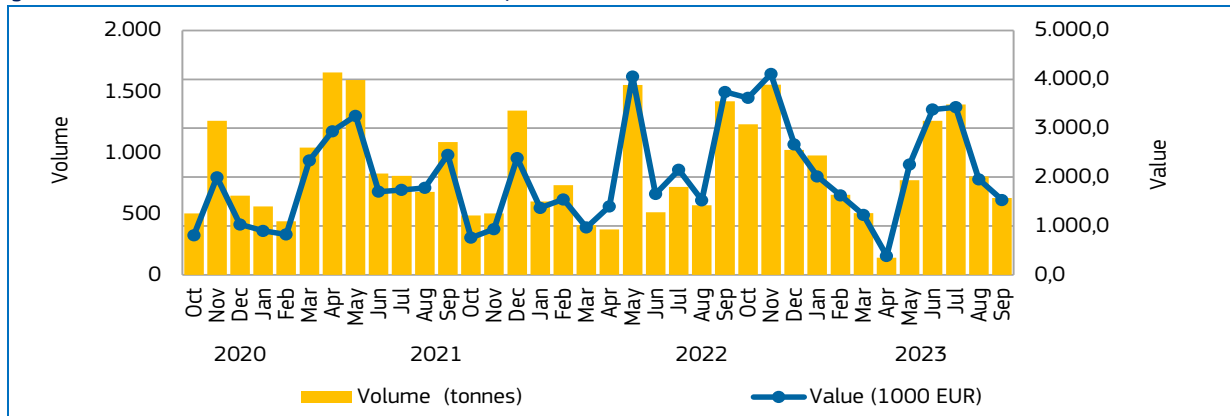
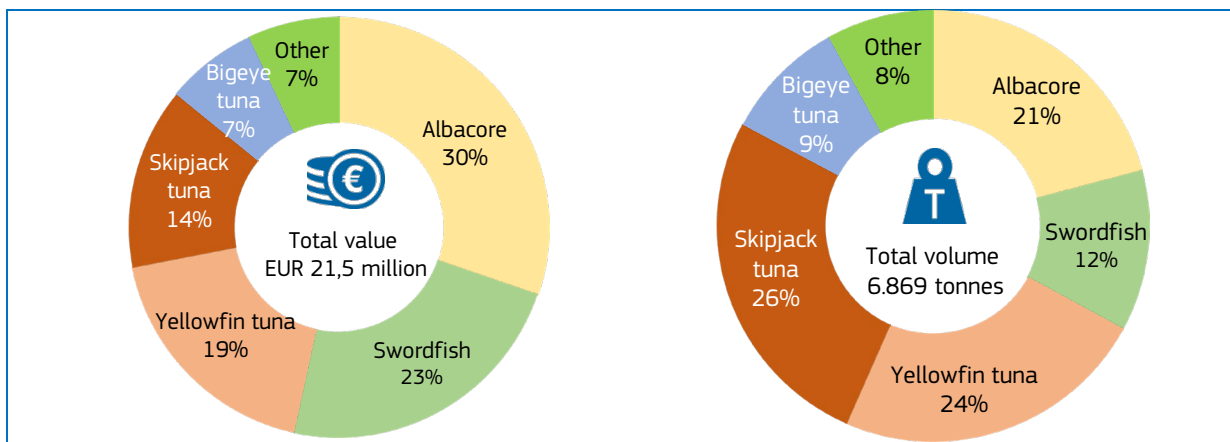


Figure 32. **BIGEYE TUNA: FIRST SALES IN SPAIN, OCTOBER 2020 - SEPTEMBER 2023**



In **Spain** over the observed 36-month period, the highest first-sales value was registered in November 2022 at about EUR 4,1 million, whereas biggest volume was 1.657 tonnes from April 2021. In general, the bigeye tuna fishery is managed by means of TACs and occurs throughout the year in Spain.

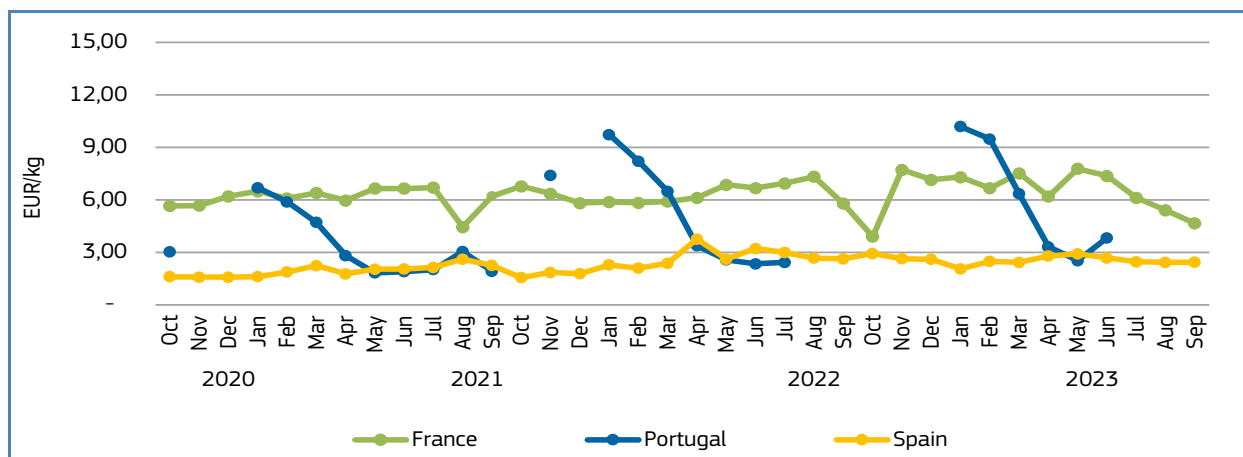
Figure 33. **FIRST SALES: COMPOSITION OF “TUNA AND TUNA LIKE SPECIES” (ERS LEVEL) IN SPAIN IN VALUE AND VOLUME, SEPTEMBER 2023**





## Price trend

Figure 34. **BIGEYE TUNA: FIRST-SALES PRICES IN SELECTED COUNTRIES, OCTOBER 2020 – SEPTEMBER 2023**



Over the 36-month observation period (October 2020 – September 2023), the weighted average first-sales price of bigeye tuna in **France** was 5,74 EUR/kg, 112% higher than in **Portugal** (2,70 EUR/kg), and 148% above the average price in **Spain** (2,32 EUR/kg). Most bigeye tuna was sold live/fresh in France and Portugal, while frozen sales dominated in Spain.

In **France** in September 2023, the average first-sales price of bigeye tuna (4,66 EUR/kg) decreased by 19% compared to September 2022, and by 25% compared to September 2021. Over the past 36 months, the average price ranged from 3,91 EUR/kg for 14 tonnes in October 2022 to 7,78 EUR/kg for 3,5 tonnes in May 2023.

In **Portugal** in September 2023, there were no registered first sales of bigeye tuna. In the 36-month period observed, the lowest average price at 1,83 EUR/kg for 1.140 tonnes was registered in May 2021, while the highest average price of 10,19 EUR/kg for about 17 tonnes was recorded in January 2023.

In **Spain** in September 2023, the average first-sales price of bigeye tuna (2,44 EUR/kg) decreased by 7% compared to September 2022 and increased by 8% compared to September 2021. During the period observed, the average price ranged from 1,56 EUR/kg for 486 tonnes in October 2021 to 3,77 EUR/kg for 372 tonnes in April 2022.

## 2. Extra-EU imports

The weekly extra-EU import prices (weighted average values per week, in EUR per kg) for nine different species are examined every month. The three most relevant species in terms of value and volume remain consistent: fresh or chilled Atlantic and Danube 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 “tuna and tuna-like species”<sup>22</sup>.

Data analysed in the section “Extra-EU imports” are extracted from EUMOFA, as collected from the European Commission<sup>23</sup>.

Table 22. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF THE THREE MOST RELEVANT FISHERIES AND AQUACULTURE PRODUCTS IMPORTED INTO THE EU**

Extra-EU Imports		Week 42/2023	Preceding 4-week average	Week 42/2022	Notes
Atlantic salmon and Danube salmon, excluding liver and roes, fresh imported from Norway ( <i>Salmo salar</i> , <i>Hucho hucho</i> CN code 03021400)	Price (EUR/kg)	7,37	7,19 (+3%)	6,81 (+8%)	From weeks 01/2023 to 42/2023 prices have been fluctuating and showing a decreasing trend while they increased over the three-year period analysed. Prices ranged between 4,32 EUR/kg (week 44/2020) and 11,28 EUR/kg (week 16/2022). Prices show seasonality with the highest peaks occurring between weeks 10 and 18.
	Volume (tonnes)	18.427	17.458 (+6%)	17.481 (+5%)	Volumes fluctuate strongly with values ranging between 5.672 tonnes (week 15/2022) and 19.497 tonnes (week 35/2022). Supply is seasonal with peaks occurring most often in weeks 35/37, 39/42 and 49/50. Lowest peak seems to occur in weeks 13/15 and 51/52.
Frozen Alaska pollock fillets imported from China ( <i>Theragra chalcogramma</i> , CN code 03047500)	Price (EUR/kg)	2,75	2,82 (-3%)	3,98 (-31%)	Between weeks 01/2023 and 42/2023 prices showed some fluctuations and followed a decreasing trend. Prices ranged between 1,84 EUR/kg registered in week 48/2022 and 4,03 EUR/kg registered in week 41/2022.
	Volume (tonnes)	1.811	2.274 (-20%)	3.768 (-52%)	Supply fluctuates strongly but does not seem to follow a clear seasonality. Over the period analysed, weekly volumes ranged between 843 tonnes (week 17/2022) to 6.758 tonnes (week 48/2022).
Frozen tropical shrimp imported from Ecuador (genus <i>Penaeus</i> , CN code 03061792)	Price (EUR/kg)	5,28	5,30 (0%)	6,48 (-18%)	From week 01/2023 and week 42/2023 prices fluctuated slightly while they showed an increasing trend over the past three years. Prices fluctuated strongly between 4,58 EUR/kg (week 10/2021) to 7,19 EUR/kg (week 41/2022).
	Volume (tonnes)	3.162	3.424 (-8%)	2.681 (+18%)	In the period analysed volumes showed high fluctuations, where peaks in supply seem to occur most often between weeks 14/17, 21/23, 30/33 and 45/46. Volume fluctuates between 891 tonnes (week 09/2023) and 4.925 tonnes (week 33/2021).

<sup>22</sup> The featured species of the commodity group of the month are frozen fillets of tuna "of the genus *Thunnus*", skipjack or stripe-bellied bonito "*Euthynnus pelamis*" from the Republic of Korea, prepared or preserved skipjack, whole or in pieces from Ecuador and prepared or preserved fillets known as "loins" of Yellowfin tuna "*Thunnus albacares*" from Ecuador. The three randomly selected species this month are prepared or preserved shrimps and prawns in airtight containers from Greenland, frozen fish livers, roes and milt from Iceland and fresh or chilled sole "*Solea* spp." from Iceland.

<sup>23</sup> Last update: 23.11.2023

Figure 35. **IMPORT PRICE OF FRESH AND WHOLE ATLANTIC SALMON FROM NORWAY, 2020 - 2023**

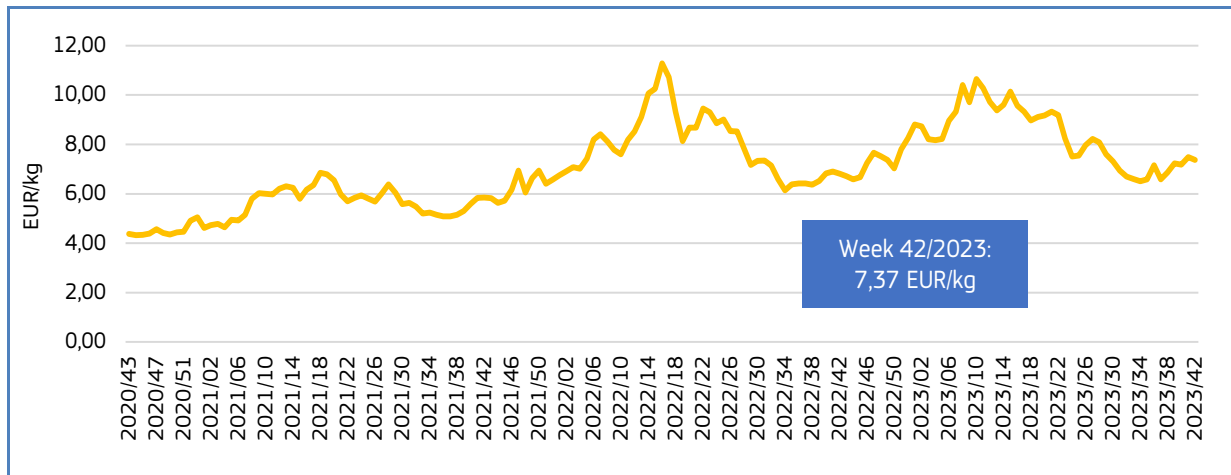


Figure 36. **IMPORT PRICE OF FROZEN ALASKA POLLOCK FILLETS FROM CHINA, 2020 - 2023**

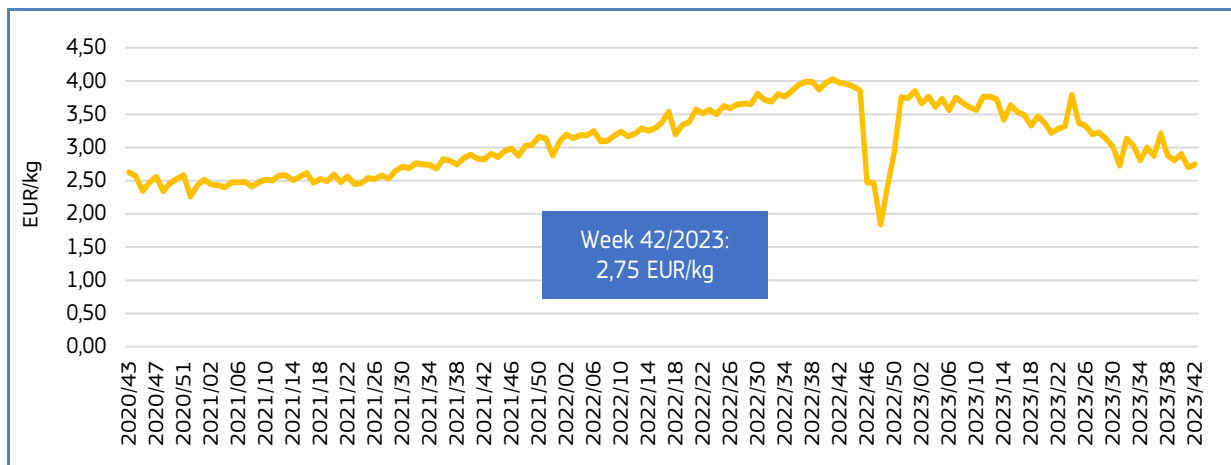


Figure 37. **IMPORT PRICE OF FROZEN TROPICAL SHRIMP FROM ECUADOR, 2020 - 2023**

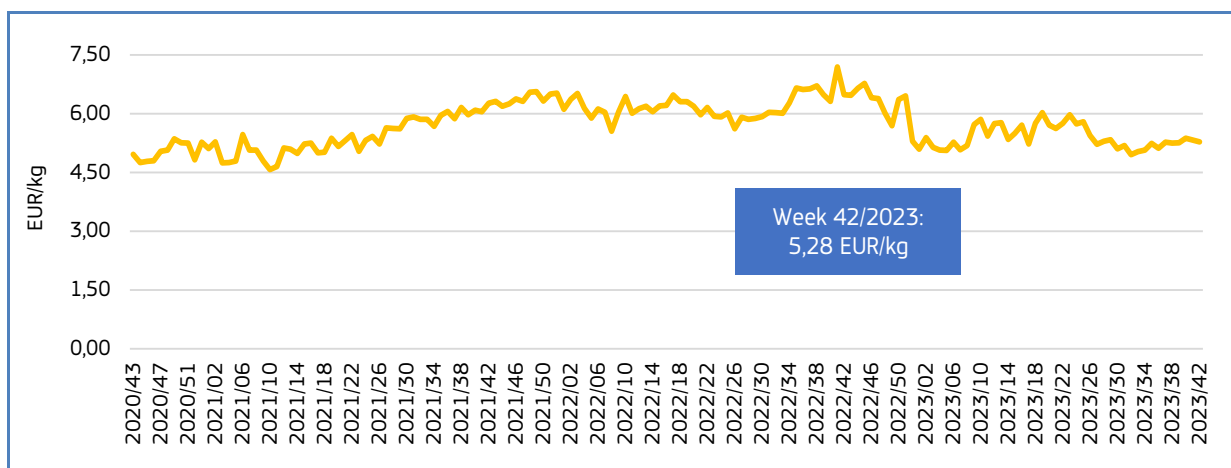
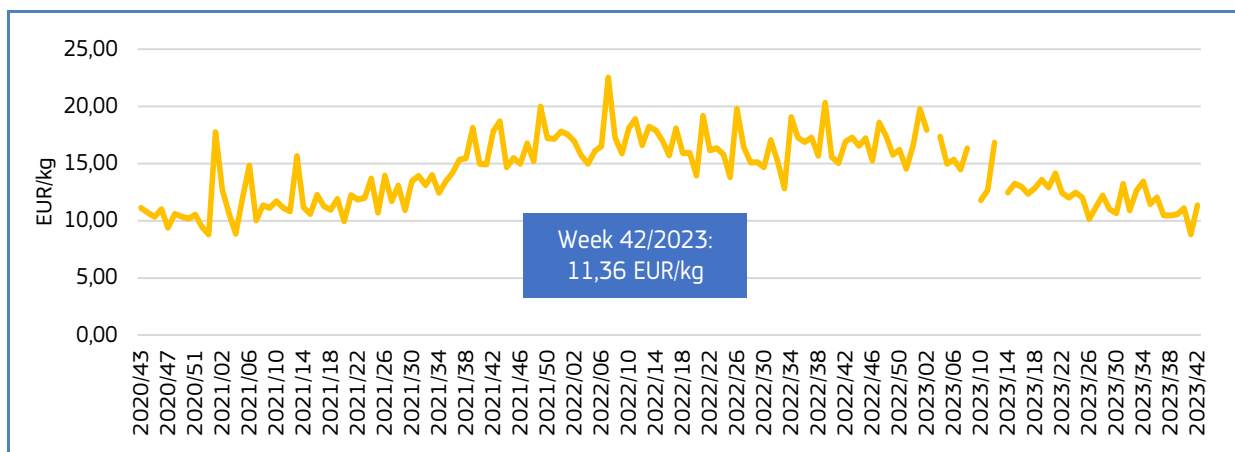


Table 23. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF THIS MONTH'S THREE FEATURED COMMODITY PRODUCTS IMPORTED INTO THE EU**

Extra-EU Imports		Week 42/2023	Preceding 4-week average	Week 42/2022	Notes
Frozen fillets of <b>tuna, skipjack or stripe-bellied bonito</b> from the <b>Republic of Korea</b> ("genus <i>Thunnus</i> ", " <i>Euthynnus</i> [ <i>Katsuwonus</i> ] <i>pelamis</i> ." CN code 03048700)	<b>Price (EUR/kg)</b>	11,36	10,23 (+11%)	16,91 (-33%)	Between weeks 43/2020 and 42/2023 prices fluctuated strongly following availability of supply. The minimum price of 8,79 EUR/kg was registered in week 53/2020 and the maximum price of 22,55 EUR/kg in week 07/2022. The highest spikes in prices seem to occur between week 01 and 13. 53% of the weekly prices is between 10,00 EUR/kg and 15,00 EUR/kg.
	<b>Volume (tonnes)</b>	125	135 (-7%)	147 (-15%)	Volumes show high fluctuations ranging from 611 kilos (week 12/2023) to 257 tonnes (week 20/2023). 44% of the weekly supply was less than 90 tonnes. Highest peaks were registered in 2023.
Prepared or preserved <b>skipjack</b> , whole or in pieces (excl. minced, fillets known as "loins" and such products in vegetable oil) from <b>Ecuador</b> (CN code 16041428)	<b>Price (EUR/kg)</b>	4,59	4,55 (+1%)	4,61 (0%)	Between weeks 43/2020 and 42/2023 prices showed fluctuations decreasing to the minimum price of 3,06 EUR/kg (week 33/2021) then following an increasing trend up to the maximum price of 5,47 (week 01/2021). Prices have been decreasing since then. 47% of the weekly prices were between 3,00 EUR/kg and 4,00 EUR/kg.
	<b>Volume (tonnes)</b>	347	542 (-36%)	214 (+62%)	Volumes show high fluctuations ranging from 103 tonnes (week 25/2021) to 1.345 tonnes (week 09/2021). 47% of the weekly supply was less than 500 tonnes. No clear seasonality is registered while the highest peaks were registered in 2021 weeks 1, 15 and 27 respectively.
Fillets known as "loins" of <b>Yellowfin tuna</b> , prepared or preserved, whole or in pieces (excl. such products in vegetable oil or minced). from <b>Ecuador</b> (" <i>Thunnus albacares</i> ", CN code 16041436)	<b>Price (EUR/kg)</b>	6,20	6,87 (-10%)	6,45 (-4%)	Prices fluctuated strongly in the period analysed ranging between 4,23 EUR/kg (week 11/2021), and 7,69 EUR/kg (week 44/2022). 39% of the weekly prices were between 5,50 EUR/kg and 6,50 EUR/kg.
	<b>Volume (tonnes)</b>	202	425 (-52%)	426 (-53%)	Very high fluctuations in supply from 14 tonnes (week 35/2021) to 1.190 tonnes (week 27/2023). 45% of the weekly supply was below 200 tonnes. No clear seasonality is registered. The highest peak was registered in 2023.

Figure 38. **IMPORT PRICE OF FROZEN FILLETS OF TUNA, SKIPJACK OR STRIPE-BELLIED BONITO FROM THE REPUBLIC OF KOREA, 2020 - 2023**



Overview | 1. First sales in Europe | 2. Extra-EU imports | 3. Consumption

| 4. The EU processing industry | 5. Dogfish and ray in the EU market | 6. Global highlights | 7. Macroeconomic context

Figure 39. **IMPORT PRICE OF PREPARED OR PRESERVED SKIPJACK FROM ECUADOR, 2020 - 2023**

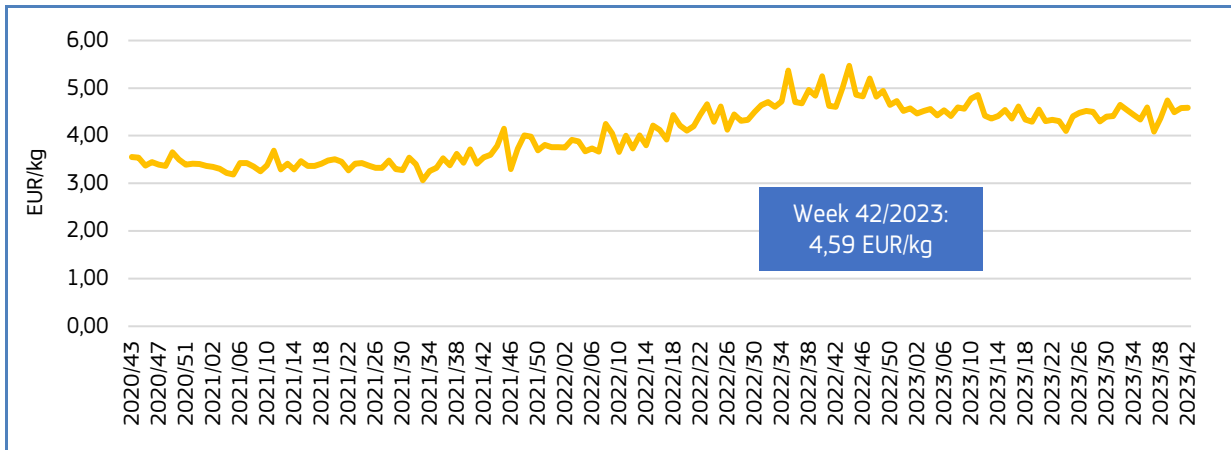
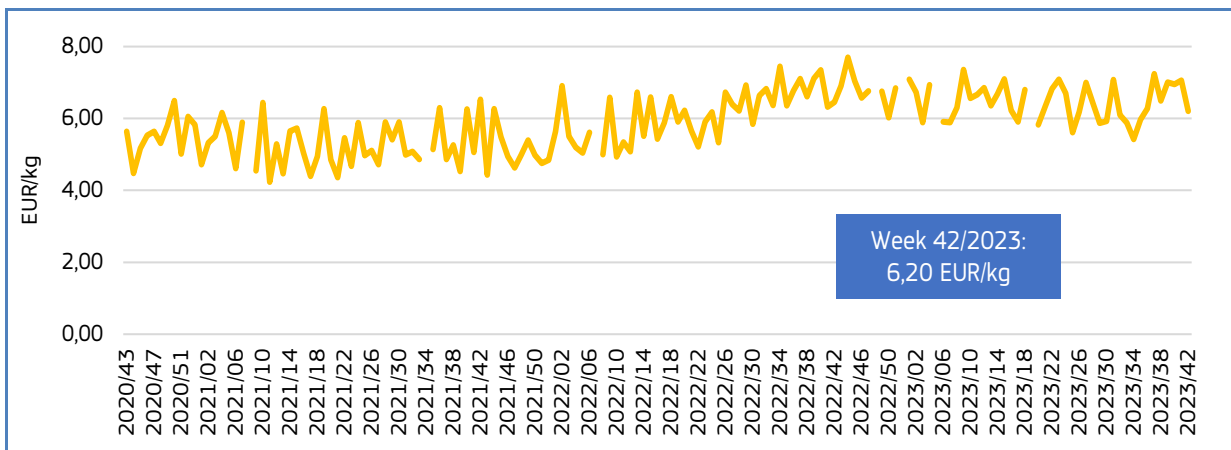


Figure 40. **IMPORT PRICE OF PREPARED OR PRESERVED FILLETS OF YELLOWFIN TUNA, FROM ECUADOR, 2020 - 2023**



Between weeks 01/2023 and 42/2023, the price of frozen fillets of **tuna, skipjack or stripe-bellied bonito** from **the republic of Korea** showed high fluctuations and a downward trend. The price ranged between 8,80 EUR/kg and 19,77 EUR/kg, and volume highly fluctuated between 661 kg to 257 tonnes.

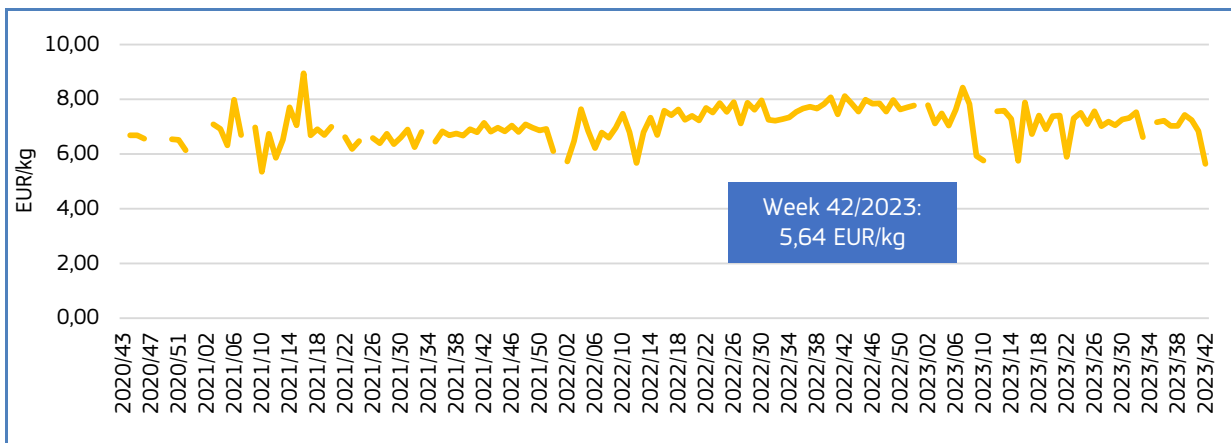
Between week 01/2023 and week 42/2023, the price of prepared or preserved **skipjack** from **Ecuador** fluctuated slightly ranging from 4,09 EUR/kg to 4,74 EUR/kg. Supply fluctuated strongly between 232 tonnes and 972 tonnes.

In 2023, the price of prepared or preserved fillets of **yellowfin tuna** from **Ecuador** showed a fluctuating and decreasing trend. Price ranged from 5,42 EUR/kg to 7,35 EUR/kg, and volume fluctuated strongly between 15 tonnes and 1.190 tonnes.

Table 24. **EVOLUTION OF WEEKLY PRICE AND VOLUME OF EU IMPORTS OF THREE OTHER FISHERIES AND AQUACULTURE PRODUCTS RELEVANT TO THE EU MARKET**

Extra-EU Imports		Week 42/2023	Preceding 4-week average	Week 42/2022	Notes
Shrimps and prawns, prepared or preserved, in airtight containers (excl. smoked) from <b>Greenland</b> (CN code 16052900)	<b>Price (EUR/kg)</b>	5,64	7,13 (-21%)	8,12 (-31%)	Between weeks 43/2020 and 42/2023 prices fluctuated greatly ranging between 5,35 EUR/kg (week 10/2021) to 8,95 EUR/kg (week 16/2021). The highest spikes in prices seem to occur between weeks 01/02, 10/15, 22/23, while 46% of the weekly prices were below 7,00 EUR/kg.
	<b>Volume (tonnes)</b>	100	430 (-77%)	304 (-67%)	Supply fluctuated greatly ranging from 2 tonnes (week 16/2021) to 1.355 tonnes (week 14/ 2022). Highest peaks in supply seem to occur between weeks 11/14, 22/24, 51. 44% of the weekly supply was less than 400 tonnes.
Frozen <b>fish livers, roes and milt</b> (excl. hard and soft roes for the manufacture of deoxyribonucleic acid or protamine sulphate) from <b>Iceland</b> (CN code 03039190)	<b>Price (EUR/kg)</b>	7,37	5,45 (+35%)	14,53 (-49%)	In the period analysed prices fluctuated strongly following availability of supply ranging between 56,50 EUR/kg in week 49/2021 and 1,04 EUR/kg in week 30/2021. The highest spikes in prices were registered in 2021. 65% of the weekly prices were below 10,00 EUR/kg.
	<b>Volume (tonnes)</b>	11	26 (-59%)	19 (-44%)	Volumes showed high fluctuations ranging from 3 kilos (week 45/2022) to 292 tonnes (week 18/2022). Supply is seasonal with peaks occurring most often between weeks 10 and 18. 46% of the weekly supply was below 20 tonnes.
Fresh or chilled sole from <b>Iceland</b> (" <i>Solea</i> spp.", CN code 03022300)	<b>Price (EUR/kg)</b>	17,24	17,82 (-3%)	14,58 (+18%)	Between weeks 43/2020 and 42/2023 prices showed fluctuations following an increasing trend ranging between 7,90 EUR/kg (week 51/2020) and 20,20 EUR/kg (week 32/2023). 50% of the weekly prices were between 10,00 EUR/kg and 15,00 EUR/kg.
	<b>Volume (tonnes)</b>	8	9 (-4%)	5 (+58%)	Volumes showed high fluctuations ranging from 410 kilos (week 20/2022) to 15 tonnes (week 24/2022). Highest peaks in supply seem to occur between weeks 11 and 15, 20 and 24. 38% of the weekly supply was more than 8 tonnes

Figure 41. **IMPORT PRICE OF PREPARED OR PRESERVED SHRIMPS AND PRAWNS FROM GREENLAND, 2020 - 2023**



Overview | [1. First sales in Europe](#) | [2. Extra-EU imports](#) | [3. Consumption](#)

| [4. The EU processing industry](#) | [5. Dogfish and ray in the EU market](#) | [6. Global highlights](#) | [7. Macroeconomic context](#)

Figure 42. **IMPORT PRICE OF FROZEN FISH LIVERS, ROES AND MILT FROM ICELAND, 2020 - 2023**

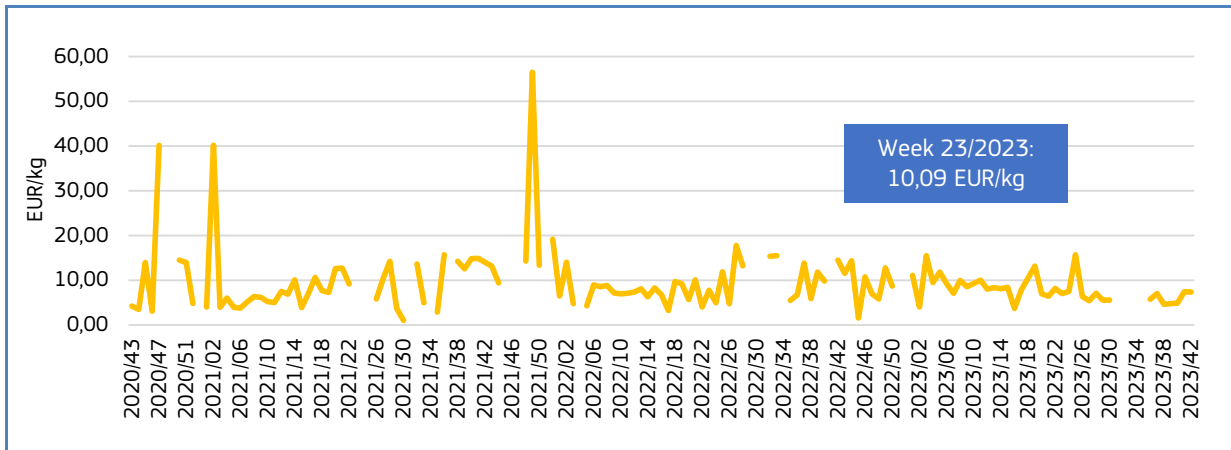
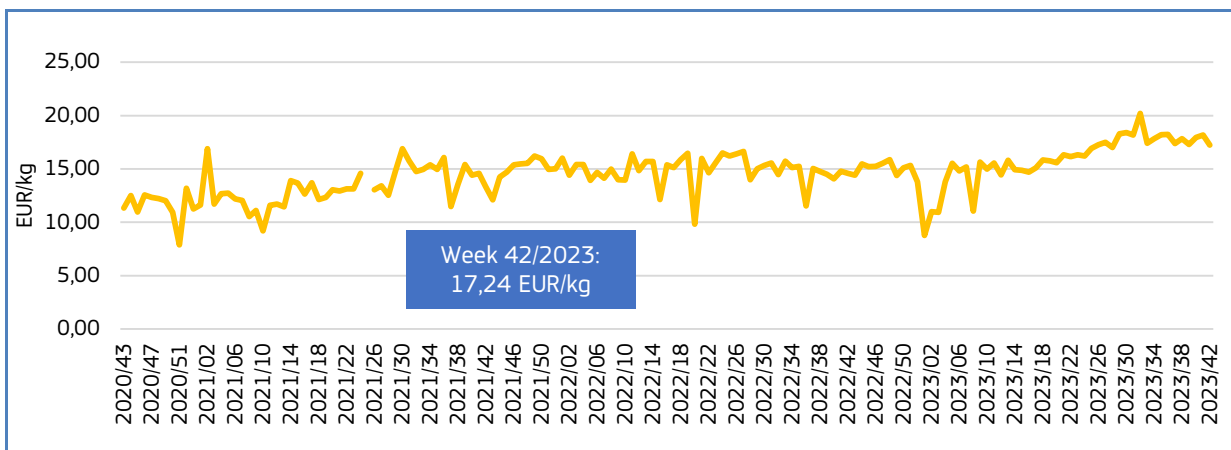


Figure 43. **IMPORT PRICE OF FRESH OR CHILLED SOLE FROM ICELAND, 2020 - 2023**



Between weeks 01/2023 and 42/2023, the price of prepared or preserved **shrimps** and **prawns** from **Greenland** showed high fluctuations and a downward trend. The price ranged between 5,64 EUR/kg and 8,42 EUR/kg, and volume highly fluctuated ranging between 40 tonnes to 1.052 tonnes.

Between week 01/2023 and week 42/2023, the price of frozen **fish livers, roes** and **milt** from **Iceland** fluctuated strongly and decreased. The price ranged from 4,67 EUR/kg to 16,14 EUR/kg. Supply fluctuated strongly between 2 tonnes and 66 tonnes.

In 2023, the price of fresh or chilled **sole** from **Iceland** showed a fluctuating increasing trend. Price ranged between 8,78 EUR/kg and 20,20 EUR/kg, and volume fluctuated strongly between 856 kg and 13 tonnes.

## 3. Consumption

### 3.1. HOUSEHOLD CONSUMPTION IN THE EU

Data analysed in the section “Consumption” are extracted from EUMOFA, as collected from Europanel<sup>24</sup>.

In September 2023 compared with September 2022, household consumption of fresh fisheries and aquaculture products decreased in France, Germany, Ireland, the Netherlands and Sweden in both volume and value, while in Italy and Spain an increase was observed in both parameters. Clam (60% of volume and 40% of value) and octopus (21% of volume and 40% of value) were the main species responsible for the increase observed in Italy, while in Spain increases were due to salmon (36% of volume and 38% of value) and mackerel (33% of volume and 40% of value). The highest decrease was detected in Sweden due to lower consumption of salmon (41% of volume and 31% of value) and other unspecified products (34% of volume and 31% of value).

Table 25. **SEPTEMBER OVERVIEW OF THE HOUSEHOLD CONSUMPTION OF FRESH FISHERY AND AQUACULTURE PRODUCTS IN THE REPORTING COUNTRIES (volume in tonnes and value in million EUR)**

Country	Per capita apparent consumption 2021* (live weight equivalent, LWE) kg/capita/year	September 2021		September 2022		August 2023		September 2023		Change from September 2022 to September 2023	
		Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
Denmark	20,00-25,00	1.120	18,36	996	17,97	957	18,73	951	18,16	4%	1%
France	32,18	18.309	201,31	17.563	210,45	16.036	193,74	16.930	207,62	4%	1%
Germany	12,51	5.722	78,66	4.578	72,56	3.690	69,07	4.322	72,07	6%	1%
Hungary	6,55	238	1,78	220	1,53	175	1,51	202	2,00	8%	30%
Ireland	14,56	1.106	16,55	1.047	17,41	820	14,99	963	17,29	8%	1%
Italy	30,15	29.360	317,14	24.105	286,58	16.958	197,61	24.260	291,06	1%	2%
Netherland	21,08	3.893	58,20	3.344	54,11	2.658	45,48	3.023	53,00	10%	2%
Poland	14,26	3.258	22,75	3.062	24,08	2.508	26,48	2.810	28,12	8%	17%
Portugal	56,52	5.827	38,46	5.195	38,48	5.380	39,51	5.341	38,46	3%	0%
Spain	42,98	45.133	381,07	40.658	369,22	36.303	345,73	41.298	398,41	2%	8%
Sweden	22,71	901	12,01	736	10,96	882	13,30	507	8,23	31%	25%

\* EUMOFA estimates. The supply balance is built on the basis of the equation catches + aquaculture production + imports – exports = apparent consumption and is calculated in live weight equivalent. The methodologies for estimating apparent consumption at EU and Member State levels are different, the first based on data and estimates, the latter also requiring the adjustment of abnormal trends due to the higher impact of stock changes. Where EUMOFA estimations on per capita apparent consumption continued to show high annual volatility even with these adjustments, national contact points were contacted to confirm these estimates or to provide their own figures. For the Netherlands and Poland, sources are the Dutch Fish Marketing Board and Institute of Agricultural and Food Economics - National Research Institute, respectively. The estimate for Denmark was provided by the University of Copenhagen.

Over the past three years, the average household consumption of fresh fishery and aquaculture products in September has been below the annual average in both volume and value in Denmark, Hungary, Poland, Portugal, Spain and Sweden, while they were above the annual average in Ireland, Italy and the Netherlands. The highest decrease was observed in Hungary,

<sup>24</sup> Last update: 23.11.2023.



where volume decreased by 48% and value by 37%. The highest increase was observed in the Netherlands (19% of volume and 9% of value, respectively).

The most recent weekly consumption data (up to **week 48 of 2023**) are available on the EUMOFA website and can be accessed [here](#).

### 3.2. Mussel *Mytilus* spp.

**Habitat:** Mussels *Mytilus* spp. are found in a wide variety of habitats, from tidal areas to fully submerged zones, with a broad range of temperatures and salinities<sup>25</sup>.

**Catch and production areas:** North Atlantic, the Mediterranean and Black seas.

**Producing countries in the EU:** Spain, Italy, France, Denmark, the Netherlands.

**Production method:** Caught and farmed.

**Main consumers in the EU:** Italy, France, Spain, Belgium, and the Netherlands.

**Presentation:** Whole live or unshelled.

**Preservation:** Live, fresh, chilled, frozen, canned, marinated.

**Means of preparation:** Cooked.



#### 3.2.1. Overview of household consumption in Germany, Denmark, Italy and the Netherlands

Based on EUMOFA estimated, per capita apparent consumption, of fishery and aquaculture products in Italy in 2021 was 30,15 kg LWE, 30% higher than the EU average of 23,28 kg LWE. Per capita apparent consumption in Denmark, Germany and the Netherlands was below the EU average. According to estimates made by the University of Copenhagen, per capita apparent consumption in Denmark in 2021 was around 20-25 kg LWE, the same level as that of the Netherlands, which was 21,08 kg LWE based on estimates from the Dutch Fish Marketing Board and Institute of Agricultural and Food Economics - National Research Institute for the latest years. Based on EUMOFA estimates, consumption in Germany in 2021 was 12,51 kg LWE, 41% lower than the Netherlands and 46% lower than the EU average.

Over the past three years, average household consumption of the mussel *Mytilus* spp. was 2.099 tonnes/month in Italy, 472 tonnes/month in Germany, 349 tonnes/month in the Netherlands and 23 tonnes/month in Denmark. German customers had to pay most for the mussel *Mytilus* spp., an average of 8,10 EUR/kg, while Dutch consumers paid 4,49 EUR/kg, Danes 4,46 EUR/kg and Italians 3,39 EUR/kg.

We have covered **Mussel *Mytilus* spp.** in previous *Monthly Highlights*:

**First sales:** MH 9 2017 (Denmark, Italy, Portugal), MH 2 2016 (Denmark)

**Consumption:** MH 7 2020 (Denmark, Germany, Netherlands); MH 6 2018 (Denmark, Germany, Italy, Netherlands); MH 7 2016 (Belgium, Denmark, France, Italy, Netherlands, Spain); MH 7 2015 (France, Italy, Spain); MH 4 2014 (France, Italy, Netherlands, Spain, United Kingdom).

**Topic of the month:** Blue mussels in the EU/summary of the mussel PTAT study 2/2023, Mussel in the EU 5/2017, Fresh mussels in the Spanish market Feb 2013.

<sup>25</sup> <https://www.eumofa.eu/documents/20178/395683/MH+7+2020+EN+final.pdf>

Figure 44. **PRICES OF MUSSEL MYTILUS SPP. PURCHASED BY GERMAN, DANISH, ITALIAN AND DUTCH HOUSEHOLDS**

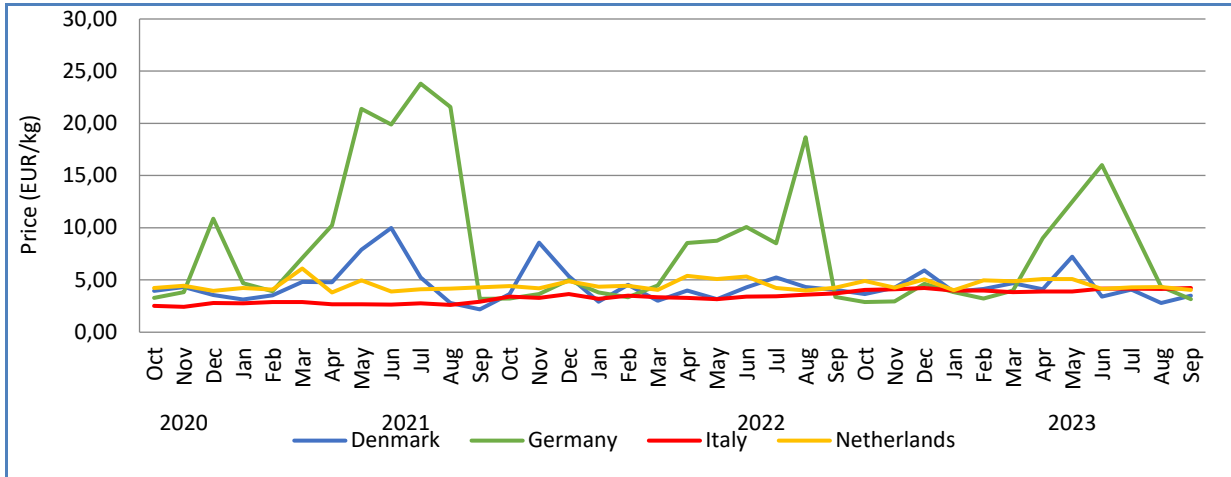
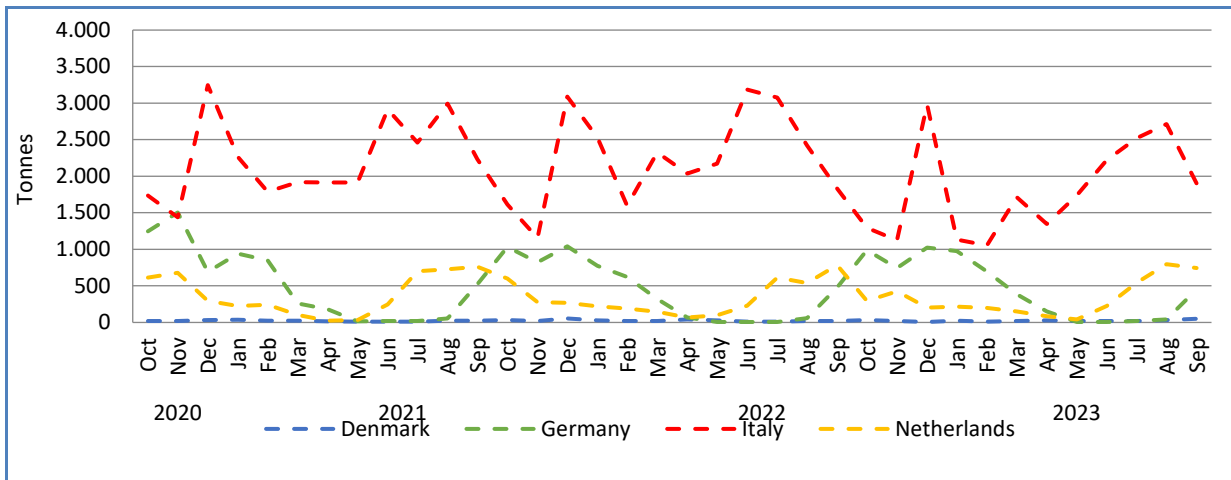


Figure 45. **HOUSEHOLD PURCHASES OF MUSSEL MYTILUS SPP. IN GERMANY, DENMARK, ITALY AND THE NETHERLANDS**



### 3.2.2. Household consumption trends in Germany

**Long-term trend (October 2020 to September 2023):** Seasonal variations in both volume and price, with decreasing peaks in price.

**Yearly average price:** 9,21 EUR/kg (2020), 10,63 EUR/kg (2021), 6,66 EUR/kg (2022).

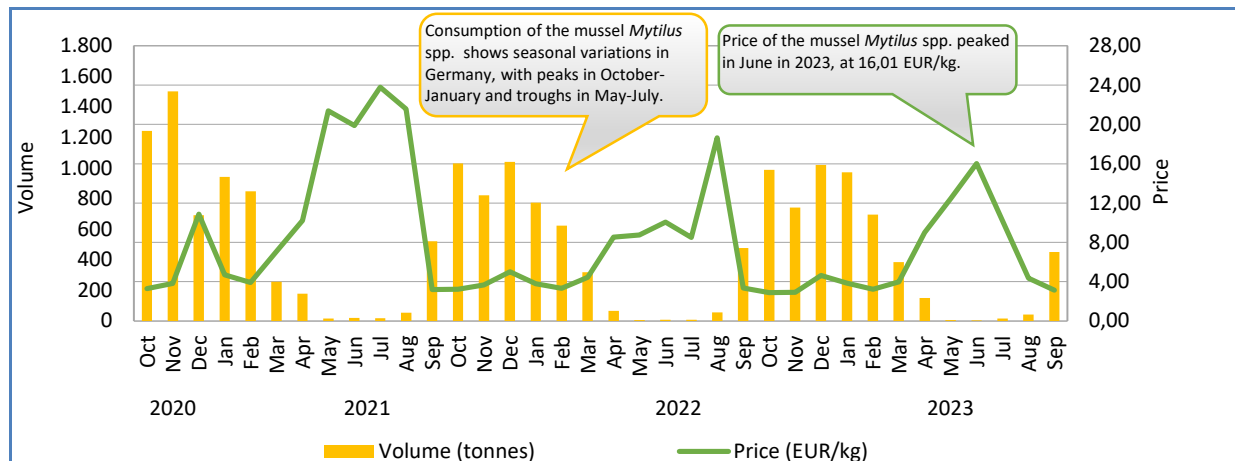
**Yearly consumption:** 5.748 tonnes (2020), 5.749 tonnes (2021), 5.086 tonnes (2022).

**Short-term trend (January to September 2023):** Seasonal variations in both volume and price.

**Price:** 7,36 EUR/kg.

**Consumption:** 2.725 tonnes.

Figure 46. **RETAIL PRICE AND VOLUME OF MUSSEL MYTILUS SPP. PURCHASED BY HOUSEHOLDS IN GERMANY, OCTOBER 2020 – SEPTEMBER 2023**



### 3.2.3. Household consumption trends in Denmark

**Long-term trend (October 2020 to September 2023):** Fluctuating volumes and prices.

**Yearly average price:** 4,76 EUR/kg (2020), 5,15 EUR/kg (2021), 4,10 EUR/kg (2022).

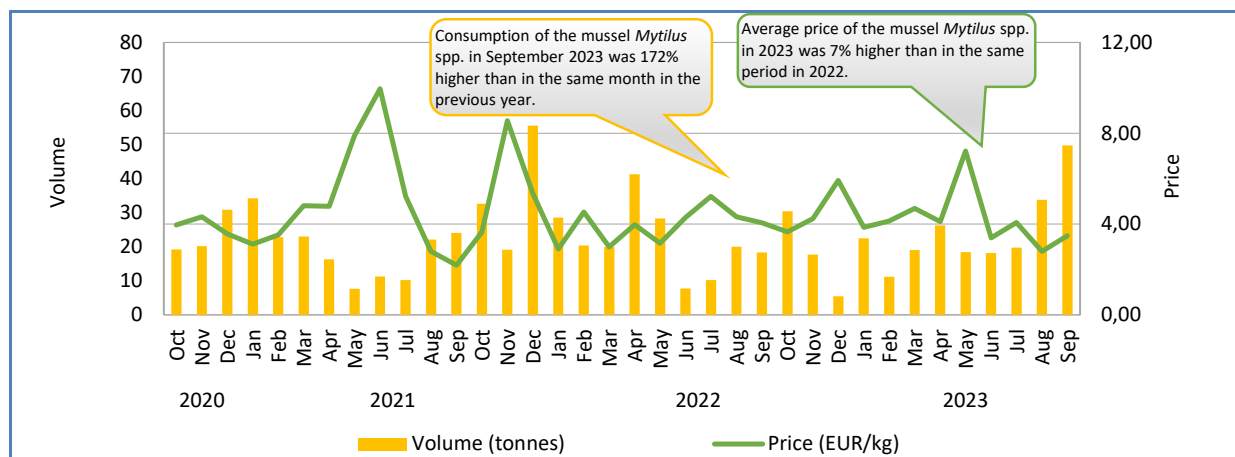
**Yearly consumption:** 276 tonnes (2020), 279 tonnes (2021), 278 tonnes (2022).

**Short-term trend (January to September 2023):** Upward trend in volume and fluctuating prices.

**Price:** 4,19 EUR/kg.

**Consumption:** 219 tonnes.

Figure 47. **RETAIL PRICE AND VOLUME OF MUSSEL MYTILUS SPP. PURCHASED BY HOUSEHOLDS IN DENMARK, OCTOBER 2020 – SEPTEMBER 2023**



### 3.2.4. Household consumption trends in Italy

**Long-term trend (October 2020 to September 2023):** Downward trend in volume and fluctuating prices.

**Yearly average price:** 2,59 EUR/kg (2020), 2,92 EUR/kg (2021), 3,58 EUR/kg (2022).

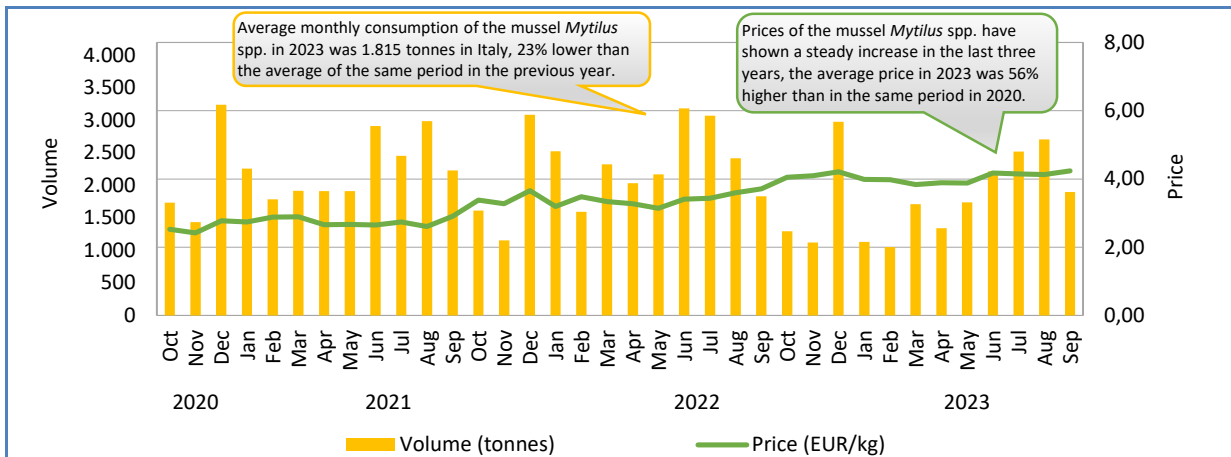
**Yearly consumption:** 27.760 tonnes (2020), 26.244 tonnes (2021), 26.558 tonnes (2022).

**Short-term trend (January to September 2023):** Upward trend in volume and fluctuating prices.

**Price:** 4,03 EUR/kg.

**Consumption:** 16.334 tonnes.

Figure 48. **RETAIL PRICE AND VOLUME OF MUSSEL MYTILUS SPP. PURCHASED BY HOUSEHOLDS IN ITALY, OCTOBER 2020 – SEPTEMBER 2023**



### 3.2.5. Household consumption trends in the Netherlands

**Long-term trend (October 2020 to September 2023):** Seasonal fluctuations in volume (with the local fishery supply) and fluctuating prices.

**Yearly average price:** 5,03 EUR/kg (2020), 4,42 EUR/kg (2021), 4,61 EUR/kg (2022).

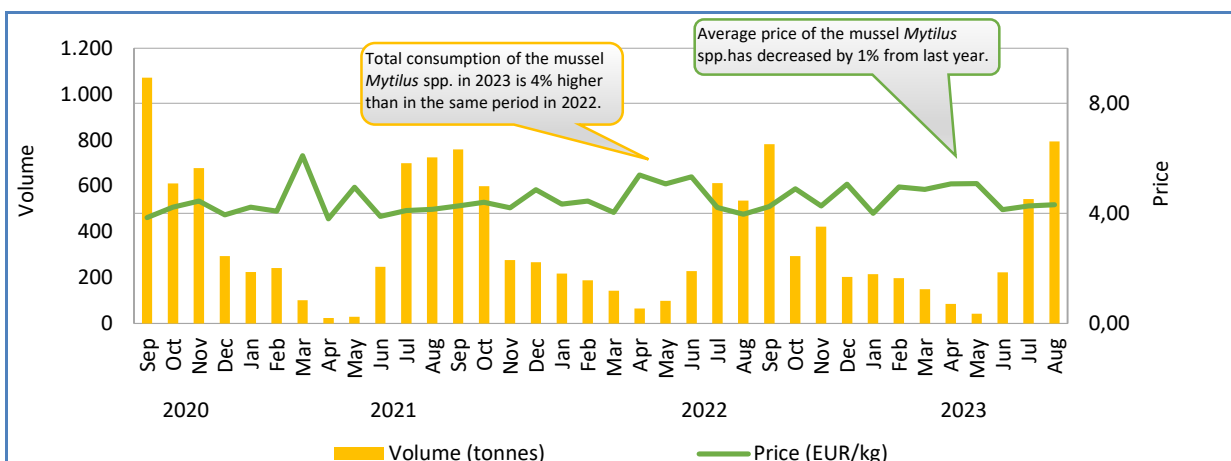
**Yearly consumption:** 4.836 tonnes (2020), 4.193 tonnes (2021), 3.790 tonnes (2022).

**Short-term trend (January to September 2023):** Upward trend in volume and fluctuating prices.

**Price:** 4,53 EUR/kg.

**Consumption:** 2.990 tonnes.

Figure 49. **RETAIL PRICE AND VOLUME OF MUSSEL MYTILUS SPP. PURCHASED BY HOUSEHOLDS IN THE NETHERLANDS, SEPTEMBER 2020 – OCTOBER 2023**



Overview | 1. First sales in Europe | 2. Extra-EU imports | 3. Consumption

| 4. The EU processing industry | 5. Dogfish and ray in the EU market | 6. Global highlights | 7. Macroeconomic context

## 4. Case study: The EU processing industry

In 2021, there were nearly 3.300 enterprises in the EU carrying out processing of fishery and aquaculture products as a main activity with a total net turnover of EUR 29,9 billion<sup>26</sup>. Spain held the largest share of enterprises (18%) and accounted for 25% of the net turnover in 2021. It was followed by Italy, with 13% of enterprises and 10% of turnover; France, with 11% of enterprises and 16% of turnover; and Poland with 10% of enterprises and 12% of turnover. In terms of employment, Spain was also the leading country with 24% of EU employment (FTE equivalents) in the sector. Due to the large size of its processing plants<sup>27</sup>, Poland followed close behind, with 18% of EU employment in the sector<sup>26</sup>.

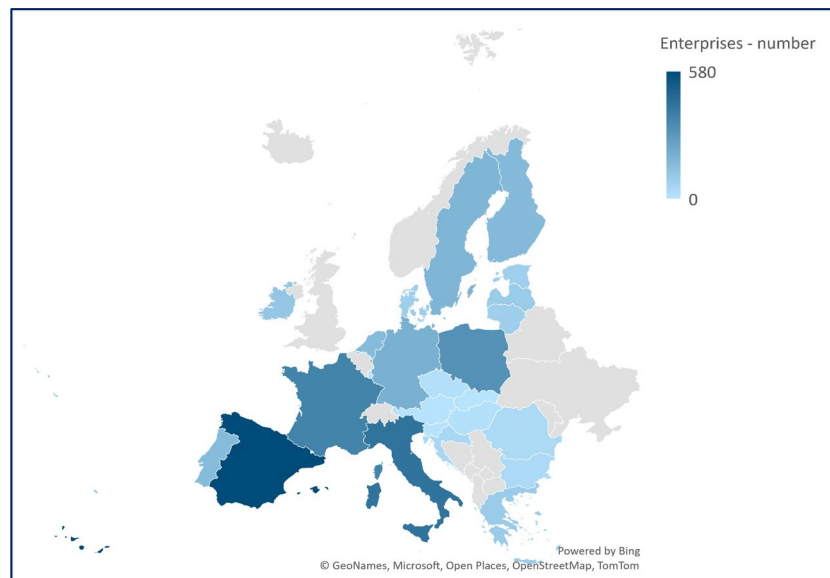
Labour intensity for enterprises working with processing of fishery and aquaculture products is largely different across the EU. The EU average was 33 employees per enterprise, or 31 employees in full-time equivalents (FTE), in 2021, but there are large discrepancies from the average at both ends of the scale<sup>26</sup>. Slovakia, Lithuania and Poland were at the top of the scale, with an average of 81 (81 FTE), 72 (70 FTE) and 62 (60 FTE) employees respectively per enterprise. Sweden, Hungary and Finland were at the bottom of the scale, with an average of 11 (8 FTE), 9 (8 FTE) and 7 (5 FTE) employees respectively per enterprise.

In 2019, 98% of the EU processing sector consisted of small and medium-sized enterprises (SMEs)<sup>28</sup>, of which 85% were small- or micro-sized (more than 50% were micro-sized)<sup>27</sup>. From 2008 to 2019, total income for the European processing industry of fishery and aquaculture products almost doubled in nominal terms and amounted to EUR 28,7 billion in 2019<sup>27</sup>. The increase in the price of commodities produced by the EU fishery and aquaculture processing sector was the leading cause behind increased turnover in the period.

### 4.1. Raw materials for the EU processing industry

The purchase of fish and raw material is the dominant cost item for the EU processing industry, accounting for more than 70% of the total production costs<sup>27</sup>. The industry relies on EU production of raw material from both fisheries and aquaculture as well as imports from third countries of raw material such as fresh salmon, fresh cod, fresh saithe, canned tuna and sardines, frozen tropical shrimps, and frozen Alaska pollock<sup>29</sup>. Some EU Member States (EU MS), like Finland and Croatia, mainly rely on domestic production for their processing industries, while EU MS such as Germany and Poland rely heavily on imports from other EU MS or third countries for their processing industries<sup>27</sup>.

Figure 50. NUMBER OF ENTERPRISES BY COUNTRY IN 2021



Source: Eurostat statistics<sup>26</sup>. Note that data for Belgium and Cyprus were not available.

<sup>26</sup> Eurostat statistics (2023). *Enterprises by detailed NACE Rev.2 activity and special aggregates*. [Ec.europa.eu](https://ec.europa.eu)

<sup>27</sup> STECF (2022). *Economic report on the fish processing industry (STECF-21-14)*. [Stecf.jrc.ec.europa.eu](https://stecf.jrc.ec.europa.eu)

<sup>28</sup> SMEs are businesses with less than 250 employees, small-sized businesses have less than 50 employees and micro-sized businesses have less than 11 employees.

<sup>29</sup> EUMOFA (2023). *The EU fish market*. [Eumofa.eu](https://eumofa.eu)

Table 26. **COST STRUCTURE OF THE EU FISH PROCESSING INDUSTRY, 2008-2019**

Cost items	Avg. 2008-2011	Avg. 2012-2015	Avg. 2016-2019
Total costs / total income (%)	87 %	90 %	91 %
Cost items as a share of total costs (%)			
<i>Raw materials</i>	68 %	70 %	73 %
<i>Personnel costs</i>	12 %	11 %	10 %
<i>Other operational costs</i>	17 %	17 %	15 %
<i>Energy costs</i>	3 %	2 %	2 %

Source: STECF27.

According to AIPCE-CEP<sup>30</sup> total market supply of fishery and aquaculture products on the EU market amounted to more than 12,0 million tonnes in 2022, of which domestic supply accounted for 3,2 million tonnes and imports from third countries around 8,8 million tonnes<sup>31</sup>. More than 2,2 million tonnes of the total EU market supply were exported to third countries, while the remaining 9,8 million tonnes were consumed in the EU, resulting in a per capita consumption of 22,1 kg and a self-sufficiency rate of 33% in 2022.

Traditionally, the key wild whitefish species for the EU processing industry have been cod, Alaska pollock, hake, haddock, saithe, redfish and grenadier<sup>31</sup>. These species still dominate consumption in many EU MS, but as logistics and access to new raw materials have improved over the years, new species such as salmon, tilapia, shrimp and tuna have entered the product mix.

Most of the key whitefish species are imported from third countries, 77% of the supply was imported in 2021<sup>32</sup> and according to APICE-CEP, 93% was imported in 2022<sup>31</sup>. Cod and Alaska pollock are the two most important whitefish species in the EU supply, and in 2021 accounted for 445.000 and 268.000 tonnes, respectively. Species under quota management in the EU have displayed a decreasing trend for many years and the total landing volume of whitefish decreased by one-third between 2020 and 2022<sup>31</sup>.

Norway was the most important trade partner for key whitefish species to the EU in 2021, followed by China and Russia<sup>33</sup>. Norway remained the biggest trade partner for key whitefish species to the EU in 2022, but imports decreased by 6%. Imports from Russia increased by 19% in 2022, overtaking China and making Russia the second largest trade partner for key whitefish species. In 2022, cod imports mainly consisted of fresh and frozen whole fish (46%) and fresh and frozen fillets (27%), while 91% of Alaska pollock imports consisted of frozen fillets.

Salmon is the most consumed fish product in the EU (either wild or farmed) and Atlantic salmon is the predominant species on the market<sup>34</sup>. The EU salmon supply is almost entirely imported from third countries (98% in 2021)<sup>35</sup>. In 2022, 81% of salmon imports came from Norway, of which 90% consisted of fresh whole salmon and 9% consisted of fresh (6%) and frozen (3%) fillets. The United Kingdom and the Faroe Islands were the second and third biggest suppliers of salmon, accounting for 6% and 4%, respectively.

Shrimp, tuna and cephalopods are important species groups for the EU processing industry which also relies heavily on imports from third countries. In 2021, 92% of the EU shrimp supply came from imports from third countries. The same was true for 60% of the tuna supply and 89% of the cephalopod supply<sup>34</sup>.

<sup>30</sup> AIPCE: EU Fish Processors and Traders Association; CEP: European Federation of National Organizations of Importers and Exporters of Fish.

<sup>31</sup> Turenhout, M.N.J., et al. (2023). *Finfish study 2023*. [aipce-cep.org](http://aipce-cep.org)

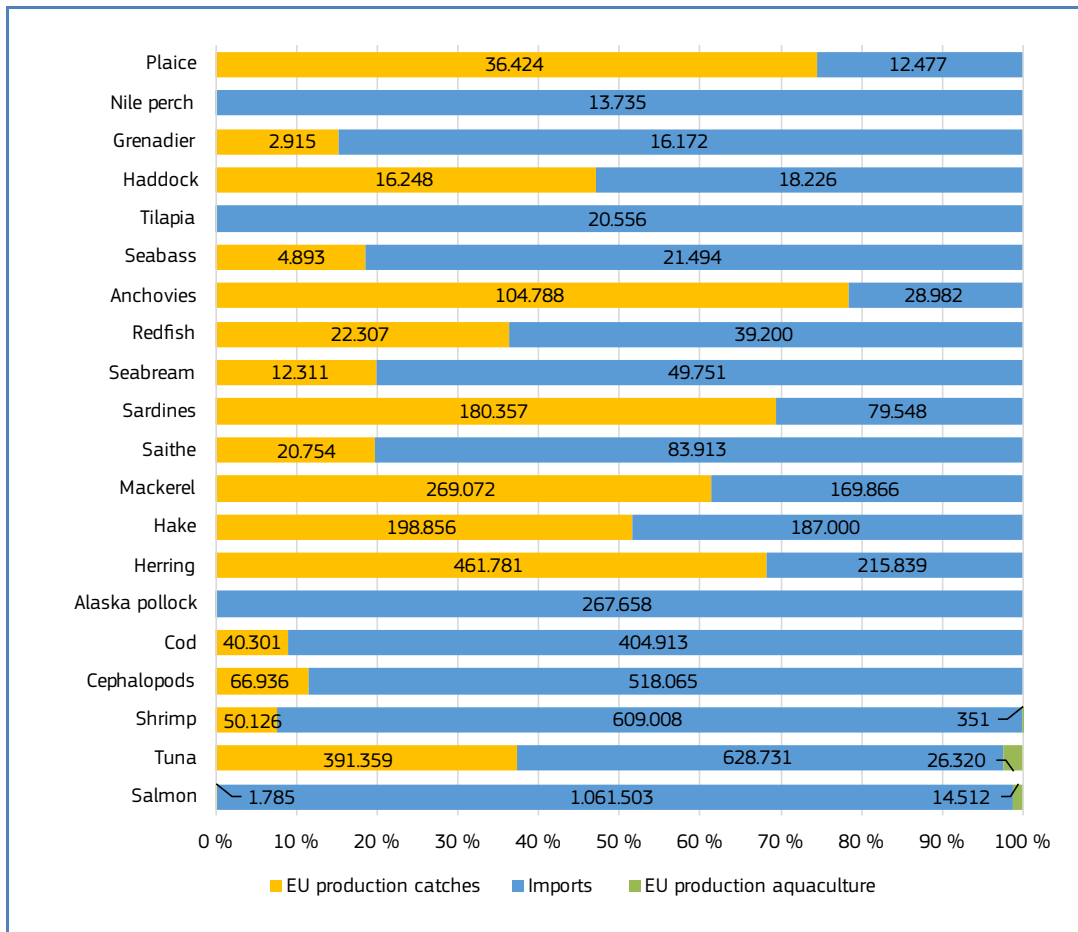
<sup>32</sup> FAO, EUMOFA elaboration of Eurostat Comext data.

<sup>33</sup> EUMOFA elaboration of Eurostat Comext data.

<sup>34</sup> Turenhout, M.N.J., et al. (2023). *Finfish study 2023*. [aipce-cep.org](http://aipce-cep.org)

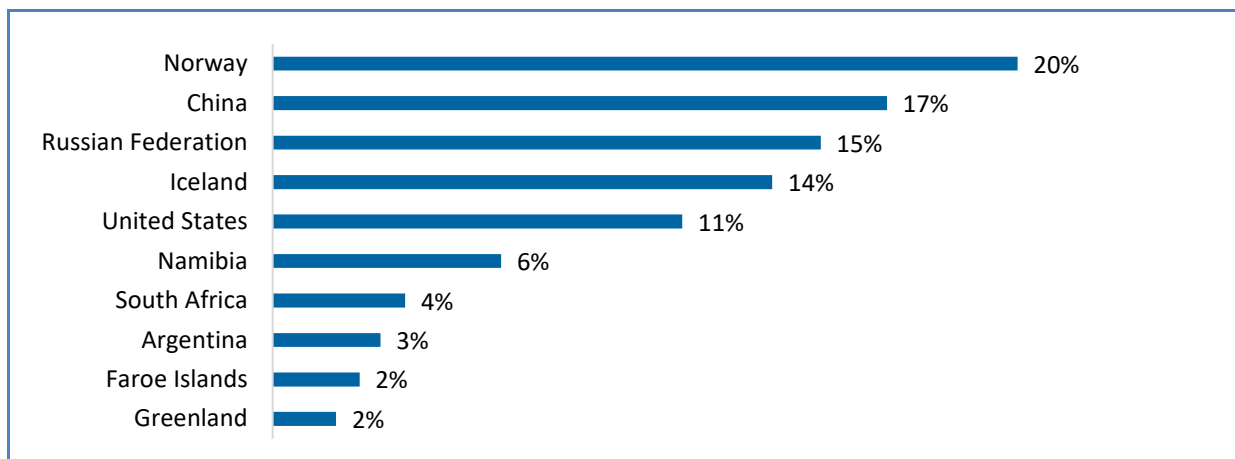
<sup>35</sup> FAO, EUMOFA elaboration of Eurostat Comext data.

Figure 51. **EU SUPPLY OF IMPORTANT SPECIES FOR THE PROCESSING SECTOR IN 2021 (volume in tonnes LWE)**



Source: FAO (EU production aquaculture, EU production captures), EUMOFA elaboration of Eurostat Comext data (extra-EU imports).

Figure 52. **EXTERNAL SOURCING COUNTRIES FOR KEY WILD WHITEFISH SPECIES IN 2021 IN PERCENTAGE OF TOTAL IMPORT (1.017.083 tonnes)**



Source: EUMOFA elaboration of Eurostat-Comext data.

Tuna is among the top three consumed fishery and aquaculture products in the EU, with skipjack and yellowfin tuna the most important species found on the EU market in terms of volume<sup>31</sup>. Other important species include bigeye tuna, albacore tuna and bluefin tuna. In 2022, imports of tuna to the EU predominately consisted of skipjack tuna (53%) and yellowfin tuna (32%). Most tuna imports came from Ecuador (22%), followed by the Seychelles (9%), Papua New Guinea (8%) and the Philippines (7%). Skipjack tuna imports mainly consisted of prepared/preserved other cuts (63%) and prepared/preserved fillets (29%), while imports of yellowfin tuna were made up of 44% frozen whole tuna, 29% prepared/preserved fillets and 27% prepared/preserved other cuts.

Cephalopods is a product category consisting of cuttlefish<sup>36</sup>, octopus<sup>37</sup> and squid<sup>38</sup>. In 2022, cephalopod imports to the EU consisted of 44% squid, 19% octopus and 7% cuttlefish. Squid imports mainly came from the Falkland Islands (30%), India (18%) and China (11%), while imports of octopus were supplied by Morocco (39%), Mauritania (24%) and Indonesia (8%). Cuttlefish were mainly supplied by Morocco (46%), Senegal (17%) and the United Kingdom (11%). Nearly all cephalopod imports (98%) consisted of frozen whole cephalopods regardless of species group and country of origin.

## 4.2. Processing in the EU

In 2022, the EU produced 4,3 million tonnes of processed fishery and aquaculture products at a value of EUR 22,1 billion<sup>39</sup>. Compared to 2021, this was a 12% increase in production volume and a 19% increase in production value. Increased production of “fresh or chilled fish fillets and fish meat” (45% increase), followed by “prepared or preserved fish” (44% increase), “prepared meals and dishes based on fish, crustaceans and molluscs” (43% increased) contributed most to the increased production volume with an added 175.700 tonnes, 90.200 tonnes and 89.700 tonnes respectively. In contrast, “frozen whole saltwater fish” (75% increased value), “fresh or chilled fish fillets or fish meat” (22% increased value) and “prepared or preserved fish” (89% increased value) accounted for 52% of the value increase (EUR 1,8 billion).

Table 27. **PROCESSED FISHERY AND AQUACULTURE PRODUCTS PRODUCED IN THE EU, 2018-2022 (volume in 1.000 tonnes)**

HS code	Product	2018	2019	2020	2021	2022
10201110	Fresh or chilled fish fillets and fish meat (including shark fins), whether or not minced	412	284	354	388	564
10201330	Frozen whole saltwater fish	552	468	489	381	470
10202540	Prepared or preserved tuna, skipjack and Atlantic bonito, whole or in pieces (excluding minced products and prepared meals and dishes)	408	424	515	446	416
10202570	Fish fillets in batter or breadcrumbs including fish fingers (excluding prepared meals and dishes)	430	335	358	359	350
10851200	Prepared meals and dishes based on fish, crustaceans and molluscs	289	227	238	210	300
10202590	Prepared or preserved fish (excluding whole or in pieces and prepared meals and dishes)	250	254	257	204	294
10204100	Flours, meals and pellets of fish or of crustaceans, molluscs or other aquatic invertebrates, unfit for human consumption	295	305	314	282	285
10203400	Prepared or preserved crustaceans, molluscs and other aquatic invertebrates (excluding chilled, frozen, dried, salted or in brine, crustaceans, in shell, cooked by steaming or boiling) (excluding prepared meals and dishes)	217	207	178	226	221
10201400	Frozen fish fillets	252	194	175	150	216
	Other	1.503	1.489	1.501	1.161	1.137
	<b>Total</b>	<b>4.608</b>	<b>4.186</b>	<b>4.380</b>	<b>3.807</b>	<b>4.253</b>

Source: Eurostat Prodcom.

Spain accounted for 28% of total processed volume and value in 2022 and had the largest volume output of processed products in the EU<sup>39</sup>. France, Denmark, Germany and Poland followed at a distance with 15%, 10%, 9% and 9% respectively

<sup>36</sup> Mainly *Sepia spp.*

<sup>37</sup> Mainly *Octopus spp.*

<sup>38</sup> Squid imports largely consist of *Loligo spp.*, *Ilex spp.*, *Nototodarus spp.*, *Todadores spp.*, and *Dosidicus spp.*

<sup>39</sup> Eurostat prodcom data.

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of production volume. As to value, only France came close to generating the same production value as Spain, accounting for 22% of production value. Italy, Denmark and Poland followed with 10%, 9% and 8% respectively of production value.

Estonia accounted for 20% of the production volume of “fresh or chilled fish fillets and fish meat” but only 0,5% of the production value. The other major producers of this product – Poland (19%), France (17%), Spain (12%) – generated most of the value (65% combined).

Spain and Portugal produced most of the “frozen whole saltwater fish”, accounting for 27% and 21% of the volume and 25% and 30% of the value respectively. Estonia (14%) and Italy (10%) also produced respectable volumes of “frozen whole saltwater fish”. However, Estonia only generated 3% of the total production value, while Italy accounted for 17% of the total production value.

Tuna is one of the most valuable species processed in the EU. In 2022, the EU produced 416.100 tonnes of “prepared or preserved skipjack and Atlantic bonito tuna” at a value of EUR 2,9 billion. Spain accounted for 76% of the production volume and 69% of the production value, followed by Italy with 20% of the volume and 27% of the value.

## Focus on a selection of Member States

The processing sector in the EU is diverse, both in terms of species processed and the structure of the industry in different Member States. In this section we cover the industry in three selected countries to show some of the diversity of the EU processing sector, namely Finland, Poland and Spain. The industry in Finland consists mainly of small businesses with few employees, and it relies on domestic production for much of its processing needs. On the contrary, the industry structure in Poland relies heavily on imports from third countries for its processing needs and is made up of several large companies with more than 250 employees. The industry in Spain is the largest in the EU and mostly consists of SMEs. It also plays an important role in the socio-economic lives of people in coastal communities.

### Finland

In 2021, 72.000 tonnes of fish were processed by 119 fish processing enterprises in Finland<sup>40</sup>. Compared to 2019, this was a 5% reduction in processing volume. Only 16 enterprises processed more than 1.000 tonnes of fish, accounting for 86% of the total volume of processed fish. Over the past decade, the number of fish processing enterprises in Finland has decreased, going from 149 enterprises in 2012 to 119 in 2021. Some of the industry players in Finland are Kalaneuvos Oy, Escamar Seafood Oy, AB Salmonfarm Oy and Kala-Lappi Oy.

The main species used in the Finnish industry were salmon, herring, rainbow trout, European whitefish and grayling<sup>41</sup>. Salmon, herring and rainbow trout made up 92% of all fish-based raw material for the processing industry in 2021<sup>30</sup>. Most of the processed fish came from domestic production (53%), while the remainder mainly consisted of imported salmon from Norway. Compared to 2019, fish from domestic production decreased by 7.000 tonnes while imported fish increased by 4.000 tonnes. Almost 26.000 tonnes of fish were processed into fresh fillets, of which two-thirds were salmon imported from abroad.

Herring has traditionally been the most important species in Finnish fish processing in terms of weight and in 2021 made up around 35% of the processed volume<sup>42</sup>. However, as domestic consumption has decreased significantly, salmon and rainbow trout have become the dominant species for processing. Most of the processed herring and sprat are exported to Estonia and Denmark. The main products sold in 2021 were “fresh or chilled fish fillets and fish meat” and “prepared meals and dishes based on fish, crustaceans and molluscs”, which together accounted for 57% of sold volume and 69% of sold value<sup>43</sup>.

### Poland

Poland is one of the largest processing hubs in Europe and plays a major role in supplying the EU with processed fish products such as smoked salmon and trout, fresh and frozen cod fillets, and canned herring, mackerel and sprat. In 2021,

<sup>40</sup> Natural Resources Institute Finland (2022). *Fish processing 2021*. Luke.fi

<sup>41</sup> Natural Resources Institute Finland (2022). *Raw material weight of fish used in fish processing by origin, species and year*. Domestic fish, imported fish

<sup>42</sup> STECF (2022). *Economic report on the fish processing industry (STECF-21-14)*. Stecf.jrc.ec.europa.eu

<sup>43</sup> Prodcom production data.

there were 315 companies involved in fish processing in Poland, the same amount as in 2020 but a decrease compared to 2018 and 2019 (-7% and -9% respectively)<sup>44</sup>. This decrease in enterprises was largely due to mergers and acquisitions, but also liquidation and bankruptcy<sup>40</sup>. According to Główny Urząd Statystyczny<sup>45</sup>, more than 500.000 tonnes of fish were processed by Polish enterprises<sup>46</sup> in 2021. Smoked fish (including fillets) made up 22% of the volume of processed products and fresh or chilled fillets of marine fish made up 20%. Fish and fish preparations made up 32% of the processed volume, with pickled products accounting for 49% and tinned products accounting for 45%.

Most of the processing plants in Poland are located close to the sea in the Pomorskie and Zachodniopomorskie regions. While the Polish processing industry is dominated by small and medium-sized firms, most of the total production value generated by the Polish fish processing industry comes from companies with more than 250 employees. Hanseatic produkcja, Milarex, Freezco, Paula Fish and Mowi are some of the industry players operating in Poland.

Due to the high demand of the Polish fish processing industry, imports of fish and fish products to Poland are mainly raw materials for the industry<sup>40</sup>. In 2022, Polish imports from third countries amounted to 270.966 tonnes of fishery and aquaculture products at a value of EUR 1,2 million. Imports mainly consisted of salmon (27%), herring (18%), Alaska pollock (10%) and cod (10%)<sup>47</sup>. Salmon was mainly imported fresh whole (90%), while most of the cod was imported frozen whole (92%). Alaska pollock was imported as frozen fillets (89%) and herring was imported as frozen fillets (41%), frozen other cuts (30%) and prepared/preserved other cuts (26%). The most sold product in Poland in 2022 was “fresh or chilled fish fillets and fish meat” which accounted for 27% of sold volume and 38% of sold value<sup>41</sup>.

## Spain

The Spanish fish processing industry is the largest in Europe with 580 enterprises and 26.000 employees in 2021. However, the industry only plays a small role in the agri-food industry in Spain and accounted for around 5% of total turnover and employment in 2019<sup>42</sup>. The fish processing industry has traditionally played a key role in the social and cultural organisation of coastal regions in Spain, creating job opportunities and securing incomes, and it still plays an important role in the socio-economic activity in coastal areas. The canning sector has the highest production volume with tuna being the most important species<sup>42</sup>. However, over the past decade, the fresh and frozen processed seafood sectors have gained greater importance. In 2022, Spain imported 286.242 tonnes of tuna from third countries, of which 45% was skipjack tuna and 37% yellowfin tuna. Tuna imports represented 24% of total imports of fishery and aquaculture products. Imports of cephalopods were higher, accounting for 27% of total imports, with squid representing 46% of cephalopod import volume. Shrimps and hake also made up a large share of total import volume, accounting for 13% and 8% respectively. Shrimp imports mainly consisted of warmwater shrimp species (54%) and miscellaneous shrimp species (42%).

In 2022, the main products sold were “prepared or preserved skipjack tuna” which represented 37% of sold volume and 32% of sold value, followed by “prepared or preserved crustaceans, molluscs and other aquatic invertebrates” (11% of volume and 12% of value) and “frozen whole saltwater fish” (11% of volume and 6% of value)<sup>48</sup>.

### 4.3. EU trade flows of important species for the processing sector

The EU processing sector relies heavily on imports from third countries to secure enough raw materials to supply the EU market with processed fishery and aquaculture products. In 2022, the EU imported 4,4 million tonnes of important species for the processing industry<sup>49</sup> at a value of EUR 25,6 billion and exported to third countries 1,1 million tonnes at a value of EUR 4,7 billion. This means that in 2022 the EU trade deficit for these species was EUR 20,9 billion.

A large share of the tuna exports was probably landed by EU vessels in Ecuador (these landings could also have been landed in other third countries and trans-shipped to Ecuador), the Seychelles and Mauritius and then imported to the EU for processing. In 2022, 17% of EU exports of tuna were exported frozen whole to (or landed in) Ecuador, 10% to Mauritius and 8% in the Seychelles. Most of this tuna (on average 95% over the past five years) was imported whole or in pieces (but not

<sup>44</sup> Eurostat statistics (2023). *Enterprises by detailed NACE Rev.2 activity and special aggregates*. [Ec.europa.eu](https://ec.europa.eu)

<sup>45</sup> Główny Urząd Statystyczny (2022). *Statistical Yearbook of Maritime Economy*. [Stat.gov.pl](https://stat.gov.pl)

<sup>46</sup> Enterprises employing more than 9 persons.

<sup>47</sup> EUMOFA elaboration of Eurostat Comext data.

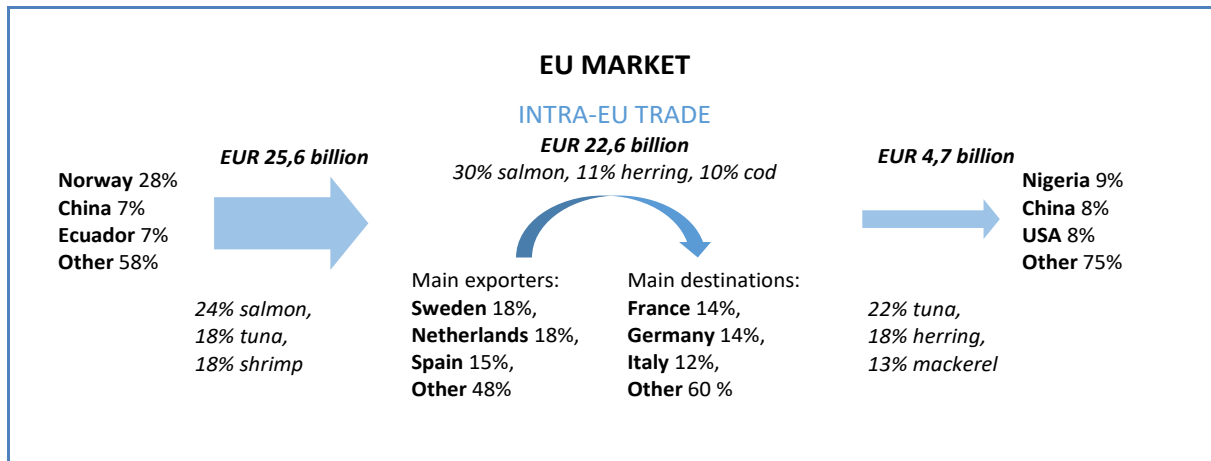
<sup>48</sup> Eurostat prodcom data.

<sup>49</sup> Species included in the selection: Alaska pollock, anchovies, cephalopods, cod, grenadier, haddock, hake, herring, mackerel, Nile perch, plaice, redfish, saithe, salmon, sardines, seabass, seabream, shrimp, tilapia, tuna.

minced, prepared or preserved) to the EU<sup>50</sup>. Tuna exports to Japan accounted for most of the value (30%), followed by exports to Korea (12%) and the UK (8%). Exports to Japan and Korea consisted of frozen fillets (55% and 76%, respectively), the remainder was exported as fresh and frozen whole tuna (45% and 22%, respectively). Exports to the UK were mainly exported as prepared/preserved other cuts (78%) and fresh and frozen fillets (19%).

Exports of herring and mackerel mainly consisted of frozen whole fish (75%) destined for Nigeria (27%), Egypt (12%) and Ukraine (11%). Most of the species imported for the EU processing industry are sold and consumed in the EU. In 2022, intra-EU exports of these products amounted to 3,5 million tonnes at a value of EUR 22,6 billion. Salmon products made up most of the intra-EU trade, as much of the Norwegian supply enters the EU in Sweden and is then re-exported to major processing hubs such as Germany and Poland.

Figure 53. **THE EU TRADE MARKET FOR IMPORTANT SPECIES FOR THE PROCESSING INDUSTRY IN VOLUME, 2022**



Source: EUMOFA elaboration of Eurostat Comext data.

<sup>50</sup> Trade Data Monitor statistics.

## 5. Case study: Dogfish and ray in the EU market

Dogfish and ray species have the same biological features as the other elasmobranch species (e.g., slow growth, late sexual maturation, low fecundity, etc.), which makes them vulnerable to overexploitation and subject to a set of regulations in the EU. There are no major targeted fisheries for dogfish species and most catches are taken as bycatch in mixed demersal fisheries, while ray species are caught in both targeted fisheries and as by-catch in multiple fisheries and are important species for many Member States. In 2021, EU catches of dogfish species amounted to 8.212 tonnes, with France and Spain being the main producing countries. The same year catches of ray species amounted to 18.526 tonnes, with France, Spain and Portugal being the most important producing countries. First-sales data between 2013 and 2022 show a downward trend in first-sales prices in France and an upward trend in Portugal. The EU market of both species is supplied with frozen products imported mainly from the USA (91% of imports value for dogfish in 2022 and 55% for ray). Dogfish and ray are also traded between EU countries. In 2022, France was the main market for dogfish, exporting mainly to Italy and Spain. The same year, Spain and the Netherlands were the main exporters of ray species within the EU, with France and Portugal being the main destinations. As these species are, in most cases, not directly targeted, there are small operators specialising in marketing both species. Recent years have also been characterised by a decrease in consumption of both species.

### 5.1. Biology resource and exploitation

#### Biology

This case study focuses on dogfish and ray species that belong to elasmobranch taxa<sup>51</sup>. This taxon has biological characteristics such as longevity, slow growth, late sexual maturation, aggregation behaviour, and low fecundity that make them vulnerable to overexploitation. Dogfish and ray species considered in this case study include several species that are called “dogfish” and “ray” in the EU market.

**Dogfish species** considered in this case study belong to the two following orders:

- The **Squaliformes** which is the second most diverse order of sharks, mostly benthopelagic in habit, and preferring to live in cold, bathyal waters. Features that are common to all elasmobranch taxa, making them particularly vulnerable to population depletion and overexploitation, are particularly pronounced in this specific shark group. Examples of species include Portuguese dogfish (*Centroscymnus coelolepis*), piked dogfish (*Squalus acanthias*), and leafscale gulper shark (*Centrophorus squamosus*).
- The **Carcharhiniformes** is also one of the most diverse groups of sharks, with species inhabiting all marine habitats. The following two species were included in the case study: greater spotted dogfish or nursehound (*Scyliorhinus stellaris*) and lesser-spotted dogfish (*Scyliorhinus canicula*).



Source: Scandinavian Fishing Year Book

<sup>51</sup> 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.

**Ray species** considered in this case study belong mainly to the following order:

- **Rajiformes**<sup>52</sup> which include many species that inhabit specific regions, leading to a high degree of regional endemism. In common with other elasmobranchs, they share life-history traits such as low reproductive potential and a limited capacity for population increase. Main ray species caught by the EU fleet include thornback ray (*Raja clavata*) which is one of the most important species in the seas of northwest Europe; and blonde ray (*Raja brachyura*) which inhabits inshore and coastal shelf waters down to 100 m.



Source: Scandinavian Fishing Year Book

## Resource, exploitation, and management in the EU

Whilst there are currently no major targeted fisheries for dogfish, a range of species are caught as bycatch in mixed demersal and longline fisheries. Several management measures have been implemented in EU waters, resulting in limited targeted fisheries of most species. Nursehound (*Scyliorhinus stellaris*) and lesser-spotted dogfish (*Scyliorhinus canicula*) are not subject to management measures. Lesser-spotted dogfish is classified as “least concern” by the International Union for Conservation of Nature (IUCN)<sup>53</sup>, which can explain larger volumes landed by the EU fleet (see section on catches below). The data on the EU fishing fleet<sup>54</sup> show that dogfish species in France and Portugal are mainly caught by bottom trawlers, while in Spain they are caught by longliners and to a lesser extent by trawlers. According to the same data, the share of dogfish catches in the total catches of these fleet segments is very low, which leads one to assume that these species are not directly targeted and are caught as bycatch. Ray species are caught in both targeted fisheries and as bycatch in multiple fisheries and are important species for many Member States. They are also caught as bycatch in various inshore gillnet fisheries and inshore and offshore trawl fisheries and may be targeted in inshore and offshore longline fisheries and offshore nets fisheries<sup>55</sup>.

<sup>52</sup> <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8303890/>

<sup>53</sup> <https://www.iucnredlist.org/species/161307554/124478351>

<sup>54</sup> Data from Scientific, Technical and Economic Committee for Fisheries (STECF)

<sup>55</sup> STECF (2017) Long-Term management skates. <https://stecf.jrc.europa.eu/documents/43805/1853075/STECF+17-16+-+LTM+skates+and+rays.pdf>

Overview | **1. First sales in Europe** | **2. Extra-EU imports** | **3. Consumption**

| **4. The EU processing industry** | **5. Dogfish and ray in the EU market** | **6. Global highlights** | **7. Macroeconomic context**

Table 28. **SUMMARY OF MANAGEMENT MEASURES, STOCK STATUS AND CLASSIFICATION IN THE IUCN RED LIST**<sup>56</sup>

Group-Species	EU management measures	Classification in the IUCN red list
<b>Dogfish - Picked dogfish</b> ( <i>Squalus acanthias</i> )	Regulation (EU) 2018/120 <sup>57</sup> prohibits fishing, retention on board, transshipment or landing of picked dogfish, with the exception of avoidance programmes (e.g., limited quota is available for vessels engaged in bycatch avoidance programmes). It also prohibits fishing, retention on board, and transshipment of the species by non-EU vessels in EU waters.	Picked dogfish is considered Endangered by the IUCN in its 2014 assessment for Europe <sup>58</sup> .
<b>Dogfish - Portuguese dogfish</b> ( <i>Centroscyrnus coelepis</i> )	The 2010 European fisheries regulations implemented a zero TAC for a list of deep-water sharks, including Portuguese dogfish. A limited TAC for bycatch in longline fisheries targeting black scabbardfish has been permitted <sup>59</sup> . Additional management measures include banned use of trawls and gillnets in waters <200m in Azores, Madeira and Canary Islands, and international waters where ICES provides advice; banned use of gillnets by EU vessels at depths <600m and closed areas to deep-water fishing, etc.	Portuguese dogfish is considered endangered by the IUCN in its 2014 assessment for Europe <sup>60</sup> .
<b>Dogfish - Nursehound</b> ( <i>Scyliorhinus stellaris</i> )	Not subject to any management measures <sup>61</sup> .	Nursehound is listed as near threatened by the IUCN in its latest assessment for Europe <sup>62</sup> (it is classified as vulnerable at global level) <sup>63</sup>
<b>Dogfish - lesser-spotted dogfish</b> ( <i>Scyliorhinus canicula</i> )	There are no catch limits or protection for the species.	Lesser spotted dogfish is classified as "least concern" by the IUCN in its latest assessment for Europe (it is also classified as "least concern" at global level <sup>64</sup> )
<b>Ray - Thornback ray</b> ( <i>Raja clavata</i> ), <b>Blonde Ray</b> ( <i>Raja brachyura</i> ), <b>cuckoo ray</b> ( <i>Raja naevus</i> ), <b>spotted ray</b> ( <i>Raja montagui</i> ) and <b>small-eyed ray</b> ( <i>Raja microocellata</i> )	For EU waters, skates and rays are managed under five regional quotas which are applied to a group of species, including cuckoo ray, thornback ray, blonde ray, spotted ray and small-eyed ray. The objective is to limit the combined TAC of all stocks of rays across several areas. Currently, the management of skates and rays has been subject to review and research, including alternative management approaches to the group TAC <sup>65</sup> .	<b>Species classified as "least concern":</b> <b>Cuckoo ray</b> (2014 assessment for Europe <sup>66</sup> ) <b>Spotted ray</b> (2015 assessment for Europe <sup>67</sup> )  <b>Species classified as "Near threatened":</b> <b>Thornback ray</b> (2014 assessment for Europe <sup>68</sup> ) <b>small-eyed ray</b> (2014 assessment for Europe <sup>69</sup> ) <b>Blonde Ray</b> (2014 assessment for Europe <sup>70</sup> )

<sup>56</sup> Categories provided in this table follow the regional guidelines for regional assessment (for Europe when available) (from worst to better): Endangered (orange), Near threatened (light green) and Least concern (green).

<sup>57</sup> 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.

<sup>58</sup> *Squalus acanthias* (Spiny Dogfish) (iucnredlist.org)

<sup>59</sup> <https://oap.ospar.org/en/versions/1742-en-1-0-1-portuguese-dogfish/>

<sup>60</sup> *Centroscyrnus coelepis* (Portuguese Dogfish) (iucnredlist.org)

<sup>61</sup> Ibidem

<sup>62</sup> <https://www.iucnredlist.org/ja/species/161484/48923567>

<sup>63</sup> <https://www.iucnredlist.org/species/161484/124493465>

<sup>64</sup> <https://www.iucnredlist.org/species/161307554/124478351>

<sup>65</sup> STECF (2022) Skates & Rays management. <https://www.nsrac.org/wp-content/uploads/2023/01/STECF-22-08-Skates-and-rays-management.pdf>

<sup>66</sup> <https://www.iucnredlist.org/ja/species/161626/48949434>

<sup>67</sup> <https://www.iucnredlist.org/ja/species/63146/48919726>

<sup>68</sup> <https://www.iucnredlist.org/species/39399/103111648>

<sup>69</sup> <https://www.iucnredlist.org/ja/species/39400/48943658>

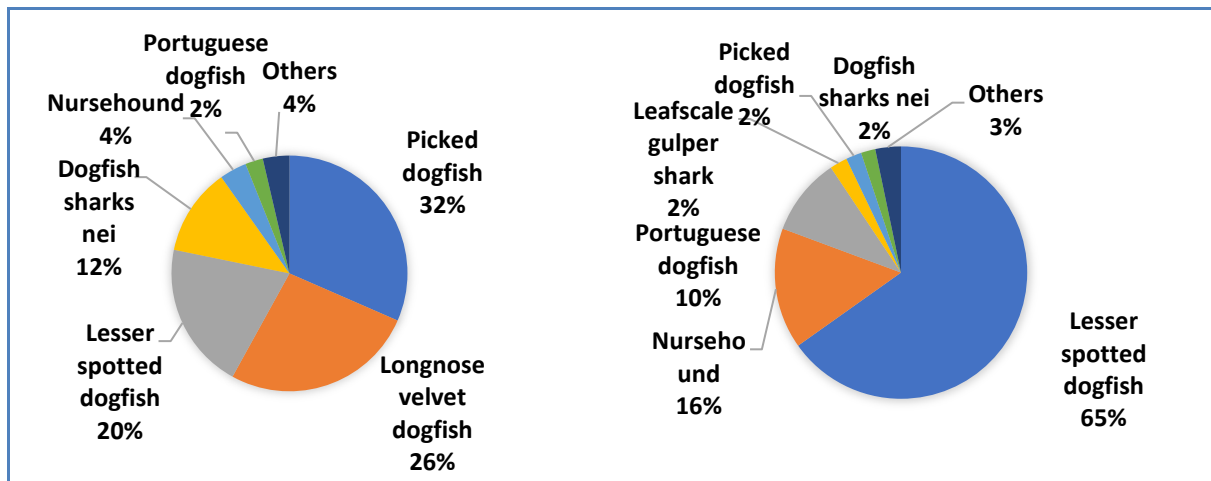
<sup>70</sup> <https://www.iucnredlist.org/ja/species/161691/48907330>

## 5.2. Production

### Catches of dogfish species

In 2021, global production of dogfish species amounted to 31.142 tonnes. The main species were picked dogfish (32%), longnose velvet dogfish (26%), lesser spotted dogfish (20%) and dogfish sharks nei (12%). Catches of nursehound and Portuguese dogfish accounted for 4% and 2% of the global catches, respectively. In the EU, the main dogfish species caught were lesser spotted dogfish accounting for 65% of the EU dogfish catches, followed by nursehound (16%) and Portuguese dogfish (10%).

Figure 54. **CATCHES OF DOGFISH SPECIES IN THE WORLD (LEFT) AND THE EU (RIGHT): BREAKDOWN BY MAIN SPECIES<sup>71</sup> IN 2021**



Source: FAO.

In 2021, the leading producers by volume were Indonesia (27% of global catches), New Zealand (17%) and the United States of America (USA) (13%). The same year, EU catches accounted for 11% of global catches and ranked fourth. Between 2012 and 2021, global catches of dogfish species have overall decreased by 5%. Specifically, catches have decreased in New Zealand (12%), the USA (59%), France (24%), Libya (-25%), Portugal (58%), Belgium (4%), while they have increased in Indonesia (423%), Spain (225%) and the United Kingdom (151%). The opposite trends between countries are explained by the different targeted species and different resource management measures in place.

Table 29. **WORLD CATCHES OF DOGFISH SPECIES (volume in tonnes)**

Country	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Indonesia	1.782	2.499	2.847	2.883	3.897	127	3.657	500	24	9.313
New Zealand	6.735	5.770	6.779	6.756	5.737	7.209	6.928	5.397	5.297	5.899
USA	11.041	7.451	10.223	9.098	12.304	8.922	7.185	8.068	7.818	4.488
<b>EU-27</b>	<b>8.563</b>	<b>10.187</b>	<b>10.354</b>	<b>10.176</b>	<b>10.426</b>	<b>8.781</b>	<b>7.739</b>	<b>8.706</b>	<b>7.874</b>	<b>8.212</b>
Libya	5.164	5.486	5.542	5.065	5.102	4.350	4.270	4.187	3.813	3.899
Others	7.826	7.049	5.487	5.574	5.794	5.880	6.536	6.539	6.381	6.230
<b>Total</b>	<b>35.947</b>	<b>32.956</b>	<b>35.690</b>	<b>34.487</b>	<b>38.158</b>	<b>30.919</b>	<b>32.045</b>	<b>29.209</b>	<b>27.394</b>	<b>34.142</b>

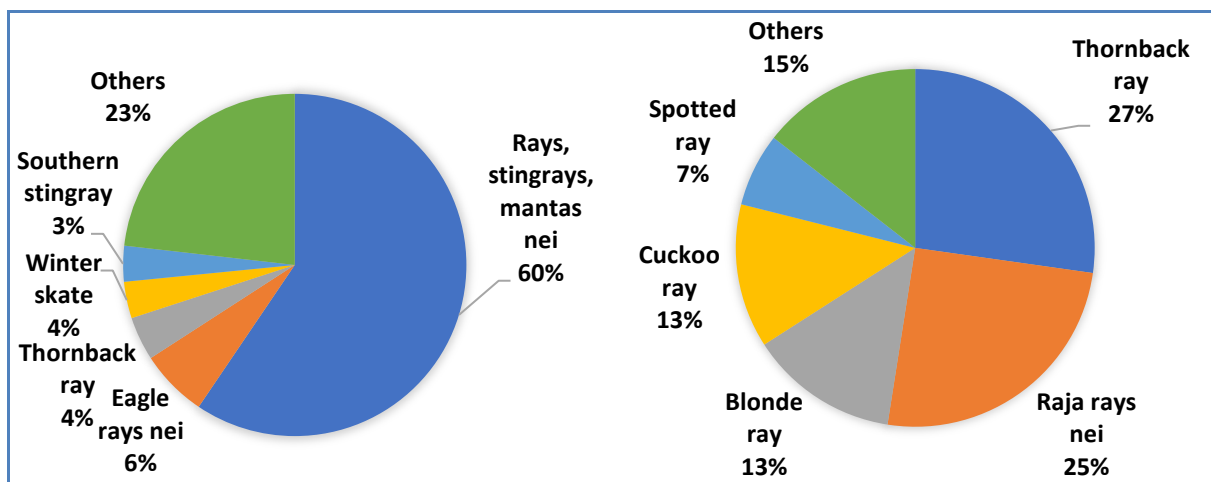
Source: FAO.

In 2021, EU catches of dogfish species amounted to 8.212 tonnes, France and Spain being the main producers with almost 80% of the EU catches (47% and 31% respectively). They were followed by Portugal and Belgium with 7% and 6% respectively of EU catches of dogfish species. Catches in Spain comprised several dogfish species, including lesser spotted dogfish (*Scyliorhinus canicula*) (48% of Spanish catches of dogfish species), Portuguese dogfish (*Centroscymnus coelolepis*) (32%), leafscale gulper shark (*Centrophorus squamosus*) (7%) and Longnose spurdog (*Squalus blainvillei*) (5%), while catches in France and Portugal were more focused on a few species. French catches comprised lesser spotted dogfish and nursehound with 83% and 17% respectively. Portuguese catches were monospecies with nursehound accounting for all catches.

### Catches of ray species

In 2021, global production of ray species amounted to 156.522 tonnes. 60% of the global production comprised the species category rays, stingrays, mantas nei<sup>72</sup>. The same year, the other main ray species caught at global level included the eagle rays nei (6%), thornback ray (4%) and winter skate (4%). In the EU, the main species caught by the EU fleet were thornback ray (27% of EU production), Raja rays nei (25%), blonde ray (13%) and cuckoo ray (13%).

Figure 55. **CATCHES OF RAY SPECIES: BREAKDOWN BY MAIN SPECIES<sup>73</sup> IN 2021 IN THE WOLD (left) AND IN THE EU (right)**



Source: EUMOFA.

The USA and the EU were the main producers in 2021, each contributing 12% of global ray production. The same year, they were followed by Indonesia, Mexico and Malaysia, supplying 10%, 8% and 6% respectively of global production.

Between 2012 and 2021, the global production of ray species decreased by 33%. Catches decreased in the USA (32%), Indonesia (75%), Malaysia (35%), Argentina (58%), the United Kingdom (50%), while they increased in Mexico (59%) and France (9%).

Within the EU, the main producers were France, Spain and Portugal, which provided 37%, 33% and 10% respectively of EU production of ray species. Other EU producers included to a lesser extent Belgium (6%), Italy (4%) and Ireland (4%). Between 2012 and 2021 catches of ray species increased by 9% in France, while they decreased by 31% in Spain and remained relatively stable in Portugal.

<sup>72</sup> This category of species corresponds to several species of rays. Production is declared under this category when the accurate species is not known.



Table 30. **TOTAL WORLD CATCHES OF RAY SPECIES (volume in tonnes)**

COUNTRY	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
USA	27.513	25.337	26.275	24.852	24.323	26.172	28.553	24.207	23.535	18.685
<b>EU-27</b>	<b>21.650</b>	<b>19.924</b>	<b>21.844</b>	<b>22.280</b>	<b>19.714</b>	<b>19.786</b>	<b>18.994</b>	<b>20.873</b>	<b>19.221</b>	<b>18.526</b>
Indonesia	60.002	60.252	70.447	80.389	78.587	32.569	68.658	55.624	57.981	15.047
Mexico	7.825	9.361	9.481	12.638	14.746	14.028	16.515	12.086	11.530	12.449
Malaysia	15.612	15.774	17.275	12.908	12.281	13.311	11.993	11.590	9.823	10.125
Argentina	16.280	15.999	16.359	19.728	18.435	17.794	17.110	11.757	12.456	8.157
Republic of Korea	8.433	6.887	6.667	6.314	5.531	4.579	4.599	6.753	6.260	7.827
Others	76.471	65.653	71.086	67.946	72.942	70.460	69.275	72.874	68.687	65.706
<b>Total</b>	<b>233.786</b>	<b>219.187</b>	<b>239.434</b>	<b>247.055</b>	<b>246.560</b>	<b>198.698</b>	<b>235.697</b>	<b>215.764</b>	<b>209.493</b>	<b>156.522</b>

Source: FAO.

## Marketing and consumption

Dogfish and ray species have been much sought after and consumed in great amounts in the EU, for their meat and fins. For example, pickled dogfish was used as smoked belly flaps in Germany, called "Schillerlocken" and the fins were used in shark fin soups<sup>74</sup>. However, since the implementation of management measures and consequent decrease in landings, both marketing and consumption of these species have been limited. The decrease in consumption could be attributed to communication campaigns aiming to address overexploitation of shark. Moreover, changes in consumption patterns of EU consumers, who prefer for ready-to-cook products, could contribute to this trend, especially considering that ray and dogfish products are marketed with minimal processing.

### 5.3. First sales in the EU

#### Dogfish

Dogfish first-sales data are available for various species. Given the limited volumes of some species, this section focuses only on the most important species in the reporting countries, i.e., nursehound which accounts for all dogfish first sales in Portugal, and lesser spotted dogfish which accounts for all first sales in France.

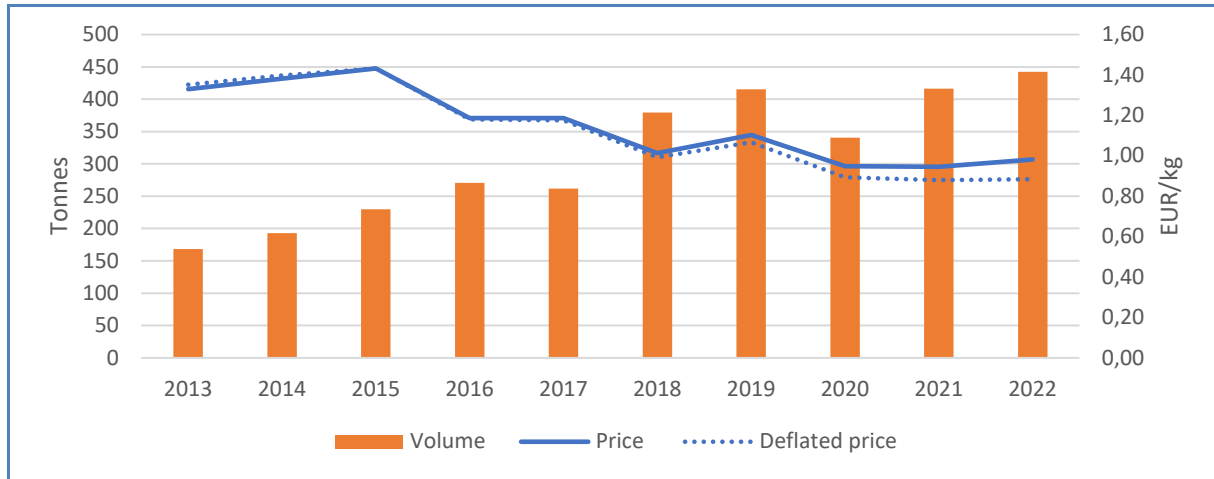
In France, first sales of nursehound amounted to 442 tonnes in 2022 at a value of around EUR 0,43 million and an average price of 0,98 EUR/kg. In Portugal, first sales reached 411 tonnes the same year, at a value of EUR 0,37 million and an average price of 0,91 EUR/kg. Between 2013 and 2022, first sale prices decreased significantly in France by 26% (by 34% in real terms<sup>75</sup>), which seems to correlate with the significant increase in volumes (by 163% during the same period). In Portugal, first-sales prices increased by 39% (23% in real terms), even though first-sales volumes increased by 8% over the same period.

In France, the top three first-sales places for fresh whole nursehound in 2022 were Cherbourg, Port-en-Bessin-Huppain (both located in the Region of Normandie) and Saint-Quay-Portrieux (located in the Region of Brittany), accounting for 62% of first-sales volume. In Portugal, the top three first-sale places the same year were Nazaré, Peniche and Figueira da Foz (all in the Central Region).

<sup>74</sup> [https://sharkadvocates.org/sharks\\_in\\_the\\_baltic.pdf](https://sharkadvocates.org/sharks_in_the_baltic.pdf)

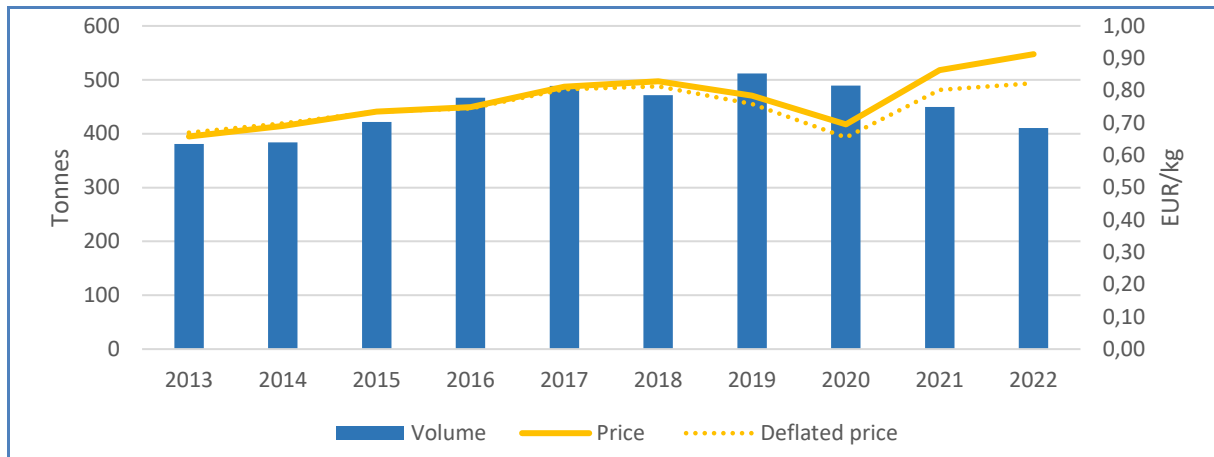
<sup>75</sup> In the report, values are real terms by using the GDP deflator (base=2015)

Figure 56. **FIRST SALES: FRESH DOGFISH IN FRANCE**



Source: EUMOFA<sup>76</sup>.

Figure 57. **FIRST SALES: FRESH DOGFISH IN PORTUGAL**



Source: EUMOFA<sup>77</sup>.

In Spain, first-sales data are incomplete. According to available data, first-sales prices in 2023 were on average 3,61 EUR/kg for Portuguese dogfish and 2,33 EUR/kg for leafscale gulper shark. Vigo was the main first-sales place in Spain in 2022, accounting for 72% of recorded first sales of dogfish species.

## Ray

First-sales data are available for various ray species. This section focuses on the most important species in the reporting countries (i.e., cuckoo ray, thornback ray and blonde ray in France; Raja ray nei. and thornback ray in Spain and thornback ray in Portugal). In France, first sales reached 1.299 tonnes of cuckoo ray at a value of EUR 3,7 million and an average price of 2,11 EUR/kg; 1.456 tonnes of thornback ray at a value of EUR 3,9 million and an average price of 2,44 EUR/kg; and 1.279 tonnes of blonde ray at a value of EUR 3,5 million and an average price of 2,68 EUR/kg. Between 2012 and 2022, first-sales prices of cuckoo ray increased by 15% (+1% in real terms), while for thornback ray and blonde ray they fell by 4% and 9% respectively (16% and 20% in real terms). This could be explained by the variation in first-sales volumes, as shown in the figure below.

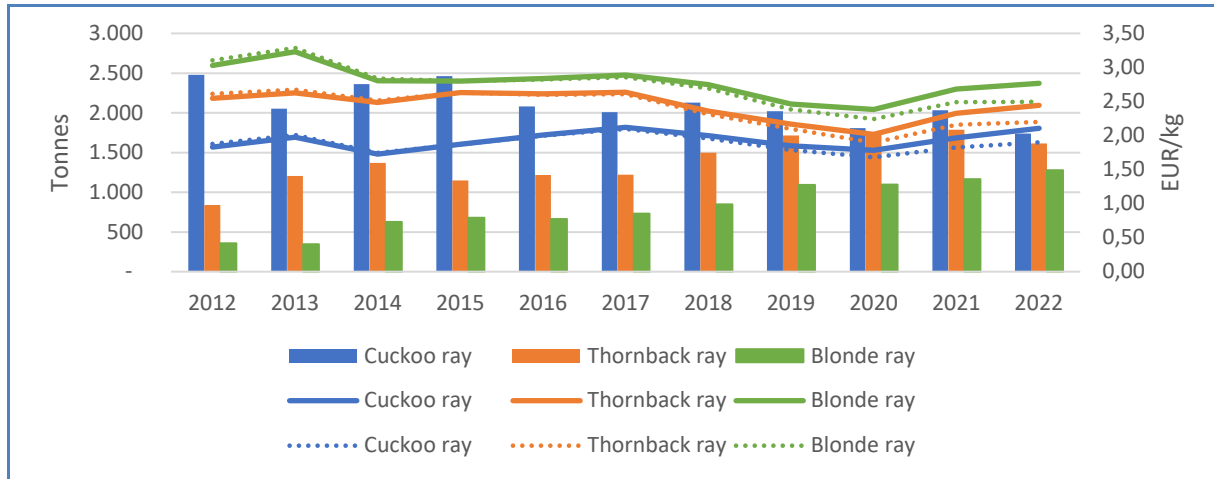
<sup>76</sup> Deflated prices are calculated by using the GDP deflator (base=2015)

<sup>77</sup> Deflated prices are calculated by using the GDP deflator (base=2015)

In Spain between 2012 and 2022, first-sales prices for Raja ray nei. increased by 25%, due to a decrease in first sale volume (by 79%). First-sales prices for thornback ray also increased by 66%, despite the increase in volumes (536%).

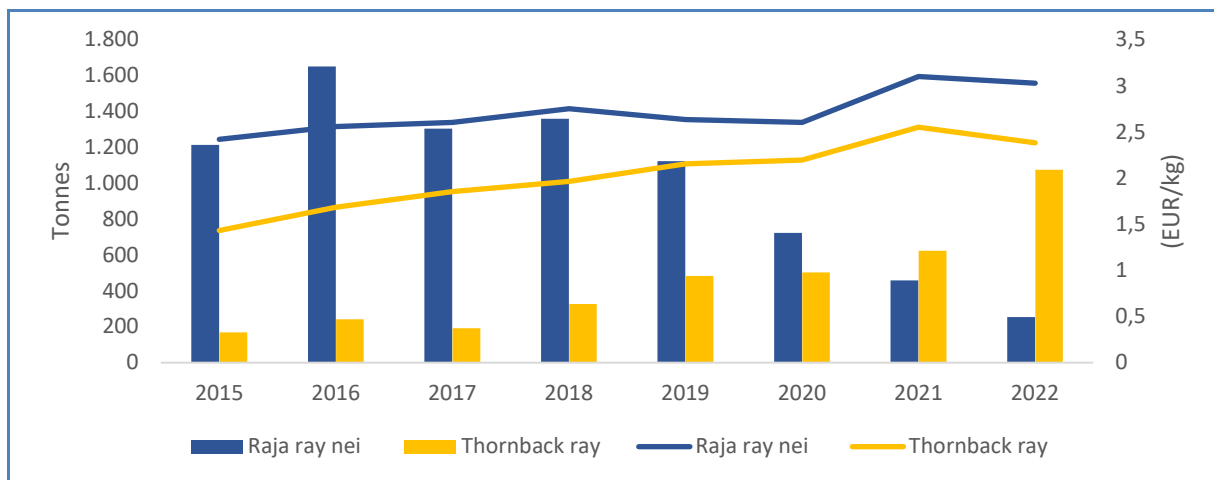
In Portugal, there is also low correlation between first-sales volumes and prices. First-sales data for the most caught species (thornback ray) show that prices increased between 2012 and 2022 (but decreased by 7% in real terms), even though first sale volumes increased by 27%.

Figure 58. **FIRST SALES: FRESH RAY IN FRANCE**



Source: EUMOFA<sup>78</sup>.

Figure 59. **FIRST SALES: FRESH RAY IN SPAIN**

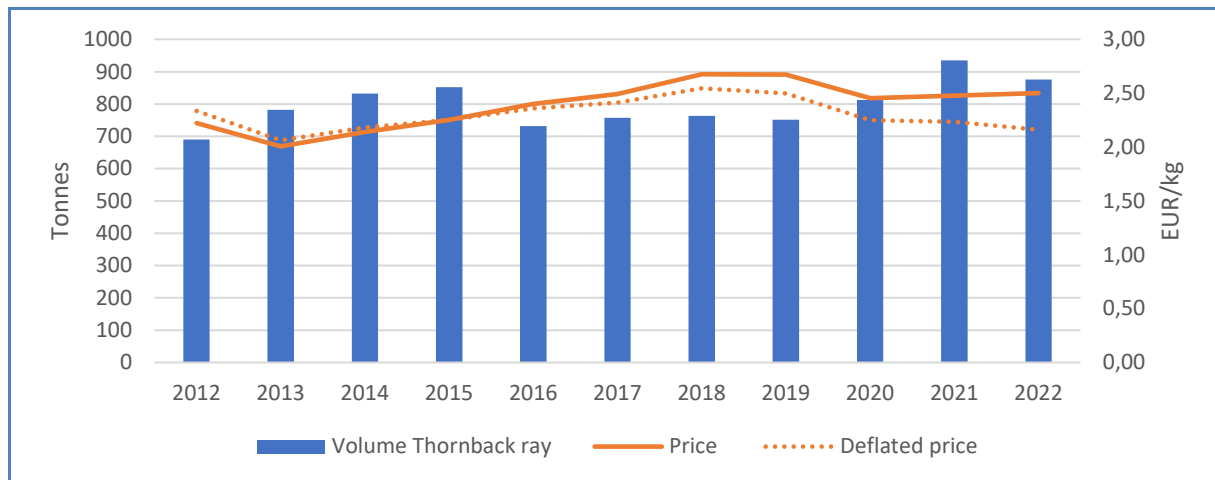


Source: EUMOFA<sup>79</sup>.

<sup>78</sup> Deflated prices are calculated by using the GDP deflator (base=2015)

<sup>79</sup> Deflated prices are calculated by using the GDP deflator (base=2015)

Figure 60. **FIRST SALES: FRESH RAY IN PORTUGAL**



Source: EUMOFA<sup>80</sup>.

## 5.4. International trade

In the CN<sup>81</sup> used for registering EU import-export data, dogfish is specifically reported as live/fresh and frozen<sup>82</sup>.

In 2022, the EU-27 trade deficit for dogfish products amounted to EUR 5,6 million. In the same year, the EU-27 imported 1.589 tonnes of dogfish at a value of EUR 6,1 million, mainly frozen (73% of the import value), but also fresh (27%). The major provider of dogfish to the EU market was the USA, accounting for 91% of import value. Main importers from third countries were Germany (30% of EU imports in value), France (29%) and the Netherlands (18%). EU exports to third countries were rather marginal, with less than 200 tonnes in 2022.

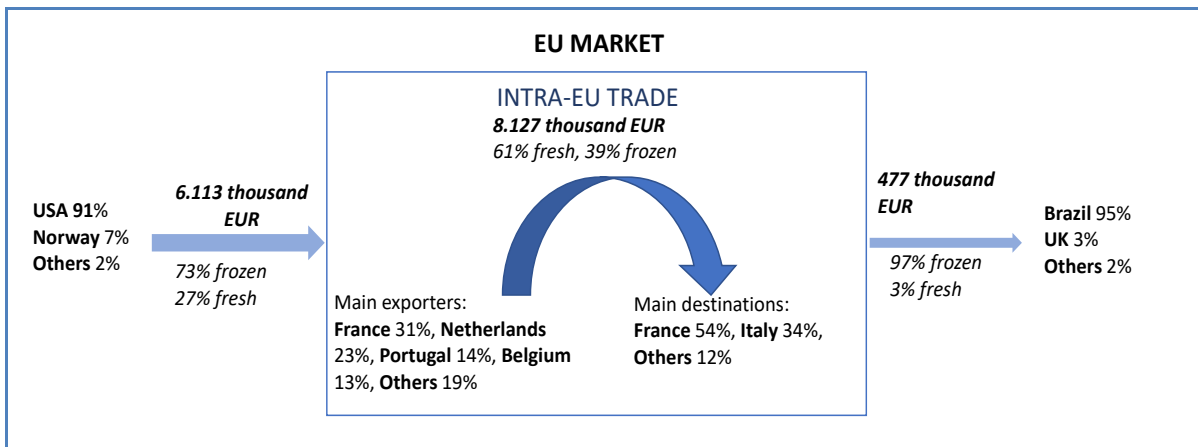
In 2022, intra-EU exports amounted to 2.116 tonnes of dogfish products at a value of EUR 8,1 million. The intra-EU trade comprised mainly fresh products which accounted for 61% of the trade value. The main exporting countries within the EU were France (31% of the intra-EU export value), the Netherlands (23%), Portugal (14%) and Belgium (13%). Italy was the main destination market for the French exports (87% of French export value and 81% volume), followed by Spain (7% of French export value and 10% volume). French exports to both destinations increased between 2013 and 2022 (by 1.292% in value to the Spanish market and by 59% to the Italian market). The average export price was around 5,14 EUR/kg for the Italian market and 3,16 EUR/kg for the Spanish market.

<sup>80</sup> Deflated prices are calculated by using the GDP deflator (base=2015)

<sup>81</sup> 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.

<sup>82</sup> 03028115: Fresh or chilled picked dogfish "*Squalus acanthias*" and catsharks "*Scyliorhinus* spp.", 03038115: Frozen picked dogfish "*Squalus acanthias*" and catsharks "*Scyliorhinus* spp.", 03044710: Fresh or chilled fillets of picked dogfish "*Squalus acanthias*" and catsharks "*Scyliorhinus* spp.", 03045610: Fresh or chilled meat, whether or not minced, of picked dogfish "*Squalus acanthias*" and catsharks "*Scyliorhinus* spp." (excl. fillets), 03048811: Frozen fillets of picked dogfish "*Squalus acanthias*" and catsharks "*Scyliorhinus* spp.", 03049610: Frozen meat, whether or not minced, of picked dogfish "*Squalus acanthias*" and catsharks "*Scyliorhinus* spp."

Figure 61. **THE DOGFISH EU-TRADE MARKET IN 2022, IN VALUE**

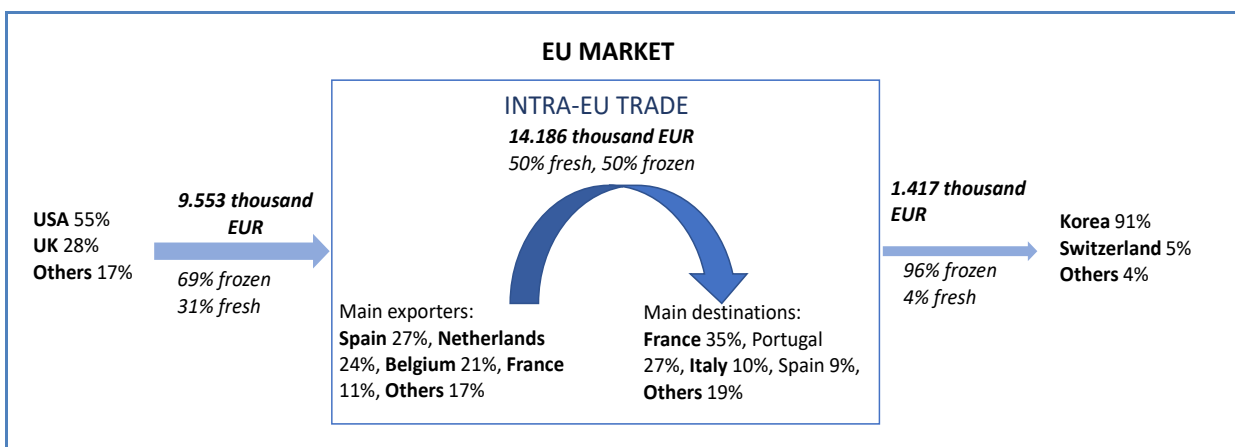


Source: EUMOFA elaboration of EUROSTAT-COMEXT data.

In the CN used for registering EU import-export data, ray is specifically reported as fresh and frozen<sup>83</sup>.

In 2022, the EU-27 trade deficit for ray products amounted to approx. EUR 8,1 million. In the same year, the EU-27 imported 2.538 tonnes for a value of EUR 9,6 million, mostly frozen (69% of the imports value). The major provider of ray to the EU market was the USA, accounting for 55% of the extra-EU import value, followed by the UK (28%). France accounted for almost half of the EU-27 imports from third countries (47% of the ray extra-EU imports volume and 52% in value). In 2022, EU exports to third countries amounted to only 337 tonnes at a value of EUR 1,4 million. EU exports of ray products were dominated by frozen products (94% of the exports volume), while fresh products accounted for only 6% of the export volume the same year. The main destination in value terms was the Republic of Korea, accounting for 91% of the total extra-EU export value, followed by Switzerland (5%). In 2022, intra-EU exports amounted to 4.075 tonnes of ray products at a value of approx. EUR 14,2 million. Half of the intra-EU trade comprised fresh or chilled ray products, while the other half was made up of frozen ray products. The main exporting countries within the EU were Spain (27% of the intra-EU export value), the Netherlands (24%), Belgium (21%) and to lesser extent France (11%). The main destinations for the intra-EU exports were France (35% of total intra-EU export value), Portugal (27%), Italy (10%) and Spain (9%).

Figure 62. **THE RAY EU-TRADE MARKET IN 2022, IN VALUE**



Source: EUMOFA elaboration of EUROSTAT-COMEXT data.

<sup>83</sup> 03028200 Fresh or chilled, rays and skates "Rajidae"; 03038200 Frozen rays and skates "Rajidae" 03044800 Fresh or chilled fillets of rays and skates "Rajidae"; 03045700 Fresh or chilled meat, whether or not minced, of rays and skates "Rajidae" (excl. fillets); 03048890 Frozen fillets of rays and skates "Rajidae"; 03049700 Frozen meat, whether or not minced, of rays and skates "Rajidae".

## 6. Global highlights

**GFCM / Fisheries & aquaculture:** Between 6 and 10 November 2023, the forty-sixth session of the General Fisheries Commission for the Mediterranean (GFCM) of the Food and Agriculture Organization of the United Nations (FAO) was held in Split, in Croatia. Following in-depth discussions, a total of 34 measures were implemented, comprising 24 obligatory recommendations. These measures aim to ensure the preservation and sustainable utilisation of marine living resources, along with the sustainable progression of aquaculture in the Mediterranean and the Black Sea. The suggested actions are centred around three principal themes: enhancing fisheries management, tackling climate and environmental concerns within the fisheries and aquaculture sector, and strengthening adherence to regulations.<sup>84</sup>



**EU / Fisheries / Management:** The European fisheries ministers agreed on fishing opportunities in the Atlantic, the North Sea, and in the Mediterranean and the Black Seas for 2024. The political agreement reached by the Council is in line with the goal of ensuring the long-term sustainability of fish stocks, while at the same time protecting the livelihoods of communities that depend on fishing.<sup>85</sup>

**EU / ICAAT / Fisheries:** On 20 November 2023, the International Commission for the Conservation of Atlantic Tunas (ICCAT) annual meeting in New Cairo concluded with the adoption of recommendations to promote sustainable practices, including proposals for shark protection, largely influenced by the EU. While there was no agreement on a new management framework for Bigeye tuna, a significant step was taken to address overfishing of South Atlantic blue shark with a new allocation key, reflecting the EU's commitment to responsible management. Sustainable harvesting levels were established for North Atlantic blue shark. ICCAT also endorsed proposals for the conservation of whale sharks and mobulid rays, primarily from the EU and the UK. Based on EU proposals, the meeting modernised the bluefin tuna farming framework, addressing outdated references, and approving a pilot project in the Cantabrian Sea.<sup>86</sup>

**EU / Atlantic Maritime Strategy:** The Atlantic Maritime Strategy, initiated in 2011, has led to ongoing collaboration among EU Member States in the Atlantic region to advance a sustainable blue economy. On 18 October 2023, the ministers of France, Ireland, Spain and Portugal issued a declaration which underscores a commitment to decarbonisation and deployment of offshore renewable energy, including measures to support sustainable energy in maritime sectors and expand production of offshore renewable energy. Recognised initiatives, such as H2 OPS Punta Salinas, LIVING PORTS, seaThings, BlueMissionAA, and ASTRAL, showcase efforts in clean energy, eco-concrete, marine education, coastal ecosystem restoration, and integrated aquaculture farming.<sup>87</sup>

**Denmark / Fisheries / Closure:** Denmark has established a new Real-Time Closure (RTC) in their waters of the Skagerrak. The closure for juvenile fish applies from 15 November to 5 December 2023.<sup>88</sup>

**EU / Eel stock / Fishery:** On 21 November 2023, members of the European Parliament urged EU Member States to intensify efforts to replenish European eel stocks, emphasising the need for fish-friendly water pumps and ladders to aid eel migration. The resolution addresses challenges such as obsolete dams and migration barriers negatively impacting eel populations, calling for prompt structural solutions. Members also highlighted threats such as pollution, parasites, predators, and illegal fishing, proposing temporary measures such as "trap and transfer" projects until structural solutions are implemented. The resolution advocates better coordination among authorities, increased checks, and monitoring of the Eel Regulation, along with transparency measures and the creation of an expert group to advise on its implementation.<sup>89</sup>

**World Fishery Day:** Established in 1997, World Fisheries Day is celebrated worldwide every year on 21 November, aiming at emphasising the critical nature of sustainable fisheries and the imperative to tackle concerns such as overfishing, habitat destruction, and the overall welfare of fishing communities. The day provides a platform to increase awareness about the importance of fisheries and their contribution to food security, livelihoods, and the global economy.<sup>90</sup>

<sup>84</sup> <https://www.fao.org/gfcm/news/detail/en/c/1661995/>

<sup>85</sup> <https://www.consilium.europa.eu/en/press/press-releases/2023/12/12/council-approves-fishing-opportunities-for-2024-in-eu-and-non-eu-waters/>

<sup>86</sup> [https://oceans-and-fisheries.ec.europa.eu/news/european-union-champions-sustainable-fisheries-iccat-annual-meeting-2023-11-21\\_en](https://oceans-and-fisheries.ec.europa.eu/news/european-union-champions-sustainable-fisheries-iccat-annual-meeting-2023-11-21_en)

<sup>87</sup> [https://oceans-and-fisheries.ec.europa.eu/news/eu-atlantic-strategy-whats-next-2023-11-13\\_en](https://oceans-and-fisheries.ec.europa.eu/news/eu-atlantic-strategy-whats-next-2023-11-13_en)

<sup>88</sup> <https://www.efca.europa.eu/en/node/621>

<sup>89</sup> <https://thefishingdaily.com/latest-news/meps-urge-eu-countries-to-enhance-efforts-in-restoring-european-eel-stocks/>

<sup>90</sup> <https://www.fisheries.noaa.gov/leadership-message/world-fisheries-day-message-alexa-cole-director-noaa-fisheries-office-international>

## 7. Macroeconomic Context

### 7.1. Marine fuel

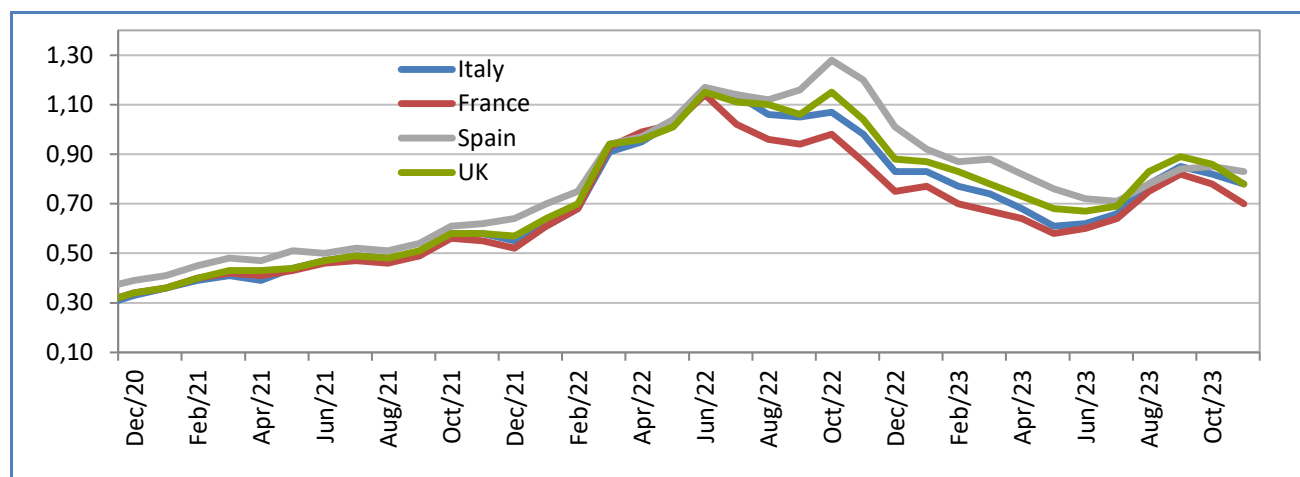
Average prices for Marine fuel in **November 2023** ranged between 0,70 and 0,83 EUR/litre in ports in **France, Italy, Spain** and the **UK**. Prices fell by an average of about 6,6% compared with the previous month and fell by an average of 24,4% compared with the same month in 2022.

Table 31. **AVERAGE PRICE OF MARINE DIESEL IN FRANCE, ITALY, SPAIN, AND THE UK (EUR/litre)**

Member State	November 2023	Change from October 2023	Change from November 2022
France <i>(ports of Lorient and Boulogne)</i>	0,70	-10%	-20%
Italy <i>(ports of Ancona and Livorno)</i>	0,78	-5%	-20%
Spain <i>(ports of A Coruña and Vigo)</i>	0,83	-2%	-31%
The UK <i>(ports of Grimsby and Aberdeen)</i>	0,78	-9%	-25%

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

Figure 63. **AVERAGE PRICE OF MARINE DIESEL IN ITALY, FRANCE, SPAIN, AND THE UK (EUR/litre)**



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

### 7.2. Consumer prices

The EU annual inflation rate was 3,6% in October 2023, down from 4,9% in September 2023. A year earlier, the rate was 11,5%.

**Inflation: lowest rates in October 2023, compared with September 2023.**



**Inflation: highest rates in October 2023, compared with September 2023.**



Table 32. HARMONISED INDEX OF CONSUMER PRICES IN THE EU (2015 = 100)

	Oct 2021	Oct 2022	Sept 2023	Oct 2023	Change from Sept 2023	Change from Oct 2022
Food and non-alcoholic beverages	111,55	130,80	140,30	140,73	↑ 0,3%	↑ 7,6%
Fish and seafood	115,29	130,18	138,84	138,92	↑ 0,1%	↑ 6,7%

Source: Eurostat.

### 7.3. Exchange rates

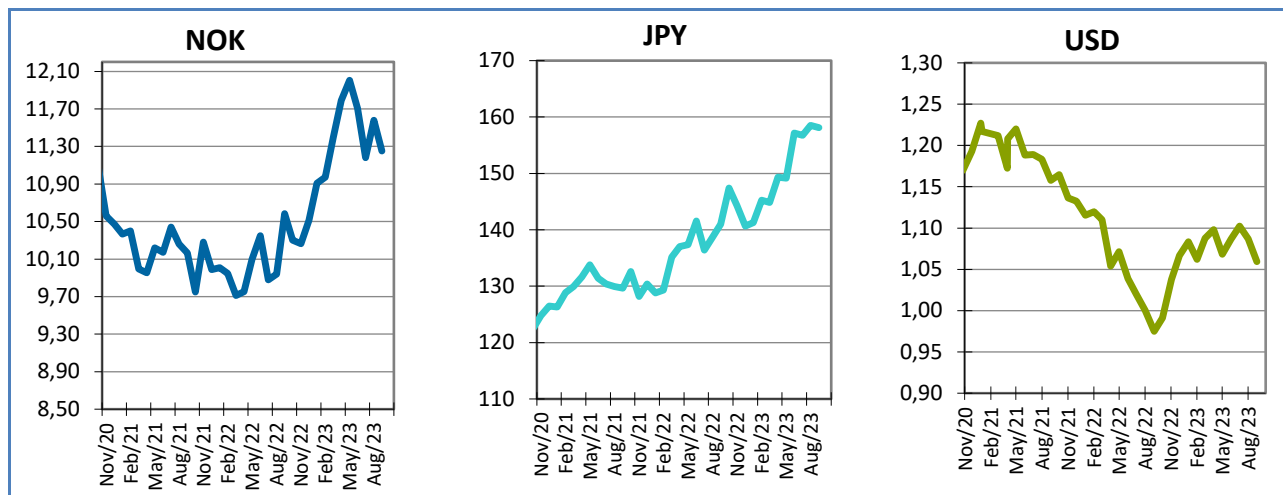
Table 33. EURO EXCHANGE RATES FOR SELECTED CURRENCIES

Currency	Oct 2021	Oct 2022	Sept 2023	Oct 2023
NOK	9,7495	10,3028	11,2535	11,8735
JPY	132,62	147,40	158,10	160,30
USD	1,1645	0,9914	1,0594	1,0619

Source: European Central Bank.

In October 2023, the euro appreciated against the Norwegian krone (5,5%), the Japanese yen (1,4%), and the US dollar (0,2%), relative to the previous month. For the past six months, the euro has fluctuated around 156,65 against the Japanese yen. Compared with October 2022, the euro has appreciated 15,2% against the Norwegian krone, 8,8% against the Japanese yen and 7,1% against the US dollar.

Figure 64. 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, EUR-Lex, ICES, FAO, Fiskepleje.dk.

**Consumption:** Dutch Fish Marketing Board, Polish Institute of Agricultural and Food Economics - National Research Institute, University of Copenhagen

**Case studies:** Eurostat statistics, STECF, AIPCE CEP, FAO, Eurostat Comext, Eurostat Prodcum, Luke, Główny Urząd Statystyczny, National Library of Medicine, Red List, European Commission, OAP, Shark Advocates International, FishStat.

**Global highlights:** European Commission, Oceans and Fisheries, Statics Iceland, the fishing daily, European Commission – Maritime forum.

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

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

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

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

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