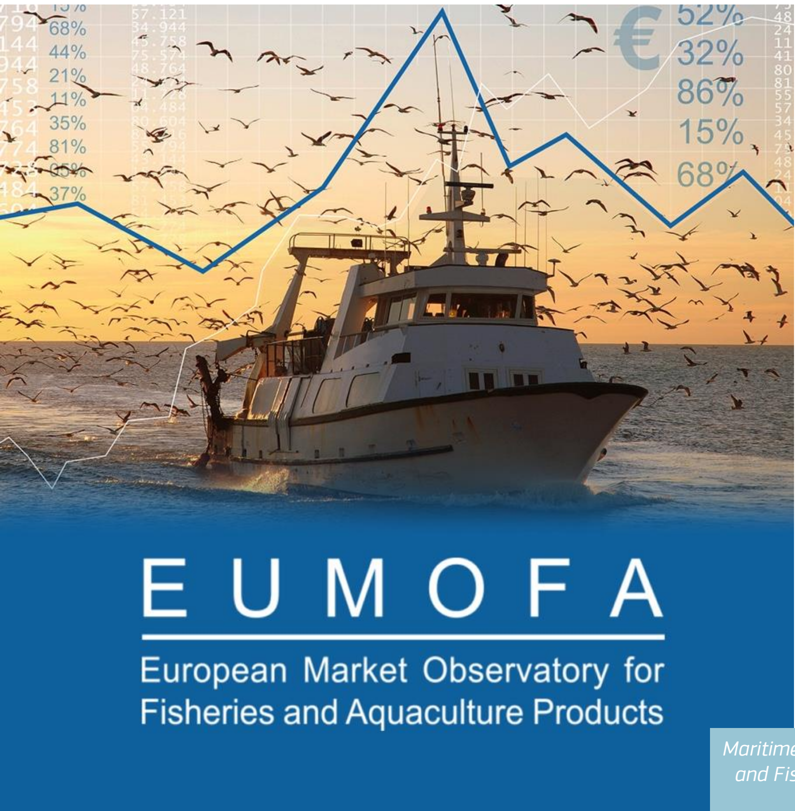
European Commission

CASE STUDY

FRESH EUROPEAN SEABASS IN THE EU



PRICE STRUCTURE IN THE SUPPLY CHAIN

FOCUS ON GREECE, SPAIN AND ITALY

MARCH 2024

WWW.EUMOFA.EU

Maritime Affairs and Fisheries

Manuscript completed in March 2024.

Luxembourg: Publications Office of the European Union, 2024

PDF KL-04-23-868-EN-N ISBN 978-92-68-07577-7 doi:10.2771/88095

FOR MORE INFORMATION AND COMMENTS:

Directorate-General for Maritime Affairs and Fisheries

B-1049 Brussels

E-mail: contact-us@eumofa.eu

Table of contents

Summary

In 2021, European seabass[1] production reached 305.000 tonnes globally, 98% from aquaculture and 2% from fisheries. Farmed production mainly took place in Türkiye (155.000 tonnes), the EU-27 (97.000 tonnes, a 10-year peak) and Egypt (33.000 tonnes). Over the last 10 years (2012-2021), global production of farmed European seabass doubled. The production increased much faster in Türkiye (+137%) and Egypt (+144%) than in the EU-27 (+52%).

Greece (51.232 tonnes) and Spain (23.037 tonnes) dominated the EU production with 76% of the total output. However, the sharpest increase in production over the last decade occurred in Croatia (+270%) which now represents 9% of EU production (9.083 tonnes). Italy, Cyprus and France followed with 7.282 tonnes, 2.680 tonnes and 2.615 tonnes respectively.

By contrast, wild seabass production decreased over the same period, by 38% globally and by 42% at EU level, mostly due to the strong decline of the resource in the Atlantic, and the implementation of drastic management measures after 2015. With 4.730 tonnes in 2021, the EU-27 represents 85% of world catches. Despite a strong decline of its catches over the period, France is still leading the EU production.

The EU apparent consumption[2] for seabass amounted to 110.723 tonnes in 2021, mainly including fresh products. Extra-EU imports reached 21.594 tonnes of live weight equivalent (lwe) in 2021 (mainly from Türkiye) and extra-EU exports amounted to 12.560 tonnes lwe (mainly to the United States and the UK). There are also significant intra-EU flows between Member States (65.588 tonnes in 2022), the main exporters being Greece, Spain and Croatia and the main importers being Italy, Spain and France. The two biggest markets were Italy and Spain, accounting for 62% of the EU apparent consumption when combined (respectively 35.130 tonnes and 33.742 tonnes).

The present report focuses on Greece, Spain and Italy:

- Greece is the main EU producer of seabass (51.611 tonnes in 2021, including both farmed and wild caught seabass), with high exports (48.260 tonnes lwe) and limited apparent consumption at national level (7.120 tonnes lwe). The price structure analysis covers fresh whole seabass sold in large-scale retail, with an ex-farm price of 5,64 EUR/kg and a final price of 10,99 EUR/kg.
- Spain is the second EU market, equally supplied by national production (24.300 tonnes in 2022, including both farmed and wild caught seabass[3]) and imports (23.900 tonnes lwe). Seabass is an affordable fish in Spain and prices are determined by import prices to a large extent. The following two detailed price structure analyses cover Spanish seabass:
    - sold in large scale-retail (ex-farm price at 5,50 EUR/kg and final price at 8,25 EUR/kg);
    - sold in a fishmonger shop (ex-farm price at 5,40 EUR/kg and final price at 7,48 EUR/kg).

  In the present analysis, the final price of seabass in Spain emerged to be lower in the fishmonger shops than in large-scale retail; however, this is not a general rule, and it may vary between years (the procurement strategies are different for large-scale retail and fishmongers) and shop location.

[1] The present report covers European seabass, which may be indicated as "seabass" in the report.
[2] Apparent consumption = production + imports – exports
[3] The apparent consumption could be calculated for 2022 in Spain, contrarily to other MS.

- Italy is the biggest EU market for seabass. It is largely supplied by imports (31.207 tonnes lwe imported in 2021) and to a lesser extent by national production (7.501 tonnes in 2021, including both farmed and wild caught seabass). In this context, the country of origin plays an important role for market segmentation in Italy, with higher prices for Italian seabass compared to imported products at all stages of the value chain. Two price structure analyses are detailed, both for fresh seabass sold in large-scale retail:
  - Seabass imported from Greece (import price at 6,0 EUR/kg and final price at 12,0 EUR/kg)
  - Italian seabass (ex-farm price at 9,70 EUR/kg and final price at 19,0 EUR/kg).

List of acronyms

API	Associazione Piscicoltori Italiani
APROMAR	Association of aquaculture enterprises of Spain
CN	Combined Nomenclature
EU	European Union (EU-27)
FAO	Food and Agriculture Organisation of the United Nations
HAPO	Hellenic Aquaculture Producers Organisation
HORECA	Hotel, Restaurant and Café
LWE	Live Weight Equivalent
MS	Member States
SME	Small and medium-sized enterprise
VAT	Value Added Tax

1 SCOPE AND CONTENT

1.1 Case study scope

Key elements on the analysis of fresh seabass price structure and distribution of value in the supply chain are detailed in the following table.

Table 1: Scope and key element of the price structure analysis

Product	Method of production	Characteristics	Market and price drivers	Focus MS
Seabass	Aquaculture Fishery (to a lesser extent)	One of the most important products on the fresh fish market Among major farmed species within the EU	Import volumes and prices from extra-EU (mainly from Türkiye) Origin of products Size of the fish Certification and brands	Greece Spain Italy

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

- Study on organic aquaculture (May 2022):

https://www.eumofa.eu/documents/20178/432372/Organic+aquaculture+in+the+EU_final+report_ONLINE.pdf

- Study on Freshwater aquaculture in the EU (March 2021):

https://www.eumofa.eu/documents/20178/442176/Freshwater+aquaculture+in+the+EU.pdf

- Study on Recirculating aquaculture systems (December 2020):

https://www.eumofa.eu/documents/20178/84590/RAS+in+the+EU.pdf

- European seabass – species profile

https://www.eumofa.eu/documents/20178/137160/European+seabass_31-1.pdf

- Country profiles:
    - Greece – https://www.eumofa.eu/en/greece
    - Spain – https://www.eumofa.eu/en/spain
    - Italy – https://www.eumofa.eu/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 Greece, Spain and Italy.

2 DESCRIPTION OF THE PRODUCT AND MARKETS

2.1 Biological and commercial characteristics

The case study focuses on fresh farmed European seabass.

Case study product

Name: European seabass (*Dicentrarchus labrax)*

FAO 3-alpha code: BSS

Presentation: Fresh whole or in fillets.

Commercial sizes:

Wild: minimum landing size is 36 cm for the southern Atlantic stock and 42 cm for the northern Atlantic stock, and 25 cm in the Mediterranean[4].

Farmed: <400 g (small or "portion"), 400-600 gr, 600-800 gr, 800-1000 gr, above 1kg.

Related codes in the product nomenclature (COMEXT/EUROSTAT)

Seabass is distinguished in the Combined Nomenclature (CN)[5] from 2012 onwards for both fresh and frozen whole fish:

- CN code 03 02 84 10 - Whole fish, fresh or chilled, European seabass (*Dicentrarchus labrax*)
- CN code 03 03 84 10 - Whole fish, frozen, European seabass (*Dicentrarchus labrax*)

Seabass fillets can also be traded in a code including several species:

- CN code 03 04 49 10 - "other fresh fillets".
- CN code 03 04 89 90 – "other frozen fish fillets"

Biological parameters

The wild seabass has a demersal behaviour, inhabits coastal waters down to about 100 m depth, but is more common in shallow waters. It thrives on various kinds of substrates, often entering estuaries and sometimes ascending rivers. Juveniles form schools, but adults appear to be less gregarious. Reproduction occurs from January to March in the Mediterranean and Black Sea, extending up to June for Atlantic populations. Seabass is a voracious predator, feeding on small shoaling fish and a wide range of invertebrates including shrimps, prawns, crabs, squids and molluscs.[6]

[4] https://fish-commercial-names.ec.europa.eu/fish-names/species/dicentrarchus-labrax_en

[5] CN is a tool for designating goods and merchandise which was established to meet simultaneously the requirements both of the Common Customs Tariff and of the external trade statistics of the EU.

[6] https://www.fao.org/fishery/en/aqspecies/2291/en

Table 2: Biological parameters for Seabass

Parameter	Characteristics[7]
Temperature	5-28°C
Habitat	Coastal waters down to about 100 m depth but also in estuaries and brackish water lagoons (seabass is euryhaline).
Diseases in farming	Virus (viral encephalo-retinopathy), bacteria (Vibriosis, Photobacteriosis, Myxobacteriosis, Mycobacteriosis, Epitheliocystis), dinoflagellate (Amyloodiniasis), ciliates (Cryptocayoniasis), Myxosporidiosis, Microsporidiosis , monogenean trematode (Gill fluke infections), nematoda (Anisakis spp.) and crustacea (isopods).
Sexual maturity	In aquaculture, females typically reach optimal maturity between 5 and 8 years of age, while males reach maturity earlier, between 2 and 4 years. In the wild, sexual maturity occurs later for males compared to aquaculture. In the Mediterranean, males reach maturity within 2 to 4 years, while in the Atlantic, it's between 4 to 7 years. For females in the wild, the age of sexual maturity is similar to that of aquaculture, between 5 and 8 years.
Diet in the wild	Carnivorous: small fish, prawns, crabs and cuttlefish.
Diet in farming	In nursery, juveniles are fed with dry pelleted feed. For the ongrowing stage, feeding consists of extruded pellets of fish.
Juvenile phase	75 days
Grow-out	18 months-24 months for the 400-450 gr
Distribution in the wild	North Atlantic from Norway and the British Isles southward to Morocco and the Canaries, also Mediterranean and Black Sea. Elsewhere, southward to Senegal.
Farming	Türkiye, Greece, Spain, Egypt, Italy, Croatia, Tunisia, France, Cyprus and to a lesser extent several other Mediterranean countries.
Farming system	Estuarine semi-intensive, sea-cage system (most common) or tank systems

Source: FAO

[7] http://www.fao.org/fishery/culturedspecies/Dicentrarchus_labrax/en

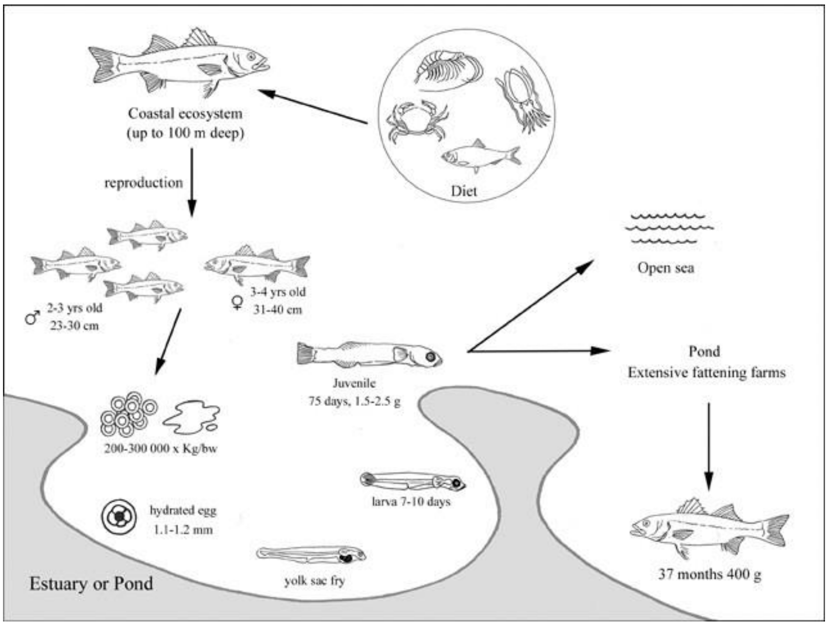
2.2 Production cycle

Although seabass can be farmed in seawater ponds and lagoons, the bulk of production comes from sea cage farming. The cages are usually made of steel with areas of 4 to over 10 m², having nets suspended below the walkways up to 6-8 m deep. Some farms are anchored close to the land and can be served from a landing. Others are located in the open sea or in the middle of a protected bay.

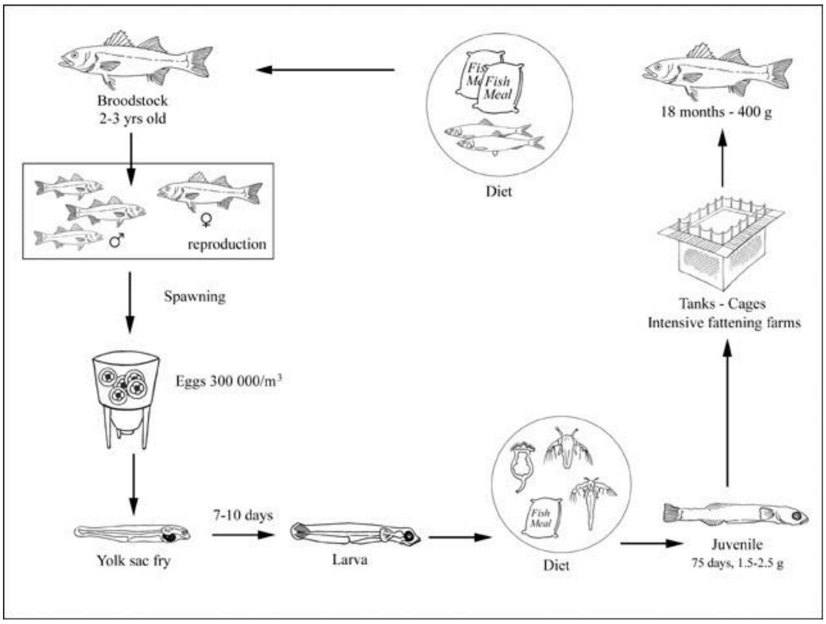
Juveniles are produced in hatcheries and sold to farmers as ongrowing stock at a size of 1,5-2,5 gr. The ongrowing juveniles reach 400-450 gr in 18-24 months. Fattening can occur in tanks or in cage systems.

Figure 1: Farmed seabass production cycle

Extensive system



Intensive system



Source: FAO

2.3 World production

2.3.1 Overview

Global seabass production amounted to 305.380 tonnes in 2021, which was 97% higher than in 2012, due to significant increase in aquaculture.

Seabass production is mainly from aquaculture (98%) which amounted to 299.810 tonnes in 2021. Catches accounted for only 2% of global production, amounting to 5.570 tonnes.

Table 3: Evolution of worldwide production of European seabass (tonnes)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	% total 2021	Evol 2021 / 2012
Catches	8.996	9.577	8.562	6.595	5.794	5.817	5.292	5.354	6.260	5.570	2%	-38%
Farmed	146.252	147.202	155.924	163.439	191.510	215.572	235.722	264.031	277.878	299.810	98%	+105%
Total	155.248	156.779	164.486	170.034	197.304	221.389	241.015	269.385	284.138	305.380	100%	+97%

Source: FAO

2.3.2 Evolution of aquaculture production at world level

Seabass were historically farmed in coastal lagoons and tidal reservoirs before they started to be farmed at a high level of production in the late 1960s. Fish culture was initially associated with salt production in coastal evaporation pans and marshes. Schools of fish living in estuarine areas were trapped and farmed in winter and spring (low evaporation season).

During the late 1960s, France and Italy competed to develop reliable mass-production techniques for juvenile seabass and, by the late 1970s, these techniques were sufficiently developed in most Mediterranean countries to provide hundreds of thousands of larvae. The European seabass (*Dicentrarchus labrax*) was the first marine non-salmonid finfish species to be commercially cultured in Europe and is currently the most important commercial fish widely cultured in Mediterranean areas. Seabass farming is often associated with gilthead seabream farming.

In 2021, the global production of farmed seabass reached almost 300.000 tonnes; the EU production accounted for 32% of this total. According to FAO statistics, the main producing areas in 2021 were Türkiye (155.151 tonnes, accounting for 52% of the production), the EU (96.647 tonnes) and Egypt (32.8893 tonnes). Other small productions are reported in other non-EU countries, such as Republic Islamic of Iran (5.616 tonnes in 2021), Tunisia (5.101 tonnes) and Albania (2.463 tonnes). The 2021 global production was two times the amount produced in 2012.

Türkiye has been the biggest producer of seabass in the world since 2017, the production greatly increased between 2012 and 2021 (+89.000 tonnes, +137%). With a production largely exceeding its domestic market, Türkiye has become the main seabass exporter, accounting for 98% of the imported volume of seabass in the EU.

Table 4: World production of farmed seabass (in 1.000 tonnes) 2012-2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Evol 2021 / 2012
Türkiye	66	68	75	75	81	100	117	137	149	155	+137%
EU 27	64	64	63	70	81	79	85	86	83	97	+52%
Egypt	13	12	15	14	24	30	25	30	32	33	+144%
Iran (Islamic Rep. of)	0	0	0	0	0	0	5	4	4	6	na
Tunisia	2	2	2	3	3	3	2	3	5	5	+155%
Albania	0	1	1	1	1	1	1	1	3	2	+516%
Others	1	1	1	1	2	2	2	2	2	2	+76%
Total	**146**	**147**	**156**	**163**	**192**	**216**	**236**	**264**	**278**	**300**	**+105%**

Source: FAO

2.3.3 Evolution of catches at world level

Global catches of European seabass reached 5.570 tonnes in 2021. Seabass is mostly caught in the North Sea and the English Channel by EU-27 fleet. To a lesser extent it is also caught in the Mediterranean. In 2021, EU accounted for 85% of world catches of European seabass. Other important countries in terms of European seabass catches are the UK (11%) and Egypt (3%). European seabass catches decreased greatly between 2012 and 2016 (from almost 9.000 tonnes in 2012 to about 5.800 tonnes in 2016), catches are more stable since 2016 and reached 5.570 tonnes in 2021. This strong trend is mainly due to the low fish stock in the Channel and the North Sea (the main fishing area of seabass) and the conservation measures introduced at EU and national levels[8].

Table 5: World catches of European seabass (in tonnes) 2012-2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Evol 2021 / 2012
EU 27	7.030	7.727	6.559	5.386	4.854	5.046	4.494	4.614	5.382	4.730	-33%
United Kingdom	896	803	1.041	686	554	441	435	414	526	613	-32%
Egypt	969	967	873	426	314	272	296	243	258	145	-85%
Other	101	80	89	97	72	58	68	83	94	82	-19%
Total	**8.996**	**9.577**	**8.562**	**6.595**	**5.794**	**5.817**	**5.292**	**5.354**	**6.260**	**5.570**	**-38%**

Source: FAO

[8] https://www.eumofa.eu/documents/20178/137160/European+seabass_31-1.pdf

2.4 EU production

2.4.1 Evolution of aquaculture production at EU-27 level

The production of farmed seabass in the EU-27 reached 97.135 tonnes in 2021. Most of this production occurred in Greece (53%) and Spain (24%). Other main producing MS were Croatia (9%), Italy (7%), Cyprus (3%) and France (3%).

In 2021, EU-27 production reached the highest production ever recorded (+54% compared to 2012), mostly attributable to increases in Greece (+45%) and Spain (+59%), and to a lesser extent in Croatia and Italy. The production remained relatively stable in France over the decade (+3%). Unlike the Italian market, the Spanish market is supplied primarily by its own aquaculture sector; increase in demand and continuing investments have entailed a rapid growth of domestic production in Spain. Croatia's production is boosted by the growth of the Italian market, undersupplied by its domestic production; 59% of Croatia's seabass production is exported to the neighbouring market of Italy.

Table 6: Production of farmed seabass in EU (in tonnes) 2012-2021

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Evol 2012 / 2021
GR	35.268	34.920	32.142	36.600	42.557	44.285	46.911	41.254	40.205	51.232	+45%
ES	14.455	14.946	16.722	18.600	22.956	17.656	22.526	25.260	22.765	23.037	+59%
HR	2.453	2.826	3.215	4.488	5.310	5.616	6.220	6.089	6.754	9.083	+270%
IT	6.896	6.330	5.724	5.633	6.800	7.039	5.738	4.948	4.693	7.282	+6%
CY	1.100	1.422	1.817	1.726	1.517	2.254	2.389	2.836	2.924	2.680	+144%
FR	2.321	2.428	2.244	2.156	1.748	1.413	1.722	2.461	2.376	2.615	+13%
PT	531	575	400	295	424	701	456	882	824	946	+78%
MT	126	127	190	27	39	59	77	62	136	221	+75%
SI	52	na	na	na	na	na	na	na	59	38	+-28%
EU-27	**63.203**	**63.574**	**62.454**	**69.526**	**81.351**	**79.022**	**86.039**	**83.791**	**80.736**	**97.135**	**+54%**

Source: EUMOFA elaboration of EUROSTAT and FAO data

2.4.2 Evolution of catches at EU-27 level

In 2022, EU seabass catches reached 4.480 tonnes. France is by far the main MS in terms of catches, with 2.431 tonnes caught by the French fleet in 2022, accounting for 51% of EU total catches. Other significant MS in terms of catches are Spain (15%) and Portugal (10%). Then come Greece, the Netherlands, and Italy with catches between 200 and 400 tonnes in 2022.

Over the past decade (2013-2022), EU seabass catches have experienced a strong downward trend (-42%). This trend is mainly attributable to the large reduction of catches in France (–56%) and, to a lesser extent, in the Netherlands (–38%). The main reason for this strong drop is the decline of seabass resource, especially in the northern Atlantic (Channel, Celtic and Irish Seas, southern North Sea). This is due to an increase in fishing pressure and a reduction of the reproduction. This led to new EU Regulation in 2015, aiming to reduce seabass catches drastically in these areas[9]. Seabass catches increased in Greece (+30%) and in Italy (+27%).

Table 7: EU seabass catches (in tonnes) 2013-2022

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Evol 2021 / 2012
FR	5.486	4.371	3.428	2.757	2.711	2.665	2.621	2.595	2.537	2.431	-56%
ES	758	568	559	570	602	508	579	1.178	545	720	-5%
PT	502	662	437	546	573	480	544	613	602	477	-5%
EL	287	242	204	348	241	276	311	325	379	374	30%
NL	370	253	218	156	132	172	210	223	235	229	-38%
IT	160	167	315	355	237	204	166	149	219	203	+27%
Others	163	161	72	56	38	35	39	44	37	46	-72%
EU-27	**7.726**	**6.425**	**5.233**	**4.787**	**4.534**	**4.340**	**4.469**	**5.126**	**4.554**	**4.480**	**-42%**

Source: Eurostat

[9] Seabass (europa.eu)

2.4.3 Import - Export

Extra-EU imports

Imports from extra-EU countries are mainly fresh products (97% of sales value in 2022) originating from Türkiye that accounted for 98% of the imported volume. Their overall value was EUR 117 million in 2022.

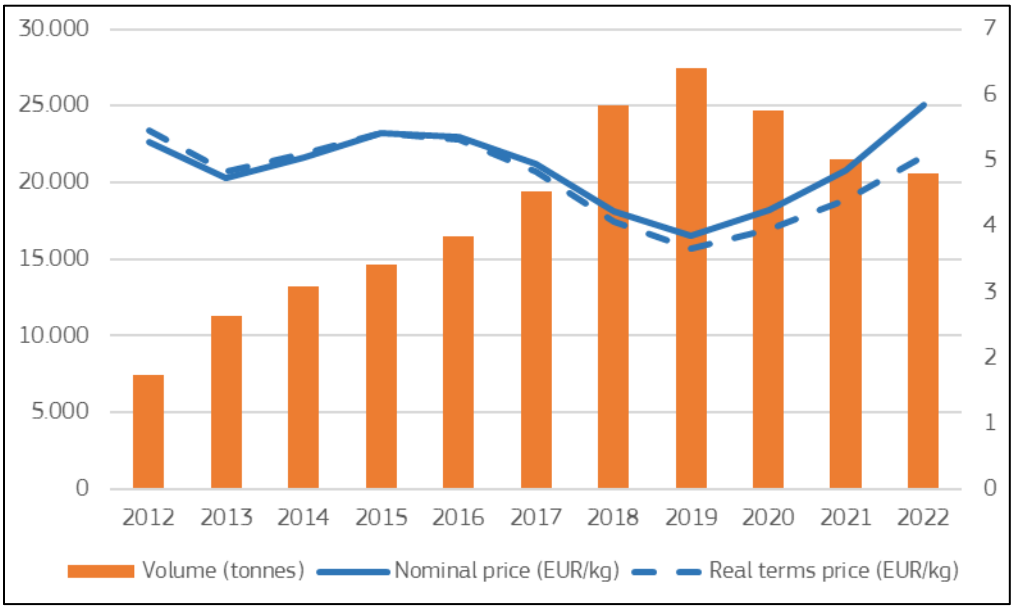
Table 8: Extra-EU imports of Europoean seabass (2022)

	Volume (tonnes)	Nominal value (1.000 EUR)	Price (EUR/kg)	% val. 2022
Fresh	20.004	117.113	5,85	97%
Frozen	598	3.540	5,91	3%
Total	20.602	120.652	5,86	100%

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

The value of imports increased by 207% in nominal value over the 2012-2022 period (+158% in real terms)[10]. The volume increased by 177% over the 2012-2022 period. Price increased by 11% over the 2012-2022 period (-7% in real terms). We observe a peak in volume in 2019 (with a low price) at 27.442 tonnes at 3,85 EUR/kg. This evolution is related to the development of seabass production in Türkiye but the growth in imports has been limited by the COVID-19 outbreak (production volume in Türkiye increased in 2020 and 2021 even if imports to the EU decreased at the same period).

Figure 2: Evolution of extra-EU imports of seabass



Source: EUMOFA elaboration of EUROSTAT-COMEXT data

[10] In the report, values in real terms are deflated by using the GDP deflator (base=2015)

Extra-EU exports

Extra-EU exports of European seabass amounted to 15.000 tonnes for EUR 120 million in 2022. Extra-EU exports mainly consisted of fresh seabass (99% of sales value) that were mostly exported to the United States (accounting for 49% of the exported volume in 2022), the UK (15% of the exported volume) and to Israel (9% of the exported volume).

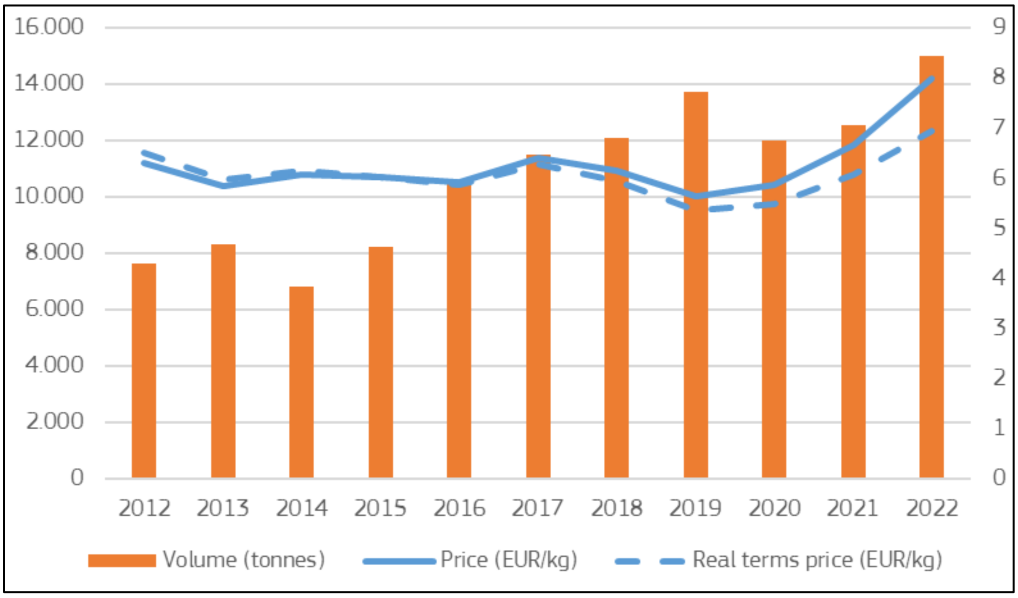
Table 9: Extra-EU exports of seabass (2022)

	Volume (tonnes)	Nominal value (1.000 EUR)	Price (EUR/kg)	% val. 2022
Fresh	14.881	118.829	7,99	99%
Frozen	119	1.171	9,83	1%
Total	**15.000**	**120.000**	**8,00**	**100%**

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

The value of extra-EU trade increased between 2012 and 2022 (+148% in nominal value; +108% in real terms). The volume increased by 96% and the price by 27% in the same period (+6% in real terms).

Figure 3: Evolution of extra-EU exports of seabass



Source: EUMOFA elaboration of EUROSTAT-COMEXT data

Intra-EU trade flows

Intra-EU exports

Main MS active on intra-EU trade is Greece (almost 39.000 tonnes exported and 55% of sales value on intra-EU market in 2022, for EUR 245 million), followed by Spain (8.205 tonnes, EUR 69 million on intra-EU market in 2022), Croatia (7.588 tonnes, EUR 51 million exported), the Netherlands (more than 5.000 tonnes, EUR 37 million), Italy (2.870 tonnes; over EUR 20 million), Austria (1.036 tonnes; over EUR 6 million in 2022) and France (1.020 tonnes; over EUR 10 million). The Netherlands and Austria are not involved in seabass farming, they import seabass from other MS or third countries and export it on the EU market.

Almost all European seabass is exported fresh (97% of sales value of intra-EU exports in 2022) except from the Netherlands, where exports of frozen seabass represent almost 20% of the exported value in 2022).

Table 10: Value of intra-EU exports of seabass from the main MS of origin (1.000 EUR, nominal value, 2022)

	Volume (tonnes)	Nominal value (1.000 EUR)	Price (EUR/kg)	% val. 2022
Fresh	63.611	433.189	6,81	97%
Frozen	1.977	14.792	7,48	3%
Total	65.588	447.981	6,83	100%

Table 11: Volume of intra-EU exports of seabass from the main MS of origin (volume in tonnes, 2022)

	GR	ES	HR	NL	IT	FR	AT	PT	DE	Others
Fresh	38.928	7.566	7.568	4.314	2.867	1.006	838	523	38.928	7.566
Frozen	68	639	20	872	3	30	182	164	68	639
Total	38.995	8.205	7.588	5.186	2.870	1.036	1.020	687	38.995	8.205

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

Intra-EU imports[11]

Main importers of European seabass from other MS are Italy (almost 23.000 tonnes imported, amounting to more than EUR 155 million in 2022), Spain (about 14.000 tonnes imported accounting for more than EUR 84 million), and France (almost 9.000 tonnes imported for more than EUR 56 million in 2022). Portugal and Netherlands follow, with about 5.000 tonnes and 4.000 tonnes imported respectively in 2022.

Only three MS are relevant importers of frozen seabass in 2022: Spain (1.369 tonnes; EUR 10 million), Italy (257 tonnes; EUR 1,8 million), and Germany (221 tonnes; EUR 1,1 million).

[11] In general, bilateral comparisons between Member States of intra-EU flows reveal major and persistent discrepancies. The main reason is the different declaration obligations for sellers (exporters) and buyers (importers) within international shipping agreement used in the transportation of goods. Thus, comparisons dealing with intra-EU trade statistics and related results must be taken into account cautiously and should consider the existence of these discrepancies.

Table 12: Volume of intra-EU imports of seabass in the main MS of destination in 2022 (tonnes)

	IT	ES	FR	PT	NL	DE	IE	BE	RO	Others
Fresh	22.941	13.852	8.867	5.164	4.175	1.547	789	699	723	2.689
Frozen	257	1.369	89	108	2	221	2	75	24	286
Total	23.199	15.221	8.956	5.272	4.177	1.768	791	774	747	2.975

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

2.4.4 Apparent consumption by Member State

In 2021, the total supply of European seabass in the EU-27 (production + imports) was 123.283 tonnes live weight equivalent (lwe). It was based on EU production for 82% of the supply (accounting for 101.689 tonnes) and on imports for 18% (21.594 tonnes lwe). Exports represented 12.560 tonnes lwe. Therefore, apparent consumption at EU-27 level (production + imports – exports) was estimated at 110.723 tonnes lwe.

The main MS in terms of apparent consumption in 2021 were Italy, Spain (35.223 tonnes and 34.092 tonnes lwe respectively), France (about 12.000 tonnes lwe), followed by Portugal and Greece (around 8.000 tonnes and 7.000 tonnes lwe respectively), Hungary and Denmark (apparent consumption over 2.000 tonnes lwe). Apparent consumption in other MS was under 2.000 tonnes LWE.

Table 13: Apparent consumption of seabass in the main MS (2021, in tonnes of live weight equivalent) (in bold, the three MS with a focus in the present report)

	Production (Catches + Aquaculture)	Total import (lwe)	Total supply (production + import)	Total export (lwe)	Apparent consumption (total supply – export)
IT	**7.501**	**31.301**	**38.802**	**3.579**	**35.223**
ES	**23.582**	**19.485**	**43.067**	**8.975**	**34.092**
FR*	5.152	7.890	13.042	1.422	11.619
PT	1.548	7.003	8.551	154	8.397
GR	**51.611**	**3.770**	**55.381**	**48.262**	**7.118**
HR	9.094	230	9.324	6.780	2.544
DE	1	2.270	2.271	173	2.098
NL	235	6.637	6.872	5.011	1.862
BG	0	1.495	1.495	209	1.285
CY	2.684	79	2.763	1.620	1.143
RO	0	1.173	1.173	407	765
BE	19	755	774	76	698
IE	0	683	683	118	565
SI	40	412	452	102	351
LT	0	223	223	25	198
MT	221	43	264	94	170
CZ	0	169	169	12	157
SK	0	132	132	0	132
LU	0	150	150	27	123
LV	0	126	126	9	117
EU-27	**101.689**	**21.594**	**123.283**	**12.560**	**110.723**

Source: based on EUROSTAT

3 THE GREEK MARKET

3.1 Structure of the supply chain

3.1.1 Production

Greece is the largest producer in the EU, representing 51% of seabass production in the EU-27 (2021). Seabass production in Greece originates mainly from aquaculture (99% of the Greek production in 2021). Fisheries seabass production was 379 tonnes in 2021.

The 2021 production reached 51.232 tonnes, marking a 45% increase compared to 2012 in volume. The short-term increase between 2020 and 2021 (+27%) is explained by the gradual lifting of the restrictive lockdown measures implemented in 2020 (in relation to the Covid-19 crisis) and the return to normal market functioning in 2021. Production value has also increased by 35% in comparison to 2020, explained by higher ex-farm prices which reached 5,37 EUR/kg in 2021, marking a 6% increase in 2021. The price increase in 2021 is explained by increase of production costs after the Covid-19 crisis. According to operators, production costs have continued to increase in 2022 and 2023 due to the energy crisis and supply chain disruptions following the Russian invasion of Ukraine.

Table 14: Seabass production in Greece between 2012 and 2021 (tonnes)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Evol 2021 / 2012
Aquaculture	35.268	34.920	32.142	36.600	42.557	44.285	46.911	41.254	40.205	51.232	+45%
Catches	274	287	242	204	348	241	276	311	325	379	+38%
Total	**35.542**	**35.207**	**32.384**	**36.804**	**42.905**	**44.526**	**47.187**	**41.565**	**40.530**	**51.611**	**+45%**

Source: Eurostat/EUMOFA

Structure of the industry[12]:

285 marine Mediterranean fish farms (floating facilities) belonging to 73 companies were active in 2021. 63% of the companies are small and medium-sized enterprises (SMEs) and family companies with a production up to 500 tonnes per year.

Almost 78% of the farms are located in three areas, namely: 1) Peloponnese-West Greece and Ionian Sea, 2) Thessaly-Central Greece and 3) the Aegean Sea, accounting for almost 87% of leased land and almost 82% of Greek production.

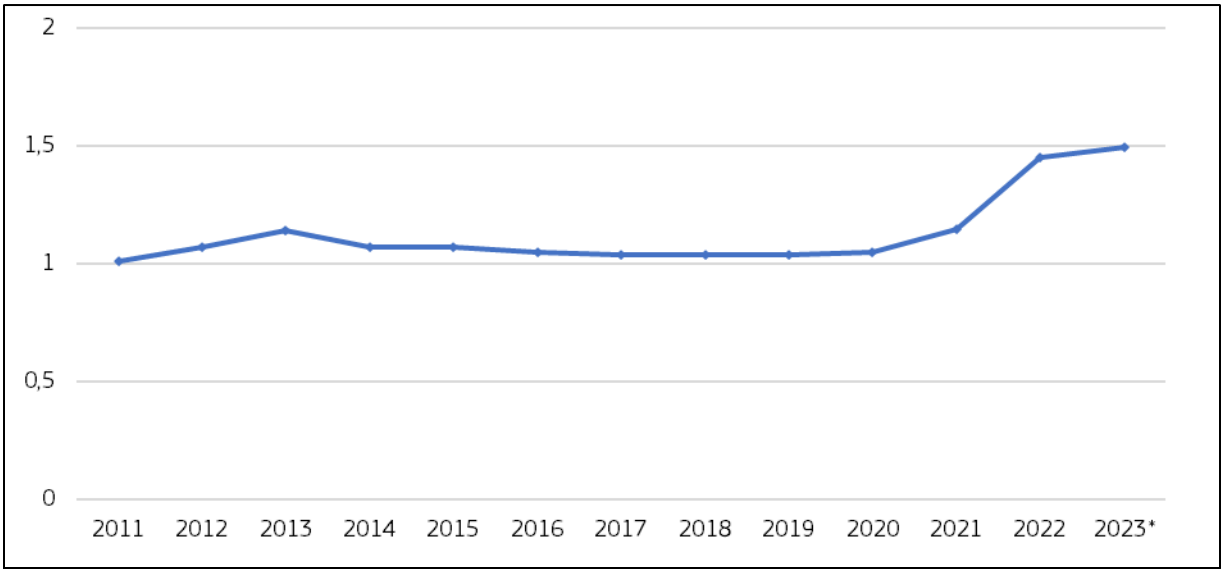
Increased costs of fish feed[13]:

In Greece, there are eight fish feed manufacturers, four of which are involved in fish farming either as their primary or secondary activity.

Recent years have been characterised by a significant increase of production costs, mainly regarding fish feed which represents up to 57-59% of the production costs per kilogram of product. Average prices of fish feed have increased by 44% since 2020 (nominal term).

[12] https://fishfromgreece.com/wp-content/uploads/2023/10/HAPO_AR23_WEB-NEW.pdf
[13] https://fishfromgreece.com/wp-content/uploads/2023/10/HAPO_AR23_WEB-NEW.pdf

Figure 4: Evolution of average fish feed prices between 2011 and 2023 (estimated) (EUR/kg)



Source: Hellenic Aquaculture Producers Organisation[14]

Juvenile production in Greece:

Juveniles are the second largest input used for fish farming. It accounts for 13% to 16% of production costs of seabass-seabream farming costs in Greece. In 2022, 164 million seabass juveniles were produced, marking a 9% increase compared to 2021. 95% of this production was made for the Greek market, while only 5% was exported. A recent report expected seabass juvenile production to decrease to 158 million juveniles in 2023. [15].

3.1.2 Imports - Exports

Imports

Greek imports of seabass reached 4.089 tonnes and EUR 22 million in 2022. Seabass imports to the Greek market concern almost exclusively fresh seabass. Frozen products account only for a minor share of seabass imports (less than 1% of imports in value terms). Most of the imported seabass originated from Türkiye (98% of the imports in value terms). According to interviews, most of the imports from Türkiye are imported to be re-exported to other EU markets. They transit by Greece to benefit from the local logistic facilities.

Table 15: Imports of fresh and frozen seabass to Greece in 2022

	Volume (tonnes)	Nominal value (1.000 EUR)	Price (EUR/kg)
Fresh	4.085	21.724	5,3
Frozen	4	27	6,7
Total	**4.089**	**21.751**	**5,3**

Source: EUROSTAT-COMEXT

[14] https://fishfromgreece.com/wp-content/uploads/2023/10/HAPO_AR23_WEB-NEW.pdf
[15] Ibidem

Seabass imports have significantly increased in recent years from less than 50 tonnes in 2012 to over 4.000 tonnes in 2022, with a significant increase in prices (+31% in nominal terms and +24% in real terms) leading to a significant increase in imports value.

Table 16: Evolution of imports volume (tonnes), value (nominal, 1.000 EUR) and price (nominal, EUR/kg) of seabass to Greece between 2012 and 2022

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Evol 2022 / 2013
Volume	45	139	426	698	1.922	4.104	5.482	4.624	3.769	4.089	**+8.987%**
Value	183	720	2.317	3.085	8.424	15.552	18.433	17.621	16.313	21.751	**+11.786%**
Price	4,06	5,19	5,44	4,42	4,38	3,79	3,36	3,81	4,33	5,32	**+31%**

Source: EUROSTAT-COMEXT

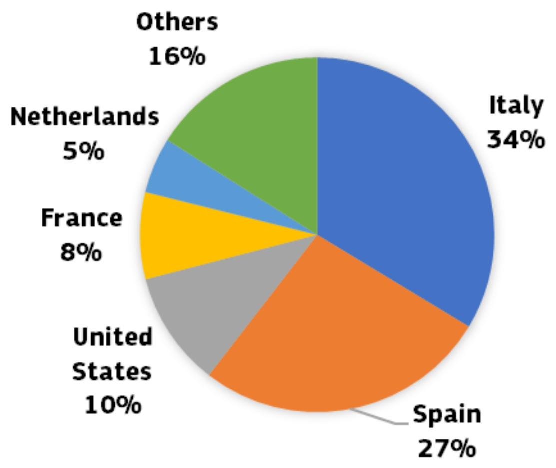
Exports

Greek exports of European seabass are much higher than imports, amounting to 47.851 tonnes and EUR 305 million in 2022. Seabass is exported almost exclusively fresh. 81% were exported to EU-27 countries and 19% to third countries. Top three destinations of Greek seabass were Italy (accounting for 34% of the total exported volume), Spain (23% of exported volume), and the United States (12% of exported volume). Greece is the main supplier of seabass of the Italian and Spanish markets and the second supplier of the US market (after Türkiye). These were followed by France and the Netherlands with respectively 8% and 7% of total exports in volume terms.

According to interviews, the European market is for whole seabass and small sizes (particularly for Spain and Portugal), while the US market is for gutted products and bigger fish (above 600 gr). The British market mainly requires seabass in fillets. According to the same interviews, there is an increasing demand for seabass (and seabream) in the US market (see below the evolution of exports to the US market). Both species are considered as niche species for premium restaurants or selected stores in the US market. A recent study[16] has estimated that approximately 20% of European seabass and gilthead seabream in the US market are sold through the retail sector, while the main part (80%) is sold through the HORECA sector. The analysis of products available through the various retail sales channels in the US market shows that seabass is mainly sold fresh whole (about 50% of the retail market share), in frozen fillets (35%), in fresh or chilled fillets (10%) and frozen whole (5%).

[16] Analysis of the USA market for seabass and seabream products. 2021. https://performfish.eu/wp-content/uploads/2023/01/D5.7.pdf

Figure 5: Breakdown of Greek exports (volume) by destination (2022)



Source: Eurostat-Comext

Between 2012 and 2022, exports have experienced a 60% increase in volume. This is related to the increase of exports to the United States, which increased from 125 tonnes in 2013 to over 5.000 tonnes in 2022. In addition, exports have increased to the Spanish market (+252% over the same period), the French market (+35%), the Dutch market (+377%) and the Canadian market (+3.174%). On the contrary, exports to the Italian market have remained relatively stable (+3% over the same period), whilst exports to the UK have decreased. The prices of exported seabass have also increased by 30% (23% in real terms) between 2013 and 2022 (from 4,91 EUR/kg in 2013 to 6,38 EUR/kg in 2022). According to interviews, there is huge competition on the international market and the main challenge for Greek producers is to maintain the price level despite increased global supply.

Table 17: Evolution of the Greek exports volume (tonnes), value (nominal, million EUR) and nominal price (EUR/kg) of seabass between 2013 and 2022

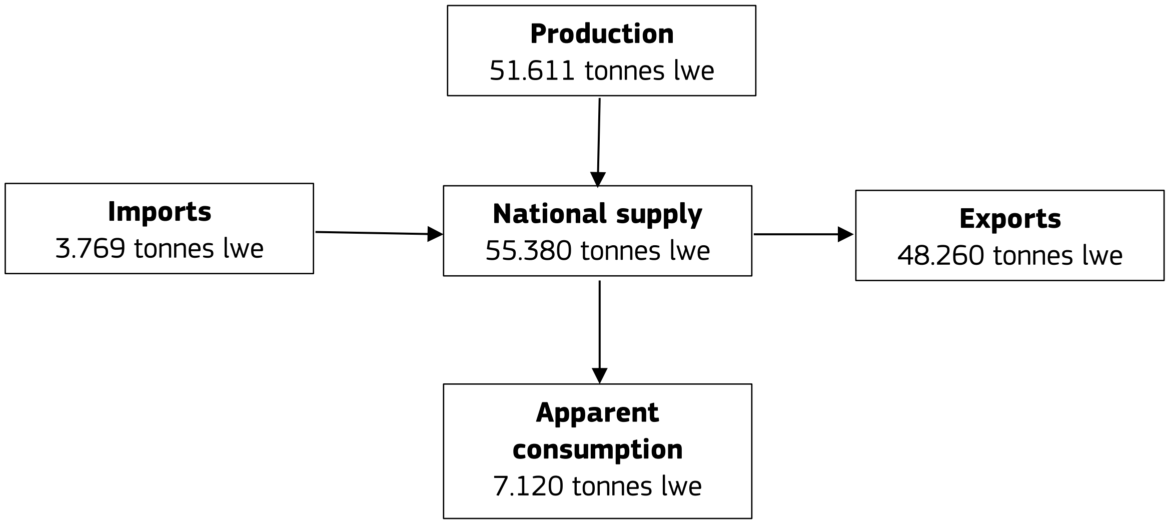
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Evol. 2022 / 2013
Volume	29.933	28.621	30.052	35.004	39.243	40.764	46.243	44.210	48.260	47.851	**+60%**
Value	147	153	164	195	218	203	212	221	254	305	**+108%**
Price	4,91	5,36	5,47	5,57	5,54	4,98	4,58	5,00	5,25	6,38	**+30%**

Source: Eurostat-Comext

3.1.3 Apparent consumption

In 2021, the Greek total supply of European seabass amounted to 55.380 tonnes in live weight equivalent (lwe), with 93% coming from national production (mainly aquaculture) and 7% from imports. Major share of this supply was exported (87%). The apparent consumption of seabass in Greece is estimated at 7.120 tonnes lwe in 2021, which represented 13% of the national supply.

Figure 6: Supply balance for European seabass in Greece (2021, tonnes of live weight equivalent)



Source: EUMOFA elaboration based on EUROSTAT data

3.2 Characteristics of the Greek market and consumption

The Greek seabass market is highly export oriented. 87% of the national supply was exported in 2021. According to interviews, the Greek market is focused on retail and HORECA. It is estimated that 85-90% of seabass and seabream products in Greece are channeled through the retail sector and the rest through the HORECA sector. The Greek seabass market is fresh based, with lack of value-added products, which is explained by the overall consumers preferences for unprocessed products, even though there is an increasing demand for elaborated products. For instance, some farms have developed ready-to-cook fish (i.e. fillets) presented in protective atmosphere packing paired with a new recyclable tray.

The Greek market for seabass products is segmented based on:

- **Fish size**: food service requires big whole fish, while the retail requires small sizes (mainly 400-600 gr) and increasingly more elaborated products. For this reason, operators are working on developing more elaborated products.
- **Fish quality (based on fish size, freshness and shape)**: the Greek market for seabass can be divided into three product segments: premium products segment, standard product segment and discounted product segment.

Overall, the Greek seabass market is characterised by low segmentation based on certifications. The organic production is small, with only two certified farms producing around 400 tonnes annually (less than 1% of the national production). The Hellenic Aquaculture Producers Organisation (HAPO) has established a collective brand called "Fish from Greece", with the aim to promote the Greek farming assets. However, according to interviews, this collective brand is used only by a small number of producers. A few farms are also certified by the Aquaculture Stewardship Council (ASC).

3.3 Price transmission in the supply chain

3.3.1 First sale prices

As shown in the table below, first sale prices have remained relatively stable over the period 2012 to 2021 and reached 5,37 EUR/kg in 2021 based on ELStat (+3% in real terms). Prices may vary depending on fish size and marketing channels (higher prices are reached when selling to food service). Organic seabass may also reach higher prices (9,00 EUR/kg according to HAPO), but this concerns small volumes. We observe an upward trend between 2012 and 2017, a drop in 2018 and 2019, and an upward trend in 2020 and 2021.

However, ex-farm prices have increased significantly in 2022 and 2023 according to HAPO as a result of the rapid increase in production costs and interest rates. According to HAPO estimations, prices for seabass reached 6,30 EUR/kg in 2022, marking an increase of 20% compared to 2021 (the average ex-farm price in 2021 was 5,27 EUR/kg according to HAPO estimations).

Table 18: Ex-farm prices (nominal price, EUR/kg) for farmed seabass (2021-2021)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Evol. 2021 / 2012
Price (EUR/kg)	5,46	5,13	5,38	5,61	5,55	5,59	5,08	4,87	5,08	5,37	-2%

Source: ELStat

3.3.2 Wholesale prices

Wholesale prices provided below vary significantly, from 3,16 EUR/kg to 7,15 EUR/kg. Based on an interview, this variation could be explained by the fact that wholesale markets cover both Greek and imported products from Türkiye, which are sold at different prices.

By comparison, wholesale prices surveyed for the Mart (which is one of the main cash & carry chains) was 12,93 EUR/kg (excluding VAT) for a whole seabass (1.000-1.500 gr) in December 2023. This confirms that prices in the table below are low and could refer to imported products.

Table 19: Wholesale prices (nominal value, EUR/kg) for whole gutted seabass (2012-2023)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Price (EUR/kg)	7,15	6,40	8,19	6,84	6,40	7,05	6,60	6,23	4,77	3,16	5,66	5,05

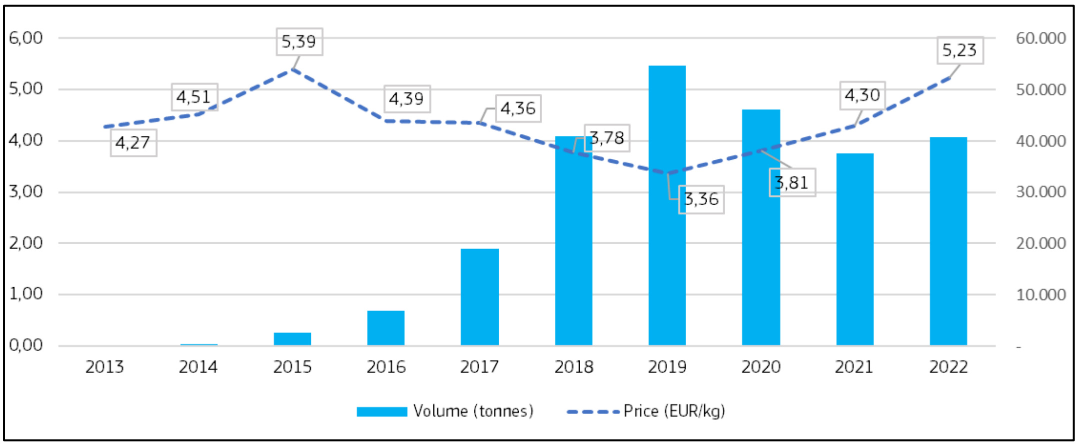
Source: EUMOFA

3.3.3 Import and export prices

Over the period surveyed, import prices of fresh seabass from Türkiye (which provides almost all the Greek imports of seabass) has followed comparable trend as first sale prices, with three phases:

- an upward trend between 2013 and 2015, from 4,27 EUR/kg to 5,39 EUR/kg;
- a downward trend between 2015 and 2019, with the lowest price being recorded in 2019 (3,36 EUR/kg). This trend in import prices could be explained by the significant increase in the Turkish production over this period (from 75.164 tonnes in 2015 to 137.419 tonnes in 2019) which resulted in significant increase of imported volume to Greece (from 265 tonnes in 2015 to 5.477 tonnes in 2019).
- an upward trend from 2020 onward.

Figure 7: Import prices (EUR/kg) of fresh seabass from Türkiye (2013-2022)



Source: Eurostat-Comext

The export prices provided below show a significant increase in 2022 compared to 2021, regardless of destination.

Over the period 2013 to 2022, export prices have increased for all destinations surveyed, except for the USA where export prices have decreased by 13% between 2013 and 2022 (-17% in real terms) in relation to the increase of exports volume during the same period (from 125 tonnes to over 5.000 tonnes). Export prices to the USA reached their lowest level between 2019 and 2021, in parallel with a significant increase in exports' volume. According to a recent FAO report[17], US imports of seabass have increased and most of the increase is made up of seabass from Greece.

Table 20: Prices of Greek exports of fresh seabass between 2013 and 2022 by destination (EUR/kg)

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Evol. 2022 / 2012
Italy	4,76	5,43	5,51	5,64	5,62	5,07	4,58	5,06	5,22	6,48	**+36%**
Spain	4,80	4,79	4,90	5,11	5,07	4,56	4,39	4,74	4,91	5,40	**+12%**
USA	8,09	7,60	7,73	7,19	7,70	7,37	5,07	5,51	5,89	7,07	**-13%**
France	5,39	5,55	5,56	5,67	5,65	5,10	4,70	5,15	5,27	6,49	**+20%**
Netherlands	5,32	5,39	5,70	6,36	6,29	5,85	5,55	5,67	6,96	8,69	**+63%**
Total	**4,91**	**5,35**	**5,47**	**5,56**	**5,54**	**4,98**	**4,58**	**5,00**	**5,25**	**6,39**	**+30%**

Source: Eurostat-Comext

[17] https://www.fao.org/3/cc1350en/cc1350en.pdf

3.3.4 Retail prices

In the absence of official retail price data, we conducted a survey of major retailers' websites to examine seabass pricing (see table below, based on the e-commerce websites of four large-scale retailers in Greece). Our initial observation is that seabass is not widely available in the product offering of e-commerce platforms. This is in line with the consensus among stakeholders that seabass is not often sold through e-commerce. The limited references identified concern primarily packaged products, as only one reference of unpacked product has been found. These prices suggest that packed seabass tend to be pricier compared to fresh unpacked seabass available at supermarket fish counters (10,99 EUR/kg for unpacked products versus 11,60-13.82 for packed products). The survey found that the retail price for fresh whole seabass from aquaculture ranges from 10,99 EUR/kg to 13,82 EUR/kg. The highest recorded price is for seabass fillets, reaching 32,00 EUR/kg.

Table 21: Prices at the retail stage for European seabass in large-retailers in Greece (EUR/kg) (December 2023)

Whole / fillet	Origin	Size	Additional details	EUR / unit	EUR / kg
Whole	Greece	400-600 gr	Gutted, packed	4,41	11,60
Whole	Greece	300-400 gr	Gutted, packed	3,71	11,60
Whole	Greece	300-400 gr	Gutted, packed	5,25	13,82
Whole	Origin not specified	400-600 gr	/	/	10,99
Fillet	Origin not specified	200 gr of fillets	Fillet, packed	6,4	32,00

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

3.3.5 Price transmission

This section focuses on the supply chain of farmed seabass produced in Greece and sold in supermarkets. The fish is sold under contract and without any intermediaries between the producer and the retailer. Prices refer to whole and not gutted fish (400-600 gr) in boxes sold at fresh fish counter of the supermarket (unpacked).

The breakdown (percentage) between costs and margins is based on the 2019 study[18] on price structure in the EU supply chain for seabass[19]. Ex-farm prices and retail prices have been updated based on interviews and the survey of e-commerce websites respectively.

[18] According to operators, this breakdown is still valid.

[19] https://www.eumofa.eu/documents/20178/121372/PTAT+Case+Study+-+Seabass+in+the+EU.pdf

Table 22: Costs and margins for fresh seabass 400-600 gr for large-scale retail (2023) in Greece

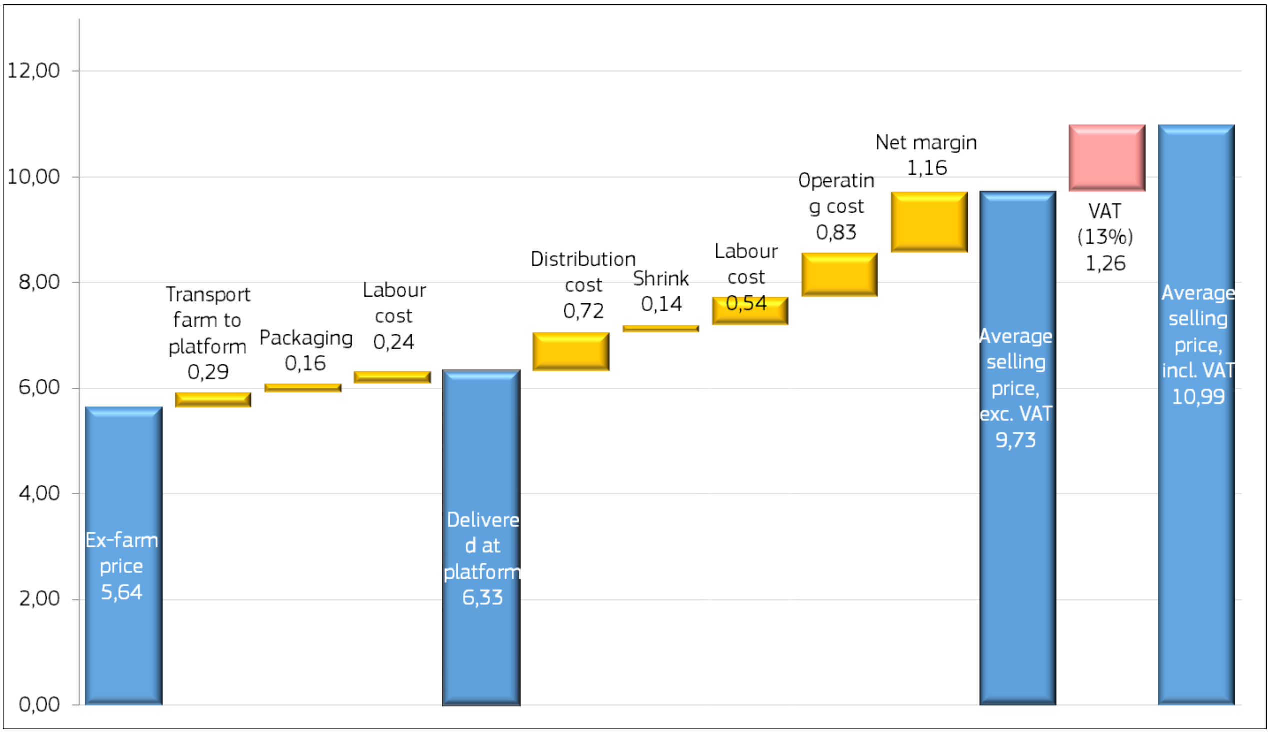
	Price (EUR/kg)	% of the final price	Source
Ex-farm price (1)	**5,64**	**51%**	Calculation
Transport farm to platform	0,29	3%	Breakdown between costs and margins estimated based on 2019 study on price structure analysis of the Greek supply chain for seabass
Packaging	0,16	1%	
Labour cost	0,24	2%	
Delivered at platform	**6,33**	**58%**	
Distribution cost	0,72	**7%**	
Shrink	0,14	**1%**	
Labour cost	0,54	**5%**	
Operating cost	0,83	**8%**	
Net margin	1,16	**11%**	
Average selling price, exclusive of VAT (2)	**9,73**	**88%**	
VAT (13%)	1,26	**12%**	
Average selling price (3)	**10,99**	**100%**	Survey

Source: EUMOFA survey

Source:

(1) Ex-farm price: calculated.
(2) The average selling price corresponds to the price of seabass, including all costs and margins. To calculate costs and margins in real terms, the breakdown from the 2019 EUMOFA study is used.
(3) The average selling price corresponds to the retail price surveyed from e-commerce websites for fresh seabass 400-600 gr.

Figure 8: Price transmission for fresh farmed seabass 400-600 gr sold in large-scale retail in Greece (2023)



Source: EUMOFA survey

4 THE SPANISH MARKET

4.1 Structure of the supply chain

4.1.1 Production

Based on data from The Ministry for Agriculture, Fisheries and Food (MAPA) on aquaculture facilities[20], there were 72 farms authorised to grow seabass in Spain in 2022, 35 of which were located in Andalusia. There are two main types of production methods used: sea cages (33 farms) and extensive aquaculture in estuaries (27 farms). The remaining farms are nurseries and hatcheries or research centres. It is estimated by the Association of aquaculture enterprises of Spain (APROMAR) that sea cage farms produce over 90% of the Spanish farmed seabass. The production from extensive farms in estuaries is specific to Andalusia and is sold mainly on local markets.

The volume of European seabass production in Spain was 23.582 tonnes in 2021, of which 23.037 tonnes from aquaculture (98%) and 545 tonnes from fisheries (2%). Seabass is the first finfish farmed in Spain, before rainbow trout (about 18.000 t) and red tuna (about 11.000 t). The volume of seabass from catches peaked in 2020 at 1.178 tonnes but decreased over the period by 18%. On the contrary, the volume of aquaculture production increased by 60% over the period despite a drop in production volumes in 2017, in a context of general over-supply of seabass and seabream, and in 2020, following heavy losses due to diseases and the storm Gloria[21].

Table 23: Seabass production in Spain between 2012 and 2021 (tonnes)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Evol 2021 / 2012
Aquaculture	14.455	14.945	16.722	18.600	22.956	17.656	21.269	25.260	22.765	23.037	+59%
Catches	663	758	568	559	569	602	507	579	1.178	545	-18%
Total	**15.118**	**15.703**	**17.290**	**19.159**	**23.525**	**18.258**	**21.776**	**25.839**	**23.943**	**23.582**	**+56%**

Source: Eurostat

According to the 2023 APROMAR report[22], the farmed production remained fairly stable in 2022, around 23.622 t.

The production is concentrated in Mediterranean regions and in the outermost region of the Canaries (31% in the Region of Murcia, 25% in Andalusia, 22% in the Valencian Community, 21% in the Canaries and 1% in Catalonia[23]).

The production of juveniles is significant in Spain and reached 60 million units in 2022, a 3% increase from 2021 (APROMAR, 2023). It is concentrated in the Balearic Islands (56%), the Valencian Community (15%) and Andalusia (29%). However, it does not fulfil the needs of the Spanish production of adult seabass and juveniles are also imported from France, Italy and Greece.

[20] https://servicio.pesca.mapama.es/acuivisor/
[21] Source: https://www.fao.org/in-action/globefish/market-reports/resource-detail/fr/c/1263874/
[22] APROMAR, Aquaculture in Spain 2023
[23] Ibidem

4.1.2 Imports - Exports

Imports

Total imports of fresh and frozen seabass to Spain reached 19.038 tonnes and EUR 107 million in 2022, the main product imported was fresh seabass, EUR 97 million in 2022 (90% of total value imported). Main suppliers were Greece and Türkiye (67% and 21% of total value respectively).

Table 24: Imports of fresh and frozen seabass to Spain (2022)

	Volume (tonnes)	Nominal value (1.000 EUR)	Price (EUR/kg)	% val. 2022
Fresh	17.667	97.518	5,52	90%
Frozen	1.371	10.361	7,56	10%
Total	**19.038**	**107.879**	**5,67**	**100%**

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

Imports of seabass have increased by 294% in volume and 317% in value between 2012 and 2022 (+267% in real terms). The price has increased in recent years and was 5,67 EUR/kg in 2022, a 6% increase in nominal terms since 2012, but a 7% decrease in real terms.

Table 25: Evolution of imports of seabass to Spain between 2012 and 2022

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Evol 2022 / 2012
Volume (tonnes)	4.835	8.512	9.587	8.077	9.275	9.264	10.968	13.447	15.937	19.048	19.038	+294%
Nominal value (1.000 EUR)	25.840	39.182	40.074	34.974	39.783	43.586	48.467	59.587	71.208	97.693	107.879	+317%
Price (EUR/kg)	**5,34**	**4,60**	**4,18**	**4,33**	**4,29**	**4,70**	**4,42**	**4,43**	**4,47**	**5,13**	**5,67**	**+6%**

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

Exports

Exports of seabass from Spain reached 11.339 tonnes and EUR 100 million in 2022. This was mainly composed of fresh seabass (94% of value of all seabass exported, EUR 94 million). Main destinations were Portugal and France (40% and 22% of value exported respectively). In addition, some Spanish producers export to niche high-value markets, such as the United States, the Middle East or South Korea.

Table 26: Exports fresh and frozen seabass from Spain (2022)

	Volume (tonnes)	Nominal value (1.000 EUR)	Price (EUR/kg)	% val. 2022
Fresh	10.660	94.689	8,88	94%
Frozen	679	5.558	8,19	6%
Total	**11.339**	**100.246**	**8,84**	**100%**

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

Exports of seabass have increased by 165% in volume and 238% in value since 2012 (+198% in real terms). The price has increased by 28% over the period and was 8,84 EUR/kg in 2022 (+12% in real terms).

Table 27: Evolution of the Spanish exports volume (tonnes), value (nominal, 1.000 EUR) and nominal price (EUR/kg) of seabass between 2012 and 2022

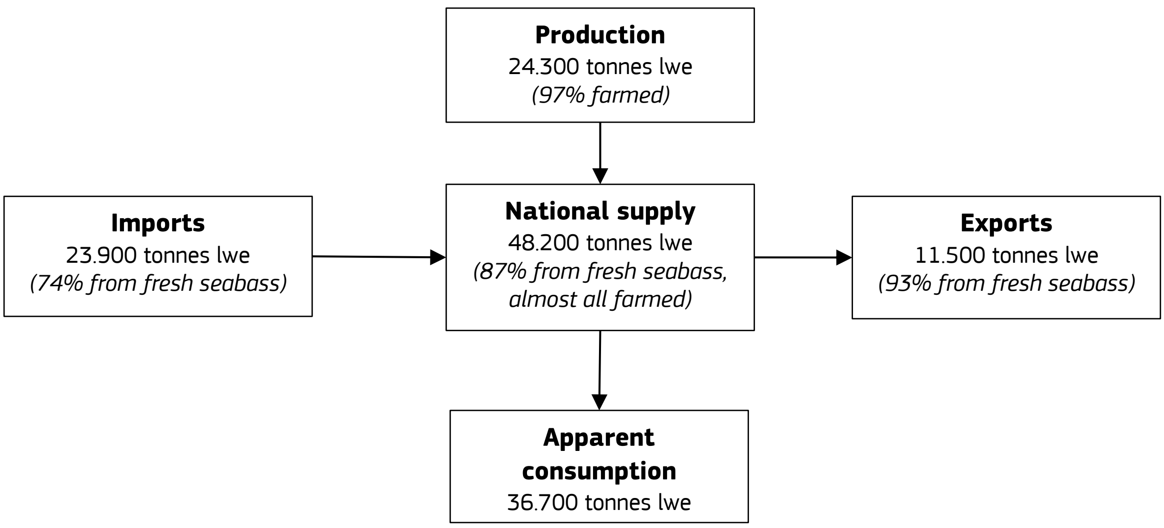
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Evol 2022 / 2012
Volume	4.276	5.690	5.751	6.708	8.148	6.245	6.475	8.253	5.637	8.888	11.339	+165%
Nominal value	29.619	37.026	39.936	45.349	56.927	49.523	52.549	61.226	42.500	66.736	100.246	+238%
Nominal price	6,93	6,51	6,94	6,76	6,99	7,93	8,12	7,42	7,54	7,51	8,84	+28%

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

4.1.3 Apparent consumption

The available data in Spain allows to estimate the apparent consumption for 2022, instead of 2021 as presented in other EU MS. In addition, feedback from interviews indicated that the food service also imported frozen filets of seabass from Türkiye through the Netherlands, possibly reaching around 2.000 tonnes of frozen fillets, that were not captured in COMEXT statistics as they fell under a broader CN code for frozen fish fillets[24]. The analysis here therefore differs slightly from the one provided under section 2.4.4 at EU level, based only on EUROSTAT-COMEXT data. The total supply of seabass in Spain is therefore estimated to amount to 48.200 tonnes lwe, about 50% from national production and 50% from imports. Aquaculture represents over 98% of the supply. Besides national catches, wild seabass is mainly imported fresh from France through wholesale markets. Overall, it is estimated that the supply of wild seabass may reach around 1.000 tonnes. Close to one quarter (24%) of this supply is exported, thus 76% can be estimated as “apparent” consumption, or 36.700 tonnes lwe.

Figure 9: Supply balance for seabass in Spain (2022, tonnes lwe)



Source: EUMOFA elaboration based on EUROSTAT, APROMAR and interviews

[24] CN 03 04 89 90 – Frozen fish fillets, n.e.s.

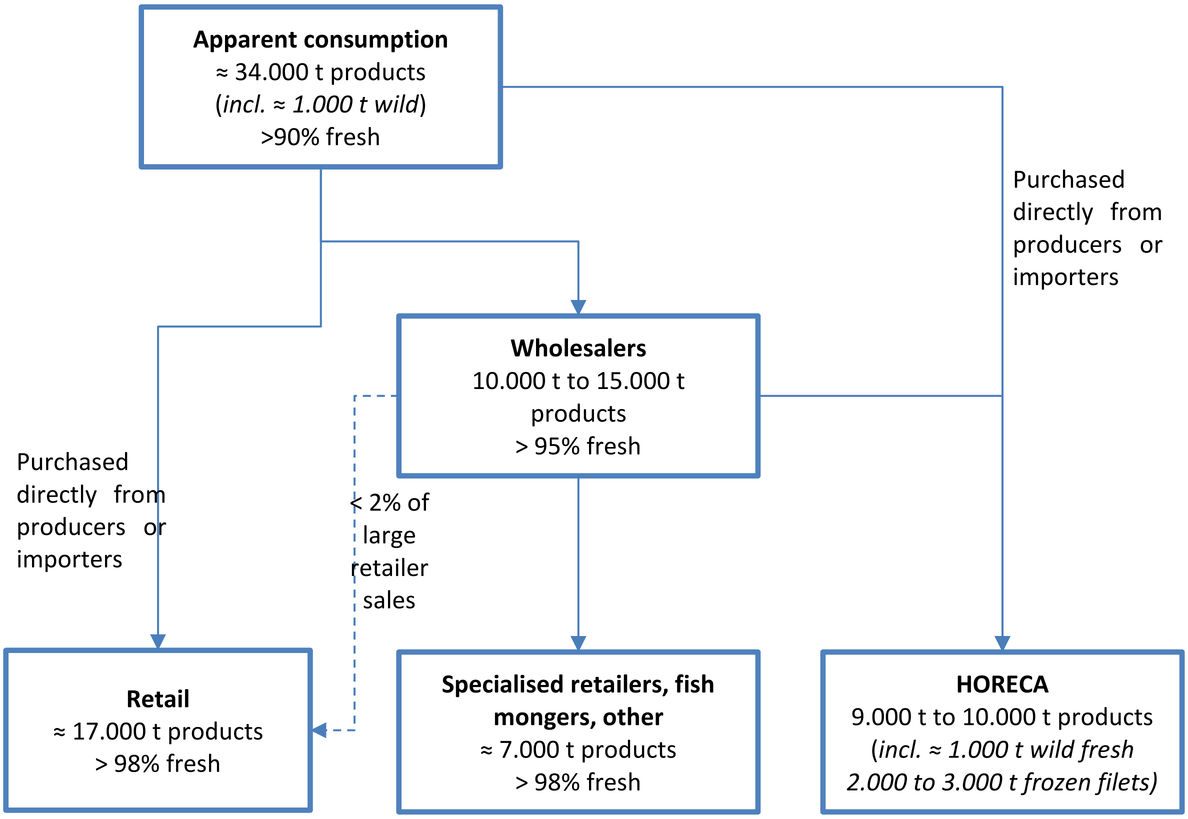
4.2 Characteristics of the Spanish market and consumption

4.2.1 Characteristics of the market

National data on household consumption[25] show that the consumption of seabass in Spain has increased by 43% between 2012 and 2022, while the total consumption of fresh fish decreased by 31%, partially as a result of the economic crisis and partially because of the evolution of consumer habits[26]. The increase in consumption is lower than the increase in production (+59% between 2012 and 2022) but these data indicate that the majority of the increase in production is absorbed by the domestic market, as shown also in the previous figure.

The following diagram provides an overview of the Spanish market by sales channel.

Figure 10: Seabass consumption by sales channel in Spain (2022)



Source: EUMOFA, based on APROMAR, COMEXT, MAPA (consumption data) and interviews

At retail stage, seabass is mainly sold in supermarkets and large stores. According to the Food Consumption Panel of the Ministry of Agriculture, Fisheries, and Food on household consumption, in 2022, large retail outlets (hypermarkets + supermarkets) represented 71% of sales volume and 68% of sales value; fishmongers accounted for 19% of sales volume and 21% of sales value[27]. By crossing information gathered from the various stages of the supply chain, out-of-home consumption is

[25] https://www.mapa.gob.es/es/alimentacion/temas/consumo-tendencias/panel-de-consumo-alimentario/series-anuales/default.aspx
[26] EUMOFA study on EU Consumer habits regarding fishery and aquaculture products, 2017
[27] The percentage in value could be slightly lower as the average price provided by the MAPA, based on a consumer panel is significantly higher than the average price provided by FEDEPESCA based on accounting data from their members (see price transmission).

estimated to represent about 30% of the seabass consumed in Spain (in volumes), and about 20% of the fresh seabass from aquaculture.

Large-scale retailers and large companies of the food service sector tend to buy directly from producers or traders, relying only marginally on wholesalers for occasional complements, while fish mongers and independent restaurants rely more on wholesalers. Large trading companies, often located near the main wholesale markets (in particular in Barcelona or Madrid), play a key role in the supply chain.

The segmentation of the market of fresh seabass in Spain is based on three main criteria:

- The production method: catch, aquaculture in sea cages, aquaculture in estuaries;
- Size : <400 gr (small or "portion"), 400-600 gr, 600-800 gr, 800 -1.000 gr, above 1kg;
- The origin: through the label "Crianza Mare y Ríos de España" ("Farmed in Spanish sea and rivers") that allows to differentiate the Spanish production from imports

The seabass grown in sea cages represents by far the largest share of the market both for household consumption and HORECA. Other production methods are marginal and represent market niche with more specific outlets. Wild seabass represents less than 5% of the supply and is mostly consumed in restaurants. Seabass grown in estuaries are mainly sold in local fisheries and supermarkets. In 2021, they accounted for 7% of the national production (EUROSTAT). Applied to 2022 production data, it would represent around 5% of the supply of fresh seabass.

Based on EUROSTAT, the price difference between seabass farmed in sea cages and in estuaries is around 2,00 EUR/kg at first sale, but fish size may also have an impact on price difference[28]. As reported in the 2019 EUMOFA study[29], the characteristics differ slightly between seabass grown in estuary and seabass grown in sea cages (e.g. in terms of skin colour) but the consumers' willingness to pay is also related to consumers' interest for local products.

The price difference is more significant between farmed and wild seabass. In 2022, farmed seabass was sold at 5,56 EUR/kg on average at first sale (APROMAR) while wild seabass was sold at 11,73 EUR/kg at first sale (EUMOFA, first sale data). In this case as well, the differences in average size may contribute to some extent to the price difference.

There are no statistics available on prices for different sizes at first sale, but prices from Mercamadrid and feedback from interviews indicate that the price of large seabass (above 800 gr) can reach 1,00 or 2,00 EUR/kg above the standard price (corresponding to 400-600 g fish).

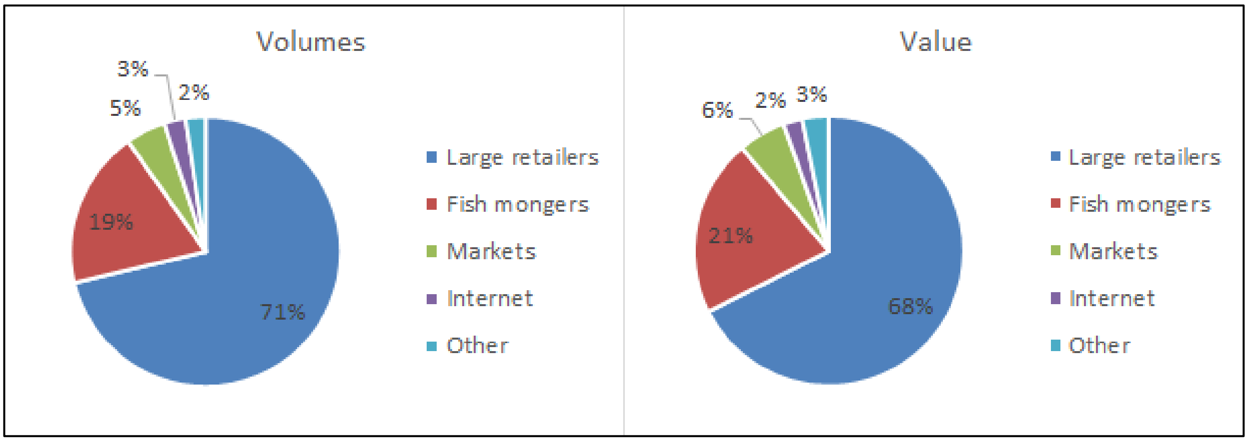
The label Crianza Mare y Ríos de España[30], which includes four of the main Spanish seabass producers, is widely used by fishmongers, and to some extent by supermarkets and the food service sector. It contributes to differentiating Spanish seabass, but only results in a slight price difference[31].

4.2.2 Consumption

Seabass is a widely consumed product in Spain, characterized by a high penetration rate of 38,73%[32] and a relatively low and stable retail price. It is mostly purchased in supermarkets, whole, and prepared at the fish counter based on consumers demand (whole, gutted or filleted). The preparation is not taken into account in the price. Nevertheless, the offer has started to diversify in recent years with the growth of internet sales and the arrival of fileted seabass on the shelves. Frozen seabass for home consumption remains mainly sold through specialised shops for frozen food.

[28] The only examples of seabass from estuaries sold online by supermarkets were large seabass (>900 g).
[29] https://www.eumofa.eu/documents/20178/121372/PTAT+Case+Study+-+Seabass+in+the+EU.pdf
[30] https://crianzamaresyriosdespana.es/
[31] Based on feedback from different stages of the supply chain and examples found online.
[32] By comparison, the main consumed species by Spanish households, hake, has a penetration rate of 49,69%.

Figure 11: Breakdown of consumption at home by sales channel (2022)



Source: MAPA, annual consumption data[33].

National data on at home consumption show that the consumption of seabass in Spain more than doubled between 2012 and 2020 and decreased by 34% between 2020 and 2022. The decrease in recent years can be partially explained by the general decrease of consumption at home following the COVID crisis (- 15% for food products in general) and the general decrease of fish consumption (– 23% for all fishery products)[34], which tend to be more impacted by the economic crisis than other less expensive food products. However, the decrease in at home consumption is partially compensated by the increase in the HORECA sector.

[33] 2022datosanualesdelpaneldeconsumoalimentarioenhogares_tcm30-649661.xlsx (live.com)

[34] MAPA consumption data, annual series

4.3 Price transmission in the supply chain

4.3.1 First-sale prices

Overall, the nominal price of seabass at first sale increased by 20% over the past five years (9,5% in real terms), and by 19% between 2021 and 2022 according to APROMAR data[35].

Table 27: ex-farm price and production volume for seabass in Spain

	2018	2019	2020	2021	2022	Evol. 2018 / 2022
Average price (EUR/kg)	4,64	3,80	4,30	4,70	5,57	+20%
Volumes (t)	22.460	27.335	21.709	23.924	23.622	+5%

Source: APROMAR

First sale prices for seabass are primarily influenced by import prices as the competition with extra-EU imports forces to keep prices at a competitive level and therefore do not necessarily reflect changes in production costs.

The price at first sale stage is the price paid by the wholesalers or retailers purchasing directly from the aquaculture farm and includes transport fees. Seabass is mainly sold whole and the shrink cost is considered negligible.

As presented in previous sections, most of the fresh seabass is sold through the mass retail channel, which directly purchases seabass from aquaculture farms through short-term agreements (6 months) with fixed price. On the contrary, prices in wholesale markets are negotiated daily based on supply and demand and can be lower than prices paid by supermarkets.

4.3.2 Import and export prices

Imports of fresh seabass increased by 84% in volume over the 2018-2022 period, while exports increased by 72%. Import prices increased by 28% over the same period. Main import countries are Greece and Türkiye (91% of 2022 import value). The import price is close to the Spanish ex-farm price but influences seabass first sale price dynamics.

The export price increased by 8% between 2018 and 2022. Based on the information gathered from producers, the increase could be due to two factors; the increase of the share of large seabass in exports and the increase of exports to the United States (23% of the exports value in 2022, with an average price of 10,87 EUR/kg, including transport). France and Portugal remain the two other main markets (with respectively 37% and 12% of export value).

Table 28: Import and export price (nominal price) and volume for fresh seabass in Spain

		2018	2019	2020	2021	2022	Evol. 2012/ 2022
Price (EUR/kg)	**Import**	4,31	4,39	4,43	5,03	5,52	+28%
	Export	8,24	7,50	7,71	7,56	8,88	+8%
Volume (tonnes)	**Import**	9.623	11.816	14.251	16.618	17.667	+84%
	Export	6.183	7.952	5.294	8.399	10.660	+72%

Source: EUROSTAT-COMEXT

[35] Average prices provided by the MAPA and Eurostat differ significantly from those provided by APROMAR (7,68 EUR/kg in 2022 for the MAPA), as a result of different survey methodologies, but show the same trends. We chose to use APROMAR data for the piece transmission as it is more coherent with information provided by interviewees and prices observed at later stages of the supply chain.

4.3.3 Wholesale prices

The table below clearly shows the difference in prices between wild and farmed seabass and between different size segments. If compared with ex-farm prices, it also indicates that the gross margin at wholesale stage is thin.

Table 29: Wholesale price for seabass in Spain by wholesale market and type of production (EUR/kg)

	2016	2017	2018	2019	2020	2021	2022
Farmed small (300-400g)	5,01	4,82	4,49	4,29	4,56	5,08	5,32
Farmed medium (400-600g)	6,22	5,90	5,47	5,34	6,43	5,60	6,63
Farmed large (>600g)	9,09	9,19	8,81	8,27	8,39	8,49	9,80
Wild	23,52	23,25	20,50	21,21	20,78	22,27	21,74

Source: Mercamadrid

4.3.4 Retail prices

Based on data from the observatory of food prices from the Ministry of Agriculture, Fisheries and Food (MAPA), and, Europanel (available in EUMOFA), the average price for fresh farmed seabass (all size categories) ranged from 8,25 EUR/kg to 9,95 EUR/kg between 2018 and 2022.

The median price from the monitoring of retail prices in EUMOFA[36] for 400 g - 600 g seabass was slightly lower, with 7,95 EUR/kg in 2021 and 8,75 EUR/kg in 2022.

Table 30: Retail price of seabass in Spain

	2018	2019	2020	2021	2022	Evol. 2018 / 2022
MAPA average price (EUR/kg)	8,58	8,31	8,73	9,03	9,95	+16%
Europanel average price (EUR/kg)	8,50	8,25	8,67	8,96	9,83	+16%
Monitoring of retail prices in EUMOFA - 400-600 gr seabass (EUR/kg)	n.a.	n.a.	n.a.	7,95	8,75	n.a.

Source: MAPA, EUMOFA

4.3.5 Price transmission

Two price transmission analyses are provided, they both cover whole seabass farmed, medium size (400-600g), of Spanish origin. The analyses differ according to the retail channel:

- seabass retailed in supermarkets in Spain,
- seabass retailed by fishmongers in the Madrid region.

36 https://www.eumofa.eu/fr/online-shop-retail-prices

Whole seabass retailed in supermarkets

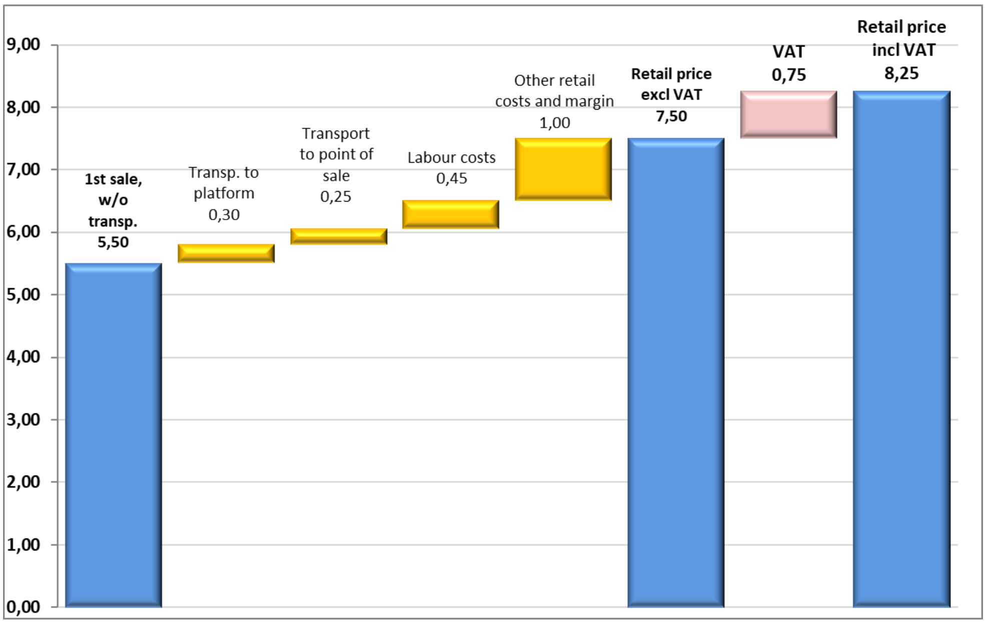
The first analysis covers fresh whole farmed seabass, medium size (400-600g) of Spanish origin sold in supermarkets. It is the most common size sold in retail. The ex-farm price generally includes transport to the platform or wholesaler, the detail of transport is provided in the present analysis. Based on available data and interviews, the ex-farm price is estimated at around 5,80 EUR/kg, or 5,50 EUR/kg without transport, for seabass sold directly to large retailers through contractualization (*i.e.* with fixed prices during the contract duration). Retail price for fresh whole seabass medium (400-600g) sold in supermarkets, is 8,20 EUR/kg. These prices are based on interviews with stakeholders and a survey of online shops. The shrink rate is considered negligeable here and is not reported since the seabass is marketed whole and not gutted most of the time.

Table 31: Costs and margins for fresh whole seabass farmed medium (400-600 gr) of Spanish origin retailed in supermarkets in Spain (EUR/kg, 2022)

	Average price (EUR/kg)	% of retail price	Sources
Estimated first sale price without transport (whole)	**5,50**	**67%**	APROMAR / Interviews
Transport to distribution platform	0,30	4%	Interviews
Transport to point of sale	0,25	3%	EUMOFA 2019 study[37]
Labour costs	0,45	5%	EUMOFA 2019 study + Eurostat labour cost index
Other retail costs and margin	1,00	12%	Calculated (EUMOFA)
Average selling price, excl. VAT	**7,50**	**91%**	Calculated (EUMOFA)
VAT (10%)	0,75	9%	Calculated (EUMOFA)
Average selling price	**8,25**	**100%**	Survey on online shops for seabass 400/750 gr, Interviews

Source: EUMOFA survey

Figure 12: Costs and margins for fresh whole seabass farmed medium (400-600 gr) of Spanish origin retailed by supermarkets in Spain (EUR/kg, 2022)



Source: EUMOFA survey

[37] https://www.eumofa.eu/documents/20178/121372/PTAT+Case+Study+-+Seabass+in+the+EU.pdf

Whole seabass retailed by fishmongers in the area of Madrid

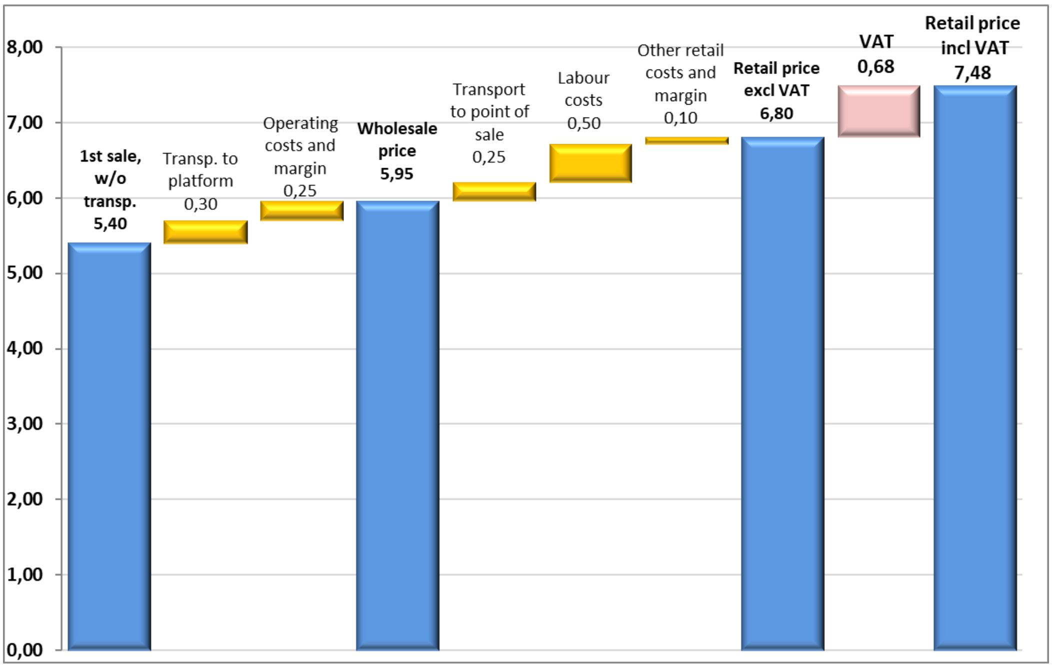
The second analysis covers fresh whole farmed seabass, medium size (400-600g), of Spanish origin and sold by fishmongers. The ex-farm price is slightly lower in this example than for large-scale retailers as prices are negotiated daily by wholesalers while they are generally fixed in contracts with large retailers. As for large retailers, ex-farm prices generally include transport to wholesaler; in the present analysis ex-farm price are estimated before transport. As transport and prices may vary significantly depending on the retail location for fishmongers, the example focuses on fishmongers located in the Madrid area.

Table 32: Costs and margins for fresh whole farmed seabass medium (400-600 gr) of Spanish origin retailed by fishmongers in the area of Madrid (EUR/kg, 2022)

	Average price (EUR/kg)	% of final price	Source
Estimated first sale price without transport (whole)	**5,40**	**73%**	APROMAR and interviews
Transport to wholesaler	0,30	4%	Interviews
Operating costs and margin	0,25	3%	Calculated (EUMOFA)
Wholesale price	**5,95**	**80%**	Mercamadrid and interviews
Transport to point of sale	0,25	3,3%	2019 EUMOFA study[38]
Labour costs	0,50	7%	2019 study + Eurostat labour cost index
Other retail costs and margin	0,10	1%	Calculated (EUMOFA)
Average selling price, exclusive of VAT	**6,80**	**91%**	Interviews
VAT (10%)	0,68	9%	Calculated (EUMOFA)
Average selling price	**7,48**	**100%**	Calculated (EUMOFA)

Source: EUMOFA survey

Figure 13: Costs and margins for fresh whole farmed seabass medium (400-600 gr) of Spanish origin retailed by fish mongers in the area of Madrid (EUR/kg, 2022)



Source: EUMOFA survey

[38] https://www.eumofa.eu/documents/20178/121372/PTAT+Case+Study+-+Seabass+in+the+EU.pdf

5 THE ITALIAN MARKET

5.1 Structure of the supply chain

5.1.1 Production

The volume of European seabass production in Italy was 7.501 tonnes in 2022, with 7.282 tonnes coming from aquaculture (97%) and 219 tonnes from fisheries (3%). Both sectors have increased since 2012: +6% for aquaculture and +19% for fishery.

Table 33: Seabass production in Italy between 2012 and 2021 (tonnes)

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	Evol 2021 / 2012
Aquaculture	6.896	6.330	5.724	5.633	6.800	7.039	5.738	4.948	4.693	7.282	+6%
Catches	184	160	167	315	355	237	204	166	149	219	+19%
Total	**7.080**	**6.490**	**5.891**	**5.948**	**7.155**	**7.276**	**5.942**	**5.113**	**4.842**	**7.501**	**+6%**

Source: Eurostat

Seabass farm production peaked in 2022 at 7.282 tonnes. We observe an upward trend over the last years, with another peak in 2017 (7.039 tonnes).

Italian production is conducted offshore in cages and on land. However, due to energy consumption for pumps in on-land facilities, the prospects for the development of this type of production are quite negative (based on qualitative feedback from Italian stakeholders). Prospects are more optimistic for offshore sites, even if companies face difficulties in getting new licences There are four large-scale hatcheries for seabass in Italy, in north Adriatic, Sicily and Puglia.

5.1.2 Imports – Exports

Imports

Total imports of fresh and frozen seabass to Italy reached 28.856 tonnes and EUR 184 million in 2022; the main product imported was fresh seabass, with 28.250 tonnes and EUR 182 million in 2022 (99% of total value imported). The main suppliers were Greece (50% of the total import value), Croatia (24% of total value), and Türkiye (16% of total value) in 2022.

Table 34: Imports of seabass to Italy in 2022

	Volume (tonnes)	Nominal value (1.000 EUR)	Price (EUR/kg)	% val. 2022
Fresh	28.250	182.691	6,47	99%
Frozen	316	2.249	7,12	1%
Total	28.566	184.940	6,47	100%

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

Imports of seabass have increased by 35% in volume and by 51% in value (+35% in real terms) from 2012 to 2022. The price has increased in recent years to 6,47 EUR/kg in 2022 (compared to 5,79 EUR/kg in 2012, +12% in nominal terms but -1% in real terms).

Among the different exporters to Italy, the flow from Croatia has significantly increased over the last years with 7.046 tonnes of seabass imported in 2022 compared to 1.150 tonnes in 2012 (+513%). Imports of fresh seabass from Greece and Türkiye peaked around 2018 and 2019 for each of these countries (respectively at 18.477 tonnes and 7.390 tonnes) and has been on a downward trend over the last years (14.055 tonnes from Greece and 5.341 tonnes from Türkiye in 2022).

Table 35: Evolution of imports of seabass to Italy between 2012 and 2022

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Evol 2022/ 2012
Volume (tonnes)	21.129	21.229	23.168	25.370	26.431	26.412	30.699	32.049	28.433	31.207	28.566	+35%
Nominal value (million EUR)	122	113	125	140	156	155	160	154	141	171	185	+51%
Price (EUR/kg	5,78	5,33	5,39	5,53	5,89	5,87	5,21	4,81	4,94	5,48	6,47	+12%

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

Exports

Exports of seabass from Italy are lower than imports. It reached 3.086 tonnes and EUR 22 million in 2022. This was mainly fresh seabass (99% of value of all seabass exported, EUR 22 million). Main destinations were France (23% of the exported value), Portugal (20% of the exported value), and Germany (12% of the exported value).

Table 36: Exports fresh and frozen seabass from Italy in 2022

	Volume (tonnes)	Nominal value (1.000 EUR)	Price (EUR/kg)	% val. 2022
Fresh	3.068	22.180	7,23	99%
Frozen	19	225	12,13	1%
Total	**3.086**	**22.405**	**7,26**	**100%**

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

Exports of seabass have decreased by 335% in volume and 297% in value since 2012 (+255% in real terms). The price has fluctuated between 4,92 EUR/kg and 7,95 EUR/kg over the period (with the lowest point in 2019 and highest in 2012). It was 7,26 EUR/kg in 2022.

Table 37: Evolution of italian exports of fresh and frozen seabass between 2012 and 2022

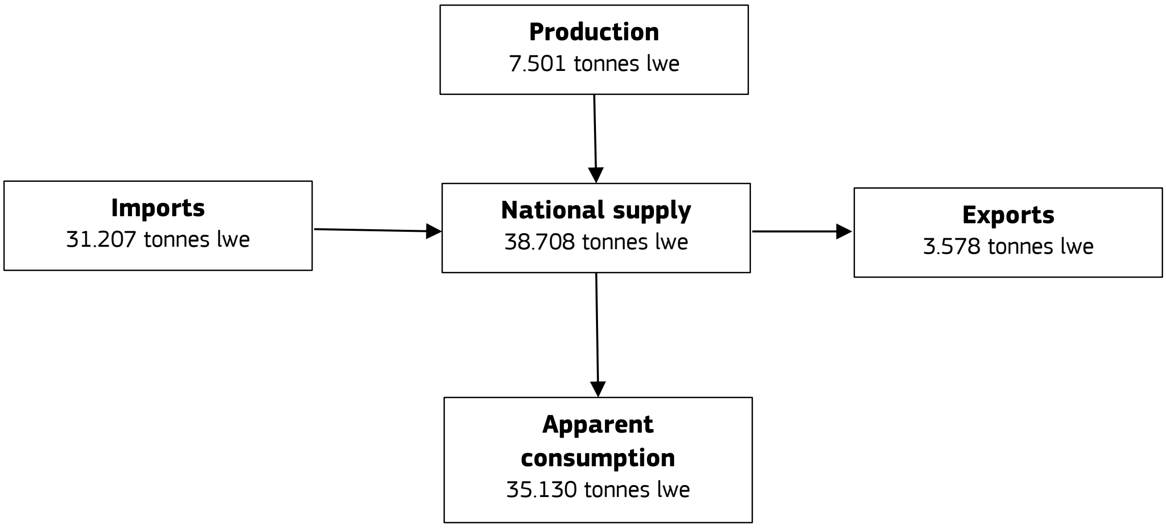
	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	Evol 2022 / 2012
Volume (tonnes)	709	1.534	1.720	2.248	2.533	2.886	2.912	3.923	4.241	3.578	3.086	+335%
Nominal value (million EUR)	5,6	9,8	11,6	14,8	16,1	17,9	16,8	19,3	21,4	21,1	22,4	+297%
Price (EUR/kg	7,95	6,42	6,77	6,57	6,37	6,20	5,77	4,92	5,05	5,90	7,26	-9%

Source: EUMOFA elaboration of EUROSTAT-COMEXT data

5.1.3 Apparent consumption

In 2021, the total supply of European seabass in Italy amounted to 38.708 tonnes in live weight equivalent (lwe), 19% from national production (aquaculture + fisheries) and 81% from imports. Only 9% of this supply were exported and 91% (35.130 tonnes lwe) were for the national market ("apparent" consumption).

Figure 14: Supply balance for Eureopean seabass in Italy (2021, tonnes of live weight equivalent)



Source: EUMOFA elaboration based on EUROSTAT data

5.2 Characteristics of the Italian market and consumption

5.2.1 Characteristics of the market

The market segmentation on the Italian market for seabass is based on:

- **The country of origin of the product:** the price being higher for fish from Italy compared to imported products (these differences may reach several EUR/kg). The reasons for these higher prices are:
  - a higher freshness of Italian products compared to Greek and Turkish seabass, due to the delay of transport;
  - a better knowledge from Italian wholesalers and retailers of the production methods implemented by Italian farmers, with the use of several certification schemes to highlight the national origin (see below);
  - a possible preference for national origin from consumers.

  Among imported seabass, prices are higher for Greek and Croatian fish compared to fish from Türkiye.

- **The size of the fish**, with higher prices for largest seabass, the weight of each seabass ranges from 300 gr to 1,5 kg.
- **The method of production (farmed versus wild caught)**, the price being higher for wild caught products even if volume of wild caught seabass is limited on the Italian market.
- **The type of presentation (whole or fillet)**, the product is often retailed whole (gutted or not) but may also be retailed filleted (no data is available on the share of whole compared to fillet). When the fish is sold whole and not gutted, the gutting may be conducted by the fishmongers (if asked by the client) or by the consumer himself. Both types of presentation (whole or fillet)

may come from national origin and imports. Fillets are generally from fish between 400 gr and 600 gr and weight about 110 gr each. Qualitative feedback from stakeholders indicated that imports of fillet from Türkiye were a growing trend (trade statistics do not allow to identify fillet and whole fish).

No detailed data are available on the sales channels. The household consumption for fresh products is reported as 19.392 tonnes in 2021 (source: Europanel, in tonnes of products[39]), which makes about 55% of the apparent consumption calculated in live weight equivalent.

L'Associazione Piscicoltori Italiani (API) estimates that the breakdown on sales for Italian seabass is:

- 50% in large-scale retail (the share of imported products is assessed to be higher in large-scale retail);
- 30% in restaurants;
- 20% in specialised shops (fishmongers).

Each sale channel asks for specific size of fish (based on interviews with stakeholders):

- large-scale retailers ask for smallest sizes: 200–300 gr or 400–600 gr,
- specialised fishmongers ask for 600-800 gr or fish over 1.000 gr,
- restaurants ask for fish from 600 gr up to 2.000 gr.

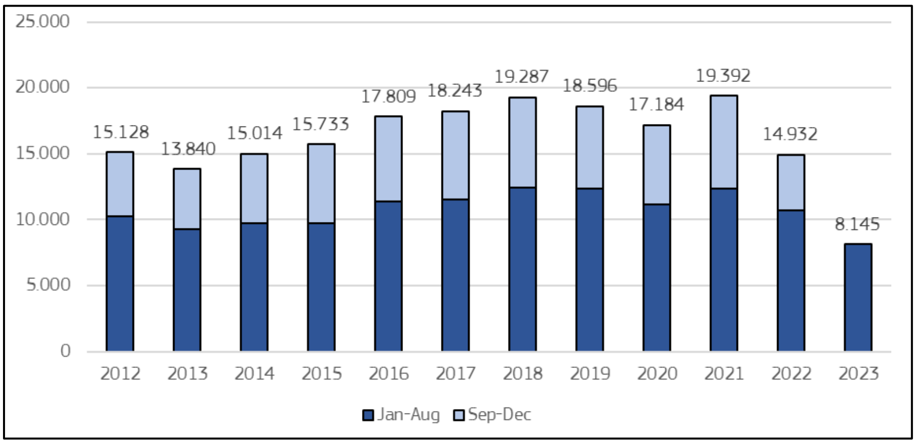
Several certification schemes are used on the market, in particular for Italian seabass, for quality insurance and to highlight Italian origin. Main schemes used are: Global G.A.P., Friend of Sea, ASC, private labels by large-scale retailers and the national scheme "*Sistema di qualità nazionale acquacoltura sostenibile*" ("national scheme for sustainable aquaculture") initiated in 2020[40].

5.2.2 Consumption

Seabass is consumed all year long. The only seasonality is related to the summer period with higher consumption in restaurant due to tourism in Italy (based on qualitative interviews with wholesalers).

Based on Europanel data (available in EUMOFA), the household consumption of fresh seabass has ranged from 17.000 to 19.400 tonnes between 2016 and 2021, it dropped to 14.932 tonnes in 2022 (-23% compared to 2021). For 2023, data are available up to August while this report is drafted, the consumption on the first eight months has decreased compared to previous years: 8.145 tonnes in 2023 (January to August) compared to 10.687 tonnes in 2022 (January to August).

Figure 15: Household consumption for fresh seabass in Italy (tonnes)



Source: based on EUROPANEL (in EUMOFA)

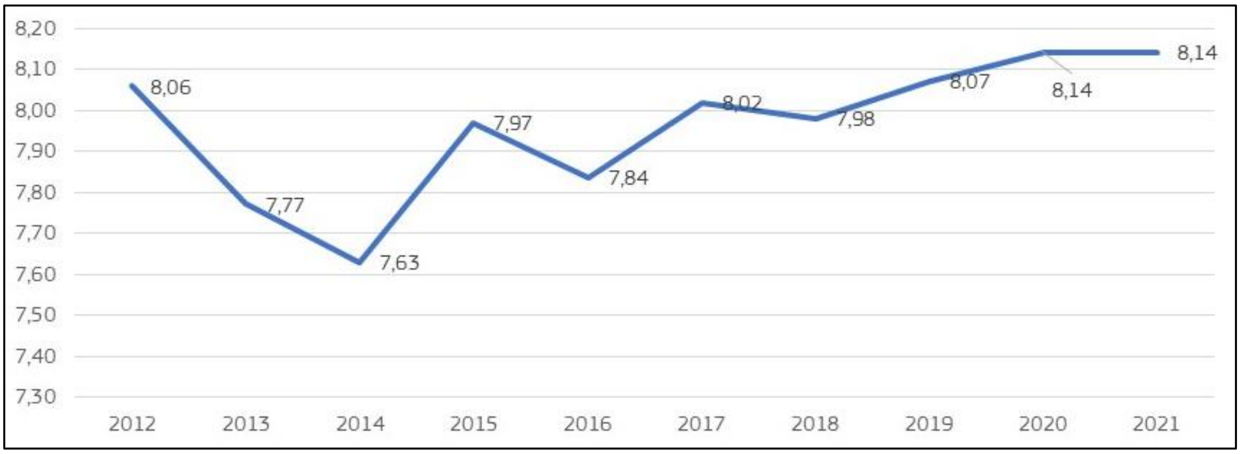
[39] The household consumption reported here is in tonnes of products, the consumption in live weight equivalent would be higher as a share of this consumption is for filleted products.
[40] https://www.politicheagricole.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/15812

5.3 Price transmission in the supply chain

5.3.1 First-sale prices

Nominal price for seabass at ex-farm level has been on an upward trend between 2014 and 2021 (+6,7%) and reached 8,14 EUR/kg in 2021 (source: EUROSTAT). In real terms, the evolution is negative (-0,5%).

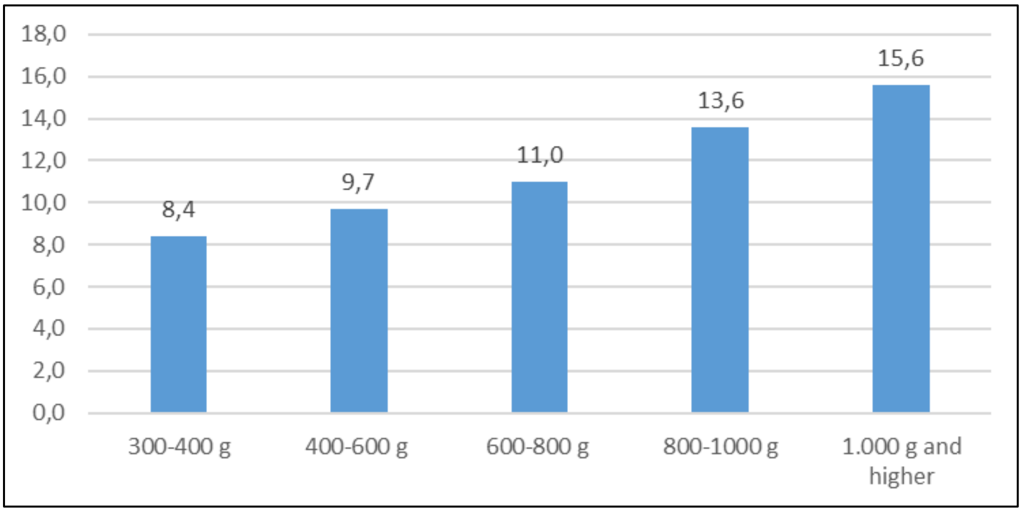
Figure 16: Ex-farm price for seabass farmed in Italy from 2012 to 2021 (EUR/kg)



Source: EUROSTAT

There are high price differences based on the size of the fish, from 8,40 EUR/kg for smallest fish (300-400 g) up to 15,60 EUR/kg for fish over 1 kg (based on ISMEA Mercati, data for April 2023).

Figure 17: Ex-fam price for seabass in Italy for the different sizes of fish (April 2023)

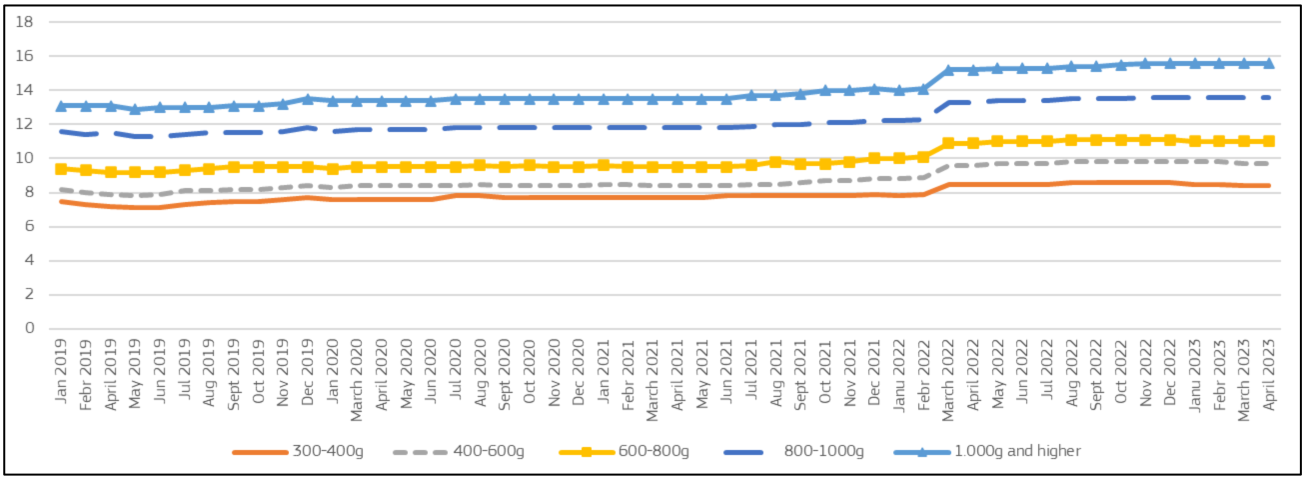


Source: based on ISMEA Mercati[41]

[41] https://www.ismea.it/flex/cm/pages/ServeBLOB.php/L/IT/IDPagina/1488

Over the last years (January 2019 up to April 2023: pre-covid period compared to latest available period), the prices for each size of fish as increased by 0,12 to 0,19 EUR/kg. The inter-month variability is quite limited, the largest evolution is spotted in March 2022 (+0,60 EUR/kg up to +1,10 EUR/kg depending of the fish size). We also observe a small decrease in price (-0,10 EUR/kg) for the two smallest categories in early 2023.

Figure 18: Evolution of ex-farm price for seabass in Italy, for the different sizes (2019 to 2023)



Source: based on ISMEA Mercati

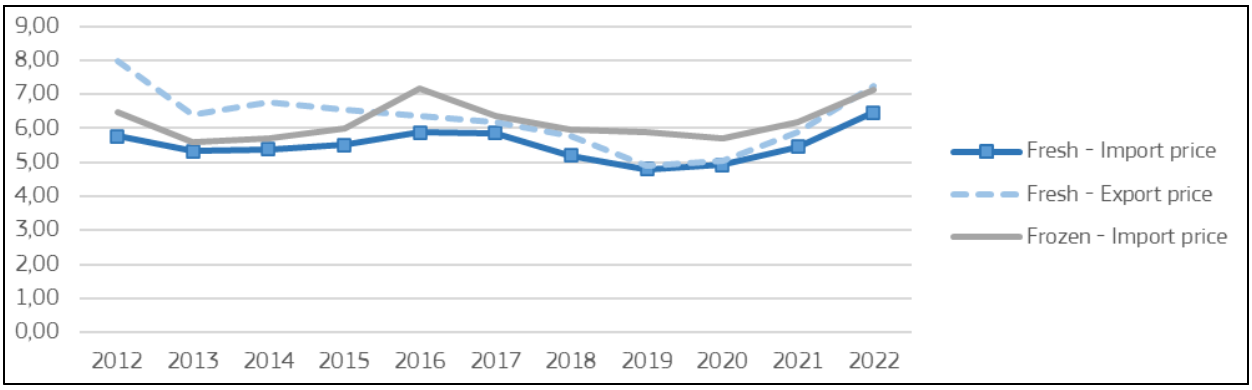
5.3.2 Import and export prices

The main trade flow for seabass to or from Italy is the import of fresh seabass (25.000 to 30.000 tonnes each year). The price was 6,47 EUR/kg in 2022 (+0,70 EUR/kg compared to 2012, +12% in nominal terms and -1% in real terms), this price is on an upward trend since a low point in 2019 (4,79 EUR/kg).

For fresh seabass, the export price is higher than the import price: +0,12 EUR/kg in 2019 up to 2,21 EUR/kg in 2012. The export price of fresh seabass was 7,23 EUR/kg in 2022, this is its highest point since 2013.

The price of imported frozen seabass tends to be higher than the price of fresh seabass (imported and exported), it reached 7,12 EUR/kg in 2022. However, the volume remains limited with a few hundred tonnes each year. Export flow of frozen seabass is very limited (less than 20 tonnes each year) and the data is not detailed here.

Figure 19: Import and export prices for seabass in Italy (fresh and frozen)

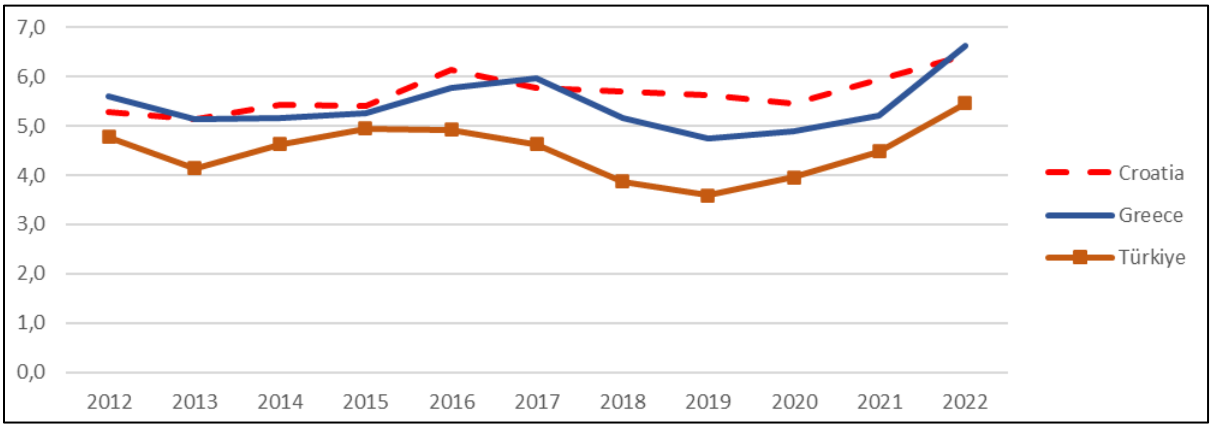


Source: based on EUROSTAT

The main origins for imported fresh seabass are Greece, Croatia and Türkiye. Prices for Greek and Croatian seabass are comparable between 2012 and 2022, except from 2018 to 2021 with lower prices for Greek seabass. Import price for Turkish seabass is lower than Croatian and Greek ones, from 0,7 EUR/kg to 2,0 EUR/kg less since 2016 (difference was a bit lower before 2016, between 0,3 and 1 EUR/kg).

Prices are on an upward trend since 2020, and reached 6,62 EUR/kg (Greece), 6,43 EUR/kg (Croatia) and 5,46 EUR/kg (Türkiye) , in 2022. This increase was still ongoing in 2023 for Greek and Croatian seabass (data available until August 2023 while this report is drafted), with prices at 7,60 EUR/kg from Croatia, 7,10 EUR/kg from Greece and 5,35 EUR/kg from Türkiye.

Figure 20: Import price for imported fresh seabass to Italy from Greece, Croatia and Türkiye



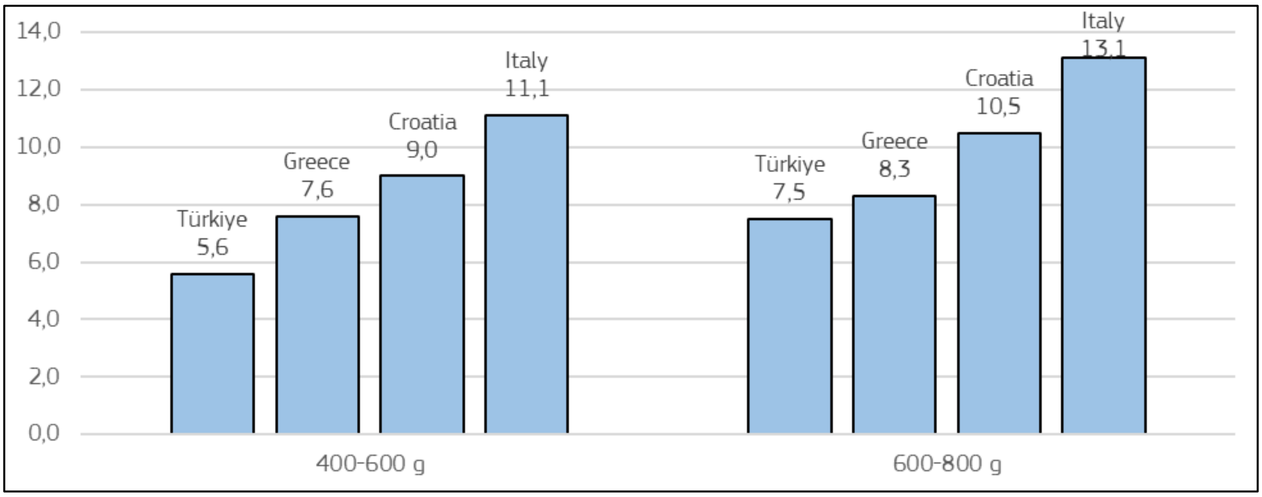
Source: based on Eurostat

5.3.3 Wholesale prices

Based on wholesale prices in the different Italian wholesale markets (example with data from Milano market in November 2023 below), we observe that:

- the price is higher for the largest sizes: from 6,70 EUR/kg for a Greek seabass with size 300-400 gr up to 12,50 EUR/kg for a Greek seabass of 1.000-1.500 gr.
- A strong difference based on origin (for the same size), usually based on the following order (from lowest prices to higher prices): Türkiye, Greece, Croatia and Italy. In November 2023 in Milano, there are 5,50 EUR/kg differences between a Turkish seabass and an Italian one (size 400-600 gr).

Figure 21: Comparison of the wholesale prices of seabass in Milano for two sizes of fish (400-600 gr and 600-800gr) with details by origin (EUR/kg)



Source: based on data from Mercato Agroalimentaro Milano - https://www.sogemispa.it/come-fare-per/visualizzare-e-acquistare-bollettino-prezzi

The following table compares the prices for the different categories of seabass in Milano (November 2023). The lowest prices observed are for the smallest size of seabass from Türkiye (300-400 gr, 4,90 EUR/kg) while the highest prices observed are for the largest Italian seabass (1.000–1.500 gr, 15,70 EUR/kg). There was a factor of one to three between these two seabass categories, for the same week, on the same wholesale market.

Most of the seabass sold in wholesale markets is from aquaculture. Occasionally, there are some data on seabass from wild caught fisheries, with prices significantly higher than prices for farmed products. For instance, in Milano wholesale market, between January and July 2023, wild caught seabass was between 10,00 and 35,00 EUR/kg.

Table 38: Wholesale price of farmed seabass in Milano wholesale market on the week of the 7th November 2023 – Details by size and origin

Origin	Size	Price EUR/kg
Türkiye	300-400	4,90
Greece		6,70
Türkiye	400-600	5,60
Greece		7,60
Croatia		9,00
Italy		11,10
Türkiye	600-800	7,50
Greece		8,30
Croatia		10,50
Italy		13,10
Croatia	800-1000	12,40
Greece		11,70
Italy		14,60
Greece	1.000 – 1.500	12,50
Croatia		14,50
Italy		15,70

Source: based on data from Mercato Agroalimentaro Milano - https://www.sogemispa.it/come-fare-per/visualizzare-e-acquistare-bollettino-prezzi

Some differences may also be observed among the place of market. For instance, in November 2023, Italian seabass (400-600g) was sold between 8,50 and 10,00 EUR/kg in Venezia compared to 13,30-14,00 EUR/kg in Roma. The range of prices for Greek seabass was smaller (from 6,30 to 9,00 EUR/kg in Milano and Venezia).

Table 39: Comparison of prices among place of sale (EUR/kg) – November 2023

Seabass category	Place of sale	Min	Max
Greece – 400-600 g	Milano	6,30	9,00
	Roma	7,00	7,50
Italia – 400 – 600 g	Venezia	8,50	10,00
	Milano	11,10	11,10
	Roma	13,30	14,00

Source: based on BMTI (bulletin 10th November 2023) [42] and Mercato Agroalimentaro Milano for seabass 400-600 gr in Milano (week 7th November 2023)

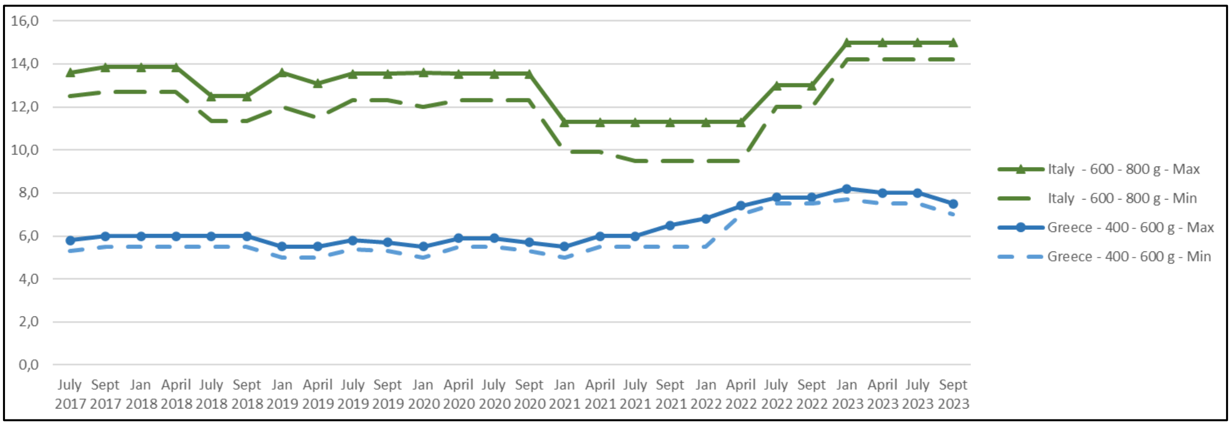
[42] https://ittico.bmti.it/Prezzi/pages/Documenti?tipo=settimanale

On the long term, we observe an price increase for both Italian and Greek seabass at wholesale stage (based on Roma wholesale market, 400-600 gr for Greek seabass and 600-800 gr for Italian seabass).

Prices for Italian seabass ranged between 12,50 and 13,60 EUR/kg in July 2018 compared to 14,20-15,00 EUR/kg in September 2023. There has been a period of lower prices from January 2021 up to April 2022 (between 9,50 and 11,30 EUR/kg). The average difference of price between minimum and maximum prices is 1,30 EUR/kg.

The price for Greek seabass is lower than Italian (due to its origin and the size of fish monitored). We observe a general growth since July 2017 (prices between 5,30 and 5,80 EUR/kg), in particular since July 2021, to reach a maximum in January 2023 (7,70 EUR/kg to 8,20 EUR/kg). A small decrease is observed since July 2023 (7,00 to 7,50 EUR/kg). The difference between minimum and maximum is smaller for Greek seabass than for Italian one, the average difference being 0,50 EUR/kg.

Figure 22: Evolution of minimum and maximum prices for Greek (400-600 g) and Italian (600-800 g) seabass in Roma wholesale market, between July 2017 and September 2023



Source: based on weekly prices from BMTI[43], four price references taken each year: last week of January, April, July and September

5.3.4 Retail prices

Several sources are available on retail prices:

- Europanel data (displayed in EUMOFA) for household consumption of fresh products,
- monitoring of retail prices in EUMOFA (weekly basis),
- survey on a selection of online shops,
- phone survey with specialised fishmongers.

Seabass price highly differ based on the production method (wild caught or farmed), size, country of origin and presentation (whole or fillet). The first two sources mentioned above don't provide details on these elements while this information could be collected with the two last methods (specific surveys implemented for this report).

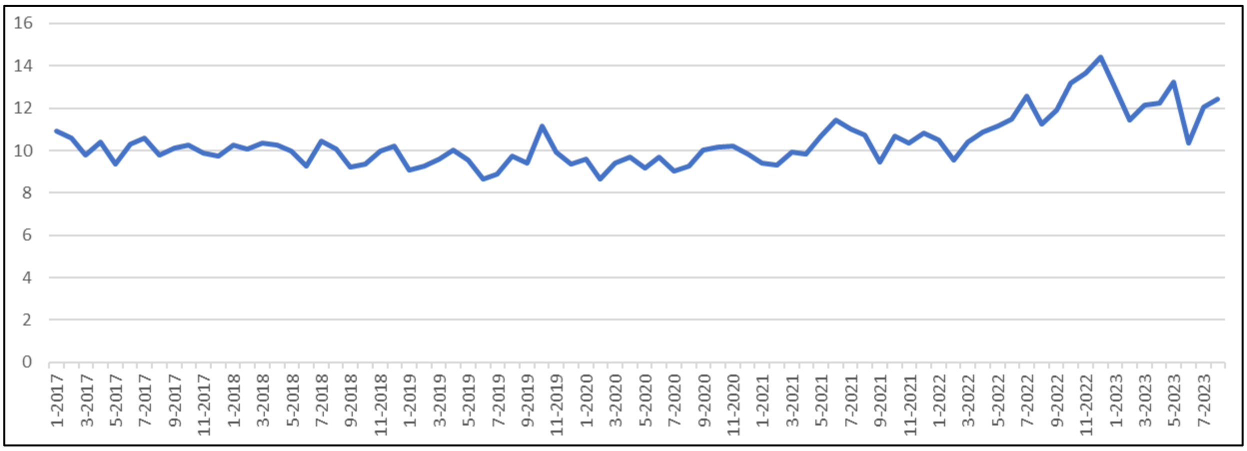
[43] https://ittico.bmti.it/Prezzi/pages/showIndex

Household consumption for fresh products (EUROPANEL data available in EUMOFA)

The average retail price for fresh seabass (household consumption) was 12,03 EUR/kg in 2023 (data available up to August 2023, source: EUROPANEL). We observe two periods:

- the retail price has been relatively stable between 2017 and early 2022, with average yearly prices ranging from 9,55 EUR/kg up to 10,25 EUR/kg (minimum and maximum monthly prices are 8,67 EUR/kg and 11,44 EUR/kg over this period),
- a price increase is observed since May 2022 (related to the general inflation period) and a maximum has been reached in December 2022 at 14,42 EUR/kg. Prices have remained relatively high in 2023 (average price at 12,03 EUR/kg in from January to September 2023).

Figure 23: Fresh seabass price in Italy – Household consumption (EUR/kg)

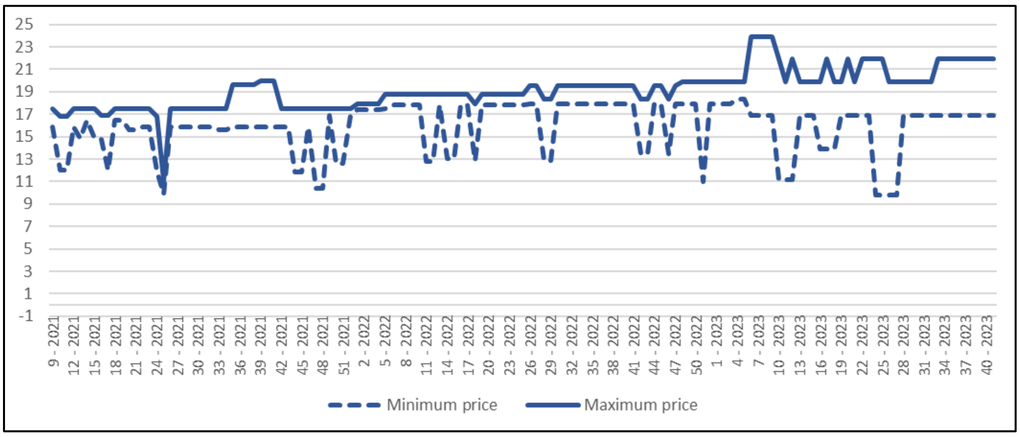


Source: EUROPANEL data in EUMOFA

Large-scale retail prices (from automatic monitoring on online stores)

Based on the monitoring of retail prices in EUMOFA[44] of prices on large-scale retailers' websites), the price of fresh seabass has ranged between 9,75 EUR/kg and 23,90 EUR/kg between September 2021 and October 2023. We observe that the maximum prices tend to increase over the period, maximum price was 17,49 EUR/kg up August 2021, it was 19,90 EUR/kg in 2022 and 23,90 EUR/kg in 2023. This data shall be considered with caution as the detailed information by product (origin, certification, name of the retailer) is not available.

Figure 24: Retail price for fresh and packed seabass in Italy (2021-2023)



Source: EUMOFA - Online shop retail prices

44 https://www.eumofa.eu/fr/online-shop-retail-prices

Large-scale retail prices (from a survey on a selection of online stores)

Based on a survey of large-scale retailers' online shops (November 2023), retail prices for farmed fresh whole seabass ranges from 9,90 EUR/kg (12,50 EUR/kg, excluding possible discounts) to 22,90 EUR/kg. Only one product from wild caught seabass has been identified at a higher price of 39,90 EUR/kg.

Imported products are entry-level products (up to 13,90 EUR/kg) while prices for Italian products tend to be higher, between 16,50 and 21,90 EUR/kg, excluding any promotional offers that may lower prices. Italian products in the market are often accompanied by additional information on origin, such as *Ortobello Terre d'Italia*[45], and are sometimes sold under retailer brands. One of the Italian seabass production is organic, the price is not higher for organic seabass compared to non-organic seabass with the same size and origin.

Only three references of seabass fillets are identified, for a price from 25,90 EUR/kg to 28,70 EUR/kg, these are imported products in two cases and there is no mention of the origin for the last case.

Table 40: Retail price of fresh seabass in Italian large-scale retail (November 2023)

Whole / fillet	Origin	Size	Additional details	EUR / unit	EUR / kg
Whole	Greece or Türkiye	200/300 gr	20% discount, gutted	*5,25*	**9,90**
	Italy	600 gr	30% discount, gutted	*7,08*	**11,80**
	Origin not specified*	450 gr	/	*5,62*	**12,50**
	Greece	300/400 gr	Gutted	*3,90*	**13,90**
	Italy	500 gr	Retailer brand	*8,25*	**16,50**
	Italy	350 gr	Gutted	*7,60*	**16,89**
	Italy	400 gr	Retailer brand	*6,76*	**16,90**
	Italy	400 gr	Retailer brand	*7,56*	**18,90**
	Italy	490 gr	Retailer brand	*9,56*	**19,50**
	Italy	500 gr	Organic, gutted	*9,95*	**19,90**
	Italy	600 gr	Retailer brand	*11,94*	**19,90**
	Italy	500 gr	Origin "Orbetello Terre d'Italia"	*10,95*	**21,90**
	Italy	400/700 gr	Origin "Orbetello Terre d'Italia"	***206,10*	**22,90**
	Fished in Atlantic (imported to Italy)	1.200 gr	Wild caught	*47,88*	**39,90**
Fillet	Origin not specified	450 gr of fillet	/	*11,65*	**25,90**
	Greece or Türkiye	200 gr of fillet	/	*5,70*	**28,50**
	Greece or Türkiye	130 gr of slices	20% discount	*3,73*	**28,70**

* Assumption that it is an imported product; ** *Sale by batch of 9 kg*

Source:

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

[45] Specific location in Tuscany area: "Laguna di Orbetello"

Specialised fishmongers' prices (from a phone survey on a selection of shops)

In specialised shops (fishmongers), prices are higher than in large-scale retail. The prices observed in fishmonger shops in Roma (based on a phone survey in a selection of shops) range for Greek farmed seabass from 15,90 EUR/kg to 16,90 EUR/kg for 300-600 gr fish, and up to 21,00 EUR/kg for larger fish (700 g). For the same size (500-600 g), the price of Italian farmed seabass is 3,10 EUR/kg higher than Greek seabass at 20,00 EUR/kg. Two references of premium products have been identified: an organic Italian seabass at 30 EUR/kg and a wild caught seabass at 60 EUR/kg.

Table 41: Retail price of fresh seabass in Italian in specialised fishmongers in Roma (July 2023)

Farmed / wild caught	Origin	Weight	Additional details	EUR / kg
Farmed	Greece	300 g	/	15,90
Farmed	Greece	500 g	/	16,90
Farmed	Greece	500-600 g	/	16,90
Farmed	Italy	500-600 g	/	20,00
Farmed	Greece	700 g	/	21,00
Farmed	Italy	600-700 g	Organic	30,00
Wild caught	Not specified	1-2 kg	/	60,00

Source: EUMOFA – Survey in three shops in Roma in July 2023

5.3.5 Price transmission

Two price transmissions are analysed for Italy:

- Greek farmed seabass (300/400 gr), imported to Italy and sold in large-scale retail (12,00 EUR/kg final price), Greece being the first exporter of seabass in Italy.
- Italian farmed seabass (400/600 gr), sold in large-scale retail (19,00 EUR/kg final price).

As detailed before, the difference of price between the two products is related to 1) the origin (the price of Italian seabass is higher than Greek one) and 2) the size (the price is higher for larger seabass).

Greek seabass 300/400 gr sold in large-scale retail in Italy

Greek farmed seabass imported into Italy is retailed between 9,90 EUR/kg and 13,90 EUR/kg (based on online shop survey), we consider 12,00 EUR/kg in the present analysis.

This import price is calculated from the ex-wholesaler price (source: Milano wholesale market) and the gross margin of wholesaler (source: interview with wholesalers). The import price is estimated around 6,00 EUR/kg for a small size seabass (50% of the final price), while statistics report a price at 6,62 EUR/kg in 2022 and 7,10 EUR/kg for the first months of 2023 for all sizes of seabass. These differences are coherent as the price level between different size categories is significant (for instance, price of seabass over 1 kg is 5,80 EUR/kg higher than price for 300/400 gr seabass from Greece, in Milano in November 2023).

Wholesaler costs and margin remain limited (11% of the ex-wholesaler price), distribution costs and margin account for a significant share of the final price (35%).

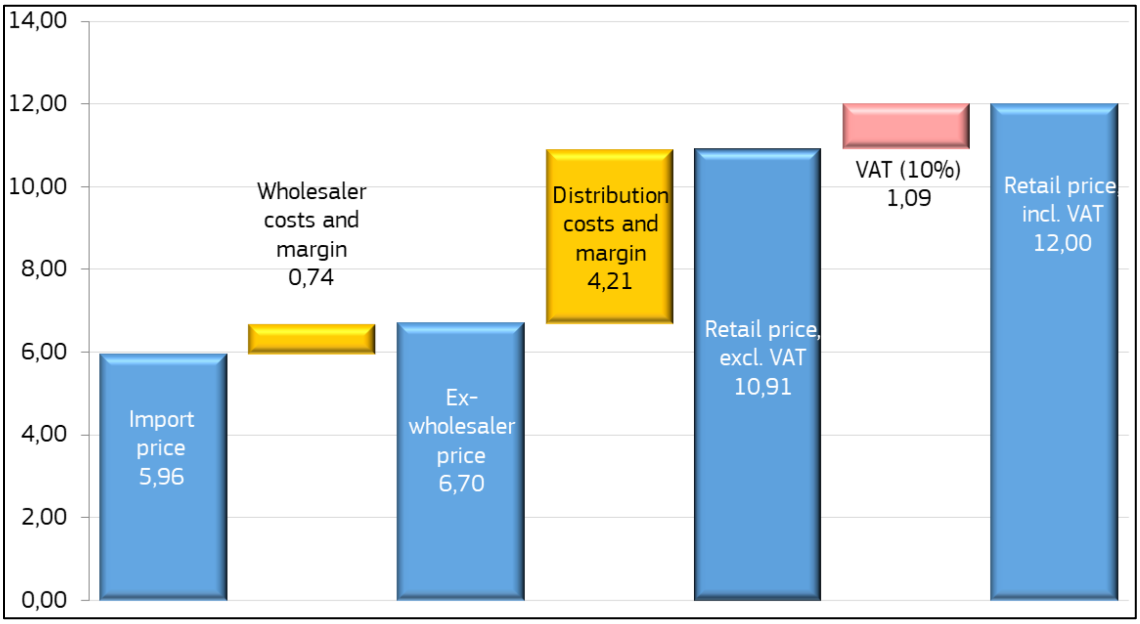
The analysis is based on data from wholesale markets, data monitored on large-scale retailers' website and qualitative interviews with stakeholders.

Table 42: Price transmission for fresh farmed seabass 300/400 gr from Greece, sold in large-scale retail in Italy (2023)

	Price (EUR/kg)	% of the final price	Sources
Import price	**5,96**	**50%**	Calculation
Wholesaler costs and margin	0,74	6%	Estimate based on interviews with wholesalers
Ex-wholesaler price	**6,70**	**56%**	Ex-wholesaler price for 300-400 gr seabass in Milano in November 2023 (source: wholesale market Milano)
Distribution costs and margin	4,21	35%	Calculation
Retail price, excl. VAT	**10,91**	**91%**	Calculation
VAT (10%)	1,09	9%	Calculation
Retail price, incl. VAT	**12,00**	**100%**	Survey on online shops for Italian seabass 300/400 gr

Source: EUMOFA survey

Figure 25: Price transmission for fresh farmed seabass 300/400 gr from Greece, sold in large-scale retail in Italy (2023)



Source: EUMOFA survey

Italian seabass 400-600 gr sold in large-scale retail in Italy

Italian seabass is retailed between 16,50 EUR/kg and 22,90 EUR/kg (based on online shop survey). These are premium farmed seabass in Italy (compared to imported seabass). Wild caught seabass even reach higher prices, but volumes are limited. In the present case, we consider that product is sold via a wholesaler. However, farmers may also sell directly to large-scale retailers.

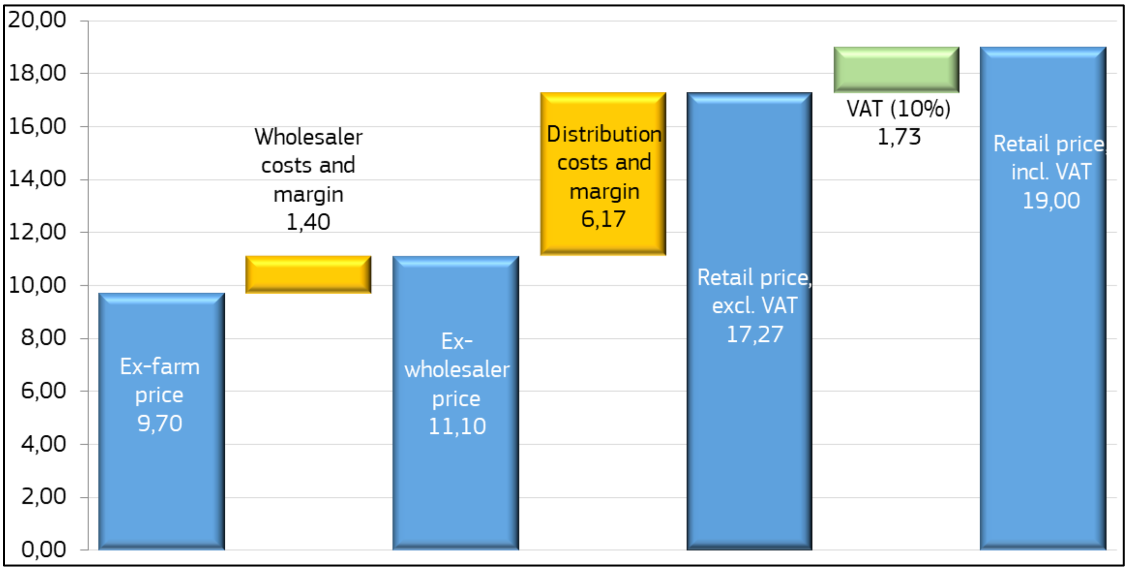
In the example below, the final price is 19,00 EUR/kg. The ex-farm price account for half of the final price (51%). Distribution costs and margin account for 32% of the final price and wholesaler costs for 7%.

Table 43: Price transmission for fresh farmed seabass 400-600 gr from Italy, sold in large-scale retail in Italy (2023)

	Price (EUR/kg)	% of the final price	Sources
Ex-farm price	**9,70**	**51%**	Ex-farm price for seabass in April 2023 - size 400-600 gr (ISMEA Mercati)
Wholesaler costs and margin	1,40	7%	Calculation and estimate based on qualitative interviews with wholesalers
Ex-wholesaler price	**11,10**	**58%**	Ex-wholesaler price for 400-600 gr seabass in November 2023 (source: wholesale market Milano)
Distribution costs and margin	6,17	32%	Calculation
Retail price, excl. VAT	**17,27**	**91%**	Calculation
VAT (10%)	1,73	9%	Calculation
Retail price, incl. VAT	**19,00**	**100%**	Survey on online shops for Italian seabass 400-600 gr (between 16,50 EUR/kg to 22,90 EUR/kg)

Source: EUMOFA survey

Figure 26: Price transmission for fresh farmed seabass 400-600 gr from Italy, sold in large-scale retail in Italy (2023)



Source: EUMOFA survey.

6 CONCLUSION: COMPARISON OF THE PRICE TRANSMISSION FOR SEABASS IN GREECE, SPAIN AND ITALY

The present report proposes five price transmission analyses in three MS (Greece, Spain and Italy). Among the five analyses conducted, all analyses cover farmed seabass, fresh and whole. As follows:

- 400-600 gr fresh seabass sold in large-scale retail in Greece (origin of the fish: Greece), in 2023,
- 400-600 gr fresh seabass sold in large-scale retail in Spain (origin of the fish: Spain), in 2022,
- 300-400 gr fresh seabass sold in large-scale retail in Italy (origin of the fish: Greece), in 2023,
- 400-600 gr fresh seabass sold in large-scale retail in Italy (origin of the fish: Italy), in 2023,
- 400-600 gr fresh seabass sold in fishmonger shop in Spain (origin of the fish: Spain), in 2022.

The present section proposes a summary of the price transmission analysis, more details are provided in each specific section covering each MS. In particular, details are provided on the range of prices observed at each level of the value chain, as high price variation may be observed based on the fish size, the geographical origin, the presentation type (whole or fillet) and the production method (farmed or wild caught).

A table summarises the main data on the following page.

Ex-farm / import prices

Among the five products monitored, the ex-farm price/import price ranges between 5,00 EUR/kg and 6,00 EUR/kg for almost all cases. There is one exception for seabass farmed in Italy with a higher ex-farm price at 9,70 EUR/kg.

Distribution costs and margin

Distribution costs and margin range between 4,09 and 7,57 EUR/kg in Greece and Italy (distribution costs and margin tend to be higher for more expensive products). Distribution costs and margin are lower in Spain, from 1,40 to 2,00 EUR/kg.

Retail price

Seabass is a relatively affordable product in Spain, it is the market with the lowest prices among the three MS monitored (7,48 to 8,25 EUR/kg). Spanish market is equally supplied by national production and imports. Accordingly, the Spanish market is highly impacted by the prices at international level (from Greece or Türkiye) and there is no premium for Spanish product compared to imported products. In the present analysis, final price is lower in fishmonger shops than in large-scale retail, this is not a general rule, and it may depend on the year and the location of the shops. The procurement strategies are different for large-scale retailers and fishmongers. Large-scale retailers may implement multi-year contracts with fish farmers (allowing more stable prices) while fishmongers supply *via* wholesalers with higher evolution of prices (depending on the international prices).

In Greece, the market for seabass is small and the production is oriented toward export. Final price for Greek seabass retailed in Greece is 10,99 EUR/kg in the present analysis and is comparable to Greek seabass retailed in Italy (12,00 EUR/kg).

In Italy, the price of Italian seabass is higher than the price of imported seabass, reaching 19,00 EUR/kg. Unlike other markets, there is a clear market segmentation in Italy based on the origin of the product, the Italian product (accounting only for 19% of the national supply, which is a lower share than in Spain) is sold at a significantly higher price than imported product.

Wild seabass accounts for a limited share of the market, it is a premium product sold at higher prices than farmed products (prices monitored in Italy at 40,00 EUR/kg in large-scale retail and even 60,00 EUR/kg for large fish in a fishmonger shop).

General overview

The following table provides an overview of the price transmission for each case analysed in Greece, Spain and Italy.

Table 44: Synthesis of the price structure analysis in Greece, Spain and Italy (2022-2023)

Market	Greece (2023)	Spain (2022)		Italy (2023)	
Origin	Greece	Spain	Spain	Greece	Italy
Size	400-600 gr	400-600 gr	400-600 gr	300-400 gr	400-600 gr
Sales channel:	Large-scale retail	Large-scale retail	Fishmonger	Large-scale retail	Large-scale retail
Seabass price: ex-farm or import price	5,64	5,50	5,40	5,96	9,70
Distribution costs and margin	4,09	2,00	1,40	4,95	7,57
Retail price excl. VAT	9,73	7,50	6,80	10,91	17,27
Retail price incl. VAT	10,99	8,25	7,48	12,00	19,00

Source: EUMOFA

7 STAKEHOLDERS INTERVIEWED

- Greece
  - Two fish farming companies
  - Hellenic Aquaculture Producers Organisation
- Spain
  - Asociación de Empresarios Mayoristas de Pescados de Madrid (AEMPM)
  - Fedepesca
  - Two Fish Farmers
- Italy
  - Associazione Piscicoltori Italiani
  - Fish farmers
  - Wholesalers
  - Fishmongers

KL-04-23-868-EN-N

EUMOFA

European Market Observatory for
Fisheries and Aquaculture Products

www.eumofa.eu

Publications Office
of the European Union

ISBN 978-92-68-07577-7

doi: 10.2771/88095