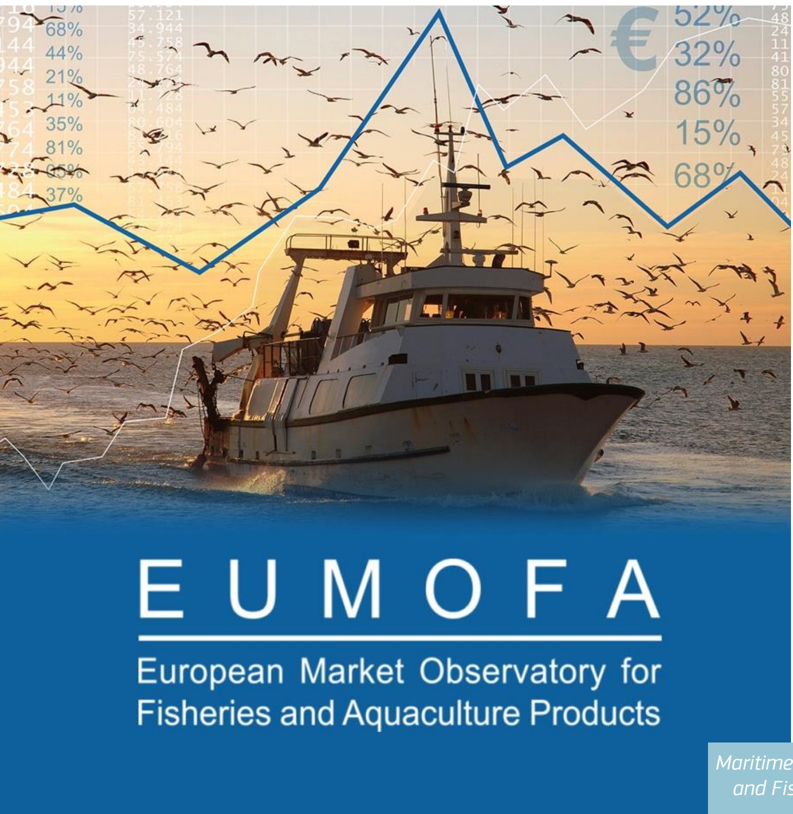
European Commission

CASE STUDY

LARGE TROUT IN THE EU



Maritimes Affairs and Fisheries

PRICE STRUCTURE IN THE SUPPLY CHAIN

FOCUS ON SPAIN AND ITALY

MAY 2023

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Summary

- In 2020, the world trout production was 981.239 tonnes (FAO). It increased by 21% between 2011 and 2020. 99% of the trout production comes from aquaculture and mainly consists of rainbow trout (*Oncorhynchus mykiss*), which accounts for 98% of the total. According to the FAO, the EU-27 is the second largest producer in the world (187.936 tonnes in 2020, 19% of world production) after Iran (197.370 tonnes, 20% of world production). Among the other major producers, production is also increasing in Türkiye and Norway, while it is decreasing in Chile. At EU level, main producers in 2020 were France, Italy and Denmark with respectively 37.201, 34.473 and 29.479 tonnes.
- "Large trout" names trout over 1-1,2 kg. This size is generally intended for smoking but is also sold whole or filleted (fillets over 400 g). More than one third of the EU production is large trout (38% in 2020 according to Federation of European Aquaculture Producers (FEAP)) and less than two-thirds is portion and medium-sized trout (62%). The share of large trout tends to increase, as it accounted for 27% of the total production in 2014. Main producers of large trout are France, Denmark and Poland, with a production above 10.000 tonnes each (2020).
- In 2022, large trout accounted for 61% of the intra-EU trade flows of trout in value. Smoked trout alone made 27% of the total and fresh whole large was 26%. Main intra-EU sellers of large trout were Sweden (EUR 86 million), Poland (EUR 63 million) and Denmark (EUR 59 million). Main intra-EU destinations are Germany (EUR 116 million), France (EUR 64 million), Finland (EUR 43 million) and Poland (EUR 39 million).
- Apparent consumption of trout at EU-27 level was 223.372 tonnes live weight equivalent (LWE) in 2020. The total supply relied for 84% on EU production and for 16% on imports (mainly from Norway and Türkiye). A limited share of the EU supply was exported (5%). Regarding large trout, the EU 27 apparent consumption was 100.192 tonnes in 2020. This supply relied for 78% on EU production and for 22% on imports. Exports accounted for 8% of the large trout supply.
- Focus on Spain and Italy:
    - In Spain, the volume of large trout production is growing (7.500 tonnes in 2020 versus 2.600 tonnes in 2014), with a trend to switch from portion trout to large trout. A large share of the Spanish large trout production is exported to France for the smoking industry. The remaining volumes are sold fresh on the HORECA sector and to the national smoking industry.
    - In Italy, the production and consumption of large trout are limited, even though the production is growing (about 3.000 tonnes in 2021). Large trout is mainly intended for the smoking or filleting by national stakeholders, it is also marketed to HORECA. The smoking industry is conducted at small-scale level.

List of acronyms

API	Associazione Piscicoltori Italiani
CN	Combined Nomenclature
EU	European Union
FEAP	Federation of European Aquaculture Producers
HORECA	Hotel, Restaurant, Café
MS	Member States
FAO	Food and Agriculture Organisation of the United Nations
VAT	Value Added Tax
LWE	Live Weight Equivalent

1 SCOPE AND CONTENT

1.1 Case study scope

Key elements on the analysis of large trout price structure and distribution of value in the supply chains are:

Product	Origin	Characteristics	Market and price drivers	Focus MS
Large Trout	Aquaculture	Consumed mainly smoked and filleted	Growing aquaculture production	Spain Italy

1.2 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 EU level;
- An analysis of the price structure along the supply chain in Spain and Italy.

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

- The country profiles:
  - Italy – https://www.eumofa.eu/italy
  - Spain – https://www.eumofa.eu/en/spain
- The species profile on rainbow trout – https://www.eumofa.eu/documents/20178/137160/Rainbow+trout_31-1.pdf
- Portion trout in the EU - https://www.eumofa.eu/documents/20178/474612/PTAT+Portion+trout+in+PL+DE+IT_EN.pdf/4f9b95b8-5a26-95b4-ac6b-c735f2668159?t=1635330900589

2 DESCRIPTION OF THE PRODUCT AND MARKETS

2.1 Biological and commercial characteristics

Case study product

Name: Rainbow trout (*Oncorhynchus mykiss)* **FAO 3-alpha code:** TRR **Presentation:** Smoked, fresh in fillets

Other main species

Sea trout/Brown trout (*Salmo trutta*): mainly produced in Europe, including France, UK, Italy, Germany, Romania, Finland and Russia

Related codes in the product nomenclature (COMEXT/EUROSTAT)

Based on the research conducted in the context of this study, trade of trout covers live, whole (fresh and frozen), filleted (fresh and frozen) and smoked fish. The relevant codes are identified in the following table.

Table 1: Custom codes for products that may contain trout and trout products (CN-8 nomenclature)

Code (CN8)	Description
03019110	Live trout "Oncorhynchus apache and Oncorhynchus chrysogaster"
03019190	Live trout "Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae"
03021110	Fresh or chilled trout "Oncorhynchus apache and Oncorhynchus chrysogaster"
03021120	Fresh or chilled trout of the species "Oncorhynchus mykiss", with heads on and gills on, gutted, weighing > 1,2 kg each, or with heads off, gilled and gutted, weighing > 1 kg each
03021180	Fresh or chilled trout "Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae" (excl. of the species "Oncorhynchus mykiss", with heads on and gills on, gutted, weighing > 1,2 kg each, or with heads off, gilled and gutted, weighing > 1 kg each)
03031410	Frozen trout "Oncorhynchus apache and Oncorhynchus chrysogaster"
03031420	Frozen trout of the species "Oncorhynchus mykiss", with heads on and gills on, gutted, weighing > 1,2 kg each, or with heads off, gilled and gutted, weighing > 1 kg each
03031490	Frozen trout "Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita and Oncorhynchus gilae" (excl. of the species "Oncorhynchus mykiss", with heads on and gills on, gutted, weighing > 1,2 kg each, or with heads off, gilled and gutted, weighing > 1 kg each)
03044210	Fresh or chilled fillets of trout of the species "Oncorhynchuss mykiss" weighting > 400 g each
03044250	Fresh or chilled fillets of trout "Oncorhynchus apache and Oncorhynchus chrysogaster"
03044290	Fresh or chilled fillets of trout "Salmo trutta", "Oncorhynchus mykiss" weighting <= 400 g each, "Oncorhynchus clarki", "Oncorhynchus aguabonita" and "Oncorhynchus gilae"
03048210	Frozen fillets of trout of the species "Oncorhynchus mykiss" weighting > 400 g each
03048250	Frozen fillets of trout "Oncorhynchus apache and Oncorhynchus chrysogaster"
03048290	Frozen fillets of trout "Salmo trutta", "Oncorhynchus mykiss" weighing <= 400 g each, "Oncorhynchus clarki", "Oncorhynchus aguabonita" and "Oncorhynchus gilae"
03054300	Smoked trout "Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae, Oncorhynchus apache and Oncorhynchus chrysogaster", incl. fillets (excl. offal)

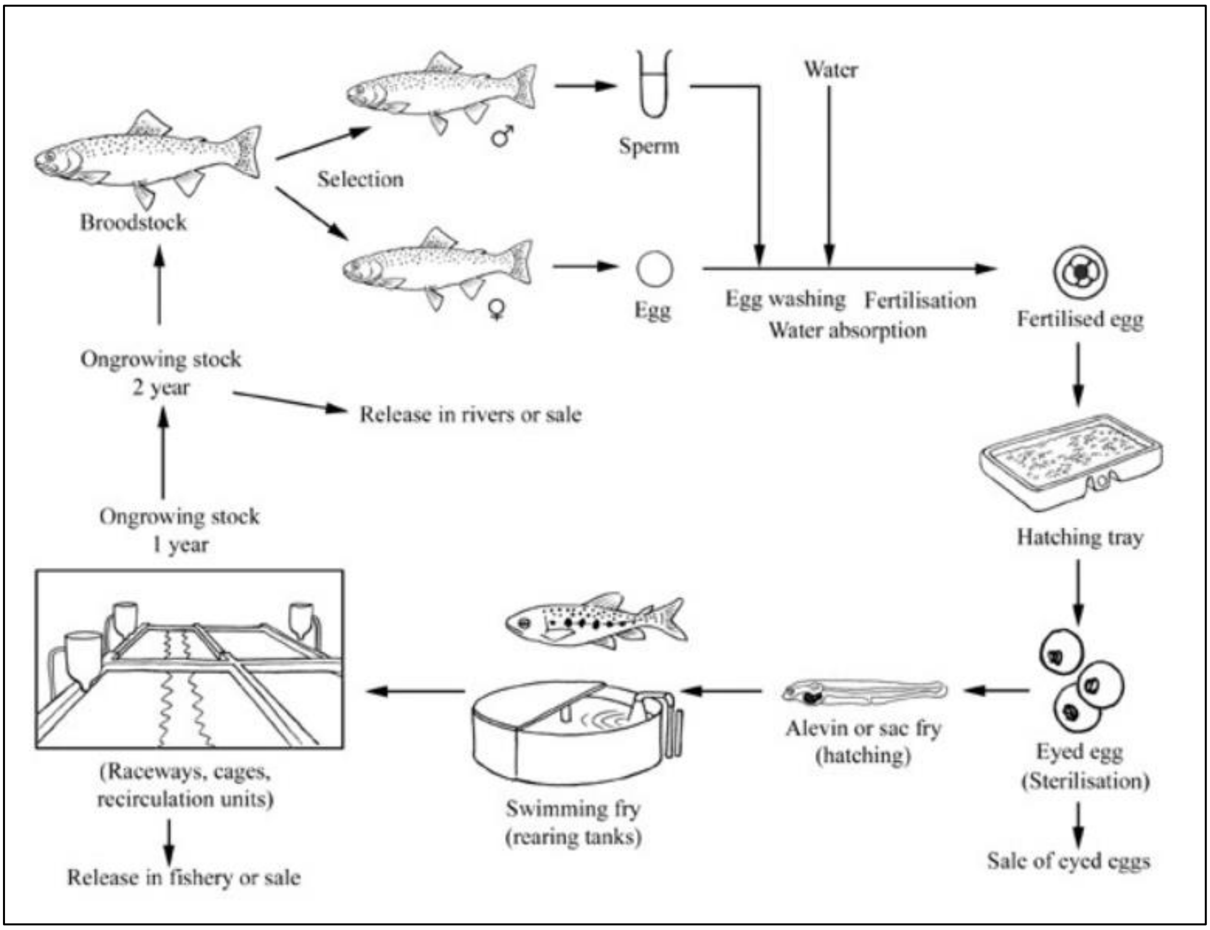
Table 2: Trout biological characteristics

Parameter	Characteristics – Rainbow trout - *Oncorhynchus mykiss*
Life cycle	Rainbow trout is capable of occupying many different habitats, ranging from an **anadromous life history** (living in the ocean but spawning in rivers and streams) to **permanently inhabiting lakes**. The anadromous strain is known for its rapid growth, achieving 7-10 kg within 3 years, whereas the freshwater strain can only attain 4,5 kg in the same time span. Males mature generally at 2 years and females at 3. Spawning takes place from November until May in the Northern hemisphere and from August to November in the Southern hemisphere. At the sea, mature individuals undertake short spawning migrations while anadromous forms may migrate long distances to spawning in streams.
Temperature	The species can withstand vast ranges of temperature variation (0-27 °C) but spawning and growth occur in a narrower range (9-14 °C). The optimum water temperature for rainbow trout culture is below 21 °C. Temperature and food availability influence growth and maturation, causing age at maturity to vary.
Diet	In the wild, adult trout feed on aquatic and terrestrial insects, molluscs, crustaceans, fish eggs, minnows, and other small fishes. The most important food is freshwater shrimp (also known as "scud"), that contains the carotenoid pigments responsible for the orange-pink colour in the flesh of the fish. Juveniles feed on zoobenthos and zooplankton.
Distribution	The rainbow trout is native to the cold-water rivers and lakes of the Pacific coasts of North America and Asia. It has been introduced practically everywhere the conditions are favorable for its culture, because rainbow trout tolerates a wide range of environmental and production conditions better than other trout species.
Catches	Rainbow trout catches represent a negligeable share of the total global catches. They also represent only 0,3% of the global trout production in 2020, as the species is mainly farmed. In Europe, only small volumes are caught (520 tonnes in 2020) with Finland being the main producer.
Aquaculture production	Rainbow trout can be farmed in both fresh and saltwater. The European production of farmed rainbow trout is historically influenced mainly by portion-size fish (less than 500 g), in freshwater (mainly in tanks and raceways and more recently in recirculating aquaculture systems (RAS), mainly in Denmark). The larger sized trout is produced in marine areas, farmed in cages. Figure 1 provides an overview of the Rainbow trout production cycle. The main production steps are as follows: <u>Seed supply</u>: Trout will not spawn naturally in culture systems; hence eggs are artificially spawned from high quality brood fish when fully mature (usually females of 3 or 4 years old are used). The reproduction of rainbow trout is well understood, and the techniques are well-developed. <u>Hatchery production:</u> Eggs are incubated and undisturbed until the eyed stage is reached, in hatching troughs, vertical flow incubators or hatching jars. Time taken for hatching varies depending on water temperature, e.g., 100 days at 3.9 °C and 21 days at 14.4 °C. <u>Rearing fry:</u> Fry are traditionally reared in fiberglass or concrete tanks, preferably circular in shape, to maintain a regular current and uniform distribution of the fry, but square tanks are also used. Fry are fed with specially prepared starter feeds using automatic feeders, starting from when approximately 50 percent have reached the swim-up stage. When most fish are actively feeding, 10 percent of the fish weight should be introduced daily for 2-3 weeks, preferably on a continuous basis using clockwork belt feeders. The feed pellets are made of fish meal (80 percent), fish oils and grains. <u>Ongrowing</u>: When the fry reaches 8-10 cm in length (~250 fish/kg) they are moved to outdoor grow-out facilities. These facilities can be i) concrete raceways, ii) flow-through

Parameter	Characteristics – Rainbow trout - *Oncorhynchus mykiss*
	ponds, or; iii) cages. Fish are grown to marketable size (30-40 cm), usually within 9 months, although some fish are grown to larger sizes over 20 months. The stock is graded, usually four times (at 2-5 g, 10-20 g, 50-60 g and >100 g) in a production cycle (first year), the density needs to be reduced, thus ensuring fast growth, improving feeding management and creating product uniformity. Fish transferred to marine cages have faster growth rates, reaching larger market size. Fry of about 70 g weight can attain 3 kg in less than 18 months.
Disease in farming	The main diseases observed in aquaculture are linked to the following pathogenic agents: protozoan (*Ichthyophthirius multifilis, Myxosoma cerebralis, Hexamita truttae, Costia necatrix*), bacteria (*Aeromonas salmonicida, Aeromonas liquefaciens, Vibrio anguillarum, Corynebacterium sp., Myxobacterium* sp.), virus (*IPN, IHN, VHS*) Trematodal parasite (*Gyrodactylus sp., Diplostomum spathaceum*)

Source: FAO[1], DORIS[2]

Figure 1: Production cycle of trout in aquaculture (*Oncorhynchus mykiss*)



Source: FAO[3]

[1] https://www.fao.org/fishery/en/culturedspecies/oncorhynchus_mykiss/en
[2] https://doris.ffessm.fr/Especes/Oncorhynchus-mykiss-Truite-arc-en-ciel-2308
[3] https://www.fao.org/fishery/en/culturedspecies/oncorhynchus_mykiss/en

2.2 World production

2.2.1 Overview

In 2020, the world trout production was 981.239 tonnes, with a 21% increase since 2011 (811.750 tonnes in 2011). Almost all the production is from aquaculture (99%). The main species is rainbow trout (*Oncorhynchus mykiss)* (source: FAO).

Table 3: Evolution of world trout production from aquaculture (tonnes)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	% total 2020	Evol. 2020 / 2011
Rainbow trout	792.499	882.071	815.091	794.924	750.619	841.671	840.537	862.335	903.225	959.690	98%	+21%
Other	19.251	20.800	22.977	25.567	26.598	21.370	23.925	22.251	23.635	21.549	2%	+12%
Total	**811.750**	**902.871**	**838.067**	**820.491**	**777.217**	**863.041**	**864.462**	**884.586**	**926.860**	**981.239**	**100%**	**+21%**

Source: FAO

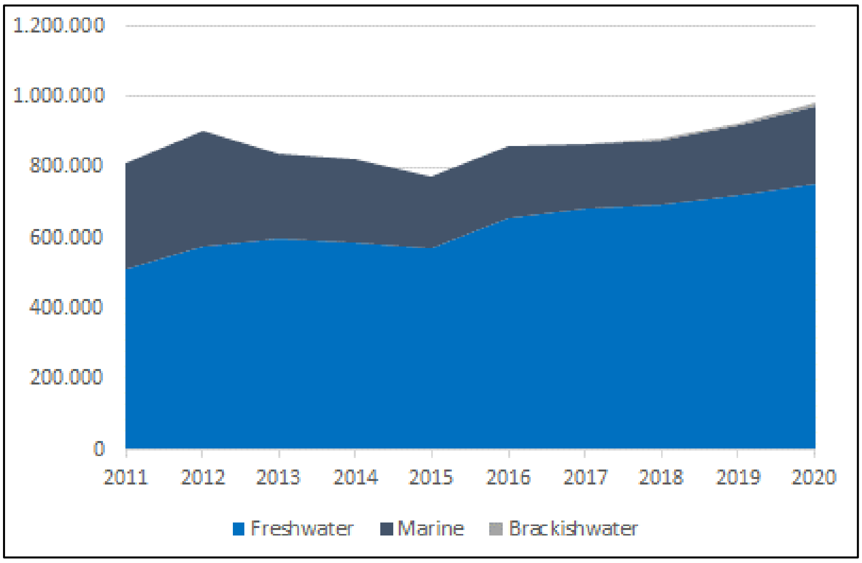
Most of the world production of farmed trout occurs in freshwater (77%, 754.986 tonnes in 2020), while 22% comes from marine production (220.703 tonnes in 2020). The freshwater production has increased significantly over the past decade (+47%) while the marine production has decreased (-26%). Production of trout in brackish water has been registered since 2018, accounting for 5.500 tonnes in 2020 (1% of the world production).

Table 4: Evolution of world farmed trout production by type of water environment (tonnes)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	% total 2020	Evol. 2020 / 2011
Freshwater	513.325	576.263	599.657	588.472	572.212	656.304	684.579	694.823	719.753	754.986	77%	+47%
Marine	298.229	326.577	238.365	231.922	205.004	206.737	179.883	183.463	201.820	220.703	22%	-26%
Brackish water	197	30	45	97	0	0	0	6.300	5.287	5.550	1%	+2717%
Total	**811.750**	**902.871**	**838.067**	**820.491**	**777.217**	**863.041**	**864.462**	**884.586**	**926.860**	**981.239**	**100%**	**+21%**

Source: FAO

Figure 2: Evolution of world farmed trout production (tonnes)



Source: FAO

2.2.2 Trout production over time by the main producing countries

At a global level, the main trout producer is Iran, which accounted for 20% of world production in 2020, followed by the EU-27, Türkiye, Norway and Chile. Iran, the EU-27, and Türkiye accounted for more than half (54%) of the world production in 2020.

Table 5: Evolution of farmed trout production in the main producing countries (tonnes)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	% total 2020	Evol. 2020 / 2011
Iran (Islamic Rep. of)	106.409	131.000	143.917	126.515	140.632	163.325	167.830	179.684	187.888	197.370	20%	+85%
EU - 27	173.929	171.681	175.701	169.732	165.959	186.324	185.983	173.558	188.422	187.936	19%	+8%
Türkiye	107.936	114.569	128.059	113.593	108.038	107.013	109.657	114.497	125.745	146.594	15%	+36%
Norway	58.545	74.668	71.552	68.986	73.007	87.852	66.999	68.345	83.489	96.263	10%	+64%
Chile	224.448	254.353	142.681	151.773	94.717	84.607	76.971	78.446	82.176	87.724	9%	-61%
Peru	19.962	24.762	34.993	32.923	40.947	52.246	54.878	64.372	50.793	54.188	6%	+171%
Russian Federation	21.180	21.874	24.223	25.120	24.536	28.837	33.806	35.232	45.303	50.917	5%	+140%
China	18.575	23.589	26.356	25.528	24.828	35.198	41.460	38.606	39.373	37.841	4%	+104%
Other	80.766	86.375	90.586	106.321	104.553	117.640	126.877	131.846	123.671	122.406	12%	+52%
Total	**811.750**	**902.871**	**838.067**	**820.491**	**777.217**	**863.041**	**864.462**	**884.586**	**926.860**	**981.239**	**100%**	**+21%**

Source: FAO

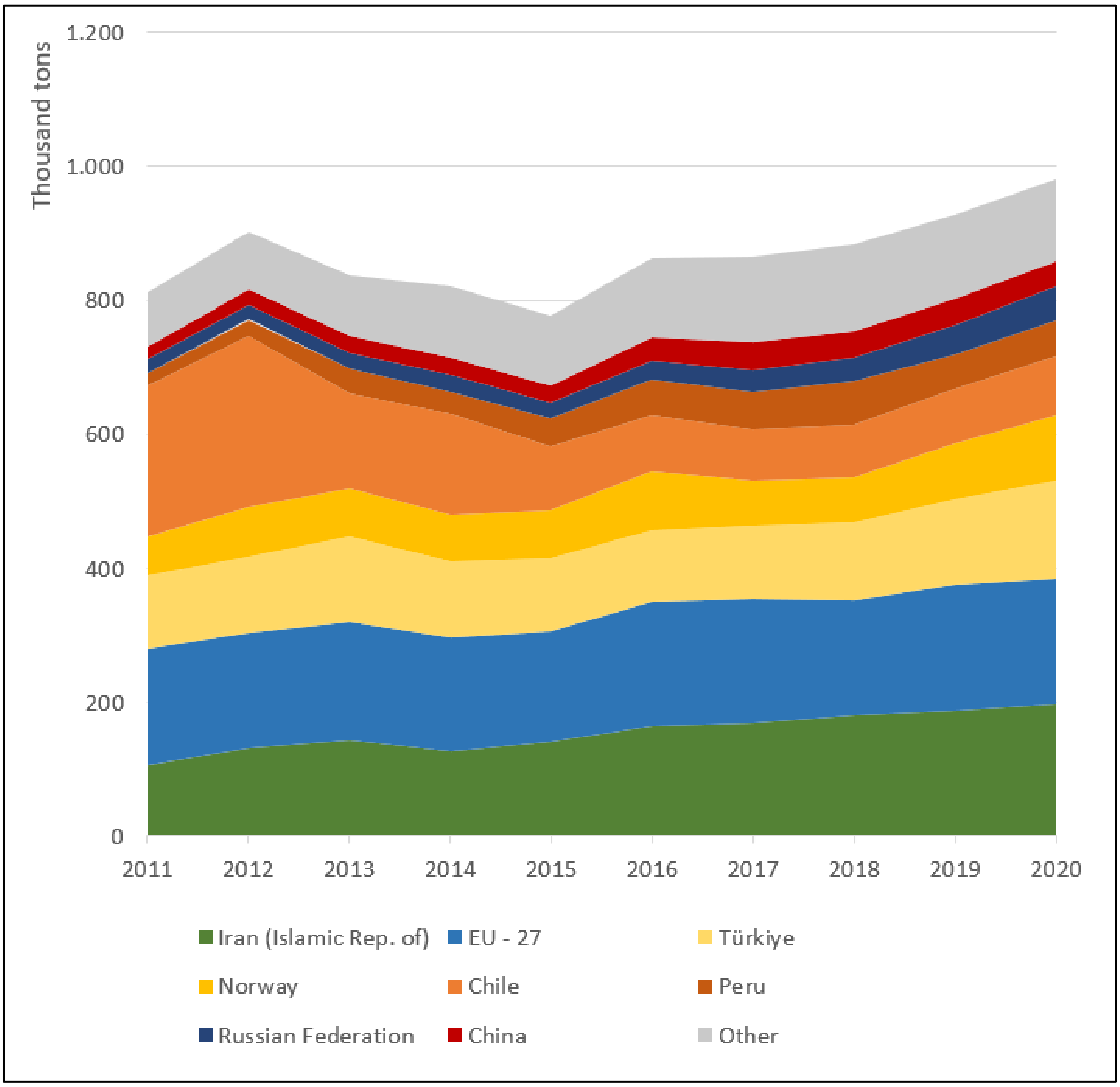
The production in Islamic Republic of Iran has increased by 85% over the past decade. The country became the biggest trout producer in the world in 2020 (197.370 tonnes). The EU-27 was the second largest world producer in 2020 (187.936 tonnes), with a production relatively stable over the last decade (+8% compared to 2011). Türkiye was the third largest trout producer (146.594 tonnes in 2020) with a strong production increase since 2011 (+36%).

Among other major producers, trout production has significantly increased over the last decade (2011-2020) in Norway (+64%), Peru (+171%), the Russian federation (+140%) and China (+104%), with a production ranging from 37.000 to 96.000 tonnes in each country in 2020. However the production in Norway fell by 2% in 2021 compared to 2020 according to the Norwegian Directorate of Fisheries. The Russian production is also expected to drop in 2022 as a result of the sanctions imposed on the Russian Federation and the resulting shortage in feed, juveniles and other equipment[4].

Chile is the only major producer where the production has decreased between 2011 and 2020: -61%, due to disease issues, it reached 87.724 tonnes in 2020.

[4] https://thefishsite.com/articles/russian-aquaculture-is-hit-hard-by-sanctions

Figure 3: Evolution of farmed trout production in the main producing countries (1000 tonnes)



Source: FAO

2.3 EU supply and apparent consumption

2.3.1 EU production by the main producing Member States

EUROSTAT[5] and FAO data differ when measuring EU-27 trout production. In 2020, the production has reached 185.116 tonnes in 2020 according to EUROSTAT and 191.569 tonnes according to FAO. For both sources, fisheries account for less than 2% of the total production, with an estimate of 3.633 tonnes for FAO and 276 tonnes for EUROSTAT[6] .

Table 6: Comparison of the statistical sources on trout production in the EU-27 (tonnes LWE)

		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	% total 2020
FAO	**Total**	**177.178**	**174.885**	**180.234**	**174.118**	**170.651**	**190.847**	**190.214**	**177.698**	**192.064**	**191.569**	
	Aquaculture	173.929	171.681	175.701	169.732	165.959	186.324	185.983	173.558	188.422	187.936	98%
	Fisheries	3.249	3.204	4.533	4.386	4.692	4.523	4.231	4.139	3.643	3.633	2%
EUROSTAT	**Total**	**172.134**	**171.693**	**171.487**	**168.456**	**169.980**	**181.381**	**180.465**	**176.961**	**185.010**	**185.116**	
	Aquaculture	171.717	171.304	171.003	168.100	169.627	180.808	179.903	176.327	184.717	184.840	100%
	Fisheries	417	389	484	356	353	573	562	634	293	276	0%

Source: FAO, EUROSTAT

In the following section of this report, only EUROSTAT data is considered. While the volume of farmed trout production increased by 8% between 2011 and 2020, from 171.717 to 184.840 tonnes, its value increased by 27% in nominal terms from 507,59 to EUR 644,65 million (+11% in real terms)[7].

Table 7: Volume and nominal value of farmed trout in EU-27

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Evol. 2020 / 2011
Volume (t LWE)	171.717	171.304	171.003	168.100	169.627	180.808	179.903	176.327	184.717	184.840	+8%
Nominal Value (1.000 EUR)	507.590	488.427	533.707	529.483	552.982	602.441	633.068	617.449	637.702	644.655	+27%

Source: EUROSTAT

Rainbow trout is the main species farmed in the EU, accounting for 183.506 tonnes in 2020 (more than 99% of the production). It is also the species that generated the greater income with EUR 593,1 million[8].

The main producing Member States are France, Italy and Denmark (with respectively 37.201, 34.473 and 29.563 tonnes). Together these MS account for 54% of the EU production. The production in volume of France, the largest EU producer, has increased by 17% between 2011 and 2020. Production in Italy

[5] Within EUMOFA, the main source used for supplying the database of EU aquaculture data is Eurostat. In some instances, Eurostat figures needed to be integrated with figures deriving from FAO database, national sources and sector associations. On the EUMOFA website a list reports such instances, as well as those instances for which data are estimates or provisional figures. For all other instances not reported in this list, only Eurostat data were used - Link https://www.eumofa.eu/sources-of-data#aquacultureTab

[6] Trout is mainly fished in inland waters, which are not reported in Eurostat, which explains the difference between FAO and Eurostat figures.

[7] Real terms are calculated using the GDP deflator (basis=2015).

[8] APROMAR, Aquaculture in Spain 2022. Page 29. Access: https://apromar.es/wp-content/uploads/2022/10/Aquaculture-in-Spain-2022_APROMAR.pdf [28/02/2023]

and Denmark has decreased over the past decade (-5% and -2%) while production in Poland has increased significantly (+48%) reaching 20.061 tonnes in 2020, overtaking Spain (-4%, 17.606 tonnes) as the 4th producer producing MS.

Table 8: Evolution of trout production in the main producing Member States (tonnes, live weight)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	% total 2020	Evol. 2020 / 2011
FR	31.927	31.821	31.771	30.312	30.163	34.313	33.697	34.146	35.100	37.201	20%	+17%
IT	36.275	36.330	36.850	32.794	32.332	36.101	35.900	34.287	38.906	34.473	19%	-5%
DK	29.885	31.632	29.781	30.449	32.359	30.423	30.580	28.280	30.904	29.479	16%	-1%
PL	13.541	11.490	11.563	14.179	13.473	14.633	14.446	15.719	16.103	20.069	11%	+48%
ES	16.547	16.307	15.799	15.106	16.158	17.215	16.835	16.002	15.920	15.806	9%	-4%
FI	10.100	11.466	12.229	12.572	14.069	13.749	13.928	13.303	14.320	14.414	8%	+43%
DE	10.069	10.065	10.730	10.645	9.158	9.289	9.125	8.435	8.811	9.007	5%	-11%
SE	10.752	10.505	9.763	9.444	8.972	11.552	11.363	9.586	8.304	8.649	5%	-20%
BG	2.339	2.692	2.892	2.870	2.338	3.118	2.975	4.806	3.846	3.332	2%	+42%
RO	1.710	1.074	1.106	1.152	1.542	1.595	2.078	2.474	2.537	2.636	1%	+54%
AT	1.664	2.030	2.066	2.043	1.958	2.066	2.251	2.330	2.451	2.625	1%	+58%
EL	2.389	1.970	2.013	1.611	1.759	1.644	1.989	2.127	1.898	1.936	1%	-19%
CZ	815	751	682	694	611	668	777	1.106	936	923	0%	+13%
SI	611	557	582	747	656	833	748	978	937	919	0%	+50%
EE	372	473	480	585	573	692	704	814	937	878	0%	+136%
SK	578	767	738	871	938	1.080	1.024	1.014	999	760	0%	+31%
PT	1.115	479	775	788	890	676	665	662	682	612	0%	-45%
IE	1.201	781	908	808	803	705	647	0	608	604	0%	-50%
HR	0	0	354	391	679	466	395	370	372	392	0%	/
LT	0	54	52	38	244	328	106	111	177	127	0%	/
HU	44	45	52	61	42	67	54	72	76	95	0%	+116%
LV	18	31	38	47	141	92	100	122	57	69	0%	+278%
NL	0	0	0	0	0	0	0	0	50	50	0%	/
CY	66	55	56	42	41	40	44	41	50	33	0%	0%
BE	81	277	173	175	50	0	0	0	1	0	0%	-100%
EU-27	172.100	171.652	171.454	168.424	169.949	181.345	180.431	176.784	184.982	185.090	100%	+8%

Source: EUROSTAT

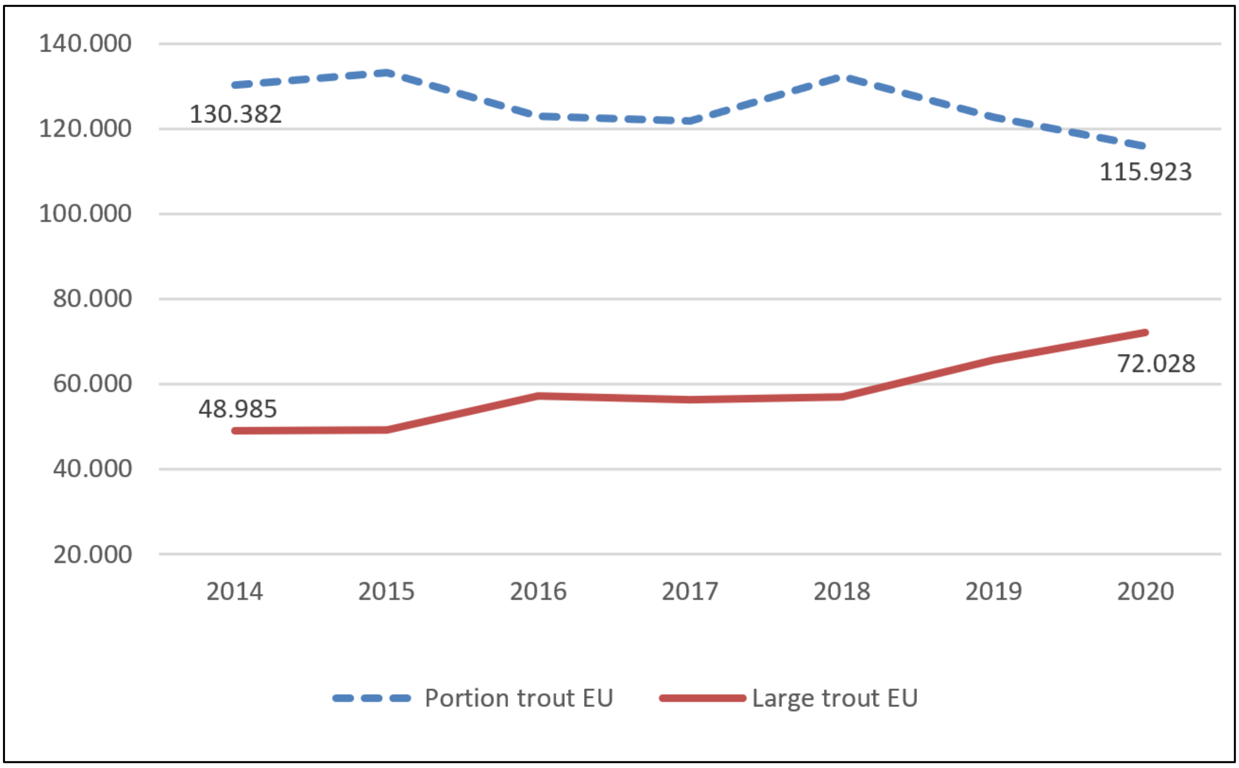
The Federation of European Aquaculture Producers (FEAP) provides detailed data[9] on the farmed production of:

- portion and medium-sized trout (below 1,2 kg / piece), called "portion trout"
- large trout (over 1,2 kg / piece)

The total volume provided by FEAP for the EU production of farmed trout is 187.951 tonnes in 2020, which is slightly more than the volume provided by EUROSTAT/EUMOFA (184.840 tonnes). Based on FEAP data, portion trout accounted for 62% of the volume in the EU-27, and large trout accounted for 38%.

The gap between the two categories has been significantly reducing during the past years: In 2014, portion trout accounted for 73% of the total and large trout for 27%. The volume of portion trout production has decreased by 11% between 2014 and 2020 (from 130.382 to 115.923 tonnes), while the volume of large trout production has increased by 47% (from 48.985 in 2014 to 72.028 tonnes in 2020).

Figure 4: Development of the volume of production of farmed portion trout and large trout in the producing EU MS (tonnes, live weight)

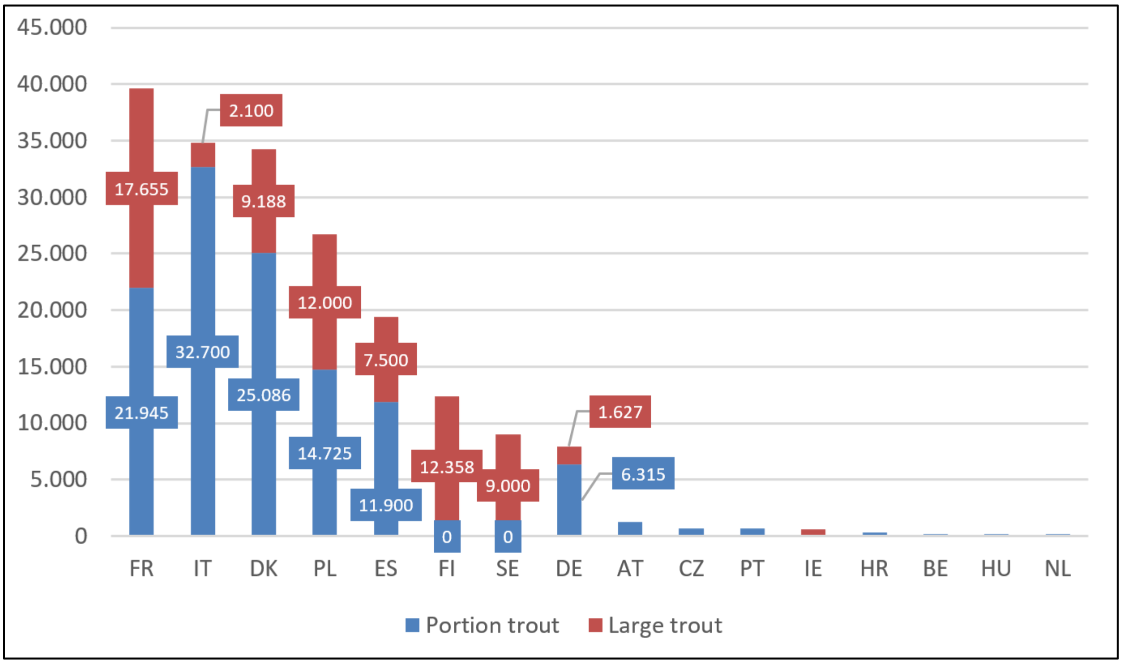


Source: FEAP

9 FEAP, European Aquaculture Production Report 2014-2020. Slides 32-35. Access: https://feap.info/wp-content/uploads/2022/03/production-report-v1.1.pdf [07/03/2023]

According to the FEAP, the main EU producers of large trout are France (17.655 tonnes in 2020), Finland (12.358 tonnes), Poland (12.000 tonnes), Denmark (9.188 tonnes), Sweden (9.000 tonnes), Spain (7.500 tonnes), Italy (2.100 tonnes) and Germany (1.627 tonnes). In Finland, Sweden and Ireland, 100% of the trout production is large trout. Large trout also accounts for a significant share of the production in: Poland (45%), France (45%), Spain (39%) and Denmark (27%).

Figure 5: Volume of production of farmed portion trout and large trout in the producing MS in 2020 (tonnes)



Source: FEAP

Table 9: Development of farmed large trout production in the main producing MS (tonnes)

Country	Product	2014	2015	2016	2017	2018	2019	2020
FR	Large trout	12.000	12.766	13.000	13.064	14.295	14.500	17.655
	Total	34.000	36.713	37.200	37.570	41.109	40.500	39.600
	Share of large trout	**35%**	**35%**	**35%**	**35%**	**35%**	**36%**	**45%**
DK	Large trout	12.448	12.500	13.127	12.314	12.835	13.116	12.358
	Total	39.373	39.425	34.149	31.718	37.921	38.202	37.444
	Share of large trout	**32%**	**32%**	**38%**	**39%**	**34%**	**34%**	**33%**
PL	Large trout	0	0	0	0	0	8.400	12.000
	Total	17.500	19.000	18.000	19.000	20.500	24.000	26.725
	Share of large trout	**0%**	**0%**	**0%**	**0%**	**0%**	**35%**	**45%**
FI	Large trout	11.115	11.115	13.500	13.500	11.599	9.188	9.188
	Total	11.115	11.115	13.500	13.500	11.599	9.188	9.188
	Share of large trout	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
SE	Large trout	6.951	7.048	9.123	8.504	8.504	9.000	9.000
	Total	6.951	7.048	9.123	8.504	8.504	9.000	9.000
	Share of large trout	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**	**100%**
ES	Large trout	2.600	2.678	3.900	5.025	5.185	5.250	7.500
	Total	15.600	15.938	17.160	17.947	18.856	18.930	19.400
	Share of large trout	**17%**	**17%**	**23%**	**28%**	**27%**	**28%**	**39%**
IT	Large trout	2.000	1.000	2.500	1.800	2.500	4.000	2.100
	Total	38.800	38.000	36.300	35.100	37.500	36.800	34.800
	Share of large trout	**5%**	**3%**	**7%**	**5%**	**7%**	**11%**	**6%**
DE	Large trout	1.471	1.506	1.506	1.506	1.537	1.627	1.627
	Total	9.937	9.148	9.148	9.148	7.852	7.942	7.942
	Share of large trout	**15%**	**16%**	**16%**	**16%**	**20%**	**20%**	**20%**
IE	Large trout	400	500	500	500	557	500	600
	Total	1.400	1.000	1.000	1.000	1.057	500	600
	Share of large trout	**29%**	**50%**	**50%**	**50%**	**53%**	**100%**	**100%**

Source: FEAP

2.3.2 Imports, exports and apparent consumption

Methodological note on "portion-sized trout ", "medium-sized trout" and "large trout" in FEAP and trade data

In the different MS, portion sized trout is generally considered to be below 500 g (even below 450 g). Trout between 500 g and 1,2 kg is considered as "medium-sized trout" and is notably used for filleting. Large trout, above 1,2 kg is generally intended for the filleting and smoking industries.

The FEAP definition for "portion trout" is trout below 1,2 kg. This size covers both "portion trout" and "medium-sized trout". The same applies in trade data. There are codes for trout below 1-1,2 kg (aggregating "portion" and "medium-sized trout") and codes for trout over 1-1,2 kg (large trout). In the present report, when "portion trout" is used from FEAP and trade data, this will cover both "portion trout" and "medium-sized trout".

The different codes also cover different species; however, rainbow trout accounts for 97% to 98% of both EU and world production (which means that other species are negligible).

The details on the terms used in the report for each trade code (CN-8 code) are provided in the following table.

Table 10: Trade codes and links with "portion-trout", "medium-sized trout" and "large trout"

Product	CN-8 CODE	Preservation	Presentation	Species	Weight
Live	03019190	Live	Whole	Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita and Oncorhynchus gilae	Unspecified
	03019110	Live	Whole	Oncorhynchus apache, Oncorhynchus chrysogaster	Unspecified
Fresh whole - large	03021120	Fresh	Whole	Oncorhynchus mykiss	> 1-1,2 kg
Fresh whole - portion	03021180	Fresh	Whole	Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae	Excluding large Oncorhynchus mykiss
	03021110	Fresh	Whole	Oncorhynchus apache, Oncorhynchus chrysogaster	Unspecified
Frozen whole - large	03031420	Frozen	Whole	Oncorhynchus mykiss	> 1-1,2 kg
Frozen whole - portion	03031490	Frozen	Whole	Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita and Oncorhynchus gilae	Excluding large Oncorhynchus mykiss
	03031410	Frozen	Whole	Oncorhynchus apache, Oncorhynchus chrysogaster	Unspecified
Fresh fillet - large	03044210	Fresh	Fillet	Oncorhynchus mykiss	> 400 g
Fresh fillet - portion	03044290	Fresh	Fillet	Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita and Oncorhynchus gilae	Excluding large Oncorhynchus mykiss
	03044250	Fresh	Fillet	Oncorhynchus apache, Oncorhynchus chrysogaster	Unspecified
Frozen fillet - large	03048210	Frozen	Fillet	Oncorhynchus mykiss	> 400 g
Frozen fillet - portion	03048290	Frozen	Fillet	Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita and Oncorhynchus gilae	Excluding large Oncorhynchus mykiss
	03048250	Frozen	Fillet	Oncorhynchus apache, Oncorhynchus chrysogaster	Unspecified
Smoked	03054300	Smoked	Whole and fillet	Salmo trutta, Oncorhynchus mykiss, Oncorhynchus clarki, Oncorhynchus aguabonita, Oncorhynchus gilae, Oncorhynchus apache and Oncorhynchus chrysogaster	Unspecified

Extra-EU imports

EU imports of trout from third countries reached EUR 192 million and 29.147 tonnes in 2022, with large trout accounting for 71% of the total import value[10]:

- whole large trout (fresh and frozen) is the main imported product; it accounts for 45% of the imported value (40% for fresh and 5% for frozen trout);
- smoked trout, which is mostly made from large trout, makes 18% of the value with EUR 32,8 million;
- large trout fillet accounts for 9% of the value of imports (6% for fresh fillet with EUR 10,8 million, 3% for frozen fillet with EUR 6,4 million)
- the main suppliers of the EU-27 are Norway (EUR 81,0 million) and Türkiye (EUR 76,9 million), both countries reaching together 82% of the EU-27 external supply.

Table 11: Extra-EU imports of trout (2022)

	Volume (tonnes)	**Value (1.000 EUR)**
Fresh whole - large	10.647	76.154
Frozen whole - large	1.803	10.335
Fresh fillet - large	885	10.832
Frozen fillet - large	709	6.354
Smoked	3.850	32.833
Sub total – Large Trout	17.893	136.509
Fresh whole - portion	1.889	8.822
Frozen whole - portion	5.765	22.043
Fresh fillet - portion	396	3.777
Frozen fillet - portion	3.191	20.559
Sub total – Portion Trout	11.240	55.201
Live Trout	14	360
Grand total	**29.147**	**192.070**

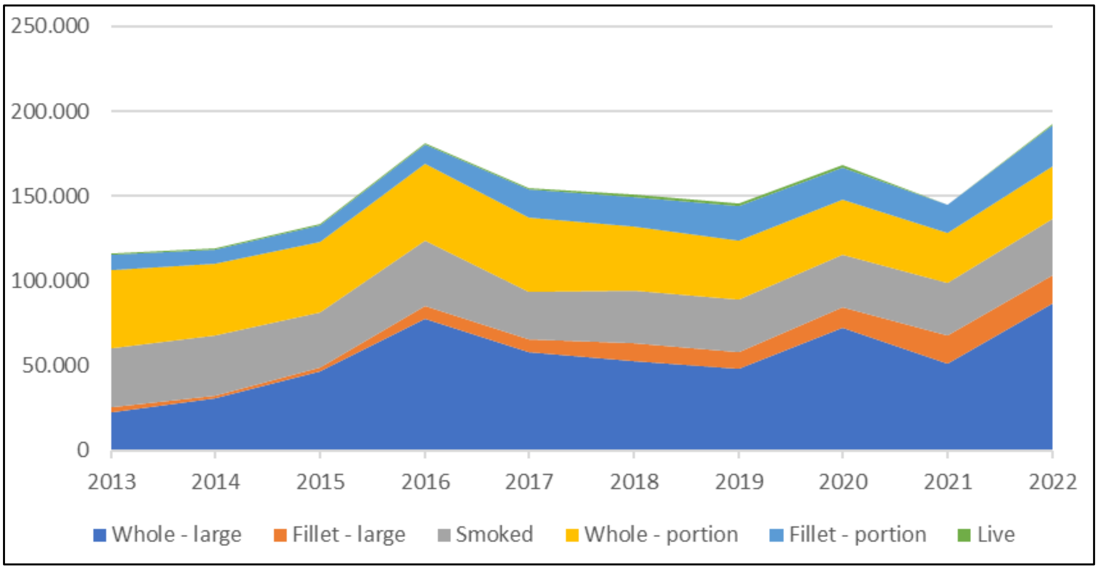
Source: Eurostat-Comext

[10] This calculated share includes the following categories: fresh whole - large, frozen whole - large, fresh fillet - large, frozen fillet - large, smoked trout.

Imports of trout from third countries increased by 32% in value and 6% in volume between 2021 and 2022 (EUR 47 million increase) due to a growth of fresh whole large trout (+62% in value and +24% in volume in 2022 compared to 2021). 2022 is the highest level of import over the period 2013-2022, in terms of nominal value.

In the long run, imports from third countries increased by 66% in nominal value (+41% in real terms) and by 10% in volume between 2013 and 2022; 2022 being the highest point in value. In terms of volume, the peak was in 2016 with 35.366 tonnes.

Figure 6: Extra-EU imports of trout in nominal value (1.000 EUR)



Source: Eurostat-Comext

Extra-EU exports

EU exports of trout to third countries reached EUR 64,4 million (7.001 tonnes) in 2022:

- smoked trout is the first exported product, accounting for 39% of the value with EUR 25 million;
- whole large trout accounts for 30% of the export value (23% for frozen trout with EUR 14,8 million and 7% for fresh trout with EUR 4,5 million,).
- fillets accounts for 15% of the exported value, mainly from portion trout.

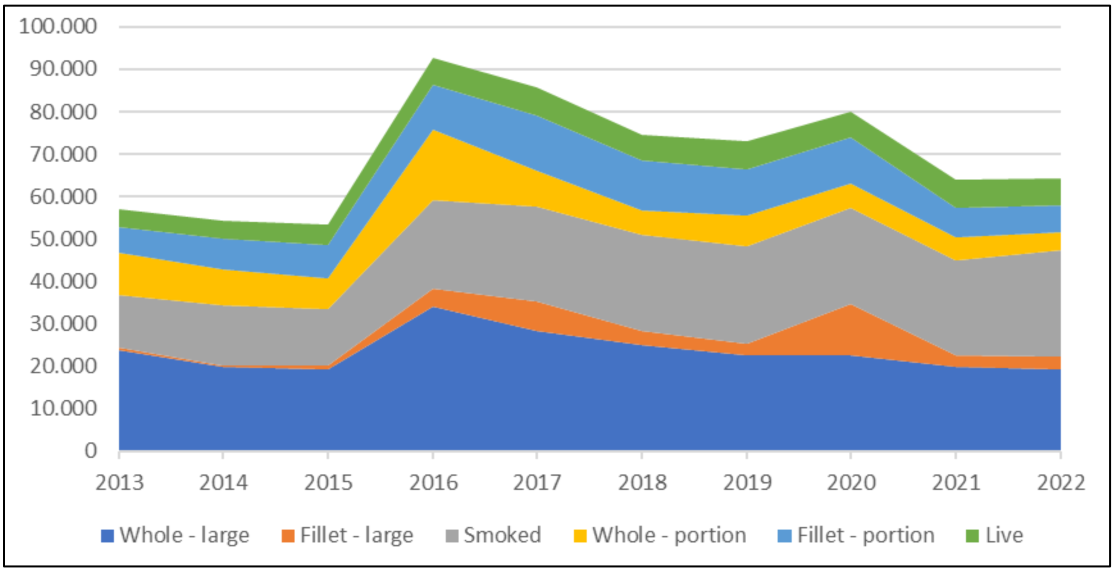
Table 12: Extra-EU exports of trout (2022)

	Volume (tonnes)	Value (1.000 EUR)
Fresh whole - large	689	4.461
Frozen whole - large	2.801	14.782
Fresh fillet - large	189	2.525
Frozen fillet - large	49	433
Smoked	1.449	25.111
Sub total – Large Trout	5.178	47.312
Fresh whole - portion	444	3.095
Frozen whole - portion	184	1.100
Fresh fillet - portion	361	4.648
Frozen fillet - portion	327	1.874
Sub total – Portion Trout	1.316	10.717
Live Trout	508	6.400
Grand total	**7.001**	**64.429**

Source: Eurostat-Comext

Extra-EU exports have decrased by 1% in value between 2021 and 2020, reaching both their lowest point in volume and value since 2016 (7.001 tonnes and EUR 64,4 million in 2022 compared to EUR 92,6 million and 16.899 tonnes in 2016, -30% in nominal terms and -39% in real terms). This decrease is mainly related to whole trout, both large (-53% in volume between 2013 and 2016) and portion (-88% since between 2013 and 2016). Exports of smoked trout are relatively stable in volume since 2016, between 1.449 tonnes and 1.578 tonnes.

Figure 7: Extra-EU exports of trout in nominal value (1.000 EUR)



Source: Eurostat-Comext

Intra-EU trade flows

Intra-EU exports accounted for EUR 587 million in 2022, large trout accounting for 61% of the total value (EUR 356 million). The larger share of the intra-EU trade (27% with EUR 156 million) is related to smoked trout (which is mainly large trout). The second type of product is also large trout: fresh whole, accounting for EUR 150 million (26% of the total). Third product is live trout (EUR 87 million). Other large trout products (fillets, fresh or frozen, frozen whole), account for a limited share of the intra-EU trade (1% to 4% of the total value each).

Table 13: Value of intra-EU trade of trout (exports, 2022)

	Volume (tonnes)	Value (1.000 EUR)
Fresh whole - large	24.058	150.203
Frozen whole - large	3.794	20.418
Fresh fillet - large	2.305	22.840
Frozen fillet - large	852	6.315
Smoked	11.393	156.124
Sub total – Large Trout	42.403	355.900
Fresh whole - portion	8.969	59.735
Frozen whole - portion	5.588	28.061
Fresh fillet - portion	3.368	35.093
Frozen fillet - portion	2.576	21.245
Sub total – Portion Trout	20.502	144.134
Live Trout	20.953	87.296
Grand total	**83.857**	**587.330**

Source: Eurostat-Comext

Based on Eurostat - Comext data, the main exporters of trout intra-EU are Poland, Denmark and Sweden, with respectively EUR 98 million, EUR 97 million and EUR 87 million exported on the EU market. In the case of Sweden and Denmark, those figures mainly reflect that exports from Norway first enter the EU through these two MS. Considering large trout, the main intra-EU exporter is Sweden, followed by Poland and Denmark, with respectively EUR 83 million, EUR 63 million and EUR 59 million.

Table 14: Value of intra-EU exports of trout (breakdown large trout and protion trout) from the main MS of origin (1.000 EUR, nominal value, 2022)

	PL	DK	SE	ES	DE	IT	FR	AT	NL
Large	62.702	59.052	83.180	33.602	37.106	14.382	16.555	27.885	5.705
Portion	35.034	38.239	3.117	36.039	15.504	30.611	26.476	8.395	13.904
Total	**97.736**	**97.291**	**86.298**	**69.641**	**52.611**	**44.994**	**43.030**	**36.280**	**19.609**

Source: Eurostat-Comext

The main importer of trout intra-EU is Germany, with imports reaching EUR 207 million. Following importers are France and Poland with imports reaching respectively EUR 80 million and EUR 57 million in 2022. Considering large trout, the main intra-EU importer is Germany, followed by France, Finland and Poland with respectively EUR 116 million, EUR 64 million, EUR 43 million and EUR 39 million.

Table 15: Value of intra-EU imports of trout (breakdown large trout and protion trout) from the main MS of origin (1.000 EUR, nominal value, 2022)

	DE	FR	PL	FI	AT	BE	IT	RO	ES
Large	116.366	63.829	39.113	43.198	21.534	14.838	10.228	3.527	1.251
Portion	90.608	16.451	17.387	2.988	19.988	12.675	9.607	13.260	2.329
Total	**206.974**	**80.280**	**56.500**	**46.186**	**41.522**	**27.512**	**19.834**	**16.787**	**3.581**

Source: Eurostat-Comext

Supply and apparent consumption

Based on EUROSTAT, FAO and FEAP data, the total supply and apparent consumption were estimated for all trout products (portion and large) in table 16. Table 17 focuses on large trout. All data used to calculate supply and apparent consumption are in LWE, including imports and exports.

The apparent consumption of trout at EU-27 level was estimated at 212.276 tonnes LWE in 2020. The EU production accounted for 84% of the total supply, while extra-EU imports accounted for 16%.

Apparent consumption accounted for 95% of the total supply. The main markets were Germany, France, Italy and Poland. Each of these MS having an apparent consumption over 20.000 tonnes LWE. The main part of national supply came from domestic production in Italy (92% of the supply), France (76%) and Poland (53%), while exports were significantly dominant in Germany (88% of the supply).

Table 16: Apparent consumption of trout in the main MS in 2020 (tonnes LWE)

	Production (aquaculture + catches)	Import	Total supply (production + import)	Export	Apparent consumption (total supply - export)
DE	9.015	72.319	81.334	5.975	75.359
FR	37.201	12.003	49.205	7.695	41.510
IT	34.473	2.873	37.346	10.804	26.542
PL	20.061	17.179	37.240	15.482	21.758
FI	15.043	9.022	24.065	5.666	18.399
ES	17.606	4.121	21.727	11.389	10.338
AT	2.625	12.239	14.864	6.463	8.400
RO	2.636	5.550	8.186	99	8.087
SE	9.224	16.530	25.755	18.133	7.621
BE	76	4.458	4.534	605	3.930
BG	3.332	816	4.148	832	3.317
CZ	1.018	2.152	3.170	161	3.009
EE	888	3.334	4.222	1.345	2.877
DK	29.563	4.850	34.413	31.965	2.448
LT	134	3.096	3.229	1.401	1.828
SL	943	684	1.627	299	1.329
SK	824	1.011	1.835	523	1.312
IE	619	591	1.210	45	1.165
LV	70	1.333	1.402	302	1.100
HR	396	715	1.111	81	1.030
HU	95	796	892	15	877
PT	613	76	689	56	633
NL	50	3.973	4.023	3.413	610
LU	0	358	358	136	221
CY	33	157	190	0	190
MT	0	9	9	0	9
EL	1.936	122	2.057	2.508	*na
EU-27	**188.473**	**34.898**	**223.371**	**11.096**	**212.275**

*na: not available[11]

Source: EUMOFA, FEAP

For large trout, the apparent consumption was estimated at 92.230 tonnes LWE in 2020. The EU supply (100.192 tonnes LWE) was based for 78% on EU production and 22% on imports. A limited share of the

[11] Apparent consumption may result in a negative value in MS where the consumption is low as a result of unavoidable approximations in the estimates. First, hypotheses regarding the conversion factor between final products and live fish weight rely on certain hypotheses on the product mixes under the CN codes that may not exactly reflect the specific product mix in every MS (e.g. whole fish may be gutted only or gutted and head-off, fish size will also impact the conversion factor). Second, intra-EU trade data are based on declarative obligations from operators and are not as reliable as extra-EU trade data.

EU supply was exported to third countries (7.961 tonnes LWE). Main MS for consumption of large trout are Germany, France, Finland (82% of the EU consumption).

Table 17: Apparent consumption of large trout in the main MS in 2020 (tonnes of live weight equivalent, LWE)

	Production (aquaculture/FEAP)	Import	Total supply (production + import)	Export	Apparent consumption (total supply - export)
DE	1.627	50.365	51.992	4.639	47.353
FR	17.655	4.385	22.040	346	21.694
FI	12.358	8.802	21.160	5.525	15.635
PL	12.000	9.068	21.068	11.121	9.948
SE	9.000	15.593	24.593	17.435	7.159
UK	5.800	74	5.874	85	5.789
BE	0	2.894	2.894	155	2.740
ES	7.500	101	7.601	5.204	2.398
EE	0	2.909	2.909	1.099	1.810
RO	0	1.861	1.861	78	1.783
CZ	0	1.423	1.423	47	1.376
NL	0	1.352	1.352	643	709
SK	0	682	682	0	682
LT	0	1.380	1.380	726	654
IE	600	34	634	1	633
LV	0	630	630	268	362
AT	0	6.123	6.123	5.793	330
CY	0	129	129	0	129
HU	0	128	128	0	128
LX	0	131	131	6	125
SL	0	84	84	2	82
HR	0	47	47	0	47
PT	0	26	26	0	26
BG	0	6	6	1	6
MT	0	2	2	0	2
EL	0	14	14	91	*na
IT	2.100	453	2.553	4.124	*na
DK	9.188	3.647	12.835	17.065	*na
EU-27	**77.828**	**22.364**	**100.192**	**7.961**	**92.230**

*na: not available[12].
Source: EUMOFA, FEAP

[12] Apparent consumption may result in a negative value in MS where the consumption is low as a result of unavoidable approximations in the estimates. First, hypotheses regarding the conversion factor between final products and live fish weight rely on certain hypotheses on the product mixes under the CN codes that may not exactly reflect the specific product mix in every MS (e.g. whole fish may be gutted only or gutted and head-off, fish size will also impact the conversion factor). Second, intra-EU trade data are based on declarative obligations from operators and are not as reliable as extra-EU trade data.

3 THE SPANISH MARKET

3.1 Structure of the supply chain

3.1.1 Production

The volume of trout production in Spain was 17.606 tonnes in 2020 (FAO); 15.806 tonnes from aquaculture (90%) and 1.800 tonnes from fisheries (10%). The Spanish production decreased 4% between 2011 and 2020, with sensible annual variations in recent years. The share of Spanish trout volumes in the EU-27 production decreased over the last decade from 10,5% in 2011 to 9,3% in 2020. The Polish trout production overtook the Spanish production for the first time in 2020, Poland becoming the 3rd largest trout producing country in the EU.

Table 18: Trout production in Spain between 2011 and 2020 (tonnes)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	% total 2020	Evol. 2020 / 2011
Aquaculture	16.547	16.307	15.799	15.106	16.158	17.215	16.835	16.002	15.920	15.806	90%	-5%
Fisheries	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	1.800	10%	0%
Total	**18.347**	**18.107**	**17.599**	**16.906**	**17.958**	**19.015**	**18.635**	**17.802**	**17.720**	**17.606**	**100%**	**-4%**
% EU-27	10%	10%	10%	10%	11%	10%	10%	7%	10%	9%	/	/

Source: FAO for Fisheries, EUROSTAT for aquaculture

Catches of wild trout remain limited in Spain (1.800 tonnes/year according to FAO estimates) and almost exclusively come from fishing in inland waters. According to interviewed operators, the catches may be linked with recreative fishing activities.

Rainbow trout represents close to 100% of the farmed trout production in Spain. It is grown in freshwater tanks and raceways. Farms are spread across the Spanish territory. In 2021, the five main producing regions account for about two thirds of the production: Castilla y León (25%), Galicia (11,4%), Catalonia (10,7%), Aragon (10,5%) and Andalusia (10,1%)[13].

According to EUROSTAT, the volume of farmed trout in Spain peaked in 2016 with 17.215 tonnes, with a decreasing production since then. In terms of value, the production followed an increasing trend with an 11% increase in real terms over the 2011-2020 period. This increasing value, since 2015, and despite decreasing production volumes since 2017, could be linked with the increasing share of large trout in the Spanish production (which is more valuable).

Table 19: Volume and nominal value of farmed trout production in Spain

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Volume (tonnes)	16.547	16.307	15.799	15.106	16.158	17.215	16.835	16.002	15.920	15.806
Nominal value (1.000 EUR)	42.058	39.659	42.157	41.635	46.123	49.788	50.070	51.160	52.240	52.001

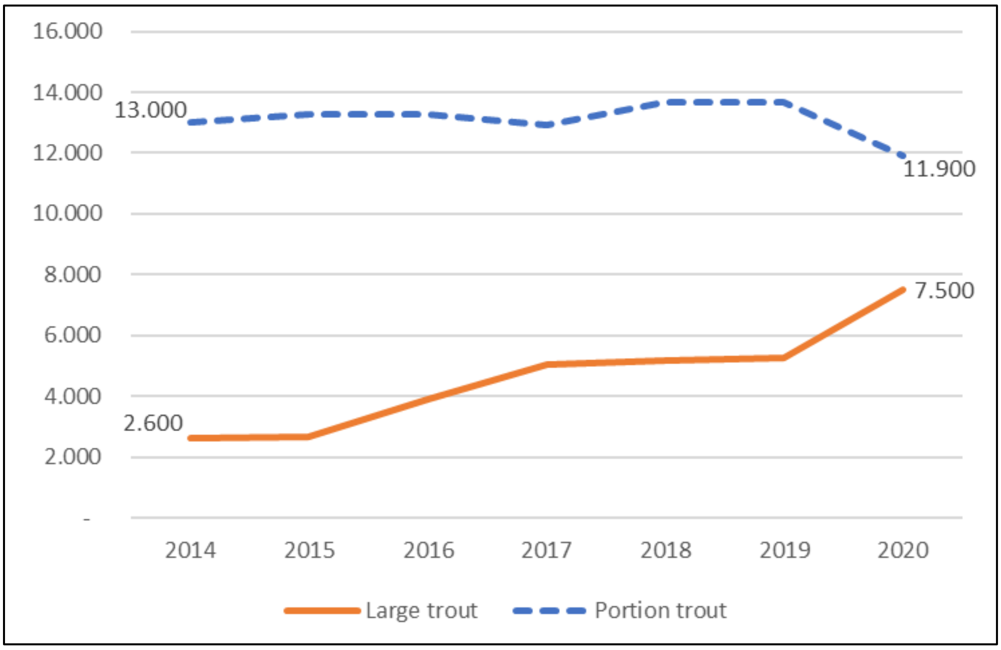
Source: EUMOFA based on EUROSTAT and FAO

The total volume provided by FEAP for the Spanish production of farmed trout is 19.400 tonnes in 2020. According to FEAP data, portion trout accounted for 61% of the production volume of farmed trout in the EU-27, and large trout accounted for 39%, similarly to the EU averages. The gap between the two categories decreased faster than at the EU level: in 2014, portion trout accounted for 83% of the total and large trout for 17%. This development has been mainly driven by an increase in the large trout production by 188% (from 2.600 to 7.500 tonnes) between 2014 and 2020, and more recently by a

[13] APROMAR, Aquaculture in Spain 2022, p. 71. Aquaculture-in-Spain-2022_APROMAR.pdf

decrease of portion trout production (-8% between 2014 and 2020, and -13% between 2019 and 2020), to reach 11.900 tonnes.

Figure 8: Development of the volume of production of farmed portion trout and large trout in Spain (tonnes)



Source: FEAP

3.1.2 Imports - Exports

Imports

In 2022, Spanish imports of trout amounted to 2.869 tonnes, with a total value of EUR 28 million. Large trout only accounts for 3% of those imports, both in volume and value, while portion trout represents 51% of imports in volume and 52% in value, and live trout respectively 47% and 45%[14].

According to Eurostat, Sweden is by far the main country of origin, regardless of the preservation stage, with 70% of the total value of trout imports to Spain in 2022. Trout imported from Sweden mainly comes from Norwegian farms.

In 2022, 73 tonnes of large trout were imported, mainly fresh. These fish are used by processing companies specialized in smoked salmon to diversify their product range.

Table 20 – Imports of trout to Spain (2022)

	Volume (tonnes)	Value (1.000 EUR)
Fresh whole - large	44	333
Frozen whole - large	1	11
Fresh fillet - large	0	0
Frozen fillet - large	13	132
Smoked	15	287
Sub total – Large Trout	**73**	**762**
Fresh whole - portion	293	2.339
Frozen whole - portion	1.026	8.466
Fresh fillet - portion	88	879
Frozen fillet - portion	46	281
Sub total – Portion Trout	**1.453**	**11.965**
Live Trout	**1.343**	**10.306**
Grand total	**2.869**	**23.033**

Source: Eurostat-Comext

[14] Live trout trade flows are mostly related to juveniles traded between hatcheries and trout farmers.

Exports

In 2022, Spanish exports of trout amounted to 11.545 tonnes (total value of EUR 70 million). Large trout accounts for respectively 51% and 48% of those exports in volume and value. Portion trout represents 21% of exports in volume and 32% in value, and live trout respectively 28% and 20%.

France is the main destination, with 60% of the total value of trout exports from Spain in 2022, and 92% of the exports of large trout, which are destined to French smoking companies. Italy represents the second largest destination, with 10% of the total value, and 34% of the exports of portion trout.

In 2022, 5.854 tonnes of large trout were exported, mainly fresh.

Table 21: Exports of trout from Spain (2022)

	Volume (tonnes)	Value (1.000 EUR)
Fresh whole - large	5.787	33.182
Frozen whole - large	7	53
Fresh fillet - large	22	80
Frozen fillet - large	34	229
Smoked	4	102
Sub total	**5.854**	**33.646**
Fresh whole - portion	2.255	20.667
Frozen whole - portion	80	535
Fresh fillet - portion	107	1.253
Frozen fillet - portion	21	153
Sub total	**2.463**	**22.608**
Live	**3.227**	**13.705**
Grand total	**11.545**	**69.958**

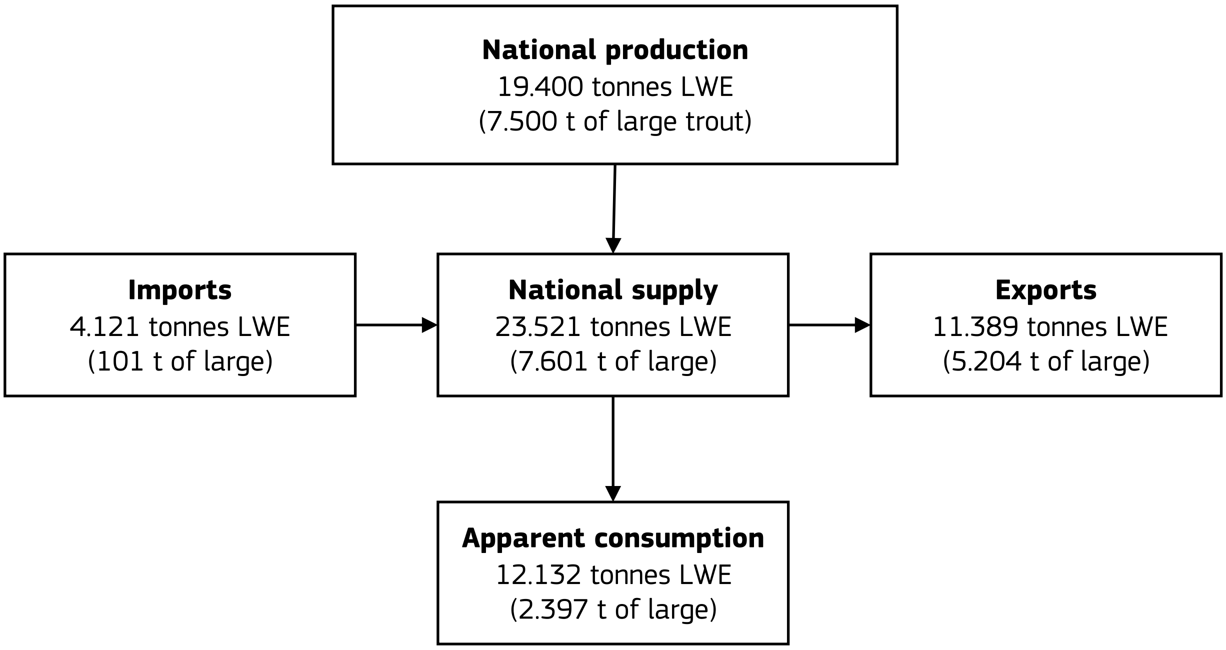
Source: Eurostat-Comext

3.1.3 Apparent consumption

Based on EUROSTAT, FAO and FEAP data, the Spanish supply of trout was estimated at 21.727 tonnes LWE in 2020. 82% (19.400 tonnes LWE) of this supply comes from national production and 18% (4.121 tonnes LWE) from imports. Spain exported 11.389 tonnes LWE of trout, making an "apparent" consumption of 12.132 tonnes LWE.

Considering large trout, the national supply was estimated at 7.601 tonnes LWE in 2020, among which 98,7% (7.500 tonnes) came from national production and 1,3% (101 tonnes) from imports. With exports reaching 68% (5.204 tonnes) of the national supply, the Spanish "apparent" consumption was 2.397 tonnes LWE in 2020, which accounts 32% of the national supply.

Figure 9: Supply balance for trout and large trout in Spain (tonnes LWE) - 2020



Source: EUMOFA elaboration based on EUROSTAT, FAO and FEAP

3.2 Characteristics of the Spanish market and consumption

Spain has a very small consumption market for large trout. Actually, most of the 9.000 tonnes of large trout produced in 2022 (estimate provided by Spanish operators) is exported to France as raw material for the smoking sector. France is one of the biggest consumption markets for smoked trout, and one of the main producers worldwide, but its production of trout is limited by the difficulty to obtain new licences or expand existing farms. Therefore, the smoking industry increasingly relies on the Spanish production for its supply.

According to stakeholders interviewed, Spanish large trout production is mostly concentrated in two leading companies: Pirinea and Piszolla (a French-owned company since 2018). Together, they account for more than 80% of the national production. These two companies are mostly supplying the French market. The rest of the production is sold fresh fileted mainly through large retailers, and to a lesser extent smoked by the trout producers themselves or sold to other Spanish smoking companies as well as supplying the emerging Horeca demand. As trout remains marginal in the product range of Spanish smoking companies compared to salmon, they tend to obtain their raw material from the Norwegian farms which supply them with salmon rather than from Spanish farms.

In Spain the consumption of smoked trout remains limited compared to smoked salmon (225 tonnes consumed at home in 2021 compared to 8.309 t for salmon, based on data from the Spanish Ministry). Nevertheless, the domestic market for large trout is increasing (even if still fragile) and the industry is becoming more structured, with 2-3 big smoking companies that have signed contracts with producers to secure regular supply (prices agreed every 3 months). On the fresh market the demand is less stable depending on the evolution of salmon price, as large trout remains a substitution product of fresh salmon for many operators, but the perception of Spanish consumers towards trout is improving. On the contrary, demand for fresh portion-trout tends to decrease as a result of evolving tastes and consumption habits (e.g. portion trout have many bones, they are more difficult to cook, etc).

The general trend of switching from a portion-trout oriented production to a large trout production is therefore driven by demand: changing consumption patterns on the domestic market and increasing demand from the French smoking industry. It is also made possible by the significant increase in salmon prices, which stirs up prices for trout and makes the production of large trout economically viable (as production costs are significantly higher than those of portion trout). As a result, even small producers reduce their portion-trout production to grow bigger fish: 400-600g, 600-1kg (for filets) and larger trout for the smoking industry (3 kg+).

3.3 Price transmission in the supply chain

3.3.1 First-sale prices

Ex-farm prices

Based on EUROSTAT data, the average price for Spanish trout ranged from 2,54 EUR/kg to 3,29 EUR/kg between 2011 and 2020. During this period, ex-farm price of trout increased by 16% in real terms. This rise in prices could be linked to the increased share of large trout in Spanish production compared to portion trout.

Table 22: Ex-farm price (nominal, EUR/kg) for trout in Spain from 2011 to 2020

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Nominal price	2,54	2,43	2,67	2,76	2,85	2,89	2,97	3,20	3,28	3,29

Source: EUMOFA based on EUROSTAT and FAO data.

Qualitative information from interviews

According to stakeholders, in 2022, the average first-sale price for 1,2 kg trout was around 5,0-5,5 EUR/kg and 6,5-7,0 EUR/kg for 3kg+ trout while portion trout price was about 3,30 EUR/kg.

3.3.2 Processing stage

Based on interviews, only a small share of the national large trout supply is processed in Spain as the quantity supplying the domestic market is mainly consisting of fresh fillets for retail, generally processed at farm level.

3.3.3 Import and export prices

Imports

Imports of large trout to Spain are limited with less than 100 tonnes of products. The prices ranged between 5,1 EUR/kg (frozen whole) to 6,8 EUR/kg for smoked trout.

Table 23: Import prices (nominal, EUR/kg) of trout to Spain

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fresh whole - large	5,4	4,4	4,7	6,1	5,7	6,8	6,0	5,1	6,6	7,6
Frozen whole - large	5,2	na	3,2	3,5	10,8	5,1	4,6	3,8	5,1	14,3
Fresh fillet - large	6,1	3,9	3,8	na	na	10,0	na	7,6	na	na
Frozen fillet - large	4,1	6,4	3,9	3,3	4,6	5,0	7,3	4,0	8,9	10,0
Smoked	1,4	2,0	2,7	5,4	5,2	6,8	4,7	5,8	6,8	19,1

na: not available

Source: Eurostat-Comext

Exports

Main product exported is fresh whole trout (5.787 tonnes, accounting for 99% of the export for large trout). The exports have started to be significant since 2018. The price has increased from 4,9 EUR/kg in 2018 to 5,7 EUR/kg in 2022 (+17% in nominal value). Note: it is an average price and is likely to include 1,2 kg trout and 3 kg+ trout.

Table 24: Export prices (nominal, EUR/kg) of trout from Spain between 2013 and 2022

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Fresh whole - large	3,4	3,8	na	4,5	5,0	4,9	4,8	5,1	5,2	5,7
Frozen whole - large	4,8	4,9	5,1	5,3	5,2	5,5	4,9	na	na	7,2
Fresh fillet - large	6,2	na	13,3	4,1	5,5	na	na	na	3,9	3,7
Frozen fillet - large	13,3	13,8	13,8	9,5	5,5	5,5	4,8	5,3	4,7	6,6
Smoked	19,9	20,7	11,6	17,7	22,0	25,2	25,3	na	27,3	28,2

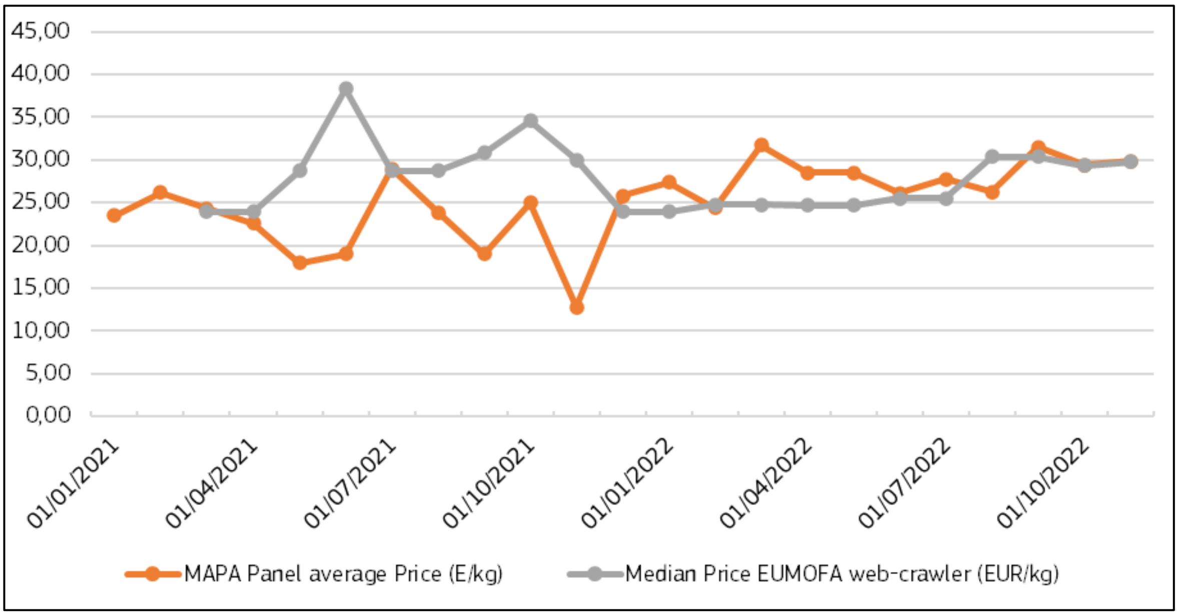
na: not available

Source: Eurostat-Comext

3.3.4 Retail prices

Two main sources provide retail price data for smoked trout in Spain: the MAPA household consumption data and the EUMOFA web-crawler (online supermarkets shops). Data for 2021 and 2022 show prices fluctuating between 15,00 and 40,00 kg in 2021, then stabilizing around 25,00-30,00 EUR/kg in 2022.

Figure 10: Retail price of smoked trout in Spain in 2021 and 2022 (in EUR/kg)



Source: MAPA Panel and EUMOFA Online shop retail prices - https://www.eumofa.eu/fr/online-shop-retail-prices

3.3.5 Price transmission

The analysis covers fresh fillets of large trout and smoked trout sold by retailers. The data are based on interviews and mostly refer to the fourth quarter of 2022 and first quarter of 2023.

Available official data for ex-farm prices do not differentiate between portion trout and large trout. In addition, large trout can be sold by the farms under various presentations: Whole eviscerated for exports to French smoking companies or for Spanish smoking companies, fileted or smoked for Spanish large retailers. For the purpose of this analysis, we use as a starting point, an estimated price of the raw material on-farm, whole, eviscerated.

This price is estimated at 5,5 EUR/kg for large trout used for fresh filets and at 6,8 EUR/kg for large trout used to produce smoked trout. The price difference is due to the fact that larger fish are used by the smoking companies (around 2 to 3 kg on average).

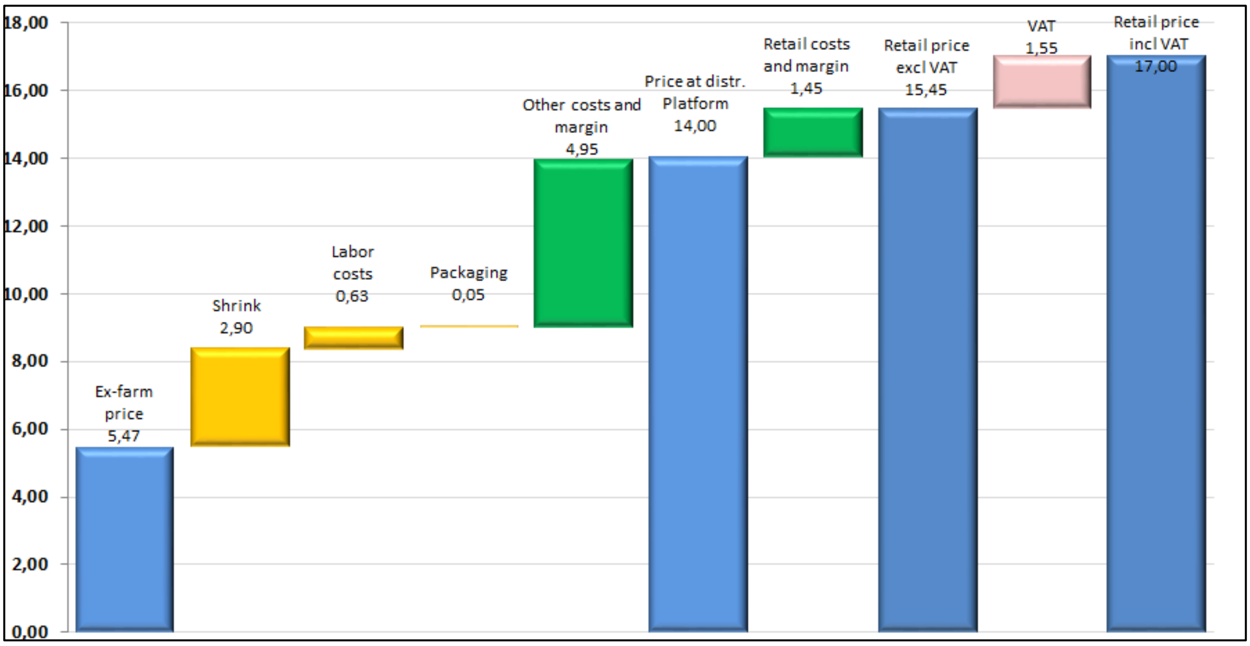
The average selling price at the point of sale has been estimated based on online prices. It is estimated at 17 EUR/kg for fresh filets of large trout and 28,9 EUR/kg for smoked trout.

Table 25: Costs and margins for fresh filets of large trout in large-scale retail (early 2023)

	Average price (EUR/kg)	% of final price	Comments and sources
Estimated price of raw material (eviscerated)	**5,5**	**32%**	Min = Price in Mercabarna: 4,94 EUR/kg in 2023- Max = Export price of fresh trout >1,2 kg to FR: 6 (COMEXT, Nov-Dec 2022)
Shrink (due to fileting operations)	2,9	17%	FAO publications on the processing of trout, corresponds to an average yield of between 60 and 70% of the raw material (from whole eviscerated to fillets)
Labour costs	0,6	4%	EUMOFA (estimated at 4,5% of sales price), confirmed by interviews
Packaging	0,1	0,3%	EUMOFA (estimated at 0,05 EUR/kg), confirmed by interviews
Other processing costs and Net margin	5,0	29%	EUMOFA
Estimated price at distribution platform	**14,0**	**82%**	Interview (price 1st quarter 2023)
Retail costs and margin	1,5	9%	EUMOFA
Average selling price, exclusive of VAT	**15,5**	**91%**	EUMOFA
VAT (10%)	1,5	9%	
Average selling price	**17,0**	**100%**	Prices found on the internet (01/03/2023)

Source: EUMOFA

Figure 11: Costs and margins for fresh filets of large trout in large-scale retail (early 2023)



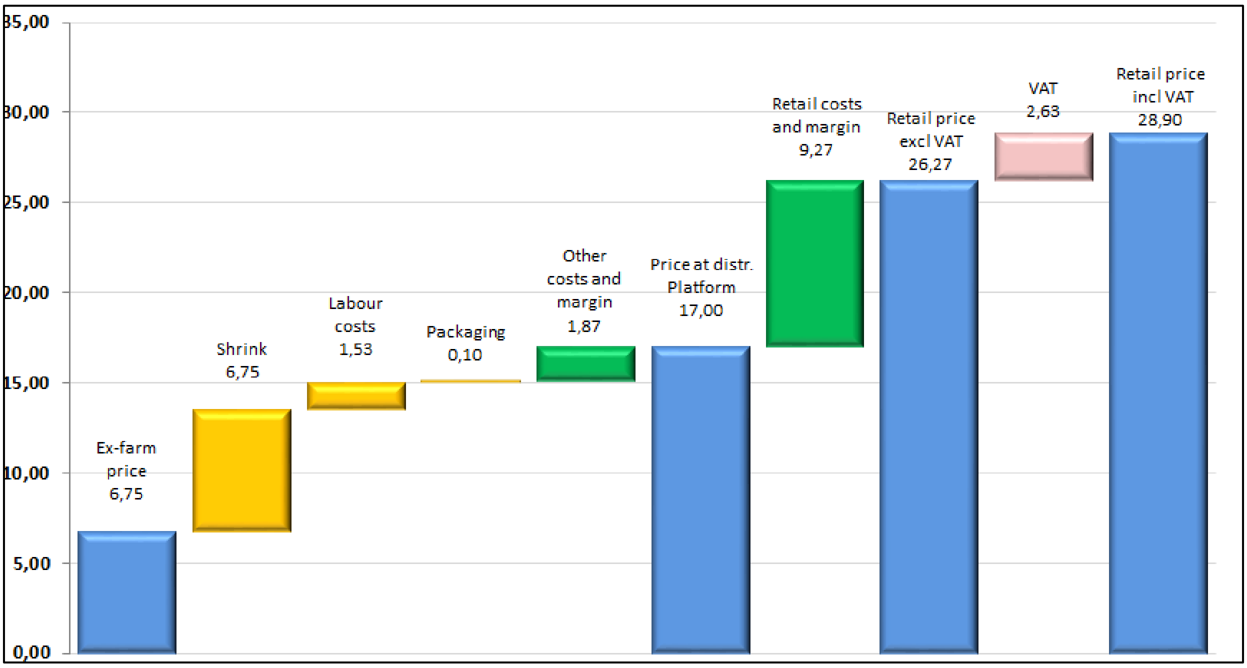
Source: EUMOFA

Table 26: Costs and margins for smoked trout in large-scale retail (early 2023)

	Average price (EUR/kg)	% of final price	Comments and sources
Estimated price of raw material (eviscerated)	**6,8**	**23%**	Min= Export price of fresh trout >1,2 kg to FR: 6 (COMEXT, Nov-Dec 2022) / Max = info from interviews: price of eviscerated large trout delivered in France is sold between 7,5 and 8 E/kg, including transport in the 1st quarter 2023.
Shrink (due to fileting and smoking operations)	6,8	23%	EUMOFA - conversion rate for smoked trout and FAO publications on the processing of trout, corresponds to an average yield of 50% of the raw material (from whole eviscerated to smoked fillets)
Labour costs (incl. fileting and smoking operations)	1,5	5%	EUMOFA (estimated at 9% of sales price), confirmed by interviews
Packaging	0,1	0,3%	EUMOFA (estimated at 0,10 EUR/kg), confirmed by interviews
Other processing costs (energy, depreciation, overheads...) and margin	1,9	6%	EUMOFA
Estimated price at distribution platform	**17,0**	**59%**	Interview (price 1st quarter 2023)
Retail costs and margin	9,3	32%	EUMOFA
Average selling price, exclusive of VAT	**26,3**	**91%**	EUMOFA
VAT (10%)	2,6	9%	
Average selling price	**28,9**	**100%**	Min=Data from Consumo alimentario (MAPA, 2022) / Max = Median price from the *on*line shops monitoring prices (EUMOFA)

Source: EUMOFA

Figure 12: Costs and margins for smoked trout in large-scale retail (early 2023)



Source: EUMOFA

4 THE ITALIAN MARKET

4.1 Structure of the supply chain

4.1.1 Production

Italian trout production exclusively comes from aquaculture. In the case of Italy, aquaculture data on trout are collected by EUMOFA from Eurostat only.

The production has ranged from 32.000 tonnes to 39.000 tonnes over the last decade; it was 34.473 tonnes on 2020. The ex-farm value was EUR 105 million in 2020, with a significant increase in normal value since 2011 (+13% in nominal terms); the evolution is +7% in real terms.

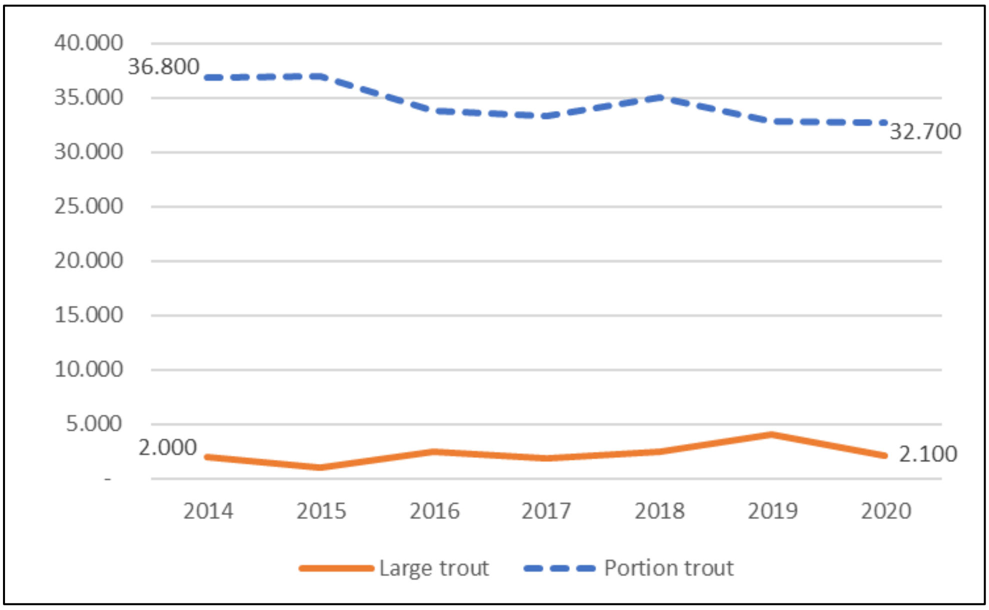
Table 27: Volume and nominal value of farmed trout production in Italy (2011-2020)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Evol. 2020 / 2011
Volume (tonnes)	36.275	36.330	36.850	32.794	32.332	36.101	35.900	34.287	38.906	34.473	-5%
Nominal value (1.000 EUR)	93.309	91.079	107.972	93.013	102.335	105.537	107.087	101.010	121.569	105.399	+13%

Source: EUROSTAT

The volume of production provided by FEAP is a bit higher than EUROSTAT, at 34.800 tonnes of trout produced in Italy in 2020. Portion trout makes the majority of the production (93%, 32.700 tonnes), while large trout only accounts for 7% of the total trout production (2.100 tonnes). The production of large trout has ranged from 1.000 to 4.000 tonnes since 2014 (highest level in 2019). Based on Associazione Piscicoltori Italiani (API), the production volume for large trout was about 3.000 tonnes in 2021.

Figure 13: Development of the volume of production of farmed portion trout and large trout in Italy (tonnes)



Source: FEAP

4.1.2 Imports - Exports

Imports

Imports to Italy of trout and trout products accounted for 2.994 tonnes and EUR 23,3 million in 2022. Large trout accounted for only 3% of the value and 9% of the volume (239 tonnes and EUR 4,6 million). Most of the imports were portion trout (EUR 18.4 million, almost half being fresh whole portion trout).

Table 28: Imports of trout to Italy (2022)

	Volume (tonnes)	Value (1.000 EUR)
Fresh whole - large	17	361
Frozen whole - large	6	47
Fresh fillet - large	7	86
Frozen fillet - large	109	706
Smoked	187	3.631
Sub total – Large Trout	329	4.589
Fresh whole - portion	1.099	8.917
Frozen whole - portion	486	3.162
Fresh fillet - portion	261	2.287
Frozen fillet - portion	604	4.048
Sub total – Portion Trout	2.450	18.414
Live Trout	215	314
Grand total	2.994	23.316

Source: Eurostat-Comext

Exports

In 2022, exports reached 10.322 tonnes and EUR 49,4 million. Live trout is the main product exported (EUR 5,2 million, 41% of the total), followed by large trout (32% of the value) and portion trout (27% of the value). In the large trout category, the main products exported are:

- fresh whole trout (2.831 tonnes and EUR 12,32 million), mainly to Germany and Poland;
- fresh fillet (323 tonnes and EUR 2.98 million), mainly to Switzerland, Germany and Romania.

Table 29: Exports of trout from Italy (2022)

	Volume (tonnes)	Value (1.000 EUR)
Fresh whole - large	2.831	12.322
Frozen whole - large	0	0
Fresh fillet - large	323	2.975
Frozen fillet - large	4	11
Smoked	101	469
Sub total – Large Trout	3.259	15.777
Fresh whole - portion	1.322	7.105
Frozen whole - portion	66	274
Fresh fillet - portion	464	5.417
Frozen fillet - portion	46	415
Sub total – Portion Trout	1.899	13.210
Live Trout	5.165	20.367
Grand total	10.322	49.355

Source: Eurostat-Comext

4.1.3 Apparent consumption

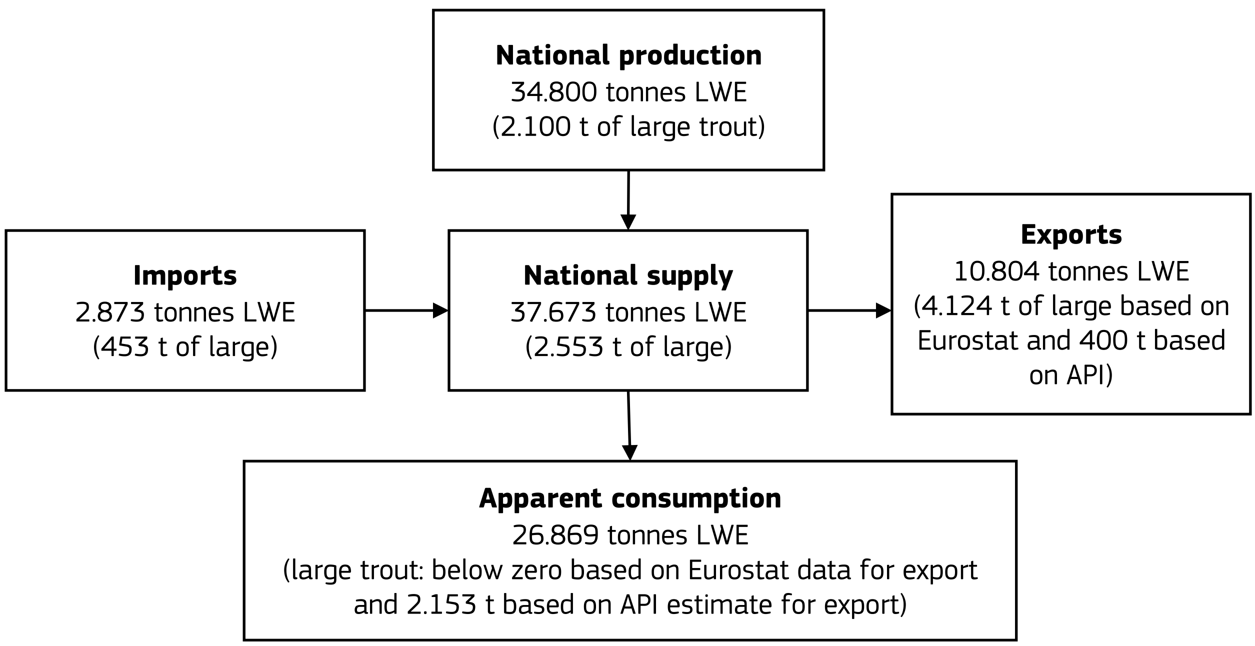
Based on EUROSTAT, FAO and FEAP data, the Italian national supply (production + imports) of trout reached 37.673 tonnes LWE in 2020, of which 8% (2.873 tonnes LWE) from imports and 92% (34.800 tonnes LWE) from domestic production. The share of large trout is limited in this national supply (2.553 tonnes LWE).

With 10.804 tonnes LWE (including 4.124 tonnes LWE of large trout), exports are equivalent to 29% of the national supply.

Italian apparent consumption (national supply – exports) was estimated at 26.869 tonnes LWE in 2020, accounting for 71% of the national supply. For large trout, the calculation of the apparent consumption is below zero (-1.570 tonnes) if we consider the exported volume from the Eurostat statistics (4.124 tonnes LWE of large trout). However, based on an interview with the national professional organisation (API), about 400 t of large trout are exported, which is much lower than Eurostat data. Based on API estimate, the apparent consumption of large trout would be 2.153 tonnes. This discrepancy in the data may have multiple causes:

- Each statistic has its own methodology and discrepancies between different sources are common; in the present case we use Eurostat and FEAP data;
- Some operators may report some “portion trout” exports as “large trout” exports (for fish just below the weight limit of “large trout’); this would lead to an over-estimate of “large trout” exports;
- The breakdown between large and portion trout is based on FEAP data for the production. This breakdown is not detailed for all CN codes in trade data. In the context of this study, we considered that live trout was “portion” and smoked trout was “large”;
- The conversion coefficients used for the calculation of live weight equivalent for each product may not capture the accurate situation for each trade flow (for instance due to specific fileting method or depending on the size of the fish)[15].

Figure 14: Supply balance for trout and large trout in Italy (tonnes LWE) - 2020



Source: EUMOFA elaboration based on EUROSTAT, FAO and FEAP

[15] See annex 7 in EUMOFA metadata - https://www.eumofa.eu/en/supply-balance-and-other-methodologies

4.2 Characteristics of the Italian market and consumption

The distinction of trout is based on its weight, with the following categories in Italy:

- Below 0,5 kg/fish: portion trout,
- From 0,5 kg to 1-1,2 kg/fish: medium trout intended for filleting,
- Over 1-1,2 kg/fish: large trout intended for smoking and filleting.

Most of the large trout is pink trout (about 90%) and the remaining volume is white trout (about 10%). White and pink trout are the same species, the only differences being the colour of the flesh; changes depend on the fish feed used in production.

Based on API, most of the large trout produced is processed (about 50%): smoking industry (about two-thirds) and filleting (about one-third). A significant share (about 40% of the volume) is marketed fresh on the HORECA market (via specialized wholesaler active on the HORECA sector) and the remaining volumes are marketed (about 10%) on other channels, in particular exported live for leisure fishing in Austria and Germany (leisure fishing is a major market for portion trout).

Large trout is mainly produced and consumed in northern parts of Italy, in particular in mountain areas. The production has been growing over the last years in other areas such as Umbria, Marche in Apennines mountains.

The product is mainly consumed in festive situations, such as Christmas and New Year.

4.3 Price transmission in the supply chain

4.3.1 First-sale prices

The first sale price of large trout (this covers both live and whole gutted trout) was 3,90 EUR/kg in 2021. Over the last years, the highest price was in 2017 at 4,30 EUR/kg and the minimum in 2013 at 3,00 EUR/kg. The price of large trout is generally higher than the portion trout price (0,40 EUR to 1 EUR higher for large).

Table 30: Ex-farm price (nominal, EUR/kg) of trout in Italy (2013-2019) – Live or fresh whole

	2013	2014	2015	2016	2017	2018	2019	2021
Large trout (> 1,2 kg)	3,00	3,20	3,80	4,00	4,30	3,80	3,50	3,90

Source: API

Based on interview with API, ISMEA data cover ex-farm prices. These prices differ from those reported by API. Based on API, ISMEA prices are those in the wholesale channels. A regular increase of prices over the period January 2021 - early 2023 has been observed:

- + 1,2 EUR/kg for fresh large trout (5;7 EUR/kg in February 2023);
- + 1,7 EUR/kg for smoked fillet (14,7 EUR/kg in February 2023).

Table 31: Ex-farm price (EUR/kg) of large trout and smoked fillet (mainly large trout) in Italy from January 2021 to February 2023

		Fresh trout 1,5 kg and higher	Smoked fillet (mainly large trout)
2021	Jan.	4,5	13,0
	Feb.	4,5	13,0
	Mar.	4,5	13,0
	April	4,5	13,0
	May	4,5	13,0
	June	4,5	13,0
	July	4,6	13,0
	Aug.	4,6	13,2
	Sep.	4,6	13,2
	Oct.	4,7	13,2
	Nov.	4,8	13,3
	Dec.	4,9	13,3
2022	Jan.	4,9	13,3
	Feb.	5,0	13,3
	Mar.	5,4	14,4
	April	5,4	14,4
	May	5,4	14,4
	June	5,4	14,5
	July	5,6	14,5
	Aug.	5,6	14,5
	Sep.	5,6	14,6
	Oct.	5,6	14,8
	Nov.	5,6	14,8
	.Dec.	5,6	14,8
2023	Jan.	5,7	14,8
	Feb	5,7	14,7

Source: ISMEA - https://www.ismea.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/1488?YY=2023

4.3.2 Import and export prices

Imports

Imports to Italy of large trout remains limited. The highest volumes are for smoked trout (114 tonnes in 2021); other product categories were below 60 tonnes in 2021.

In terms of price, whole trout price ranged between 2,1 EUR/kg and 5,6 EUR/kg. Price for fresh fillet has increased over the last years, up to 10,9 EUR/kg in 2021, compared to 5,7 EUR/kg for frozen fillet.

The same increase is observed for smoked trout with 18,3 EUR/kg in 2021 (highest price since 2013).

Table 32: Import prices (nominal, EUR/kg) of large trout from Italy

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Fresh whole	4,0	2,1	2,8	5,6	4,6	2,8	4,4	3,2	na
Frozen whole	5,5	6,6	5,3	4,7	4,4	4,0	4,1	4,8	3,3
Fresh fillet	6,1	5,5	5,5	7,8	6,9	7,4	9,0	8,1	10,9
Frozen fillet	4,1	5,5	5,3	5,8	6,5	6,3	6,2	6,7	5,7
Smoked	10,7	12,8	12,5	15,1	14,8	8,9	11,7	16,6	18,3

na: not available

Source: Eurostat-Comext

Exports

Main volume of exports are fresh whole trout (3.245 tonnes in 2021) at 3,1 EUR/kg in 2021 (price lower than ex-farm price reported by API). There is a decrease in the price for fresh whole, with peaks in recent years at 3,60 €/kg in 2017 and 2019. Other significant products exports are fresh fillet (551 tonnes in 2021) with prices relatively stable over the last years (between 7,1 and 7,4 EUR/kg) and frozen fillets (119 tonnes in 2021) at 3,3 EUR/kg in 2021.

Table 33: Export prices (nominal, EUR/kg) of large trout from Italy between 2013 and 2021

	2013	2014	2015	2016	2017	2018	2019	2020	2021
Fresh whole	3,6	3,6	3,4	3,4	3,6	3,5	3,6	3,4	3,1
Frozen whole	3,7	na	3,4	4,5	8,9	9,9	10,0	na	1,5
Fresh fillet	5,3	5,5	6,4	7,0	7,7	7,4	7,1	7,3	7,1
Frozen fillet	6,8	3,1	8,5	na	3,3	3,8	5,1	4,1	3,3
Smoked	23,6	21,3	18,7	19,2	26,2	22,3	21,0	23,1	21,1

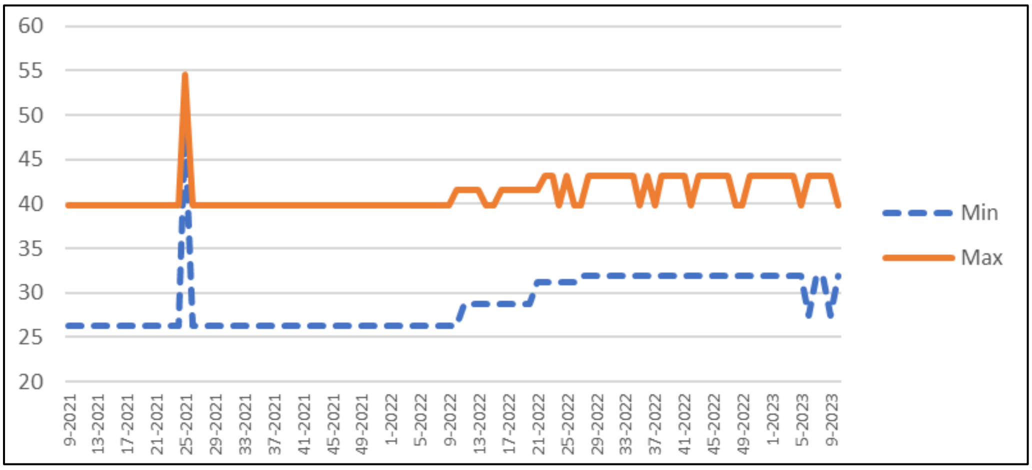
na: not available

Source: Eurostat-Comext

4.3.3 Retail prices

Based on EUMOFA online retail price monitoring, the price of smoked trout in Italian large-scale retail (online shops) ranged from **26,24 EUR/kg to 43,12 EUR/kg** from 2021 to early 2023, with the exception of one week in 2021 with a peak at 54,60 EUR/kg. This illustrates the high diversity of price at retail stage for this product. We observe an increase of price in March 2022 for both minimum and maximum (about 2 EUR/kg).

Figure 15: Minimum and maximum weekly retail price (EUR/kg) for smoked trout in Italy – large scale retail – from 2021 to 2023



Source: EUMOFA Online shop retail prices - https://www.eumofa.eu/fr/online-shop-retail-prices

Based on interviews with smoked trout producers and survey of producers' websites (between October 2022 and February 2023), the price ranges from **45,7 EUR/kg to 75,0 EUR/kg** for smoked trout on direct sales from Italian smokers (this covers premium products). The unit price ranges from 7 EUR to 22,5 EUR, for pieces between 100 gr up to 350 gr.

Based on API, most of the smoked trout is retailed between **15 EUR/kg and 40 EUR/kg**. These high differences in the prices are related to the market segmentation, smoked trout covers both medium range and premium products.

4.3.4 Price transmission

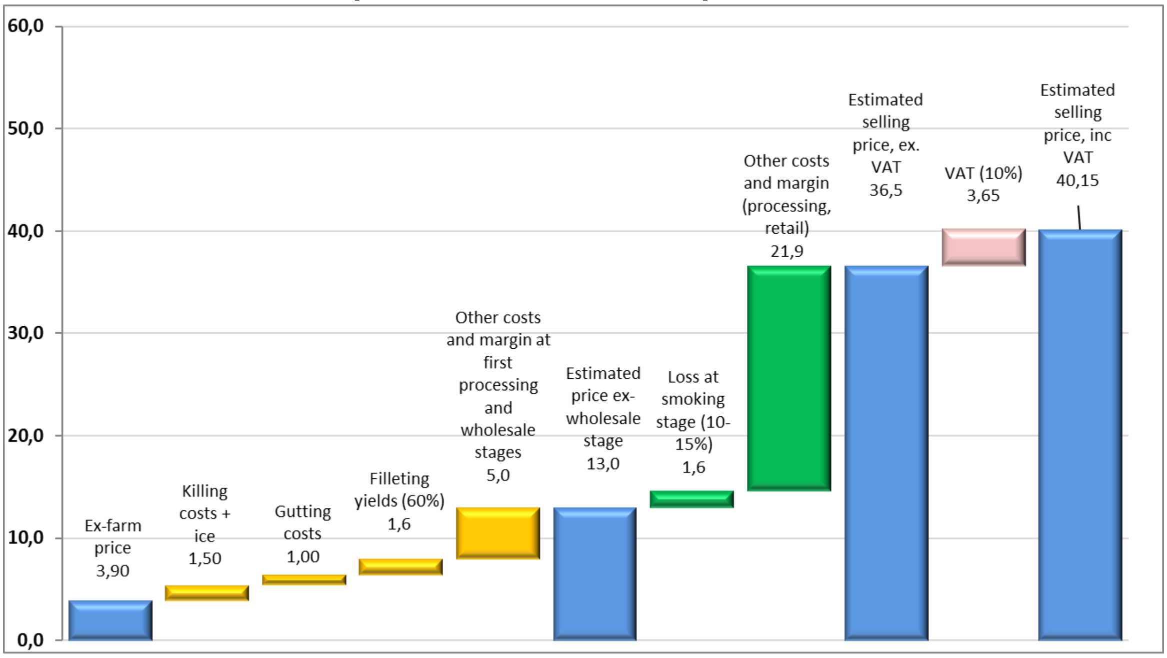
The price transmission covers large trout, smoked and sold directly by the producer. The present analysis shall be considered with caution due to the low size of the sector and the high diversity of prices observed at retail stage. The raw material price is 3,9 EUR/kg and the final price (smoked and filleted) is 40,20 EUR/kg. Main costs are related to the processing (smoking stage) which is conducted by small-scale companies.

Table 34: Costs and margins for large trout, filleted and smoked, retailed directly by the processor (smoker) in Italy (2022)

	Average price (EUR/kg)	% of final price	Comments and sources
Ex-farm price	**3,9**	**10%**	API (2021)
Killing costs + ice	1,5	4%	Price structure analysis on portion trout in Italy (EUMOFA, 2021)
Gutting costs	1,0	2%	Price structure analysis on portion trout in Italy (EUMOFA, 2021)
Filleting yields (60%)	1,6	4%	Interviews
Other costs and margin at first processing and wholesale stages	5,0	13%	Calculation
Estimated price ex-wholesale stage	**13,0**	**32%**	Interviews
Loss at smoking stage (10-15%)	1,6	4%	Interviews
Other costs and margin (processing, retail)	21,9	54%	Calculation
Estimated selling price, ex. VAT	**36,5**	**91%**	Interviews + price survey
VAT (10%)	3,7	9%	Calculation
Estimated selling price, inc VAT	**40,2**	**100%**	Interviews + price survey

Source: EUMOFA

Figure 16: Costs and margins for large trout, filleted and smoked, retailed directly by the processor (smoker) in Italy (2022)



Source: EUMOFA

5 COMPARISON OF THE PRICE TRANSMISSION IN SPAIN AND ITALY

The following table provides a comparison of the price structure analysis for fresh and smoked trout in Spain and for smoked trout in Italy.

The final price ranges from 17 EUR/kg for fresh trout in Spain, up to 40,2 EUR/kg for smoked trout in Italy. The smoked trout in Spain is sold in retail at 28,9 EUR/kg.

We observe a significantly higher price in Italy compared to Spain. It should be highlighted that large trout is a small-scale production in Italy, with a premium positioning and prices reported up to 40 EUR/kg at retail stage and even higher in specialised channels (such as HORECA and direct sales from the processor). The entry level price for smoked trout in Italy is about 15 EUR/kg, based on interview with API.

The raw material accounts from 10% of the final price (for products with high retail price) up to 32% (fresh trout).

Table 35: Comparison of the price structure analysis in Spain and Italy (EUR/kg)

	ES	ES	IT
	Fresh fillet – large-scale retail	Smoked fillet – large-scale retail	Smoked fillet – direct sale
Raw material price	5,5	6,8	3,9
Price at platform / wholesale	14,0	17,0 (smoked fillet)	13,0 (non-smoked fillet)
Final price	17,0	28,9	40,2
% raw material / final price	32%	24%	10%

6 STAKEHOLDERS INTERVIEWED

- Spain
  - APROMAR
  - Asociación de Empresarios Mayoristas de Pescados de Madrid (AEMPM)
  - Fish Farmer
  - Wholesaler
- Italy
  - Associazione Piscicoltori Italiani (API)
  - Trout smokers

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