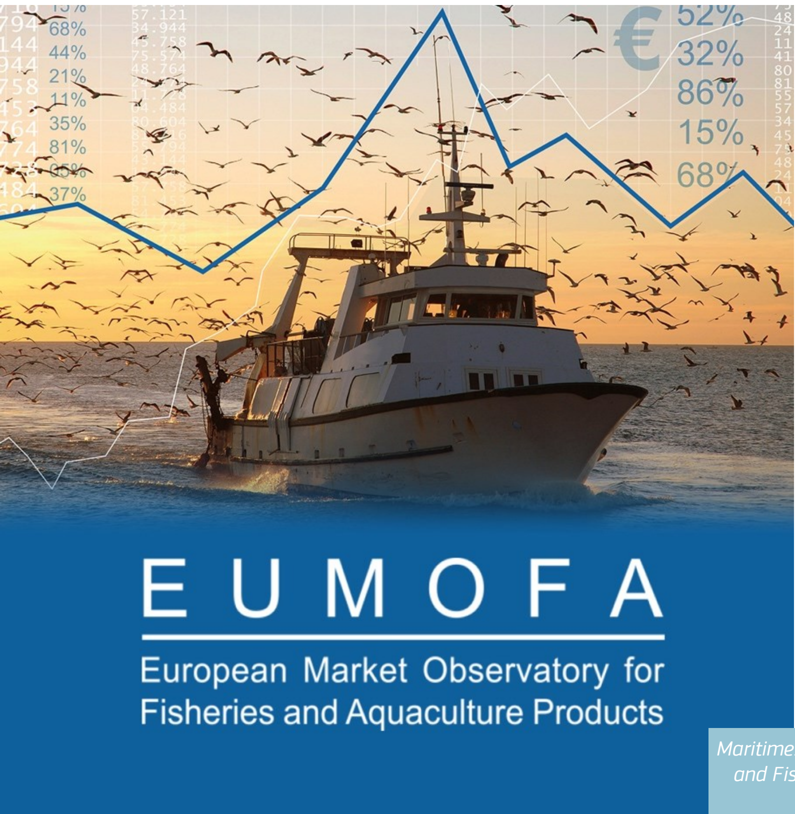
European Commission

CASE STUDY

SMOKED SALMON IN THE EU



Maritimes Affairs and Fisheries

PRICE STRUCTURE IN THE SUPPLY CHAIN

FOCUS ON FRANCE, GERMANY AND POLAND

DECEMBER 2024

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Summary

Global Atlantic salmon production reached 2,9 million tonnes in 2022, a 37% increase from 2013, with aquaculture dominating and wild catches accounting for less than 0,1%. Norway is the largest producer, contributing to 54% of the world's salmon production, followed by Chile (26%) and the UK (6%). The EU's production is minimal, with Ireland as the main EU producer.

The EU is one of the main markets for salmon worldwide and has a significant processing industry for smoking salmon. The apparent consumption for salmon at the EU-27 level was estimated at 1.115.902 tonnes live weight equivalent (LWE) in 2022 and the apparent consumption of smoked salmon was 145.653 tonnes. Poland, France and Lithuania are the top EU processing countries. France led smoked salmon consumption at 28% of the EU market, followed by Germany (18%) and Italy (16%).

Given the limited salmon production in the EU, the EU smoking industry relies entirely on imports. Norway is the leading supplier of salmon to the EU, accounting for 83% of extra-EU imports in 2023. Sweden and Denmark play key roles as trade hubs, importing fresh salmon from Norway and re-exporting it to major EU markets such as Poland, Germany, and France. The UK was the second-largest supplier to the EU, providing 5% of imports, followed by the Faroe Islands (4%) and Iceland (2%).

This study focuses on three Member States (MS) among the largest markets of smoked salmon in the EU: France, Germany and Poland.

France is the largest market for smoked salmon in the EU and the third largest producer, with a production of 22.650 tonnes in 2022. The French salmon smoking industry is entirely dependent on imports, mainly of fresh whole Atlantic salmon from Norway. Domestic production of smoked salmon has decreased by 46% in volume and 34% in value over the past decade, while demand remains high. Most of the salmon is smoked cold[1] in France and is sold sliced and vacuum packed in 100 and 200 gr portions. Approximately 71% of smoked salmon sold in France is processed domestically, and the "Fumé en France" ("Smoked in France") label plays a significant role in the differentiation strategy implemented by processors, which allows them to reach higher prices. The French market is segmented between premium processor brands and retail brands. The demand peaks during Christmas and 90% of French consumers consider smoked salmon as an essential part of their festive meals.

Germany is the second market for smoked salmon in the EU and the fifth largest producer. In 2022, Germany's production of smoked salmon reached 8.418 tonnes, with raw material imported as fresh or frozen whole fish or fillets. Germany also imports significant volumes of smoked salmon, with Poland as the leading supplier, followed by Lithuania and Denmark. While domestic production grew by 28% between 2021 and 2022, total imports slightly decreased, and national supply reached 39.430 tonnes in 2022, mostly driven by imports. Consumption has seen a long-term decline, attributed to decreased production and imports. The retail market is segmented by fish quality, brand, and origin, with a high share of sales occurring in large-scale retailers. Consumption is mainly dominated by consumers over the age of 50, although younger groups also contribute significantly to the whole demand.

Poland is the largest producer of smoked salmon in the EU and the third largest market in the EU. The Polish salmon market is also characterised by its reliance on imports from Norway. In 2022, Poland's production of smoked salmon reached 77.158 tonnes, accounting for nearly half of the EU's total. The Polish smoking industry is export-oriented, with Germany as the primary destination. Domestically, salmon consumption has grown from a luxury item to a widely consumed product, driven by increased availability and promotional efforts. Smoked salmon is available across various retail outlets, with cold-smoked[2] varieties particularly popular among younger, wealthier consumers, while hot-smoked salmon

[1] Two different processing techniques coexist for smoked salmon, which can be either cold-smoked or hot-smoked, referring to the temperature at which the salmon is smoked (either within a 20-30°C or a 60-80°C range). Hot-smoked salmon often is associated with a more traditional production method and consumption.
[2] Ibid.

appeals to a broader demographic. Despite this growth, consumption of smoked salmon remains lower than traditional smoked meats in Poland.

The study provides a price structure analysis of smoked salmon in France, Germany and Poland. On the three markets, retail prices of smoked salmon have increased steadily since 2021, which is correlated to the increase in the prices of raw materials from Norway.

List of acronyms

ASC	Aquaculture Stewardship Council
CN	Combined nomenclature
EU	European Union (EU-27)
FAO	Food and Agriculture Organisation of the United Nations
GGN	Global GAP G.A.P. (Good Agricultural Practices) Number
HOG	Head on gutted
HORECA	Hotel, restaurant and café
LWE	Live weight equivalent
MS	Member States
OFPM	Observatoire de la formation des prix et des marges
RAS	Recirculating aquaculture system
VAT	Value added tax

1. SCOPE AND CONTENT

Case study scope

Key elements for the analysis of Atlantic salmon price structure and distribution of value in the supply chains are:

Product	Origin	Characteristics	Market and price drivers	Focus MS
Smoked salmon	Aquaculture	Globally, most of the volume of salmon is produced from aquaculture; Norway and Chile are the main producers The EU processes most of its supply of smoked salmon; France and Germany are both the two main consumers and processors in the EU	Salmon is the 2nd most consumed fish species in the EU Price, availability and quality of the raw material from Norway Impact of energy and labour costs on the EU-based smoking industry Certifications and brands	France Germany Poland

EUMOFA provides other relevant publications on the topics covered by this study:

- Price structure analysis:
  - Smoked salmon in France (2017) : Smoked salmon FR (eumofa.eu)

- Species profile: Atlantic Salmon

- Country profiles:
  - France – France (eumofa.eu)
  - Germany – Germany (eumofa.eu)
  - Poland – Poland (eumofa.eu)

Content of the document

In conformity with the methodology developed within EUMOFA and available on its website (http://www.eumofa.eu/price-structure), this document includes:

- a description of the product;
- an analysis of production and market trends at the EU level;
- an analysis of the price structure along the supply chain in France, Germany and Poland.

2. DESCRIPTION OF THE PRODUCT AND MARKETS

2.1 Biological and commercial characteristics

The case study focuses on smoked salmon from the Atlantic.

Case study product

Family: *Salmonidae*

Name:

FAO 3-alpha code: SAL
Atlantic salmon *(Salmo salar)*

Presentation: Fresh whole head on gutted (HOG), fresh fillets, frozen whole head on gutted (HOG), frozen fillets, smoked, prepared.

Commercial sizes:

Wild: between 40 cm and 120 cm.

Minimum landing size for Atlantic salmon is 60 cm in all fishing areas (except for the Bothnian Bay, where 50cm is tolerated).[3]

[3] Council Regulation (EC) No 2019/1241

Related codes in the product nomenclature (COMEXT/EUROSTAT)

The table below provides the trade nomenclature for salmon-related products. It provides CN-8 codes, products descriptions and a summary of the preservation/presentation types, and the concerned species (excluding Danube salmon as its traded volumes are considered negligible). It also specifies whether each product is considered as a raw material or a final product for the purpose of this study. It should be noted that the type of raw material used by the smoking industry in each Member State (France, Germany and Poland) is further studied in the national chapters.

Table 1: Custom codes for salmon products (CN-8 nomenclature)

CN-8 Code	Description	Preservation-Presentation type	Species	Raw material versus final product
03019911	Live Pacific Salmon "Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus", Atlantic salmon "Salmo salar" and Danube salmon "Hucho hucho"	Live - Whole	Pacific and Atlantic salmon	
03021300	Fresh or chilled Pacific salmon "Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus"	Fresh or chilled – Whole HOG	Pacific salmon	Raw material
03021400	Fresh or chilled Atlantic salmon "Salmo salar" and Danube salmon "Hucho hucho"	Fresh or chilled – Whole HOG	Atlantic salmon	Raw material
03031100	Frozen sockeye salmon [red salmon] "Oncorhynchus nerka"	Frozen – whole HOG	Sockeye salmon	Raw material
03031200	Frozen Pacific salmon (excl. sockeye salmon "red salmon")	Frozen – whole HOG	Pacific salmon	Raw material
03031300	Frozen, Atlantic salmon "Salmo salar" and Danube salmon "Hucho hucho"	Frozen – whole HOG	Atlantic salmon	Raw material
03044100	Fresh or chilled fillets of Pacific salmon "Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus", Atlantic salmon "Salmo salar" and Danube salmon "Hucho hucho"	Fresh or chilled - Fillets	Pacific,andAtlantic salmon	Raw material
03048100	Frozen fillets of Pacific salmon "Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus", Atlantic salmon "Salmo salar" and Danube salmon "Hucho hucho"	Frozen - Fillets	Pacific and Atlantic salmon	Raw material
03053910	Fillets of Pacific salmon "Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus", Atlantic salmon "Salmo salar" and Danube salmon "Hucho hucho", salted or in brine, but not smoked	Salted or in brine - Fillets	Pacific and Atlantic salmon	-
03054100	Smoked Pacific salmon "Oncorhynchus nerka, Oncorhynchus gorbuscha, Oncorhynchus keta, Oncorhynchus tschawytscha, Oncorhynchus kisutch, Oncorhynchus masou and Oncorhynchus rhodurus", Atlantic salmon "Salmo salar" and Danube salmon "Hucho hucho", incl. fillets (excl. offal)	Smoked - inc. Fillets	Pacific and Atlantic salmon	Final product
16041100	Prepared or preserved salmon, whole or in pieces (excl. minced)	Prepared-preserved	-	-
16042010	Prepared or preserved salmon (excl. whole or in pieces)	Prepared-preserved	-	-

Biological parameters

Atlantic salmon is an *amphihaline* species, however it spends most of its life in freshwater. Juveniles spend 1 to 6 years in cold freshwater habitats such as lakes, rocky creeks and pools in small and large rivers. They mainly feed on aquatic insects, crustaceans, molluscs and fish. The juveniles then migrate to coastal waters or open oceans for 1 to 4 years, changing their diet to include squid and shrimp. Reproduction occurs from November to December, when salmons return to their birthplace for spawning. Most Atlantic salmon die after spawning, except for a few females[4].

The life cycle of Atlantic salmon in aquaculture is approximately 2 to 3 years long from roe hatch to harvest-ready salmon. Fertilisation of the roe is done in freshwater in land-based facilities. The roe is ready to hatch after 60 days, at a maximum temperature of 8°C. Four to six weeks after hatching, alevins lose the yolk sacs they use to get their food from and start to feed. Juveniles are fed on pellets. After 8 to 15 months in freshwater rearing tanks, salmons are transported to the sea. At this stage, the fish weighs from 100 to 300 g, depending on the location. The salmon is then grown at the sea farm for 14 to 22 months until it is ready for harvest, when it reaches 4 to 6 kilos[5].

Table 2: Biological parameters of Atlantic salmon

Parameter	Atlantic salmon *(Salmo salar)*
Temperature	2-9°C, cold water
Habitat	Youngs stay in freshwater for 1 to 6 years, then migrate to coastal marine waters or open oceans for 1 to 4 years before returning to their freshwater for spawning. They remain near the surface (10-23m).
Diet in the wild	Juveniles feed mainly on aquatic insects, crustaceans, molluscs and fish; adults at sea feed on squids, shrimps, and fish
Distribution in the wild	North Atlantic, Western Atlantic, North Sea and Baltic Sea

Source: Fishbase

[4] https://www.fishbase.se/summary/salmo-salar.html
[5] Based on an example of seawater aquaculture production in Norway: https://www.leroyseafood.com/en/about-us/about-leroy/how-do-we-produce-salmon/

2.2 World production

The global production of Atlantic salmon amounted to 2,9 million tonnes in 2022, marking a 37%-increase in comparison to 2013. Salmon production is almost exclusively from aquaculture. Production from fisheries amounted to less than 0,1% of the global production and has been decreasing since decades. Between 2021 and 2022, global production of smoked salmon has decreased for the first time since 2016 (-1%). According to complementary data from Kontali EDGE, this declining trend has been accelerating between 2022 and 2023 (-2%).

Table 3: Evolution of worldwide production of Altantic salmon between 2013 and 2022 (1.000 tonnes)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Evol. 22/21	Evol. 22/13
Aquaculture	2.094	2.347	2.381	2.247	2.358	2.426	2.627	2.721	2.900	2.869	-1%	+37%
Catches	2	2	2	2	2	2	2	2	2	1	-28%	-51%
Total	**2.096**	**2.350**	**2.383**	**2.249**	**2.360**	**2.428**	**2.629**	**2.723**	**2.902**	**2.871**	**-1%**	**+37%**

Source: FAO Fish Stat

Due to biological constraints, seawater temperature requirements and other natural constraints, farmed salmon is mainly produced in sea in Norway, Chile, the UK, North America, the Faroe Islands, Iceland, Ireland, New Zealand, etc.[6] In addition, each producing region has historically focused on developing the nearby markets. As salmon is primarily marketed as a fresh product, time and cost of transportation have driven this trend. According to the Salmon Farming Industry Handbook 2024[7], the main markets for each production origin are:

- Norway: Europe and Asia,
- Chile: USA, South America and Asia,
- Canada: USA,
- Scotland: Domestic within UK, France.

In 2022, Norway was the main producer, accounting for 54% of world production in 2022. The same year, it was followed by Chile, with 26% of world salmon production. The UK was the third largest producer with 169.000 tonnes, representing 6% of total production in 2022. The Faroe Islands and Canada followed, with each accounting for 4% of world production. The EU-27 accounted for less than 1% of the world production.

World production of farmed Atlantic salmon has increased by 37% between 2013 and 2022, from 2,1 million tonnes to 2,9 million tonnes. Among the main producer countries, this increase is mainly attributed to Chile (+54%), and to a lesser extent to Norway (+33%) and the Faroe Islands (43%). The strongest increases were for Australia (+89%) and Iceland (+1.322%). Between 2021 and 2022, the world production has decreased slightly (-1%), mainly due to a decline in Norwegian production, but also due to sharp decrease in the production from smaller producers such as the UK (-18%), Faroe Islands (-6%) and Canada (-10%). Among the larger producers, only Chilean production increased (+5%) between 2021 and 2022. According to complementary data from Kontali EDGE, similar to what is observed globally, Norwegian production suffered a second consecutive year of decline between 2022 and 2023 (-2%), after 5 consecutive years of production increase.

[6] Salmon Farming Industry Handbook 2024. https://ml-eu.globenewswire.com/Resource/Download/6559604d-b123-4653-9acc-03dbafd7c7c8

[7] Ibidem.

Table 4: Evolution of farmed Atlantic salmon production by country (1.000 tonnes)

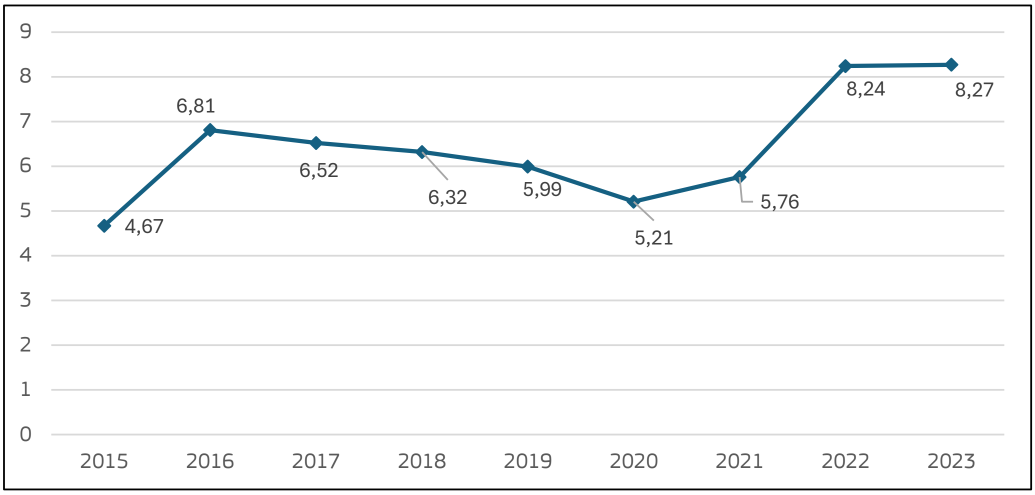
Country	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Evol. 22/21	Evol. 22/13
Norway	1.169	1.259	1.304	1.234	1.237	1.282	1.364	1.389	1.563	1.552	-1%	+33%
Chile	492	644	609	532	614	661	702	787	725	759	+5%	+54%
United Kingdom	163	179	172	163	190	156	204	192	205	169	-18%	+3%
Faroe Islands	76	86	81	83	87	79	95	89	116	109	-6%	+43%
Canada	98	86	122	124	121	123	119	120	120	108	-10%	+11%
Australia	43	42	48	56	53	61	57	67	84	81	-4%	+89%
Iceland	3	4	3	9	11	14	27	34	47	45	-3%	+1.322%
EU-27	10	11	14	18	20	14	13	16	15	13	-12%	+33%
Others	42	38	30	30	29	38	48	28	27	34	+26%	-19%
Total	**2.096**	**2.350**	**2.383**	**2.249**	**2.360**	**2.428**	**2.629**	**2.723**	**2.902**	**2.871**	**-1%**	**+37%**

Source: FAO Fish Stat

Norway is the main supplier of raw materials used by the EU salmon smoking industry. Salmon is mainly exported fresh and gutted to the EU market. In the section below, we provide an analysis of export prices for fresh gutted salmon from Norway, according to the Nasdaq salmon price index. This indicator, which is widely used by operators on the salmon market, is updated weekly[8]

The figure below illustrates these prices. In 2015, the average spot price of fresh farmed gutted, superior grade salmon from Norway was 4,67 EUR/kg. The following year, in 2016, it surged to 6,81 EUR/kg, marking a significant price shock for the market. Prices then saw a gradual decline, dropping to 6,52 EUR/kg in 2017, 6,32 EUR/kg in 2018, 5,99 EUR/kg in 2019 and 5,21 EUR/kg in 2020. However, in 2021, prices began to rise again, reaching 5,76 EUR/kg, and in 2022, they hit an all-time high of 8,24 EUR/kg. By 2023, the price stabilised at a level similar to 2022, at 8,27 EUR/kg. Changes in ex-works[9] spot prices from Norway serve as a useful indicator of import price fluctuations for EU countries, with Fish Pool providing detailed weekly data on raw salmon prices for tracking trends over time.

Figure 1: Average price for fresh whole HOG salmon from Norway (EUR/kg)



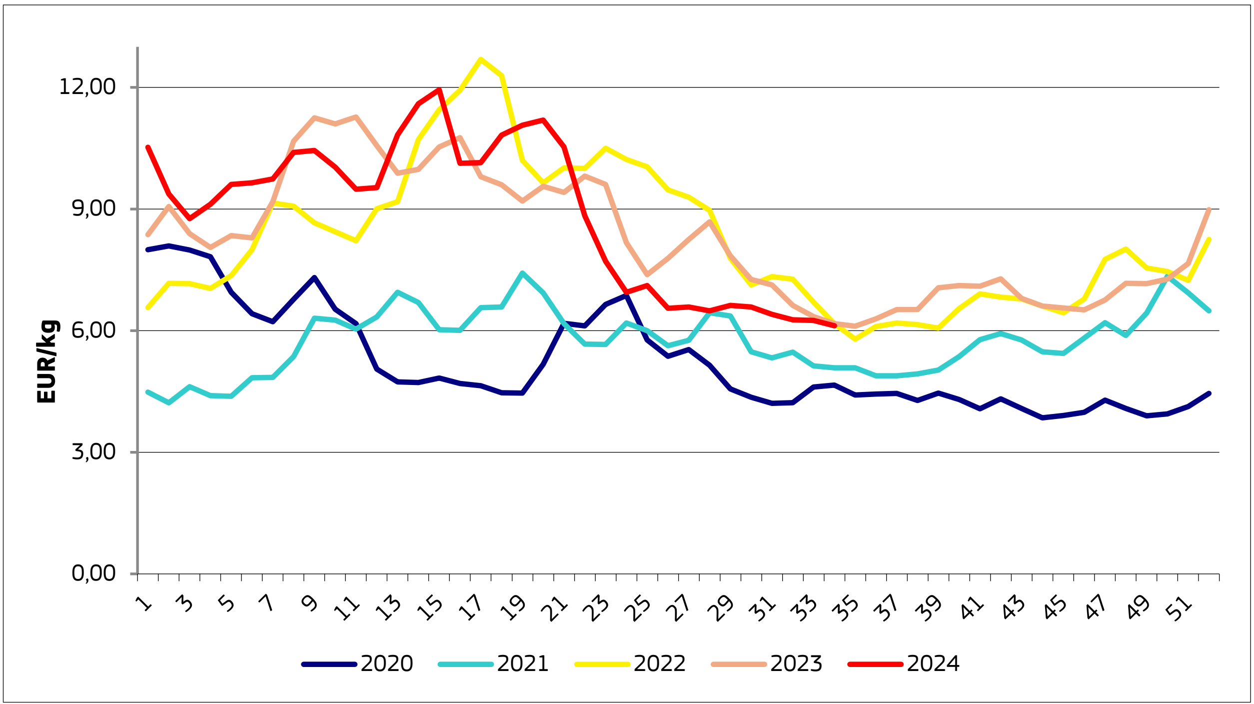
Source: Fish Pool export prices, based on the Nasdaq Salmon price index

[8] The internationally recognized salmon price index was provided until August 2024 by Nasdaq (Nasdaq Salmon price index); since August 2024, it has been replaced by SitAgri's SISALMON index

[9] Ex-works is a widely used international shipping term ; the ex-works price is similar to the ex-factory price; it includes the value of all the material used and all other costs related to its production minus any internal taxes; for more information: https://trade.ec.europa.eu/access-to-markets/en/glossary/ex-works-price

Spot prices for fresh salmon in Norway show cyclical fluctuations (see figure below). Those prices are mainly supply driven, influenced by biological parameters, sea temperatures and production regulations in Norway. The highest prices are observed when the Norwegian production levels are the lowest while the lowest prices are observed when production peaks. The effect of demand can be observed during the weeks of the Christmas break, with a temporary increase in price over a short period of time. Over the past five years, a combination of factors has contributed to a decrease in the share of superior grade[10] in Norwegian production, which drove prices of fresh whole HOG salmon up.

Figure 2: Weekly price Norway for fresh whole HOG salmon (EUR/kg)



Source: Fish Pool export prices, based on the Nasdaq Salmon price index

[10] Norwegian salmon is divided between three grades depending on its quality: superior, ordinary, production.

2.3 EU production

2.3.1 Evolution of salmon production

According to the FAO, EU salmon production amounted to 15.587 tonnes in 2022, 93% from aquaculture (14.512 tonnes) and 7% from wild catches (1.075 tonnes).

Ireland is by far the largest EU producer, with 88% (11.916 tonnes) of the total EU-27 production in 2022. The same year, it was followed by Denmark, which accounted for 9% of total EU production (1.165 tonnes), and to a lesser extent by Finland (467 tonnes from catches). Only very limited volumes have been produced in Spain and Sweden over the period. EU-27 farmed salmon production has increased between 2013 and 2022 (+30%), driven mainly by the increase in Danish production (from 142 2013 to more than 1.100 tonnes in 2022). Irish production has also increased slightly over the same period (+6%). It is important to note that there are no statistics for Poland in FAO Fish Stat but according to Eurostat and interviews with Polish stakeholders, there has been an annual Polish production of about 500 tonnes over the last few years. According to complementary data from Kontali EDGE, salmon production in the EU increased significantly between 2022 and 2023, thanks to a 28% progression of Irish farmed salmon production.

Finland and Sweden are the largest salmon fishing countries, accounting for 91% and 7% respectively of the total EU catch in 2022. EU salmon fishing decreased significantly over the past decade, and declined by 38% between 2021 and 2022, mainly due to the collapse of Swedish catches (-81%).

Table 5: EU-27 production (fisheries and aquaculture) of Atlantic salmon (in tonnes) 2013-2022

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Evol. 22/21	Evol. 22/13
Ireland	9.212	9.424	13.175	16.358	18.394	12.053	11.403	12.940	12.844	11.916	-7%	29%
Denmark	142	539	532	1.349	870	1.072	46	1.956	1.701	1.165	-32%	720%
Finland	440	620	563	626	592	274	284	491	495	467	-6%	6%
Sweden	605	523	639	401	423	778	482	647	188	35	-81%	-94%
Others	73	51	56	50	63	80	71	89	103	9	-91%	-88%
Total	**10.472**	**11.157**	**14.965**	**18.784**	**20.342**	**14.257**	**12.286**	**16.123**	**15.331**	**13.592**	**-11%**	**30%**

Source: FAO Fish Stat

2.3.2 Import - Export

Extra-EU imports

In 2023, salmon imports from third countries accounted for 992.594 tonnes for an overall value of over EUR 8,3 billion. Imports consist mainly of fresh salmon (88% of imports value in 2023) and frozen products (11%). Smoked salmon imports from extra-EU represent only 1% of the sales value in 2023. Norway is the main supplier of the EU market. In 2023, imports of salmon from Norway amounted to 823.431 tonnes, representing 83% of extra-EU imports in terms of volume. COMEXT data shows that the value of extra-EU imports of fresh salmon by Sweden and Denmark account for respectively 59% and 15% of the EU total. Both are essentially transit countries for Norwegian exports whose main destinations are the main EU markets for salmon: France, Germany and Poland. In 2023, the second supplier of the EU market was the UK (5% of EU imports in 2023), followed by the Faroe Islands (4% of EU imports) and Iceland (2% of the total volume). Between 2014 and 2023, the total imported volume and value have increased, by respectively 14% and 82% (29% in real terms[11]). The price of imported salmon has also increased by 60% (+17% in real terms).

Table 6: Extra-EU imports of salmon (2023)

	Nominal value (1.000 EUR)	Volume (tonnes net weight)	Price (EUR/kg)
Fresh	7.371.792	889.051	8,29
Frozen	920.961	97.026	9,49
Smoked	56.508	3.463	16,32
Prepared or preserved	26.815	3.046	8,80
Salted	191	9	22,26
Total	**8.376.267**	**992.594**	**8,44**

Source: EUMOFA elaboration of Eurostat-Comext data

Extra-EU exports

In 2023, salmon exports to third countries amounted to 87.041 tonnes for an overall value of EUR 1,27 billion. The main destinations were the United States of America (USA) (48% of the exported value), Switzerland (11%), the UK (9%) and Australia (7%). These exports were mainly fresh and smoked products (each representing 33% of the extra-EU export value), followed by frozen products (27%). Main EU exporters were the Netherlands accounting for 42% of the total value of extra-EU exported salmon, followed by Denmark and Poland both accounting for 26% of the total value of exported salmon. Salmon exports from the Netherlands and Denmark are mainly fresh salmon (53% and 40% of the total value respectively), while Polish exports are mainly frozen and smoked salmon (59% and 30%). Between 2014 and 2023, export volume has decreased by 23%, while prices have increased by 131% (+76% in real terms), leading to an overall increase of the exports value by 131% in nominal value over the same period (17% in real terms).

[11] Values in real terms are deflated by using the GDP deflator (base=2016)

Table 7: Extra-EU exports of salmon by preservation type (2023)

	Nominal value (1.000 EUR)	Volume (tonnes net weight)	Price (EUR/kg)
Fresh	426.357	29.602	14,40
Smoked	420.994	19.845	21,21
Frozen	340.331	30.221	11,26
Prepared or preserved	83.686	7.288	11,48
Salted	1.553	85	18,28
Total	**1.272.920**	**87.041**	**14,62**

Source: EUMOFA elaboration of Eurostat-Comext data

Intra-EU trade flows (exports)

Salmon export between EU countries amounted to 1,02 million tonnes, for an overall value of over EUR 10,3 billion in 2023. These exports consisted mainly of fresh salmon (68% of exports value in 2023), followed by smoked salmon (15%) and frozen salmon (12%).

The value of intra-EU exports increased by 53% in nominal value over the 2014-2023 period (47% in real terms). The total volume exported rose by 26% and the price increased by 36% over the same period (+17% in real terms).

Table 8: Intra-EU exports of salmon by preservation type (2023)

	Nominal value (1.000 EUR)	Volume (tonnes net weight)	Price (EUR/kg)
Fresh	7.045.446	774.950	9,09
Smoked	1.572.843	87.010	18,08
Frozen	1.265.722	122.190	10,36
Prepared or preserved	466.947	35.665	13,09
Salted	31.581	2.647	11,93
Total	**10.382.539**	**1.022.462**	**10,15**

Source: EUMOFA elaboration of Eurostat-Comext data

COMEXT data show that besides Sweden, which accounts for half of the value of intra-EU exports due to its specific situation as a transit country, the largest exporter to other EU MS in 2023 was Poland, with 19% of the value of intra-EU exports. Polish exports to other EU MS consisted of smoked salmon (52% of the total value of exports), fresh salmon (20%) and frozen salmon (17%). The main destination was Germany, which accounted for 52% of Polish exports in value to EU countries. Denmark was the third largest exporter, accounting for 19% of intra-EU exports in value terms. Exports consisted mainly of fresh salmon (67% by value) and frozen salmon (25%). Destinations were mainly Germany (26% of total export value) and other countries such as France, Netherlands, Italy and Poland (each accounting for around 10% of total export value). As already mentioned, Sweden and Denmark are hubs for salmon. Both import from Norway and then export to the other EU countries.

In summary, the main importing countries of salmon from other EU MS are Germany (accounting for 20% of the intra-EU export value in 2023), France (14%), Poland (13%) and Italy (12%). While some countries import mainly raw products, such as France (87% of imports from EU are fresh and frozen salmon) and Poland (98% of total imports in value), Germany imports both raw products and a significant share of processed products, accounting for 40% of total imports in value from other MS.

Table 9: Value of intra-EU exports of salmons to the main MS of destination (1.000 EUR, nominal value, 2023)

	Fresh	Smoked	Frozen	Prepared or Preserved	Salted	Total	% total 2023
DE	852.195	611.797	363.062	186.339	20.265	2.033.657	20%
FR	1.131.637	133.033	170.657	46.868	1.316	1.483.512	14%
PL	1.147.264	4.485	166.850	10.904	62	1.329.564	13%
IT	752.436	326.268	109.016	50.104	292	1.238.115	12%
NL	810.718	92.933	66.632	27.680	37	997.998	10%
ES	815.406	21.849	75.371	10.386	78	923.089	9%
BE	288.280	117.115	41.231	23.947	1.184	471.758	5%
DK	159.277	47.041	76.866	8.931	179	292.294	3%
Others	1.088.234	218.322	196.039	101.788	8.167	1.612.550	16%
Total	**7.045.446**	**1.572.843**	**1.265.722**	**466.947**	**31.581**	**10.382.539**	**100%**

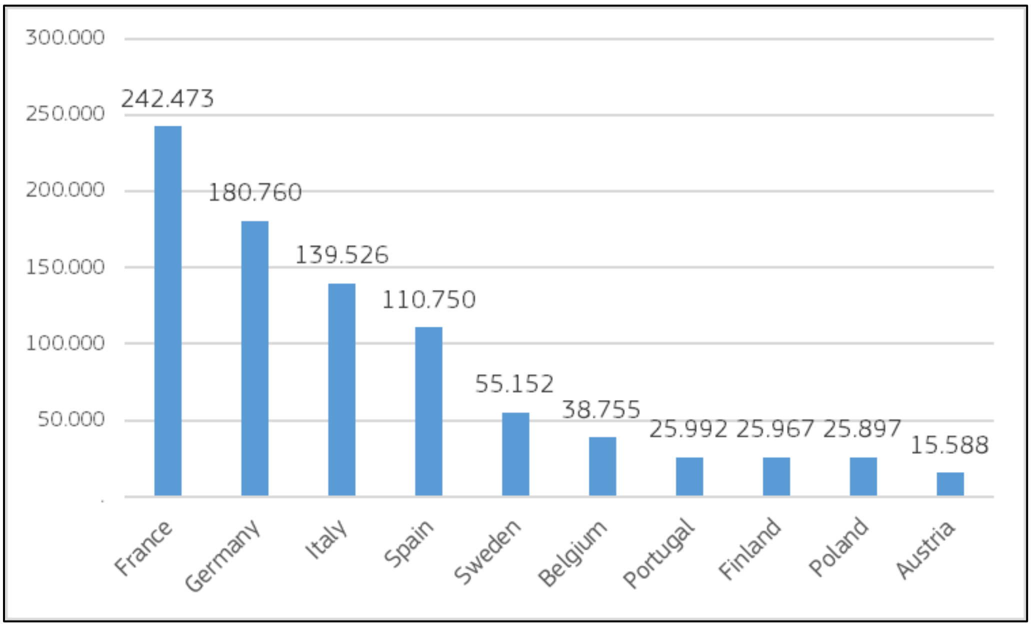
Source: EUMOFA elaboration of Eurostat-Comext data

2.3.3 Apparent consumption by Member State

Apparent consumption of salmon

In 2022, the total supply of salmon in the EU-27 (production + imports) was estimated at 1.275.893 tonnes live weight equivalent (LWE). Almost the entire supply came from imports (99%, accounting for 1.262.301 tonnes LWE). Exports accounted for 159.991 tonnes LWE. Therefore, the apparent consumption for salmon at the EU-27 level (production + imports - exports) was estimated at 1.115.902 tonnes LWE (see Annex 1). The main markets for salmon within the EU in 2022 were France (242.473 tonnes LWE, representing one-quarter of EU-27 consumption), Germany (180.760 tonnes LWE), Italy (139.526 tonnes LWE), and Spain (110.750 tonnes LWE).

Figure 3: Apparent consumption of salmon in the top-10 markets in the EU (tonnes LWE)



Source: EUROSTAT and Eurostat-Comext data

Apparent consumption of smoked salmon

In 2022, the total supply of smoked salmon in EU-27 (production + imports) was estimated at 165.796 tonnes. Although the raw materials are sourced from outside the EU, the EU smoked salmon market is supplied with products processed within the EU. The main processing countries are Poland (47% of the EU production of smoked salmon), Lithuania (19%), France (14%) and Denmark (10%). In 2022, imports accounted for 3.138 tonnes, which constitutes only 2% of the EU smoked salmon supply. Exports accounted for 20.143 tonnes. Apparent consumption at the EU-27 level (production + imports - exports) was estimated at 145.653 tonnes.

The main EU markets for smoked salmon in 2022 were France (34.279 tonnes accounting for 24% of the EU market), Germany (18% of EU consumption), Italy (16%) and Poland (15%).

Table 10: Apparent consumption of smoked salmon in the MS (2022, in tonnes product weight) (in bold, the three MS studied in the present report)

	Production	**Imports**	**Total Supply** (production +imports)	**Exports**	**Apparent consumption** (total supply-exports)
France	**22.650**	**14.965**	**37.615**	**3.336**	**34.279**
Germany	**8.418**	**31.019**	**39.437**	**13.738**	**25.699**
Italy	1.838	21.218	23.056	148	22.908
Poland*	**77.158**	**703**	**77.861**	**56.425**	**21.435**
Lithuania	30.265	197	30.462	15.776	14.686
Denmark	15.661	2.822	18.484	9.342	9.142
Belgium	2.799	9.419	12.218	4.673	7.545
Greece	0	7.195	7.195	3.310	3.885
Finland	2.442	333	2.776	200	2.576
Austria	0	3.117	3.117	566	2.551
Portugal	0	1.955	1.955	41	1.915
Ireland	937	552	1.490	166	1.324
Sweden	0	1.683	1.683	525	1.159
Czechia	0	834	834	247	587
Estonia	490	188	677	205	472
Romania	0	553	553	145	408
Spain	0	1.409	1.409	1.029	380
Luxembourg	0	372	372	19	354
Hungary	0	288	288	13	275
Croatia	0	769	769	580	188
Slovenia	0	190	190	15	175
Bulgaria	0	283	283	176	107
Malta	0	93	93	0	93
Cyprus	0	54	54	0	54
Latvia**	0	281	281	1.347	nd
Netherlands**	0	2.171	2.171	8.683	nd
EU-27	**162.659**	**3.138**	**165.796**	**20.143**	**145.653**

Source: Eurostat-Prodcom and Eurostat-Comext

** The calculation of the apparent consumption in Latvia and the Netherlands provides negative values. This could be related to a lack of accuracy in production and export data.

3. THE FRENCH MARKET

3.1 Structure of the supply chain

3.1.1 Supply

Imports of raw material

The French salmon market relies entirely on imports, as there is no domestic production of raw materials. The French smoking industry primarily sources fresh whole head-on gutted (whole HOG) Atlantic salmon, mainly imported from Norway. According to interviews, the raw materials used by the smoking industry in France consist of the following imported products:

- Atlantic salmon and Danube salmon, fresh or refrigerated whole (HOG) (CN8 code: 03021400),
- Pacific salmon, fresh or refrigerated, whole and gutted (HOG) (CN8 code: 03021300),
- Pacific, Atlantic and Danube salmon, fresh or refrigerated fillets (CN8 code: 03044100).

Table 10: Evolution of French imports of fresh (whole HOG and fillet) and frozen HOG salmon[12] (tonnes product weight, 2019-2023)

	2019	2020	2021	2022	2023	Evol. 2023/19
Atlantic salmon and Danube salmon, fresh or refrigerated whole and gutted	123.862	131.534	178.802	141.214	129.470	+5%
Pacific, Atlantic and Danube salmon, fresh or refrigerated fillets	10.476	11.713	18.294	26.326	13.662	+30%
Pacific salmon, fresh or refrigerated, whole and gutted	1.280	995	1.444	388	634	-50%

Source: Eurostat-Comext

According to Eurostat-Comext, the majority of raw material imports for the French smoking salmon industry originate from Sweden and Denmark. However, both MS also act as "trade hubs" for imports from third countries. The French smoking salmon industry is mainly supplied with fresh Atlantic salmon– mainly whole HOG but also fillets– imported primarily from Norway and Scotland, with smaller quantities from Ireland, which specialises in organic salmon. The industry is also supplied with frozen Alaska salmon, which according to the French Association of Processed Food represents 7% of the raw material used by the smoking industry.

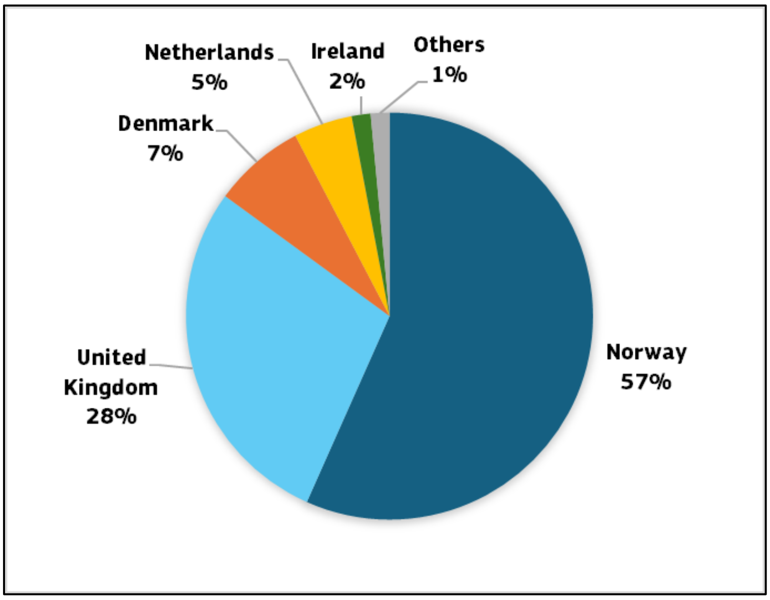
In 2023, over 90% of the volume of fresh salmon imports (by product weight) consisted of whole HOG fish, while less than 10% in fish fillets. Volumes of imports of fresh whole HOG Pacific salmon have decreased significantly (-50%) over the past five years (2019-2023). Salmon fillets are also imported from Norway but are transported through Sweden and Denmark. It is important to note that a share of these imports supplies the fresh market, as salmon in France is widely consumed fresh, both household consumption and in restaurants).

A According to ADEPALE (*Association des Entreprises de Produits Alimentaires Elaborés* - national business organisation of processed food companies), 93% of the raw materials used by the salmon

[12] According to stakeholders, no frozen fillet is used for smoked salmon processing in France. The following table give the total imported volume of products, which according to the interviews are used for smoked salmon production. Most of these volumes are sold either fresh and frozen to the consumer, and are not used as raw material for smoked salmon production.

smoking industry originate from aquaculture. The remaining 7% of the raw materials almost exclusively consists of frozen imports of wild salmon from the Pacific region (Sockeye and Pacific salmon).

Figure 4: Breakdown of import volume of raw material[13] by main suppliers, 2023



Source: Eurostat-Comext

Note: In the figure above, we assume that the Netherlands and Denmark are mainly transit countries for imports from Norway and, to a lesser extent, from the UK.

Production of smoked salmon in France

The smoking industry in France is composed of around 50 companies involved in primarily smoking salmon and trout. Most of these enterprises are small and medium-scale companies. Majority of salmon is smoked cold in France and is sold sliced and vacuum packed in 100 and 200 gr portions.

Over the period 2013-2022, the French production of smoked salmon decreased in volume (-46%) and value (-34%), while sale prices increased by 9% in real terms. Even though there is high demand for smoked salmon in France, the production capacity is limited by the availability of raw material and its price.

Table 11: Production of smoked salmon in France (2013-2022)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Evol. 2022/13
Volume (tonnes)	42.108	27.252	23.025	24.154	21.038	18.568	20.897	17.900	21.174	22.650	-46%
Value (1.000 EUR)	869.324	584.500	524.478	568.854	544.952	504.533	*nc*	419.575	492.785	573.923	-34%
Sale price (EUR/kg)	20,64	21,45	22,78	23,55	25,9	27,17	*nc*	23,44	23,27	25,34	23%

Source: Eurostat-Prodcom

Imports of smoked salmon

Imports of smoked salmon to France reached 13.042 tonnes in 2023. The main countries of origin are Norway (reported under Sweden in the official statistics), accounting for 29% of total import volume, Poland (24%) and the UK (14%). According to statistics, imports of smoked salmon from Norway have

[13] This breakdown of import volumes does only take into account fresh salmon, and excludes frozen imports.

only started since 2022. According to interviews, these imports correspond to low-priced smoked salmon, imported in bulk from Norway to be packed in France (see section 3.3 on price transmission in the value chain). The last five years (2019-2023) have been characterised by a small increase in the imports of smoked salmon.

Data on imports of raw materials show a strong seasonality, with the bulk of imports being concentrated towards the end of the year, in anticipation of the Christmas and end-of-the-year festivities, which are marked by a high consumption level. Between 2019 and 2023, nearly 40% of annual imports took place from September to December.

Table 13: Evolution of smoked salmon imports to France by main suppliers (tonnes product weight, 2019-2023)

	2019	2020	2021	2022	2023	Evol. 2023/2019
Sweden (Norway)	66	73	136	3.852	3.741	+5.568%
Poland	5.670	3.755	4.582	3.022	3.079	-46%
United Kingdom	1.807	1.371	2.395	2.233	1.875	+4%
Germany	1.664	1.029	1.508	1.813	1.268	-24%
Lithuania	566	614	772	832	1.228	+117%
Belgium	896	1.118	1.168	1.289	876	-2%
Others	479	524	761	1924	975	+104%
Total	**11.149**	**8.484**	**11.322**	**14.965**	**13.042**	**+17%**

Source: Eurostat-Comext

Supply with smoked salmon (imports + national production)

In 2022, the supply of smoked salmon in France reached 37.615 tonnes, 60% from the French processing activities and 40% from imports. According to interviews, 2023 will be characterised by a decrease in the French production, due to reduced production in the main supplier countries (-2% for Norway, -5% for the UK and -10% for the Faroe Islands) and an increase in raw material prices.

Table 14: Evolution of French smoked salmon supply (tonnes product weight, 2018-2022)

	2018	2019	2020	2021	2022	Evol. 2021/2022	Evol. 2018/2022
Domestic processing	18.568	20.897	17.900*	21.174	22.650	**+7%**	**+22%**
Imports	10.603	11.149	8.484	11.322	14.965	**+32%**	**+41%**
Supply	**29.171**	**32.046**	**26.384**	**32.496**	**37.615**	**+16%**	**+29%**

*According to interviews, national production in 2020 is higher than the production reported in official statistics.

Source: Eurostat-Prodcom and Eurostat-Comext

3.1.2 Exports

Exports

In 2023, France exported 3.065 tonnes of smoked salmon, with Italy being the largest destination, accounting for 26% of the total export volume, followed by Belgium, Spain, and Switzerland, each at 14%. Exports to Italy have fluctuated from 580 tonnes to 1.264 tonnes. According to an interviewee, this variability is due to a major importer handling most of Italy's imports from France and other EU countries through a tender process, with export volumes depending on the outcome of these tenders.

Table 15: Evolution of French smoked salmon exports by countries (tonnes product weight, 2019-2023)

	2019	2020	2021	2022	2023	Evol. 2023/2019
Italy	580	589	1.264	1.078	796	+37%
Belgium	325	247	401	392	443	+36%
Spain	293	53	693	230	363	+24%
Switzerland	361	334	381	367	349	-3%
Others	643	601	1.275	1.269	1.113	+73%
Total	**2.202**	**1.824**	**4.014**	**3.336**	**3.065**	**+39%**

Source: Eurostat-Comext

3.1.3 Apparent consumption

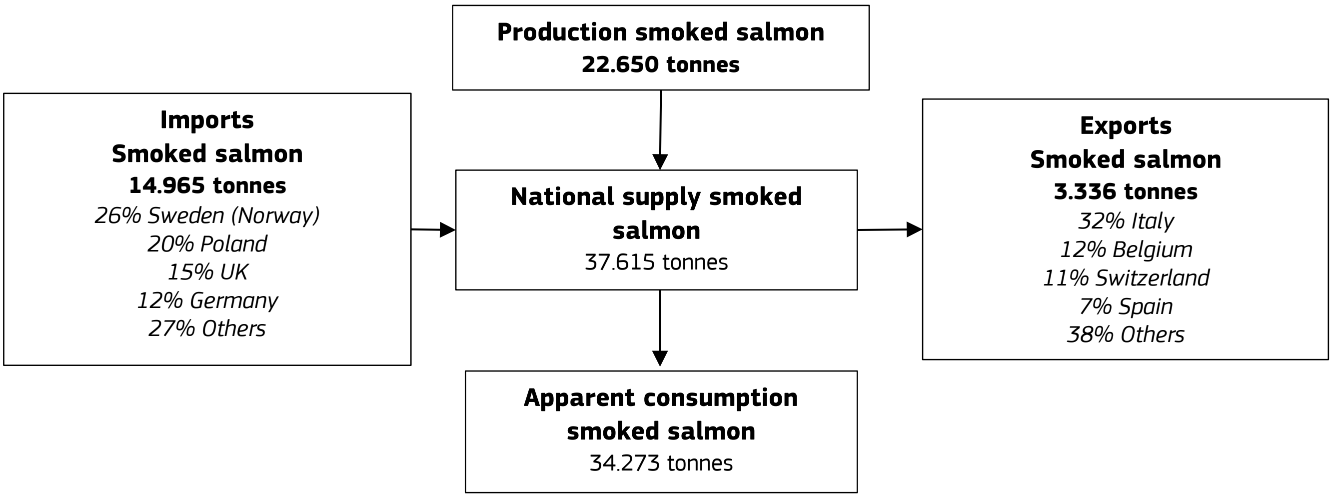
The French smoked salmon market is estimated at 34.273 tonnes in 2022. Apparent consumption of smoked salmon increased by 17% between 2021 and 2022 but decreased by 26% over the past decade (2013-2022). The increase in consumption between 2021 and 2022 was primarily driven by a 24% increase in imports and a small increase in domestic production (+7%). Over the last decade, domestic production decreased at almost twice the rate of consumption (-26%), while imports grew by 72%.

Table 16: French apparent consumption of smoked salmons in 2022 (tonnes product weight)

	Volume	Evol. 2021/2022	Evol. 2013/2022
Domestic processing	22.650	7%	-46%
Import	14.965	24%	+72%
Supply	37.615	14%	-26%
Export	3.342	-20%	-24%
Apparent Consumption	**34.273**	**17%**	**-26%**

Source: Eurostat-Prodcom and Eurostat-Comext

Figure 5: Supply balance for smoked salmon in France (2022, tonnes of product weight)



Source: EUROSTAT and EUROSTAT-COMEXT data

3.2 Characteristics of the French market and consumption

3.2.1 Characteristics of the market

According to an interview, the French smoking industry does not use frozen fillet salmon for the smoked salmon, as processors believe they can better control the quality with whole HOG salmon. In particular, it is also a requirement included in the collective scheme, developed by the French Association of Food Processors (*Association des Entreprises de Produits Alimentaires Élaborés*) (see below).

71% of the smoked salmon, sold in France is processed in France. For this reason and in order to ensure that the French production is easily recognised by French consumers, who are generally sensitive to the product's origin, the French manufacturers have developed a collective scheme that enables certified products to bear the "*Fumé en France*" logo ("Smoked in France"). It is estimated that 85% of market players have subscribed to this voluntary certification. This scheme covers requirements in terms of the raw material quality (only whole HOG products are accepted), the place of processing (all processing steps must be in France), etc.

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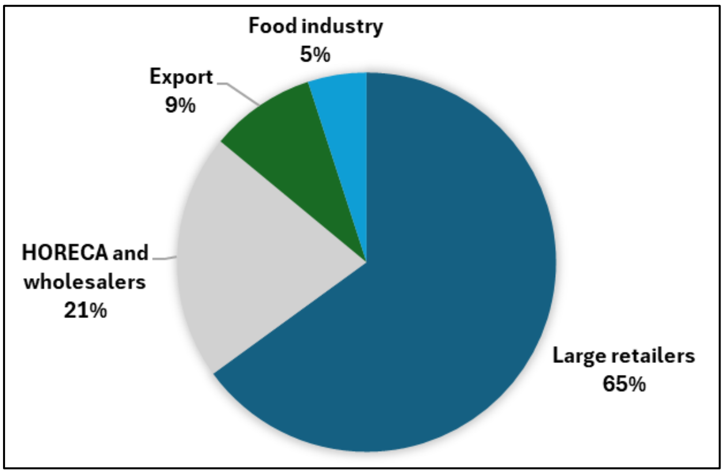
The French market is segmented between processor brands, mostly for high-end products, and retailer brands, mostly oriented on entry-level and middle-end products.

During the Christmas period, processors adapt their offerings and provide bigger packed products (packs of 8, 10 and 12 slices), while rest of the year, the offering is mainly composed of small packed products (packs of 4 slices).

According to ADEPALE, 91% of the French production of smoked salmon is marketed within the domestic market, while only 9% is exported (mainly to Italy). Large retail is the main marketing channel for the French production (65% of smoked production), followed by the HORECA and wholesalers (21% of the French production of smoked salmon).

Figure 6: Breakdown of sales of French smoked production (volume in tonnes)



Source: ADEPALE

3.2.2 Consumption

The French market is characterised by high quality expectations from consumers, seasonal peaks during the festive season and a preference for products smoked in the country, as evidenced by interviews, desk research and statistics.

France is one of the biggest consumers of smoked salmon in Europe (see apparent consumption of the EU Member States in section 2.3.3).

Prices in retail vary depending on the following factors:

- Brand: as mentioned earlier, processor brands tend to focus on high-end products, while retailer brands are typically entry-level and mid-range products. This is reflected in pricing, with processor brands being sold at higher prices than retailer brands, even for products of similar quality.
- Raw material (defrosted or fresh): Products made with fresh salmon are generally sold at higher prices than those made with salmon that has been defrosted before processing.
- Certification schemes: Products with the scheme "*Fumé en France*" are sold at higher prices, especially when combined with other certifications, such as organic label.
- Other processing characteristics: factors like smoking method and the type of wood used for smoking also influence pricing.

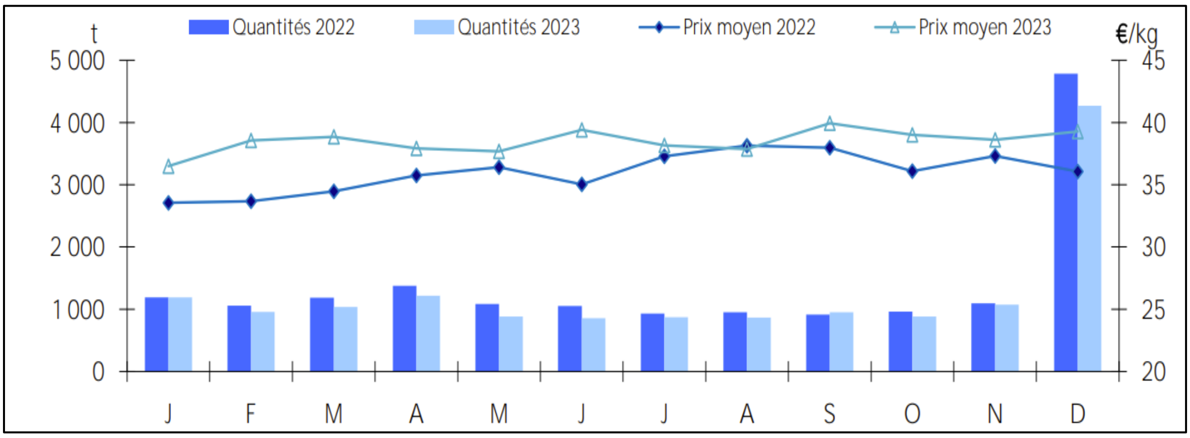
According to interviews, demand has shifted towards high-quality products. Certification schemes such as the "*Fumé en France*"[14] and the French certification scheme "Label Rouge", play an important role in maintaining high standards of production, animal welfare and environmental sustainability.

90% of French consumers eat smoked salmon, with the vast majority considering it an essential part of their festive meals. Three-quarters of consumers prefer products bearing the "*Fumé en France*" label[15].

Demand for smoked salmon in France is stable for most of the year, with a sharp rise in December (see figure below), with no significant impacts on the prices which remain relatively stable.

[14] https://saumonfumeinfo.fr/nos-engagements/le-logo-et-la-charte-du-saumon-fume-en-france-en-synthese/
[15] https://saumonfumeinfo.fr/les-francais-en-sont-fans/saumon-fume-monde-laime/

Figure 7: Monthly evolution of household consumption of smoked salmon in France (volume and price) in 2022 and 2023



Source: FranceAgriMer, based on Kantar[16]

According to FranceAgriMer (based on Kantar), smoked salmon is less popular among young people under the age of 35, while consumption is more widespread among older age groups, which may be explained by the high price and the image of a luxury product.

Smoked salmon occupies a dominant position in the smoked fish market. Although smoked trout and herring are present, smoked salmon retains a dominant penetration rate of around 57% in 2023 based on household consumption data[17].

3.3 Price transmission in the supply chain

3.3.1 Raw material prices

Over the past 5 years (2019-2023), the average price of raw materials imported to France fluctuated between 5,98 EUR/kg (in 2020) and 9,27 EUR/kg (in 2023). The imported price is variable according to the product imported. Fresh or chilled fillets of Pacific or Atlantic salmon are imported at prices higher than the average price for raw material. In 2023, filets were imported at 12,30 EUR/kg, while fresh whole HOG Atlantic salmon, which constitutes the bulk of French salmon imports for the smoking industry, was imported at 8,95 EUR/kg. However, according to interviews with French processors, fillets of salmon imported from Norway are generally of lower quality than whole HOG fish and are often referred to as "production-grade salmon"[18], which includes products with lower quality, and as a result can be exported only once filleted according to Norwegian legislation[19]. According to these interviews, the Norwegian production is characterised by an increase in the share of "production-grade salmon" which could pose a challenge for the supply of whole HOG salmon and prices. The past five years have been characterised by an overall increase in import prices of raw material. In particular, prices of the fresh whole HOG Atlantic salmon have increased by 38% between 2019 and 2023.

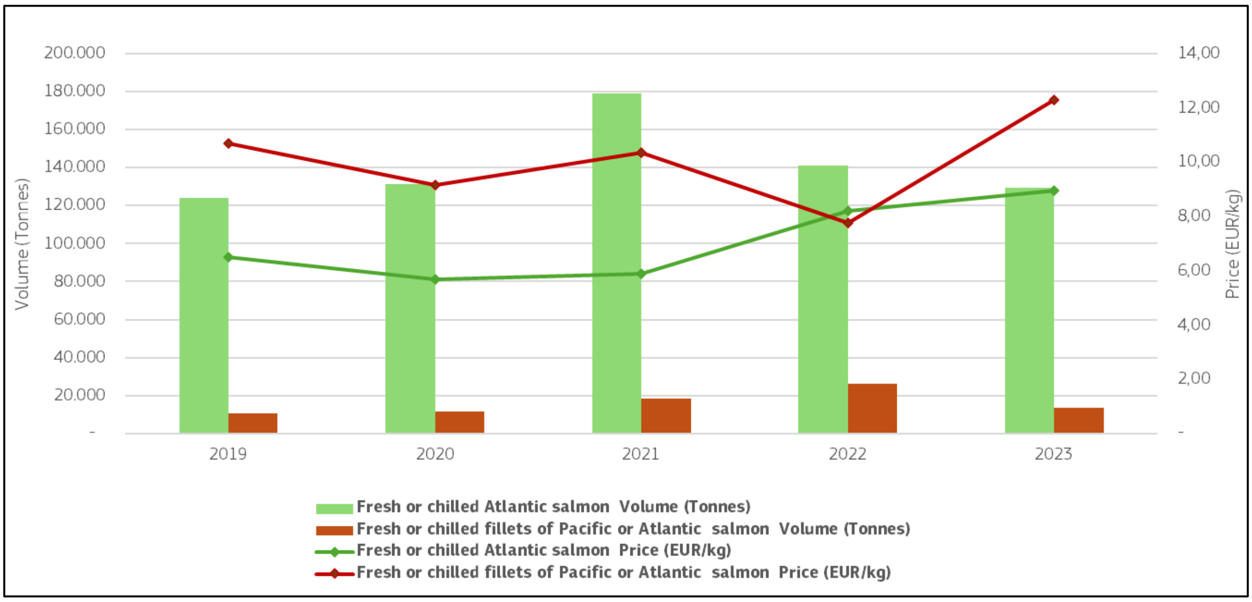
[16] https://www.franceagrimer.fr/fam/content/download/74286/document/STA_MER_CONSO_2023.pdf?version=3

[17] https://www.franceagrimer.fr/fam/content/download/74286/document/STA_MER_CONSO_2023.pdf?version=3

[18] Norwegian salmon is divided between three grades depending on its quality: superior, ordinary, production. According to a Norwegian legislation, production of the third grade (i.e. production-grade salmon) should be filleted before being sold and exported.

[19] https://www.seafoodsource.com/news/processing-equipment/norways-production-grade-salmon-controversy-driving-up-prices

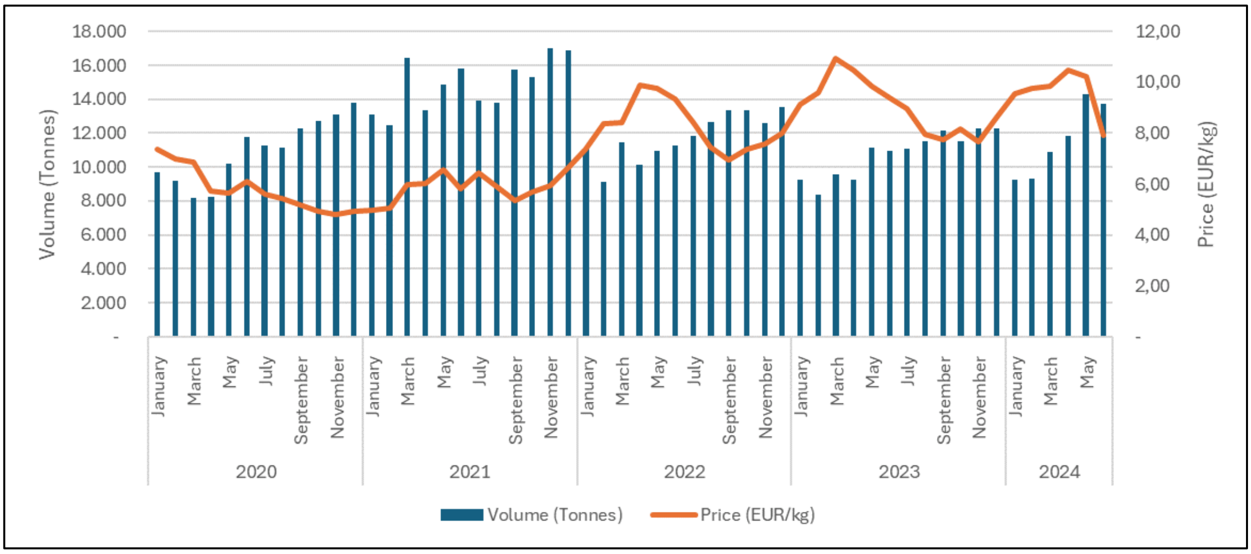
Figure 8: Prices (EUR/kg) of raw material used by the French smoking industry between 2019-2023



Source: Eurostat-Comext

Monthly import data show that since 2022 there is a peak in import prices around March-April-May of each year, correlated to a decrease in volumes of imports.

Figure 9: Monthly imports of fresh whole HOG Atlantic salmon to France between January 2020 to June 2024 (volume and price)



Source: Eurostat-Comext

3.3.2 Import prices of smoked salmon

The table below provides the volume and prices of smoked salmon imports to France by key suppliers. Significant price variability can be observed depending on the supplying country and the volume imported. In 2023, import prices ranged from 9,65 EUR/kg for imports from Norway (Sweden in official statistics) to 22,77 EUR/kg for imports from Belgium. Over the past two years, imports of smoked salmon from Norway have increased significantly, rising from 73 tonnes in 2020 to 3.741 tonnes in 2023. Smoked salmon from Norway is imported at prices close to raw material prices. Interviews suggested that these volumes correspond to low-priced smoked salmon imported in bulk to be packed in France. According to these interviews, this product is of lower quality compared to French-smoked salmon.

Table 12: Volume and prices of smoked salmon imports to France (2020-2023)

	2020		2021		2022		2023	
	Volume (Tonnes)	Price (EUR/kg)	Volume (Tonnes)	Price (EUR/kg)	Volume (Tonnes)	Price (EUR/kg)	Volume (Tonnes)	Price (EUR/kg)
Sweden (Norway)	73	14,16	136	10,09	3.855	8,78	3.741	9,65
Poland	3.755	12,87	4.582	11,81	3.022	14,58	3.079	17,79
UK	1.371	10,73	2.395	15,35	2.232	15,07	1.875	15,90
Germany	1.029	13,67	1.508	13,34	1.813	15,53	1.268	16,94
Lithuania	614	13,06	772	12,43	832	15,59	1.228	16,51
Belgium	1.118	17,65	1.168	17,79	1.290	20,13	876	22,77

Source: Eurostat-Comext

3.3.3 Export prices

Export prices fluctuated significantly between 2020 and 2023, with variations depending on the destination and the volume exported. However, there was a general upward trend in export prices, particularly noticeable in 2023. This rise is attributed to increasing production costs, which affected ex-factory prices (see section below on ex-factory price) and pricing throughout the value chain.

Table 13: Volume and prices of smoked salmon exports from France (2020-2023)

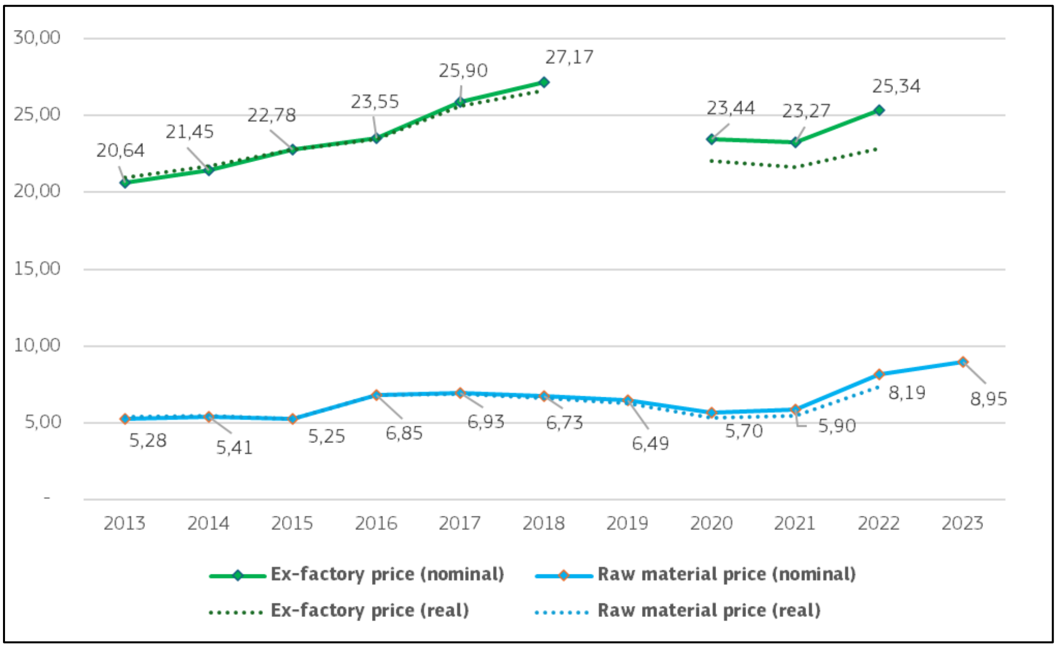
	2020		2021		2022		2023	
	Volume (Tonnes)	Price (EUR/kg)	Volume (Tonnes)	Price (EUR/kg)	Volume (Tonnes)	Price (EUR/kg)	Volume (Tonnes)	Price (EUR/kg)
Italy	589	20,48	1.264	19,12	1.078	19,10	796	22,05
Belgium	247	33,76	401	25,28	392	27,92	443	28,60
Spain	53	14,29	693	13,65	230	19,00	363	18,24
Switzerland	334	33,07	381	35,00	367	37,91	349	40,16
Others	601	14,52	1.275	14,46	1.269	14,66	1.113	18,30
Total	**1.824**	**22,44**	**4.014**	**18,82**	**3.336**	**20,51**	**3.065**	**23,25**

Source: Eurostat-Comext

3.3.4 Ex-factory price

As already mentioned over the period 2013-2022, the French production of smoked salmon decreased in volume (-46%) and value (-34%), while sale prices increased by 9% in real terms. This increase could be explained by the increase of the raw material prices (imports of fresh whole HOG Atlantic salmon), which increased by 37% in real terms, even though the increase is less moderated in the case of the ex-factory prices.

Figure 10: Evolution of ex-factory prices and raw material prices between 2013 and 2022 (EUR/kg)



Source: Eurostat-Comext and Eurostat-Prodcom

3.3.5 Retail prices

<u>Household consumption of smoked salmon (FranceAgriMer, based on Kantar)</u>

French household consumption of smoked salmon was estimated at 16.256 tonnes. Consumption volumes rose between 2019 and 2021, but have declined since 2022, coinciding with a sharp rise in retail prices, which increased from 34,21 EUR/kg to 38,54 EUR/kg. These are average prices, which can hide a significant variability. Additionally, prices in this section (based on Kantar data) are lower than those listed from e-commerce websites (Table 15).

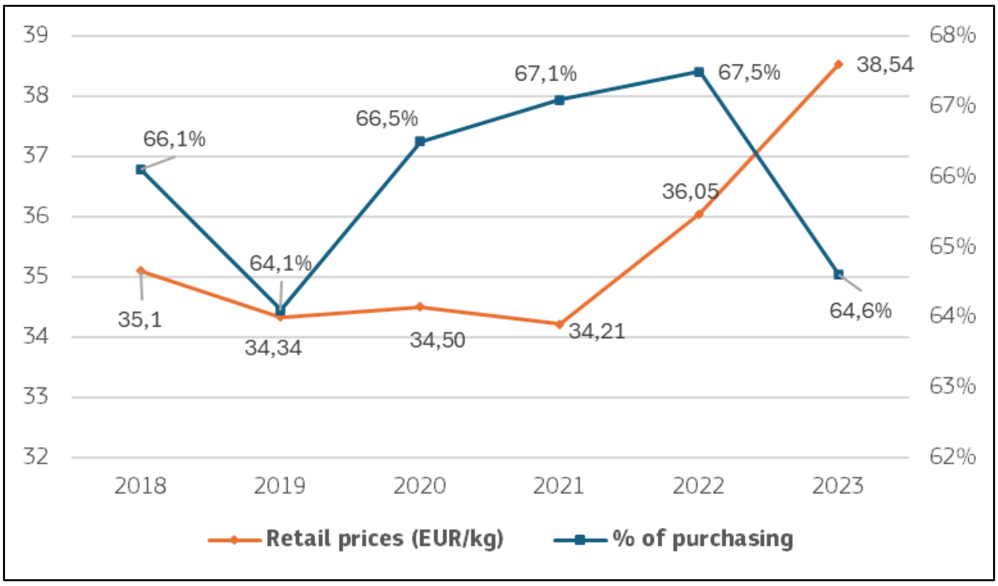
Table 14: Household consumption of smoked salmon in France between 2019 and 2013

	2019	2020	2021	2022	2023	Evol. 2023/19
Volume (tonnes)	16.246	17.510	18.687	17.726	16.256	0%
Value (1.000 EUR)	557.854	604.180	639.344	639.056	626.565	+12%
Price (EUR/kg)	34,34	34,50	34,21	36,05	38,54	+12%

Source: FranceAgriMer, based on Kantar

Kantar provides some indication on the relation between price and purchase level. Figure below illustrates this relation and highlights that the significant increase of 4,3 EUR/kg observed with two years of consecutive rise in 2021 and 2023 resulted in a significant decrease in the purchase level in 2023.

Figure 11: Relation between retail prices of smoked salmon (EUR/kg) and purchase level (%)

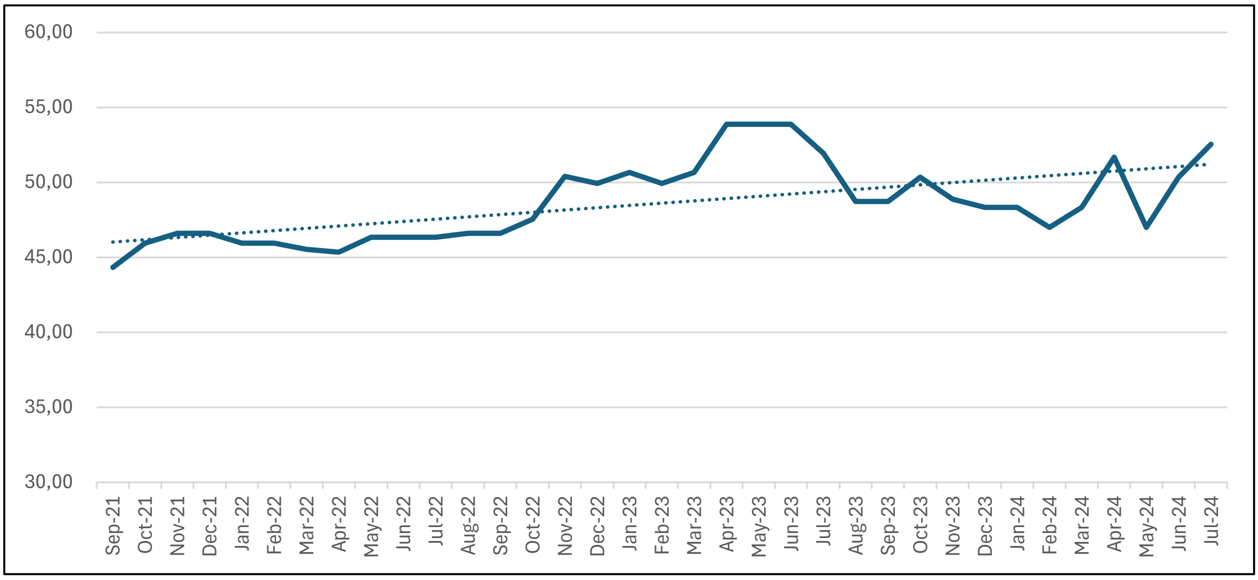


Source: FranceAgriMer, based on Kantar

Large-scale retail prices (EUMOFA based on automatic monitoring of online stores)

Based on the monitoring of retail prices in EUMOFA on large-scale retailer websites, the price for smoked salmon has ranged from 44,33 EUR/kg to 53,87 EUR/kg between September 2021 and July 2024. These data show a significant increase in retail prices by 18%. The prices provided from the monitoring of online stores are median prices that could hide a significant variability of prices according to the type of products, the origin, and the associated labels, as demonstrated in section below.

Figure 12: Evolution of median retail prices of smoked salmon in France between September 2021 and July 2024 (EUR/kg)



Source: EUMOFA - Online shop retail prices

Large-scale retail prices (online survey)

The table below, based on a manual online survey, highlights the diversity of smoked salmon products and prices in large-scale retail in France:

Table 20: Retail prices of smoked salmon in French large-scale retail (September 2023)

Raw material origin	Raw material preservation type	Place of processing	Associated label	Mark	Size	Price (EUR/Unit)	Price (EUR/kg)
Aquaculture - Norway	Defrosted	France	No label	Retailer's brand	200 g	4,95	24,75
Aquaculture - Norway	Defrosted	France	No label	Retailer's brand	6 slices - 200 g	5,99	29,95
Aquaculture - Norway	Fresh	France	Fumé en France	Processor's brand	4 slices - 200 g	10,99	39,25
Aquaculture - Norway	Fresh	France	ASC	Retailer's brand	4 slices - 140 g	5,99	42,75
Aquaculture - Norway	Fresh	France	No label	Retailer's brand	4 slices - 140 g	6,25	44,64
Aquaculture - Norway	Fresh	France	ASC	Processor's brand	4 slices - 120 g	5,75	47,92
Aquaculture - Norway	Fresh	France	Fumé en France	Processor's brand	6 slices - 215 g	10,46	48,65
Aquaculture - Ireland/ Scotland / Norway	Fresh	France	Organic	Retailer's brand	4 slices - 140 g	6,89	49,21
Aquaculture - Norway	Fresh	France	Fumé en France	Processor's brand	4 slices - 140 g	7,48	53,43
Aquaculture - Norway	Fresh	France	Filière qualité carrefour	Retailer's brand	2 slices - 70 g	3,79	54,14
Not mentioned	Not mentioned	France	Organic / Produit en Nouvelle Aquitaine	Processor's brand	2 slices - 100 g	5,85	58,50
Wild - Pacific salmon	Defrosted	France	ASC / Fumé en France	Processor's brand	6 slices - 180 g	11,38	63,22
Aquaculture - Norway	Fresh	France	Fumé en France	Processor's brand	2 slices - 75 g	4,79	63,87
Aquaculture - Ireland/ Scotland / Norway	Fresh	France	Organic / Fumé en France	Processor's brand	6 slices - 180 g	13,99	77,72

Source: Based on a sample of large-scale retailers' e-commerce websites

3.3.6 Price transmission

The following table and figure provide available information on costs and margins in the salmon smoking industry in France, highlighting price transmission along the supply chain.

The price transmission analysis for smoked salmon in the French market was based on official statistics and EUMOFA calculations. These calculations have been discussed with the French processors' organisation. The table refers to data from 2022, as it is the year with the latest available data. According to the French processors' organisation, the distribution between costs and margins for the different stages of the value chain (raw material, processing, retailing) is still valid for 2024, even though an increase in the raw material price continues to be observed.

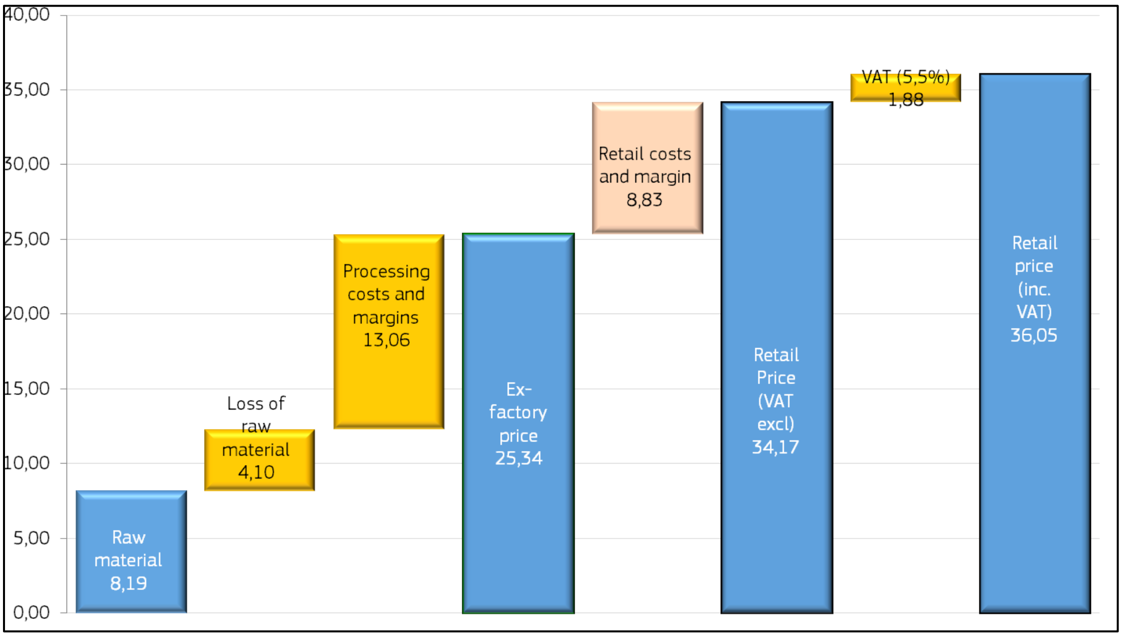
Table 21: Costs and margins in the smoking salmon industry in France (2022)

	Price (EUR/kg)	% of the final price	Source
Raw material (1)	**8,19**	**21%**	Statistics
Loss of raw material (2)	4,10	11%	Calculation
Processing costs and margins	13,06	34%	Calculation
Ex-factory price (3)	**25,34**	**66%**	Statistics
Retail costs and margin	11,19	29%	Calculation
Retail Price (VAT excl)	36,53	95%	Calculation
VAT (5,5%)	2,01	5%	Calculation
Retail price (inc. VAT) (4)	**38,54**	**100%**	Statistics

Notes and sources:

(1) Raw material price corresponds to the average yearly price of imported fresh whole HOG Atlantic salmon calculated from COMEXT
(2) Loss of raw material related to processing is estimated by EUMOFA at 50% and confirmed by interviews. On the basis of an average price of 12,29 EUR/kg for Atlantic salmon imported from Norway, the net costs of raw material, taking into consideration processing loss (head, entrails, slime, bones desiccation…), are estimated at 18,45 EUR/kg.
(3) Average ex-factory price is calculated from Eurostat-Prodcom.
(4) Average retail price from national consumer panels (Kantar).

Figure 13: Price transmission for smoked salmon sold in retailers in France (2022)



Source: EUMOFA elaboration

A previous EUMOFA price structure analysis for smoked salmon in France was carried out in 2013[20], which can be compared to the present price structure analysis. The comparison shows a significant rise in the final price (+38,1%) and changes in the distribution of the value at different stages of the value chain. The share of the raw material in the final price has increased by 3 points, from 20% (5,3 EUR/kg) to 23% (8,19 EUR/kg), as well as the share of the retail costs and margin, by 8 points from 16% (4,1 EUR/kg) to 24% (8,83 EUR/kg). This has impacted the industry costs and margin, whose share in the final price has decreased by 9 points, from 59% with 15,3 EUR/kg to 48% with 17,15 EUR/kg.

The French observatory on prices and margins ("*Observatoire de la formation des prix et des marges"* (OFPM)[21] developed by FranceAgriMer, has also carried out an analysis on prices along the smoked salmon value chain, for the period 2015-2021. Results from the OFPM and the price structure analyses presented above are coherent but are not fully comparable as there are differences in the methodologies applied (in terms of temporal scope and in terms of sources). Raw material prices in particular have been calculated from a different source and on a different scope[22], leading to significantly higher price in the OFPM analysis than in the EUMOFA one.

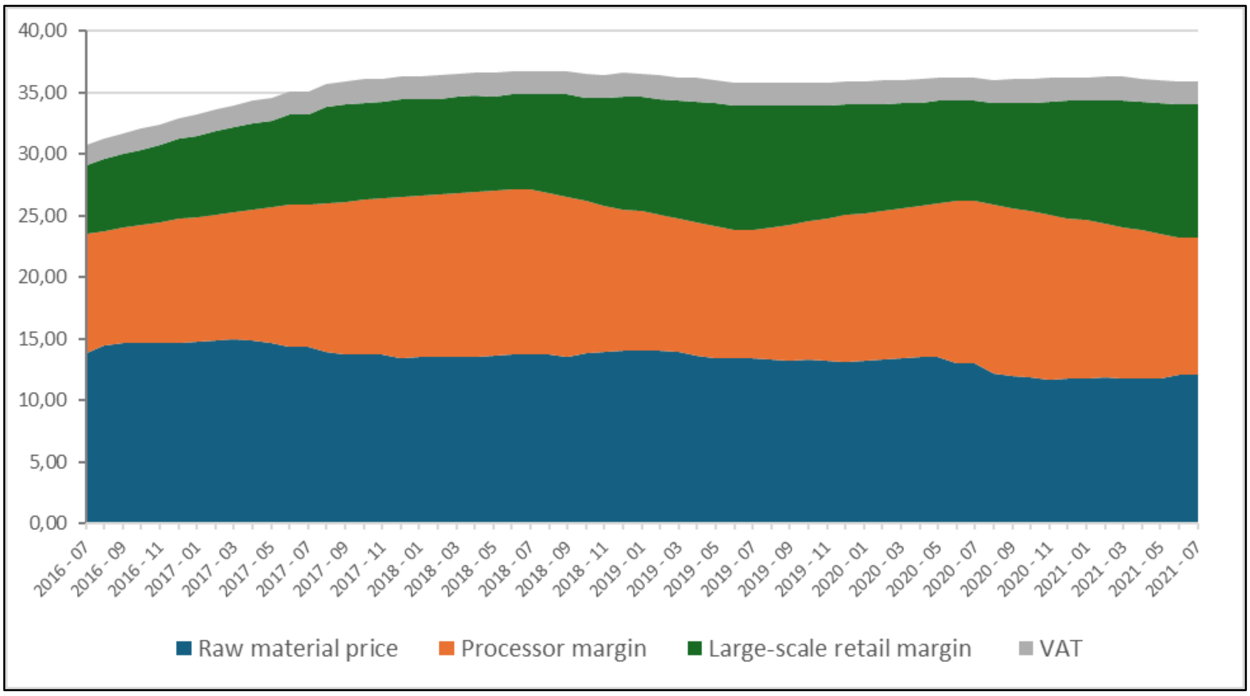
Regarding the trend in the distribution of costs and margins, OFPM results are consistent with the EUMOFA analysis. The OFPM also witnesses, in the 2015-2021 period, a rise in the share of retail costs and margin in the final price of smoked salmon (from 19% to 30%) and a decline in the share of the industry costs and margins (from 40% to 31%). According to the OFPM, the share of costs from raw material, around 35%, has remained stable over this period of time.

[20] https://eumofa.eu/documents/20124/44880/Price+structure_Smoked+salmon+in+FR.pdf/bb2c0ea3-53d7-4cca-a4ad-a349982a2cf1?t=1600420673086

[21] Data available from July 2015 to July 2021: https://observatoire-prixmarges.franceagrimer.fr/resultats-par-domaine/P%C3%AAche+et+aquaculture-Produits+de+la+p%C3%AAche+et+de+l%27aquaculture-4-19-T

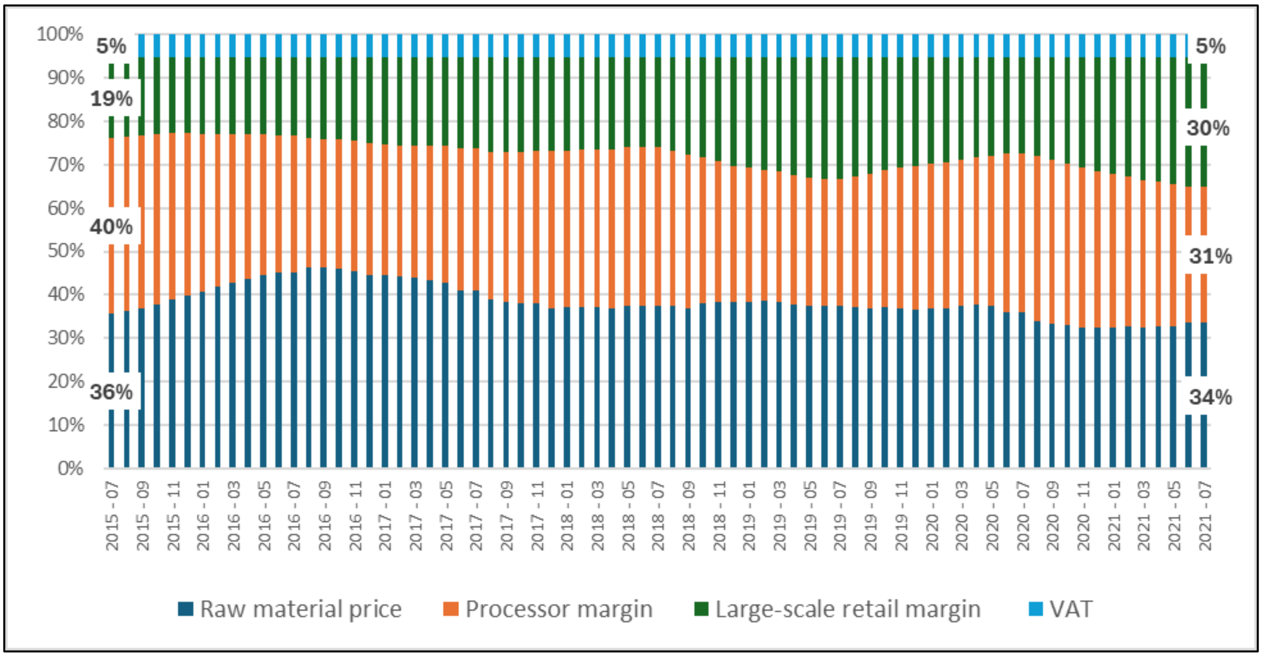
[22] More details on the OFPM methodology are available in the following document (p 331): https://observatoire-prixmarges.franceagrimer.fr/sites/default/files/pictures/rapport_ofpm_2023_avec_couv_0.pdf; in particular, OFPM considered the imports of both fresh and frozen whole salmon from a selection of origins while EUMOFA considered the imports of fresh whole salmon from all origins.

Figure 14: Monthly evolution of prices and margins for smoked salmon products in France (nominal price in EUR/kg, 2015-2021)



Source: EUMOFA, based on OFPM data

Figure 15: Monthly evolution of prices and margins for smoked salmon products in France (share of nominal price in %, 2015-2021)



Source: EUMOFA, based on OFPM data

4. THE GERMAN MARKET

4.1 Structure of the supply chain

4.1.1 Supply

Production & imports raw material

Raw material for smoked salmon processed in Germany includes fresh and frozen salmon, whole head on gutted (whole HOG) and in fillets. German production covers a wide range of products, ranging from low cost to premium products and involves both manual and mechanised processing operations. The supply is fully dependent on imports. The total product volume of potential raw material reaches 100.544 tonnes in 2023, the larger share of which is sold unprocessed, and part of which will be effectively used for smoked salmon production.

Table 22: Potential raw material volume for smoked salmon production in Germany

CN-8	Imported products	2020	2021	2022	2023
3021300	**Fresh or chilled Pacific salmon**	293	332	442	521
3021400	**Fresh or chilled Atlantic salmon**	53.886	55.237	53.021	42.938
3031100	**Frozen sockeye salmon**	3.398	4.973	3.605	1.676
3031200	**Frozen Pacific salmon**	1.977	1.110	1.221	994
3031300	**Frozen Atlantic salmon**	2.658	2.285	1.753	1.738
3044100	**Fresh or chilled fillets salmon**	23.692	22.540	29.002	26.269
3048100	**Frozen fillets salmon**	31.542	30.539	30.747	26.407
Total		**117.446**	**117.015**	**119.790**	**100.544**

Source: Eurostat-Comext

According to interviews the German processing sector uses between 12.000 to 16.000 tonnes of whole HOG fish, and below 3.000 tonnes of fish fillet for the production of smoked salmon. Companies with manual processing operations tend to use more filets as raw material.

The production of smoked salmon in Germany reached 8.418 tonnes in 2022. According to interviews, production is concentrated in the hands of three main processors.

Imports of smoked salmon

In 2023, the main supplier of smoked salmon is Poland, with 15.858 tonnes (62% of the total volume of imports) for EUR 287 million (63% of the value), followed by Lithuania (15% in volume, 16% in value), Denmark (8% in volume) and the Netherlands (6% in volume). According to interviews, imports of smoked salmon from Denmark includes a share of smoked salmon imported from Norway and then exported to other EU countries. The other main suppliers are Belgium, France and Ireland. In 2023, the average price for imported smoked salmon is 17,82 EUR/kg. Among the main suppliers, smoked salmon from Denmark is imported at lower prices (15,87 EUR/kg) compared to smoked salmon imported from Lithuania (18,42 EUR/kg).

Table 23: Imports of smoked salmon by supplier country in 2023

	Volume (tonnes product weight)	Share of volume	Value (1.000 EUR)	Share of value	Average price (EUR/kg)
Poland	15.858	62%	287.317	63%	18,12
Lithuania	3.886	15%	71.578	16%	18,42
Denmark	2.159	8%	34.276	8%	15,87
Netherlands	1.494	6%	26.156	6%	17,51
Belgium	1.098	4%	20.308	4%	18,50
France	519	2%	5.563	1%	10,73
Ireland	333	1%	4.380	1%	13,14
Others	146	1%	4.734	1%	32,43
Total	**25.493**	**100%**	**454.310**	**100%**	**17,82**

Source: Eurostat-Comext

The table below shows a decline in Germany's total imports of smoked salmon from 2019 to 2023, with a 25% overall reduction. Poland and Lithuania, two of the largest suppliers, saw significant drops of 24% and 52%, respectively. In contrast, imports from the Netherlands rose by 60%, while Denmark saw more moderate changes. Smaller suppliers like Belgium and France experienced remarkable growth, with Belgium increasing by 1.065% and France by 5.760%, although from much lower starting points. This could indicate a shift in sourcing patterns, with smaller suppliers gaining market share.

Table 24: Evolution of imports of smoked salmon by key suppliers between 2019 and 2023 (tonnes of product weight)

	2019	2020	2021	2022	2023	Evol.2023/2019
Poland	20.777	23.726	22.170	21.962	15.858	-24%
Lithuania	8.148	7.072	4.940	4.062	3.886	-52%
Denmark	2.413	1.634	1.959	2.523	2.159	-11%
Netherlands	931	817	1.630	921	1.494	+60%
Belgium	94	52	55	34	1.098	+1.065%
France	9	72	235	530	519	+5.760%
Ireland	343	304	538	511	333	-3%
Others	1.329	1.140	166	469	146	-89%
Total	**34.044**	**34.818**	**31.692**	**31.012**	**25.493**	**-25%**

Source: Eurostat-Comext

Supply with smoked salmon

In 2022, the national supply for smoked salmon reached 39.430 tonnes and EUR 637 million. Imports accounted for 31.012 tonnes (79% of the supply), for a value of over EUR 480 million (75% of total value). Domestic processing of smoked salmon accounted for 8.418 tonnes (21% of total volume), for a value of over EUR 156 million (25% of total value). Average price for imports of smoked salmon was significantly lower (15,49 EUR/kg) than the ex-factory price of domestic production (18,57 EUR/kg).

Table 25: German supply with smoked salmon (tonnes of product weight, 2022)

	Volume (tonnes product weight)	Share of volume	Value (1.000 EUR)	Share of value	Average price (EUR/kg)
Import	31.012	79%	480.334	75%	15,49
Domestic processing	8.418	21%	156.345	25%	18,57
Total	**39.430**	**100%**	**636.679**	**100%**	**16,15**

Source: Eurostat-Comext, Eurostat-Prodcom

In 2022, national supply of smoked salmon increased by 3% in volume and by 28% in value in comparison to 2021. Domestic processing of smoked salmon rose by 28% in volume, while imports saw a small decrease of 2%. Between 2018 and 2023, the national supply decreased by 27% in volume, with an 18% decline in imports (-12% in value) and a 48% decline in domestic production (-28% in value).

According to stakeholders, the significant decline in German smoked salmon production over the past 5 years is due to a rise in domestic production costs (notably energy), which made it less competitive compared to imported smoked salmon. The decline in the total supply is due to an overall rise in smoked salmon prices (from German production, but also, to a lesser extent, from imports) and a decline in consumption.

Table 26: Respective evolution of imports and domestic production, in volume and value

Indicator		2018	2019	2020	2021	2022	Evol. 2022/2021	Evol. 2022/2018
Volume (tonnes product weight)	**Import**	37.979	34.044	34.818	31.692	31.012	-2%	-18%
	Production	15.705	10.230	7.392	6.557	8.418	+28%	-46%
	Total	**53.685**	**44.274**	**42.210**	**38.249**	**39.430**	**+3%**	**-27%**
Value (1.000 EUR)	**Import**	547.747	490.566	471.534	405.985	480.334	+18%	-12%
	Production	217.694	162.102	119.053	91.761	156.345	+70%	-28%
	Total	**765.441**	**652.668**	**590.587**	**497.746**	**636.679**	**+28%**	**-17%**

Source: Eurostat-Comext, Eurostat-Prodcom

4.1.2 Exports

In 2023, German exports of smoked salmon reached 11.841 tonnes, for over EUR 227 million. The main destinations were Austria (20% of the value) followed by Switzerland (16%) and Italy (13%). The average price for exports of smoked salmon was 19,19 EUR/kg, with significant differences between destination countries. The higher prices were for exports to the USA (22,38 EUR/kg) and Switzerland (22,01 EUR/kg), while prices were lower for Italy (16,36 EUR/kg) and France (14,55 EUR/kg). The USA was the 6th destination in volume and the 4th destination in value.

Table 27: Exports of smoked salmon by destination (tonnes of product weight, 2023)

	Volume (tonnes product weight)	Share of volume	Value (1.000 EUR)	Share of value	Average price (EUR/kg)
Austria	2.195	19%	44.793	20%	20,41
Switzerland	1.683	14%	37.036	16%	22,01
Italy	1.870	16%	30.588	13%	16,36
United States	838	7%	18.755	8%	22,38
Belgium	944	8%	18.591	8%	19,69
Netherlands	941	8%	18.240	8%	19,38
France	723	6%	10.522	5%	14,55
Others	2.647	22%	48.669	21%	18,39
Total	11.841	100%	227.195	100%	19,19

Source: Eurostat-Comext

The table below shows a general decrease in smoked salmon exports from Germany, with a total decrease of 15% between 2022 and 2023 and an 18% drop compared to 2019. Austria and Italy, two of the largest destinations, saw a 14% decline in 2023. However, Switzerland and the USA were notable exceptions, with export growth of 20% and 11%, respectively, since 2022. While exports to countries like Belgium, the Netherlands, and France decreased significantly, the USA recorded the highest long-term growth, (+51% since 2019). According to stakeholders, this growth is due to the good reputation of European salmon in North America, limited domestic production capacities in the USA and Canada, and reduced supply from Chile as a result of both climatic factors (El Niňo) and sanitary concerns on South American salmon production (mostly Chilean).

Table 28: Evolution of exports by destination (tonnes of product weight, 2019-2023)

	2019	2020	2021	2022	2023	Evol. 2022/2023	Evol. 2023/2019
Austria	2.449	2.416	2.473	2.556	2.195	-14%	-10%
Italy	1.731	1.676	1.958	2.170	1.870	-14%	+8%
Switzerland	1.395	1.449	1.566	1.406	1.683	20%	+21%
Belgium	1.151	1.535	1.351	1.006	944	-6%	-18%
Netherlands	1.361	1.407	1.274	1.109	941	-15%	-31%
USA	555	876	869	755	838	11%	+51%
France	760	489	620	1.345	723	-46%	-5%
Others	5.120	4.197	3.150	3.596	2.647	-26%	-48%
Total	**14.522**	**14.046**	**13.261**	**13.943**	**11.841**	**-15%**	**-18%**

Source: Eurostat-Comext

4.1.3 Apparent consumption

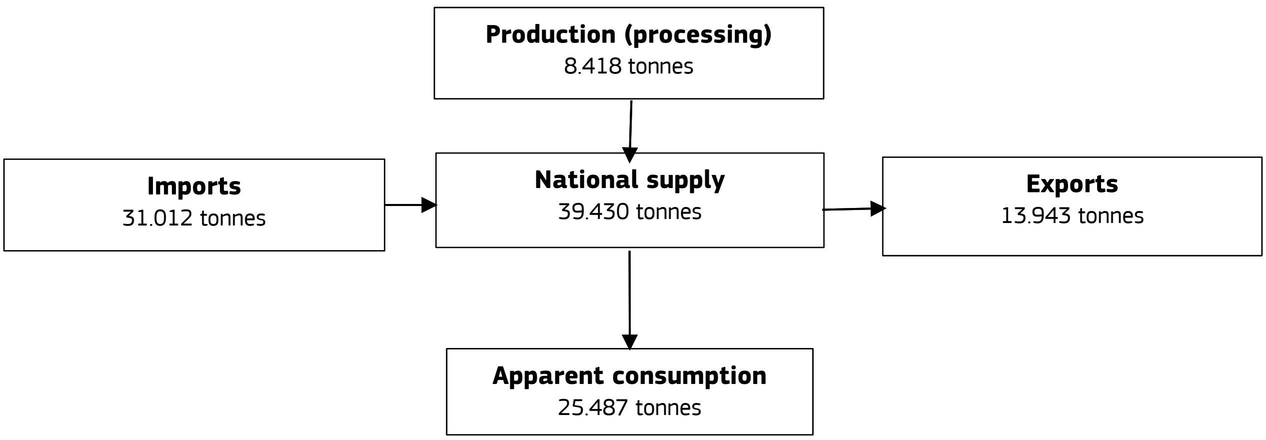
The German market for smoked salmon was estimated at 25.487 tonnes in 2022. Smoked salmon apparent consumption increased by 2% between 2021 and 2022 with an overall decline of 41% over the past decade (2013-2022). The increase in consumption between 2021 and 2022 can be attributed to an increase in domestic production (+28%) and stability in imports (+2% over the same period of time). The significant drop in smoked salmon consumption in Germany is attributed to the simultaneous decrease in domestic production and imports (by respectively -43% and -20%) while exports have increased over the same period (+34%).

Table 29: Apparent consumption for smoked salmon in 2022 (tonnes of product weight)

	Volume	Evol.2021/2022	Evol.2013/2022
Production (processing)	8.418	+28%	-43%
Import	31.012	-2%	-20%
Supply	39.430	+3%	-27%
Export	13.943	+34%	+34%
Apparent consumption	**25.487**	**+2%**	**-41%**

Source: Eurostat-Prodcom, Eurostat-Comext

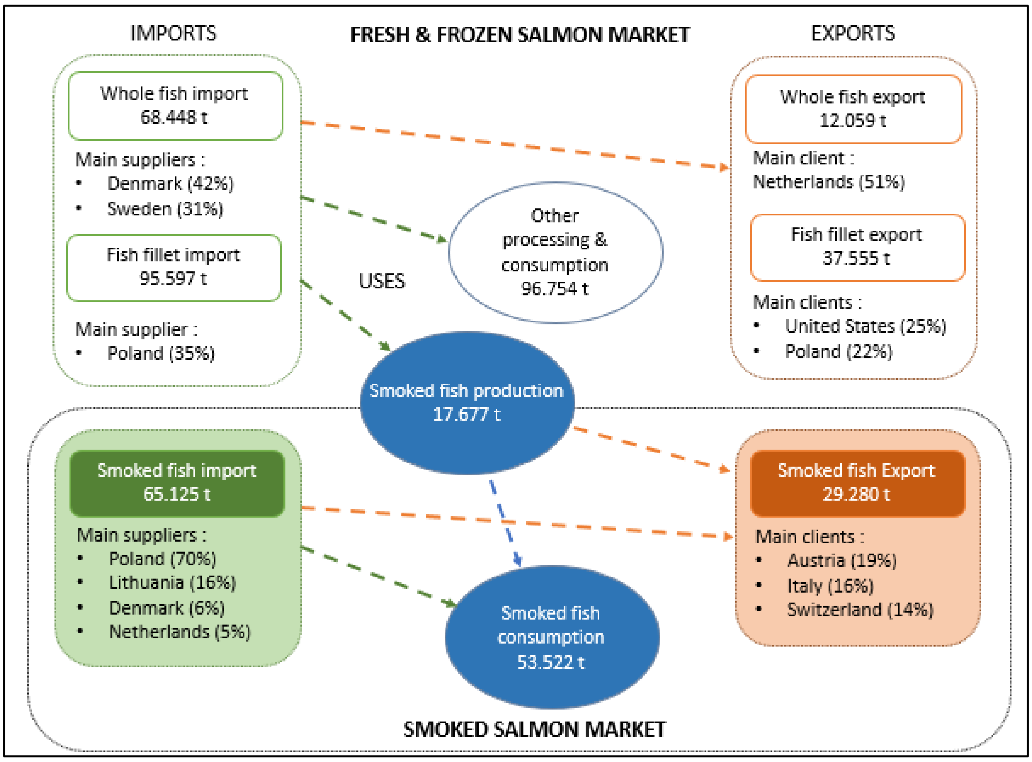
Figure 16: Supply balance for smoked salmon in Germany (2022, tonnes product weight)



Source: EUMOFA, based on Eurostat-Prodcom, Eurostat-Comext

The following figure describes the supply balance for smoked salmon within the broader supply balance for salmon products in Germany. Volumes are expressed in tonnes live weight equivalent, using the conversion factor of 2,10 from live salmon to processed smoked salmon. The respective share of supplier and client countries is also displayed. In 2022, smoked salmon processing mobilised 15% of the national supply volume of fresh and frozen salmon (whole HOG and fillets). The respective shares of fresh, frozen, whole HOG salmon and salmon fillet used in the smoked salmon production could not be quantified.

Figure 17: Supply chain for smoked salmon in Germany (tonnes LWE, 2022)



Source: EUMOFA elaboration based on Eurostat-Comext, Eurostat-Prodcom and interviews with stakeholders

4.2 Characteristics of the German market and consumption

4.2.1 Characteristics of the market

According to stakeholders, the first distribution channel for smoked salmon in Germany is large retail. The share of the HORECA sector is also significant, with a particularly high demand from hotels (smoked salmon is largely included in their breakfast offer).

The German retail market for smoked salmon is segmented according to three main criteria:

- The quality of the raw material: wild/farmed salmon, Aquaculture Stewardship Council (ASC) certified salmon, organic salmon
- The brand: retailer's and processor's brand
- The geographical origin of the fish: Norway, Scotland, Faroe Islands

Besides the smoked salmon fillet, which comes in packages from 80 to 200 g, the large retail offering for smoked salmon includes a significant share of marinated smoked salmon products, often prepared with spices and sometimes with a sauce, and coming mostly in packages of 100 or 125 g. This category includes products labelled as "stremel lachs" or "graved lachs" - similar to the Nordic "gravlax" salmon.

4.2.2 Consumption

According to stakeholders, the main differentiation criteria for consumers is between wild and farmed salmon. However, wild salmon only account for a limited share of the market. Labels such as Global GAP

Number (GGN)[23], ASC, Marine Stewardship Council (MSC, for wild salmon) or organic farming are commonly used. According to stakeholders, their impact on consumers' choices is weakened in the current context of inflation. Consumer choice in terms of the origin of the fish is limited by the dominance of the Norwegian origin. According to stakeholders, smoked salmon from the Faroe Islands are often valorised as premium products. One processing company is currently running a large communication campaign to promote its brand, positioned in the higher price segment of large-scale retail.

Stakeholders distinguish three age groups based on smoked salmon consumption habits:

- The majority of smoked salmon consumers are over 50 years old,
- The 35-50 age group purchases less smoked salmon than older consumers but still represents a notable share of the market,
- Consumers under 35 years old buy significantly less smoked salmon.

According to stakeholders, smoked salmon consumers remain younger than consumers of other fishes in the German market.

Quantitative analysis of raw material and smoked salmon imports witness a moderate seasonality in consumption, with low imported volumes in spring and summer and a peak in December.

According to EUMOFA data, apparent consumption of smoked salmon in Germany has declined significantly (-41%) over the past 10 years. This situation is confirmed by stakeholders. The rise of prices, driven by a significant increase in production costs, notably energy, is seen as the main explaining factor. Due to limited data on retail price evolution in Germany, it remains unclear how ex-factory prices have been transmitted by retailers.

4.3 Price transmission in the supply chain

4.3.1 Price of raw material

The average price for imported whole HOG salmon reached 8,45 EUR/kg in 2023, with fresh whole HOG salmon priced at 8,51 EUR/kg and frozen whole HOG salmon at 7,49 EUR/kg. Import prices for whole HOG salmon increased significantly, by almost 22% between 2019 and 2023. Stakeholders have reported a strong increase in whole HOG salmon prices over the past few years, accelerating to over 9,00 EUR/kg in 2024.

The average price for imported salmon fillets reached 13,55 EUR/kg in 2023, with fresh salmon fillets priced at 15,02 EUR/kg and frozen salmon fillets at 12,26 EUR/kg. Import prices for salmon fillets have increased by 29% between 2019 and 2023.

[23] Used both as a BtoB label and as a consumer label - see for more information: https://www.globalgap.org/ggn/

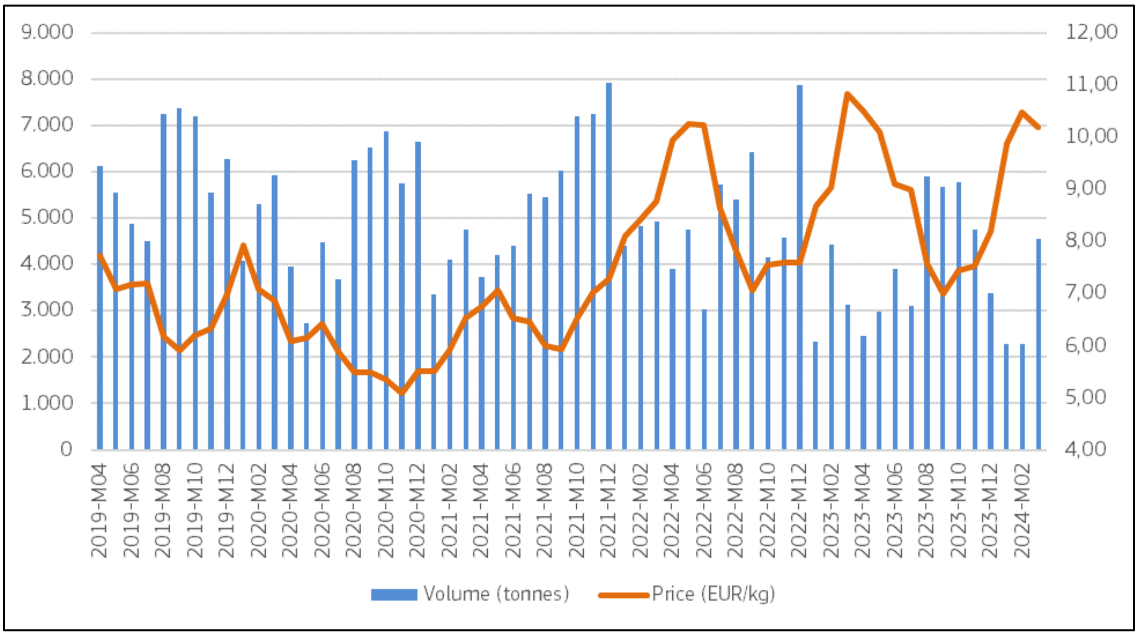
Table 30: Evolution of import prices for whole HOG salmon and salmon fillets (EUR/kg, 2019-2023)

	2019	2020	2021	2022	2023	Evol. 2023/22	Evol. 2023/19
Fresh whole HOG salmon	6,57	5,88	6,28	8,22	8,51	+4%	23%
Frozen whole HOG salmon	7,53	6,74	7,74	8,86	7,49	-15%	-1%
Average whole HOG salmon	**6,62**	**5,94**	**6,36**	**8,26**	**8,45**	**+2%**	**+22%**
Fresh salmon fillets	10,96	10,93	10,51	13,57	15,02	+10%	+27%
Frozen salmon fillets	8,63	8,80	9,23	12,40	12,26	-1%	+30%
Average salmon fillets	**9,60**	**9,91**	**10,03**	**13,09**	**13,55**	**+3%**	**+29%**

Source: Eurostat-Comext

The monthly analysis of whole HOG salmon imports shows significant intra-annual fluctuations in both prices and volumes. Since the end of 2021, prices have become increasingly unstable. Price variation reached 3,84 EUR/kg in 2023, ranging from 10,84 EUR/kg in March to 7,00 EUR/kg in September. Stakeholders describe this "extreme volatility" in raw material prices as unusually severe. The growing variability follows the same pattern each year, with prices peaking in spring (May in 2021 and 2022, March in 2023) and hitting their lowest level in September (for all three years: 2021, 2022 and 2023).

Figure 18: German imports of whole HOG salmon (tonnes product weight, EUR/kg)



Source: EUMOFA based on Eurostat-Comext

In early 2024, stakeholders witnessed a shortage in fresh whole HOG fish, caused by an imbalance in Norwegian raw material production. As mentioned above, an exceptionally high share of the national production was classified as "production-grade"[24]. This situation led to supply shortages and rising prices for imported whole HOG salmon[25]. According to stakeholders, many smoked salmon producers reacted by switching their supply from whole HOG fish to fish fillets. This shift in supply also impacted producers who usually use imported fish fillets as their raw material. The situation could have contributed to unusually low volume of whole HOG salmon imported in the first months of 2024. It also led to price of salmon filet to rise temporarily.

4.3.2 Smoked salmon: ex-factory and import prices

According to Eurostat-Prodcom, average ex-factory price for German smoked salmon reached 18,57 EUR/kg in 2022, which marked a 33% increase compared to 2021. Domestic production ex-factory price is significantly higher than smoked salmon import prices, by 3,09 EUR/kg. The price difference between imported smoked salmon and ex-factory domestic production remained relatively limited until 2018. It became unstable since smoked salmon produced in Germany became increasingly more expensive than imported smoked salmon.

Between 2018 and 2022, domestic production ex-factory prices increased by 42% and import prices rose by 10%. According to stakeholders, costs have been steadily increasing over the past few years, with energy costs seeing the sharpest rise in the last three years. This has directly affected cooling and logistics costs. Labour costs have also increased, though to a lesser extent. Recently, energy prices have started to decline, while labour costs are now experiencing the most significant growth.

Table 31: Comparison of prices for imported smoked salmon import and national production (ex-factory prices) in Germany (EUR/kg)

	2018	2019	2020	2021	2022	Evol. 2022/2021	Evol. 2022/2018
Import	14,36	14,31	13,52	12,79	15,48	+21%	+10%
Domestic production	13,86	15,85	16,10	13,99	18,57	+33%	+42%
Price difference	-0,49	1,54	2,58	1,20	3,10	+33%	+42%

Source: Eurostat-Comext and Eurostat-Prodcom

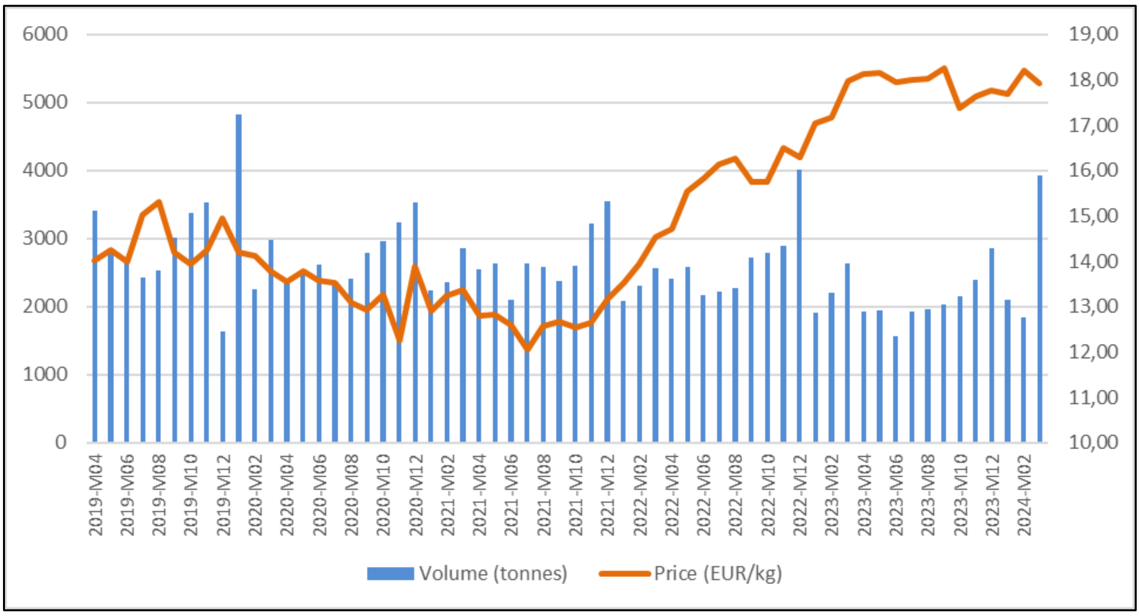
According to stakeholders, ex-factory prices in Germany also vary significantly depending on the processing method and the market segment. In 2024, prices range between 16,00 and 20,00 EUR/kg for the lowest market segment (industrial filleting and smoking) and between 21,00 and 24,00 EUR/kg for higher-end segment (traditional smoking of smaller volumes). Stakeholders noted that ex-factory prices of German production have continued to rise significantly, with a 14% increase in the lowest market segment between 2023 and 2024.

Monthly prices of smoked salmon imports have been increasing strongly (+51%) between August 2021 and April 2023. Imported volumes declined to a lesser extent over the same period. Since April 2023, import prices seem to be more stable, while imported volumes continued to decline.

[24] As already mentioned, the Norwegian salmon is divided between three grades depending on its quality: superior, ordinary, production. According to a Norwegian legislation, production of the third grade (i.e. production-grade salmon) should be filleted before being sold and exported.

[25] https://www.seafoodsource.com/news/processing-equipment/norways-production-grade-salmon-controversy-driving-up-prices

Figure 19: Volume (tonnes) and prices (EUR/kg) of imported smoked salmon to Germany



Source: EUMOFA, based on Eurostat-Comext

4.3.3 Retail prices

According to an online survey of large retailer shopping outlets in 2024, smoked salmon prices in large retail ranged from 24,00 EUR/kg to 60,00 EUR/kg. Prices vary mainly depending on the sale channel, the associated certification schemes and the branding. The lowest prices observed in large-scale retail are above 20,00 EUR/kg for discounted products. In specialised shops, smoked salmon products can reach up to 85,00 EUR/kg.

Table 32: Average prices of smoked salmon products sold in Germany by large retail (2024)

Criteria	Category	Mean price (EUR/kg)
Sale channel	Discounter	28,50
	Supermarket	44,60
Brand	Retailer brand	35,84
	Producer brand	40,28
Label	No label	21,73
	GGN	33,55
	Organic	47,96
	ASC	49,23

Source: EUMOFA, based on online large-scale retailer shopping outlets

An in-field survey carried out in three large retail outlets in two different locations (one urban and one rural) corroborates the findings from the online survey, showing prices ranging from 23,95 EUR/kg to 56,13 EUR/kg. The product offered is relatively similar in both areas. Packages with small quantities of products, processor brands and organic label significantly increase prices. Conversely, there seems to be no significant price difference between smoked and smoked and marinated products. Price difference between discounters and other large-scale retailers is also significant.

Table 33: Price survey for smoked salmon products sold in Germany by large retail (2024)

Distribution channel	Product type	Product weight (gr)	Retail price (EUR/kg)	Brand	Label used
Discounter Rural area (Putlitz)	Smoked salmon 1	200	23,95	Retailer	No label
	Smoked salmon 2	90	31,00	Retailer	No label
	Smoked sockeye wild salmon	100	29,90	Retailer	No label
	Stremellachs natural	125	27,92	Retailer	GGN
	Stremellachs with pepper	125	27,92	Retailer	GGN
Large-scale retail Urban area (Berlin)	Smoked salmon 1	125	35,92	Producer	GGN
	Smoked salmon 2	100	42,90	Producer	ASC
	Smoked wild salmon	80	49,88	Producer	MSC
	Organic smoked salmon 1	200	37,45	Producer	Organic
	Organic smoked salmon 2	80	56,13	Producer	Organic
	Stremellachs natural	100	49,90	Retailer	GGN
	Stremellachs with pepper	100	35,90	Retailer	GGN
	Graved salmon with sauce 1	100	35,90	Retailer	GGN
	Graved salmon with sauce 2	100	49,90	Producer	No label

Source: EUMOFA, based on in-site survey (three sites in two locations)

According to stakeholders, prices have been rising strongly over the past years. As a consequence of this rise, the number of packaged products containing less than 100 gr of smoked salmon (either 80 gr or 90 gr) has progressed significantly compared to products containing 100 gr of smoked salmon. Some stakeholders report a stronger increase in prices in 2024, due to a rising demand of European salmon in North America.

Several stakeholders observe a change in consumer behaviour in response to unusually high prices. Many consumers are switching from premium smoked salmon products to more affordable ones, while a small share of consumers has stopped buying smoked salmon products altogether. Retail prices are expected to keep rising, driven by ongoing cost increases.

4.3.4 Price transmission

Two price structure analyses have been carried out in Germany. The first analyses the case of a smoked salmon product which can be found in discounter supermarkets. The second focuses on the case of a premium product sold in open markets. Both focus on smoked salmon processed in Germany.

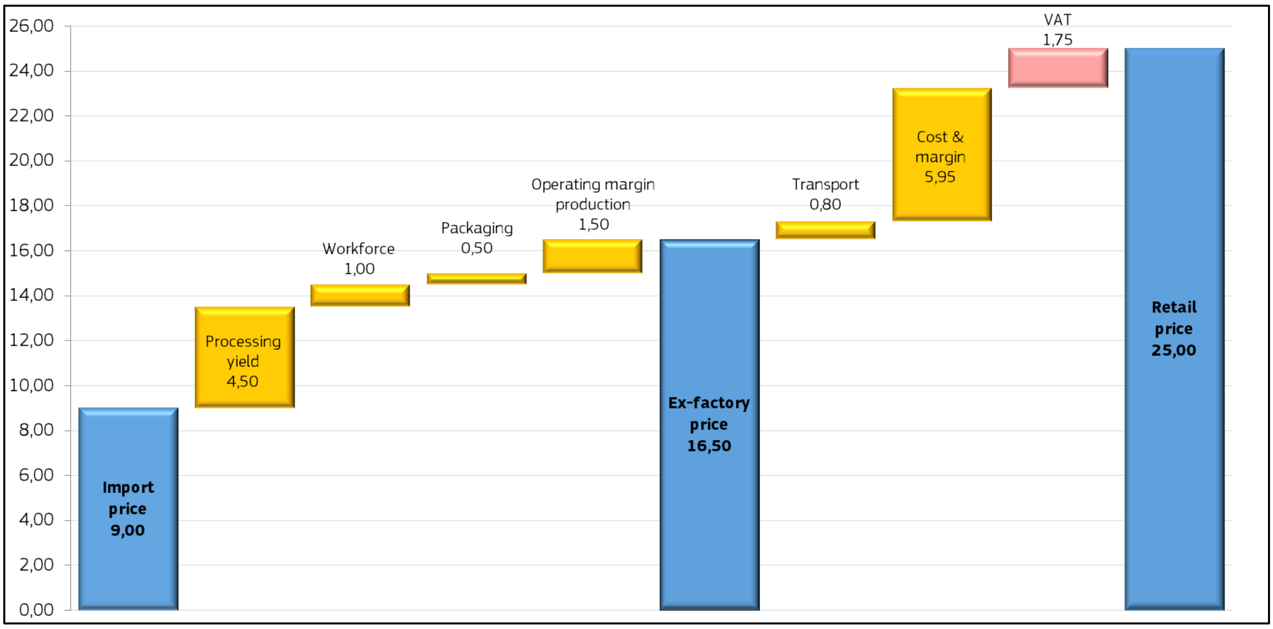
The first analysis covers smoked salmon medium size (100 gr) industrially processed in Germany from whole HOG fish of Norwegian origin and sold in supermarkets. Based on Eurostat-Comext and on interviews with stakeholders, the price for imported whole HOG fish used as a raw material is estimated at 8,00 EUR/kg. It has to be noted that this price is very volatile, as illustrated in section 4.3.1. Raw material is bought by processors on a spot market. The loss rate of 50% from whole HOG fish to smoked salmon product was confirmed by stakeholders. Based on Eurostat-Prodcom and on stakeholder interviews, the ex-factory price for smoked salmon processed (filleted and smoked) industrially in Germany is estimated at 18,50 EUR/kg. Based on stakeholder interviews and a shop survey, the retail price chosen for smoked salmon medium size (100 gr) sold in supermarkets is 25,00 EUR/kg. This relatively low price (in respect to margin in retail) can be commonly found in German supermarkets (especially in discounter supermarkets). It applies to a product labelled as “discounted”. Smoked salmon acts in this case as a “loss leader”, a product on which the retail margin is voluntarily low, whose presence in the supermarkets mainly aims at attracting consumers. According to stakeholders, similar downstream costs apply to smoked salmon sold at 35,00 EUR/kg a price which is also commonly found in German supermarkets. In this case, other costs and margin from the retailer would reach 15,25 EUR/kg and VAT would be 2,45 EUR/kg.

Table 34: Costs and margin for smoked salmon processed industrially in Germany from Norwegian supply of whole HOG salmon, and sold in supermarkets in Germany (EUR/kg, 2024)

	Average price (EUR/kg)	% of retail price	Sources
Imported whole HOG fish price	**9,00**	**36%**	Comext + interviews
Processing loss	4,50	18%	EUMOFA conversion factor + interviews (50% loss)
Labour costs	1,00	4%	Interviews
Packaging	0,50	2%	Interviews
Operating other costs and margin	1,50	6%	Calculated (EUMOFA)
Ex-factory price	**16,50**	**66%**	Prodcom + Interviews
Transport to point of sale	0,80	3%	Interviews
Retail other costs and margin	5,95	24%	Calculated (EUMOFA)
Average selling price, excl. VAT	**23,25**	**93%**	Calculated (EUMOFA)
Value added tax (VAT)	1,75	7%	Calculated (EUMOFA)
Average selling price	**25,00**	**100%**	Interviews + survey of retailer's websites

Source: EUMOFA survey

Figure 20: Costs and margin for smoked salmon processed industrially in Germany from Norwegian supply of whole HOG salmon, and sold in supermarkets in Germany (EUR/kg, 2024)



Source: EUMOFA survey

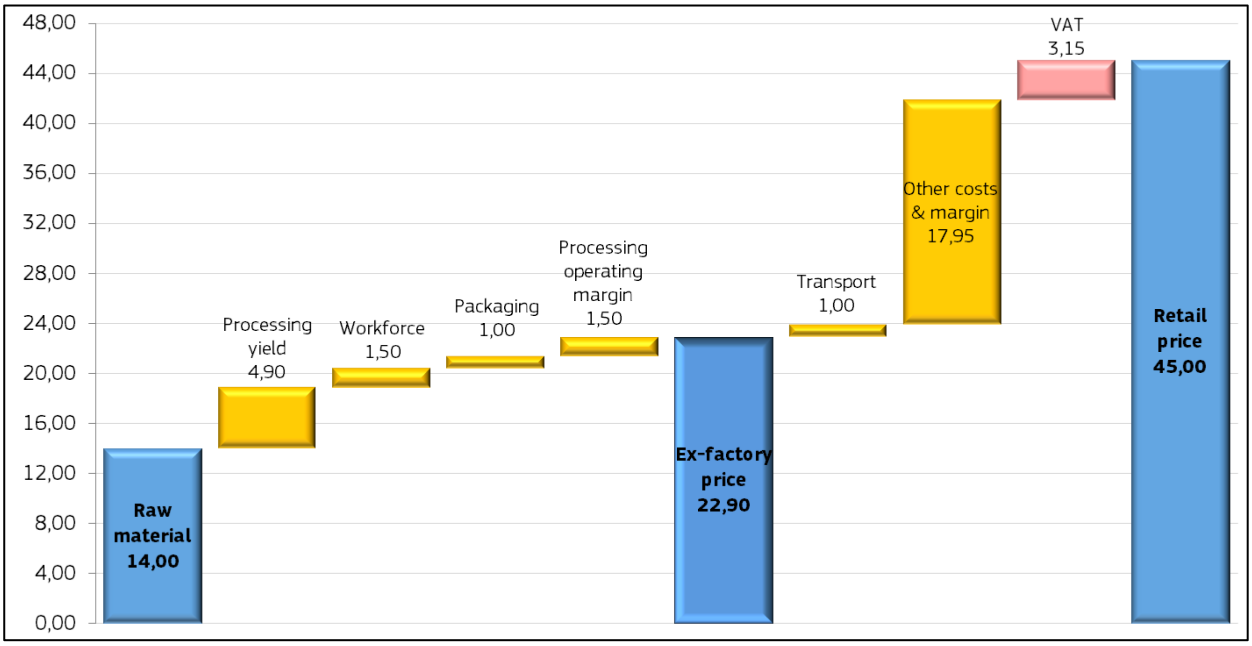
The second analysis covers smoked salmon large size (500 gr) smoked in Germany from fillet of fish of Norwegian origin and sold by fishmonger. Based on Eurostat-Comext and interviews with stakeholders, the price of imported fish fillets used as a raw material is estimated at 14,00 EUR/kg. The loss rate of 35% from fish fillet to smoked salmon product was confirmed by stakeholders. Based on interviews with stakeholders, the ex-factory price of smoked salmon processed manually from fish fillets in Germany is 22,90 EUR/kg. Based on interviews, the retail price for smoked salmon large size in fish market is estimated at 45,00 EUR/kg. Transport costs and prices may vary significantly depending on the retail location of the fishmongers.

Table 35: Costs and margin for smoked salmon processed manually in Germany from Norwegian supply of salmon fillet, and retailed in fish markets in Germany (EUR/kg, 2024)

	Average price (EUR/kg)	% of retail price	Sources
Imported fish fillet price	**14,00**	**31%**	Comext + interviews
Processing loss	4,90	11%	EUMOFA conversion factor + interviews (35% loss)
Labour costs	1,50	3%	Interviews
Packaging	1,00	2%	Interviews
Operating other costs and margin	1,50	3%	Calculated (EUMOFA)
Ex-factory price	**22,90**	**51%**	Interviews
Transport to point of sale	1,00	2%	Interviews
Retail other costs and margin	17,95	40%	Calculated (EUMOFA)
Average selling price, excl. VAT	**41,85**	**93%**	Calculated (EUMOFA)
Value added tax (VAT)	3,15	7%	Calculated (EUMOFA)
Average selling price	**45,00**	**100%**	Interviews

Source: EUMOFA survey

Figure 21: Costs and margin for smoked salmon processed manually in Germany from Norwegian supply of salmon fillet, and retailed in fish markets in Germany (EUR/kg, 2024)



Source: EUMOFA survey

5. THE POLISH MARKET

5.1 Structure of the supply chain

5.1.1 Supply

Production & imports of raw material

In Poland, Atlantic salmon farming has been conducted for the past 10 years in two recirculating aquaculture system (RAS) facilities, including one large facility. In accordance with data from the national public statistics (RRW-22 questionnaire), the maximum achieved production volume was 673 tonnes, in 2021. For the most recent year for which statistical data is available (2022), production amounted to only 228 tonnes. Therefore, it remains insignificant for the supply of the domestic fish processing industry, which is primary supplied with imports.

In 2023, Poland imported 231.091 tonnes of salmon that could be used for the smoking industry. According to interviews, the import of fresh and frozen salmon to Poland is primarily raw material-oriented and closely linked to the needs of fish processing plants, mainly for export production. Imports intended for the domestic market account for less than 10% of the total import of fresh and frozen salmon.

These imports mainly consisted of fresh salmon, whole head-on gutted (whole HOG) and fillets, which accounted for 92% of the total imported volume. In statistical reports, the origin of fresh salmon is recorded as follows: Sweden (56% of the total imports in volume), Norway (26%) and Denmark (10%). However, it should be noted that imports from Denmark and Sweden correspond to imports from Norway. Both are the countries through which salmon enters the EU customs area via road transport.

Poland also imported some frozen salmon (18.203 tonnes). In Eurostat and EUMOFA statistical reports, the origin of frozen salmon is recorded as follows: Sweden (22% of the total imports in volume), Denmark (20%), Germany (15%), the USA (11%) and Chile (10%). Similar to the case of fresh salmon, Eurostat's statistical reports for frozen salmon do not reflect the actual situation. The key suppliers are the USA, Chile, and Norway (shipments from Norway are, as in the case of fresh salmon, attributed to Sweden and Denmark). Frozen salmon shipments from Germany are, in fact, imports from Chile and the USA which arrive at the port of Hamburg and are recorded in the statistics as imports from Germany.

Raw material imports evolved between 2014 and 2023, with fresh and frozen whole HOG salmon increasing by 62% and 152% respectively, while fresh and frozen fillets decreased by 24% and 33% over the same period. Overall, Poland imported 50% more raw materials in volume in 2023 than in 2014 (from 153.814 to 231.091 tonnes).

Table 36: Evolution of imports of raw material in Poland (tonnes product weight)

Preservation	Presentation	2019	2020	2021	2022	2023	Evol. 2022/2023	Evol. 2014/2023
Live/Fresh	Whole/Gutted (HOG)	176.358	198.550	205.978	191.867	202.173	5%	62%
	Fillet	5.490	13.513	15.152	15.649	10.715	-32%	-24%
	Total	181.847	212.063	221.130	207.516	212.887	3%	54%
Frozen	Whole/Gutted (HOG)	9.059	7.545	10.371	11.787	10.989	-7%	152%
	Fillet	5.365	4.072	5.286	4.817	7.214	50%	-33%
	Total	14.424	11.617	15.656	16.604	18.203	10%	20%
Total		**196.271**	**223.681**	**236.787**	**224.120**	**231.091**	**3%**	**50%**

Note: The products in the table above correspond to the following detailed products (with their CN-8 codes):

- Fresh or chilled whole and gutted (HOG) salmon: 03021300 and 03021400
- Fresh fillets of salmon: 03044100
- Frozen whole and gutted (HOG) salmon: 03031100, 03031200 and 03031300
- Frozen fillets of salmon: 03048100

Source: Eurostat-Comext

Production of smoked salmon

In 2022, Poland's smoked salmon production was estimated at 77.158 tonnes (product weight), marking an 11% decline compared to 2021, when record production levels were achieved. Over the long term, Poland's smoked salmon production has been steadily growing, peaking at 86.385 tonnes in 2021, which represented 46% of the EU's total production.

Table 37: Evolution of Polish smoked salmon imports by countries (tonnes product weight, 2018-2022)

	2018	2019	2020	2021	2022	Evol. 2022/21	Evol. 2022/18
Production of smoked salmon	56.684	61.031	70.386	86.385	77.158	**-11%**	**+36%**

Source: Eurostat-Prodcom

Imports smoked salmon

Imports of smoked salmon to Poland accounted for 619 tonnes in 2023. The main countries of origin were Germany (accounting for 44% of total imports in volume) and Denmark (36%). Imports of smoked salmon into Poland have decreased by 12% in the period between 2019 and 2023.

Table 15: Evolution of Polish smoked salmon imports by countries (Tonnes product weight, 2019-2023)

	2019	2020	2021	2022	2023	Evol.2023/22	Evol.2023/19
Germany	497	1.281	1.266	656	275	-58%	-45%
Denmark	16	2	22	21	221	+967%	+1.276%
Others	173	115	62	26	123	+374%	+374%
Total	**686**	**1.398**	**1.350**	**703**	**619**	**-12%**	**-12%**

Source: Eurostat-Comext

Supply

In 2022, the supply of smoked salmon in Poland reached 77.861 tonnes, with 99% sourced from domestic production and only 1% from imports. Although this represents a slight decrease compared to 2021 (in relation to the decrease of production as highlighted above), Poland's supply has grown by 39% over the past decade, driven primarily by increased production.

Table 16: Evolution of Polish smoked salmon supply (tonnes product weight, 2018-2022)

	2018	2019	2020	2021	2022	Evol. 2022/21	Evol. 2022/18
Production	56.684	61.031	70.386	86.385	77.158	-11%	36%
Imports	929	686	1398	1350	703	-48%	-24%
Supply	**57.613**	**61.717**	**71.784**	**87.735**	**77.861**	**-11%**	**35%**

Source: Eurostat-Comext and Eurostat-Prodcom

5.1.2 Exports

Exports

Exports of smoked salmon from Poland reached 52.099 tonnes in 2023. The main destination was Germany, which accounted for more than half of exports (56% of export volume). Other main destinations were Italy (14%), France (9%) and the USA (4%). Polish exports of smoked salmon have increased between 2014 and 2023, with a notable increase in Italy, the USA and Sweden.

Record-high exports of smoked salmon from Poland were recorded in 2021. The level of exports for the following years (2022-2023) and preliminary results for the first half of 2024 indicate that salmon exports from Poland are now stabilising at the average level of 2019-2020.

Table 40: Evolution of Polish smoked salmon export by main destination countries (Tonnes product weight, 2014-2023)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	Evol. 2023/14
Germany	32.422	34.256	35.971	29.840	29.715	32.547	37.231	39.213	31.984	29.403	**-9%**
Italy	4.164	4.072	4.965	4.599	5.966	6.356	7.100	8.706	8.984	7.510	**+80%**
France	4.116	4.366	4.131	4.291	4.874	5.882	4.243	4.485	4.631	4.431	**+8%**
USA	354	239	293	366	228	378	449	906	1.508	1.898	**+436%**
Others	3.173	3.011	3.318	4.005	5.516	5.461	7.406	9.524	9.319	8.857	**+179%**
Total	**44.229**	**45.945**	**48.678**	**43.101**	**46.299**	**50.625**	**56.428**	**62.834**	**56.425**	**52.099**	**+18%**

Source: Eurostat-Comext

5.1.3 Apparent consumption

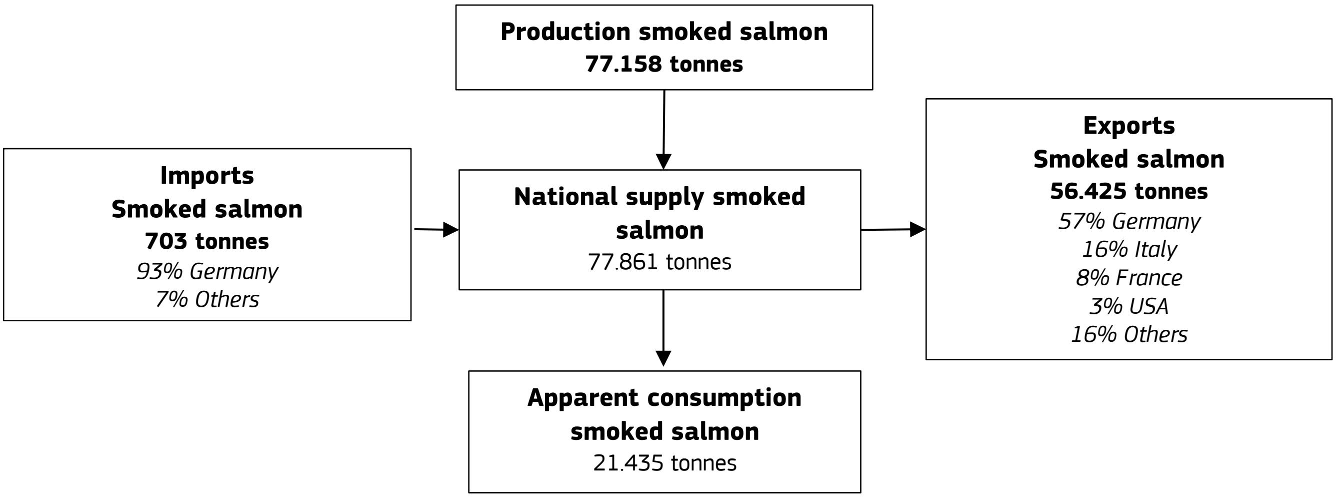
Based on the previously presented data from Eurostat, it can be calculated that Polish apparent consumption of smoked salmons in 2022 amounted to 21.435 tonnes of product weight, i.e. 0,56 kg per capita per year.

Table 41: Polish apparent consumption of smoked salmon in 2022 (tonnes product weight)

	Volume	Evol. 2021/2022	Evol. 2013/2022
Production	77.158	-12%	+40%
Imports	703	-92%	-29%
Supply (production + imports)	77.861	-13%	+39%
Export	56.425	-11%	+24%
Apparent consumption (supply – exports)	**21.435**	**-16%**	**+103%**

Source: EUMOFA elaboration based on Eurostat-Comext and Eurostat-Prodcom

Figure 22: Supply balance for smoked salmon in Poland (2022, tonnes of product weight)



Source: Eurostat and Eurostat-Comext data

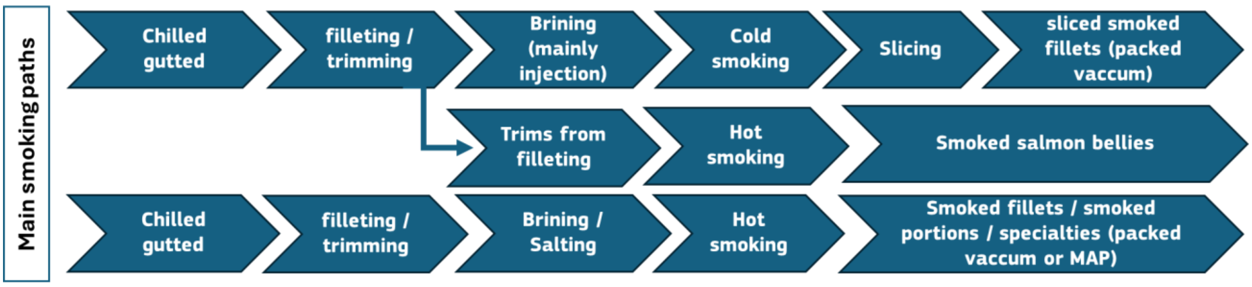
5.2 Characteristics of the Polish market and consumption

Processing industry

According to an interview with a stakeholder from the salmon value chain in Poland, the dominant form of supply is chilled (iced) gutted salmon in styrobox. According to the same interview, Norway is the dominant supplier, mostly because of the availability of raw materials and logistics, but also customer preferences. Stakeholders in the Polish value chain consider that the Scottish salmon is a good alternative but it has low availability and difficult logistics to Poland. Some customers (mostly from France and the UK) in export require organic, ASC certification or specific Scottish origin which explains imports from Scotland to Poland for further processing.

The figure below provides the main processing paths in the salmon smoking industry in Poland, based on interviews.

Figure 23: Main processing paths in the salmon smoking industry in Poland



Source: EUMOFA elaboration based on interviews

Domestic market and consumption overview

Historically, salmon was a rare and niche product in Poland. Smoking activities, with smoked Baltic salmon primarily available on the coast and considered a luxury product elsewhere. Since the 1990s, smoked salmon production expanded slightly, using imported raw materials, though it remained a luxury product with limited availability for the average consumer. After 2004, wild Baltic salmon catches declined sharply due to catch limits and the ban on gillnets, while imports of farmed salmon, mainly for processing and export (smoking), grew significantly. This growth was accompanied by the development of the domestic market, driven by intensive B2B and B2C promotional campaigns by the Norwegian

Seafood Council. As a result, salmon has become one of the frequently consumed fish in Poland and is among the most preferred and commonly purchased fish by consumers.

Additionally, data from the GfK Consumer Panel shows that in 2023, fresh and smoked salmon made up 8,2% of household fish and fish product purchases, up from 6,3% in 2018[26].

Salmon is one of the most widely available fish products in Poland, found in a variety of retail outlets. Particularly, smoked salmon is available in many supermarkets and convenience chains in addition to smaller grocery stores and other discounters, though it may not always be part of their regular offering.

In terms of overall availability of smoked fish, smoked salmon ranks as the second most accessible in Poland, surpassed only by smoked mackerel. Based on a market onsite review, the most commonly available smoked salmon products in Polish retail include:

- cold-smoked sliced fillets, commonly found in supermarkets and hypermarkets,
- cold or hot-smoked fillets (unsliced), more frequently available in traditional local shops,
- hot-smoked fillets or portions, widely available in supermarkets and hypermarkets,
- smoked salmon bellies, found in hypermarkets, cash-and-carry outlets, traditional trade, and supermarkets.

In recent years, the most dynamic growth in the domestic market has been in the sales of salmon as an ingredient in sushi sets. Most of the sushi sets offered in Polish supermarkets do not contain raw fish - the primary fish-based ingredient is cold-smoked salmon (slices - especially in the form of nigiri and maki or tartare), less commonly hot-smoked or baked salmon (in maki or futomaki).

Smoked salmon trails behind traditional smoked meats like ham and sausage both in terms of purchase quantity and frequency. According to a 2021 IMAS International study, about 15% of consumers eat smoked fish weekly, while 29% try to buy it 2-3 times a month, 25% purchase it once a month and 17% eat smoked fish very rarely or not at all[27].

There is also a variability in consumer preferences between cold-smoked and hot-smoked salmon. Cold-smoked salmon is particularly popular among younger consumers (18-24 years old), with 18% selecting it as their top smoked fish choice, compared to only 8% of consumers aged 45-74. Higher education and income levels also correlate with increased consumption of cold-smoked salmon. Hot-smoked salmon has a smaller, but steady following across age groups, indicating its appeal as a traditional product with potential growth among younger consumers[28].

[26] Mech G., Dekada Kongresu Rybnego – rynek ryb i produktów rybnych w perspektywie 10 lat, presentation on the 10th Fish Congress, 19.05.2024

[27] Kulikowski T., Dobre perspektywy dla wędzonych łososi, słabsze dla makreli, bardzo słabe dla szprotów, Fish Industry Magazine (Magazyn Przemysłu Rybnego), no. 2 (140) / 2021, pp. 4-12.

[28] Kulikowski T., Dobre perspektywy dla wędzonych łososi, słabsze dla makreli, bardzo słabe dla szprotów, Fish Industry Magazine (Magazyn Przemysłu Rybnego), no. 2 (140) / 2021, pp. 4-12.

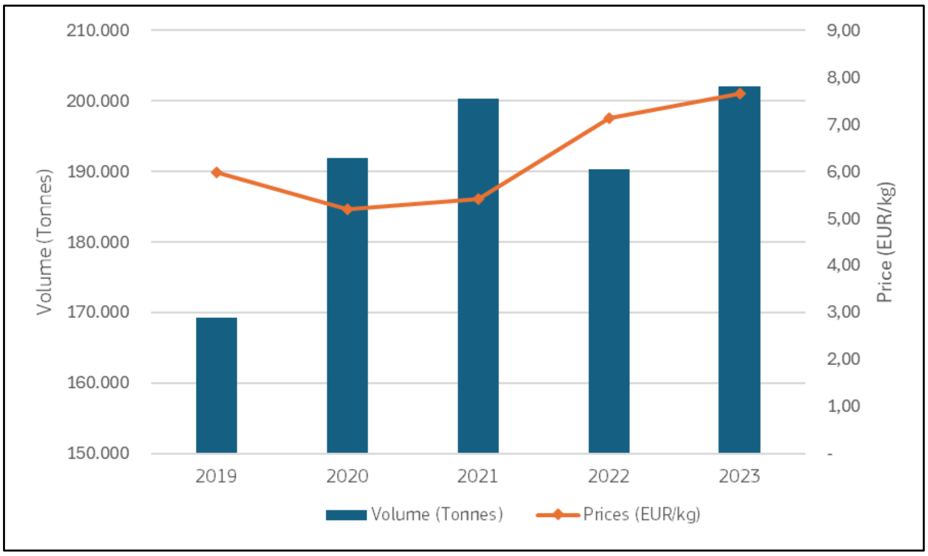
5.3 Price transmission in the supply chain

In this section, to convert all prices originally available in PLN, a fixed EUR/PLN exchange rate of 1 EUR = 4.6872 PLN was applied (i.e., the average exchange rate for 2023 according to the National Bank of Poland).

5.3.1 Price of raw material

The figure below presents the prices of fresh whole HOG salmon, the primary raw material for the Polish smoking industry. It shows a steady increase in prices since 2020. Raw material prices peaked in 2023, with an average price of 7,66 EUR/kg.

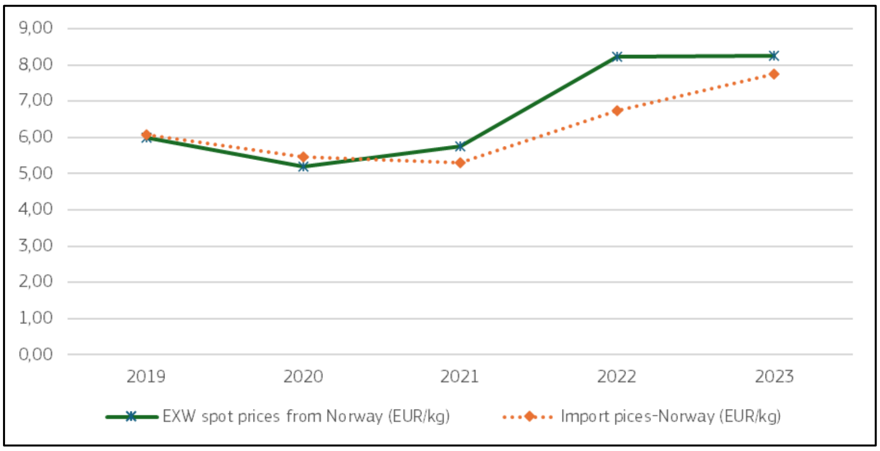
Figure 24: Volume (tonnes) and prices (EUR/kg) of raw material (fresh whole HOG salmon) between 2019-2023



Source: Eurostat-Comext

A comparison of average spot prices from Norway with the average import prices from statistics (illustrated in figure below) indicates that, despite the added transportation costs, import prices to Poland are on average 10% lower than the average annual export prices from Norway between 2021 and 2023. This is due to the fact that some of the purchases made by Polish importers are based on long-term contracts rather than spot prices, and also because purchases are optimised and made, at least partially, during periods when prices are lower.

Figure 25: Comparison between spot prices from Norway and Import prices of fresh whole HOG salmon



Source: Fish Pool export prices, based on the Nasdaq Salmon price index and Eurostat-Comext

5.3.2 Export prices

Export prices have shown an overall upward trend, driven by rising production costs and raw material prices. The peak was reached in 2023, with an average price of 18,95 EUR/kg, marking a 15% increase compared to 2022. Prices vary significantly depending on the market and export volumes. For instance, the average export price of smoked salmon was 18,85 EUR/kg to Germany (Poland's largest market for smoked salmon), 18,87 EUR/kg to Italy, 17,35 EUR/kg to France, and higher prices were observed for exports to Austria and the USA.

Table 42: Volume and prices of smoked salmon exports from Poland (2020-2023)

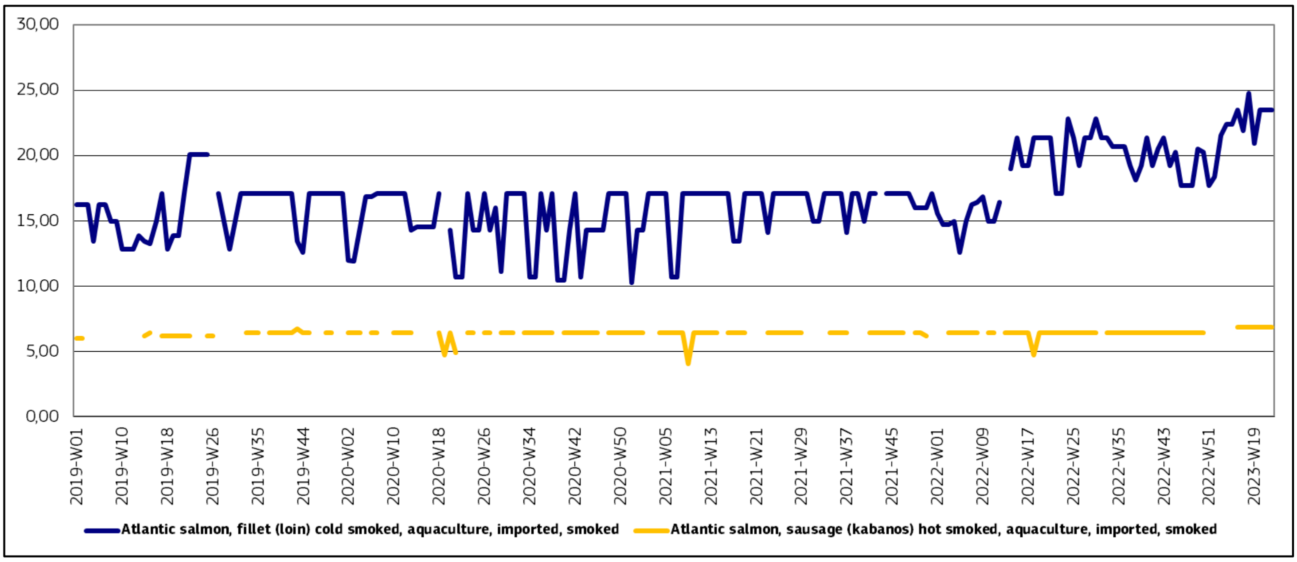
	2020		2021		2022		2023	
	Volume (Tonnes)	Price (EUR/kg)	Volume (Tonnes)	Price (EUR/kg)	Volume (Tonnes)	Price (EUR/kg)	Volume (Tonnes)	Price (EUR/kg)
Germany	37.236	13,93	39.320	13,02	32.067	16,06	29.487	18,85
Italy	9.365	15,48	11.928	15,12	12.225	16,76	10.174	18,87
France	4.732	12,48	5.105	11,37	5.968	14,68	5.154	17,35
Austria	2.494	17,29	3.353	16,43	3.475	18,34	3.095	20,68
USA	1.327	17,66	1.781	18,12	2.265	22,09	2.739	21,64
Others	17.122	13,68	18.551	14,02	17.499	16,57	16.168	18,89
Total	**72.276**	**14,33**	**80.038**	**13,72**	**73.499**	**16,48**	**66.818**	**18,95**

Source: Eurostat-Comext

5.3.3 Wholesale prices

According to EUMOFA data, based on weekly price observations from a leading Polish cash-and-carry network (which supplies fish wholesale and semi-wholesale, primarily for the HORECA sector and small independent stores), the prices of cold-smoked salmon fillets (loins) remained stable (with weekly fluctuations around an average price of 15 EUR/kg) from early 2019 to early 2022. During 2022 and 2023, there was a sharp increase to nearly 23-24 EUR/kg, representing an overall 50% rise over two years.

Figure 26: Wholesale prices of smoked salmon in Poland (EUR/kg)



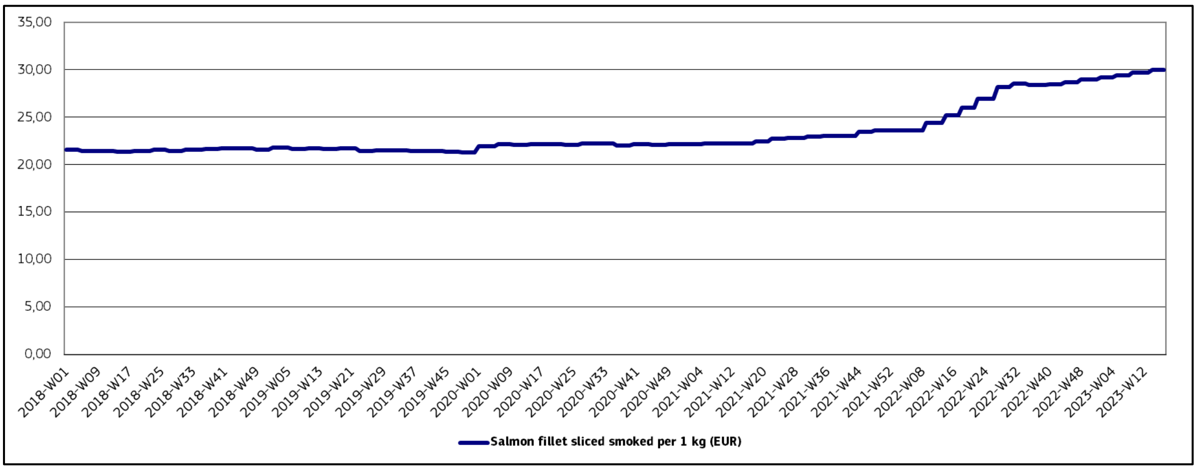
Source: EUMOFA

5.3.4 Retail prices

According to EUMOFA, average retail prices of smoked salmon (smoked fillet sliced, packed in 100 gr vacuum packages) amounted to 29,95 EUR/kg in week 30 of 2023. It was 6,4% more than in the same week of 2022 and 31,3% more than in the same week of 2021.

Retail prices of smoked salmon in the Polish market were relatively stable from 2018 to 2021. However, in 2022, a significant increase in smoked salmon retail prices was observed, similar to the average increase in food prices in Poland that year, which amounted to 22.3%.

Figure 27: Retail price in Poland, salmon fillet sliced smoked (packed 100g vacuum packages) (EUR/kg)

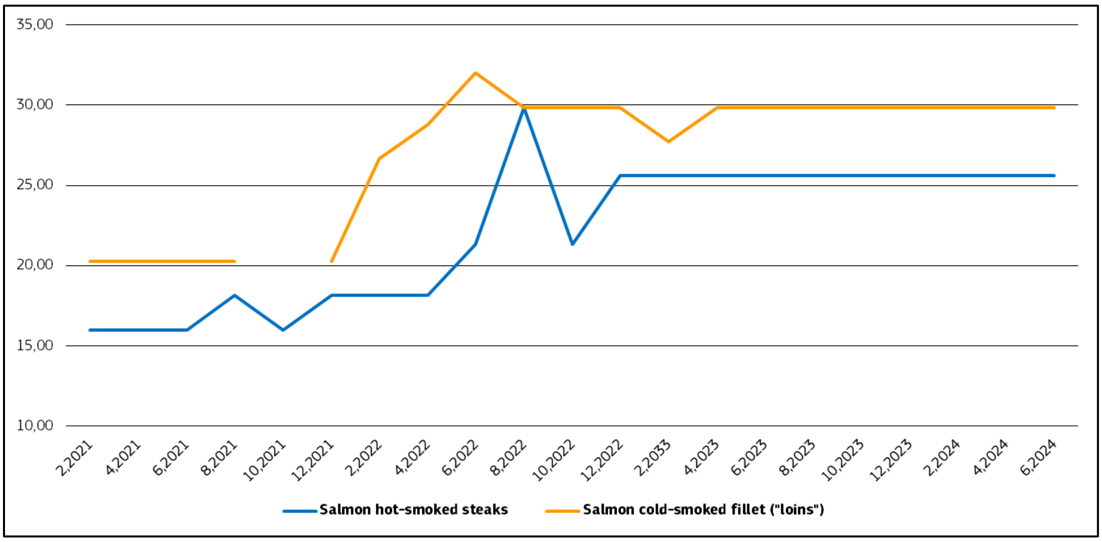


Source: EUMOFA, based on Europanel

Considering that the average purchasing power of consumers in Poland (according to GfK Poland) is 62,2% of the EU average, it should be noted that smoked salmon is a premium product and is very expensive for the average consumer in Poland.

In traditional retail trade in Poland (according to a price review published by *Magazyn Przemysłu Rybnego*[29]), prices exhibit greater short-term stability compared to prices in chain stores. In 2022, similar to the entire retail market, there was a sharp price increase of 41% for hot-smoked salmon steaks and 4% for cold-smoked salmon fillets (the fillets had already seen a significant price rise the previous year).

Figure 28: Retail prices (EUR/kg) of salmon hot-smoked steaks and cold-smoked fillets



Source: *Magazyn Przemysłu Rybnego*[30]

5.3.5 Price transmission

This section focuses on the value chain of cold smoked salmon fillets, processed in Poland from imported raw material (head on gutted salmon - HOG) imported from Norway and sold, under private label (GGN certified farming) in discount supermarkets in Poland. Cold-smoked salmon fillets studied in this supply chain are sold in individual packages of 100 gr.

[29] Fish Industry Magazine, bi-monthly, issues from no. 1 (139)/2021 to 3 (159)/2024).
[30] Fish Industry Magazine, bi-monthly, issues from no. 1 (139)/2021 to 3 (159)/2024).

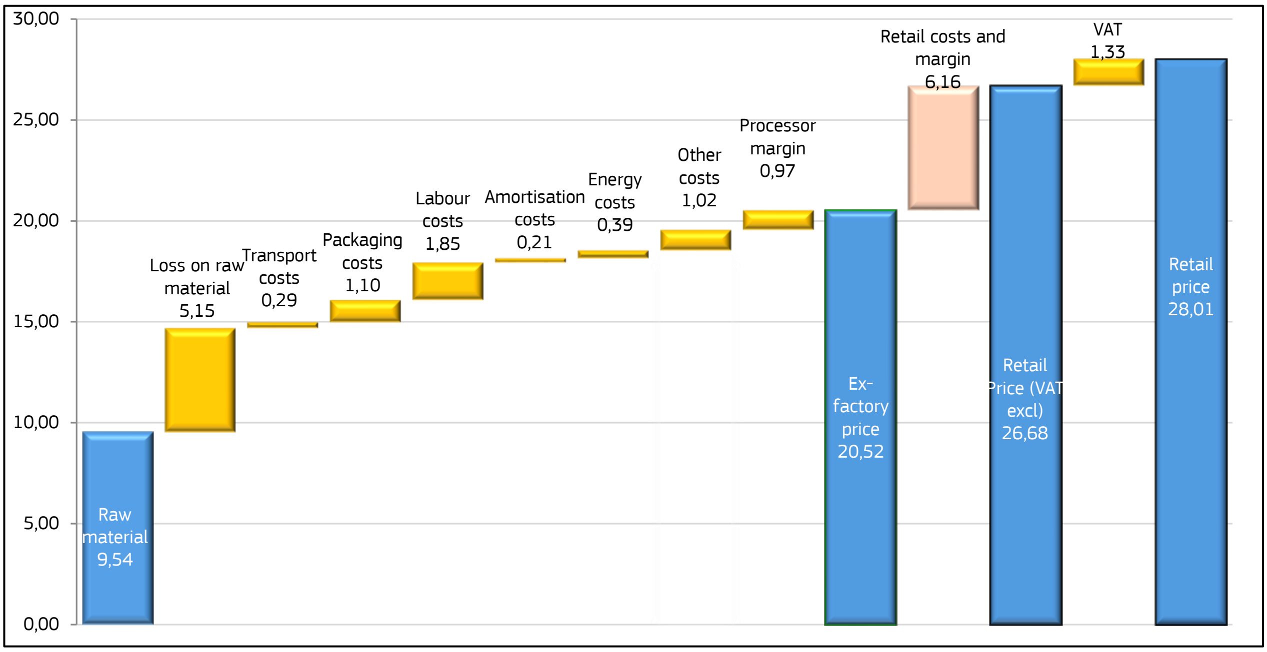
Table 43: Costs and margins for cold-smoked salmon fillets in package of 100 g, sold in discount supermarkets in Poland (2024)

	Price (EUR/kg)	% of the final price	Sources
Raw material	**9,54**	**34%**	Statistics and interviews
Loss on raw material	5,15	18%	Interviews and overview of annual financial data and reports
Costs of transport in value chain	0,29	1%	
Packaging costs	1,10	4%	
Labour costs	1,85	7%	
Amortisation costs	0,21	1%	
Energy costs	0,39	1%	
Other costs	1,02	4%	
Processor margin	0,97	3%	
Ex-factory price	**20,52**	**73%**	Statistics and interviews
Retail costs and margin	6,16	22%	Calculation
Retail Price (VAT excl)	26,68	95%	
VAT	1,33	5%	
Retail price	**28,01**	**100%**	Interviews and analysis of retail prices

Notes:

- **Raw material**: HOG salmon, chilled on ice in a styrofoam box.
- **Processing losses** (35%): In total, the losses in the production of cold-smoked sliced fillets amount to 35% (cold-smoked sliced fillets represent 65% of the HOG fish's weight).
- **Amortisation costs**: the depreciation costs of tangible assets were estimated, based on interviews and an analysis of financial statements from 2022-2023, at an average of 1% in relation to sales revenue.
- **Packaging costs:** based on interviews, the cost of tray packaging consists of the cost of the tray and the cost of the high-barrier film (top laminate).
- **Other processing costs:** these include: other energy costs, costs of auxiliary materials (salt, brine, smoking chips), cleaning and hygiene maintenance costs, costs of proprietary testing (chemical, microbiological) certification costs, marketing costs and general management costs.
- **Processor's profit margin**, in relation to sales revenue, is 5%. However, there is significant variability in profit levels, depending on the company, year, season, and strongly influenced by the enterprise's costs and financial income.
- **Ex-factory price** is not directly correlated with the retail price, as suppliers sign multi-month contracts with retail networks, during which they must maintain the agreed price even in the event of an increase in raw material costs.

Figure 29: Costs and margins for cold-smoked salmon fillets in package of 100 g, sold in discount supermarket in Poland (2024)



Source: EUMOFA survey

6. CONCLUSIONS OF THE PRICE TRANSMISSION IN THE DIFFERENT MEMBER STATES

This study provides price transmission analysis for smoked salmon in France, Germany and Poland.

Salmon is the 2nd most consumed fish species in the EU[31]. The present case-study focuses on the processed form of smoked salmon. France, Germany and Poland are among the four main markets for smoked salmon in the EU, accounting for respectively 24%, 17% and 15% of the EU consumption. Due to significant rise in prices and change in consumption habits, smoked salmon consumption decreased very significantly between 2013 and 2022 in France (-26%) and Germany (-41%). Between 2021 and 2022, consumption began to recover in both countries (+17% in France and +2% in Germany). Over the past 10 years, smoked salmon consumption increased by 103% in Poland, despite a decline by 16% between 2021 and 2022 due to recent increase in prices.

Smoked salmon is characterised by a large range of retail prices, especially in France and Germany. In terms of consumption, smoked salmon is generally popular among younger age groups compared to other fisheries and aquaculture products. In France, quality schemes such as "*Fumé en France*" play in the differentiation strategy implemented by processors, which allows them to reach higher prices. Both in France and Germany, the recent increase in prices led to a preference for cheap products and/or a decrease in smoked salmon consumption. In Poland, smoked salmon has grown from a luxury item to a widely consumed product, driven by increased availability and promotional efforts.

Poland, France and Germany are also the three main producers of smoked salmon in the EU, accounting for respectively 47%, 14% and 5% of the EU production. Over the past 10 years, domestic production decreased by 46% in France (twice the rate of the decrease in French consumption) and 43% in Germany (approximately the same rate as the decline of German consumption). Smoked salmon production increased by 40% in Poland, driven by the rise in domestic consumption of Polish exports. Between 2021 and 2022, the evolution is the opposite, with rises in domestic production in France (+7%) and Germany (+28%) and a decline in Poland (-12%). The raw material used in the EU for smoked salmon processing consists mainly of farmed salmon from Norway, and to a lesser extent, from the UK.

The price structure analysis in Germany and Poland was based on interviews and refers to prices observed by stakeholders in 2024, while the price structure analysis in France was based on official statistics and EUMOFA calculations and refers to 2022, the year of the latest available data. It has to be noted that raw material prices have increased significantly over the past years.

The following table provides a comparison of the price structure analysis for smoked salmon in the three countries covered. The final prices for smoked salmon fillets in large retail range from 25,0 EUR/kg in discount supermarkets in Germany to 38,5 EUR/kg in large retail in France. Smoked fillets are also sold at high price of 45,0 EUR/kg in fishmonger shops in Germany.

Prices for smoked salmon fillets sold in discount supermarkets are similar in Poland and Germany. In Germany, prices in large retail range from 23,95 EUR/kg to 35,92 EUR/kg (no label or GGN, farmed fish). Prices are significantly higher in the French large retail market.

The raw material account for 21% (in France) to 34% (in Poland) of the final price. Raw material prices are similar in the three countries. The higher final price in France is explained by both higher processing costs and margin and higher retailer costs and margin. The share of raw material in the price is similar for premium smoked fillet sold in open market, when considering fillet as raw material.

[31] The EU Fish Market, 2023. https://eumofa.eu/documents/20124/35668/EFM2023_EN.pdf

Table 44: Synthesis of price structure analyses of smoked salmon in France, Germany and Poland

	France	Germany	Germany	Poland
	Smoked fillet - large retail	Smoked fillet - discount supermarket	Smoked fillet premium - open market	Smoked fillet - discount supermarket
Raw material price	8,2	8,0	14,0	9,5
Price at platform / wholesale	25,3	18,5	22,9	20,5
Final price	38,5	25,0	45,0	28,0
% raw material / final price	21%	32%	31%	34%

7. ANNEXES

7.1 Annex 1: Apparent consumption of salmon

Table 45: Apparent consumption of salmon in the main MS (2022, in tonnes of live weight equivalent) (in bold, the three MS with focus in the present report)

	Production	**Total imports**	**Total Supply** (production +imports)	**Total exports**	**Apparent consumption** (supply-exports)
France	**0**	**291.714**	**291.714**	**49.241**	**242.473**
Germany	**0**	**269.871**	**269.871**	**89.110**	**180.760**
Italy	0	143.300	143.300	3.774	139.526
Spain	3	128.934	128.937	18.187	110.750
Sweden	35	669.779	669.814	614.662	55.152
Belgium	0	63.526	63.526	24.771	38.755
Portugal	0	28.654	28.654	2.662	25.992
Finland	467	64.502	64.969	39.002	25.967
Poland	**0**	**268.230**	**268.230**	**242.333**	**25.897**
Austria	0	17.303	17.303	1.715	15.588
Denmark	1165	271.790	272.955	258.841	14.114
Greece	0	20.998	20.998	8.064	12.933
Czechia	0	27.700	27.700	14.778	12.922
Romania	0	12.511	12.511	1.422	11.089
Slovakia	0	6.375	6.375	41	6.334
Estonia	0	10.133	10.133	3.942	6.191
Lithuania	0	51.932	51.932	46.420	5.512
Ireland	11.916	9.753	21.669	16.501	5.167
Latvia	3	13.302	13.305	9.296	4.009
Hungary	0	3.580	3.580	267	3.312
Luxembourg	0	3.206	3.206	271	2.935
Bulgaria	0	4.203	4.203	1.759	2.444
Cyprus	0	2.371	2.371	0	2.371
Croatia	0	3.722	3.722	1.637	2.084
Slovenia	3	1.852	1.855	218	1.637
Malta	0	910	910	0	910
Netherlands	0	113.659	113.659	142.208	nd
EU	**13.592**	**1.262.301**	**1.275.893**	**159.991**	**1.115.902**

Source: EUMOFA elaboration of Eurostat and Eurostat-Comext data

* The calculation of the apparent consumption in Netherlands provides a result below 0; this result may be due to inaccuracies in the statistics or to the margin of error in the calculation of live weight equivalents (which are based on standard coefficients for each CN code).

7.2 Annex 2: Stakeholders interviewed

- France
  - French processors' organisation (Association des Entreprises de Produits Alimentaires Elaborés (ADEPALE)
  - Fish processor

- Germany
  - Fish processor large scale
  - Fish processor medium/small scale
  - Large wholesale and retail company

- Poland
  - Scientific institutes
  - Salmon importers/intermediaries
  - Fish processors - management, commercial departments
  - Packaging suppliers
  - Equipment suppliers for the processing industry

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