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IMPACT OF THE COVID-19 PANDEMIC, BREXIT AND THE RUSSIAN WAR OF AGGRESSION AGAINST UKRAINE ON THE EU FISHERY AND AQUACULTURE SECTOR



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DEFINITIONS

BAR	The Brexit Adjustment Reserve
CRII	The Coronavirus Response Investment Initiative
EEA	European Economic Area
EEZ	Exclusive economic zone
EMFAF	The European Maritime, Fisheries and Aquaculture Fund
EMFF	The European Maritime and Fisheries Fund
EU	The European Union
EU-27	The European Union's 27 Member States
EUMOFA	The European Market Observatory for Fisheries and Aquaculture Products
FAO	The Food and Agriculture Organization of the United Nations
FEAP	The Federation of European Aquaculture Producers
HAPO	Hellenic Aquaculture Producers Organisation
HORECA	Hotels, restaurants, and catering/cafés – the foodservice sector
ICES	The International Council for Exploration of the Sea
RAS	Recirculating aquaculture systems
SME	Small and medium-sized enterprises
SPS	Sanitary and phytosanitary
TAC	Total allowable catch
TCA	The EU-UK Trade and Cooperation Agreement

SUMMARY

Between 2019 and 2024, the fishery and aquaculture sector of the European Union (EU) was subject to by three coincident external shocks: the COVID-19 pandemic, Brexit, and Russia's war of aggression against Ukraine. Together, these events disrupted supply chains, reshaped trade flows, increased production costs, and altered consumer behaviour across the EU aquatic food market. Despite these pressures, the sector demonstrated significant adaptability, though underlying vulnerabilities remain.

COVID-19 caused an abrupt collapse of foodservice demand and major logistical and labour disruptions, leading to sharp declines in sales of fresh, live, and high-value fishery and aquaculture products. Retail consumption, however, rose as households shifted toward frozen, canned, and ready-to-cook products. Brexit then introduced new non-tariff barriers – customs procedures, sanitary and phytosanitary controls, and border delays – that raised costs and complicated the movement of fresh products between the EU and the United Kingdom. This forced many operators to adjust trade routes, diversify sourcing, and rely more heavily on frozen formats. The Russian war of aggression against Ukraine amplified pressures by driving up energy, fuel, feed, and fertiliser prices, significantly increasing operating costs for both fisheries and aquaculture. These cost shocks translated into higher consumer prices across nearly all seafood categories, contributing to a contraction in volume demand after 2021 as households became more price sensitive.

Across aquatic food commodities, the EU's high import dependency – around 65% – remained a defining feature of its market exposure. Inflation and supply chain uncertainty accelerated a shift from fresh to frozen formats and expanded the role of retail and online channels. Species were affected differently: salmon demand remained strong but increasingly price-constrained; Mediterranean aquaculture species such as seabass and seabream experienced sharp downturns in consumption in 2022-2024; cod faced persistent supply shortages and high import prices; and live shellfish endured the deepest initial pandemic impacts due to reliance on foodservice. Processing hubs – especially Poland, the Netherlands, Germany, and Spain – absorbed raw material shocks but were heavily affected by rising energy and logistics costs.

Case studies from Spain, Ireland, Greece, and Germany illustrate the varied national impacts, from Brexit-related trade losses to input-cost inflation and logistical bottlenecks. Policy responses at EU and national levels provided crucial short-term relief, including flexibility measures provided under the European Maritime Fisheries Fund (EMFF), the European Maritime, Fisheries and Aquaculture Fund (EMFAF), the Brexit Adjustment Reserve (BAR), and crisis support mechanisms linked to the Russian war of aggression. Beyond these immediate responses, longer-term policy orientations are being implemented through multiannual national programmes under the EMFAF.

Overall, the sector emerged more digitalised, more diversified in its sourcing and sales channels, and more aware of structural risks because of successive crises. At the same time, the past five years exposed the central role of energy in shaping competitiveness and resilience. The EU aquatic food system remains highly sensitive to fuel prices, electricity costs, and energy-intensive logistics, underscoring the structural vulnerability created by fossil fuel dependency. Strengthening resilience will therefore require not only further supply chain diversification and sustainable production, but also a more decisive energy transition across fleets, aquaculture operations, processing facilities, and cold-chain infrastructure. Improvements in fuel efficiency, electrification, renewable integration, and low-carbon logistics will be essential to reduce exposure to future price shocks while aligning with broader climate objectives. Targeted policy support under the EMFAF and related instruments can play a key role in accelerating this transformation and securing the sector's long-term stability.

1 INTRODUCTION

1.1 Study objectives and scope

This study examines how three major external shocks – the COVID-19 pandemic, Brexit, and Russia’s war of aggression against Ukraine – have affected the EU market for fishery and aquaculture products over the period 2019-2024. The analysis captures the onset of the pandemic, the implementation of the EU-UK Trade and Cooperation Agreement, and the subsequent economic and geopolitical repercussions of the war in Ukraine.

Its main objectives are to:

- Assess the combined and individual impacts of these disruptions on trade flows, pricing dynamics, production trends, and supply chain resilience in the EU fishery and aquaculture sector.
- Identify macro-level trends, including changes in import and export patterns, consumption trends, and structural adjustments across the supply chain.
- Conduct detailed value chain analyses for selected high-value or strategically important species, highlighting vulnerabilities and adaptive strategies implemented by producers, processors, and distributors.
- Examine policy and industry responses, including emergency support measures, regulatory adjustments, and private-sector innovations.
- Provide forward-looking insights aimed at strengthening the long-term resilience, competitiveness, and sustainability of the EU fishery and aquaculture sector.

Geographically, the analysis focuses on the EU-27, with particular attention to major producing, processing, and exporting Member States. Given the EU’s high level of import dependency, the study also considers key external partners – notably the United Kingdom, Norway, and Russia – whose supply roles and policy environments significantly influence EU market conditions.

In terms of product coverage, the study applies a dual-level analytical approach:

- At commodity level, it examines aggregated trends in production, trade, prices, and consumption across fisheries and aquaculture.
- At species level, it undertakes value chain analyses for selected species with economic importance or clear exposure to the identified shocks: Atlantic salmon, seabass and seabream, cod, Alaska pollock, tuna, mussels and oysters, herring and mackerel.

This combined approach allows the study to provide both a strategic market overview and a detailed understanding of species-specific impacts.

1.2 Methodological overview

This study adopts a mixed-methods approach, combining quantitative data analysis with qualitative insights to capture both broad market dynamics and detailed, species-specific effects of COVID-19, Brexit, and the Russian war of aggression against Ukraine.

The quantitative analysis is primarily based on data from EUMOFA, which serves as the core statistical source for the study. EUMOFA datasets are used to analyse trends in trade flows, prices, processing activity, aquaculture production, landings, supply balance, consumption, and first-sale values, providing a consistent and harmonised basis for assessing market developments across the EU. EUMOFA data are supplemented with additional sources – such as Eurostat, FAO FishStat, and national statistical offices – where external comparisons are needed, or data gaps appear in EUMOFA data. Qualitative analysis is based on a review of policy documents, market and industry reports, and scientific assessments, complemented by stakeholder interviews with players from production, including producer organisations (POs) processing and distribution and.

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Value chain analysis extends from input supply through processing and distribution to final consumption, identifying key vulnerabilities, bottlenecks, and adaptive responses across different market players. Together, these methods provide a coherent and robust basis for assessing how recent shocks have reshaped the EU aquatic food market.

1.2.1 Limitations and assumptions

Several factors make it difficult to interpret results:

- **Attribution challenges:** concomitant shocks make it difficult to isolate the precise contribution of each event.
- **Data gaps:** not all Member States provide consistent species-level or intra-year data.
- **Limited stakeholder coverage:** samples size of interviews varied and do not fully represent all segments or regions.
- **Evolving context:** the impacts of Russia's war of aggression continue to unfold, and some effects may only become visible after the study period. Additionally, other external factors influencing the EU aquatic food market may have emerged during the period covered but fall outside the scope of this study.

Despite these limitations, the combined use of quantitative and qualitative evidence provides a robust and coherent basis for assessing recent market developments.

2 BACKGROUND

2.1 Overview of the EU fishery and aquaculture sector and market

The European Union (EU) is one of the world's largest and most diversified markets for fishery and aquaculture products, supported by a complex system of domestic production, international trade, processing activities, and extensive distribution networks. The sector encompasses fisheries, aquaculture (marine and inland), a large and specialised processing industry, and broad retail and foodservice channels that connect producers with consumers across all Member States.

In 2023¹, total EU production of fishery and aquaculture products reached 4,6 million tonnes, representing a slight (1%) increase from 2022, driven primarily by higher catches of blue whiting². Aquaculture production, however, decreased slightly from the previous year. Over the past decade, EU production has fluctuated between approximately 4,5 and 5,4 million tonnes, with aquaculture consistently representing around 20-22% of total production. The main aquaculture species produced in the EU include mussels, trout, oysters, gilthead seabream, and European seabass, reflecting the sector's strong Mediterranean and Atlantic specialisation.

On the fisheries side, major species landed by the EU fleet include herring, blue whiting, mackerel, hake, sardine, and tuna. Total EU landings reached 2,9 million tonnes in 2023, the lowest level of the past decade, following a long-term decline since 2018². Despite this decline in volume, landings remain a critical input for the EU processing industries and regional economies.

Given the size of the EU aquatic food market, domestic production alone is insufficient to meet demand. The EU remains structurally dependent on imports, particularly for tuna, salmon, Alaska pollock, shrimps, and cod, which together accounted for 44% of estimated apparent consumption in 2023, with an overall self-sufficiency rate of only 12% for these products². Across all commodity groups, the EU's self-sufficiency rate stood at 38% in 2023, up slightly from the decade low recorded in 2022 but still well below earlier years due to declining domestic production since 2018.

The EU maintains one of the world's most advanced aquatic food processing sectors, with strong clusters in several Member States, including Poland, the Netherlands, Germany, Spain, and France. These hubs play a key role in stabilising supply through the year by importing, processing, and re-exporting frozen, canned, and prepared fishery and aquaculture products.

The EU aquatic food system's high degree of integration with global supply chains, combined with declining domestic production and persistent import dependence, underscores the importance of resilience for both economic stability and food security. These structural characteristics shape how external disturbances propagate through the sector, affecting production, trade, processing, and consumption in different ways. Against this background, the period from 2019 to 2024 represents an unprecedented stress test for the EU fishery and aquaculture sector, marked by a succession of major external shocks whose nature and overarching impacts are outlined in the following section.

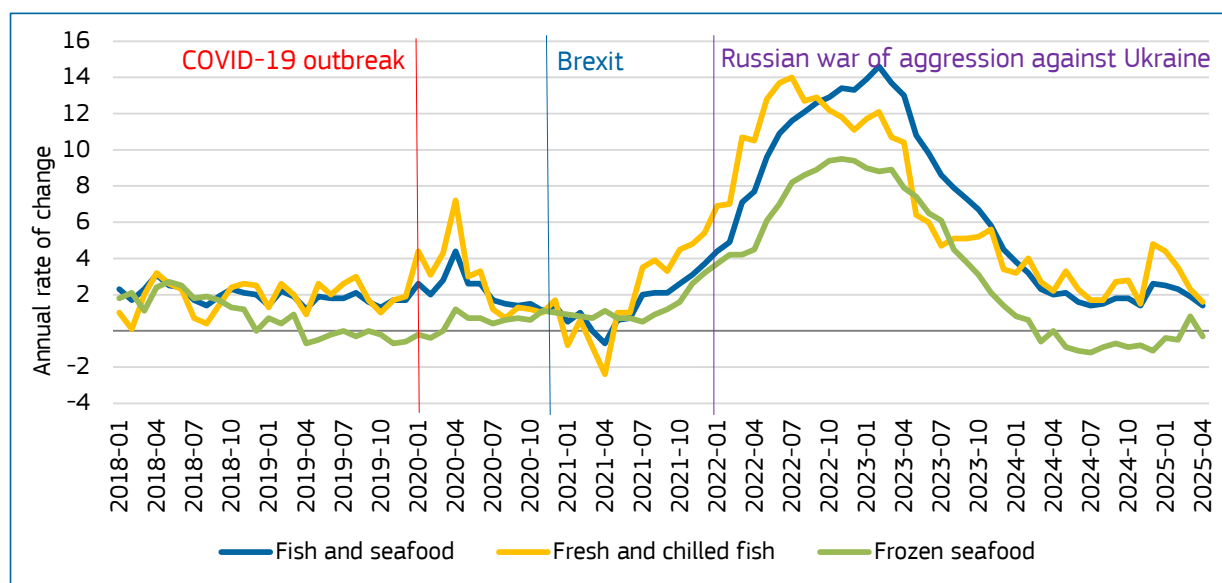
¹ 2024 production figures were not used for this overview due to incomplete data availability at the time of drafting. In particular, the most recent Eurostat dataset contains significant reporting gaps for several Member States, including aquaculture data for Denmark, Greece, Italy, Poland and Spain, and fisheries data for Ireland, Latvia and Portugal. As these gaps affect the reliability of EU aggregates, 2023 figures are used as the most recent complete reference year.

² EUMOFA (2025). *The EU fish market – 2025 edition*. [Eumofa.eu](https://eumofa.eu)

2.2 External shocks affecting the EU fishery and aquaculture sector

Between 2019 and 2024, the EU fishery and aquaculture sector was exposed to three major external shocks: the COVID-19 pandemic, the withdrawal of the United Kingdom (UK) from the EU, and Russia's war of aggression against Ukraine. Although distinct in nature, these shocks occurred in close succession and, in several respects, reinforced one another, generating sustained pressure on production systems, trade flows, cost structures, and consumer demand across the EU aquatic food value chain (Figure 1).

Figure 1: Harmonised indices of consumer prices for selected fish and seafood categories in the EU



Source: Eurostat, harmonised indices of consumer prices - EU.

The COVID-19 pandemic primarily disrupted demand channels and labour availability^{3,4}. Public health restrictions and the temporary closure of foodservice outlets sharply reduced demand for fresh, live, and high-value aquatic food products, while accelerating a shift toward retail, frozen, and shelf-stable formats⁵. Labour shortages and operational constraints affected fishing, aquaculture, processing, and logistics activities, exposing vulnerabilities in highly specialised and time-sensitive supply chains.

From 2021 onwards, Brexit introduced a second layer of disruption by altering the institutional and regulatory framework governing EU-UK aquatic food trade and fisheries management⁶. While tariff-free trade was preserved, new customs procedures, sanitary and phytosanitary (SPS) controls, and certification requirements increased administrative burdens and logistical complexity, particularly for fresh and live products^{7,4}. Changes in access to fishing opportunities and quota allocations further

³ European Parliament (2021). *Impacts of the COVID-19 pandemic on EU fisheries and aquaculture*. [Europarl.europa.eu](https://eur-parl.europa.eu)

⁴ Stakeholder interviews.

⁵ EUMOFA (2025). *The EU fish market – 2025 edition*. [Eumofa.eu](https://eumofa.eu)

⁶ European Commission (2021). *EU-UK Trade and Cooperation Agreement*. [Eur-lex.europa.eu](https://eur-lex.europa.eu)

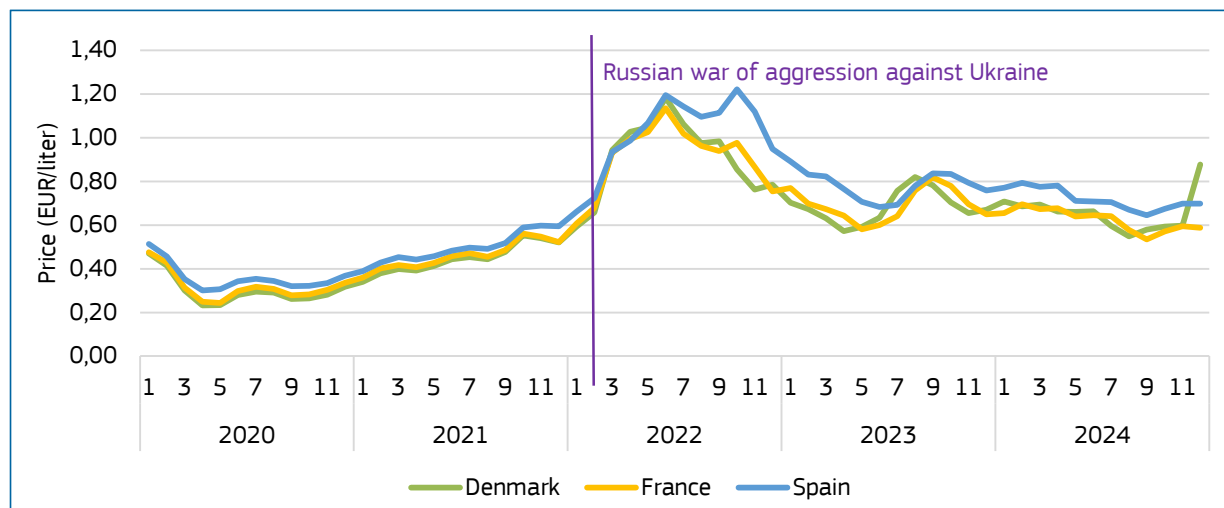
⁷ EPRS (2025). *Implementation of the EU-UK TCA*. [Europarl.europa.eu](https://europarl.europa.eu)

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affected certain fleet segments and processing activities, with impacts varying considerably across Member States and regions^{8,9}.

Russia's war of aggression of Ukraine in 2022 triggered a third shock with wide-ranging indirect effects on the EU fishery and aquaculture sector. The sharp rise in energy prices increased operating costs for fishing vessels, aquaculture installations, processing plants, cold storage, and transport^{4,5} (Figure 2). At the same time, disruptions to global commodity markets and logistics contributed to higher prices for key aquaculture feed inputs, packaging and key raw materials. These cost pressures fed into broader inflationary dynamics, weakening household purchasing power and reinforcing shifts in consumption toward lower-priced and longer shelf-life aquatic food products.

Figure 2: Price trends for marine fuel in selected EU Member States



Source: EUMOFA [key economic drivers](#) dashboard (MABUX).

Taken together, these three shocks exposed structural vulnerabilities linked to energy dependence, import reliance, and logistical complexity, while also accelerating selected adaptive responses within the sector. The following chapter examines how these pressures translated into concrete market outcomes at commodity level, including changes in trade volumes, prices, sourcing patterns, and consumption behaviour.

⁸ European Parliament (2022). *Impacts of the EU-UK TCA on fisheries and aquaculture in the EU*. [Europarl.europa.eu](#)

⁹ European Parliament (2022). *Brexit and the reduction in EU fishing quota shares, 2021 to 2023*. [Europa.eu](#)

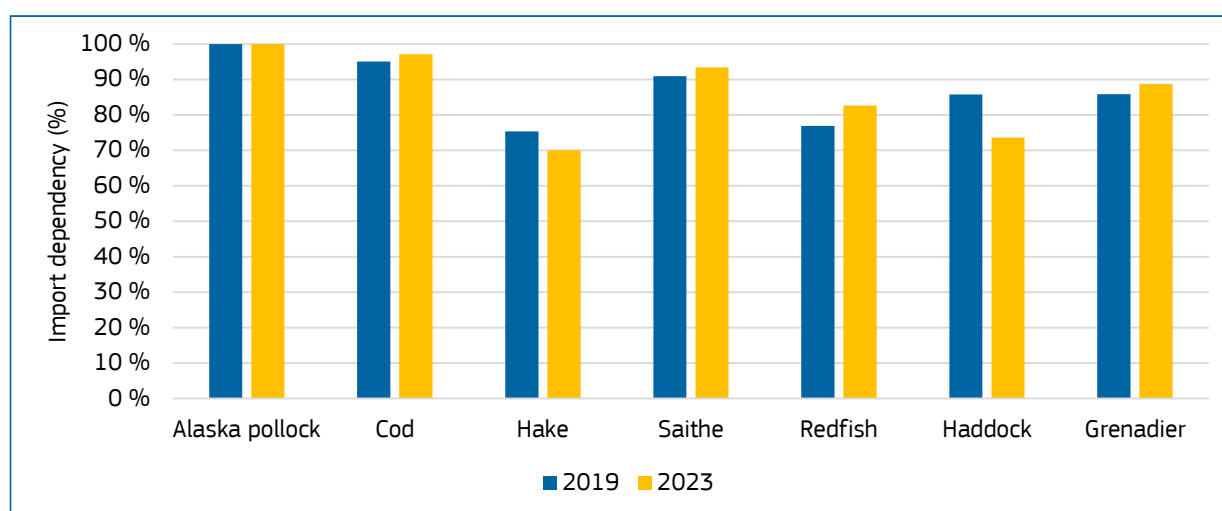
3 MARKET TRENDS AT COMMODITY LEVEL

This chapter analyses how the external shocks described in Chapter 2 translated into concrete market outcomes at commodity level over the period 2019–2024. It examines changes in trade volumes, import dependency, prices, sourcing patterns, and consumption behaviour across major fishery and aquaculture product groups. The analysis focuses on market responses rather than the underlying causes of the shocks, drawing on trade data, price indicators, and stakeholder interviews to identify both short-term disruptions and emerging structural adjustments within the EU aquatic food market.

3.1 Overview of trade and import dependency

The EU's structural reliance on imports remained a defining feature of the aquatic food market throughout the 2019–2024 period. In 2023, import dependency stood at approximately 65%, with non-EU suppliers providing most of the EU's salmonids, groundfish, tuna and tuna-like species, crustaceans, and non-food use products such as fishmeal and fish oil¹⁰. While import dependency for 2024 cannot yet be calculated due to incomplete production data, it is estimated to have remained at a broadly similar level. Across major commodity groups, imports continued to be essential for meeting demand: non-EU origins accounted for around 93% of groundfish consumption, while self-sufficiency for key whitefish commodities remained close to zero (Figure 3).

Figure 3: EU import dependency for key wild groundfish species in 2019 and 2023



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT), FAO.

Extra-EU trade data underline both the scale of this import dependence and the nature of market adjustment over the period (Figure 4). Total extra-EU import volumes declined from 6,26 million tonnes in 2019 to 5,85 million tonnes in 2024 (-6,6%), while the total nominal value of imports increased from EUR 26,4 billion to EUR 29,2 billion over the same period, peaking at EUR 31,7 billion in 2022¹¹. This divergence points to a predominantly price-led adjustment, with rising unit values offsetting lower traded volumes across most commodity groups.

Groundfish remained one of the largest imported commodity groups by volume and continued to play a central role in supplying the EU processing industry, reflecting both sustained demand and the concentration of processing capacity in major hubs such as Poland, the Netherlands, Germany, and Spain. Groundfish import volumes declined steadily from 1,21 million tonnes in 2019 to just over 1,0 million tonnes in 2024, while import values remained elevated, particularly from 2022 onwards.

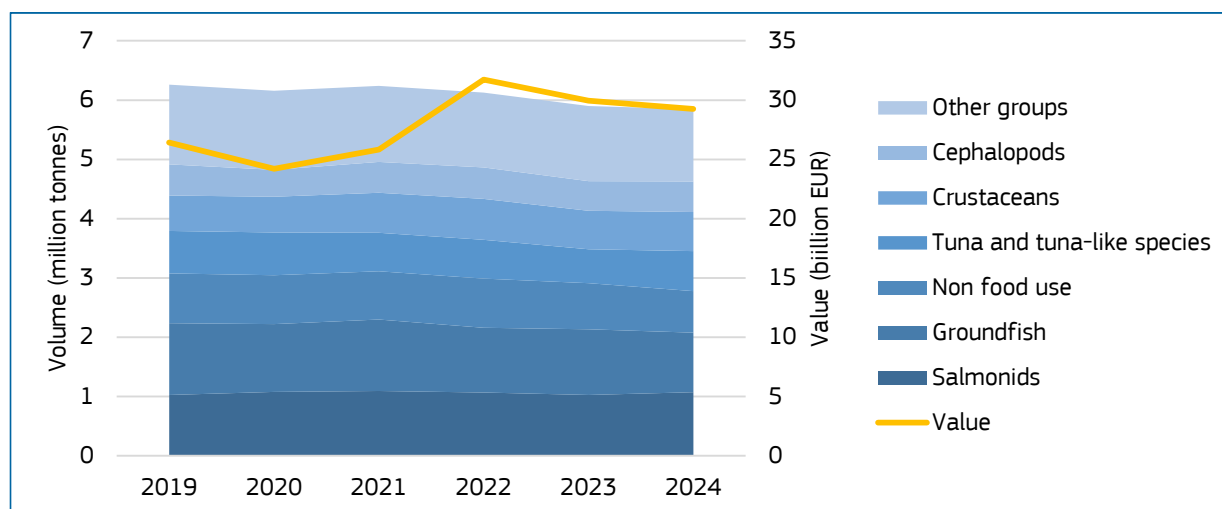
¹⁰ EUMOFA (2025). *The EU fish market – 2025 edition*. [Eumofa.eu](https://eumofa.eu)

¹¹ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

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Salmonids and crustaceans displayed greater volume stability over the period, but both groups experienced pronounced value growth, with salmonid import value increasing from EUR 6,6 billion in 2019 to over EUR 8,6 billion in 2023-2024. Non-food use products exhibited one of the strongest structural adjustments, with import volumes declining by around 17% between 2019 and 2024, while import values increased by more than 20%, reflecting strong price pressures in feed markets.

Figure 4: Extra-EU imports of fishery and aquaculture products by commodity group



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Stakeholder interviews corroborate this high level of import dependence and the price-led nature of market dynamics¹². Processors reported adjusting sourcing strategies in response to shifting availability and cost conditions, including differentiated pricing by origin for certain commodity groups and increased exposure to energy, transport, and input costs inflation. Trade dynamics over the period were characterised by pronounced volatility: in 2020-2021, import volumes contracted sharply for fresh and chilled fish, live shellfish, and high-value products, reflecting disruptions to logistics, labour availability, and supply channels^{12, 13}. From 2021-2022 onwards, import values recovered more rapidly than volumes, driven by rising unit prices rather than increased quantities¹⁴. Interviews consistently indicate that elevated fuel, freight, packaging, and aquaculture feed costs were key factors underpinning this inflation-driven adjustment, with market volatility in 2022-2023 shaped primarily by cost pressures rather than changes in traded volume¹².

3.2 COVID-19 effects: demand collapse and retail shift

Market developments in 2020-2021 were marked by a sharp reallocation of demand across distribution channels and preservation formats rather than a uniform contraction across commodity groups¹⁵. Extra-EU import data show that the impact of the pandemic varied significantly depending on product format, storability, and suitability for retail distribution.

Products primarily oriented toward foodservice and immediate consumption experienced the strongest disruption¹⁴. Across several commodity groups, imports of live and fresh products declined in 2020, particularly for categories with limited retail penetration and high dependence on HORECA channels¹⁵. In contrast, frozen products displayed significantly greater stability. For most major commodity groups,

¹² Stakeholder interviews.

¹³ JRC (2020). *The impact of COVID-19 on the EU-27 fishing fleet*. [Publications.jrc.ec.europa.eu](#)

¹⁴ EUMOFA (2025). *The EU fish market – 2025 edition*. [Eumofa.eu](#)

¹⁵ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

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frozen imports accounted for the largest share of volumes and exhibited smaller year-on-year fluctuations during 2020, followed by a faster recovery in 2021.

Retail-oriented commodity groups and formats proved comparatively resilient. Salmonids, which are widely distributed through retail channels, recorded stable or increasing import volumes in live and fresh format during 2020-2021, while frozen volumes also increased modestly¹⁵. This pattern suggests substitution within formats and channels rather than a collapse in overall demand. By contrast, prepared and smoked products declined across several commodity groups during the same period, indicating that pandemic-related consumption shifts did not translate into uniform growth in value-added formats.

Groundfish imports illustrate a different adjustment dynamic. At the presentation state-level, frozen products in many commodity groups proved relatively stable during the pandemic shock, often showing a dip in 2020 followed by a recovery in 2021. Frozen groundfish, however, did not follow this pattern. Instead, volumes declined gradually from 2019 onward and entered a more sustained downward trajectory after 2021, falling by around 25% by 2024¹⁵.

The contraction was concentrated in key commercial species: cod imports decreased by nearly 90.000 tonnes over the period, while Alaska pollock and hake also recorded substantial declines. These developments reflect reduced total allowable catches and tighter availability in major North Atlantic fisheries, which constrained raw material supply for EU processors. As frozen groundfish is primarily used for secondary processing, volumes are closely linked to quota availability and processor utilisation rather than directly to final consumption. Limited substitution toward species such as saithe and redfish partly mitigated the decline but did not offset the reduction in cod, Alaska pollock, and hake.

By contrast, fresh groundfish imports showed a more direct response to the pandemic shock. Volumes declined in 2020 but rebounded in 2021 following the reopening of hospitality channels and the restoration of short-cycle supply chains. The divergence between frozen and fresh volumes therefore reflects the interaction of pandemic-related channel disruption and structural quota constraints, rather than a simple consumption-driven shift.

Overall, the pandemic accelerated a rebalancing toward preservation formats and supply chains capable of absorbing demand volatility. Frozen products emerged as the primary stabilising element across commodity groups, while live, fresh, and certain prepared formats proved more exposed to disruptions in foodservice outlets. By 2021, import volumes recovered unevenly across preservation states, with several categories stabilising below pre-2019 levels, indicating that the pandemic resulted in lasting adjustments to sourcing, processing, and consumption patterns rather than a full reversion to previous market structures.

3.3 Brexit effects: trade friction and market reorientation

From 2021 onwards, EU-UK aquatic food trade underwent a marked and persistent contraction, reflecting the introduction of non-tariff frictions associated with the UK's new status as a third country. EU imports of fishery and aquaculture products from the UK declined from around 450.000 tonnes in 2019 to approximately 322.000 tonnes in 2022, before partially recovering to 353.000 tonnes in 2024¹⁶. Despite this rebound, import volumes in 2024 remained more than 20% below pre-Brexit levels. Import values followed a similar but more pronounced downward trend, falling from nearly EUR 2,0 billion in 2019 to around EUR 1,5 billion in 2023-2024, indicating a sustained loss of UK market share in the EU rather than a temporary adjustment.

The impact of Brexit varied substantially by preservation state (Figure 5). Live and fresh products experienced the sharpest and most persistent declines across several commodity groups, highlighting the sensitivity of time-critical supply chains to border procedures, SPS controls, and certification requirements¹⁶. In contrast, frozen products proved significantly more resilient. For several commodity

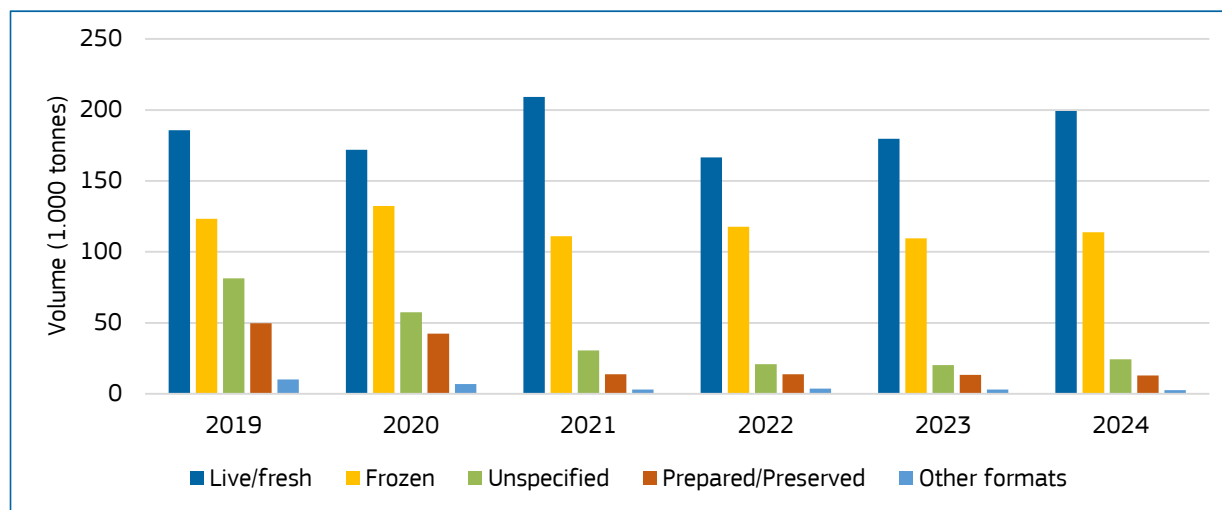
¹⁶ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

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groups, frozen imports from the UK stabilised more quickly after 2020 and, in some cases, increased in later years, reflecting their greater logistical flexibility and lower exposure to border delays.

Prepared and preserved products showed a particularly pronounced contraction. Imports of prepared, preserved, and smoked products from the UK declined sharply after 2020 across most commodity groups and did not recover to pre-Brexit levels by 2024¹⁶. This pattern suggests a structural weakening of UK-based value-added processing in EU markets, with EU buyers increasingly sourcing such products from intra-EU processors or alternative third-country suppliers.

Figure 5: EU imports of fishery and aquaculture products from the UK by preservation state



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Commodity-group data further illustrate the differentiated nature of Brexit impacts. Salmonids remained the largest UK-linked import category by value, but volumes declined substantially between 2019 and 2023, particularly for live and fresh products, before a partial recovery in 2024¹⁷. Groundfish imports from the UK exhibited high volatility, with declines in frozen and prepared formats indicating a rerouting of processing and sourcing activities away from UK-based intermediaries. Crustaceans, bivalves, flatfish, and miscellaneous aquatic products all experienced sustained reductions in UK-origin imports, especially in fresh and prepared forms, while non-food-use products saw a near-collapse in volumes after 2020.

Overall, Brexit accelerated a structural reconfiguration of EU aquatic food trade rather than causing a short-lived disruption. Trade flows did not revert to pre-2020 patterns, and the contraction of UK-origin imports was only partially offset by recovery in frozen formats. The data indicate a lasting shift toward intra-EU sourcing and non-UK third-country suppliers, particularly for time-sensitive and value-added products, consistent with stakeholder reports of logistical re-routing and sourcing diversification.

3.4 Russian war effects: energy, feed, and inflationary pressures

From 2022 onwards, EU aquatic food markets were increasingly shaped by sharp increases in energy, feed, and transport costs, resulting in a predominantly inflation-driven adjustment across commodity groups¹⁸. Extra-EU import data indicate that this shock was characterised less by changes in traded volumes than by a pronounced surge in import values¹⁷. While total extra-EU import volumes declined

¹⁷ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

¹⁸ EUMOFA [key economic drivers](#) dashboard (MABUX).

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slightly between 2021 and 2023, total import value increased sharply, peaking in 2022, confirming that rising unit prices rather than higher volume drove market outcomes during this period.

The inflationary effect was visible across all major commodity groups. In 2022, import values increased substantially for groundfish, salmonids, crustaceans, cephalopods, tuna and tuna-like species, and small pelagics, even where import volumes stagnated or declined¹⁷. This divergence reflects higher fuel costs for fishing and transport, rising electricity prices affecting processing and cold storage, and increased costs for packaging and logistics.

The transmission of these cost pressures differed by commodity group. Species characterised by fuel-intensive harvesting methods and extensive freezing or long-distance transport – notably groundfish, crustaceans, cephalopods, and tuna – exhibited particularly strong increases in import values despite stagnant or declining volumes. In salmonids, energy costs were compounded by a sharp rise in feed prices, amplifying inflationary pressures across the aquaculture value chain.

Rising feed costs emerged as a critical constraint for aquaculture-related commodity groups more broadly. Extra-EU trade data for non-food-use products, largely reflecting fishmeal and fish oil, show a sustained decline in import volumes from 2019 to 2024 alongside a marked increase in import values, particularly in 2022-2023¹⁷. This pattern underscores tight global supply conditions and elevated prices for key feed inputs, which transmitted directly into higher production costs for aquaculture and reinforced downstream price pressure for farmed aquatic food products.

Preservation state data further indicate that inflationary pressures reinforced structural differences between product formats¹⁷. Frozen products remained the dominant format across most commodity groups and proved relatively resilient in volume terms, benefiting from greater logistical flexibility and storability. Live and fresh products, by contrast, exhibited greater sensitivity to cost inflation and transport disruptions, with volumes declining or remaining volatile across several commodity groups during 2022-2023. Prepared and preserved products did not experience a uniform decline in demand; rather, rising input costs and inflationary pressures compressed margins and altered consumption patterns within these categories, prompting processors to adjust product ranges, pack sizes, and price positioning, particularly within higher-value segments¹⁹.

On the demand side, rising prices reduced household purchasing power and accelerated a consumer down-trading toward lower-priced formats and species²⁰. Although nominal expenditure on aquatic food increased, consumption volumes declined, particularly for fresh and higher-priced products²¹. Consumer prices for fresh fish increased by 3,4% in 2023, while overall household seafood consumption declined by more than 5% between 2021 and 2023²². Stakeholder interviews consistently report widespread down-trading across retail markets, with consumers favouring frozen formats, lower-priced commodity groups, and smaller pack sizes¹⁹. These behavioural adjustments reinforced the price-led nature of market dynamics and limited volume recovery through 2023-2024.

An EU-wide Eurobarometer survey conducted in 2024 confirms this broader shift in purchasing behaviour. Price has overtaken freshness and appearance as the most important factor in seafood purchasing decisions, and frozen and tinned products are now purchased more frequently than fresh seafood in many households²³. This evolution reflects growing sensitivity to affordability and convenience under sustained cost-of-living pressures and points to a durable rebalancing of demand toward frozen and processed formats rather than a wholesale shift away from aquatic food consumption.

¹⁹ Stakeholder interviews.

²⁰ AIPCE (2024). *EU seafood supply synopsis 2024*. [Aipce-cep.org](https://aipce-cep.org)

²¹ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

²² EUMOFA (2024). *The EU fish market – 2024 edition*. [Eumofa.eu](https://eumofa.eu)

²³ European Commission (2025). *Eurobarometer survey shows new trends in fishery and aquaculture products consumption*. [Europa.eu](https://europa.eu)

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Overall, the effects of the Russian war of aggression against Ukraine consolidated a period of sustained inflation across the EU aquatic food market. Unlike earlier shocks, which primarily affected supply channels and logistics, this shock operated through input and energy costs, reshaping price structures across commodity groups and reinforcing longer-term adjustments in sourcing, processing, and consumption patterns.

3.5 Concluding synthesis

Across commodity groups, the market adjustments observed between 2019 and 2024 reveal a shift toward price-led and format-dependent dynamics rather than uniform changes in traded volumes. Rising energy, feed, and transport costs increasingly shaped market outcomes, particularly from 2022 onwards, amplifying volatility even where physical supply remained relatively stable. Frozen products consistently exhibited greater resilience across commodity groups, benefiting from storability and logistical flexibility, while live, fresh, and highly time-sensitive formats proved more exposed to demand shocks and trade frictions.

Importantly, neither the pandemic nor Brexit was followed by a full return to pre-crisis trade levels across most commodity groups and preservation states. While volumes rebounded unevenly after the 2020 contraction, several categories stabilised below their 2019 baseline, reflecting structural adjustments in sourcing, processing, and distribution rather than temporary disruption alone. In the case of Brexit, new SPS requirements, administrative frictions, and quota reallocations produced lasting changes in trade patterns that were not subsequently reversed.

At the same time, persistent import dependence limited the scope for substitution through domestic production, leading instead to rerouting of trade flows and adjustments in sourcing strategies. Consumption patterns evolved from pandemic-driven shifts toward convenience and shelf-stable products to inflation-driven price-sensitivity and downtrading, reshaping demand within commodity groups rather than restoring previous market configurations.

The evidence therefore suggests that the 2019-2024 period represents not a temporary disturbance but a structural reconfiguration of EU aquatic food markets. The following chapter builds on these findings by examining how these cross-cutting mechanisms translated into differentiated outcomes at species level.

4 SPECIES-SPECIFIC VALUE CHAIN ANALYSIS

This section focuses on detailed value chain analyses for some of the most important fishery and aquaculture species within the EU, namely Atlantic salmon, seabass and seabream, cod, Alaska pollock, tuna, mussels and oysters, herring, and mackerel. The analysis will assess the impacts of COVID-19, Brexit, and the Russian war of aggression against Ukraine on production, trade, processing, and consumption within these species, highlighting key disruptions and adaptation strategies across the value chain.

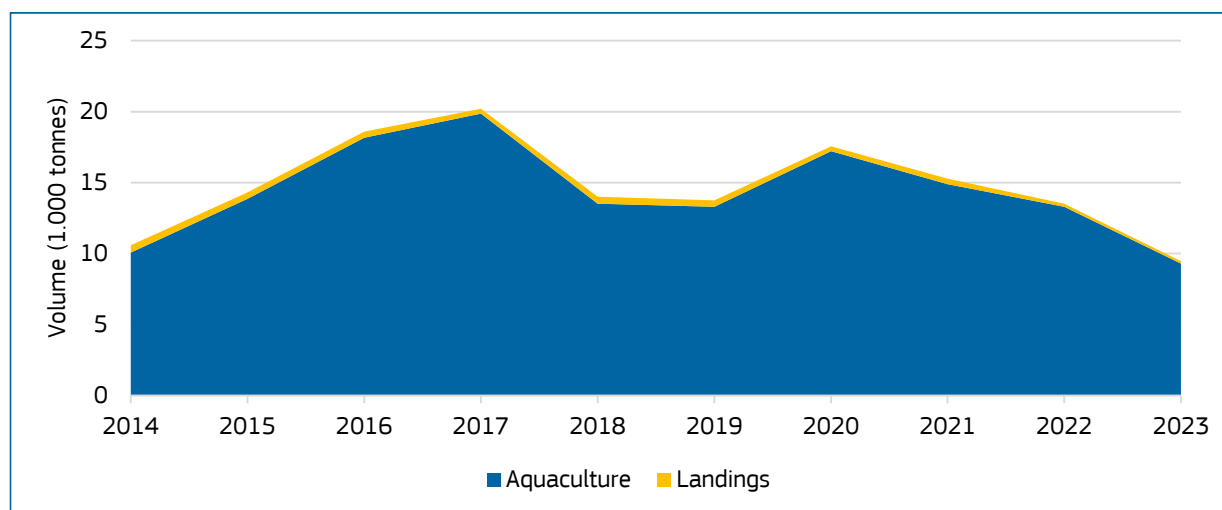
4.1 Atlantic salmon

4.1.1 Production

Atlantic salmon is the most important aquaculture species shaping trade and market dynamics in the EU, despite the EU's very limited production base. Global production is dominated by Norway, which is also the EU's largest external supplier, while the UK (Scotland) and the Faroe Islands contribute to significant additional volumes. Within the EU, production has declined sharply over the past decade and is now highly concentrated.

EU aquaculture production of Atlantic salmon peaked at nearly 20.000 tonnes in 2017 (Figure 6) before falling steadily to around 9.000 tonnes in 2023 (-53%)²⁴. By 2023, Ireland was the only Member State reporting commercial salmon production, underscoring the marginal role of EU farming in the global salmon market. In the same year, global aquaculture production of Atlantic salmon reached approximately 2,7 million tonnes, leaving the EU with a share of around 0,4%²⁵. Wild salmon plays an even smaller role: EU landings declined from roughly 510 tonnes in 2014 to 170 tonnes in 2023, corresponding to only 1-2% of EU farmed salmon production²⁶.

Figure 6: Annual EU-27 aquaculture production and landing volume of salmon



Source: EUMOFA [aquaculture](#) and [landings](#) dashboard (Eurostat fishery).

As a result, the EU is almost entirely dependent on extra-EU suppliers for salmon. Between 2019 and 2024, total EU import volumes increased modestly from around 991.000 tonnes to 1,0 million tonnes, while the nominal value of imports rose much more strongly, from approximately EUR 6,4 billion to

²⁴ EUMOFA [aquaculture](#) dashboard (Eurostat fishery).

²⁵ FAO statistics.

²⁶ EUMOFA [landings](#) dashboard (Eurostat fishery).

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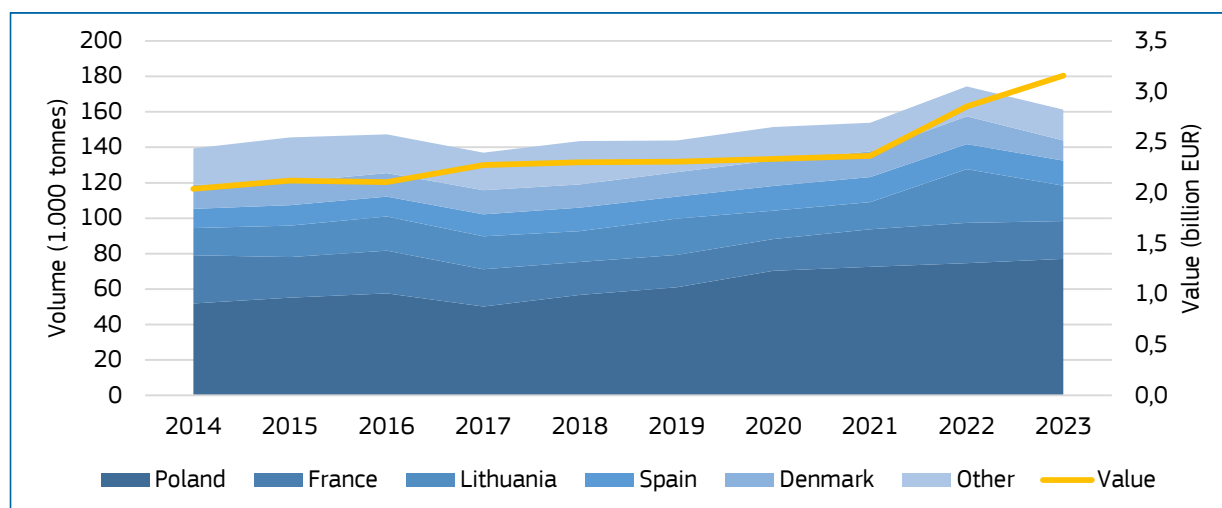
EUR 8,4 billion, reflecting rising unit prices²⁷. Norway remained the dominant supplier throughout, accounting for around 80% of extra-EU import volumes, while the combined share of other North Atlantic suppliers – particularly the Faroe Islands and Iceland – increased modestly over the period, indicating a small broadening of sourcing, with Norway retaining its central role.

The limited and declining role of EU salmon production heightens the sector's exposure to external supply and cost shocks. From 2022 onwards, rising feed costs, higher energy and freight prices, and broader inflationary pressures contributed to a marked increase in production and procurement costs along the salmon value chain. The observed rise of roughly 25-30% in EU salmon import unit values between 2019 and 2024 is consistent with these pressures²⁷. However, exchange-rate developments also influenced import values: fluctuations in the Norwegian krone against the euro, particularly the depreciation of the NOK 2022-2023, partly moderated the pass-through of cost increases into EUR-denominated import prices. In this context, the EU's position as a marginal producer but major importer and processor leaves salmon market particularly sensitive not only to developments in global input markets and logistics, but also to currency movements in key supplier countries.

4.1.2 Processing and trade

The EU remains a key market and processing hub for Atlantic salmon produced in Norway, the UK, and, to a lesser extent, the Faroe Islands and Iceland. A substantial share of these imports is transformed into higher value products, notably smoked fillets, prepared and preserved portions, and frozen cuts. Processing statistics indicate that smoked salmon production in the EU reached annual volumes of around 140.000-150.000 tonnes in the mid-2010s, with a temporary dip in 2019²⁸ (Figure 7). However, PRODCOM data underestimate total production in recent years due to reporting gaps in several major producing Member States, including Germany and Spain in 2023 and Poland in 2021-2022.

Figure 7: EU-27 processing volume and value of smoked salmon²⁹



Source: EUMOFA [processing](#) dashboard (Eurostat PRODCOM). Note that processing volume and value has been estimated for Poland in 2021-2022, France in 2019, Spain in 2022-2023, and Germany (in the "other" category) in 2023.

²⁷ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

²⁸ EUMOFA [processing](#) dashboard (Eurostat PRODCOM).

²⁹ Gaps in national processing data reflect confidentiality rules and incomplete reporting in EU industrial production statistics. Data for certain Member States (e.g., Poland, France, Spain, Germany, Sweden) are withheld in specific years due to statistical disclosure control, changes in national reporting, or temporary gaps in survey coverage, rather than an absence of production.

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Taking these statistical discontinuities into account, EU smoked salmon production in recent years is estimated at around 160.000 tonnes, confirming the continued central role of the EU processing sector. Over the same period, the value of smoked salmon production increased steadily, rising from approximately EUR 2,0 billion in 2014 to about EUR 2,7 billion in 2023 in nominal terms. This implies a marked increase in average unit values, from roughly 14,00-15,00 EUR/kg in 2019 to around 19,00 EUR/kg in 2023, reflecting higher raw material costs as well as a sustained focus on premium and value-added products²⁸.

Geography of the processing industry is concentrated in a handful of Member States. Poland is the leading EU processor of smoked salmon, with reported volumes rising from about 52.000 tonnes in 2014 to more than 70.000 tonnes in 2020 and over 77.000 tonnes in 2023, accounting for nearly half of total EU smoked salmon production in the latest year²⁸. France, Lithuania, Denmark, Spain, and Germany also play important roles. In France, smoked salmon volumes fluctuated around 18.000-27.000 tonnes annually, while Lithuania processed roughly 15.000-20.000 tonnes and Denmark about 13.000-15.000 tonnes per year. Spain's smoked salmon production increased from approximately 10.800-12.400 tonnes in 2014-2017 to nearly 14.000 tonnes by 2021. These patterns underscore the strong specialisation of certain Member States in salmon smoking and filleting, drawing heavily on imported raw material.

Beyond smoked products, EU processors also produce substantial volumes of prepared and preserved salmon. Based on estimated production data that account for gaps in official statistics, annual production in this category increased steadily from around 15.000 tonnes in 2014 to over 22.000 tonnes by 2018, before continuing to rise to approximately 24.000 tonnes in 2019³⁰. Production expanded further during the pandemic period, reaching around 30.000-32.000 tonnes in 2020-2021, and subsequently stabilised at similarly high levels through 2022-2023.

Production is also led by Poland, which accounts for a large share of EU production, followed by France, Italy, Lithuania, and Belgium, with additional contributions from Portugal, Germany, and Spain. In value terms, prepared and preserved salmon production increased markedly over the period, from approximately EUR 130 million in 2014 to around EUR 250-260 million in 2023. This reflects both higher volumes and rising unit values, driven by increased raw material costs and a continued shift toward value-added and convenience-oriented salmon products. While smaller than the smoked segment, prepared and preserved salmon represents a growing and increasingly important component of the EU's salmon processing industry, serving both domestic consumption and export markets.

Because fresh salmon is highly perishable, EU processing activities depend on a reliable and rapid supply of chilled raw material. Efficient logistics – particularly road transport and, to a lesser extent, air freight from Norway and Scotland – are therefore critical for maintaining processing schedules and product quality. Both the COVID-19 pandemic and Brexit disrupted these logistics systems, albeit through different channels^{31, 32}. Pandemic related transport constraints and labour shortages temporarily lengthened delivery times and increased costs, while Brexit introduced persistent border procedures and administrative requirements, adding uncertainty to time-sensitive supply chains, particularly for fresh and premium product lines.

Stakeholders reported that these disruptions directly affected factory operations, as less predictable delivery times complicated production planning and reduced flexibility in cutting, smoking, and packaging processes designed around just-in-time supplies³³. In response, some processors adjusted inventory management and scheduling practices, though scope for substitution remained limited given the perishability of the raw material.

³⁰ EUMOFA [processing](#) dashboard (Eurostat PRODCOM).

³¹ Salmon Scotland (2024). *Scottish salmon is the UK's largest food export*. [Salmonscotland.co.uk](https://salmonscotland.co.uk)

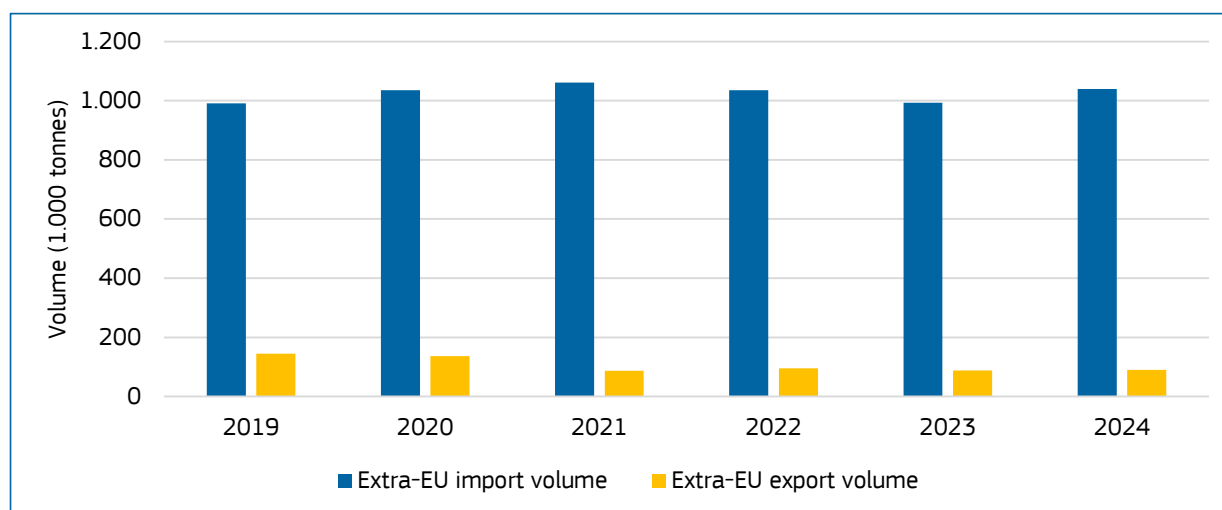
³² EUMOFA (2025). *The EU fish market – 2025 edition*. [Eumofa.eu](https://eumofa.eu)

³³ Stakeholder interviews.

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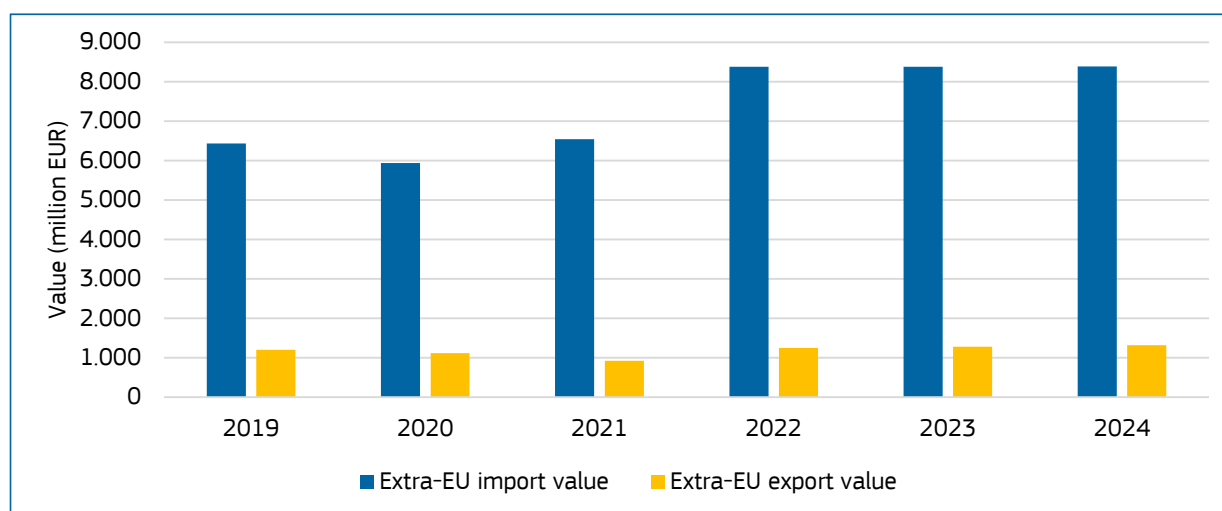
Despite these pressures, the structure of EU salmon imports remains heavily skewed towards fresh products. In 2024, imports of Norwegian salmon continued to be dominated by fresh whole fish and fillets, while frozen salmon (both whole and filleted) accounted for only a small share of total volumes³⁴ (Figure 8 and Figure 9). While some operators reported a cautious increase in the use of frozen inputs to mitigate logistical risk, this shift remains marginal and has not fundamentally altered the fresh-oriented structure of EU salmon processing.

Figure 8: EU-27 trade balance of Atlantic salmon in volume



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 9: EU-27 trade balance of Atlantic salmon in value



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Extra-EU exports of salmon remain significantly smaller than imports, confirming the EU's role as a net salmon importer that adds value through processing. By 2024, export volumes corresponded to only about 9% of extra-EU import volumes, while export values represented approximately 16% of import values, reflecting the higher unit values of processed products³⁵. Export flows are geographically concentrated, with a limited number of high-income and processing-oriented markets accounting for most of volumes. The United States is by far the most important destination, with exports of EU-processed salmon increasing substantially in both volume and value between 2019 and 2024. Other

³⁴ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

³⁵ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

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significant destinations include Switzerland, Israel, Australia, and the United Kingdom, while smaller but growing flows to markets such as Vietnam and Japan indicate the EU's integration into both premium retail and international processing supply chains.

The composition of these exports highlights the position of EU processors within the global salmon value chain. Export portfolios differ by destination but consistently include a high share of processed products such as smoked salmon, prepared and preserved portions, and frozen fillets, alongside fresh products³⁵. This pattern confirms that EU processors capture part of the value added through filleting, smoking, and preparation of salmon sourced primarily from Norway and other non-EU producers before supplying premium markets.

The crises of the past five years primarily affected the cost structure and operational conditions of EU salmon processors rather than their market orientation. Stakeholders consistently identified rising input costs as the most significant challenge³⁶. Higher prices for feed ingredients, fish oil, energy, freight, and packaging materials – particularly plastics – put sustained pressure on processing margins, especially following Russia's war of aggression against Ukraine. At the same time, labour shortages during and after the COVID-19 pandemic complicated production planning and contributed to wage inflation, notably in plants reliant on mobile or seasonal labour.

These cost pressures were transmitted along the value chain and are reflected in the marked increase in average unit values for both imported raw salmon and processed products such as smoked salmon between 2019 and 2023³⁷. While processors were generally able to pass on part of these increases to buyers, interviews indicate that margin compression occurred in several segments, particularly for standardised products and long-term supply contracts³⁶. While processors implemented limited operational adjustments to manage cost and logistics pressures, EU salmon processing remains structurally constrained by its reliance on stable and timely supplies of chilled raw material.

4.1.3 Consumer demands and market shifts

The EU supply balance of salmon shows that demand has been overall resilient. Estimated apparent consumption (Figure 10) fluctuated around 1,1 million tonnes between 2018 and 2023, with estimated per capita consumption moving from about 2,2 kg in 2018 (EU-28, prior to the UK's withdrawal) to a peak of 2,6 kg in 2021 (EU-27), before easing back to around 2,4 kg in 2023 (EU-27)³⁸. In other words, consumption dipped slightly after the recent price shocks but remained above pre-COVID levels throughout the period.

The main adjustment during COVID-19 was therefore not a collapse in demand, but a reconfiguration of where and how salmon was consumed. Household panel data for fresh salmon indicate strong growth in retail purchases in 2020-2021 in most of the main markets³⁹ (Figure 11). In France, household volumes rose from 27.000 tonnes in 2019 to 33.600 tonnes in 2020 and 37.400 tonnes in 2021. Spain showed a similar pattern, increasing from 53.100 tonnes in 2019 to 67.900 tonnes in 2020 and 68.400 tonnes in 2021. Germany's fresh household purchases grew from 20.800 tonnes to about 27.300-28.000 tonnes over the same period, while Denmark, the Netherlands, and Poland also recorded noticeable increases. These trends are consistent with processors' accounts of retail and online channels absorbing much of the volume that could no longer be sold through restaurants and foodservice during lockdowns³⁶.

From 2022 onwards, higher prices and broader cost-of-living pressures began to show more clearly in the consumption data. In France, household fresh volumes fell back from 37.400 tonnes in 2021 to

³⁶ Stakeholder interviews.

³⁷ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

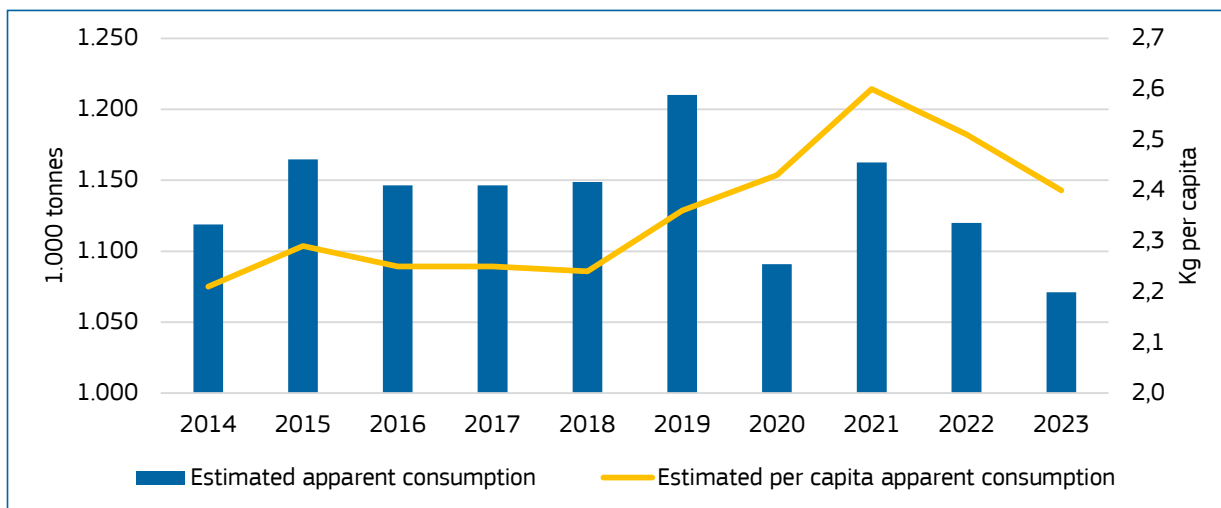
³⁸ EUMOFA [supply balance](#) dashboard.

³⁹ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

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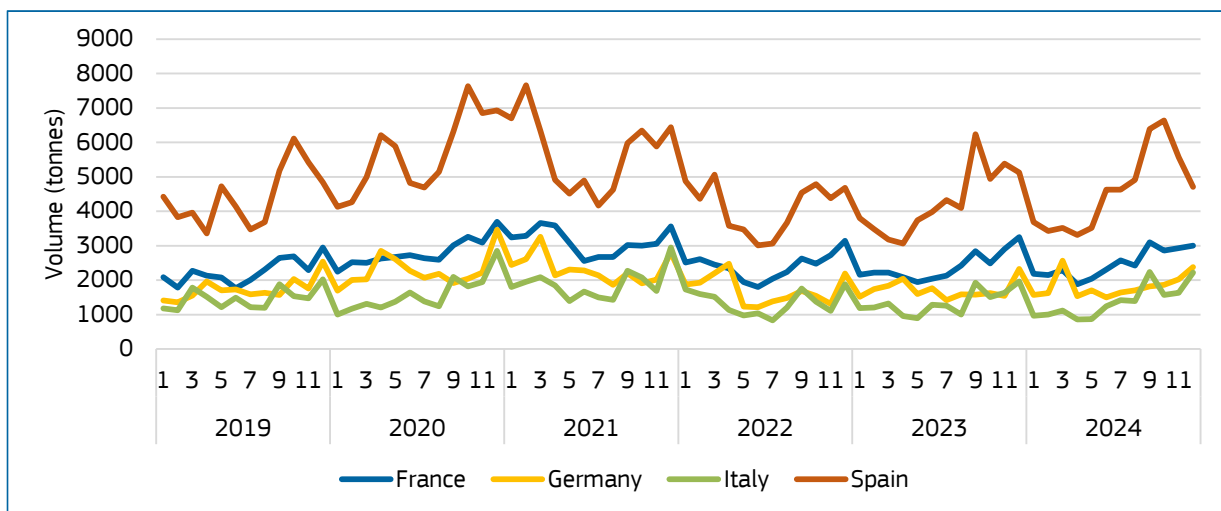
about 28.900-28.700 tonnes in 2022-2023, and in Germany from around 28.000 tonnes to roughly 20.500-20.600 tonnes³⁹. Spain’s household purchases dropped from 68.400 tonnes in 2021 to 49.500 tonnes in 2022, with only a partial recovery to 51.400 tonnes in 2023. Similar, though smaller, volume declines are visible in Italy, the Netherlands, and Sweden.

Figure 10: Estimated apparent consumption and per capita apparent consumption of salmon in the EU⁴⁰ (live weight equivalents)



Source: EUMOFA [supply balance](#) dashboard.

Figure 11: Household consumption of fresh salmon in selected EU Member States



Source: EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

At the same time, household expenditure on fresh salmon continued to rise. In Spain, for example, spending increased from about EUR 541 million in 2019 to EUR 676 million in 2020, EUR 669 million in 2021, and almost EUR 699 million in 2023, before reaching roughly EUR 778 million in 2024⁴¹. France followed a comparable trajectory, with values rising from EUR 517 million in 2019 to a peak of around EUR 668 million in 2021, before stabilising at slightly lower but still elevated levels in 2022-2023 and increasing again in 2024. These patterns indicate a combination of higher unit prices and some demand rationing, especially after 2021.

⁴⁰ From 2014-2019 data includes the UK (EU-28), from 2020 onward data concerns the EU-27.

⁴¹ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

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Stakeholders reported that inflation in feed, energy, logistics, and packaging – amplified by Russia's war of aggression – fed through quickly to wholesale and retail prices for salmon⁴². Super-premium and organic products were described as particularly exposed: as prices rose, many consumers treated these as discretionary purchases and traded down to cheaper options. This included shifting from branded to private-label products, opting for smaller pack sizes and, in some cases, substituting towards alternative species such as smoked trout or lower-priced salmon cuts. Household data support this narrative: overall fresh volumes in major markets softened after 2021, yet total expenditure remained high, implying that consumers increasingly prioritised affordability within the salmon category rather than abandoning it entirely⁴¹.

Channel and format choices also continued to evolve. The expansion of retail during COVID-19 appears to have had lasting effects: in countries such as France, Italy, and Spain, supermarkets and discount stores retained a larger share of salmon sales even after restaurants reopened, and online grocery platforms that expanded during the pandemic maintained a robust aquatic food offer. Interviewed stakeholders noted growing demand for convenient, portion-controlled products and family-sized packs that keep the unit price per purchase manageable⁴². Trade and processing data also point to steady or increased volumes of frozen fillets and smoked salmon, suggesting a gradual shift by some consumers towards formats better suited to at-home consumption.

Despite these pressures, salmon has remained a core protein in many EU diets. Estimated apparent consumption in 2023 was only slightly below the 2020 level, and early 2024 household data for fresh salmon in key markets such as France, Germany, and Spain show volumes edging up again compared with 2022-2023, albeit at much higher price points⁴³.

4.1.4 Price trends

EU salmon prices rose sharply during 2021-2022 and, although they eased somewhat thereafter, remained well above pre-pandemic levels through 2024. Import statistics illustrate the breadth of this shift across all major product forms. For whole salmon, trade data indicate that the average EU import price across fresh and frozen products combined rose by more than 30% between late 2021 and mid-2022, reaching a peak of around 10,00 EUR/kg in April 2022⁴⁴. As illustrated in Figure 12, this increase was driven by simultaneous price rises in both fresh and frozen whole salmon, with fresh products consistently trading at a premium. Fresh whole salmon typically traded in the range of 9,00-10,10 EUR/kg, while frozen whole salmon was imported at lower prices, generally between 5,00-7,20 EUR/kg. The price gap widened during periods of tight supply and heightened market stress, before narrowing slightly but persisting into 2023-2024.

Price movements for fillets followed a broadly similar pattern, though with smaller and less stable differentials between fresh and frozen products. Average import prices for fresh salmon fillets increased from about 8,10 EUR/kg in 2020 to more than 11,00 EUR/kg in 2022-2023, before easing to around 10,40 EUR/kg in 2024. Frozen fillets exhibited greater volatility and generally traded at prices close to, and at times comparable with, fresh fillets during the 2022-2023 period, reflecting strong demand for portioned and convenience-oriented formats.

These import-level dynamics were transmitted to retail and household markets with some delay but followed a broadly similar trajectory. In France and Germany, average household prices for fresh salmon increased from around 18,00-19,00 EUR/kg in 2019 to approximately 20,00-21,00 EUR/kg in 2024, while in Italy prices rose from about 14,00-15,00 EUR/kg to just over 20,00 EUR/kg⁴³. Spain recorded an even steeper increase, with average prices rising from roughly 10,00 EUR/kg in 2019 to

⁴² Stakeholder interviews.

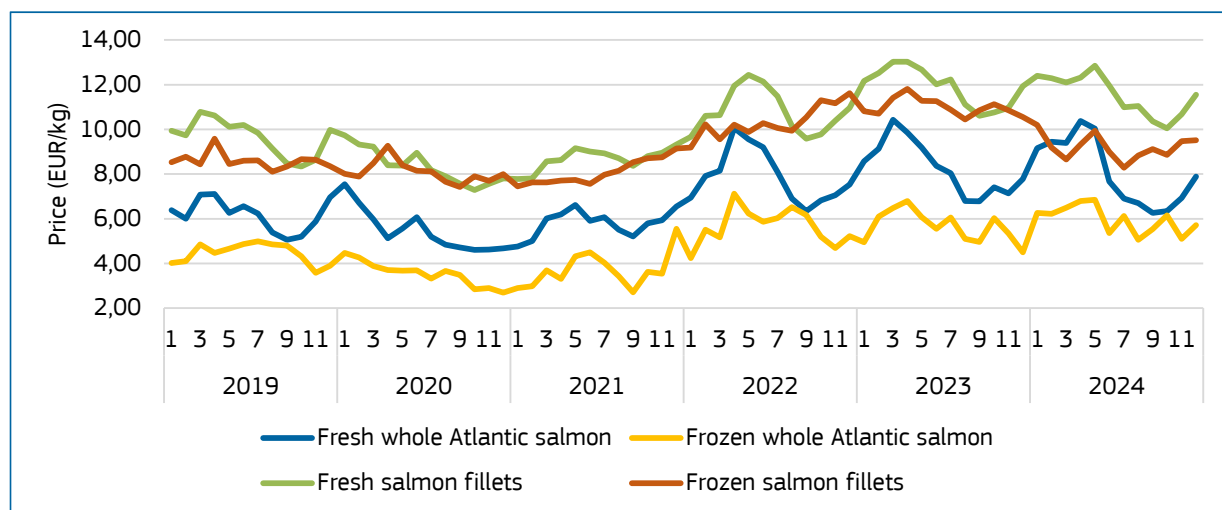
⁴³ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

⁴⁴ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

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13,00-14,00 EUR/kg by 2024. Across all four Member States, prices generally peaked in 2022-2023 and declined only modestly thereafter, without returning to earlier levels.

Figure 12: Weighted avg. extra-EU import price of fresh and frozen whole Atlantic salmon and salmon fillets



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Online retail data show a comparable upward trend, though price relationships differ by format. Frozen salmon fillets sold online commanded relatively high prices (Figure 13), reflecting portioning, branding, and convenience attributes. Across selected EU markets⁴⁵, the average online price for frozen fillets was 28,07 EUR/kg in 2021⁴⁶, rising by 7% in 2022 and a further 18% in 2023 to 35,42 EUR/kg, before easing to 33,21 EUR/kg in 2024⁴⁷. Austria recorded particularly high prices and was excluded from the EU average due to market-specific factors. Prices softened slightly in early 2025 (-1%).

Fresh salmon fillets sold online⁴⁸ followed a similar but less pronounced trajectory, increasing from 21,53 EUR/kg in 2021 to 24,87 EUR/kg in 2022 and 26,98 EUR/kg in 2023, before stabilising in 2024-2025⁴⁷ (Figure 14). Smoked salmon slices⁴⁹ remained the most expensive format, with average online prices rising from 36,61 EUR/kg in 2021 to 43,13 EUR/kg in 2024, before a slight easing in 2025 (Figure 15).

Stakeholder interviews corroborate these trends. Processors consistently identified higher feed, energy, packaging, and transport costs as the main drivers of rising wholesale and retail prices, with labour shortages and wage growth adding further pressure⁵⁰. While import prices began to moderate from late 2023, retail and online prices for most salmon products remained well above 2019 levels. Interviewees did not expect a full reversion, instead pointing to the emergence of a new, higher price baseline for salmon, particularly for value-added products such as smoked slices and fresh fillets, with frozen fillets and whole fish increasingly positioned as relatively more affordable options for price-sensitive households.

⁴⁵ Belgium, France, Germany, Italy, Netherlands, Portugal, and Spain.

⁴⁶ From September to December.

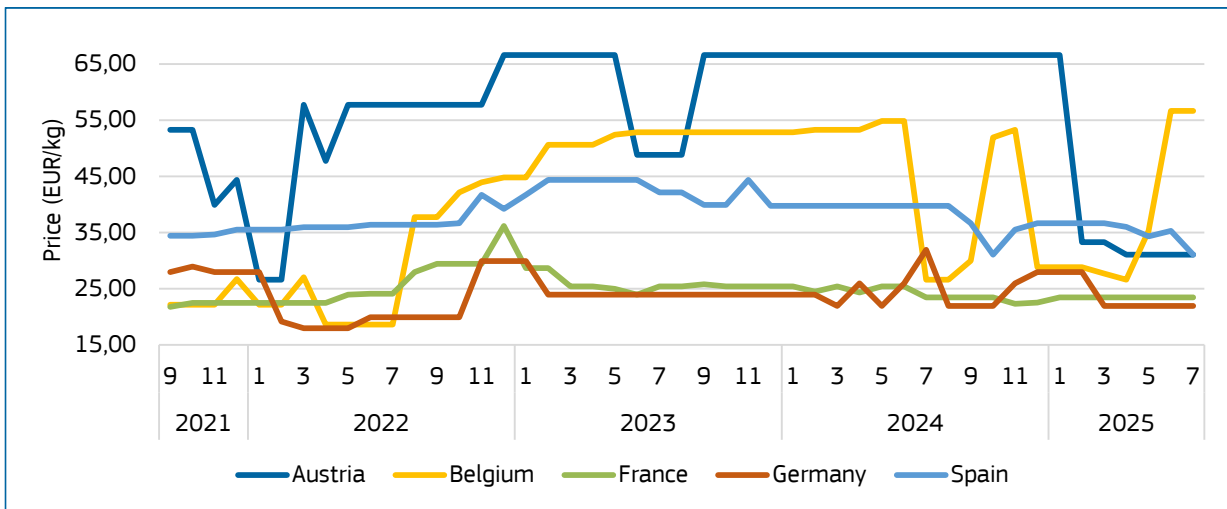
⁴⁷ EUMOFA [online retail prices](#) dashboard.

⁴⁸ In Belgium, France, Italy, Netherlands, Portugal, and Spain.

⁴⁹ In Belgium, France, Germany, Italy, Netherlands, Portugal, and Spain.

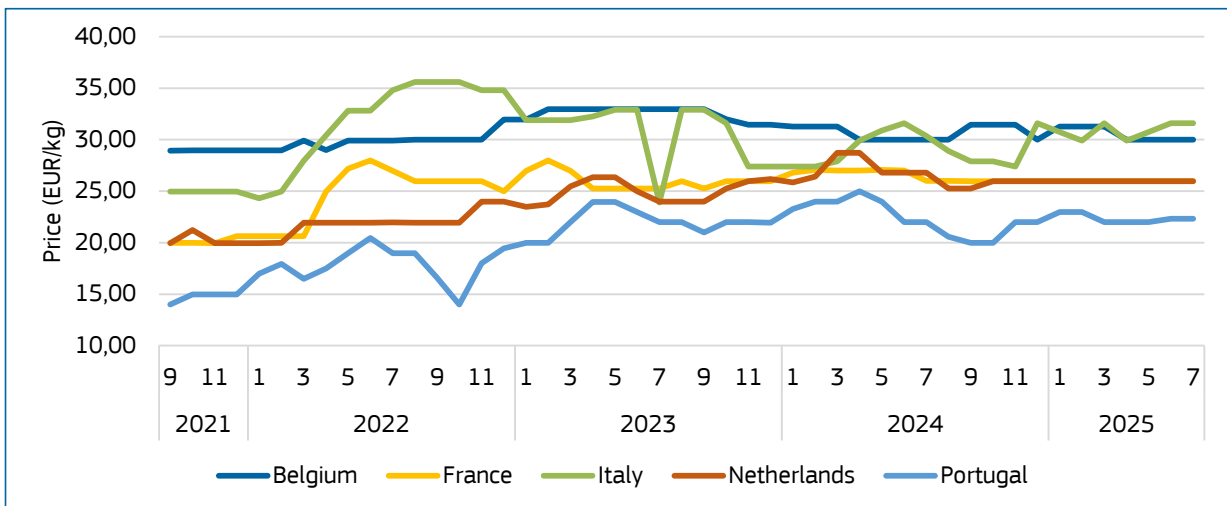
⁵⁰ Stakeholder interviews.

Figure 13: Online retail prices of frozen salmon fillets in selected Member States



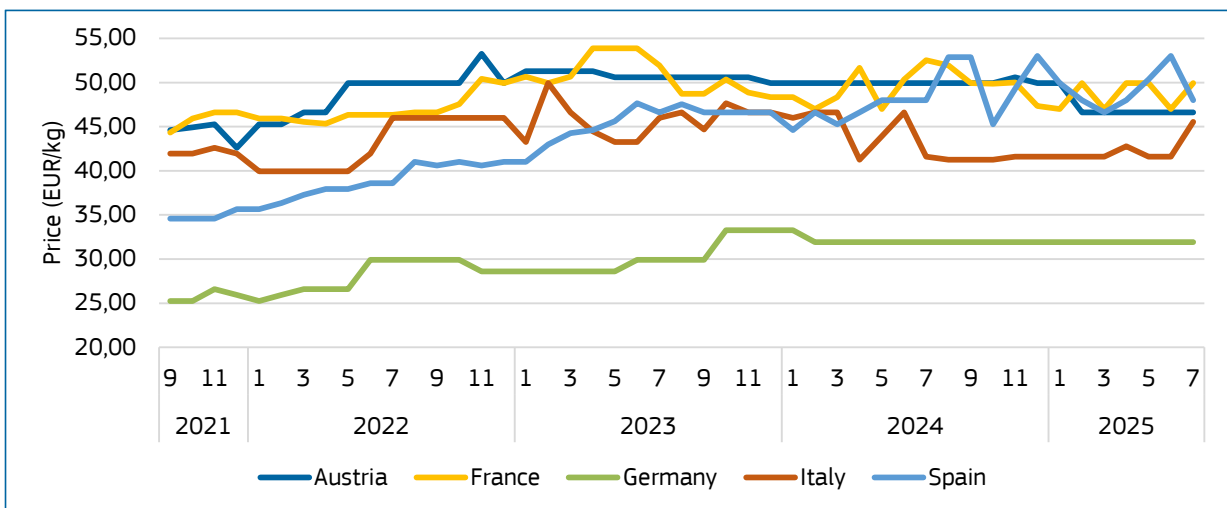
Source: EUMOFA [online retail prices](#) dashboard.

Figure 14: Online retail prices of fresh salmon fillets in selected Member States



Source: EUMOFA [online retail prices](#) dashboard.

Figure 15: Online retail prices of smoked salmon slices in selected Member States



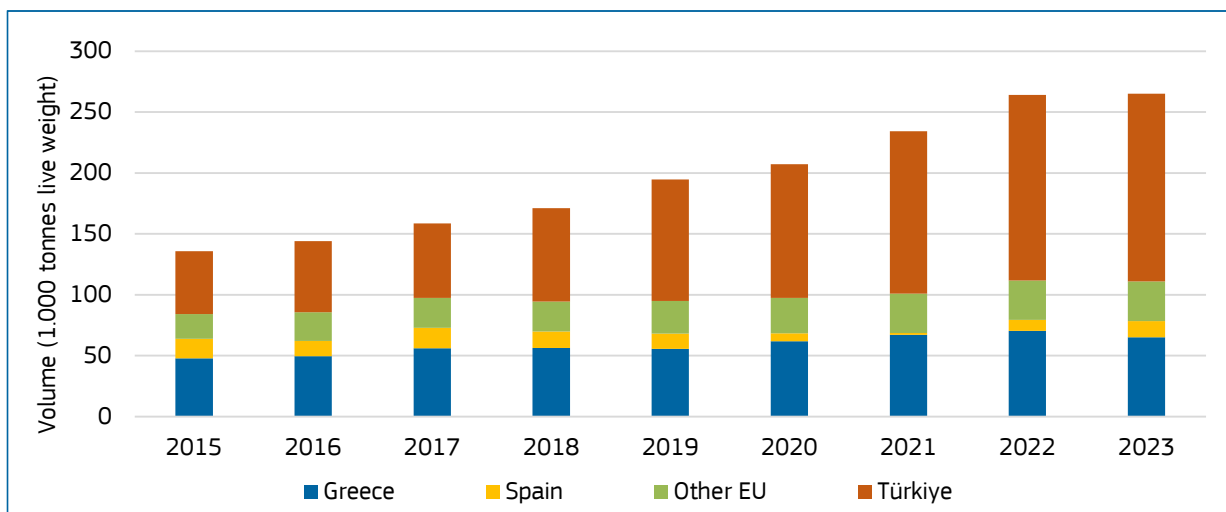
Source: EUMOFA [online retail prices](#) dashboard.

4.2 Seabass and seabream

4.2.1 Production

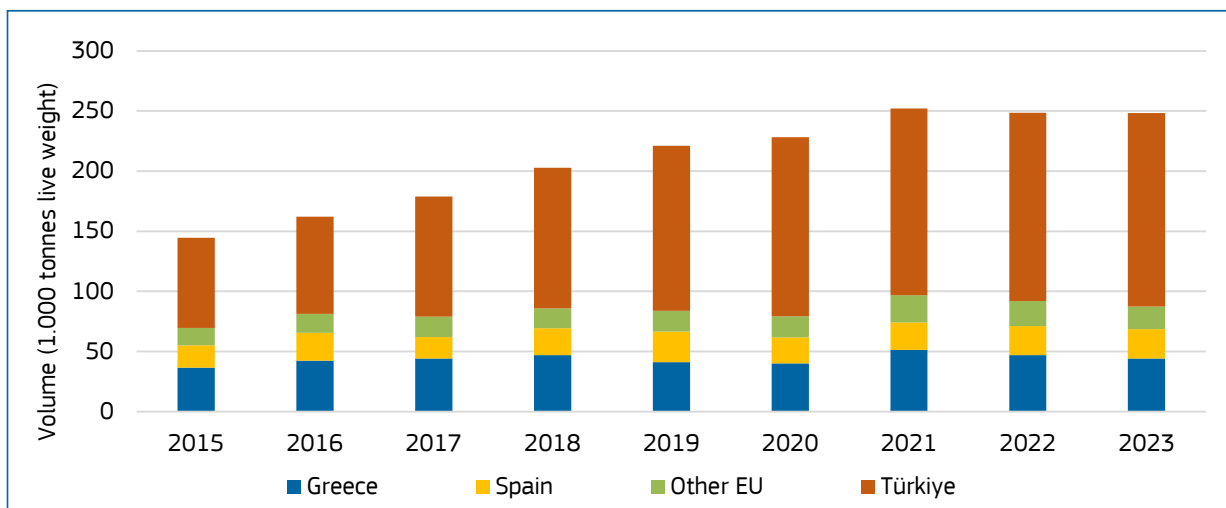
Seabass and seabream are cornerstone species of Mediterranean aquaculture, accounting for the bulk of marine finfish production in the region. Globally, more than 95% of seabass and seabream production originates from aquaculture, and approximately 97% of production is concentrated in Mediterranean countries. Greece, Türkiye, and Spain consistently rank among the largest producers (Figure 16 and Figure 17)⁵¹. Within the EU, production is highly concentrated in Greece, followed by Spain, Italy, and France. These species are predominantly produced for the fresh market, reflecting their strong positioning in Mediterranean consumption and foodservice, although the role of frozen formats has increased gradually in recent years.

Figure 16: Aquaculture production volume of gilthead seabream in the EU and Türkiye



Source: EUMOFA [aquaculture](#) dashboard (Eurostat fishery), TURKSTAT.

Figure 17: Aquaculture production volume of European seabass in the EU and Türkiye



Source: EUMOFA [aquaculture](#) dashboard (Eurostat fishery), TURKSTAT.

⁵¹ Vatsos, I.N., et al. (2023). *Life cycle assessment of seabass and seabream production in the Mediterranean area*. [Sciencedirect.com](https://www.sciencedirect.com)

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The COVID-19 pandemic disrupted seabass and seabream aquaculture across the Mediterranean, with particularly pronounced effects in Greece, the EU's leading producer. In early 2020, the sudden closure of foodservice markets, combined with labour constraints and transport disruptions, complicated harvesting schedules and biomass management, leading to temporary imbalances between production and market absorption. While producers were able to redirect part of the production towards retail and export channels, overall production growth slowed markedly compared to pre-pandemic trends⁵². As demand recovered with the reopening of hospitality in 2021, particularly in southern Europe, Greek production rebounded strongly, with seabream production exceeding 67.000 tonnes and reaching a peak in 2022⁵³. Nonetheless, the experience highlighted structural vulnerabilities related to market concentration and logistics, reinforcing efforts to adjust harvest timing, diversify sales channels, and expand capacity to redirect volumes between foodservice, retail, and export markets in response to rapid changes in demand and logistical constraints⁵⁴.

The effects of Brexit on EU seabass and seabream production appear relatively limited compared to sectors with stronger exposure to the UK market. Production of these species is largely oriented toward Mediterranean and intra-EU markets, reducing direct dependence on UK demand. However, an economic assessment of the EU seabass and seabream sector indicates that existing challenges related to costs, regulatory compliance, and market access may have been marginally exacerbated by Brexit-related non-tariff barriers, particularly for operators involved in cross-border logistics and certification⁵⁵.

Russia's war of aggression against Ukraine added further pressure to production conditions. Sharp increases in energy, fuel, and feed-related costs affected aquaculture operations across the EU, including seabass and seabream farms. According to EU-level assessments, marine gasoil and logistics costs more than doubled in many Member States, while higher electricity and feed prices squeezed margins and increased financial risk for producers⁵⁵. These cost pressures did not directly reduce production volumes but significantly weakened profitability and heightened the sector's sensitivity to further external shocks.

4.2.2 Processing and trade

Seabass and seabream are primarily marketed fresh and whole, with rapid cold-chain distribution essential to supplying major EU consumer markets such as France, Italy, and Spain. Producers in countries such as Türkiye, Greece, and Spain rely on tightly coordinated logistics systems, often delivering directly to wholesalers or retailers with limited intermediation⁵⁶. While air freight is occasionally used for specialised shipments or distant exports destinations, most intra-EU trade is conducted via refrigerated road transport⁵⁷.

The COVID-19 pandemic disrupted these distribution channels in 2020, particularly for fresh products, due to transport delays, labour constraints, and reduced market access linked to foodservice closures. However, there was no significant shift toward frozen formats. Extra-EU trade data confirm that frozen seabass and seabream volumes remained small and broadly stable throughout the crisis⁵⁸. By 2021,

⁵² FAO GLOBEFISH (2021). *Tighter market balance mitigates COVID-19 impact for seabass and seabream sector*. [Fao.org](https://www.fao.org)

⁵³ EUMOFA [aquaculture](#) dashboard (Eurostat fishery).

⁵⁴ Vatsos, I.N., et al. (2023). *Life cycle assessment of seabass and seabream production in the Mediterranean area*. [Sciencedirect.com](https://www.sciencedirect.com)

⁵⁵ Fernández Sánchez, J. L., et al. (2021). *Assessing the economic impact of key operational factors on grow-out farms producing European sea bass under different scenarios of production*. [Tandfonline.com](https://www.tandfonline.com)

⁵⁶ EUMOFA (2019). *Seabass in the EU*. [Eumofa.eu](https://www.eumofa.eu)

⁵⁷ WWF (2021). *Seabass and seabream supply chain study: from Turkey to Europe*. [Panda.org](https://www.panda.org)

⁵⁸ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

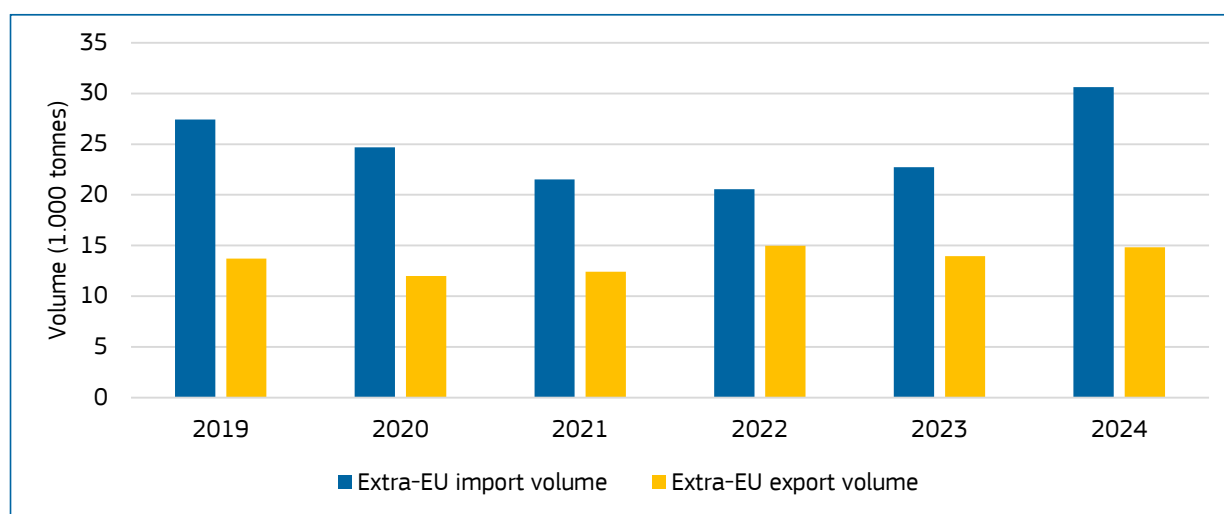
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demand for fresh products rebounded with the reopening of foodservice and a continued importance of retail channels⁵².

This recovery was soon challenged by rising operational costs. From 2022 onward, Russia's war of aggression against Ukraine triggered sharp increases in fuel, energy, and aquafeed prices, compounding earlier supply chain pressures. These inflationary dynamics translated into higher prices for fresh Mediterranean aquaculture products, including seabass and seabream⁵⁹. For example, extra-EU import values of fresh gilthead seabream increased from EUR 151 million in 2020 to over EUR 245 million in 2024, despite relatively stable import volumes⁶⁰.

While frozen trade remains marginal (below 5% of volumes), its value also increased in recent years, reflecting price inflation rather than a structural shift in product formats. Fresh products continue to dominate the EU market, underlining the central importance of efficient logistics, cost control, and cold-chain reliability for Mediterranean seabass and seabream producers (Figure 18, Figure 19, Figure 20, and Figure 21).

Figure 18: EU-27 trade balance of European seabass in volume

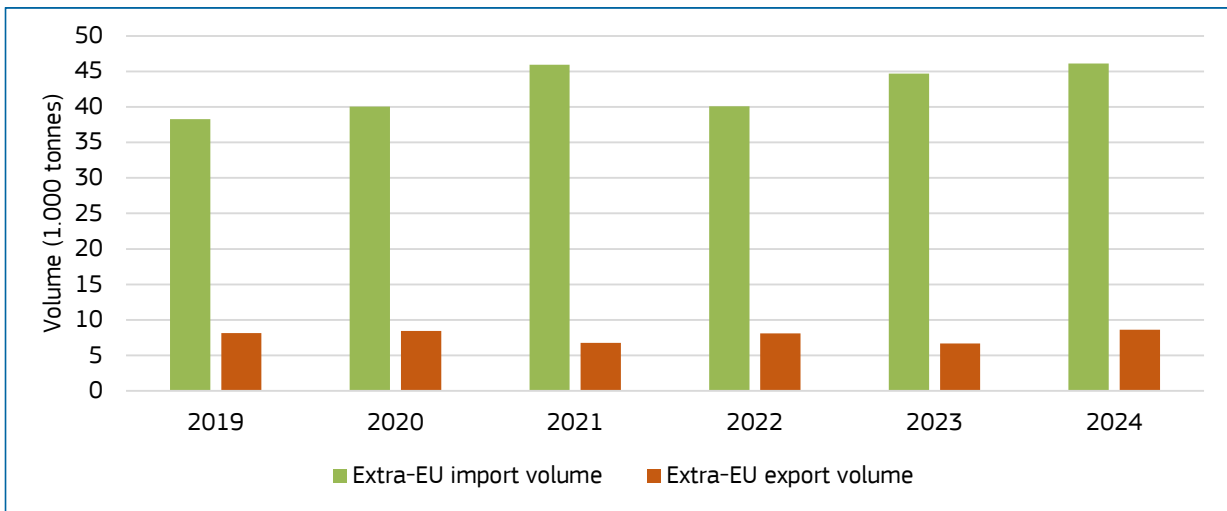


Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

⁵⁹ European Parliament (2022). *Russia's war on Ukraine: Support for the fishing, aquaculture and fish-processing sectors*. [Europarl.europa.eu](https://europarl.europa.eu)

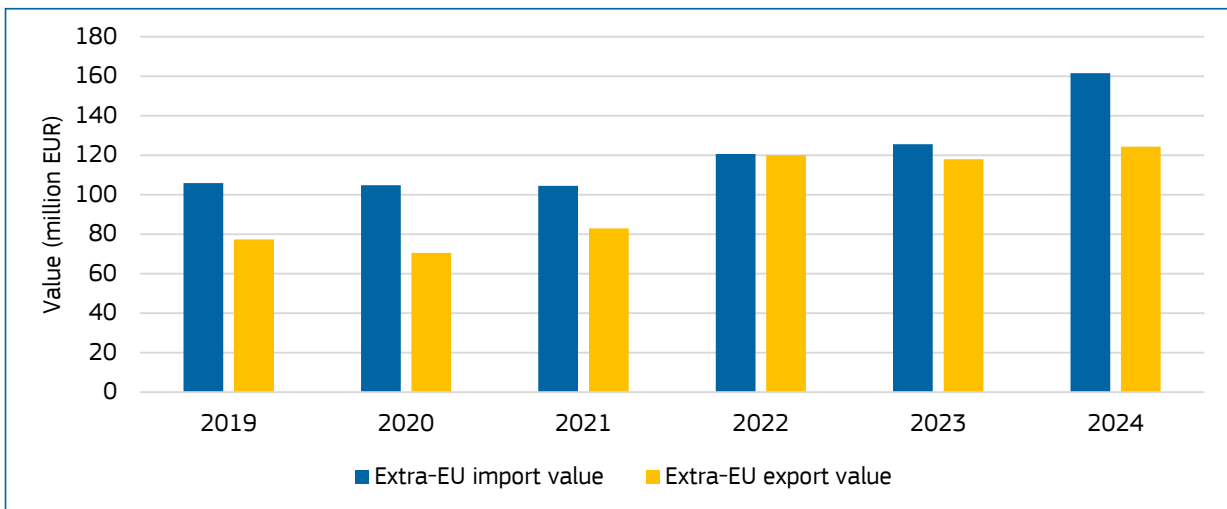
⁶⁰ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 19: EU-27 trade balance of gilthead seabream in volume



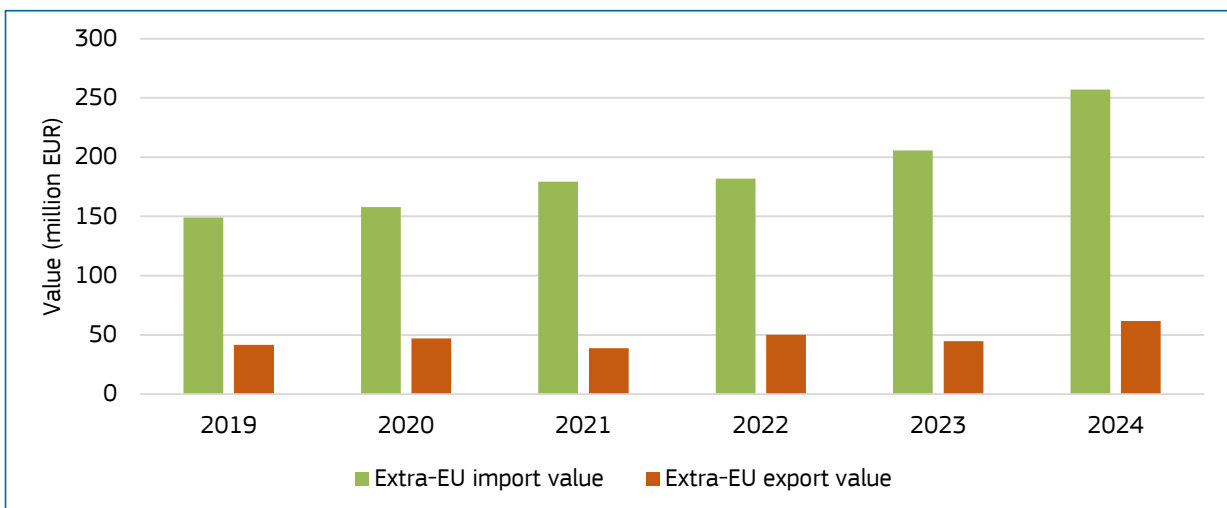
Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 20: EU-27 trade balance of European seabass in value



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 21: EU-27 trade balance of gilthead seabream in value

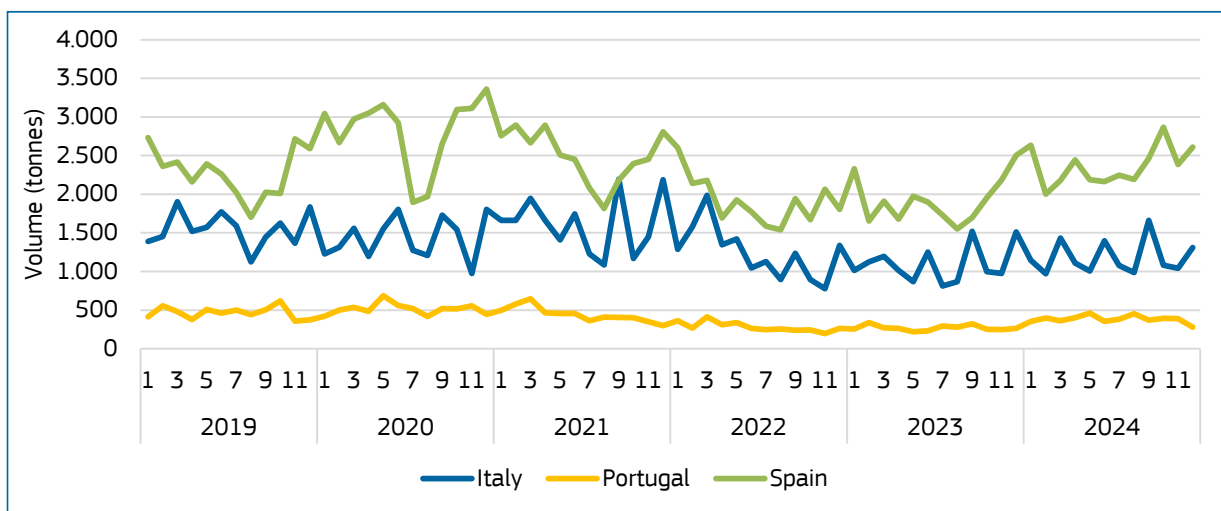


Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

4.2.3 Consumer demand and market shifts

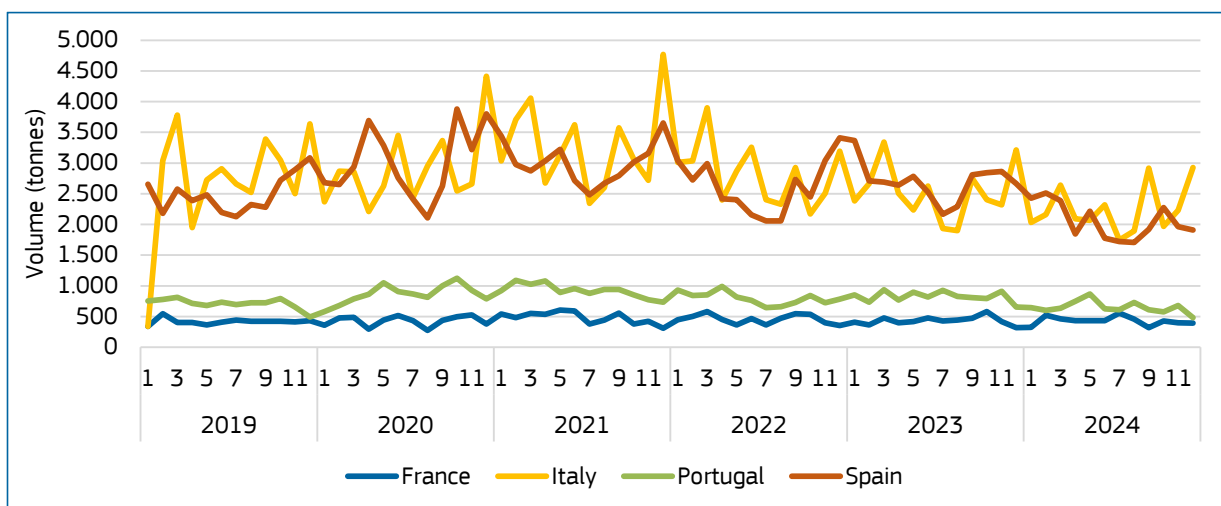
The onset of the COVID-19 pandemic led to a sharp contraction in HORECA demand for fresh seabass and seabream, as restaurants and catering services closed during successive lockdowns. This decline was partially offset by increased household consumption, as consumers shifted toward home cooking. Retail data confirm this substitution effect (Figure 22 and Figure 23). In Spain, household purchases of fresh seabass increased from approximately 27.400 tonnes in 2019 to 33.900 tonnes in 2020 (+24%), while seabream rose from 29.900 tonnes to 36.000 tonnes (+21%)⁶¹. Italy and Portugal showed similar patterns: Italian seabass purchases remained close to 17.200 tonnes in 2020 (-8% compared with 2019), while seabream volumes edged up slightly (+0,5%); Portuguese household purchases increased strongly for both species (+10% for seabass and +21% for seabream).

Figure 22: Household consumption of fresh European seabass in selected EU Member States



Source: EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

Figure 23: Household consumption of fresh gilthead seabream in selected EU Member States



Source: EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

⁶¹ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

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By 2021, demand had broadly recovered across Mediterranean markets as foodservice reopened, while retail demand remained elevated⁶². Household purchases returned to, or exceeded, pre-pandemic levels in several Member States. In Italy, seabass purchases increased to around 19.400 tonnes (+13%), and seabream consumption exceeded 39.300 tonnes (+13%), the highest level observed during the period⁶³. Spain maintained high household volumes for both species, and France also recorded strong seabream sales in 2021.

From 2022 onward, rising inflation, particularly linked to feed, fuel, and energy costs, began to weigh more visibly on household purchasing power. Volume declines became apparent across all major markets. In Italy, seabream purchases fell from 39.300 tonnes in 2021 to 34.000 tonnes in 2022 and continued to decline to 30.300 tonnes in 2023 and 27.000 tonnes in 2024⁶³. Seabass followed an even steeper downward trajectory, dropping from 19.400 tonnes in 2021 to 14.900 tonnes in 2022, 13.200 tonnes in 2023, and 14.200 tonnes in 2024. Spain exhibited a similar pattern, with household seabass purchases declining from nearly 30.000 tonnes in 2021 to around 23.000 tonnes in 2023, before a partial recovery in 2024. Portuguese volumes also declined noticeably for both species after 2021.

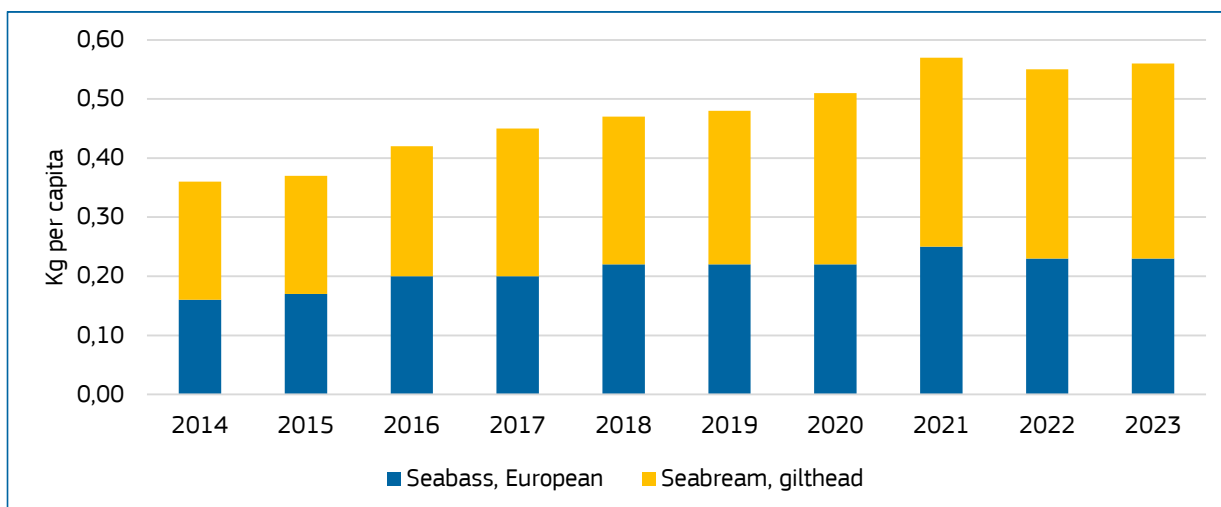
Despite falling volumes, nominal household expenditure remained elevated across markets in 2022-2024⁶³. For example, Spanish households spent around EUR 294 million on seabass in 2020 and exceeded EUR 300 million by 2024, despite lower volumes. Similarly, seabream expenditures in Italy and Spain remained high even as consumption contracted. This divergence between value and volume indicates rising unit prices and a compression of real household demand.

EU supply balance data reflect these patterns at market level (Figure 24). For European seabass, apparent consumption declined from 110.300 tonnes in 2019 to 98.700 tonnes in 2020, recovered to 110.700 tonnes in 2021, and then declined again to 100.800 tonnes in 2023⁶⁴. Production followed a similar trajectory, peaking at 101.600 tonnes in 2021 before declining to 91.900 tonnes in 2023, indicating both demand-side weakness and supply adjustment. For gilthead seabream, apparent consumption increased steadily between 2018 and 2021, from 125.400 to 140.300 tonnes, before growth slowed, reaching 147.600 tonnes in 2023. Production expanded more rapidly than consumption after 2021, suggesting higher stock accumulation or increased export orientation as inflation constrained domestic demand.

⁶² FAO GLOBEFISH (2021). *Strong recovery for bass and bream in 2021*. [Fao.org](https://www.fao.org)

⁶³ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

⁶⁴ EUMOFA [supply balance](#) dashboard.

Figure 24: Estimated per capita apparent consumption of gilthead seabream and European seabass in the EU⁶⁵ (in live weight equivalents)

Source: EUMOFA [supply balance](#) dashboard.

As prices increased, consumers became more price-sensitive, particularly in southern Europe. Rather than exiting the category, many households adjusted by moderating purchase volumes, selecting smaller sizes, or substituting toward other aquatic food products when fresh seabass and seabream became less affordable^{66, 67}. While some substitution toward frozen or processed products occurred at household level, fresh whole seabass and seabream continued to dominate consumption patterns, confirming the limited scope for format substitution for these species.

4.2.4 Price trends

Import prices for fresh seabass and seabream into the EU (Figure 25, Figure 26, and Figure 27) increased steadily from 2020 onward, reflecting rising production, feed, energy, and logistics costs, alongside broader inflationary pressures and post-pandemic supply volatility^{68, 66}. For both species, prices rose most sharply during 2021-2022. Italy and Spain experienced the strongest increases, while price growth in Greece was more gradual but sustained⁶⁹. For fresh gilthead seabream, import prices in Spain increased by around 40% between 2020 and 2024, with similar upward trajectories observed in Italy and steady gains in Greece. European seabass followed a comparable trend, although with greater month-to-month volatility. Across all major importing markets, import prices in 2025 remained well above their 2020 levels, despite some short-term easing during 2023-2024.

⁶⁵ From 2014-2019 data includes the UK (EU-28), from 2020 onward data concerns the EU-27.

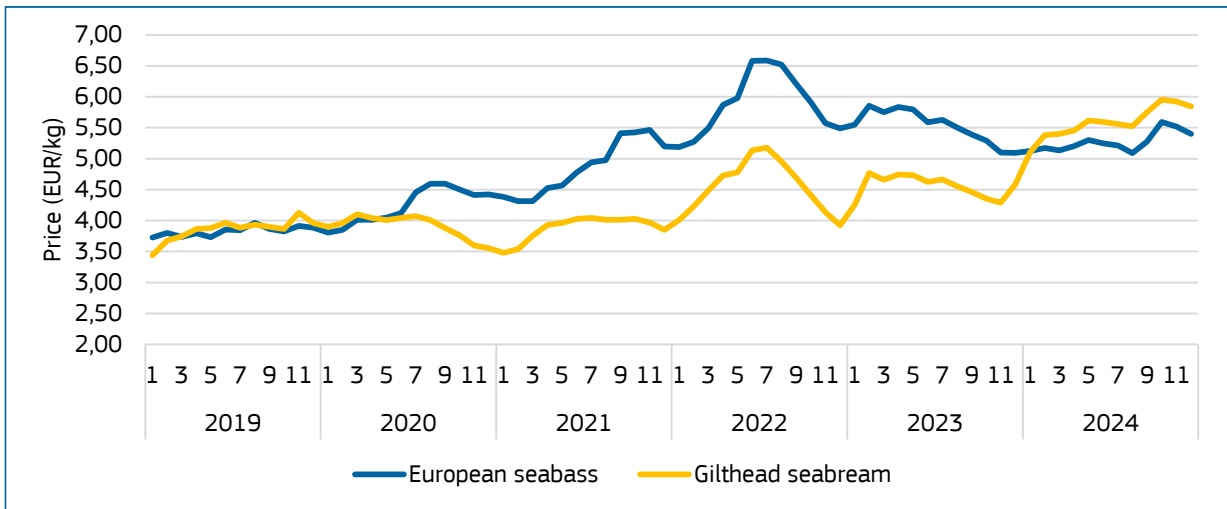
⁶⁶ FAO GLOBEFISH (2023). *Seabass and seabream: prices rise as farmers grapple with costs*. [Fao.org](#)

⁶⁷ CBI (2021). *What is the demand for fish and seafood on the European market?* [Cbi.eu](#)

⁶⁸ European Parliament (2022). *Russia's war on Ukraine: Support for the fishing, aquaculture and fish-processing sectors*. [Europarl.europa.eu](#)

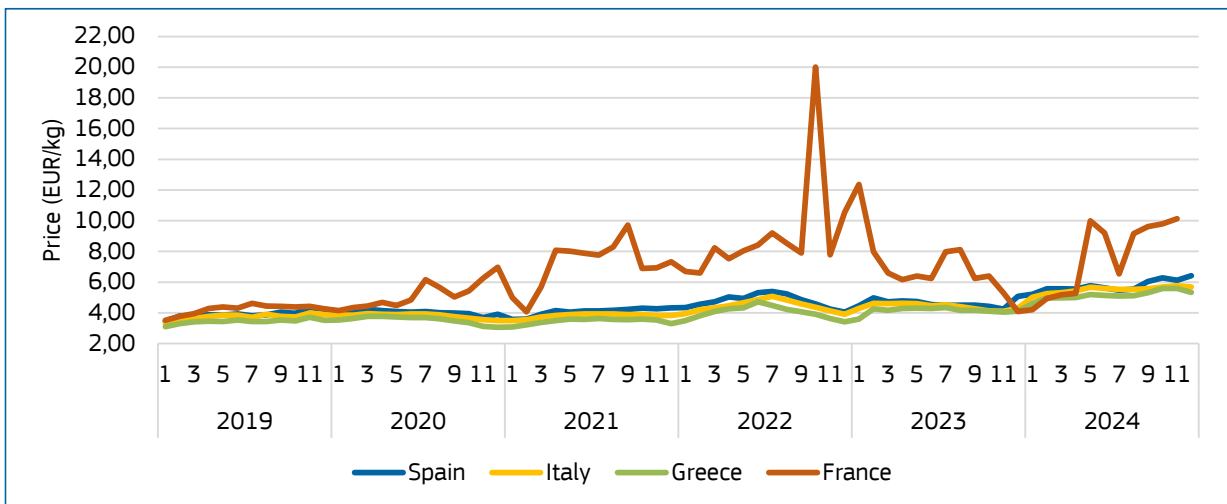
⁶⁹ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 25: Weighted average extra-EU import price of fresh European seabass and gilthead seabream



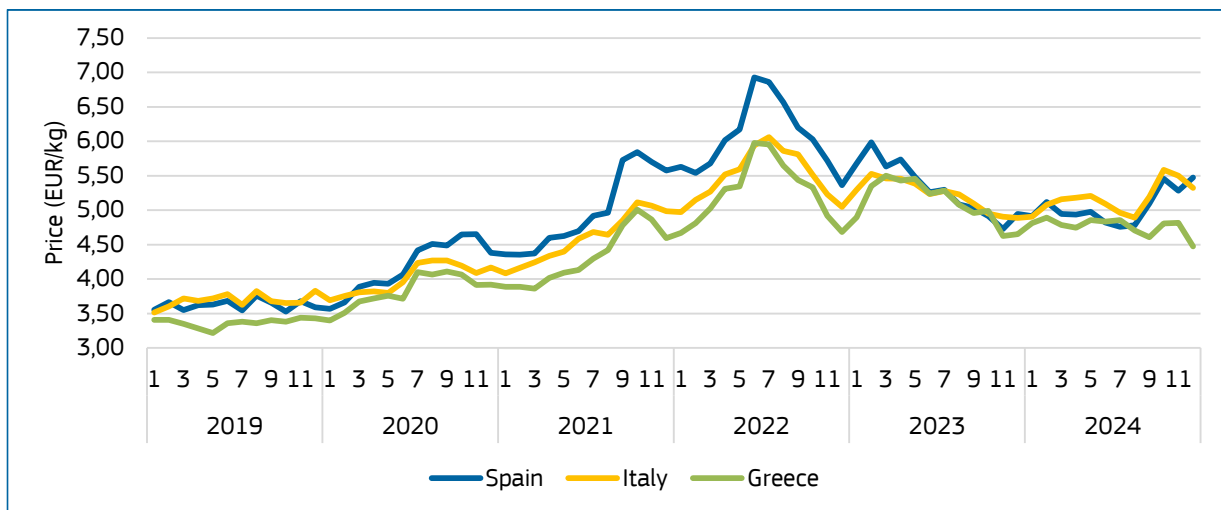
Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 26: Weighted average extra-EU import price of fresh gilthead seabream in selected EU Member States



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

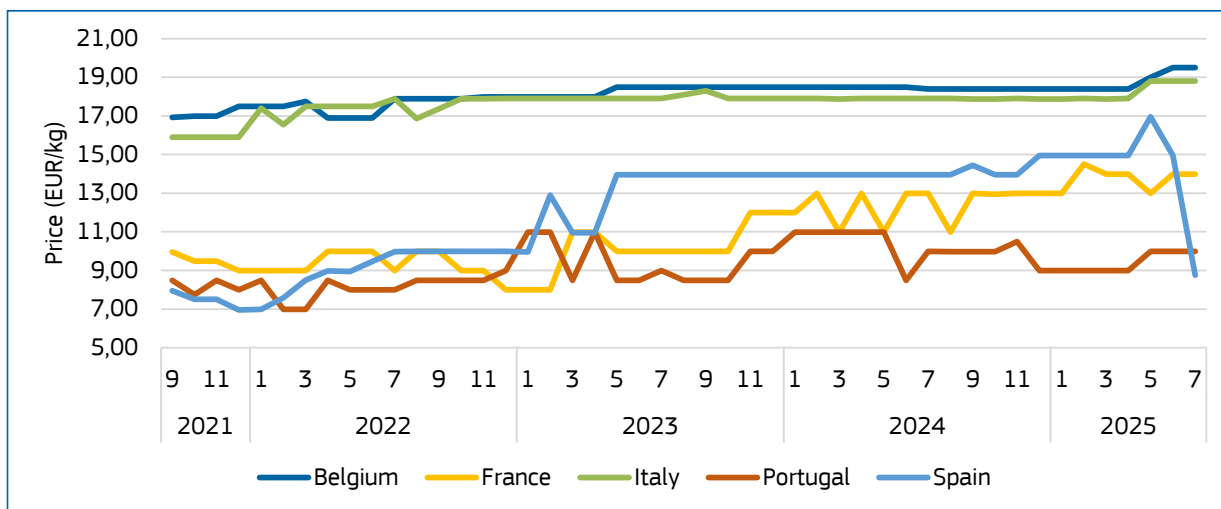
Figure 27: Weighted average extra-EU import price of fresh European seabass in selected EU Member States



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

These import-level dynamics were transmitted to consumer markets with limited attenuation. Online retail data indicate a sustained upward shift in prices for both species across nearly all observed markets from 2021 onward (Figure 28 and Figure 29). For gilthead seabream, retail prices in Belgium and Italy increased by roughly 10-15% between 2021 and 2024, reaching or exceeding 18,00 EUR/kg in most months of 2024⁷⁰. France recorded the strongest proportional increase, with prices rising by 25-35% as levels moved from a lower base to consistently above 11,00-12,00 EUR/kg. In Spain and Portugal, where seabream prices are structurally lower, increases of 15-20% were observed over the same period, before early signs of stabilisation in 2025.

Figure 28: Online retail prices of fresh gilthead seabream in selected Member States



Source: EUMOFA [online retail prices](#) dashboard.

Fresh seabass retail prices followed a broadly similar pattern. Belgian and Italian prices rose by around 10-15% between 2021 and 2024, reaching the 18,00-19,00 EUR/kg range⁷¹. In France, prices increased more sharply (by 20-30%), moving from approximately 9,00-10,00 EUR/kg in 2021 to 11,00-12,50 EUR/kg in 2023-2024. Spain and Portugal remained the lowest-priced markets in the sample but still

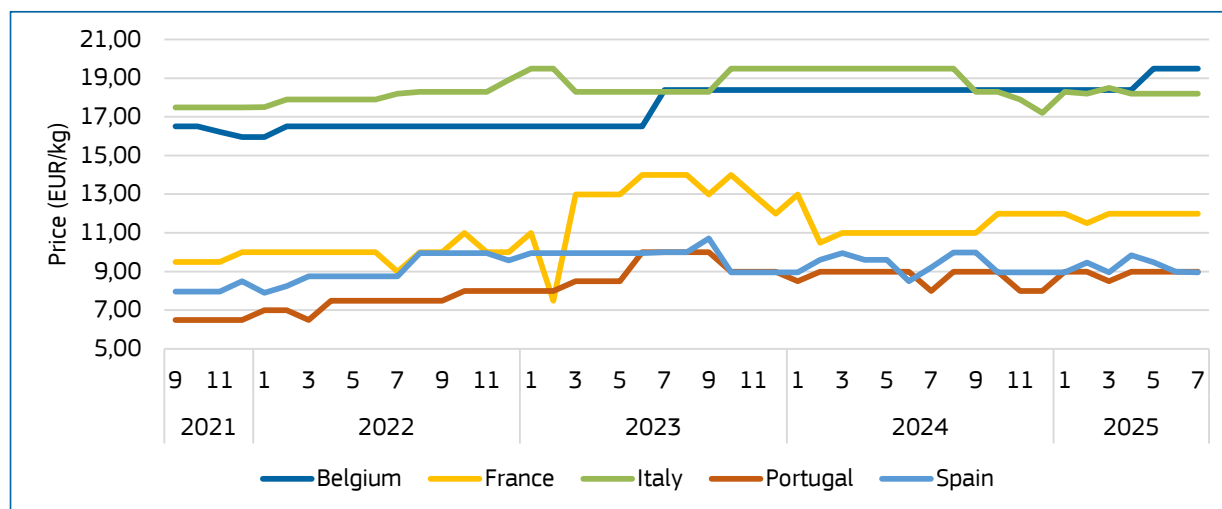
⁷⁰ EUMOFA [online retail prices](#) dashboard.

⁷¹ EUMOFA [online retail prices](#) dashboard.

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recorded price growth of 10-15% over the period. Across all Member States, early 2025 data confirm that retail prices remain clearly above 2021 levels, consistent with persistent upstream cost pressures and limited scope for price reversal.

Figure 29: Online retail prices of fresh seabass in selected Member States



Source: EUMOFA [online retail prices](#) dashboard.

4.3 Cod

4.3.1 Production

Cod is one of the most important whitefish species on the EU market, widely consumed across Member States and forming a staple in both retail and foodservice channels⁷². To meet strong and stable consumer demand, the EU relies heavily on imports, primarily from Norway, Russia, Iceland, and the UK⁷³. While cod is still landed domestically in several Member States, notably Denmark, Spain, and Germany, EU production accounts for only a small share of total supply⁷⁴. As a result, cod remains one of the EU's most significant imported fishery and aquaculture products in both volume and value terms.

EU cod landings have been in structural decline for more than a decade, reflecting deteriorating stock conditions and progressively tighter fisheries management measures⁷⁵. Total landings fell from around 81.000 tonnes in 2014 to just under 17.000 tonnes in 2023, with the most pronounced contraction occurring after 2019, when quotas were substantially reduced in response to adverse scientific advice on key cod stocks⁷⁴.

The COVID-19 pandemic coincided with this ongoing downward trajectory and contributed to additional short-term disruptions to fishing activity and processing operations through lockdowns, labour shortages, and logistical constraints. However, the sharp decline in cod landings observed between 2019 and 2021 primarily reflects pre-existing structural adjustments driven by quota reductions, rather than a pandemic-induced shock. COVID-19 therefore acted mainly as a compounding factor, intensifying pressures already stemming from biological and regulatory constraints.

Following the substantial quota cuts implemented after 2019, cod landings across the EU contracted sharply between 2019 and 2021 (Figure 30), with several major producing Member States experiencing

⁷² EUMOFA (2025). *The EU fish market – 2025 edition*. [Eumofa.eu](#)

⁷³ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

⁷⁴ EUMOFA [landings](#) dashboard (Eurostat Fishery).

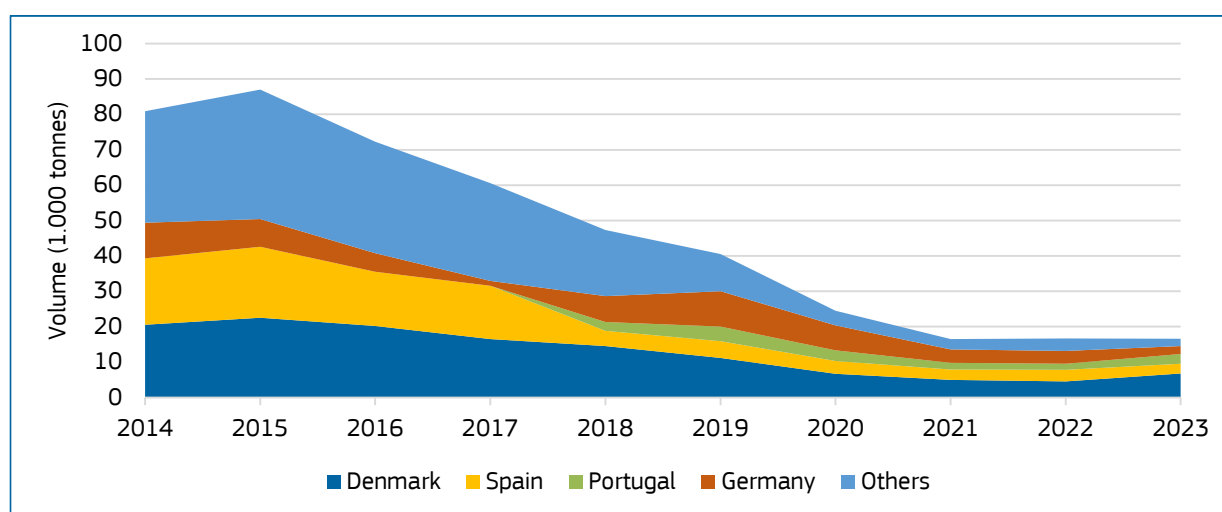
⁷⁵ ICES (2025). *ICES advice on cod*. [ices.com](#)

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reductions of 40-90%⁷⁴. Denmark, the EU's largest cod-landing Member State, saw volumes decline by around 55%, from 11.200 tonnes in 2019 to about 4.900 tonnes in 2021. Germany recorded a similar contraction of roughly 60%, while Poland experienced one of the most severe declines, with landings falling by more than 90%, from 4.400 tonnes to just 300 over the same period⁷⁶. Spain's landings decreased by around 40%, and Portugal reported a reduction of approximately 55%. Smaller producing Member States, including Sweden and Ireland, also recorded pronounced declines, with combined landings falling by nearly 60% between 2019 and 2021.

EU cod landing volumes stabilised after 2021, with a modest recovery visible in 2023, particularly in Denmark (6.800 tonnes) and Portugal (2.700 tonnes). Nevertheless, overall landings remained well below pre-2019 levels, underscoring the lasting impact of quota reductions and stock limitations.

Figure 30: Annual EU-27 landing volume of cod



Source: EUMOFA [landings](#) dashboard (Eurostat fishery).

In value terms, EU cod landings increased by around 15% between 2021 and 2023 (Figure 31), despite volumes remaining historically low. This rise was driven primarily by developments in Denmark, where landing volumes increased by approximately 37% and average unit prices rose by around 11%, together accounting for most of the net gain in EU landing value⁷⁷. Across other Member States, changes were more heterogeneous: some recorded higher prices or modest volume recoveries, while others continued to experience declining landings. At EU level, these movements largely offset one another. Overall, the increase in landed value mainly reflects higher unit prices, driven by elevated fuel, labour, and input costs, combined with persistent tight supply conditions that placed upward pressure on prices for the limited volumes available.

In parallel, the Brexit transition reshaped the institutional and regulatory context for EU-UK cod fisheries. As the UK became an independent coastal state, annual bilateral consultations were introduced to determine total allowable catches (TACs) and quota shares for shared stocks such as North Sea cod⁷⁸. This change reduced predictability and, for some EU fleets, access to UK waters, while increasing administrative and logistical burdens linked to border procedures, customs formalities, and rules of origin, particularly for fresh and chilled cod products⁷⁹. At the same time, scientific advice on

⁷⁶ Years with very low or zero reported landings in some Member States may reflect gaps or inconsistencies in national reporting (i.e., confidentiality reasons).

⁷⁷ EUMOFA [landings](#) dashboard (Eurostat Fishery).

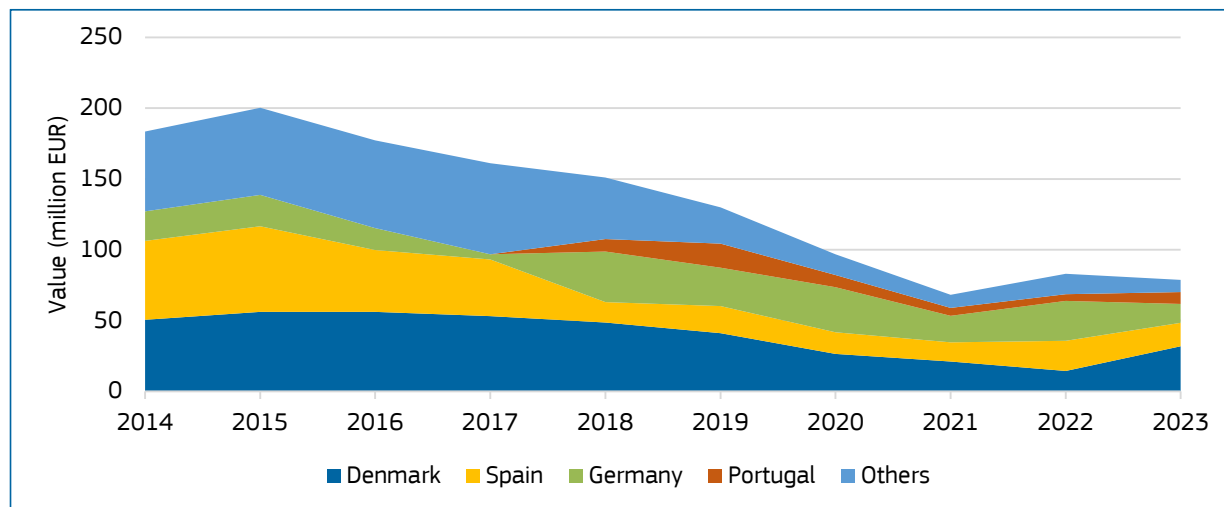
⁷⁸ European Commission (2025). *The EU and UK formalise agreement on full reciprocal access to waters until 2038*. [Europa.eu](#)

⁷⁹ EUMOFA (2025). *The EU fish market – 2025 edition*. [Eumofa.eu](#)

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declining cod stocks led to progressive quota reductions on both sides⁸⁰. While cod trade volumes partially recovered in 2022-2023, the combined effects of quota reallocation, regulatory divergence, and biological constraints continue to shape EU-UK cod supply and trade flows.

Figure 31: Annual EU-27 landing value of cod



Source: EUMOFA [landings](#) dashboard (Eurostat fishery).

4.3.2 Processing and trade

Cod processing in the EU is heavily reliant on imported raw materials, primarily fresh and frozen whole cod, fresh and frozen fillets, and salted or dried products. These imports supply major processing hubs in Member States such as Denmark, the Netherlands, Germany, and Poland, where cod is filleted, portioned, frozen, packaged, and distributed for retail and foodservice use. Raw material costs alone account for more than 70% of total production costs in the sector, making stable and affordable access to imports critical for competitiveness⁸¹.

To support processors, the EU applies autonomous tariff quotas (ATQs) that allow duty-free imports of selected cod products, notably 110.000 tonnes of headed-and-gutted cod and 45.000 tonnes of cod fillets in recent years⁸². While these measures help mitigate cost pressures, they cannot fully shield the industry from global disruptions. Between 2020 and 2024, COVID-19, Brexit, and Russia's war of aggression against Ukraine collectively reshaped cod trade flows, cost structures, and sourcing strategies across the EU.

The COVID-19 pandemic initially disrupted labour availability, logistics, and fish supply chains in 2020. However, assessments by the STECF indicate that the processing sector proved relatively resilient. By 2021, most disruptions had eased in many Member States, supported by the rapid implementation of health and safety protocols, flexible adjustment of output, and a shift in sales away from foodservice toward retail channels⁸³.

Brexit, by contrast, introduced more persistent frictions. The UK's exit from the EU customs union resulted in new administrative requirements, border checks, and delays, particularly affecting fresh and chilled cod products. These changes complicated both imports of UK-origin raw material into the EU and re-exports of EU-processed cod products back to the UK. Processors also faced higher freight costs,

⁸⁰ ICES (2025). *ICES advice on cod*. [ices.com](https://www.ices.com)

⁸¹ STECF (2024). *Economic report on the EU fish processing industry*. [Europa.eu](https://ec.europa.eu/eurostat)

⁸² EUR-Lex (2023). *Council Regulation (EU) 2023/2720*. [Eur-lex.eu](https://eur-lex.europa.eu)

⁸³ JRC (2020). *The impact of COVID-19 on the EU-27 fishing fleet*. [Publications.jrc.ec.europa.eu](https://publications.jrc.ec.europa.eu)

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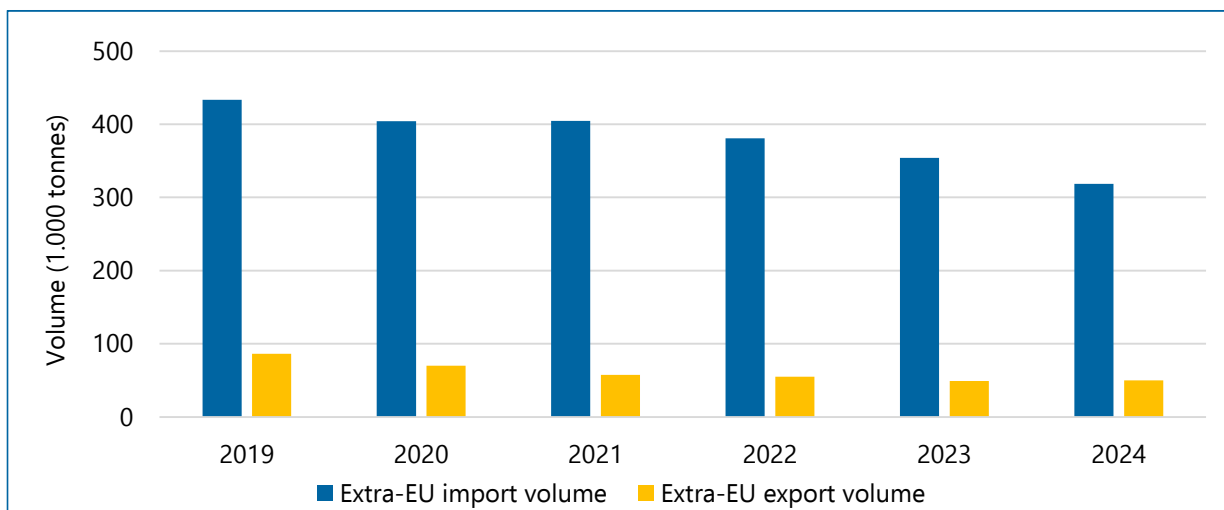
additional health certification requirements, and greater uncertainty in delivery times, especially in countries such as the Netherlands and Belgium that serve as key logistical hubs.

Russia's invasion of Ukraine in 2022 triggered an energy shock and inflationary surge that further strained EU cod processors. Despite the geopolitical context, Russia remained the EU's second-largest supplier of cod throughout much of the period, with exports concentrated in frozen whole fish and fillets that are essential for EU processing lines. Cod products themselves were largely exempt from broad EU sanctions, allowing trade to continue, albeit with higher freight costs, increased insurance premiums, and reputational risks. Some processors reported efforts to reduce dependence on Russian-origin supply⁸⁴, but available trade data indicate that import volumes remained relatively stable through 2024⁸⁵.

In mid-2025, however, the EU introduced targeted sanctions against specific Russian seafood exporters, notably Norebo and Murman SeaFood⁸⁶. These measures include asset freezes and restrictions on access to financial services, aimed at disrupting logistics and commercial operations in the whitefish sector⁸⁷. Although cod is not subject to a direct embargo, the sanctions affecting exporters and shipping operators have increased compliance burdens, delayed transactions, and introduced new uncertainty for EU processors reliant on Barents Sea supply routes.

Despite these successive disruptions, the EU has remained one of the world's largest importers of cod products (Figure 32 and Figure 33). Total cod import volumes peaked at over 404.900 tonnes in 2021, before declining to around 319.100 tonnes in 2024. In value terms, imports reached a high of approximately EUR 2,5 billion in 2022, then eased to about EUR 2,2 billion in 2024, reflecting elevated unit prices rather than a collapse in underlying demand. On the export side, EU cod export volumes have trended downward since 2020, while export values have remained broadly stable. This divergence likely reflects rising processing, packaging, and distribution costs, alongside higher unit export prices and a gradual shift toward more processed products such as skinless fillets, blocks, and convenience-oriented formats, as processors sought to preserve margins amid sustained cost inflation.

Figure 32: EU-27 trade balance of cod in volume



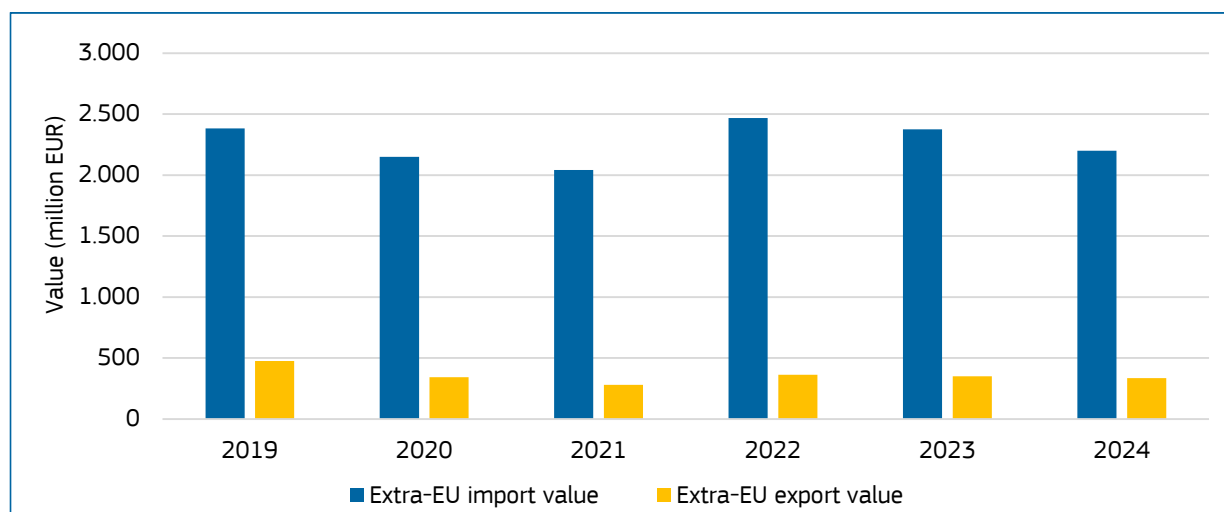
Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

⁸⁴ Gephart, J.A., et al. (2024). *Existing seafood traceability tools are insufficient for enforcing import restrictions*. [Nature.com](#)

⁸⁵ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

⁸⁶ European Council (2025). *14th package of sanctions on Russia's war of aggression against Ukraine*. [Consilium.europa.eu](#)

⁸⁷ The Fishing Saily (2025). *EU sanctions on Russian exporters threaten whitefish trade stability*. [Thefishingdaily.com](#)

Figure 33: EU-27 trade balance of cod in value

Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

4.3.3 Consumer demand and market shifts

Demand for cod products, particularly frozen fillets, proved relatively resilient during the pandemic period, as the collapse of foodservice demand in 2020 redirected consumption toward retail channels. In many EU markets, the share of frozen cod products in retail assortments increased as households prioritised longer shelf life, ease of storage, and flexibility for home consumption. This shift was primarily driven by pandemic-related restrictions and changes in eating habits, rather than by price considerations alone.

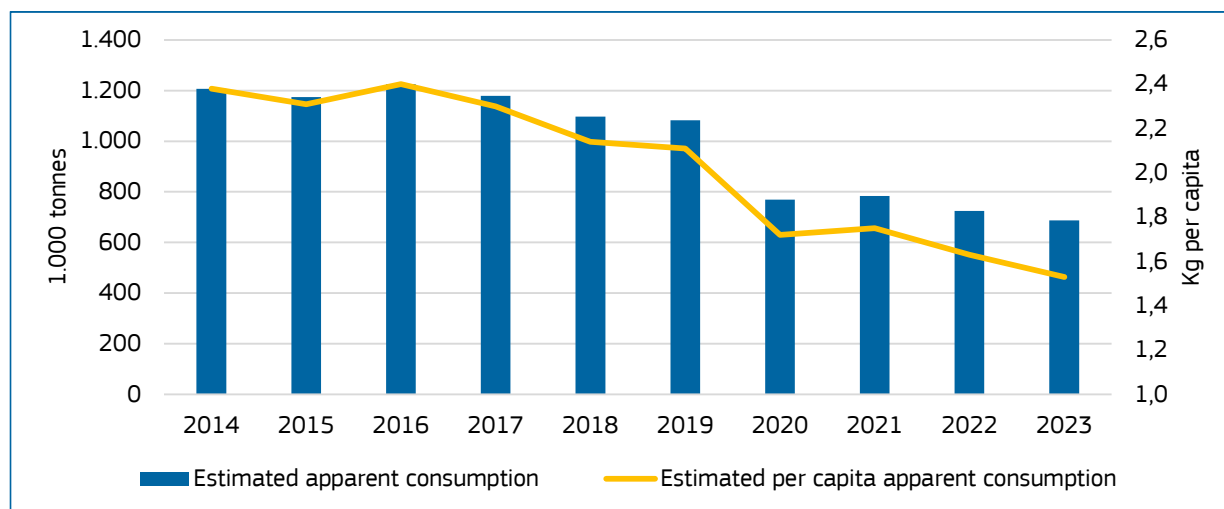
As described in chapter 3, rising inflation from 2021 onwards reinforced a broader shift toward price sensitivity and greater reliance on frozen and processed formats across commodity groups. For cod, these macro-level adjustments interacted with tightening supply conditions. While frozen formats retained relative stability in retail, fresh cod became increasingly exposed to both higher prices and reduced availability.

These demand side adjustments are reflected in the EU supply balance for cod (Figure 34). Estimated apparent consumption declined from around 1,2 million tonnes in 2014 to approximately 0,69 million tonnes in 2023, a reduction of more than 40%, while estimated per capita consumption fell from about 2,4 kg to 1,5 kg over the same period⁸⁸. Domestic production contracted sharply (by almost 80% between 2014 and 2023⁸⁹), and imports decreased by more than one third, whereas exports remained relatively stable. This indicates that reduced availability of cod on the EU market has been driven primarily by structural supply constraints, notably lower domestic landings and gradually shrinking import volumes, rather than by increased export orientation.

⁸⁸ EUMOFA [supply balance](#) dashboard.

⁸⁹ Note that the UK is included in domestic production in 2014 but excluded in 2023.

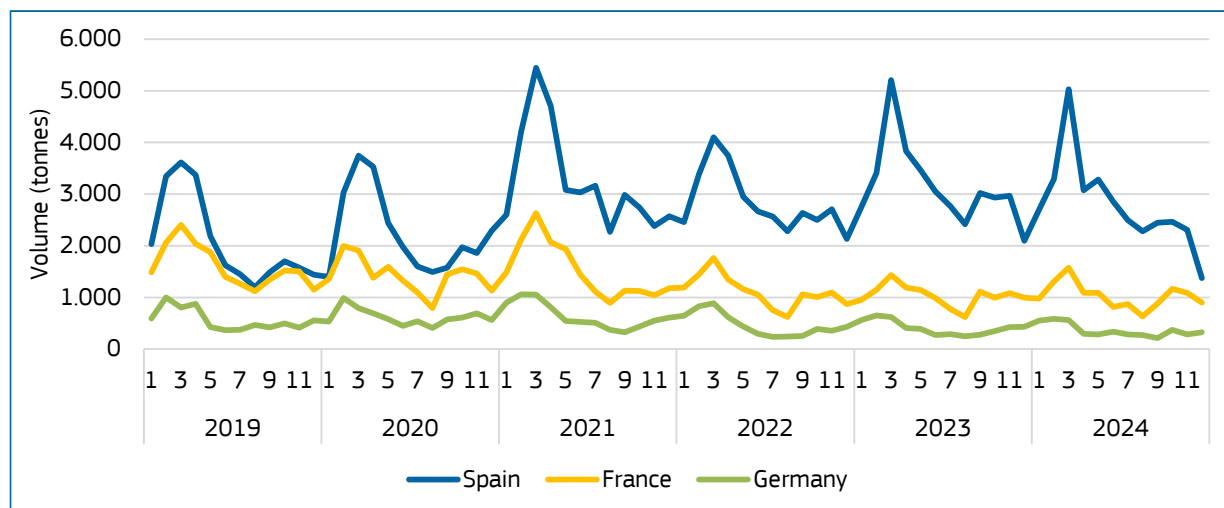
Figure 34: Estimated apparent consumption and per capita apparent consumption of cod in the EU⁹⁰ (live weight equivalents)



Source: EUMOFA [supply balance](#) dashboard.

Household data for fresh cod show a similar rebalancing away from fresh products (Figure 35). Between 2019 and 2024, fresh cod purchases declined substantially in several EU markets: in Denmark they fell from around 550 tonnes to 280 tonnes, in France from about 19,200 tonnes to 12,400 tonnes, and in Sweden from just over 600 tonnes to around 330 tonnes⁹¹. Spain represents a notable exception: fresh cod consumption there rose from about 25,000 tonnes in 2019 to more than 30,000 tonnes by 2024, driven in part by a pronounced spike in 2021 during the height of pandemic-related home cooking. Overall, the data point to a longer-term reallocation of demand away from fresh cod toward frozen and processed products, supported by their relative affordability, convenience, and greater resilience to supply and price volatility.

Figure 35: Household consumption of fresh cod in selected EU Member States



Source: EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

⁹⁰ From 2014-2019 data includes the UK (EU-28), from 2020 onward data concerns the EU-27.

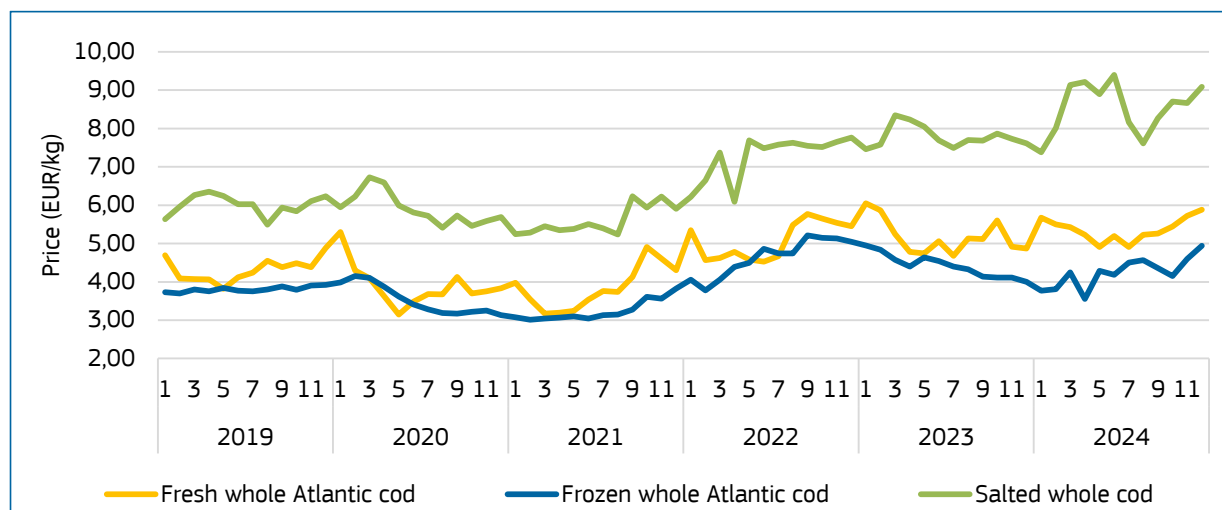
⁹¹ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

4.3.4 Price trends

Cod remains a key species in EU seafood markets, but its price trajectory since 2020 has been shaped by successive supply shocks and persistent inflationary pressures. At the import level, the most significant disruption occurred in 2022, when the jointly managed Norway-Russia Barents Sea quota was reduced by 20%⁹². This decision sharply constrained raw material availability and contributed to a 30% increase in average extra-EU import price of cod, which rose from around 5,00 EUR/kg in 2021 to approximately 6,60 EUR/kg in 2022⁹³. Over the same period, import volumes declined by about 7%, confirming that price increases were driven by supply scarcity and higher input costs rather than stronger demand. In 2023, average import prices rose more moderately, by around 2% to 6,70 EUR/kg, suggesting that the rapid escalation of 2022 had plateaued, although price levels remained well above pre-pandemic norms.

Across product forms, the 2022 supply shock is clearly reflected in import price dynamics (Figure 36, Figure 37, and Figure 38). Fresh cod fillets, which historically traded in the range of 9,00-11,00 EUR/kg, increased by roughly 35% between 2021 and 2023, consistently exceeding 13,00 EUR/kg and reaching above 15,00 EUR/kg by late 2024⁹³. Frozen cod fillets followed a similar, though slightly less pronounced, trajectory: prices rose by approximately 25-30% in 2022, entering a new range of 7,00-8,00 EUR/kg and remaining at these elevated levels throughout 2023-2024. Salted whole cod experienced one of the sharpest adjustments, with prices rising by around 20% in early 2022 and reaching levels 30-40% higher than in 2021 by the end of 2023. Prices for fresh and frozen whole cod also increased markedly, by around 25-35% relative to pre-2022 averages, reflecting higher fuel, freight, and handling costs. The greatest volatility was observed for dried whole cod, where prices more than doubled during the early pandemic shock in 2020 and increased further by an additional 30-40% between 2022 and 2024, remaining volatile thereafter.

Figure 36: Weighted average extra-EU import price of fresh and frozen whole Atlantic cod and salted whole cod

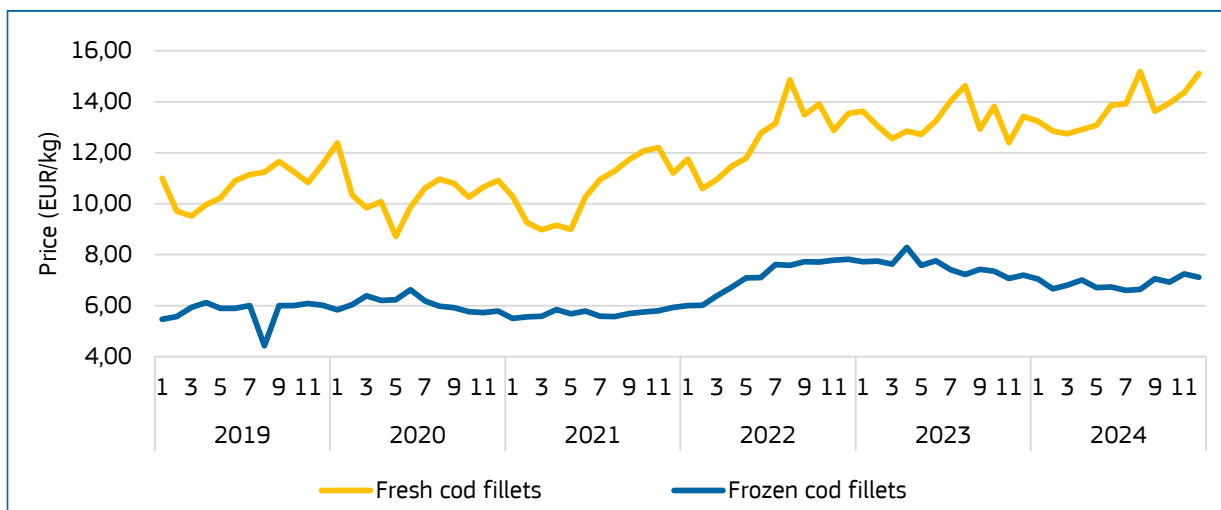


Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

⁹² ICES (2025). *Latest ICES advice on Barents Sea cod*. [ices.com](https://www.ices.com)

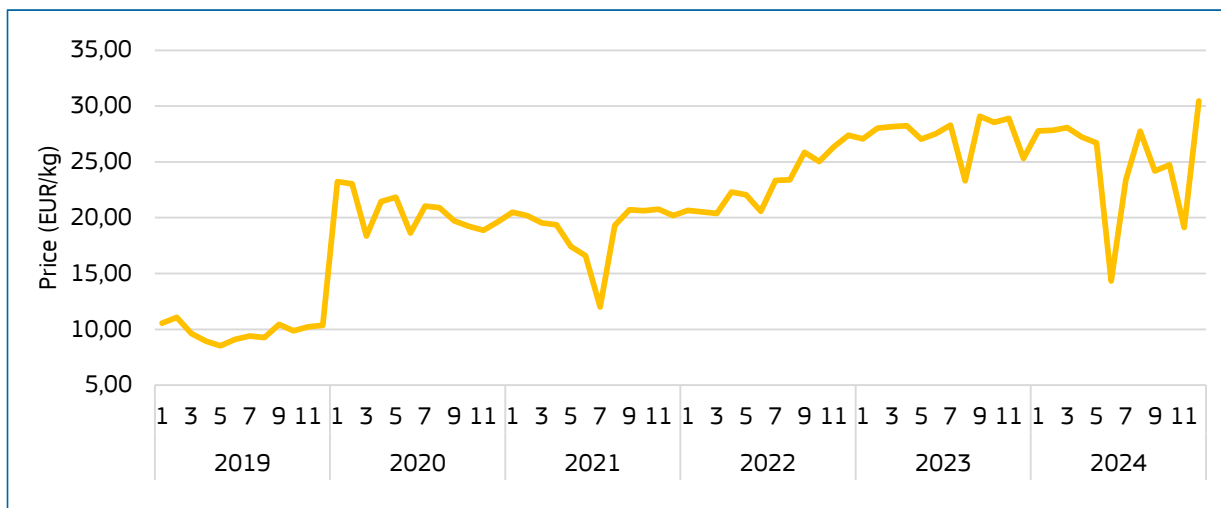
⁹³ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 37: Weighted average extra-EU import price of fresh and frozen cod fillets



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

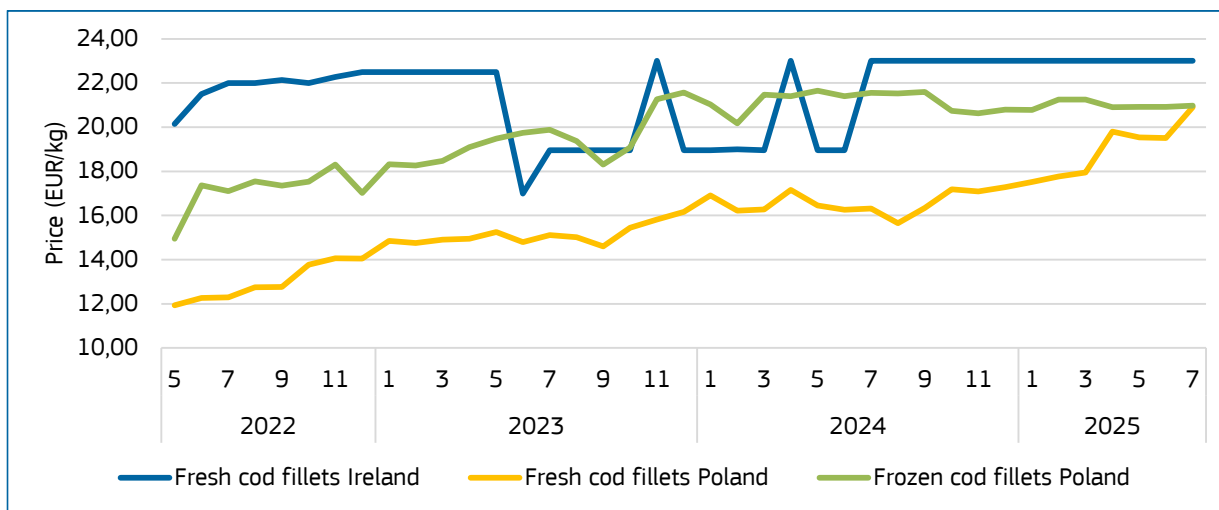
Figure 38: Weighted average extra-EU import price of dried whole cod



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Online retail data indicate that these import-level price increases were transmitted to consumers with relatively limited delay (Figure 39). In Ireland, average online prices for fresh cod fillets increased from around 21,00-22,00 EUR/kg in 2022 to approximately 23,00 EUR/kg in early 2025, representing a rise of 8-10%, despite notable month-to-month volatility⁹⁴. In Poland, where cod is typically sold at lower price points, retail price increases were more pronounced: fresh fillet prices rose from around 13,00 EUR/kg in 2022 to nearly 20,00 EUR/kg by mid-2025, a cumulative increase of roughly 50%. Frozen cod fillets exhibited a comparable pattern. In Poland, retail prices increased from approximately 15,00-17,00 EUR/kg in 2022 to more than 21,00 EUR/kg in 2023-2024, before stabilising slightly in 2025.

⁹⁴ EUMOFA [online retail prices](#) dashboard.

Figure 39: Online retail prices of fresh and frozen cod fillets in selected Member States

Source: EUMOFA [online retail prices](#) dashboard.

Taken together, these developments illustrate the high sensitivity of EU cod markets to geopolitical developments, quota decisions, and input cost inflation. Although the most acute price increases observed in 2022 have moderated, the EU cod market remains characterised by a structurally higher price environment. This has important implications for processor margins and consumer access, particularly for fresh fillet products, which continue to command a substantial premium over frozen alternatives.

4.4 Alaska pollock

4.4.1 Production

Alaska pollock is a key species for both EU and global seafood markets and is primarily harvested in the Bering Sea, off the coasts of Alaska (United States) and Russia. As one of the most widely traded whitefish species worldwide, Alaska pollock plays a central role in the EU market, particularly as a raw material for processed products such as surimi, fish fingers, and frozen fillets. The EU is entirely reliant on imports to meet demand for these products, with Alaska pollock forming a core input for German processing (notably fish fingers) and for Lithuanian reprocessing and surimi production⁹⁵.

According to national fisheries data and aggregated estimates, combined Alaska pollock production from the United States and Russia reached around 3,3 million tonnes in 2023, with Russia accounting for the larger share at approximately 1,9 million tonnes, compared with about 1,4 million tonnes from the United States⁹⁶.

Although Brexit had wide-ranging implications for EU seafood trade and policy, it had no direct impact on Alaska pollock production. Alaska pollock fisheries operate in the Bering Sea and the Sea of Okhotsk, entirely outside UK and EU waters, and are governed by national quota and control systems in the United States and Russia. Neither United States nor Russian Alaska pollock fisheries faced regulatory, certification, or quota-related disruptions linked to Brexit, and production volumes remained broadly stable through the transition period.

By contrast, the COVID-19 pandemic did not translate into a sustained decline in Alaska pollock catch volumes, but it did affect how production was organised and operated, particularly in the United States

⁹⁵ AIPCE (2024). *EU seafood supply synopsis 2024*. aipce-cep.org

⁹⁶ Data from National Marine Fisheries service (US) and Federal Agency for Fishery of the Russian Federation (Russia).

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sector. Catch data show that United States Alaska pollock catches remained broadly stable during the pandemic period, amounting to around 1,44 million tonnes in 2019 and 2020 and increasing further to approximately 1,46 million tonnes in 2021. Russian catches also remained high, rising from about 1,72 million tonnes in 2019 to 1,81 million tonnes in 2020, before easing slightly in 2021. These figures indicate that Alaska pollock fisheries in both countries continued to operate at scale throughout the pandemic.

Nevertheless, industry reports highlight that fishing and processing operations in the Bering Sea faced significant operational challenges in 2020-2021, including labour shortages, crew infections, and temporary plant closures linked to quarantine and health protocols⁹⁷. While the seafood sector was classified as essential, allowing vessels and processors to remain active, efficiency was often reduced. Some vessels operated below optimal capacity due to crew constraints, and shore-based processors implemented distancing and sanitation measures that slowed throughput⁹⁸. In this sense, the pandemic primarily exposed the sector's vulnerability to health-related labour shocks and logistical constraints in remote fishing regions, with impacts felt more through costs, operational complexity, and processing efficiency than through aggregate catch volumes.

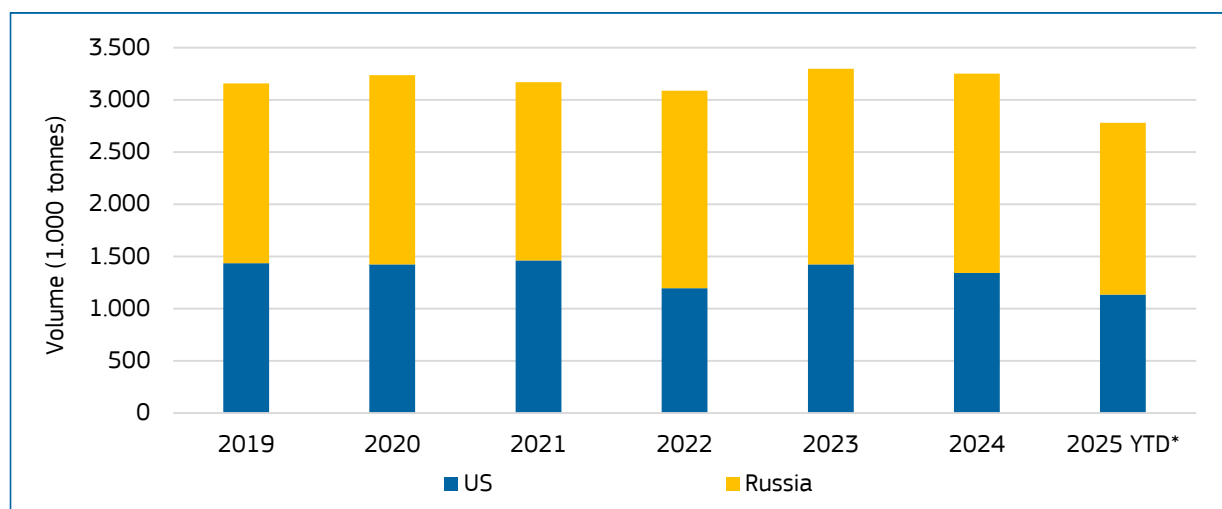
In Russia, the war of aggression against Ukraine has had significant indirect effects on Alaska pollock production (Figure 40). While Russian authorities have maintained relatively high TACs for Alaska pollock in the Far Eastern Basin, the sector has faced mounting challenges linked to sanctions, disrupted export markets, and logistical constraints. In 2023, several Russian fishing associations formally requested a reduction in the 2025 Alaska pollock quota, citing declining profitability and weak overseas demand as reasons for their inability to utilise the full TAC⁹⁹. In the Western Bering Sea, the Pollock Catchers Association specifically called for a 30% reduction in the regional TAC to better align quotas with actual catch levels, estimated at around 480.000 tonnes, well below existing ceilings¹⁰⁰. These developments indicate that, although quotas remained formally high, economic and logistical constraints under wartime conditions limited the sector's ability to utilise the full TAC, creating a widening gap between allocated fishing opportunities and actual catch levels.

⁹⁷ US Dept. of Commerce (2021). *US seafood industry and for-hire sector impacts from COVID-19*. [Noaa.gov](https://www.noaa.gov)

⁹⁸ Earl, E. (2020). *Alaska fishing industry grapples with fallout from coronavirus response*. [Adn.com](https://www.adn.com)

⁹⁹ Intrafish (2024). *Russia considers industry plea to reduce 2025 pollock quota*. [Intrafish.com](https://www.intrafish.com)

¹⁰⁰ Undercurrent News (2024). *Russian pollock industry calls for another 30% cut to West Bering Sea TAC*. [Undercurrentnews.com](https://www.undercurrentnews.com)

Figure 40: Catches of Alaska pollock in the United States and Russia

Source: National Marine Fisheries Service (US) and Federal Agency for Fishery of the Russian Federation (Russia). *For the US, 2025 YTD data cover catches up to and including week 35; for Russia, 2025 YTD data include catches up to 02.09.2025.

4.4.2 Processing and trade

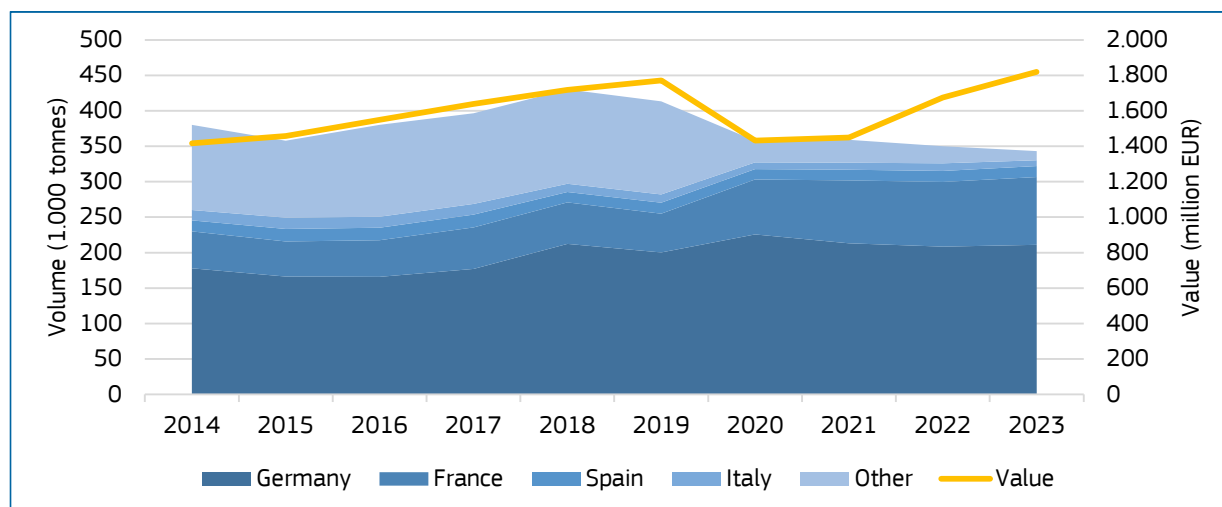
Alaska pollock is primarily processed into value-added products such as surimi, frozen fillets, and breaded items (notably fish fingers). Most primary processing – including filleting and surimi base production – takes place in the United States and China, which together handle the bulk of global Alaska pollock raw material. The EU, however, plays a crucial role as both a major consumer and a secondary processor, converting imported Alaska pollock fillets, minced blocks, and surimi base into finished products for retail and foodservice markets.

The EU processing sector for Alaska pollock-based products has remained one of the most stable and high-volume components of the whitefish industry. Production of breaded and battered products (Figure 41) has consistently exceeded 350,000 tonnes over the past decade, peaking at more than 430,000 tonnes in 2018 before easing to around 350,000 tonnes in 2022-2023 as processors faced rising raw-material, energy, and labour costs. Germany is by far the dominant producer, accounting for roughly 60% of EU production, and increasing production from 166,000 tonnes in 2015 to over 210,000 tonnes in 2023¹⁰¹. France is the second-largest hub, expanding production from about 55,000 tonnes in 2019 to more than 95,000 tonnes in 2023, supported by strong domestic demand for coated whitefish products. Production in Spain, Italy, Belgium, and Estonia has remained smaller but relatively stable, largely serving national retail markets.

In value terms, EU production of coated whitefish products increased from around EUR 1,4 billion in 2014 to nearly EUR 1,9 billion in 2023, reflecting higher input costs as well as sustained consumer demand for affordable, convenience-oriented seafood¹⁰¹. Although product formulations often combine Alaska pollock with other whitefish species, processing data confirm that Alaska pollock remains the cornerstone raw material underpinning the mass-market frozen and coated segment, with Germany and France driving most economic activity along this value chain.

¹⁰¹ EUMOFA [processing](#) dashboard (Eurostat PRODCOM).

Figure 41: EU-27 processing volume and value of fish fillets in batter or breadcrumbs, including fish fingers (excluding prepared meals and dishes)



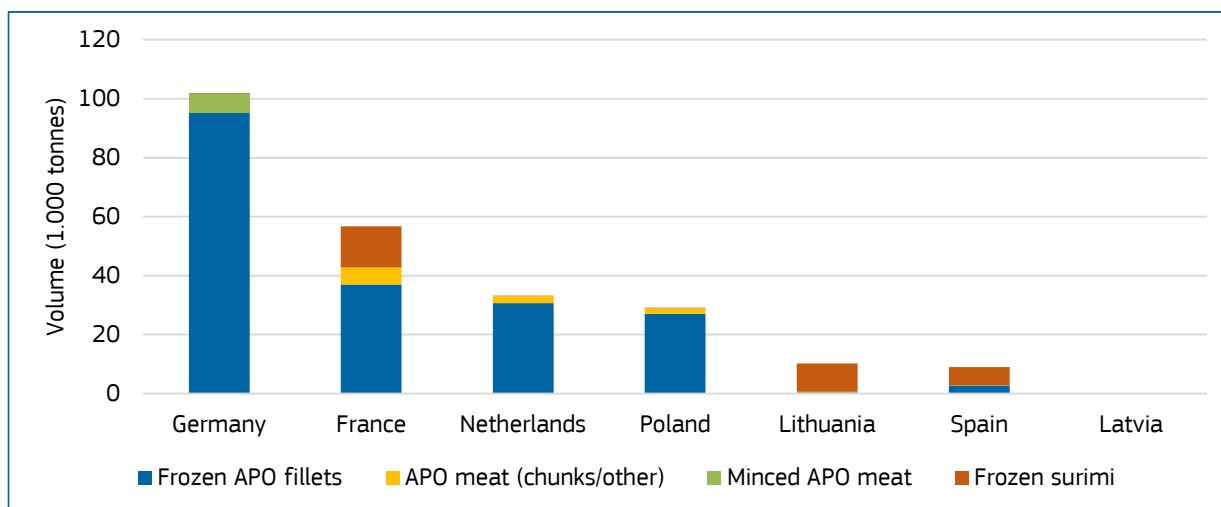
Source: EUMOFA [processing](#) dashboard (Eurostat PRODCOM).

Processing specialisation varies across Member States. Germany, the Netherlands, and Poland act as major importers of raw Alaska pollock (Figure 42), mainly frozen fillets and minced blocks. Germany alone imported around 95.000 tonnes of Alaska pollock fillets and 6.400 tonnes of minced Alaska pollock in 2024 for further processing into frozen portions and coated products, while Alaska pollock use for surimi production remained limited (around 960 tonnes, ranking ninth among EU Member States)¹⁰². By contrast, France, Italy, Belgium, and Portugal rely more heavily on imports of finished surimi products, with France emerging as the EU's largest surimi importer in 2024 (about 15.700 tonnes, nearly 90% Alaska pollock-based)¹⁰³. Lithuania, Poland, and Spain operate as regional surimi processing hubs, converting imported surimi base – predominately Alaska pollock-derived – into chilled and frozen sticks, bites, and gulas. Lithuania alone imported more than 9.600 tonnes of Alaska pollock-based surimi and more than 14.800 tonnes of total surimi in 2024. These patterns are reflected in corporate specialisation: Lucky Union Foods (Poland), Angulas Aguinaga/Krissia (Spain), and the Viciunai Group (Lithuania) dominate the surimi segment, while companies such as Espersen, Pickenpack, and Greenland Seafood focus on Alaska pollock fillets and coated products.

¹⁰² EUMOFA [trade](#) dashboard (Eurostat COMEXT).

¹⁰³ There is one producer of surimi base in France, [Compagnie des Pêches Distribution](#), which produces about 7.500 tonnes of surimi base annually. However, they use blue whiting as raw material, not Alaska pollock.

Figure 42: Extra-EU imports of Alaska pollock and Alaska pollock-based surimi by Member State in 2024



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Brexit introduced new frictions in Alaska pollock trade between the EU and the UK. Although the UK was never a producer of Alaska pollock, it previously acted as a transit and processing partner. Following the UK's exit from the EU customs union, new customs and regulatory requirements sharply reduced bilateral flows: EU imports of Alaska pollock from the UK fell from 5.600 tonnes in 2020 to just 20 tonnes in 2024, while EU exports to the UK declined by more than 90% over the same period.

The COVID-19 pandemic caused significant disruption to Alaska pollock processing globally. Lockdowns and labour shortages in China and the United States – key suppliers of surimi base and frozen fillets – led to reduced production, port congestion, and shipping delays, constraining availability in EU markets and pushing up prices¹⁰⁴. Within the EU, processors initially faced operational setbacks, but Alaska pollock-based processing rebounded relatively quickly, supported by strong retail demand for frozen, affordable protein¹⁰⁵. France and Spain recorded notable growth in surimi consumption, particularly crab sticks and seafood snacks¹⁰⁴, while Germany and Poland expanded whitefish processing to compensate for delayed imports¹⁰⁶. Germany remained the EU's largest importer of Alaska pollock fillets and minced meat in 2024, at nearly 102.000 tonnes¹⁰⁷.

Russia's war of aggression against Ukraine further strained Alaska pollock supply chains. A substantial share of Alaska pollock processed in China originates from Russian waters, raising traceability, compliance, and reputational concerns for EU buyers¹⁰⁷. While EU imports of Russian-origin Alaska pollock have not declined sharply in aggregate, heightened regulatory scrutiny and certification risks have encouraged processors to diversify sourcing¹⁰⁸. This shift is visible in trade patterns (Figure 43 and Figure 44): EU imports from China and Russia peaked in late 2022, reflecting precautionary stockpiling and continued reliance on Chinese reprocessing of Russian raw material, but declined sharply from early 2024 onward, while imports from the United States volumes increased steadily, indicating a gradual pivot toward more stable supply chains.

Poland and the Baltic states, which are highly integrated into Alaska pollock processing, were particularly exposed. Lithuania's Viciunai Group exited Russian operations, incurring transition costs and

¹⁰⁴ Our Shared Seas (2021). *Global impacts of the COVID-19 pandemic on the seafood industry*. [Oursharedseas.com](https://oursharedseas.com)

¹⁰⁵ European Parliament (2021). *Impacts of the COVID-19 pandemic on EU fisheries and aquaculture*. [Europarl.europa.eu](https://europarl.europa.eu)

¹⁰⁶ STECF (2022). *Economic report on the fish processing industry*. [Marketac.eu](https://marketac.eu)

¹⁰⁷ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

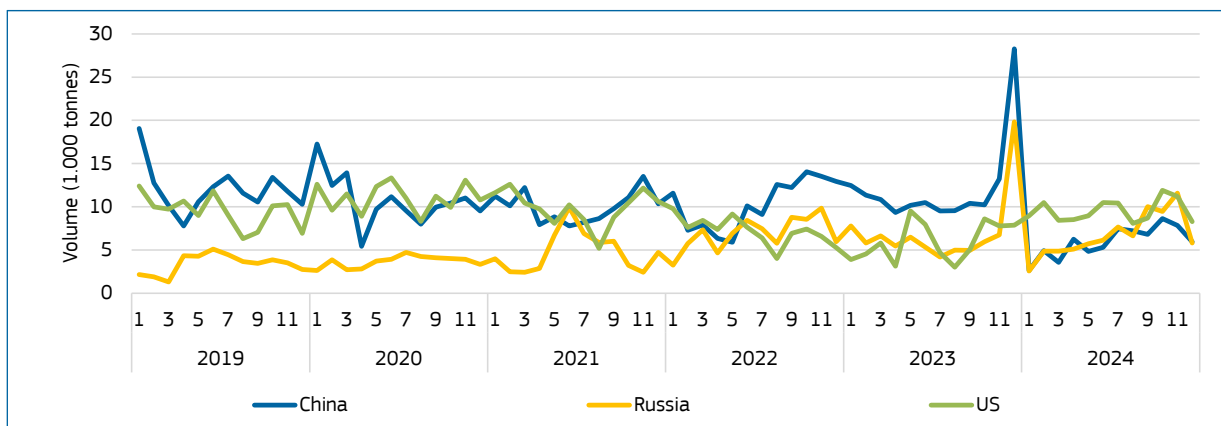
¹⁰⁸ Seafood Source (2024). *EU considering sanctions against Russian seafood*. [Seafoodsource.com](https://seafoodsource.com)

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logistical challenges, while Latvian processors increasingly relied on imported surimi rather than raw Alaska pollock¹⁰⁹. In 2024, Latvia imported 781 tonnes of surimi but only 29 tonnes of Alaska pollock, underscoring the shift toward downstream processing inputs¹¹⁰.

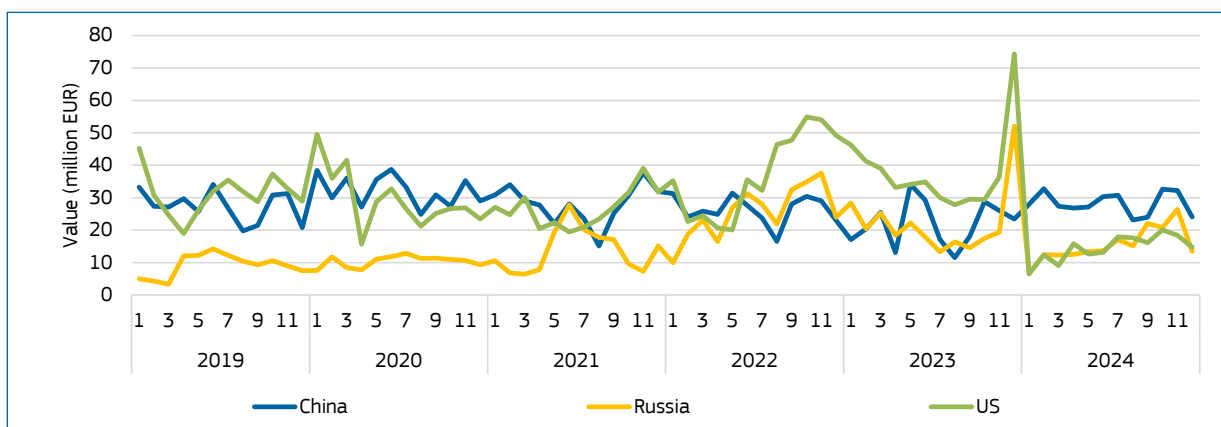
Rising transport costs in 2022-2023, driven by energy inflation, container shortages, and war-related logistics disruptions, further increased landed prices for frozen Alaska pollock products¹¹¹. Longer shipping times from Alaska and Asia reinforced cost pressures and encouraged greater reliance on EU-based secondary processing, with companies such as LUF-Euro (Poland) and Port Lite (Latvia)¹¹² expanding local production using imported surimi base to reduce sourcing risk.

Figure 43: Extra-EU import volume of Alaska pollock and Alaska pollock-based surimi from China, Russia and the United States



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 44: Extra-EU import value of Alaska pollock and Alaska pollock-based surimi from China, Russia, and the United States



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Overall, the EU Alaska pollock processing sector has shown notable resilience. Supply diversification, investment in regional processing capacity, and sustained consumer demand for shelf-stable, protein-rich products have helped stabilise the market following successive shocks, albeit at higher cost levels and with continued exposure to geopolitical and logistical uncertainty.

¹⁰⁹ Intrafish (2023). *Viciunai finds buyer for Russia surimi business*. [Intrafish.com](https://www.intrafish.com)

¹¹⁰ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

¹¹¹ Saday, G. (2022). *Weekly container freight rate update, w34, 2022*. [Xeneta.com](https://www.xeneta.com)

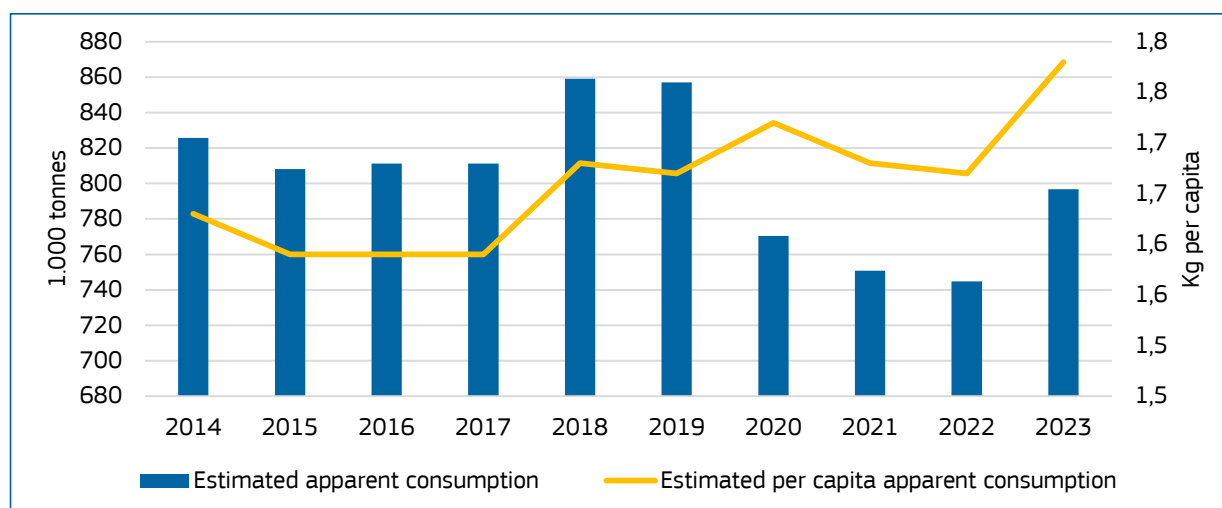
¹¹² Port Lite completed a new surimi plant in April 2024, doubling its processing capacity to ~12,000 tonnes.

4.4.3 Consumer demand and market shifts

EU demand for Alaska pollock has evolved in line with broader changes in consumer behaviour, economic conditions, and supply-side volatility. Once positioned mainly as an industrial whitefish for reprocessing, Alaska pollock is now firmly embedded in EU retail and convenience food markets, particularly through its use in affordable, processed products such as fish fingers, crab sticks, and surimi-based snacks.

Apparent consumption data underline the long-term stability of this demand base (Figure 45). Between 2014 and 2019, estimated Alaska pollock consumption remained relatively constant, fluctuating between 0,81 and 0,86 million tonnes, reflecting a mature but resilient market anchored in processed whitefish products¹¹³. A temporary contraction occurred during 2020-2022, with apparent consumption declined to around 0,75 million tonnes, as pandemic-related disruptions and reduced foodservice activity affected seafood markets more broadly. By 2023, however, consumption rebounded to nearly 0,80 million tonnes, corresponding to about 1,8 kg per capita, its highest level in a decade. This recovery points to renewed reliance on affordable and versatile whitefish products during a period of sustained food inflation.

Figure 45: Estimated apparent consumption and per capita apparent consumption of Alaska pollock in the EU¹¹⁴ (live weight equivalents)



Source: EUMOFA [supply balance](#) dashboard.

The COVID-19 pandemic marked an important inflection point in consumer behaviour. As foodservice channels closed and households shifted toward home cooking, demand increased for frozen and shelf-stable seafood. Processors expanded frozen and value-added offerings, and retail became the dominant sales channel¹¹⁵. Alaska pollock, particularly in processed formats, benefited from these shifts by offering a low-preparation protein source with long shelf life and predictable pricing. Trade and retail data indicate that frozen fish categories, including coated fillets and fish fingers, recorded particularly strong growth in 2020, outpacing overall seafood demand as consumers prioritised convenience and storage stability¹¹⁶.

In the post-pandemic period, rising inflation introduced a new set of pressures. From 2022 onward, higher energy, transport, and raw-material costs intensified price sensitivity among consumers,

¹¹³ EUMOFA [supply balance](#) dashboard.

¹¹⁴ From 2014-2019 data includes the UK (EU-28), from 2020 onward data concerns the EU-27.

¹¹⁵ Our Shared Seas (2021). *Global impacts of the COVID-19 pandemic on the seafood industry*. [Oursharedseas.com](#)

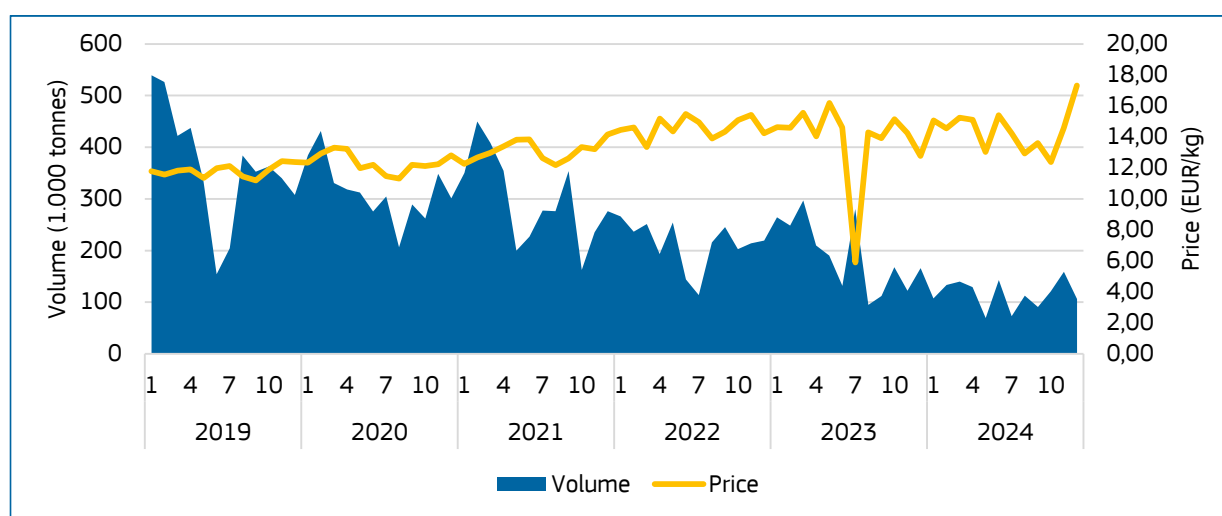
¹¹⁶ Southey, F. (2021). *The rise and rise of frozen fish*. [Foodnavigator.com](#)

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especially in lower- and middle-income households. Across the EU, fresh seafood consumption declined in 2023 as households adjusted purchasing behaviour under cost-of-living pressures¹¹⁷. In contrast, demand for processed whitefish products – including frozen fillets, coated items, and surimi-based products – proved comparatively resilient, supported by their affordability, convenience, and suitability for price-conscious consumption.

Household data illustrate this rebalancing. In Germany, for example, purchases of fresh Alaska pollock declined markedly from 2021 onward (Figure 46), while unit prices rose by more than 20% within two years¹¹⁸. By 2024, fresh Alaska pollock volumes had fallen to a fraction of their 2019 levels in some months, indicating substitution toward frozen and ready-to-eat formats rather than a withdrawal from Alaska pollock consumption altogether.

Figure 46: Household consumption of fresh Alaska pollock in Germany



Source: EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

Similar dynamics were observed elsewhere. In markets such as France and Spain, the sustained popularity of surimi-based snacks and convenience seafood products highlights the appeal of Alaska pollock-derived items during periods of economic strain¹¹⁹. The EU processing model – based on imports of frozen fillets, minced blocks, and surimi base – supports the efficient production of price-sensitive products while offering flexibility in inventory management and cost control¹¹⁷. During periods of inflation and supply uncertainty, this structure has helped processors maintain steady retail supply¹²⁰.

More broadly, Alaska pollock's strategic role within the EU protein supply has become increasingly visible. As a processing-friendly, high-throughput species, Alaska pollock supports the production of relatively low-cost, high-protein foods that are staples in institutional catering, school meals, and discount retail channels. These products play a structural role in the EU food system by providing affordable animal protein to a wide consumer base. In periods of rising protein prices and heightened supply risks, this role becomes even more pronounced, as Alaska pollock-based products help buffer consumer exposure to inflation and contribute to food system resilience. Industry stakeholders and EU advisory bodies consistently emphasise the importance of imported fish products – which account for more than 65% of EU supply – as a cornerstone of year-round protein availability^{121, 122}.

¹¹⁷ EUMOFA (2024). *The EU fish market – 2024 edition*. [Eumofa.eu](#)

¹¹⁸ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

¹¹⁹ Market Reports (2025). *Surimi products market size, share, growth, and industry analysis*. [Marketreportsworld.com](#)

¹²⁰ STECF (2022). *Economic report on the fish processing industry*. [Marketac.eu](#)

¹²¹ APICE (2023). *The resilience of the fish processing industry and the EU food security*. [Nsrac.org](#)

¹²² STECF (2022). *Economic report on the fish processing industry*. [Marketac.eu](#)

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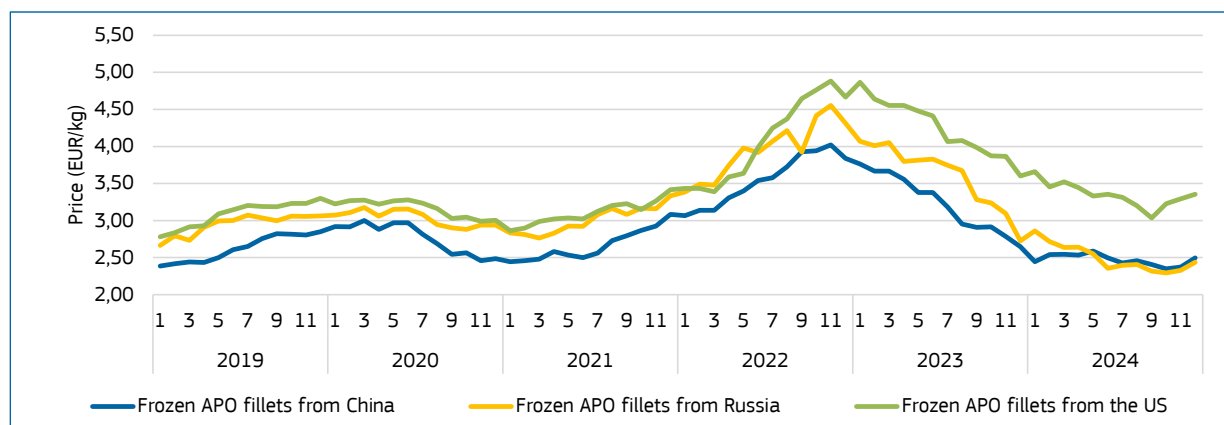
Looking ahead, consumer demand for Alaska pollock is likely to remain shaped by three interlinked trends: sustained demand for affordable processed protein, heightened sensitivity to price and availability, and continued preference for products with stable shelf life and consistent quality. Together with ongoing supply-chain realignments, these factors suggest that Alaska pollock will remain a cornerstone species within the EU's processed seafood portfolio, particularly for cost-conscious and convenience-oriented consumers.

4.4.4 Price trends

Prices for Alaska pollock products remained relatively stable in the immediate post-pandemic period but rose sharply from 2022 onward as energy, transport, and processing costs increased across global seafood supply chains. The surge in operating costs was particularly acute for energy-intensive processing activities and was ultimately passed through to EU buyers and consumers.

Between 2021 and 2022, average extra-EU import prices for frozen Alaska pollock fillets increased by 10-25%, depending on origin¹²³ (Figure 47). Fillets from the United States rose from approximately 3,17 EUR/kg to 4,10 EUR/kg, Russian-origin fillets increased from 3,04 EUR/kg to 3,96 EUR/kg, and Chinese fillets climbed from 2,63 EUR/kg to 3,50 EUR/kg. This broad-based increase reflected higher global costs for processing, energy, and logistics, and was further amplified by Russia's war of aggression against Ukraine, which disrupted trade flows and raised compliance and reputational concerns surrounding Russian-origin fish. Although United States-sourced Alaska pollock consistently traded at a premium, it gained market share in 2023-2024.

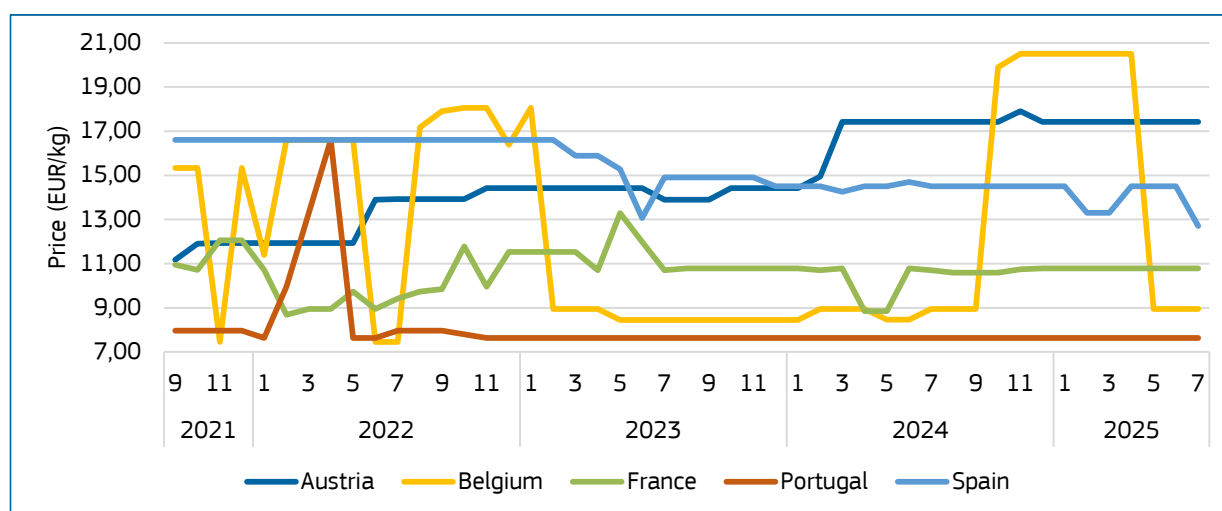
Figure 47: Extra-EU import price of frozen Alaska pollock fillets from China, Russia, and the United States



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

A similar pattern was observed for Alaska pollock-based surimi, which is sourced almost exclusively from the United States (Figure 48). Import prices were relatively stable between 2019 and 2021, averaging around 2,50-2,70 EUR/kg, but rose sharply from mid-2022 to early 2023, peaking above 4,00 EUR/kg, an increase of more than 60%¹²³. This spike reflected a combination of higher processing and freight costs, energy inflation, and tighter availability of high-grade surimi base. As demand stabilised and cost pressures eased, surimi prices fell rapidly. By mid-2024, monthly average prices had returned to around 2,20-2,30 EUR/kg, close to pre-crisis levels.

¹²³ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 50: Online retail prices of fresh surimi sticks in selected Member States

Source: EUMOFA [online retail prices](#) dashboard.

Online retail data show that these upstream cost increases translated into higher consumer prices for Alaska pollock-based products (Figure 49 and Figure 50). Prices for frozen, breaded fish fillets – a key retail format predominantly based on Alaska pollock – rose sharply across the EU between 2021 and 2023¹²⁴. In Germany, average prices increased by around 75%, while Austria recorded increases of roughly 35-40%. Other markets experienced more moderate but still significant rises: Belgium and France saw increases of around 20-25%, while prices in Spain and Portugal climbed by roughly 20%. From 2023 into 2024, retail prices generally stabilised, though in many markets they remained 10-20% above 2021 levels, indicating incomplete pass-through of cost reductions.

The price trajectory for fresh surimi sticks was similar but more volatile. Between 2021 and 2023, prices rose sharply in Belgium (by more than 30%) and Austria (by around 20-25%)¹²⁴. France and Italy also recorded moderate increases, with greater month-to-month variability in Italy. By 2024-2025, prices in most markets had stabilised or softened slightly, although overall levels remained above pre-inflation norms. This stabilisation reflects easing energy and transport costs, combined with heightened consumer price sensitivity in value-added seafood categories.

4.5 Tuna

4.5.1 Production

Tuna remains a core commodity for the EU seafood sector, dominated by canned products based on skipjack and yellowfin tuna and by frozen or chilled loins destined for further processing¹²⁵. EU production combines wild fisheries targeting skipjack, yellowfin, albacore, and bigeye in distant-water and regional fisheries with capture-based aquaculture (“ranching”) of Atlantic bluefin tuna in the Mediterranean.

Spain is the leading EU tuna producer, supported by large-scale purse-seine fleets supplying most skipjack and yellowfin landings, alongside smaller volumes of albacore and bigeye¹²⁶. France contributes with substantial albacore landings from the northeast Atlantic, together with limited quantities of yellowfin, bigeye, and bluefin. Portugal operates a mixed fishery with notable bigeye and

¹²⁴ EUMOFA [online retail prices](#) dashboard.

¹²⁵ EUMOFA (2024). *The EU fish market – 2024 edition*. [Eumofa.eu](#)

¹²⁶ EUMOFA [landings](#) dashboard (Eurostat fishery).

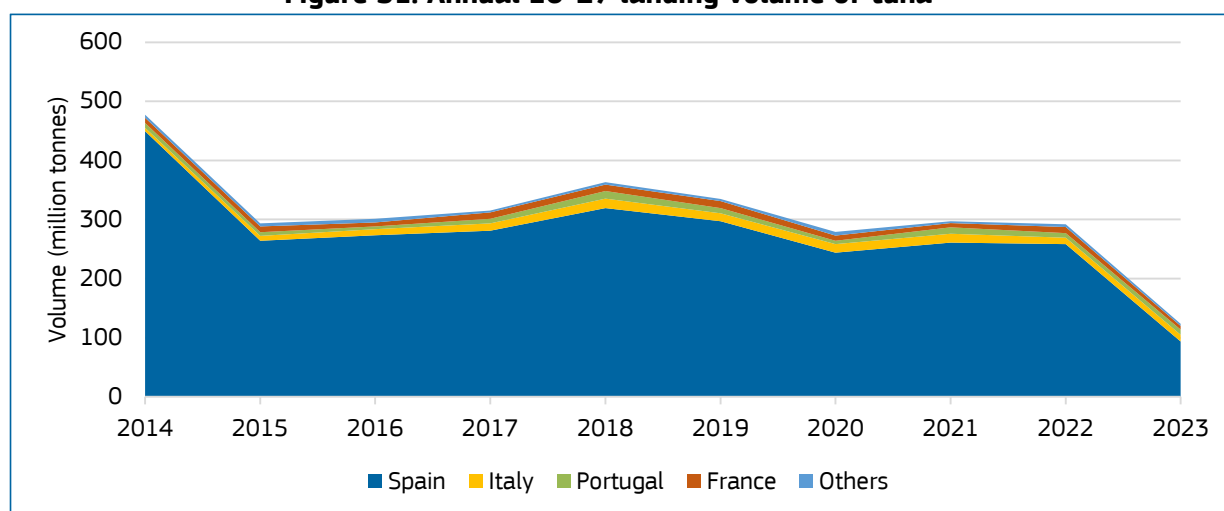
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skipjack landings in the eastern Atlantic. Italy records smaller but relatively stable landings, primarily of bluefin and albacore. Other Member States – including Ireland, Greece, Croatia, Malta, Cyprus, and the Netherlands – contribute collectively modest and often volatile volumes, typically seasonal and concentrated on albacore or bluefin. Croatia and Malta stand out more for their role in bluefin ranching than for wild landings.

A large share of EU tuna catches is taken by EU-flagged fleets operating in distant-water fisheries outside EU waters, notably in the tropical Atlantic, Indian, and Pacific Oceans. These catches are frequently landed in third countries or processed offshore and subsequently re-enter the EU market as imports, mainly in the form of loins and canned products, explaining the EU’s simultaneous role as both a significant tuna producer and a major importer.

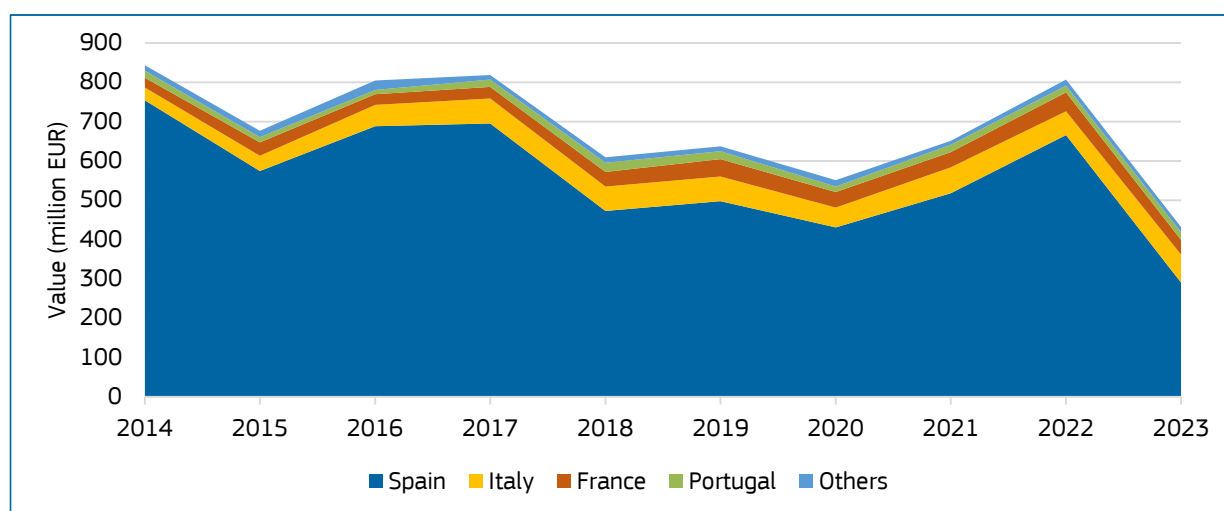
Total EU tuna landings (Figure 51 and Figure 52) declined over the past decade from approximately 477.400 tonnes (EUR 843 million) in 2014 to about 123.500 tonnes (EUR 431 million) in 2023, with pronounced year-to-year variability across species and Member States¹²⁶. This decline reflects both biological and management constraints and shifts in fleet activity rather than a single structural break.

Figure 51: Annual EU-27 landing volume of tuna¹²⁷



Source: EUMOFA [landings](#) dashboard (Eurostat fishery).

Figure 52: Annual EU-27 landing value of tuna¹²⁷



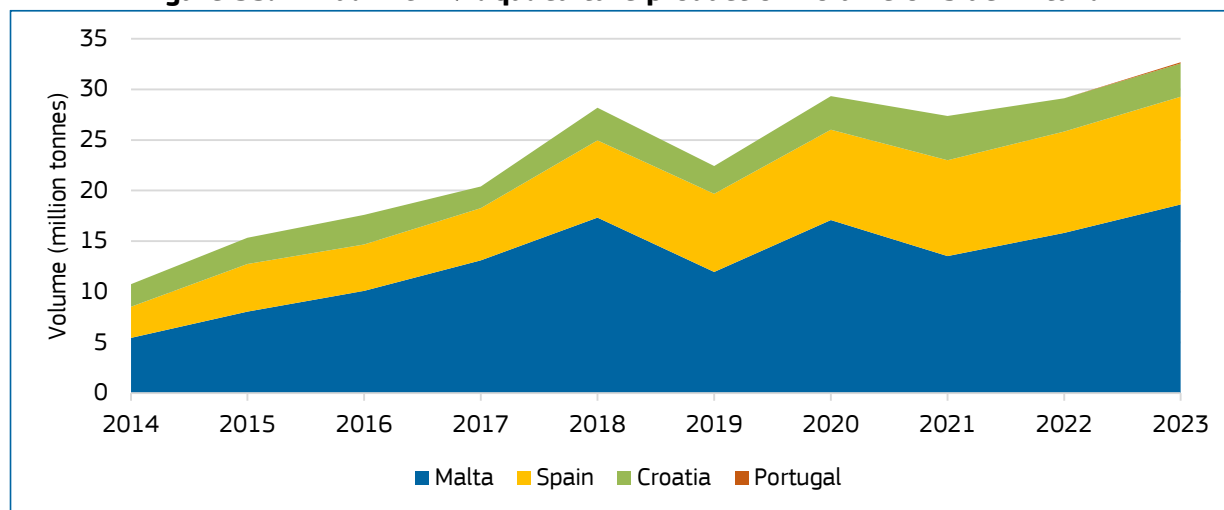
Source: EUMOFA [landings](#) dashboard (Eurostat fishery).

¹²⁷ Includes albacore tuna, bigeye tuna, bluefin tuna, skipjack tuna, yellowfin tuna and miscellaneous tuna.

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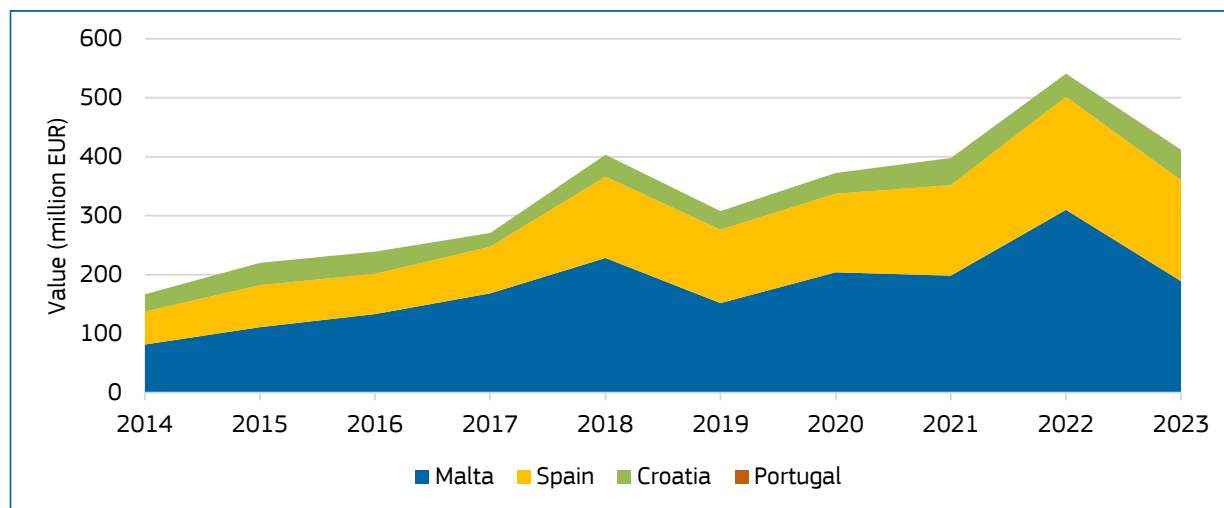
By contrast, EU aquaculture production of Atlantic tuna expanded significantly over the same period. Total production (Figure 53 and Figure 54) increased from around 10.800 tonnes (EUR 167 million) in 2014 to roughly 32.700 tonnes (EUR 412 million) in 2023¹²⁸. Malta has remained the principal producer throughout, followed by Spain and Croatia, while Portugal entered production at a small scale from 2023. Even at this expanded level, bluefin ranching represented less than one third of total EU tuna production in volume terms in 2023, and a much smaller share relative to global tuna catches. This growth reflects higher TACs under ICCAT management, increased availability of wild juveniles for on-growing, investment in farming capacity, and improvements in husbandry, logistics, and market access.

Figure 53: Annual EU-27 aquaculture production volume of bluefin tuna



Source: EUMOFA [aquaculture](#) dashboard (Eurostat fishery). Note that landing volume has been estimated for Spain in 2021-2022.

Figure 54: Annual EU-27 aquaculture production value of bluefin tuna



Source: EUMOFA [aquaculture](#) dashboard (Eurostat fishery). Note that landing value has been estimated for Spain in 2021-2022.

Recent external shocks altered costs, routing, and product mix rather than triggering a structural break in EU tuna production. During the COVID-19 pandemic, fishing activity faced temporary constraints linked to crew availability, health protocols, and port access¹²⁹. However, industrial freezer capacity, vertically integrated supply chains, and a sharp shift in consumer demand towards shelf-stable canned

¹²⁸ EUMOFA [aquaculture](#) dashboard (Eurostat fishery).

¹²⁹ FAO (2020). *The impact of COVID-19 on fisheries and aquaculture food systems*. [Fao.org](#)

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tuna helped maintain throughput for skipjack and yellowfin fisheries^{130, 131, 132}. Brexit introduced additional customs formalities, health certification, and rules-of-origin requirements for flows that previously transited the UK, increasing compliance costs and encouraging consolidation of landings and processing within the EU^{133, 134}.

From 2022 onward, Russia's war of aggression against Ukraine generated a major cost shock. Marine fuel and energy prices rose sharply across the EU, pushing up operating expenses for fleets and processors. Official assessments indicate that fuel prices for EU vessels nearly doubled relative to 2021, peaking in mid-2022, with average prices around 0,93 EUR/l and peaks close to 1,20 EUR/l¹³⁵. Input costs also increased across the value chain: aquaculture operations faced higher feed and raw-material prices, while tuna canning was affected by sustained pressure on metal packaging markets, including tinsplate¹³⁶, amid trade measures and supply tightness^{137, 138}. Broader inflation further lifted processing and logistics costs and constrained household purchasing power¹³⁹.

These pressures compressed margins and, in some cases, led to temporary tie-ups or reduced activity by parts of the EU fleet. EU institutions responded by activating crisis support mechanisms to compensate operators facing temporary cessation or viability risks¹⁴⁰. On the demand side, inflation reinforced consumers preferences for shelf-stable tuna products and lower-cost protein options, while demand for higher-value fresh and frozen tuna softened in the EU, prompting some reorientation away from premium channels toward more price-stable products^{141, 142}.

Overall, the EU remains a significant tuna producer, even as it is structurally a large importer. Wild tuna production has become more volatile and has trended lower in aggregate in recent years, while aquaculture ranching of Atlantic bluefin has expanded in both scale and value within ICCAT's management framework, though volumes remain comparatively low to fisheries production. In 2023, total EU tuna landings declined further, with tropical tunas accounting for a substantial share of catches, and first-sale data show marked year-to-year variability for skipjack, yellowfin, and bigeye¹⁴³. By contrast, bluefin ranching capacity and production in the Mediterranean continued to grow, led by Malta and supported by rising production in Spain, in line with higher TACs compared with the recovery-plan era^{144, 145}.

¹³⁰ FAO GLOBEFISH (2020). *Canned tuna demand rising amid COVID-19 pandemic*. [Fao.org](https://www.fao.org)

¹³¹ ICCAT (2023). *ICCAT PSM inspector training manual*. [lccat.int](https://www.iccat.int)

¹³² CBI (2020). *Entering the European market for tuna loins*. [Cbi.eu](https://www.cbi.eu)

¹³³ UK Government (2024). *Guidance on export health certificates*. [Gov.uk](https://www.gov.uk)

¹³⁴ UK Parliament (2021). *Seafood and meat exports to the EU*. [Parliament.uk](https://www.parliament.uk)

¹³⁵ European Commission (2024). *The 2024 annual economic report on the EU fishing fleet*. [Europa.eu](https://ec.europa.eu)

¹³⁶ The EU first imposed provisional (Implementing Regulation (EU) 2025/81) and later definitive (Implementing Regulation (EU) 2025/1042) anti-dumping duties on tinsplate imports from China.

¹³⁷ FEAP (2022). *The FEAP is concerned with the slow unfolding of compensation aid for fish farmers*. [Feap.info](https://www.feap.info)

¹³⁸ La Voz de Galicia (2023). *El menor coste de la energía y del aceite de girasol no dan para bajar el precio de la lata de atún*. [Lavozdegalicia.es](https://www.lavozdegalicia.es)

¹³⁹ EUMOFA (2023). *The EU fish market – 2023 edition*. [Eumofa.eu](https://www.eumofa.eu)

¹⁴⁰ [Regulation \(EU\) 2022/1278 of 18 July 2022](https://eur-lex.europa.eu/eli/reg/2022/1278/20220718).

¹⁴¹ FAO Globefish (2024) *Quarterly tuna analysis – June 2024*. [Fao.org](https://www.fao.org)

¹⁴² AIPCE (2024). *EU seafood supply synopsis 2024*. [Aipce-cep.org](https://www.aipce-cep.org)

¹⁴³ EUMOFA [landings](https://www.eumofa.eu/landings) (Eurostat fishery) and [first sale \(monthly data\)](https://www.eumofa.eu/first-sale) dashboards.

¹⁴⁴ Apromar (2023). *Aquaculture in Spain 2023*. [Apromar.es](https://www.apromar.es)

¹⁴⁵ ICCAT (2024). *Recommendation by ICCAT*. [lccat.int](https://www.iccat.int)

4.5.2 Processing and trade

The EU is a leading global processor of canned tuna, with major industrial clusters centred in Spain, and significant capacity in Italy, France, and Portugal^{146, 142}. Processing activity is strongly oriented toward canned products supplying both EU retail markets and exports. In 2023, EU establishments produced approximately 414.500 tonnes of prepared or preserved skipjack/Atlantic bonito, with an estimated value of EUR 3,7 billion, underscoring tuna's central role in the EU seafood processing sector¹⁴⁷.

EU canneries are structurally dependent on imported raw material, particularly cooked or frozen loins and other semi-processed inputs. ATQs for tuna loins play a key role in securing a stable supply for EU plants¹⁴⁸. Reflecting this processing model, prepared and preserved products accounted for around 75% extra-EU import volumes and 80% of import value in 2024, up from roughly 70% and 77% respectively in 2019¹⁴⁹. Within skipjack – the dominant canning species – approximately 92% of 2024 import volumes entered the EU as prepared or preserved products. EU processors add value primarily through canning, branding, and distribution within the single market and to third-country destinations.

Trade patterns are consistent with this structure (Figure 55, Figure 56, Figure 57, and Figure 58). Over 2019-2024, the EU remained a net importer of tuna by both volume and value. Extra-EU imports ranged from 556.200 tonnes in 2023 to 707.200 tonnes 2020, reaching 659.000 tonnes valued at EUR 3,1 billion in 2024¹⁴⁹. By species (all forms, 2024), skipjack accounted for around 58% of import volumes, yellowfin 28%, and miscellaneous tunas 11%. Extra-EU exports were consistently lower, declining from 294.000 tonnes in 2019 to 209.900 tonnes in 2024, with a total value of EUR 779 million. Export volumes were dominated by frozen products (81% in 2024), while prepared/preserved and fresh products contributed disproportionately to export value (33% and 15% respectively). Notably, bluefin tuna represented only about 5% of export volumes but roughly 20% of export value, reflecting its high-value fresh and frozen market positioning.

During the initial phase of the COVID-19 pandemic, retail demand for shelf-stable canned tuna surged, while demand in non-canned and foodservice channels weakened. This retail pivot persisted into 2021 and helped maintain throughput and raw-material demand for EU canneries^{150, 151}. By contrast, Brexit primarily affected procedures rather than prices: while the TCA preserved zero tariffs on seafood, new customs formalities and SPS certification requirements introduced additional administrative frictions¹⁵². The direct impact on tuna supply was limited, however, as the UK is mainly a consuming and importing market with little domestic catching or canning of tropical tuna¹⁵³.

¹⁴⁶ EUMOFA (2023). *Monthly Highlights No. 11/2023 – Case study: the EU processing industry*. [Eumofa.eu](https://eumofa.eu)

¹⁴⁷ EUMOFA [processing](#) dashboard (Eurostat PRODCOM).

¹⁴⁸ European Council (2023). *Import of fishery products: Council adopts autonomous EU tariff quotas for 2024 to 2026*. [Europa.eu](https://europa.eu)

¹⁴⁹ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

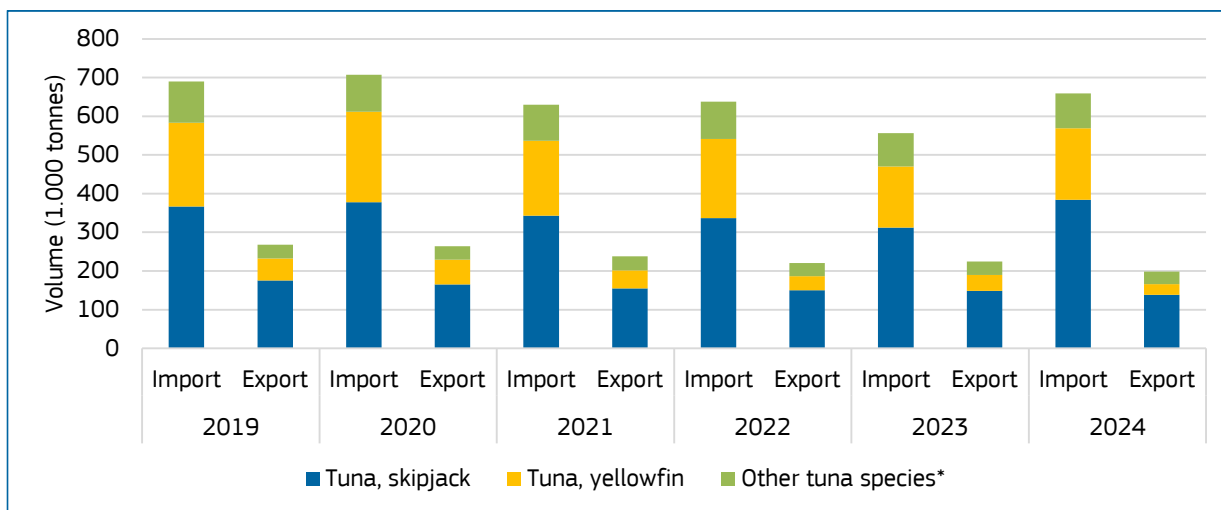
¹⁵⁰ FAO GLOBEFISH (2020). *Canned tuna demand rising amid COVID-19 pandemic*. [Fao.org](https://fao.org)

¹⁵¹ FAO GLOBEFISH (2021). *Strong global trade for canned tuna persisted throughout 2020*. [Fao.org](https://fao.org)

¹⁵² European Parliament (2021). *EU-UK relations in fisheries*. [Europa.eu](https://europa.eu)

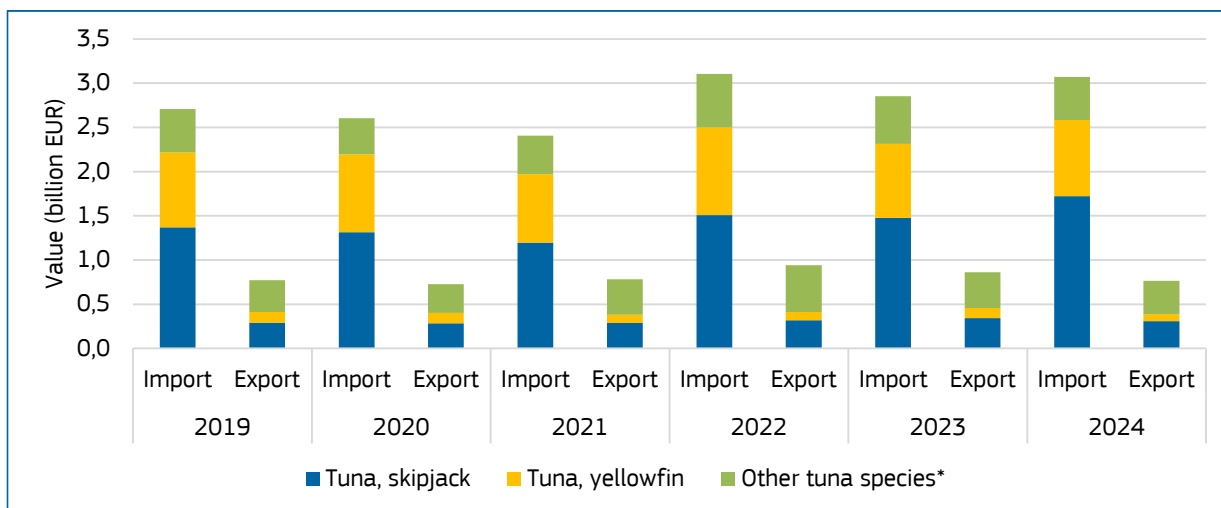
¹⁵³ Seafish (2025). *2024 UK seafood supply chain report*. seafish.org

Figure 55: EU-27 trade balance of tuna in volume



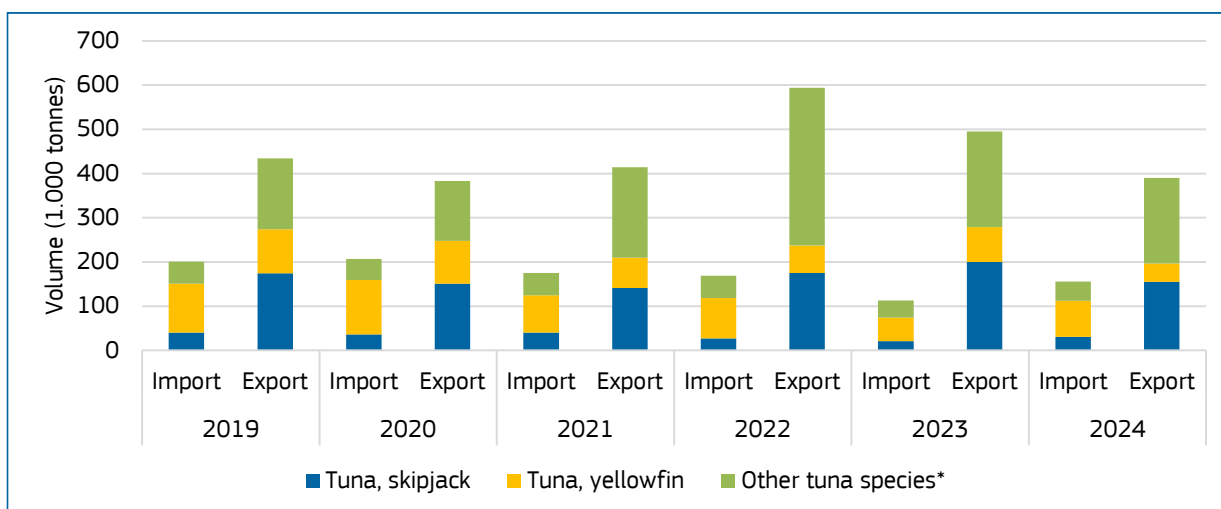
Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT). *Import volume includes albacore, bigeye, bluefin, and miscellaneous tuna, whereof miscellaneous tuna accounts for 78% of total volume. Export volume includes albacore, bluefin, and miscellaneous tuna, whereof miscellaneous tuna accounts for 64% and bluefin tuna accounts for 35% of total volume.

Figure 56: EU-27 trade balance of tuna in value



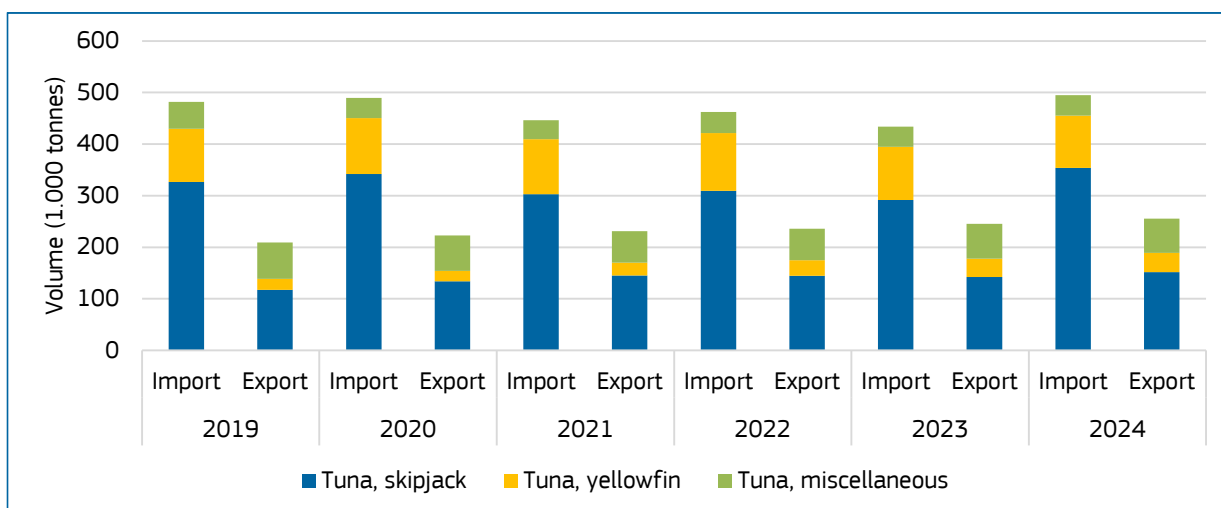
Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT). *Import value includes albacore, bigeye, bluefin, and miscellaneous tuna, whereof miscellaneous tuna accounts for 87% of total value. Export value includes albacore, bluefin, and miscellaneous tuna, whereof miscellaneous tuna accounts for 58% and bluefin tuna accounts for 42% of total value. Note that both miscellaneous and bluefin tuna exceed yellowfin tuna export value.

Figure 57: EU-27 trade balance of frozen tuna¹⁵⁴ in volume



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT). *Import volume includes albacore, bigeye, bluefin, and miscellaneous tuna, whereof miscellaneous tuna accounts for 70% of total import volume. Export volume includes albacore, bluefin, and miscellaneous tuna, whereof miscellaneous tuna accounts for 78% of total export volume.

Figure 58: EU-27 trade balance of prepared/preserved tuna¹⁵⁵ in volume



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Since 2022, Russia’s war of aggression against Ukraine has significantly increased energy and fuel costs, raising both catching and processing expenses; the Commission has characterised this period as an unprecedented energy crisis for the EU¹⁵⁶. In trade data, this is reflected in a peak average import unit value of 5,13 EUR/kg in 2023, easing to 4,66 EUR/kg in 2024, while export unit values rose from 2,74 EUR/kg in 2019 to 3,71 EUR/kg in 2024. Elevated container freight rates and port congestion in 2021–2022 further increased landed costs and caused delays for imported frozen loins and other canning inputs¹⁵⁷. At the same time, metal-packaging markets tightened, prompting the EU to open and

¹⁵⁴ Includes all tuna products starting with HS 0303 and 0304.

¹⁵⁵ Includes all tuna products starting with HS 1604.

¹⁵⁶ European Commission (2025). *EU action to address the energy crisis*. [Europa.eu](#)

¹⁵⁷ UNCTAD (2022). *Review of maritime transport 2022*. [Unctad.org](#)

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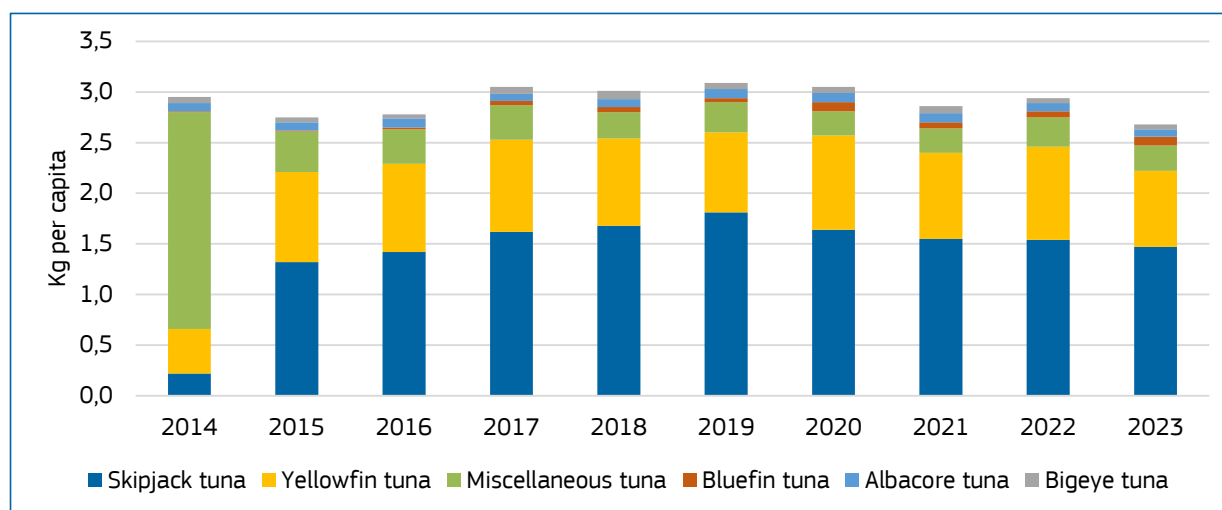
subsequently impose anti-dumping measures on tinplate imports – a key input for tuna cans – highlighting sustained cost pressure in this segment of the value chain¹⁵⁸.

4.5.3 Market and consumption trends

Tuna remains a household staple across the EU, with consumption concentrated in canned products based on skipjack and yellowfin. These formats combine affordability, long shelf life, and wide retail availability, supporting stable demand even during periods of economic stress¹⁵⁹. Fresh and frozen tuna – mainly yellowfin loins and bluefin – account for a much smaller, high-value segment oriented toward foodservice and premium retail.

EU supply balance data (Figure 59) confirm tuna's position as one of the EU's most consistently consumed seafood categories, despite a gradual long-term decline. Estimated apparent consumption fell from about 1,50 million tonnes in 2014 to 1,20 million tonnes in 2023, while per capita apparent consumption decreased from nearly 3,0 kg to 2,7 kg. Skipjack and yellowfin dominated throughout, together accounting for 85-90% of total apparent consumption. Skipjack consumption rose sharply to almost 930.000 tonnes in 2019¹⁶⁰, before declining to around 660.000 tonnes in 2023, while yellowfin peaked at 450.000-465.000 tonnes in 2015-2017 and fell to 334.000 tonnes in 2023. Albacore, bigeye, and bluefin remained comparatively minor, each representing 2-8% of total volume.

Figure 59: Estimated per capita apparent consumption of tuna in the EU¹⁶¹ (in live weight equivalents)



Source: EUMOFA [supply balance](#) dashboard.

The COVID-19 pandemic reinforced the dominance of shelf-stable tuna. Retail demand for canned products surged in 2020-2021, while foodservice closures reduced demand for fresh and frozen tuna. Imports of prepared and preserved products increased accordingly, supported by resilient EU processing capacity and expanded cold storage¹⁵⁹. Retailers broadened private-label ranges and multipack offerings, and discount channels gained market share¹⁶². These shifts largely persisted into 2022.

¹⁵⁸ The EU first imposed provisional (Implementing Regulation (EU) 2025/81) and later definitive (Implementing Regulation (EU) 2025/1042) anti-dumping duties on tinplate imports from China.

¹⁵⁹ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

¹⁶⁰ The category "miscellaneous tuna" was disproportionately large in 2014, indicating that some skipjack and yellowfin was registered as miscellaneous tuna this year.

¹⁶¹ From 2014-2019 data includes the UK (EU-28), from 2020 onward data concerns the EU-27.

¹⁶² McKinsey & Company (2025). *The state of grocery retail Europe 2025*. [Mckinsey.com](#)

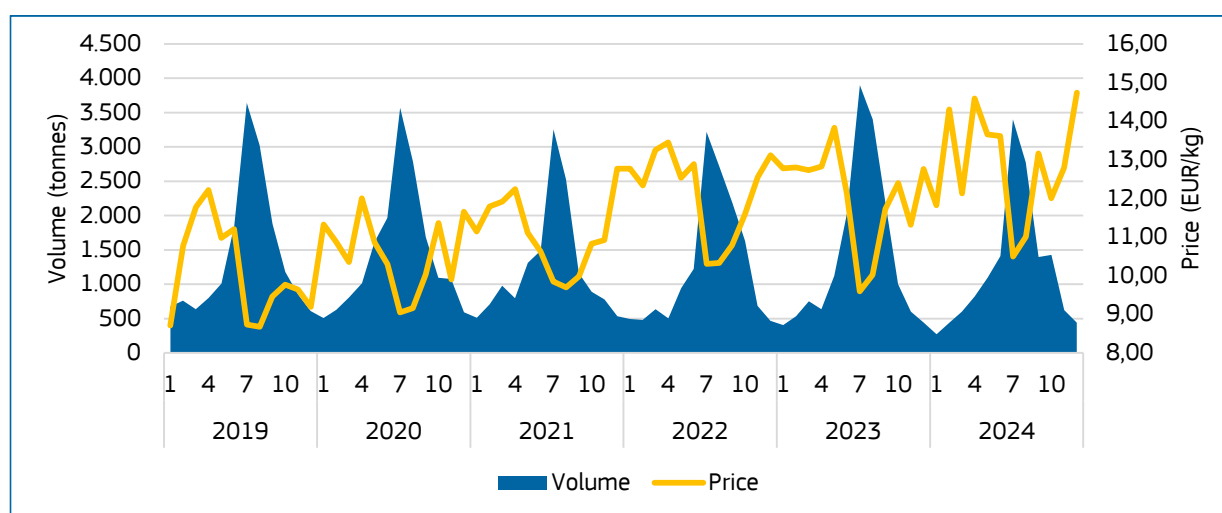
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Brexit had little direct effect on consumption patterns but introduced administrative frictions for trade in tuna loins and canned products. New customs and SPS procedures led some operators to adjust logistics routes, but consumer availability remained largely unaffected¹⁶³.

From 2022 onward, inflation linked to the Russian war of aggression against Ukraine reshaped purchasing behaviour more decisively. Higher fuel, packaging, and transport costs raised shelf prices, while real household purchasing power weakened¹⁶⁴. Import unit values peaked at 5,13 EUR/kg in 2023 before easing to 4,66 EUR/kg in 2024. Consumers responded by trading down within the canned category toward value tiers and smaller pack sizes, while demand for premium fresh tuna softened. Shelf-stable products nonetheless retained both volume and value shares, underlining their resilience under inflationary pressure¹⁶³.

Monthly household data from Spain (Figure 60) illustrate these dynamics for fresh tuna. Volumes continued to peak in summer months, reflecting seasonality and availability, but prices trended upward from 2022 onward¹⁶⁵. In 2024, average retail prices exceeded 14,00 EUR/kg in several months, while volumes showed signs of tapering. This pattern highlights growing price sensitivity in high-value tuna formats, contrasted with the continued stability of canned products.

Figure 60: Household consumption of fresh miscellaneous tuna in Spain



Source: EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

4.5.4 Price trends

Tuna prices in the EU reflected successive shocks between 2019 and 2024, including pandemic-related logistics disruptions, post-Brexit adjustments, and inflationary pressures following Russia's war of aggression against Ukraine. These shocks affected different segments of the value chain in distinct ways, visible in import unit values, wholesale prices, and retail prices.

At the import level, prices for prepared and preserved tuna followed a sustained upward trend (Figure 61 and Figure 62). Between 2019 and 2024, average unit values rose from approximately 4,36 EUR/kg to 5,13 EUR/kg, peaking in 2023 amid high energy, freight, and packaging costs¹⁶⁶. Prices moderated slightly to 4,92 EUR/kg in 2024 but remained above pre-pandemic levels. Frozen tuna imports showed

¹⁶³ EUMOFA (2024). *The EU fish market – 2024 edition*. [Eumofa.eu](#)

¹⁶⁴ European Parliament (2022). *Russia's war on Ukraine: Support for the fishing, aquaculture and fish-processing sectors*. [Europarl.europa.eu](#)

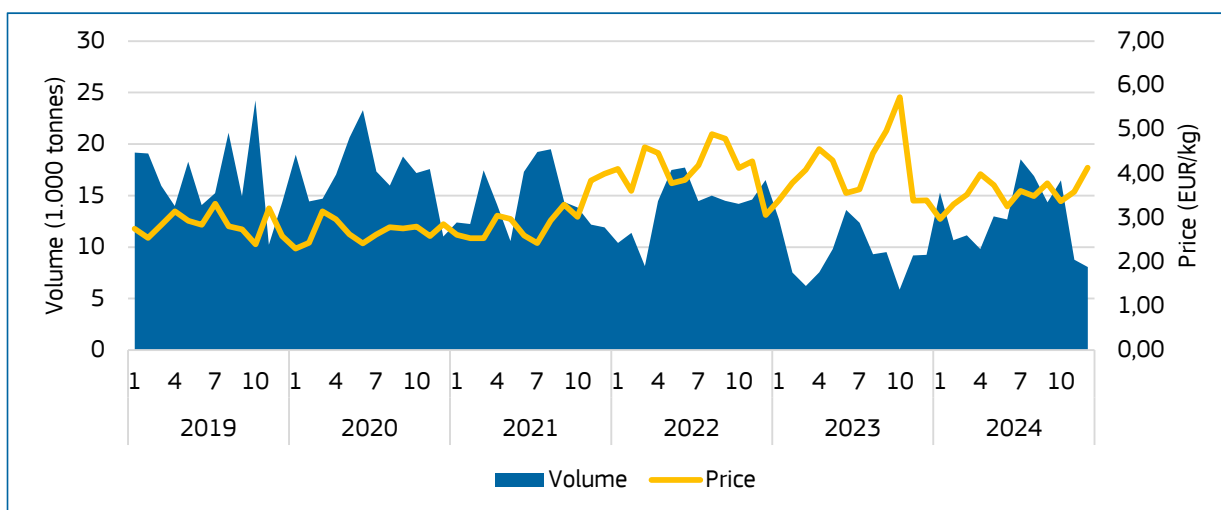
¹⁶⁵ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

¹⁶⁶ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

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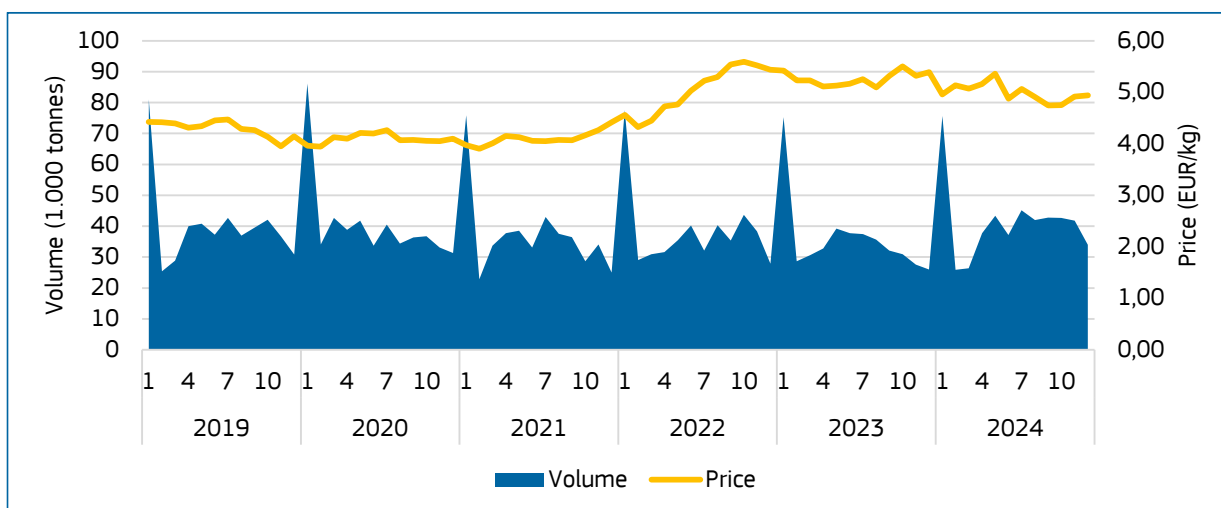
greater volatility, with average prices increasing from 2,84 EUR/kg in 2019 to a peak of 4,14 EUR/kg in 2024, driven by energy costs and logistics disruptions during 2022-2023.

Figure 61: Extra-EU import volume and price trend of frozen tuna¹⁶⁷



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 62: Extra-EU import volume and price trend of prepared/preserved tuna¹⁶⁸



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

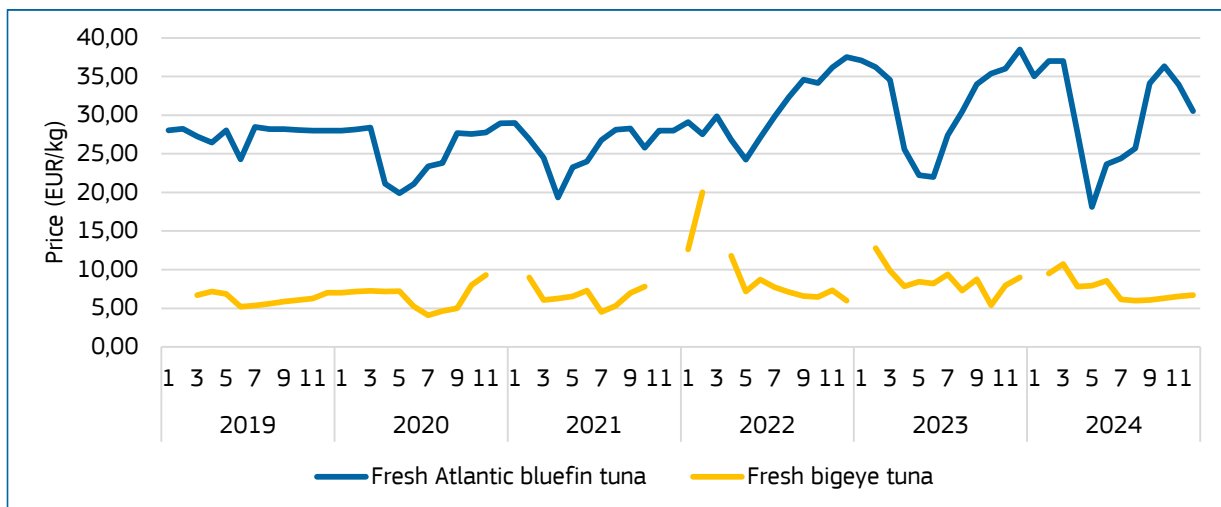
Wholesale price data illustrate similar inflationary dynamics for fresh tuna (Figure 63 and Figure 64). In Spain, prices for fresh Atlantic bluefin tuna increased from around 28,00 EUR/kg in 2019 to over 38,00 EUR/kg in late 2023, before easing slightly in 2024¹⁶⁹. Fresh bigeye tuna prices rose from below 6,00 EUR/kg in 2019 to 9,00-10,00 EUR/kg in 2023-2024. In France, wholesale prices for fresh whole bluefin tuna climbed from around 17,00 EUR/kg in 2019 to a peak of 28,40 in 2022, before stabilising around 22,00-25,00 EUR/kg by late 2024. Imported bluefin fillets, a premium niche, followed a similar trajectory.

¹⁶⁷ Includes all tuna products starting with HS 0303 and 0304.

¹⁶⁸ Includes all tuna products starting with HS 1604.

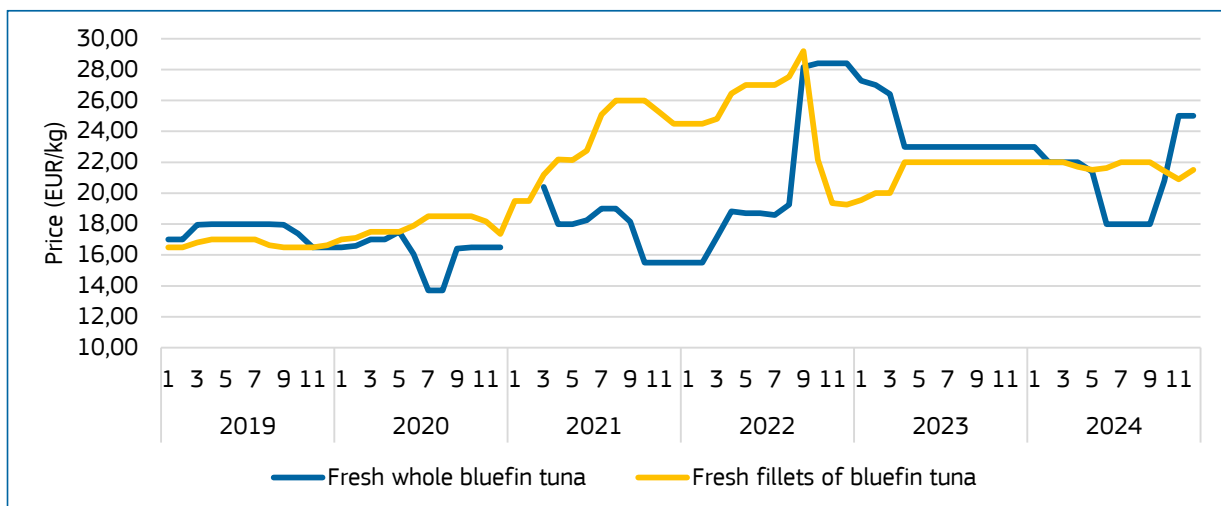
¹⁶⁹ EUMOFA [international prices](#) dashboard, MercaMadrid, and Rungis.

Figure 63: Spanish wholesale price trends for fresh Atlantic bluefin tuna and bigeye tuna (MercaMadrid)



Source: EUMOFA [international prices](#) dashboard and MercaMadrid.

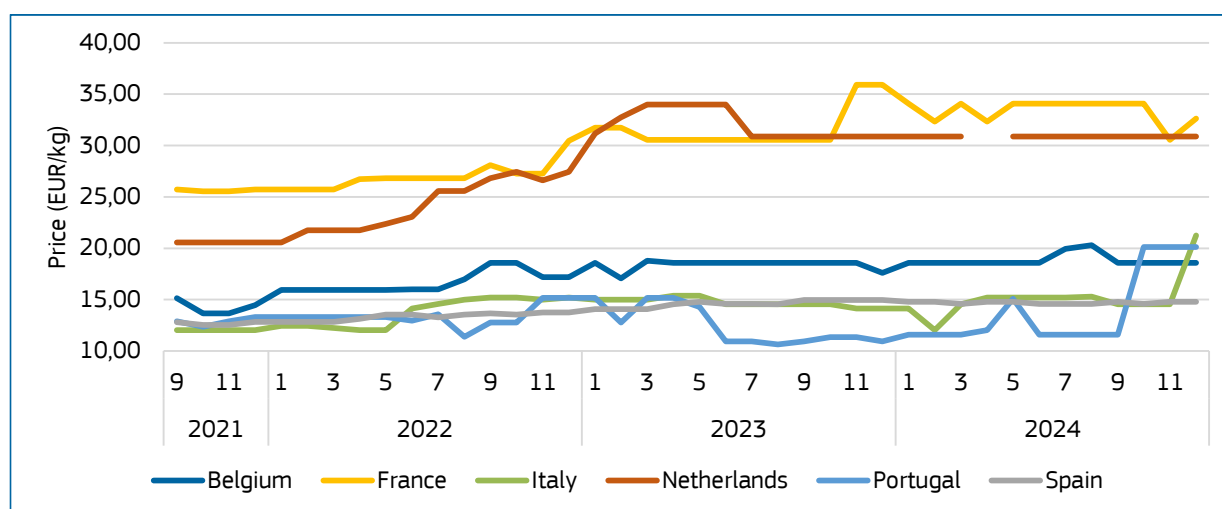
Figure 64: French wholesale price trends for fresh whole bluefin tuna of French origin and imported fresh fillets of bluefin tuna (Rungis)



Source: EUMOFA [international prices](#) dashboard and Rungis.

Retail data confirm the pass-through of these cost pressures (Figure 65). Online prices for canned tuna rose steadily across major EU markets¹⁷⁰. In France, average prices increased from around 25,00 EUR/kg in 2021 to over 34,00 EUR/kg in 2024, while prices in the Netherlands approached 31,00 EUR/kg, reflecting higher upstream costs and sustained demand.

¹⁷⁰ EUMOFA [online retail prices](#) dashboard.

Figure 65: Online retail prices of canned tuna in selected Member States

Source: EUMOFA [online retail prices](#) dashboard.

Overall, tuna price developments reflect a convergence of global shocks and structural inflation in fuel, logistics, and materials. While premium segments such as fresh bluefin absorbed substantial price increases, mainstream canned products showed more stable demand. The persistence of elevated prices into 2024 suggests that cost pressures in the tuna value chain are likely to remain a defining feature beyond the immediate crisis period.

4.6 Mussels/oysters

4.6.1 Production

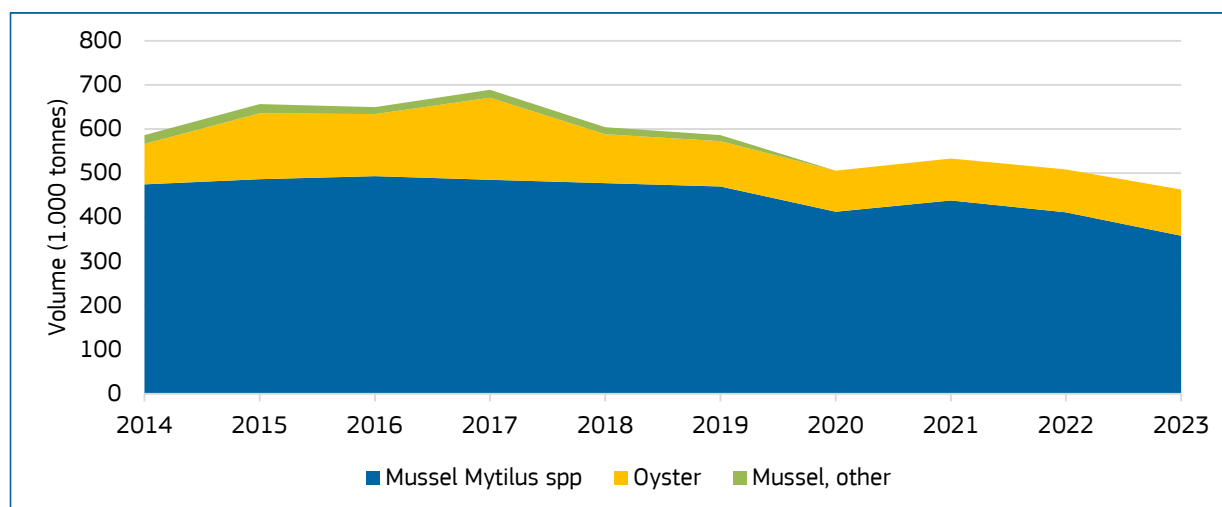
Mussels (*Mytilus* spp.) and oysters form the backbone of the EU's bivalve sector, together accounting for around one-third of total aquaculture output and representing a key livelihood for coastal regions such as Galicia, Brittany, and Ireland's west coast¹⁷¹. Between 2019 and 2023, production dynamics were shaped by a sequence of external shocks – first the COVID-19 pandemic, followed by Brexit and, later, the economic fallout of the Russian invasion of Ukraine – each leaving distinct marks on production, trade flows, and cost structures across the value chain.

Total EU production of mussels and oysters, combining aquaculture and landings (Figure 66 and Figure 67), reached around 463.200 tonnes in 2023, a decline of about 18% compared with 2019. In value terms, however, the sector expanded by roughly 16%, reaching about EUR 1,0 billion, reflecting price recovery, higher operating costs, and sustained consumer demand for local and premium bivalves¹⁷². Aquaculture dominated supply, providing more than 95% of total volume in 2023 – around 338.600 tonnes of mussels and 104.600 tonnes of oysters – while landings accounted for only about 20.000 tonnes combined. Catches have contracted steadily over the past decade and now represent a marginal input into EU markets¹⁷³.

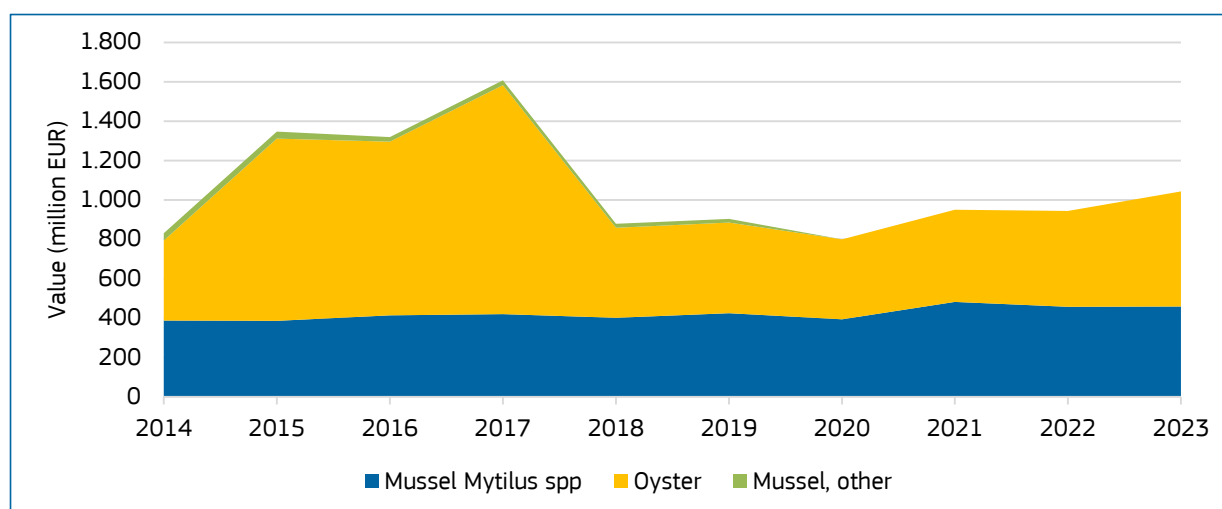
¹⁷¹ European Parliament (2025). *Aquaculture production in the EU*. [Europa.eu](#)

¹⁷² EUMOFA [aquaculture](#) and [landings](#) dashboards (Eurostat fishery).

¹⁷³ FAO statistics, EUMOFA [landings](#) dashboard (Eurostat fishery).

Figure 66: EU-27 aquaculture production and landing volume of mussels and oysters

Source: EUMOFA [aquaculture](#) and [landings](#) dashboards (Eurostat fishery).

Figure 67: EU-27 aquaculture production and landing value of mussels and oysters

Source: EUMOFA [aquaculture](#) and [landings](#) dashboards (Eurostat fishery).

Mussel farming is widespread along the Atlantic, North Sea, and Mediterranean coasts, using both suspended and bottom-culture systems¹⁷⁴. Production declined from 444.300 tonnes in 2019 to 338.600 tonnes in 2023 (-24%), while total value increased from EUR 433 million to EUR 452 million (+4%), lifting average prices from 0,97 EUR/kg to 1,33 EUR/kg¹⁷⁵. Spain, Italy, France, and the Netherlands account for nearly 90% of EU mussel production. The COVID-19 pandemic caused a sharp demand shock as restaurants closed, prompting delayed or cancelled harvests¹⁷⁶. Live mussel producers faced acute marketing difficulties as exports halted and processors reduced intake, forcing many operators to redirect sales toward domestic markets and retail packaging¹⁷⁷. Recovery began in 2021 but remained uneven, constrained by phytoplankton blooms¹⁷⁸, labour shortages, and logistics disruptions. From 2022 onward, rising fuel and electricity prices linked to Russia's war of aggression

¹⁷⁴ EUMOFA (2022). *Mussels in the EU*. [Eumofa.eu](#)

¹⁷⁵ EUMOFA [aquaculture](#) dashboard (Eurostat fishery).

¹⁷⁶ European Parliament (2021). *Impacts of the COVID-19 pandemic on EU fisheries and aquaculture*. [Europarl.europa.eu](#)

¹⁷⁷ Stakeholder interviews.

¹⁷⁸ Eurofish (2025). *Mussels from Galicia*. [Eurofish.dk](#)

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against Ukraine squeezed margins, although higher costs were partly passed on through to prices. Stakeholders noted that energy became one of the largest single cost components for aquaculture sites, particularly for land-based operations, while small-boat mussel farmers were relatively less exposed due to lower energy intensity¹⁷⁷. Brexit further disrupted trade: EU exports of live mussels to the UK fell sharply between 2019 and 2023, especially from the Netherlands, Denmark, and France, with most volumes redirected to intra-EU markets and only limited recovery observed by 2024¹⁷⁹. Industry representatives confirmed that pre-Brexit supply routes via the UK became largely unviable due to new sanitary and customs procedures, increasing complexity and costs for Irish and continental producers¹⁷⁷.

Oyster farming, though smaller in volume, is considerably higher in value and more geographically concentrated. EU production increased slightly from 101.700 tonnes in 2019 to 104.600 tonnes in 2023, while value rose by 27% to EUR 583 million (around 5,60 EUR/kg)¹⁷⁵. France dominates production with about 90.000 tonnes (86% of total production), followed by Ireland and Portugal. The pandemic severely affected oyster producers as restaurant and festive demand collapsed, leaving stocks unsold. Producers responded by holding oysters longer in the water to achieve larger sizes and by experimenting with direct sales and local online distribution to offset lost foodservice and export channels¹⁷⁷. Following Brexit, French and Irish exporters faced new sanitary requirements that disrupted trade flows in 2021, although shipments later normalised¹⁷⁹. The war in Ukraine added energy and transport cost pressures, but strong demand for premium and locally branded oysters helped sustain prices. Rising fuel and air-freight costs nevertheless curtailed exports to Asian markets, prompting some producers to refocus on European destinations¹⁷⁷.

Landings of both species now play a minor role. In 2023, mussel landings totalled just 19.600 tonnes, down by half compared with 2019, valued at EUR 7,6 million (about 0,39 EUR/kg), while oyster landings amounted to just 440 tonnes, worth around EUR 1,1 million¹⁸⁰. Mussel landings are concentrated almost entirely in Denmark, which accounts for around 90% of landings, while oyster landings are limited to small coastal fisheries in Italy, Ireland, Denmark, Portugal, and France. The steep decline in landed volumes reflects the combined effects of pandemic-era demand collapse, higher fuel costs after 2022, and the continued substitution of farmed product in EU markets.

By 2023, EU mussel and oyster production had broadly stabilised below pre-pandemic volumes but at historically high values. COVID-19 caused the most abrupt short-term disruption by paralysing foodservice demand; Brexit introduced lasting structural changes to trade flows; and Russia's war of aggression against Ukraine fundamentally altered the sector's cost base through higher energy, packaging, and logistics expenses. Stakeholders consistently described a sector emerging leaner and more regionally integrated, increasingly focused on domestic markets, retail packaging, and product differentiation¹⁷⁷. Overall, the bivalve sector has shifted toward a smaller-volume but more resilient and economically robust production model than before the crisis period.

4.6.2 Processing and trade

Processing of mussels and oysters in the EU plays a complementary role to primary production, stabilising supply and enabling product diversification across fresh, frozen, and value-added forms. Mussels are primarily processed into cooked, frozen, or vacuum-packed products, while oysters are mostly marketed fresh, with only limited shucking, freezing, or packaging^{181, 182}. This aligns with stakeholder observations: processors reported that mussels shifted increasingly toward frozen and vacuum-packed formats during and after the pandemic, while oysters remained largely a fresh, high-

¹⁷⁹ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

¹⁸⁰ EUMOFA [landings](#) dashboard (Eurostat fishery).

¹⁸¹ EUMOFA (2022). *Mussels in the EU*. [Eumofa.eu](#)

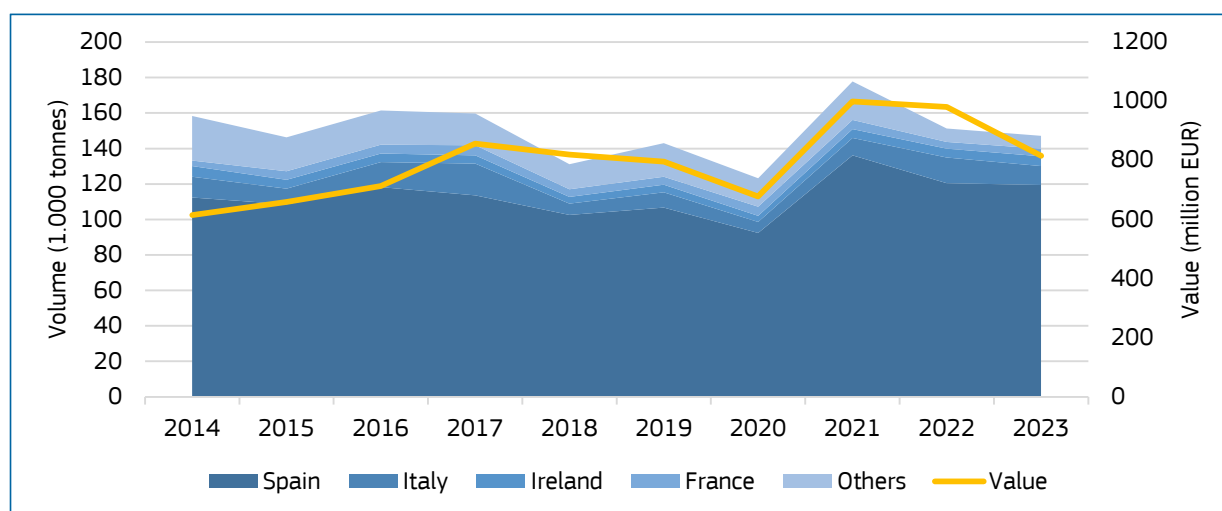
¹⁸² EUMOFA (2022). *Oysters in the EU*. [Eumofa.eu](#)

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value niche product with limited scope for industrial processing¹⁸³. Processing capacity is concentrated in a few Member States, notably Spain, Italy, France, and Portugal, with additional facilities in Ireland, the Netherlands, and Denmark.

In 2023, total EU mollusc processing reached around 147.200 tonnes (Figure 68), valued at EUR 815 million¹⁸⁴. While volumes declined from 177.800 tonnes in 2021, unit values remained elevated (5,50-6,50 EUR/kg), reflecting energy, packaging, and freight cost pressures following Russia's war of aggression against Ukraine. Processors confirmed that packaging costs increased sharply, particularly for plastic bags and vacuum materials used in mussel processing, due to higher oil prices¹⁸³. Spain is the undisputed processing hub, consistently handling over 100.000 tonnes per year (EUR 475-765 million, 2019-2023) and accounting for roughly two-thirds of EU throughput. A second tier of processors includes Italy (6.000-14.000 tonnes; EUR 50-105 million), France (around 5.000 tonnes; EUR 47-57 million), and Portugal (up to 15.000 tonnes; EUR 83 million). These figures highlight the sector's structural resilience: after the COVID-19 downturn in 2020, output rebounded strongly in 2021 and remained broadly stable through 2023 despite sustained cost inflation.

Figure 68: EU-27 processing volume and value of molluscs¹⁸⁵



Source: EUMOFA [processing](#) dashboard (Eurostat PRODCOM).

Trade patterns confirm the integration of these processing centres within the single market (Figure 69 and Figure 70). Intra-EU exchanges dominate, particularly for mussels, with Spain and the Netherlands acting as major suppliers to Italy, France, Germany, and Belgium¹⁸⁶. Stakeholders described a clear shift toward intra-EU circulation of both live and processed mussels following Brexit, as exporters sought to avoid new sanitary and customs frictions when trading with the UK¹⁸³. Total EU mussel exports (intra- and extra-EU combined) reached around 202.000 tonnes in 2024, up 24% from 2020, while extra-EU shipments remained limited (around 6.000 tonnes), mainly destined for Switzerland, the UK, and the United States.

Following Brexit, exports of live mussels from EU producers to the UK declined sharply, particularly from the Netherlands, Denmark, and France. Stricter sanitary and classification rules now require live bivalves to originate from Class A waters or to undergo purification prior to export¹⁸⁷. Industry feedback indicates that the redirection of volumes toward continental EU markets stimulated greater domestic

¹⁸³ Stakeholder interviews.

¹⁸⁴ EUMOFA [processing](#) dashboard (Eurostat PRODCOM). CN 10203250 (frozen, dried, salted, or brined molluscs).

¹⁸⁵ CN 10203250 (frozen, dried, salted, or brined molluscs).

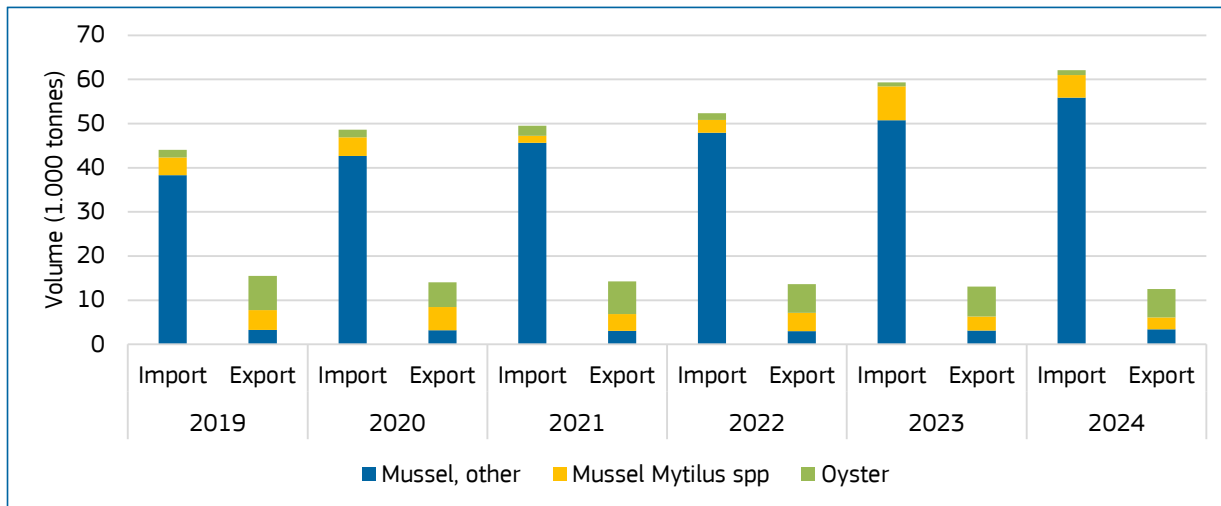
¹⁸⁶ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

¹⁸⁷ Seafood Source (2024). *Decimated UK shellfish industry scrambling for government help*. [Seafoodsource.com](https://www.seafoodsource.com)

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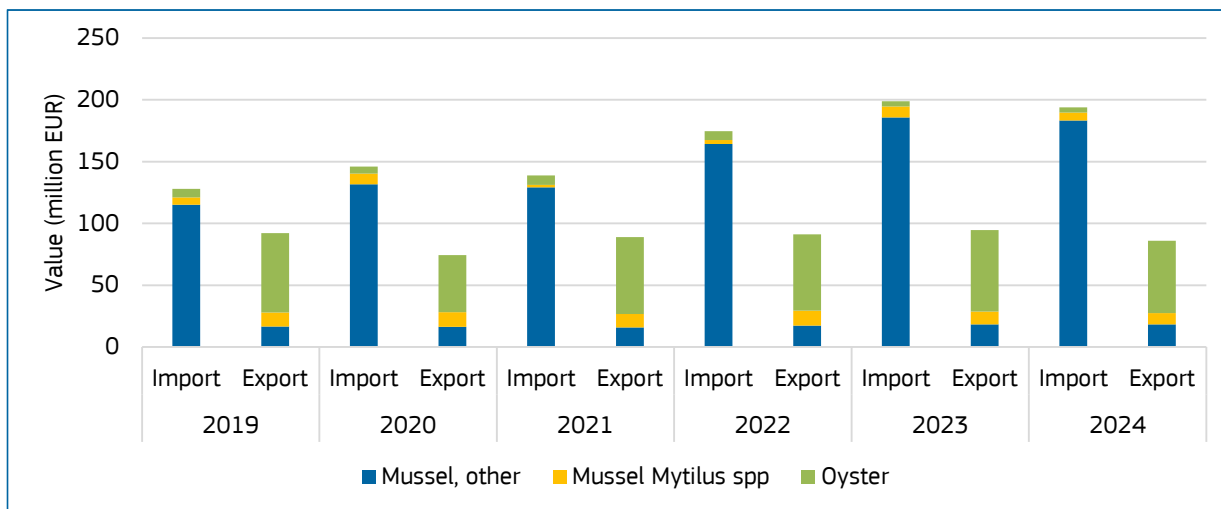
processing and packaging activity, especially in Ireland and northern France¹⁸⁸. By 2024, only limited recovery of UK-bound trade was evident. Imports of mussels from non-EU suppliers remained modest but increased from 42.300 tonnes in 2019 to 61.000 tonnes in 2024, driven by inflows from Chile, New Zealand, and Norway, which help offset seasonal gaps in EU supply¹⁸⁶.

Figure 69: EU-27 trade balance of mussels and oysters in volume



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 70: EU-27 trade balance of mussels and oysters in value



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Oyster trade, by contrast, is high-value and geographically concentrated. EU oyster exports reached around 38.000 tonnes in 2024, recovering from pandemic-related lows in 2020¹⁸⁶. France dominates this trade, supplying Italy, the Netherlands, and Spain within the EU, and China, Hong Kong, and Switzerland externally. Ireland is the second-largest exporter, mainly serving France and the UK, whose imports increased from around 200 tonnes in 2019 to nearly 600 tonnes in 2024. Industry feedback suggests that freight cost inflation and periodic air-cargo bottlenecks curtailed exports to Asian markets in 2022-2023, prompting a partial reorientation toward EU destinations¹⁸⁹.

Taken together, these dynamics position the EU as a net exporter of oysters and a net importer of mussels, with both sectors supported by advanced logistics and cold-chain infrastructure. Despite

¹⁸⁸ Stakeholder interviews.

¹⁸⁹ Stakeholder interviews.

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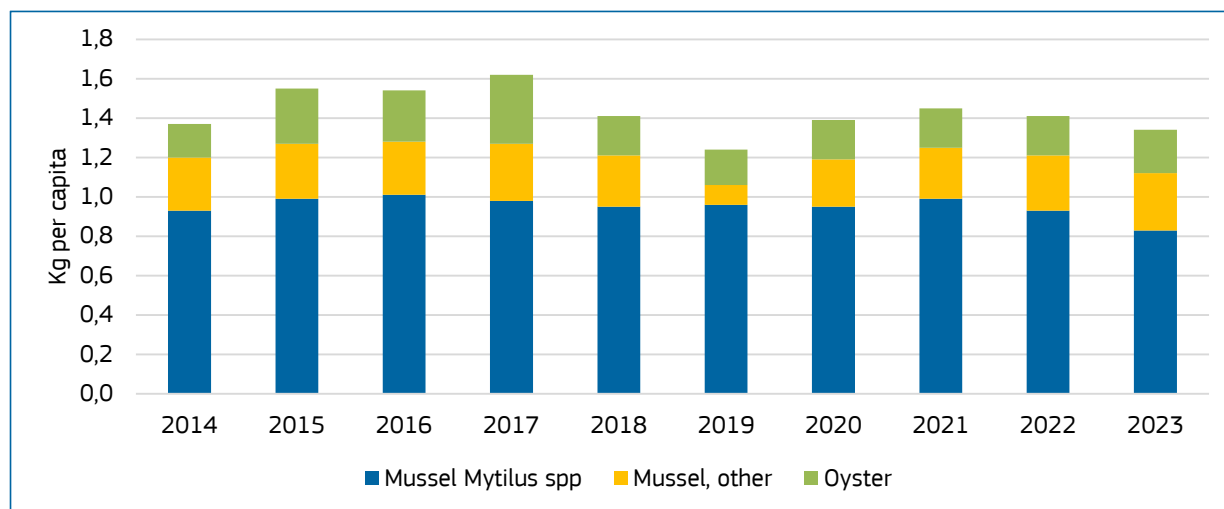
repeated disruptions of the past five years, the EU bivalve industry has demonstrated strong adaptive capacity, maintaining market access, stable values, and continuous product flows across internal and external markets. Stakeholders consistently described the post-crisis sector as more regionally integrated, technologically proactive, and strategically diversified than before¹⁸⁹.

4.6.3 Market and consumption trends

The EU market for mussels and oysters reflects both regional dietary traditions and evolving consumer behaviour shaped by recent economic, sanitary, and geopolitical shocks. Mussels remain among the most widely consumed shellfish in Europe, valued as an affordable and locally sourced seafood, while oysters occupy a smaller, high-value niche centred on France, Ireland, Spain, and Italy. Stakeholders described mussels as an “everyday product” with stable household demand even during downturns, whereas oysters were seen as “festive products” highly sensitive to income and hospitality trends¹⁸⁹.

Across the EU, *Mytilus* spp. mussels accounted for most bivalve consumption (Figure 71), averaging 490.000-515.000 tonnes (0,95-1,00 kg per capita)¹⁹⁰. Other mussel species added roughly 0,25-0,30 kg, while oysters contributed 0,17-0,28 kg per capita, bringing total mussel and oyster consumption to about 1,4-1,6 kg per person. This share trended gradually downward, constrained by both biological and market pressures: for example, mussel output in Galicia fell in recent years due to declining phytoplankton supply and weaker recruitment in seed beds¹⁹¹. Rising input costs, tighter margins, and increasing competition from imported crustaceans and cephalopods have further squeezed the relative position of bivalves in the seafood mix¹⁹². Stakeholders highlighted that younger consumers increasingly substitute bivalves with easy-to-prepare alternatives such as shrimp or cephalopod-based dishes¹⁸⁹.

Figure 71: Estimated per capita apparent consumption of mussels and oysters in the EU¹⁹³ (live weight equivalents)



Source: EUMOFA [supply balance](#) dashboard.

In 2020, with the UK excluded from EU totals (EU-27) and the onset of the COVID-19 pandemic, apparent consumption dropped sharply to 425.000 tonnes of *Mytilus* spp. mussels (0,95 kg per capita) and 89.000 tonnes of oysters (0,20 kg per capita)¹⁹⁰. Restaurant closures curtailed demand for live and fresh bivalves, but the impact was cushioned by retail sales of frozen, cooked, and vacuum-packed

¹⁹⁰ EUMOFA [supply balance](#) dashboard.

¹⁹¹ Eurofish (2025). *Mussels from Galicia*. [Eurofish.dk](#)

¹⁹² EUMOFA (2024). *The EU fish market – 2024 edition*. [Eumofa.eu](#)

¹⁹³ From 2014-2019 data includes the UK (EU-28), from 2020 onward data concerns the EU-27.

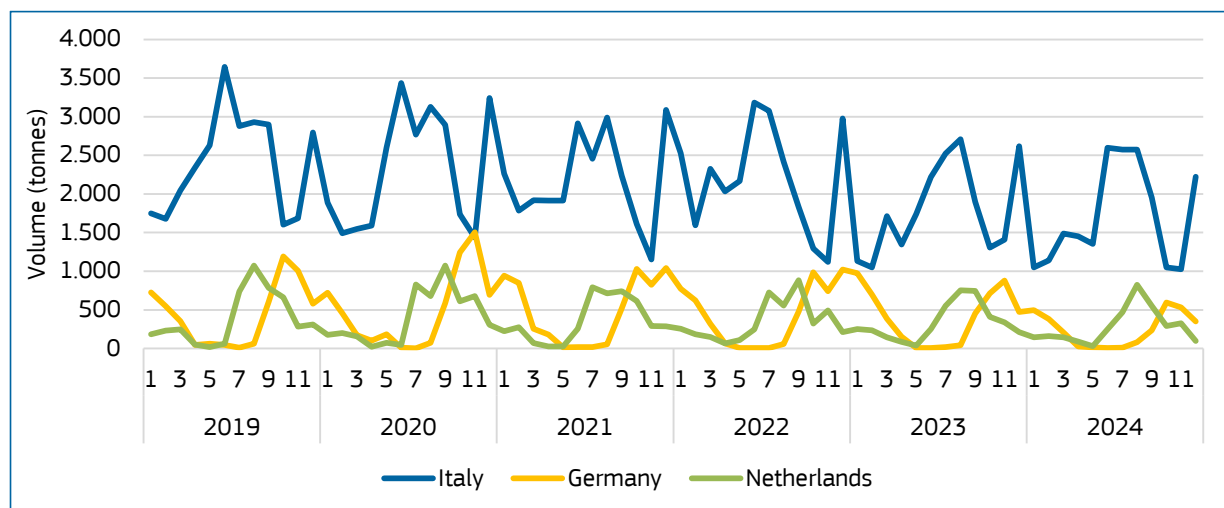
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mussels. Producers reported a rapid expansion of convenience formats and online sales channels, while oyster farmers redirected to local and domestic markets¹⁹⁰. As restrictions eased in 2021–2022, mussel consumption briefly recovered to 443.000 tonnes (0,99 kg per capita), reflecting the reopening of foodservice channels. From 2022 onward, however, rising energy and logistics costs and broader inflationary pressures weighed again on volumes. Oyster consumption stabilised around 90.000 tonnes (0,20 kg per capita), supported by resilient seasonal demand despite higher prices. Despite successive shocks, per-capita consumption remained broadly aligned with pre-pandemic levels once adjusted for the post-Brexit boundary.

By 2023, apparent consumption had fallen to 368.000 tonnes of *Mytilus* spp. mussels (0,83 kg per capita), 133.000 tonnes of other mussels (0,29 kg per capita), and 99.000 tonnes of oysters (0,22 kg per capita)¹⁹⁰. The mussel market increasingly relied on processed and ready-to-eat formats, which sustained retail value even as total volume fell. Stakeholders stressed that inflation encouraged consumers to trade down toward cheaper proteins, but mussels maintained a price advantage as locally available, low-cost option¹⁸⁹. Oysters retained strong seasonal and high-income demand, particularly in France, Ireland, and Italy, where domestic branding and local sourcing supported consumer loyalty despite higher prices. Interviewees described a widening segmentation within oyster markets: premium and organic oysters continued to perform well in affluent regions, while mid-range producers saw pressure to cut margins or downsize packaging to maintain shelf appeal¹⁹⁴.

Household consumption data confirm these patterns (Figure 72). Italy, the Netherlands, and Germany are the largest retail markets for fresh mussels, collectively exceeding 50.000 tonnes per year and showing steady demand from 2019 to 2024¹⁹⁵. In Denmark, consumption volumes remained smaller but stable, reflecting both limited domestic supply and a niche focus on local quality. This pattern aligns with observations from Irish and French producers who reported sustained local demand for branded regional products marketed through supermarkets and fishmongers¹⁹⁴.

Figure 72: Household consumption of fresh mussels (*Mytilus* spp.) in selected EU Member States



Source: EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

Overall, the EU bivalve market has shifted toward lower-volume but higher-value consumption. The pandemic and subsequent inflationary shocks accelerated this structural change: mussels now dominate everyday retail segments through processed and convenience-oriented formats, while oysters have consolidated their position as premium, regionally branded products tied to local markets and festive occasions. Stakeholders repeatedly emphasised that the crisis years encouraged greater

¹⁹⁴ Stakeholder interviews.

¹⁹⁵ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

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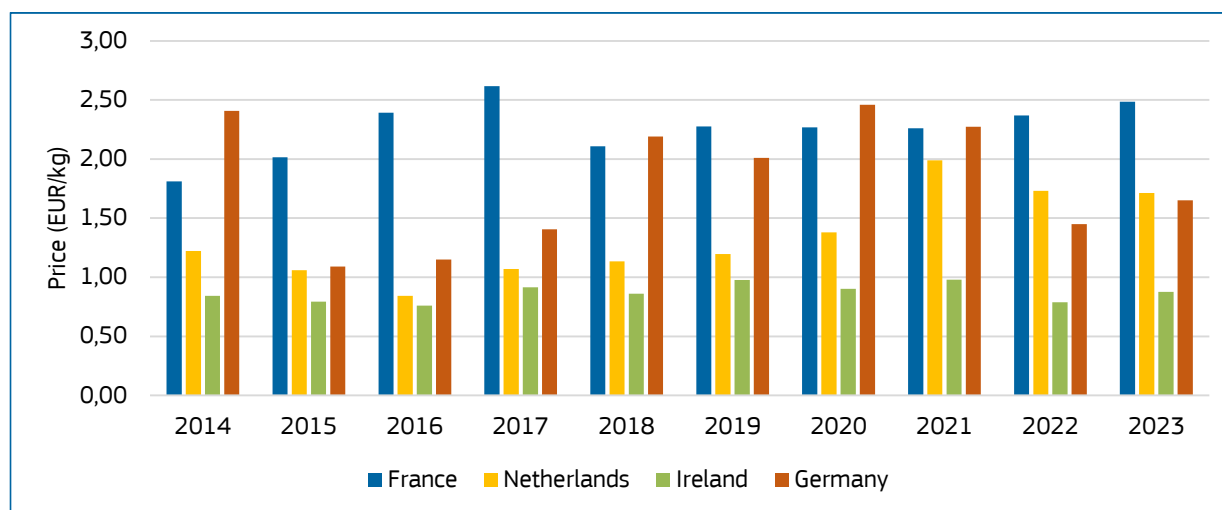
diversification and resilience – favouring producers who invested in packaging, e-commerce, and year-round retail access over those relying on single export markets or foodservice outlets¹⁹⁶. Although total apparent consumption declined from nearly 1,4 kg to about 1,3 kg per capita over the past decade¹⁹⁷, the sector continues to play an essential role in sustaining coastal economies and maintaining consumer access to sustainable, low-impact seafood.

4.6.4 Price trends

Between 2019 and 2024, price developments for mussels and oysters in the EU reflected their contrasting market roles: mussels as a locally sourced, affordable staple, and oysters as a high-value product shaped by festive and foodservice demand.

At the production level, farm-gate prices for blue mussels (*Mytilus edulis*) rose moderately in northern Europe (Figure 73 and Figure 74). In France, values increased from 2,28 EUR/kg in 2019 to 2,48 EUR/kg in 2023, while the Netherlands recorded a stronger rise from 1,20 EUR/kg to 1,71 EUR/kg, reflecting tighter North Sea supply and higher energy costs¹⁹⁸. Irish and German prices remained lower (around 0,9-1,7 EUR/kg) and more stable. In southern Member States, Mediterranean mussels (*Mytilus galloprovincialis*) showed sharper growth: Spain's prices rose from 0,52 EUR/kg to 0,81 EUR/kg, Italy's from 0,85 EUR/kg to 1,46 EUR/kg, and Greece's from 0,39 EUR/kg to 0,66 EUR/kg between 2019 and 2023, driven by inflation, logistics costs, and a growing share of processed output.

Figure 73: Farm-gate prices for blue mussel in selected Member States



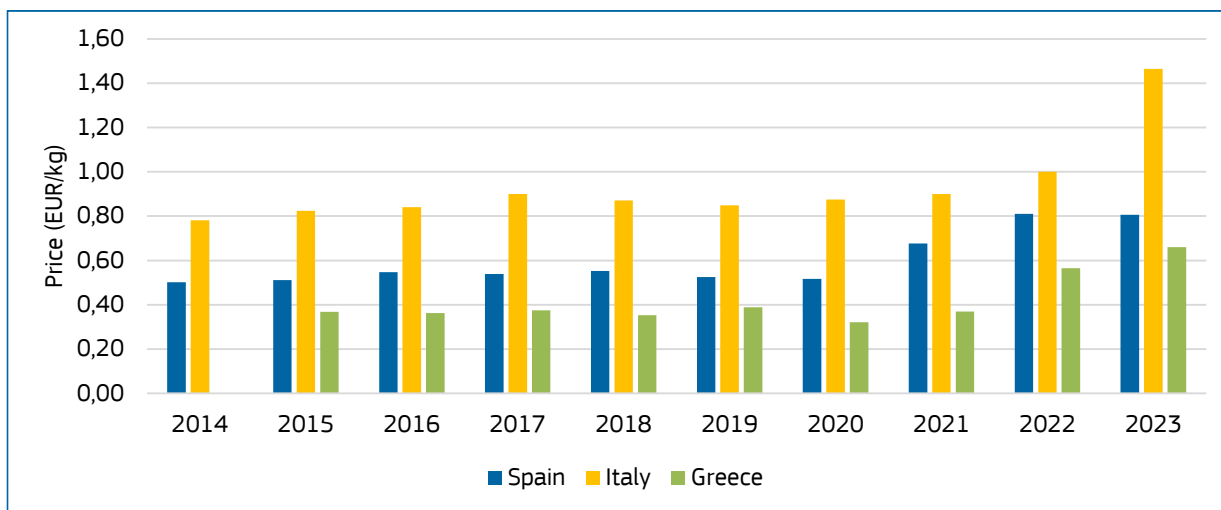
Source: EUMOFA [aquaculture](#) dashboard (Eurostat fishery).

¹⁹⁶ Stakeholder interviews.

¹⁹⁷ EUMOFA [supply balance](#) dashboard.

¹⁹⁸ EUMOFA [aquaculture](#) dashboard (Eurostat fishery).

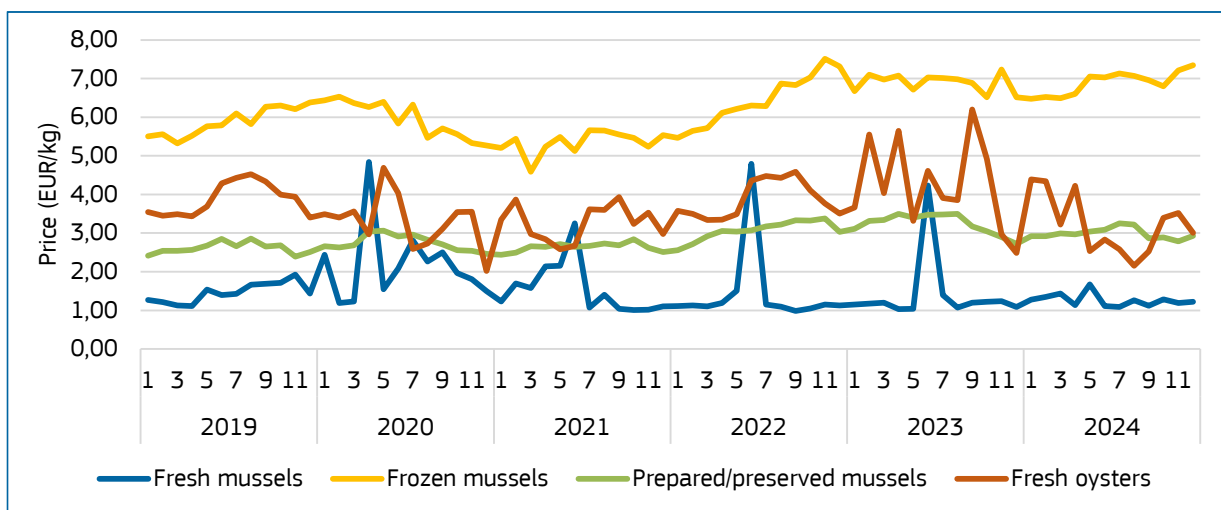
Figure 74: Farm-gate prices for Mediterranean mussel in selected Member States



Source: EUMOFA [aquaculture](#) dashboard (Eurostat fishery).

These upstream increases were transmitted along the value chain (Figure 75, Figure 76, Figure 77, and Figure 78). The average import price of frozen mussels rose from about 5,60 EUR/kg in 2019 to 7,00 EUR/kg in 2023, while prepared/preserved mussel products moved from 2,40-2,60 EUR/kg to 3,00-3,50 EUR/kg¹⁹⁹. Fresh mussel imports remained minor but stable around 1,20-1,40 EUR/kg, showing limited dependency on external supply. Within the single market, prepared mussel prices in France, Italy, and Germany also firmed steadily from 3,50-4,00 EUR/kg before 2021 to 4,50-5,00 EUR/kg by 2023-2024, evidencing full cost pass-through in value-added segments. Stakeholders noted that processors and retailers were largely able to sustain margins by repositioning toward frozen and ready-to-eat formats, which maintained consumer appeal despite higher prices²⁰⁰.

Figure 75: Extra-EU import price of mussels and oysters

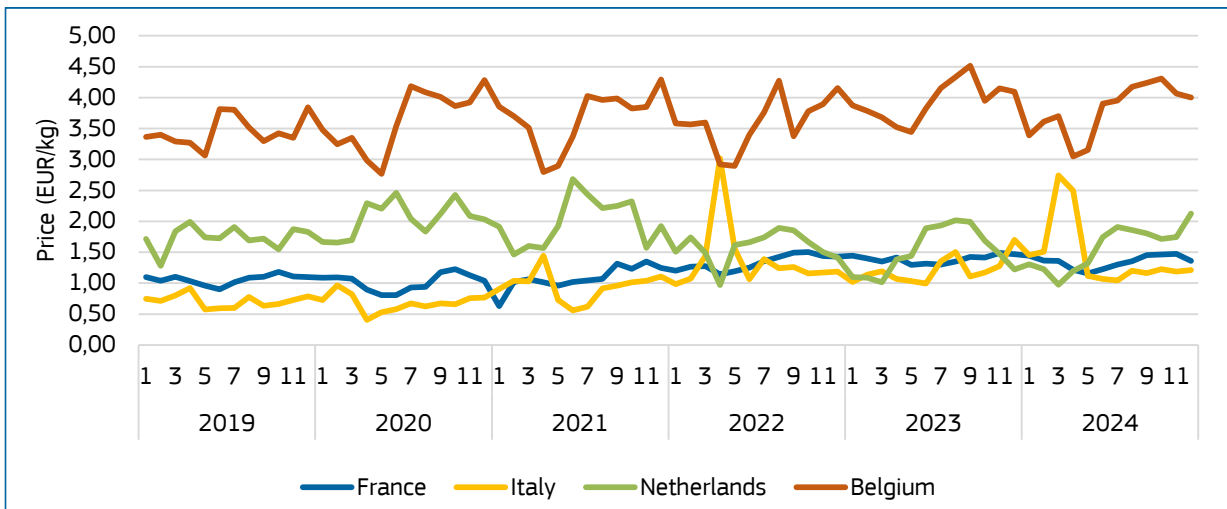


Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

¹⁹⁹ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

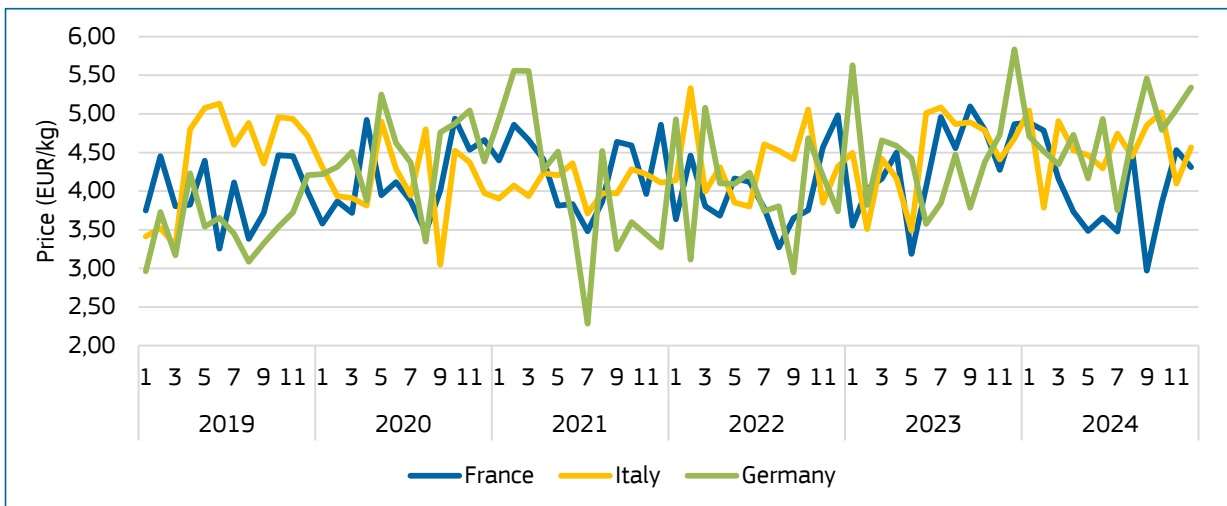
²⁰⁰ Stakeholder interviews.

Figure 76: Intra-EU import price of fresh mussels in selected Member States



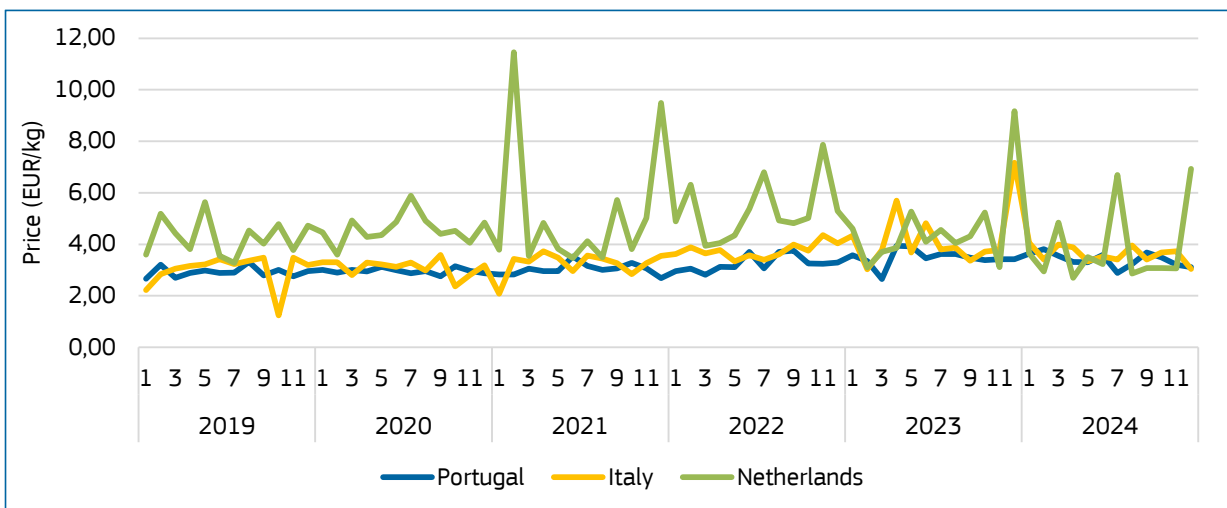
Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 77: Intra-EU import price of prepared/preserved mussels in selected Member States



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 78: Intra-EU import price of frozen mussels in selected Member States

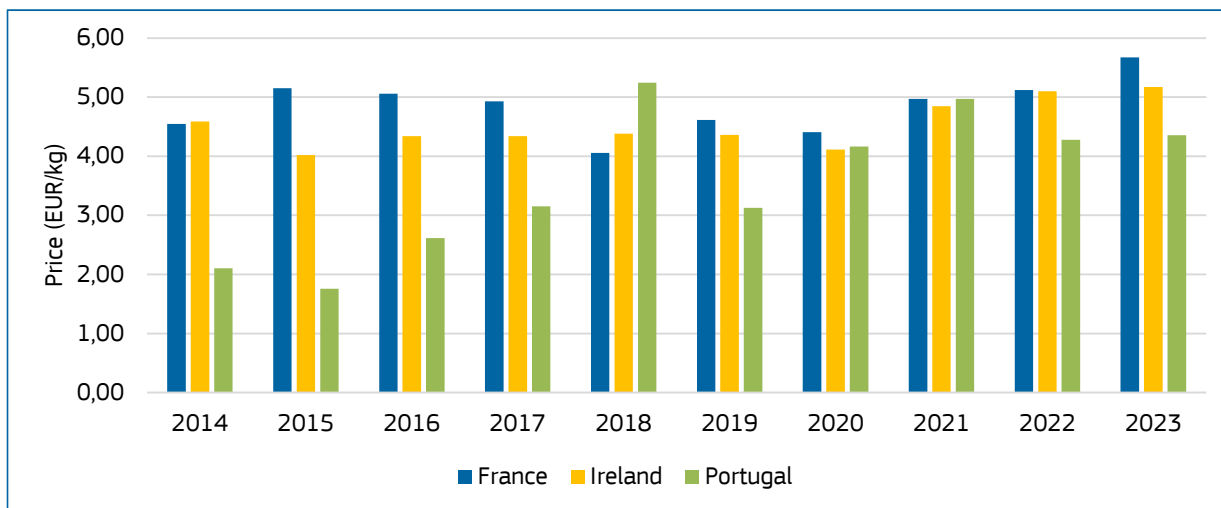


Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

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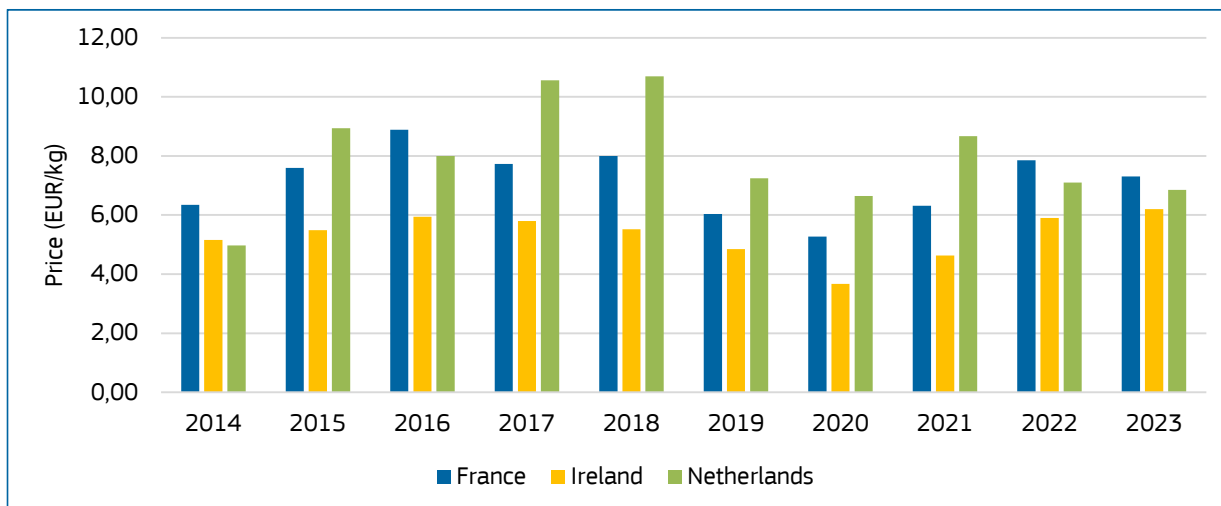
In the oyster sector, farm-gate prices (Figure 79 and Figure 80) rose more sharply and remained considerably higher than for mussels. Pacific cupped oysters (*Crassostrea gigas*) increased from 4,60 EUR/kg to 5,70 EUR/kg in France, 4,40 EUR/kg to 5,20 EUR/kg in Ireland, and 3,10 EUR/kg to 4,40 EUR/kg in Portugal between 2019 and 2023²⁰¹. The premium European flat oyster (*Ostrea edulis*) maintained a clear price lead, with French prices rising from 6,00 EUR/kg to 7,30 EUR/kg and Irish prices from 4,90 EUR/kg to 6,20 EUR/kg over the same period. On average, flat oysters commanded a 1,00-2,00 EUR/kg premium above Pacific cupped varieties, underscoring their boutique positioning.

Figure 79: Farm-gate prices for Pacific cupped oyster in selected Member States



Source: EUMOFA [aquaculture](#) dashboard (Eurostat fishery).

Figure 80: Farm-gate prices for European flat oyster in selected Member States



Source: EUMOFA [aquaculture](#) dashboard (Eurostat fishery).

Trade data mirror this pattern (Figure 81). Extra-EU import prices for fresh oysters averaged around 3,50-3,90 EUR/kg before the pandemic, dipped briefly in 2020-2021 with the loss of hospitality sales, and then climbed above 4,00-4,50 EUR/kg by 2023-2024, driven primarily by higher energy, transport, and labour costs rather than a recovery in volumes²⁰². Within the EU, French import prices remained stable at 5,00-6,00 EUR/kg, while Italy's hovered between 3,80-5,90 EUR/kg. Spain, however, recorded a marked increase to 7,00-9,00 EUR/kg in 2023-2024, reflecting strong seasonal demand and limited

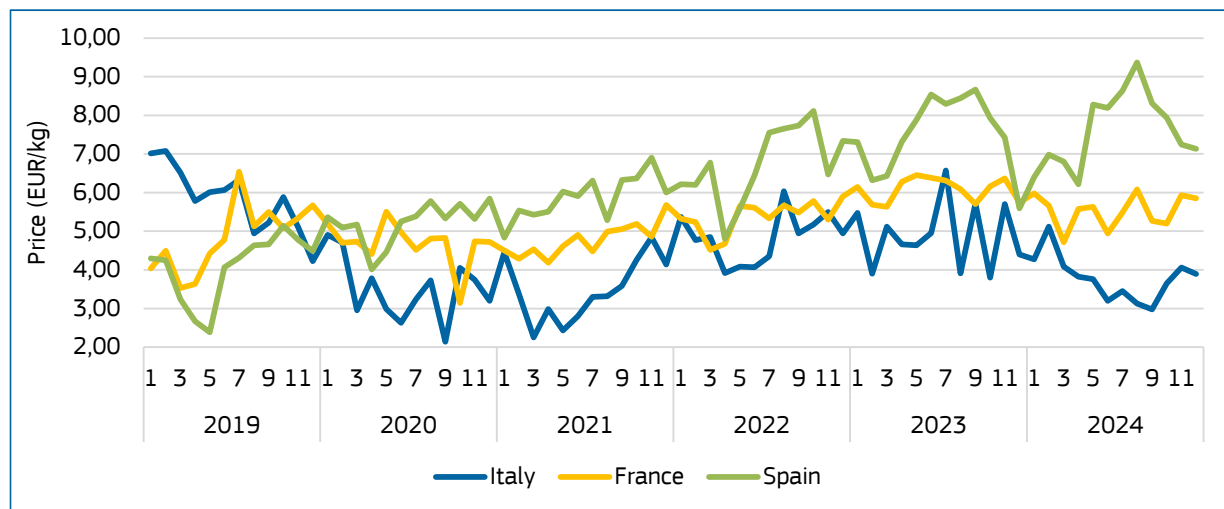
²⁰¹ EUMOFA [aquaculture](#) dashboard (Eurostat fishery).

²⁰² EUMOFA [trade](#) dashboard (Eurostat COMEXT).

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supply. Stakeholder indicated that domestic branding, shorter supply chains, and the growth of online sales helped maintain profitability despite cost pressures²⁰³.

Figure 81: Intra-EU import price of fresh oysters in selected Member States



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Overall, the post-2020 period was marked by higher production costs and increasing price differentiation. Mussels continued to perform well as an affordable, locally sourced seafood, with stable demand even as consumer traded down to lower-cost proteins. Oysters, on the other hand, consolidated their premium market position, with high-end and organic products performing strongly in France, Ireland, and Italy, while mid-range producers faced tighter margins.

4.7 Herring

4.7.1 Production

Herring, including both Atlantic and Baltic stocks, remains of the EU's most important pelagic species by volume. Between 2014 and 2018, EU herring landings (Figure 82 and Figure 83) fluctuated between 540.000 and 740.000 tonnes, before declining to around 460.000 tonnes in 2023, driven by quota reductions, biological constraints, and external shocks²⁰⁴.

Denmark and the Netherlands have dominated production, together accounting for about 60% of EU landings²⁰⁴. Danish landings peaked at 220.000 tonnes in 2018 but fell to about 138.000 tonnes in 2023, following stricter ICES advice and lowered TACs in the North Sea and western Baltic^{205, 206}. The Netherlands similarly saw a decline from 179.000 tonnes in 2018 to 149.000 tonnes in 2023, in part reflecting post-Brexit quota reassignments and market restructuring^{207, 208}. In the Baltic region, production fell more sharply. Finnish and Swedish landings declined from over 100.000 tonnes each in 2017-2018 to 54.000 and 22.000 tonnes, respectively, in 2023, as TACs for central and western Baltic herring were slashed in response to low stock biomass. Poland's landings halved over the same period

²⁰³ Stakeholder interviews.

²⁰⁴ EUMOFA [landings](#) dashboard (Eurostat fishery).

²⁰⁵ IntraFish (2024). *Scientists recommend sharp cut to North Sea herring catch for 2025*. [Intrafish.com](#)

²⁰⁶ European Commission (2025). *Fixing the fishing opportunities for certain fish stocks and groups of fish stocks applicable in the Baltic Sea*. [Europa.eu](#)

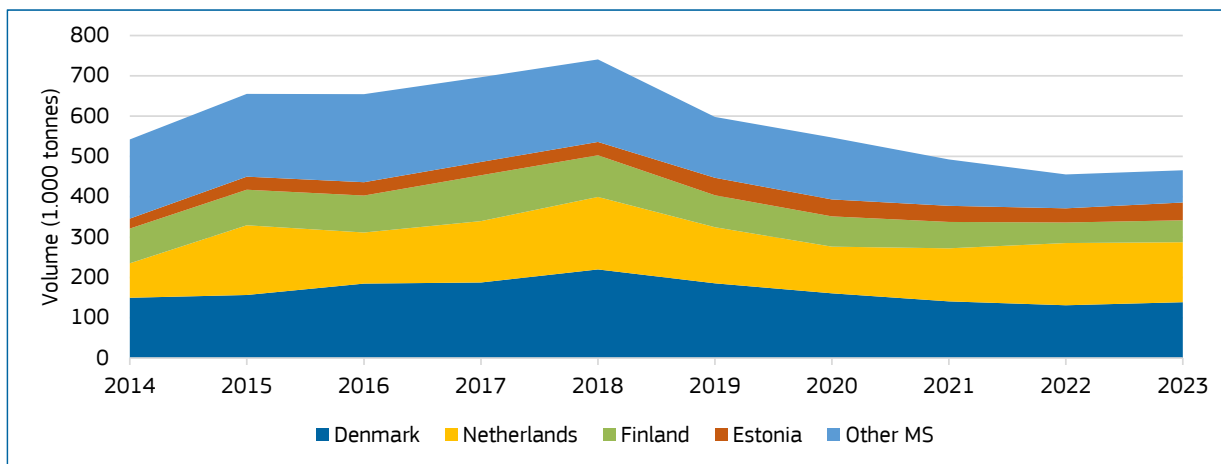
²⁰⁷ European Parliament (2022). *Brexit and the reduction in EU fishing quota shares, 2021 to 2023*. [Europa.eu](#)

²⁰⁸ European Commission (2023). *Fleet report of the Netherlands for the year 2022*. [Europa.eu](#)

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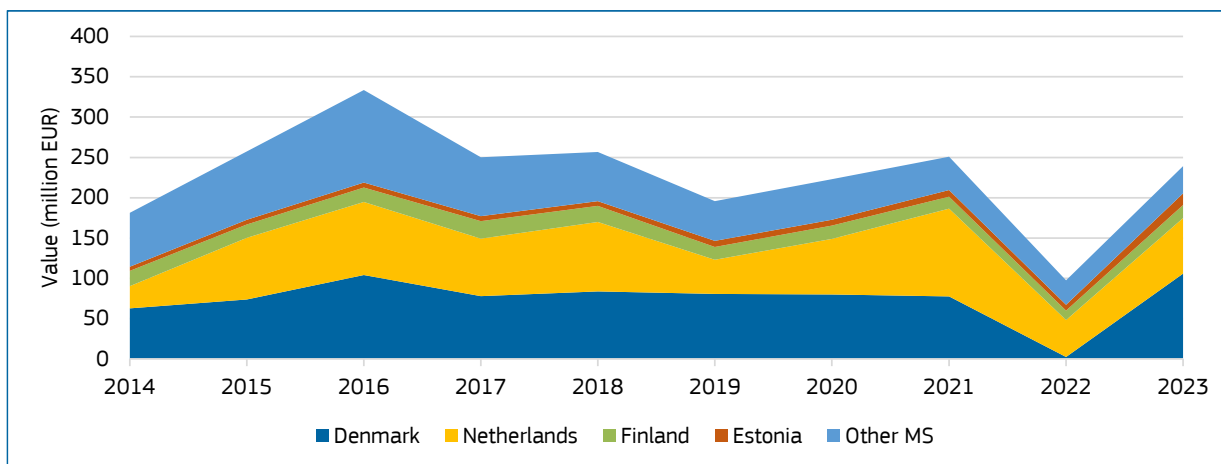
(from 42.000 tonnes to 18.000 tonnes), while Estonia and Latvia, though more stable, have only partially offset declines via Gulf of Riga stocks.

Figure 82: EU-27 landing volume of herring



Source: EUMOFA [landings](#) dashboard (Eurostat fishery).

Figure 83: EU-27 landing value of herring



Source: EUMOFA [landings](#) dashboard (Eurostat fishery).

The COVID-19 pandemic added short-term operational stress to the sector. Pelagic fleets largely continued fishing, but downstream processing and logistics faced labour constraints, intermittent plant disruptions, and transport bottlenecks²⁰⁹. In response, some operators adjusted landing timing, redirected volumes toward lower-value outlets, or increased reliance on freezing and storage to manage market uncertainty²¹⁰.

Brexit reshaped quota allocation and access arrangements for shared stocks and added friction to some EU-UK seafood flows. As the UK exited the Common Fisheries Policy²¹¹, EU fleets' access and quota shares for certain stocks were renegotiated, while some landing and logistics routes involving UK ports faced additional administrative steps²¹². In this context, several fleets and processors reported

²⁰⁹ IntraFish (2024). *Scientists recommend sharp cut to North Sea herring catch for 2025*. [Intrafish.com](https://www.intrafish.com)

²¹⁰ JRC (2020). *The impact of COVID-19 on the EU-27 fishing fleet*. [Publications.jrc.ec.europa.eu](https://publications.jrc.ec.europa.eu)

²¹¹ European Commission (2023). *Common fisheries policy*. [Europa.eu](https://europea.eu)

²¹² European Parliament (2022). *Brexit and the reduction in EU fishing quota shares, 2021 to 2023*. [Europa.eu](https://europea.eu)

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higher transaction costs and greater uncertainty in securing supplies, particularly for time-sensitive or hub-dependent flows²¹³.

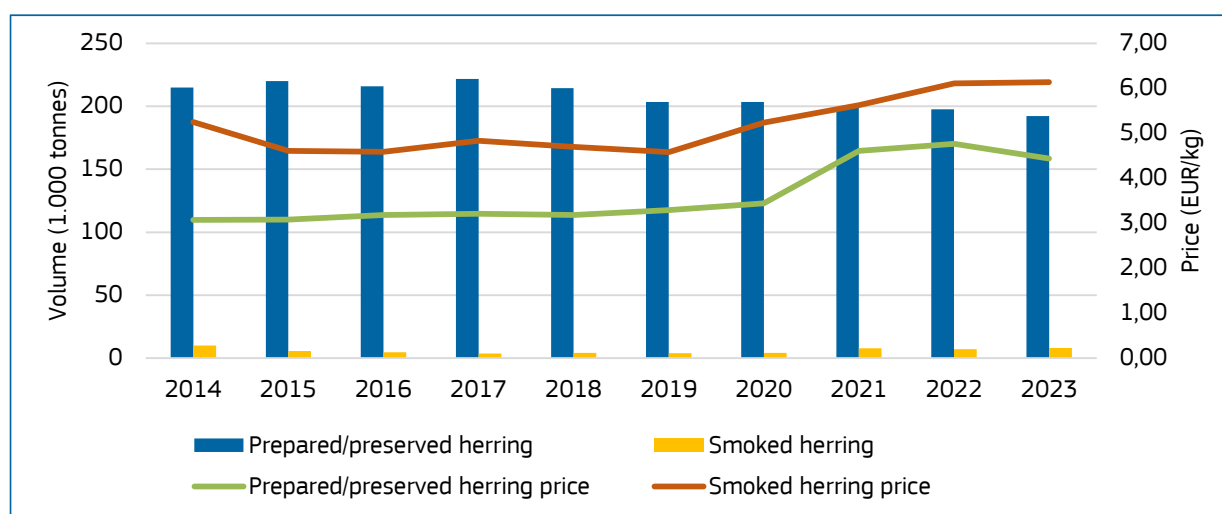
Russia's war of aggression against Ukraine amplified cost pressures across pelagic supply chains. Higher fuel, energy, and transport costs raised operating expenditures for freezing, cold storage, and transshipment, which are central to herring logistics²¹⁴. Some fleets reported temporary effort reductions or greater focus on alternative pelagics where margins were more favourable. At the same time, firmer export prices for some product forms partly cushioned the impact for major producers.

Quota constraints, combined with external shocks, have compressed EU herring landings while intensifying reliance on value extraction, processing efficiency, and access to stable export markets. The sector now operates in a lower-volume, higher-cost regime, with production increasingly concentrated in a few Member States able to scale and absorb volatility.

4.7.2 Processing and trade

Herring remains one of the EU's most important pelagic species for both processing and trade, with production centred around frozen, smoked, and prepared or preserved forms. Processing is concentrated in northern and Baltic Member States, where catches are landed and transformed into frozen fillets, marinated and brined products, and smoked preparations for EU and export markets. Between 2014 and 2023, total EU processing of prepared and preserved herring (excluding minced products) remained broadly stable at around 190.000-220.000 tonnes annually, valued at over EUR 600 million²¹⁵ (Figure 84).

Figure 84: EU-27 processing volume and avg. unit price of prepared and preserved herring and smoked herring

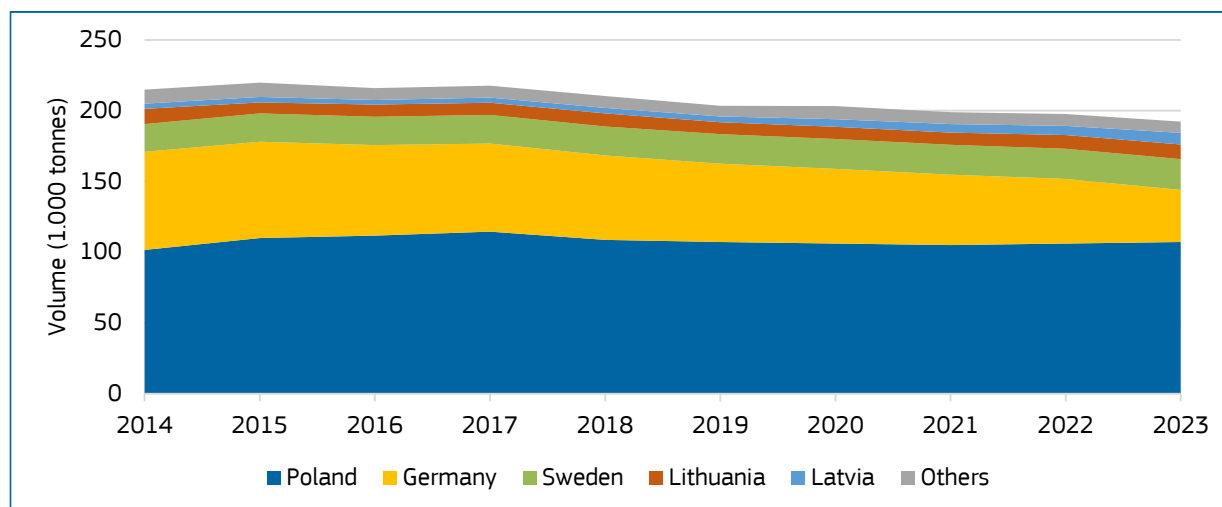


Source: EUMOFA [processing](#) dashboard (Eurostat PRODCOM). Note that processing volume for certain Member States has been estimated for prepared/preserved herring.

²¹³ Reuters (2021). 'We've lost 30 years': Brexit shatters supply chains for French fish hub. [Reuters.com](#)

²¹⁴ Guillen, J. et al. (2023). *Economic impact of high fuel prices on the EU fishing fleet*. [Mdpi.com](#)

²¹⁵ EUMOFA [processing](#) dashboard (Eurostat PRODCOM).

Figure 85: EU-27 processing volume of prepared and preserved herring by Member State

Source: EUMOFA [processing](#) dashboard (Eurostat PRODCOM). Note that processing volume has been estimated for France in 2022-2023 (in the “others” category), Poland in 2021-2023, and Sweden in 2014-2022.

Poland and Germany have traditionally dominated herring processing within the EU, together accounting for the bulk of prepared and preserved herring production²¹⁶. While PRODCOM statistics show a sharp decline or discontinuity in reported volumes after 2020 – particularly for Poland – estimated production figures indicate that overall processing capacity remained broadly stable over the analysed period (Figure 85).

Poland remained the single largest processor throughout the period, with estimated volumes fluctuating around 105.000-110.000 tonnes per year between 2019 and 2023. Germany’s production followed a clearer downward trend, falling from roughly 55.000 tonnes in 2019 to about 27.000 tonnes in 2023, reflecting reduced raw material availability and rising processing costs. By contrast, Sweden maintained a stable and gradually expanding preserved herring industry, with estimated annual production of roughly 15.000-20.000 tonnes, largely destined for the domestic market^{217, 218}.

Processing activity in the Baltic region also strengthened, particularly in Lithuania and Latvia, where combined output rose from about 12.500 tonnes in 2019 to nearly 18.600 tonnes in 2023, supported by export-oriented, cost-efficient operations²¹⁶. Smoked herring represents a smaller but valuable niche segment; France dominated this category, producing around 6.500 tonnes in 2023, accounting for more than 80% of total EU smoked herring output.

The COVID-19 pandemic disrupted labour availability, logistics, and plant operations, temporarily reducing throughput and accelerating a shift toward frozen and preserved formats better suited to retail distribution and long-distance trade²¹⁹. Brexit subsequently increased administrative and sanitary costs for shipments between the EU and UK, encouraging processors to prioritise intra-EU supply chains²²⁰. From 2022 onwards, sustained energy and input cost inflation further reinforced process optimisation and value-retention strategies, including product differentiation and export targeting.

Trade data confirm that the EU remains a net exporter of frozen whole herring, while trade in fillets and prepared or preserved products is predominantly intra-EU, reflecting strong regional specialisation

²¹⁶ EUMOFA [processing](#) dashboard (Eurostat PRODCOM).

²¹⁷ EUMOFA (2023). *Herring preserved in glass jars in Sweden*. Eumofa.eu

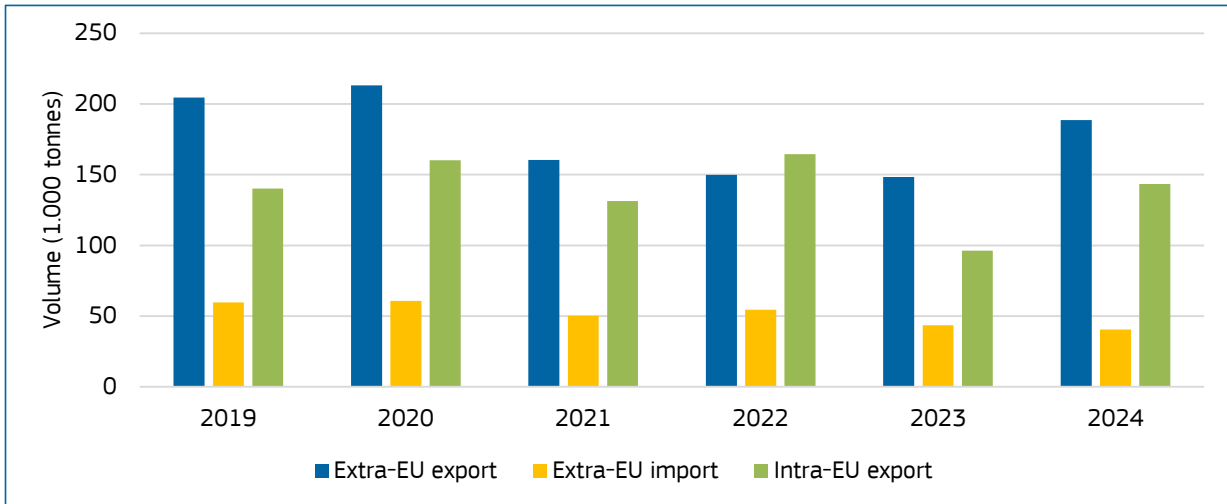
²¹⁸ Sweden Pelagic (2025). *Swedish-produced products*. Swedenpelagic.se

²¹⁹ EUMOFA (2024). *The EU fish market – 2024 edition*. Eumofa.eu

²²⁰ European Commission (2022). *Brexit Adjustment Reserve*. Europa.eu

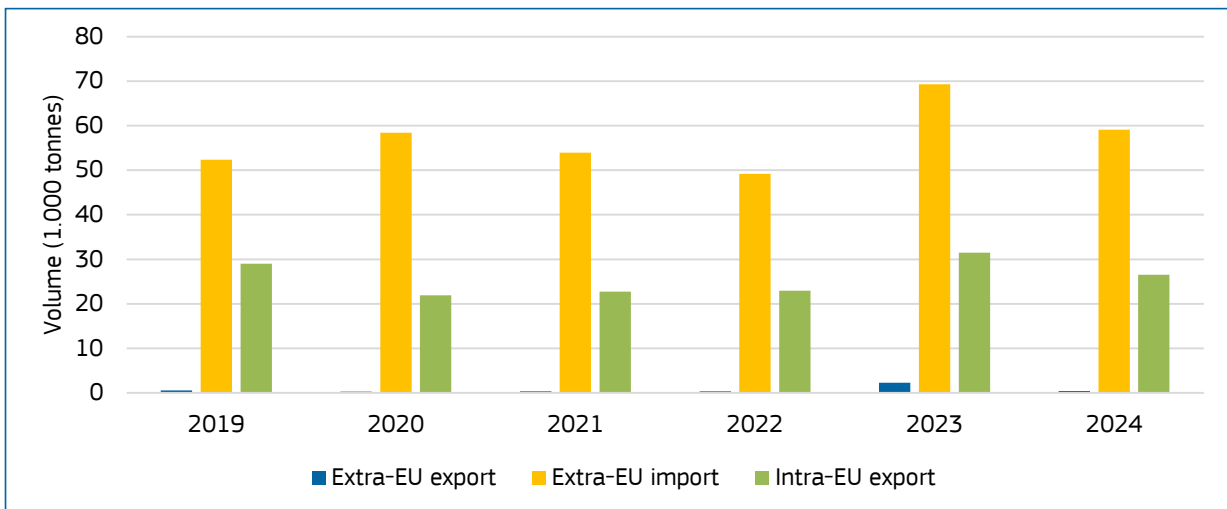
and supply-chain interdependence²²¹ (Figure 86, Figure 87, and Figure 88). Overall, the herring processing sector has shown marked resilience, sustaining its economic role despite consecutive shocks by leveraging diversification, automation, and sustained consumer demand for affordable, traditional seafood products.

Figure 86: EU-27 trade balance and intra-EU export of frozen whole herring



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

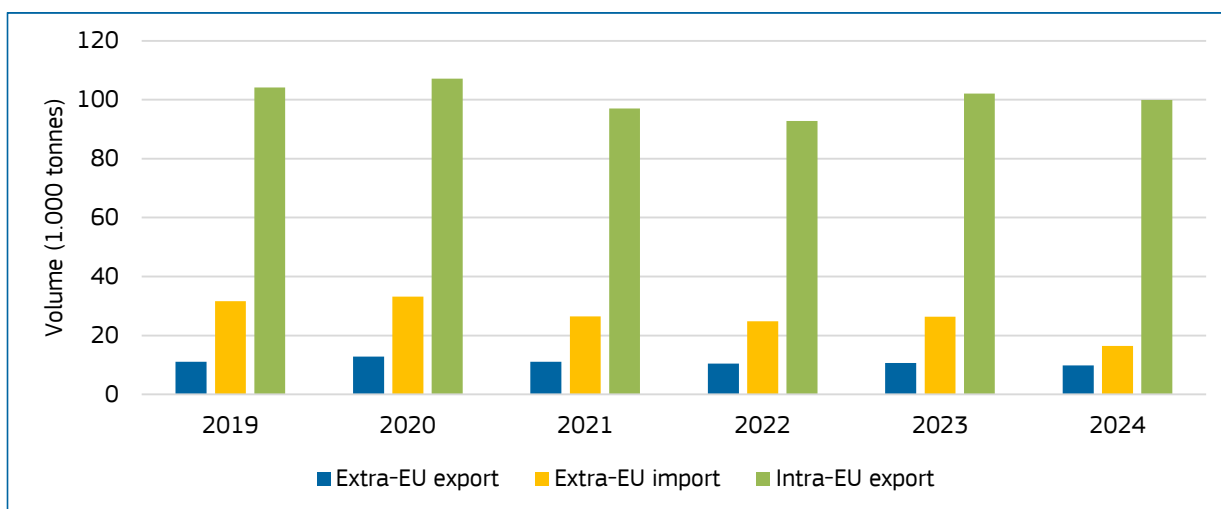
Figure 87: EU-27 trade balance and intra-EU export of herring fillets (fresh, frozen, prepared and preserved)



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

²²¹ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 88: EU-27 trade balance and intra-EU export of preapred or preserved herring

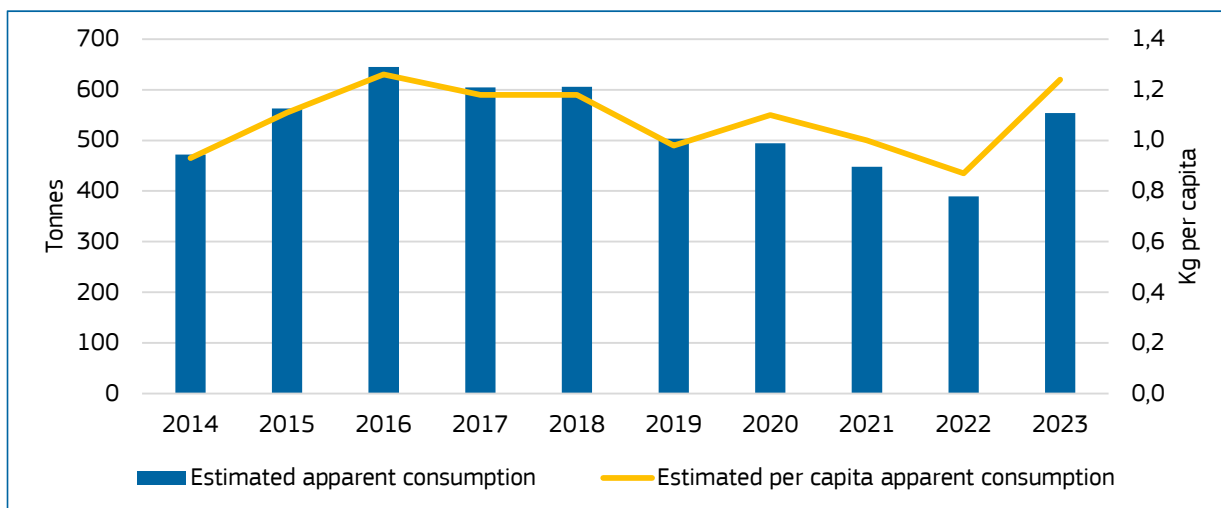


Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

4.7.3 Market and consumption trends

EU consumption of herring has fluctuated considerably over the past decade, reflecting changing consumer preferences, successive external shocks, and evolving retail structures. Between 2014 and 2018, apparent consumption in the EU-28 remained broadly stable between 472.000 and 645.000 tonnes, equivalent to roughly 0,93-1,26 kg per capita²²² (Figure 89). This period was characterised by relatively consistent supply from North Sea and Baltic stocks and sustained demand in northern Member States, where herring remains a culturally embedded and affordable source of protein.

Figure 89: Estimated apparent consumption and per capita apparent consumption of herring in the EU²²³ (live weight equivalents)



Source: EUMOFA [supply balance](#) dashboard.

From 2019 onward, consumption patterns became more volatile. Apparent consumption declined from 503.100 tonnes (0,98 kg per capita) in 2019 to 389.600 tonnes (0,87 kg) in 2022, before rebounding sharply to 553.900 tonnes (1,24 kg) in 2023²²². These fluctuations reflect the combined effects of the

²²² EUMOFA [supply balance](#) dashboard.

²²³ From 2014-2019 data includes the UK (EU-28), from 2020 onward data concerns the EU-27.

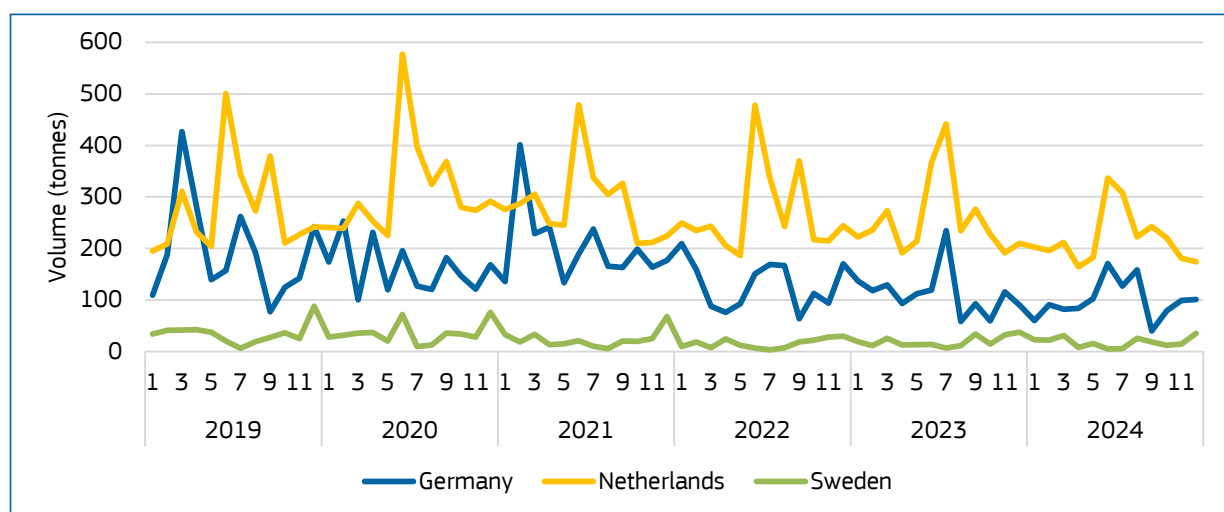
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COVID-19 pandemic, Brexit, and Russia's war of aggression against Ukraine, which reshaped consumption channels, disrupted logistics, and amplified costs across the seafood supply chain.

During the pandemic, foodservice closures curtailed demand for fresh herring, as reflected in household consumption data for Germany, the Netherlands, and Sweden. At the same time, sales shifted toward domestic retail channels amid restaurant shutdowns and logistical constraints²²⁴ (Figure 90). In the Netherlands, fresh herring purchases declined steadily after 2020, from about 3.800 tonnes to 2.600 tonnes in 2024, while average retail prices rose from approximately 14,53 EUR/kg to 19,08 EUR/kg²²⁵. In Germany, household purchases temporarily increased to around 2.400 tonnes in 2021 as outdoor markets and fish counters reopened, before declining again in 2022–2024; over the same period, average prices increased from 9,60 EUR/kg in 2019 to nearly 13,52 EUR/kg in 2024. Sweden showed a sharper contraction in fresh volumes, with declines of 33% in 2021 and 34% in 2022, alongside price increases from 6,52 EUR/kg in 2019 to a peak of 9,23 EUR/kg in 2023, easing slightly to 9,03 EUR/kg in 2024.

These price increases largely reflect higher costs for energy, fuel, and logistics rather than stronger underlying demand, illustrating the cost-push pressures affecting cold-chain seafood during this period²²⁶. Inflation and rising input costs linked to the war in Ukraine further amplified these pressures across transport, processing, and retail. Nevertheless, the relatively modest decline in fresh purchases suggests that core consumer groups in northern Europe remained loyal to herring, even as some substitution toward cheaper or preserved products likely occurred outside the fresh segment.

Figure 90: Household consumption volume of fresh herring in selected EU Member States



Source: EUMOFA [household consumption of fresh products](#) dashboard.

Following Brexit, traders increasingly prioritised intra-EU sourcing to avoid administrative and sanitary frictions in EU-UK trade. Imports remained high, ranging between 270.000 and 340.000 tonnes per year, while processors reinforced regional supply chains and retail channels less exposed to border disruptions²²⁷.

By 2023, apparent consumption rebounded strongly as inflationary pressures eased and consumer confidence improved²²⁸. Three broad patterns now characterise the EU herring market: value

²²⁴ European Parliament (2021). *Impacts of the COVID-19 pandemic on EU fisheries and aquaculture*. [Europarl.europa.eu](#)

²²⁵ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

²²⁶ EUMOFA (2024). *The EU fish market – 2024 edition*. [Eumofa.eu](#)

²²⁷ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

²²⁸ EUMOFA [supply balance](#) dashboard.

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concentration, with frozen, marinated, and preserved products accounting for a growing share of retail expenditure²²⁹; price resilience, as households continue to purchase herring despite retail seafood prices rising by 20-30% since 2019 and total spending increased in 2023; and regional segmentation, with fresh consumption concentrated in northern Member States and preserved formats dominating in central and eastern Europe.

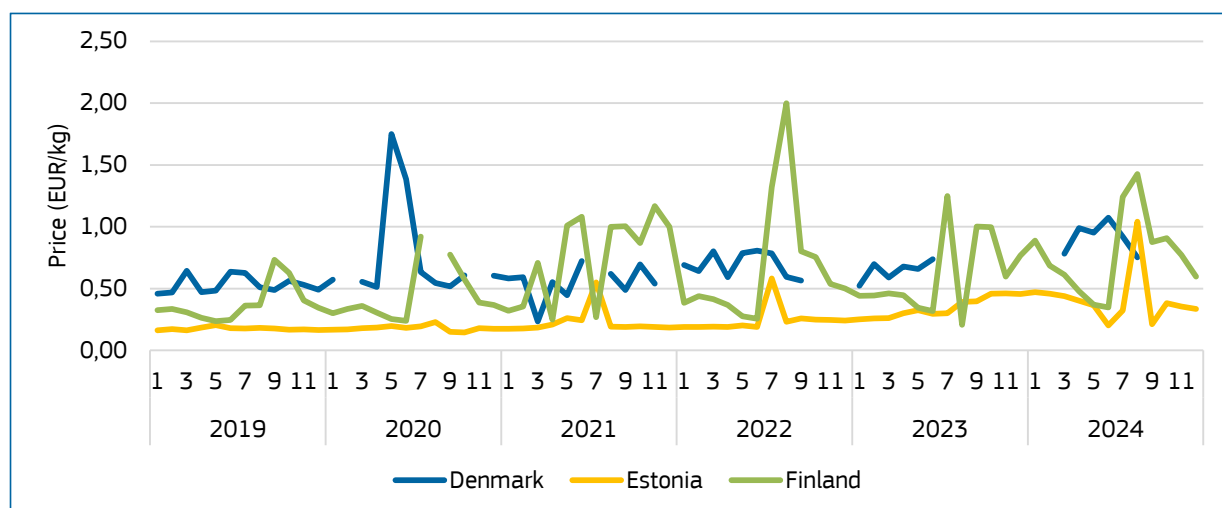
Overall, data from 2014-2023 depict a stable yet adaptive market. Consumers have adjusted purchasing behaviour rather than abandoning herring altogether, and the rebound to 554.000 tonnes of apparent consumption in 2023 – alongside firm retail values – confirm the species' role as an accessible and culturally rooted seafood in the EU.

4.7.4 Price trends

Between 2019 and 2024, herring prices in the EU increased steadily across all stages of the supply chain. This upward trend was driven primarily by higher fuel, energy, and logistics costs, compounded by reduced availability following quota cuts and inflationary pressures linked to the COVID-19 pandemic and Russia's war of aggression against Ukraine.

At first sale, prices for fresh whole herring rose markedly after 2021 (Figure 91). In Denmark, average prices fluctuated between 0,50 EUR/kg and 0,70 EUR/kg prior to 2021, but increased to 0,80-1,00 EUR/kg in 2024, with peaks above 1,00 EUR/kg in several months²³⁰. Estonia recorded a rise from approximately 0,15-0,20 EUR/kg in 2019-2021 to 0,25-0,45 EUR/kg in 2023-2024, while Finland saw prices increase from 0,30-0,40 EUR/kg to 0,45-0,90 EUR/kg over the same period. These developments reflect a combination of higher operational costs and tighter quota regimes in the North Sea and Baltic Sea, alongside reduced landings during and after the pandemic²³¹.

Figure 91: First sale prices of fresh whole herring for human consumption in selected Member States



Source: EUMOFA [first sales](#) (monthly) dashboard.

Trade prices followed a similar trajectory. In extra-EU trade, import prices for frozen herring fillets increased from around 1,40 EUR/kg in 2019 to 2,00-2,20 EUR/kg in 2024, while prepared and preserved herring rose from roughly 1,50 EUR/kg to over 2,10 EUR/kg²³² (Figure 92). Within the EU, prices for

²²⁹ EUMOFA (2024). *The EU fish market – 2024 edition*. [Eumofa.eu](https://eumofa.eu)

²³⁰ EUMOFA [first sales](#) (monthly) dashboard.

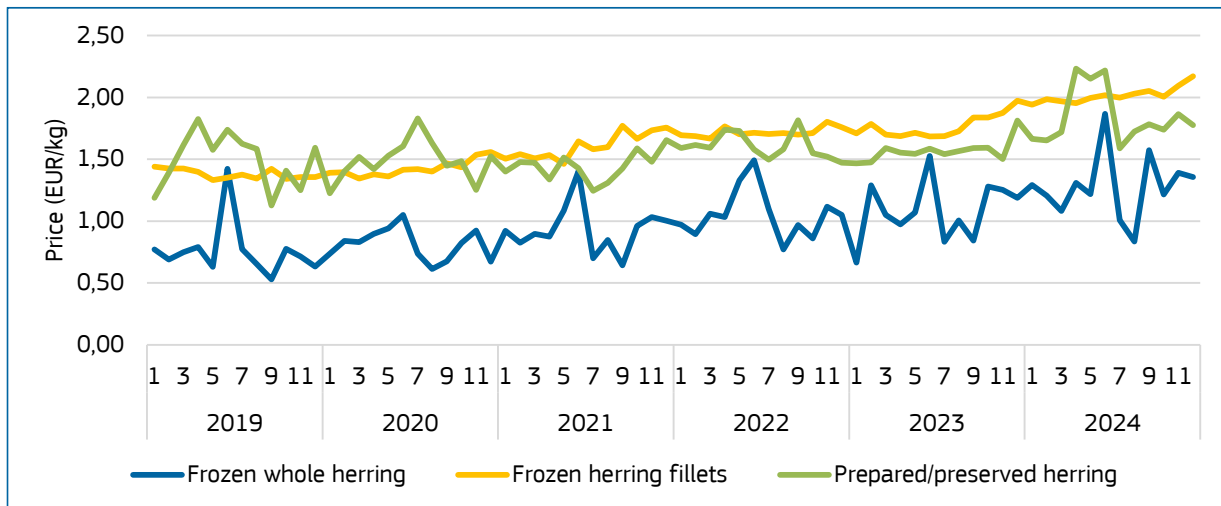
²³¹ EUMOFA [landings](#) dashboard (Eurostat fishery).

²³² EUMOFA [trade](#) dashboard (Eurostat COMEXT).

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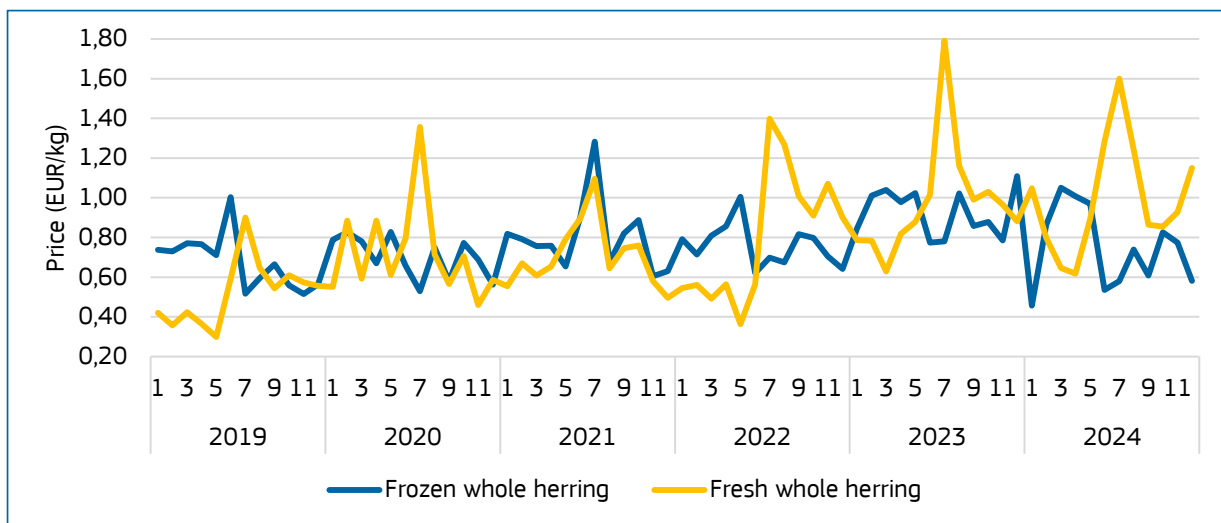
frozen fillets increased from about 1,5 EUR/kg in 2019 to 2,30 EUR/kg in 2024, while prepared and preserved fillets rose from 3,00-3,30 EUR/kg to 3,80-4,10 EUR/kg. Fresh herring fillets also became more expensive, reaching peaks above 4,00 EUR/kg in mid-2024 (Figure 93, Figure 94, and Figure 95).

Figure 92: Extra-EU import price of frozen whole herring, frozen herring fillets, and prepared/preserved herring



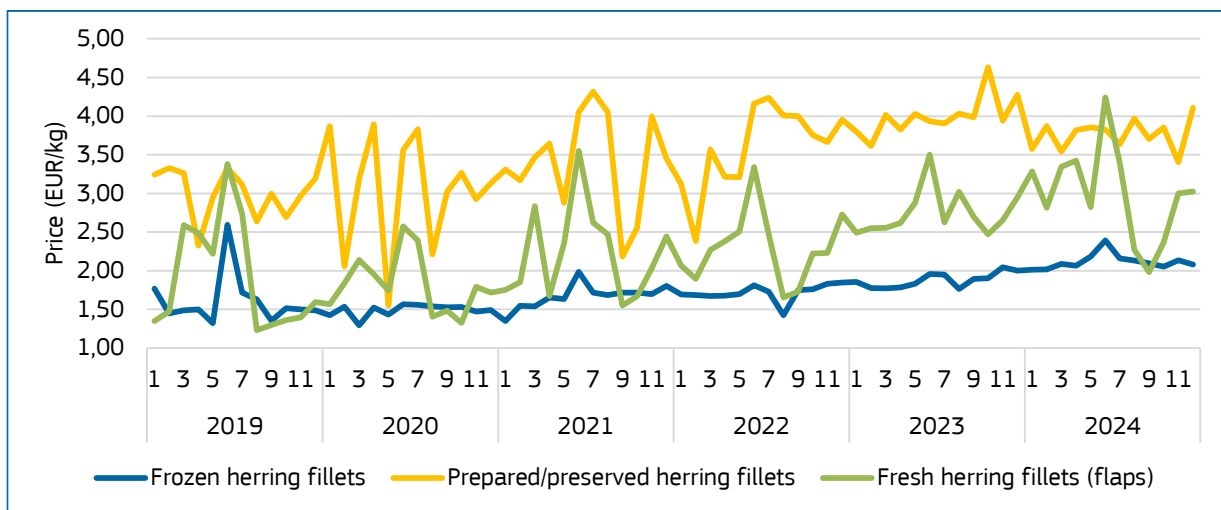
Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 93: Intra-EU import price of frozen and fresh whole herring



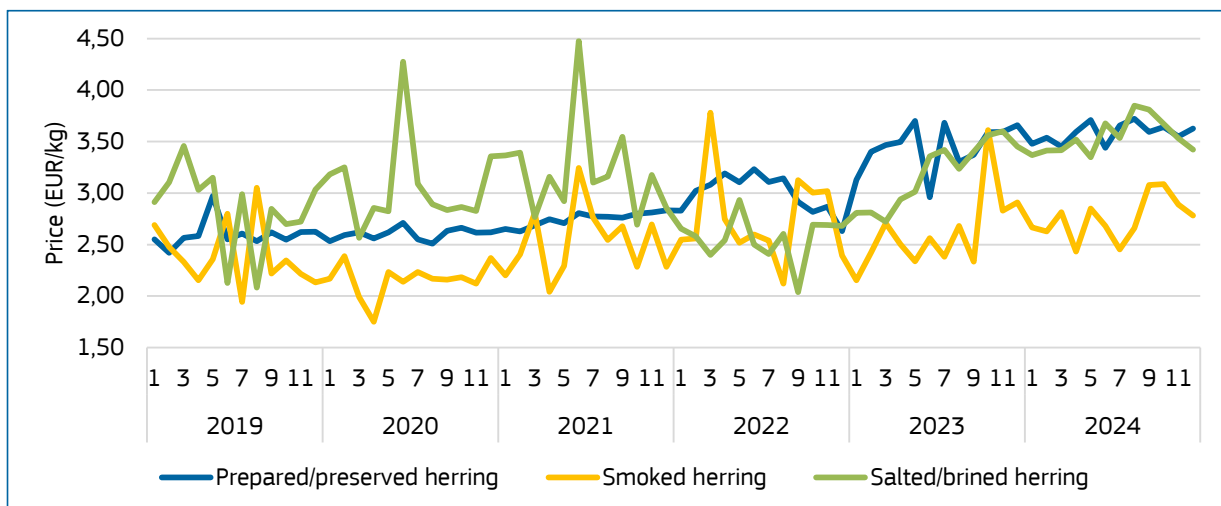
Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 94: Intra-EU import price of herring fillets



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

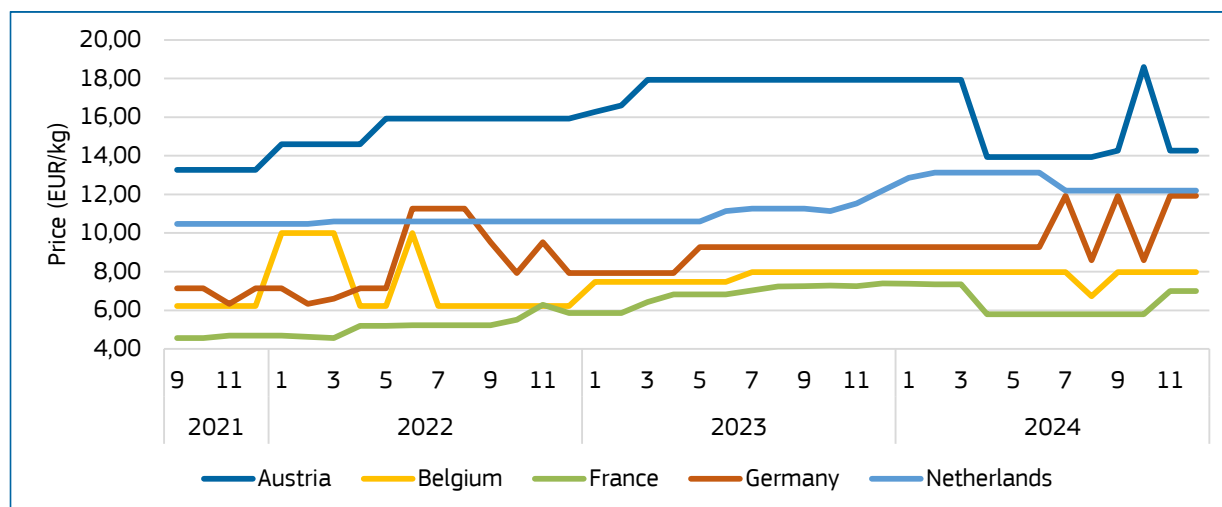
Figure 95: Intra-EU import price of prepared/preserved, smoked and salted herring



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

At retail level, prices for prepared and preserved herring fillets showed a comparable upward shift (Figure 96). In Austria, average prices rose from around 13,00 EUR/kg in 2021 to nearly 18,00 EUR/kg in 2023, before easing to approximately 14,00 EUR/kg in 2024²³³. Germany recorded an increase from 7,00 EUR/kg to 12,00 EUR/kg over the period, while prices in the Netherlands climbed from 10,50 EUR/kg to about 13,00 EUR/kg. Smaller but still significant increases were observed in Belgium and France, where prices rose from roughly 6,00 EUR/kg and 4,50 EUR/kg to about 8,00 EUR/kg and 7,00 EUR/kg, respectively.

²³³ EUMOFA [online retail prices](#) dashboard.

Figure 96: Online retail prices of prepared/preserved herring fillets in selected Member States

Source: EUMOFA [online retail prices](#) dashboard.

Overall, prices for both fresh and processed herring shifted to a structurally higher level after 2021 and remained elevated through 2024. While some first sale and trade prices softened slightly following the 2022 energy shock, retail prices adjusted more slowly, indicating that processors and retailers absorbed part of the volatility while maintaining margins through value-added formats, branding, and product differentiation.

Despite these price increases, herring has largely retained its role as an affordable and regionally sourced seafood in northern Europe. The sector has adapted by prioritising efficiency, reinforcing domestic and intra-EU supply chains, and focusing on processed and preserved products less exposed to short-term supply disruptions. This adjustment has allowed the herring value chain to remain competitive under persistent cost pressures and volatile energy markets.

4.8 Mackerel

4.8.1 Production

Mackerel (*Scomber* spp.) is one of the EU's most important pelagic species, landed across northern and western Europe and forming a vital input for both domestic processors and export-oriented industries. Landings are dominated by Atlantic mackerel (*Scomber scombrus*) from the north-east Atlantic, while chub mackerel (*Scomber japonicus*) is mainly landed in southern waters, particularly by Spanish and Portuguese fleets.

Between 2014 and 2023, EU mackerel landings fluctuated widely, reflecting biological dynamics, international quota negotiations, and successive external shocks (Figure 97 and Figure 98). Total EU landings peaked at about 358.000 tonnes in 2015, before declining to around 222.000 tonnes in 2023 (-38%)²³⁴. The Netherlands, Ireland, and Spain consistently accounted for over two-thirds of total landings, followed by Portugal, Denmark, and France.

This variability largely mirrors changes in ICES stock advice and Coastal States quota allocations, as the north-east Atlantic mackerel stock has undergone several migratory shifts toward more northerly waters since the mid-2010s²³⁵. The resulting redistribution of fishing opportunities among the EU, the

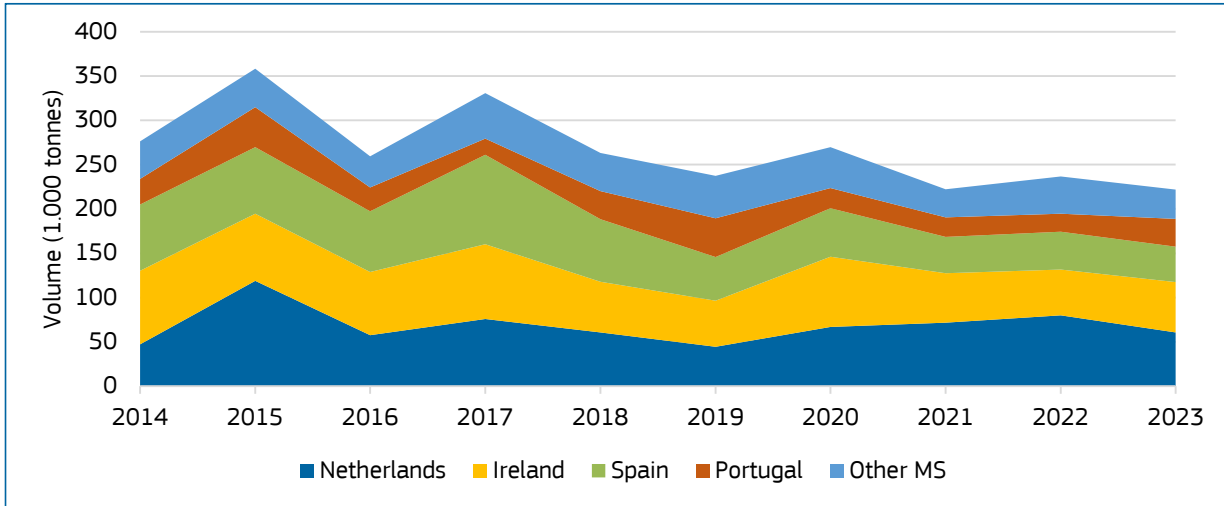
²³⁴ EUMOFA [landings](#) dashboard (Eurostat fishery).

²³⁵ ICES (2024). *Stock Annex: Mackerel*. [ICES.com](#)

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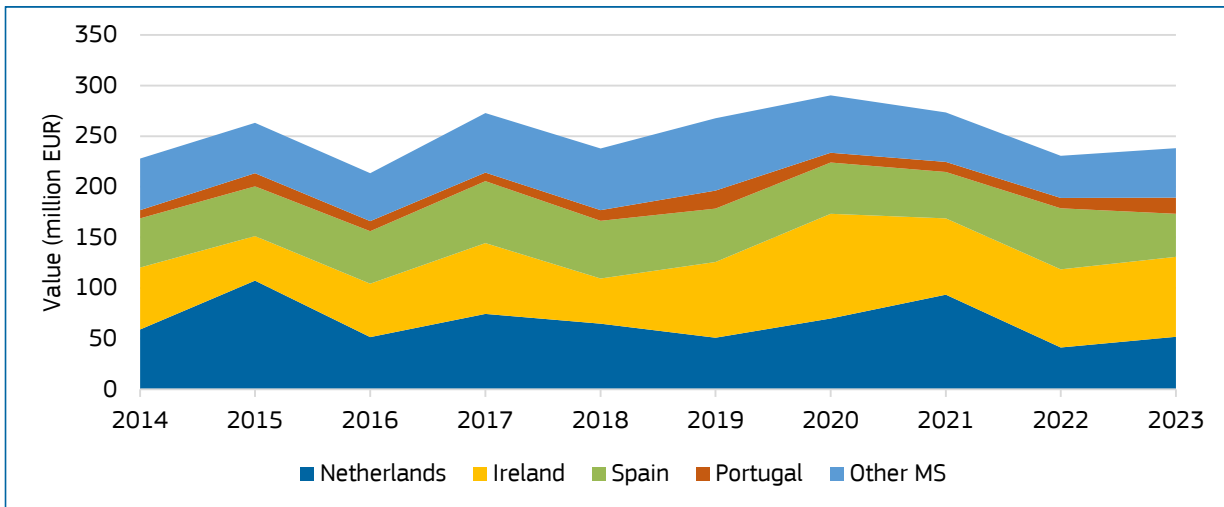
UK, Norway, Iceland, and the Faroe Islands has frequently constrained EU catches. These constraints became more pronounced following Brexit, which reduced the EU's share of the international quotas and increased administrative complexity for operations in shared waters²³⁶.

Figure 97: EU-27 landing volume of mackerel



Source: EUMOFA [landings](#) dashboard (Eurostat fishery), Central Statistics Office, Ireland (concerns Irish landing volume in 2023).

Figure 98: EU-27 landing value of mackerel



Source: EUMOFA [landings](#) dashboard (Eurostat fishery). Irish landing value in 2023 was based on the three-year average from 2020 to 2022.

The COVID-19 pandemic caused short-term operational disruptions in 2020-2021, particularly through crew availability constraints, port access limitations, and logistical bottlenecks²³⁷. While most pelagic fleets continued fishing, some operators postponed trips or temporarily redirected effort toward alternative fisheries such as blue whiting. These disruptions affected fishing patterns and logistics rather than aggregate biological availability, and overall landings proved relatively resilient. First-sale

²³⁶ European Commission (2025). *Northern agreements*. [Europa.eu](#)

²³⁷ European Parliament (2021). *Impacts of the COVID-19 pandemic on EU fisheries and aquaculture*. [Europarl.europa.eu](#)

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prices rose moderately during this period, supported by continued demand in export markets and stable retail consumption²³⁸.

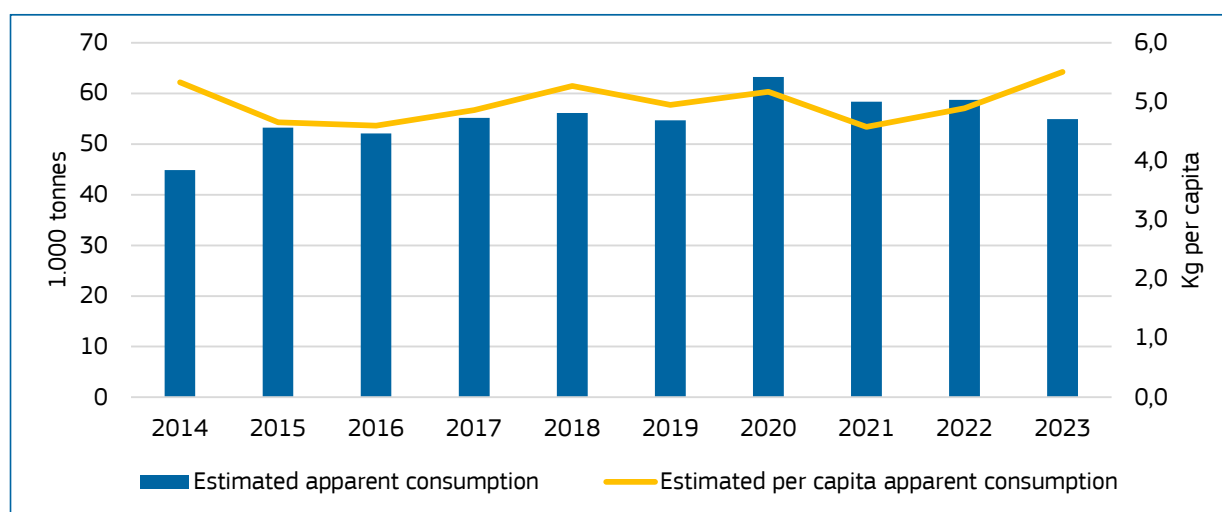
From 2022 onward, Russia's war of aggression against Ukraine introduced a more persistent cost shock. Fuel and energy prices surged, with fuel costs for pelagic vessels rising by nearly 80% in 2022 compared with 2021, sharply increasing operating expenses for large trawlers and energy-intensive freezing and storage operations²³⁹. Although fuel prices eased somewhat in 2023, they remained well above pre-crisis levels. Fleets mitigated these pressures through efficiency gains, shorter trips, and a stronger focus on higher-value export markets, allowing most operators to remain profitable despite tighter margins.

By 2023, EU mackerel production stabilised near 222.000 tonnes, supported by relatively strong quota levels and sustained demand²⁴⁰. In value terms, landings remained resilient at over EUR 238 million, underscoring the economic importance of the mackerel fishery and its capacity to adapt to biological variability, regulatory change, and successive external shocks.

4.8.2 Processing and trade

Processing of prepared and preserved mackerel in the EU is concentrated in a few Member States, led by Poland, France, and Portugal, which together account for most of the reported production²⁴¹ (Figure 99). Poland has emerged as the clear leader over the past decade, expanding production from around 9.600 tonnes in 2014 to 19.300 tonnes in 2023. Over the same period, production value more than tripled, rising from EUR 36 million to EUR 118 million. This reflects both a shift towards higher-value product formats and the pass-through of rising input, energy, and packaging costs.

Figure 99: EU-27 processing volume and avg. unit price of prepared/preserved mackerel



Source: EUMOFA [processing](#) dashboard (Eurostat PRODCOM). Note that processing volume has been estimated for Spain in 2021-2023.

France maintained relatively stable production volumes, declining only slightly from about 17.100 tonnes to 15.600 tonnes between 2014 and 2023, while consistently recording among the highest unit prices in the EU, averaging above 6,00 EUR/kg (Figure 100). Portugal also remained a key processing

²³⁸ EUMOFA [first sales](#) (monthly) dashboard.

²³⁹ European Commission (2024). *The 2024 annual economic report on the EU fishing fleet*. [Europa.eu](#)

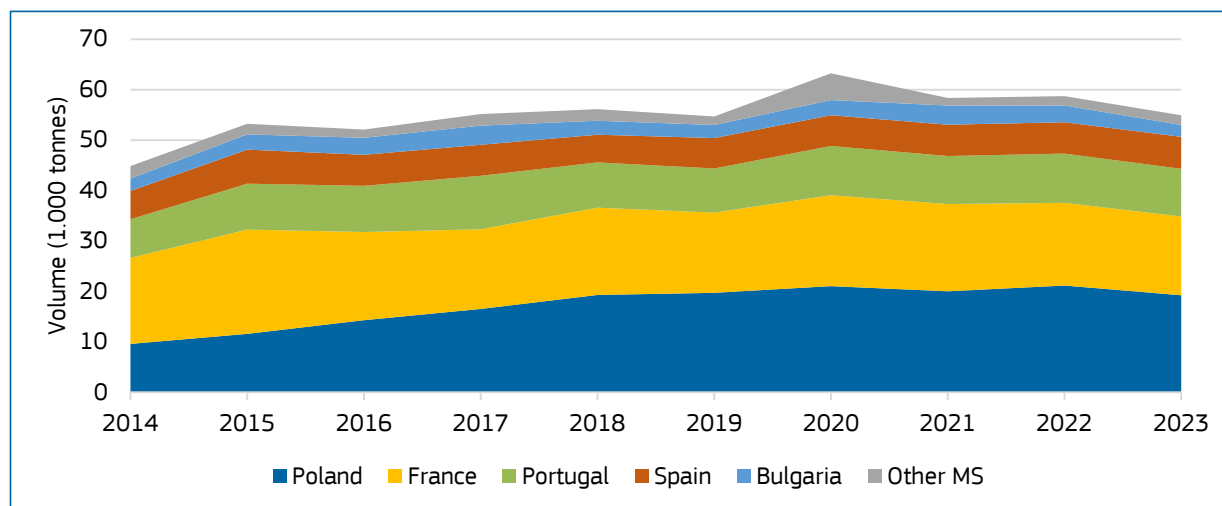
²⁴⁰ EUMOFA [landings](#) dashboard (Eurostat fishery).

²⁴¹ EUMOFA [processing](#) dashboard (Eurostat PRODCOM). Limited data availability for producers such as Spain and Sweden suggests reporting gaps rather than a collapse in production, as Spanish processors continue to play a key role in the canned mackerel segment within southern Europe.

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hub, producing around 9.000-11.000 tonnes annually. Across the EU, processing volumes have shown moderate year-to-year variability, but unit prices and total production value have risen steadily since 2020, driven by higher energy, packaging, and logistics costs, as well as a gradual shift towards more branded and value-added products²⁴².

Figure 100: EU-27 processing volume of prepared/preserved mackerel by Member States



Source: EUMOFA [processing](#) dashboard (Eurostat PRODCOM). Note that processing volume has been estimated for Spain in 2021–2023.

EU trade in mackerel is characterised by active two-way flows within the single market, alongside steady extra-EU trade across different product forms²⁴³. Intra-EU exchanges involve both raw materials and finished products: fresh and frozen whole fish supply processing hubs, while prepared and preserved products circulate through retail and foodservice channels. Extra-EU exports are dominated by frozen whole mackerel, complemented by prepared and smoked items, while imports consist mainly of frozen whole fish and fillets. Overall, these patterns reflect a highly integrated EU supply chain balancing raw-material availability, processing capacity, and market demand.

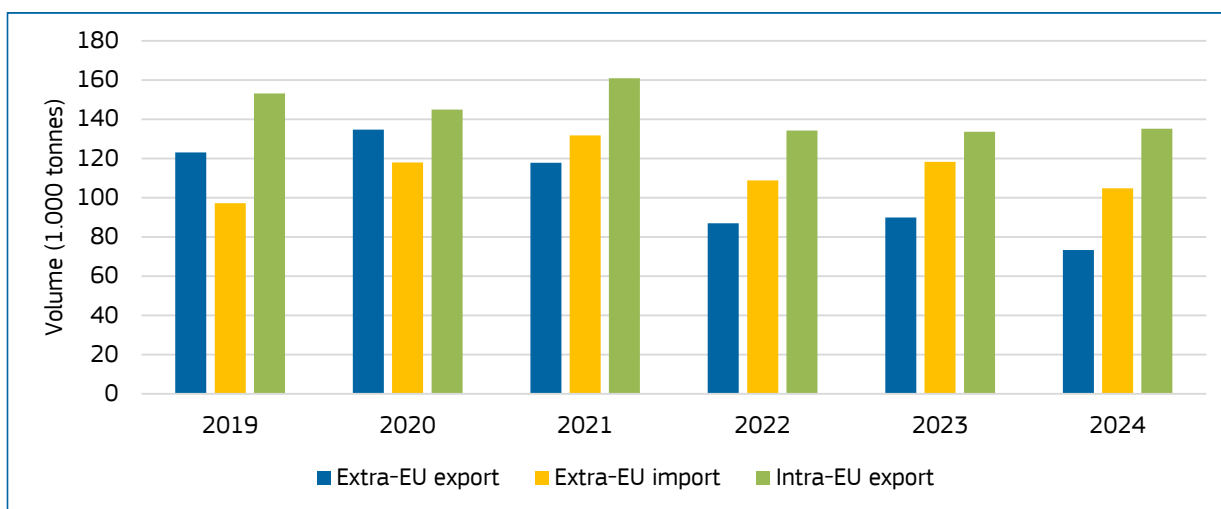
For frozen whole mackerel (Figure 101), the EU shifted from a clear extra-EU export surplus in 2019 and 2020 to a widening deficit in subsequent years²⁴⁴. Exports peaked at around 135.000 tonnes in 2020 before entering a sustained decline, falling to approximately 73.000 tonnes in 2024. Imports, by contrast, peaked at 131.000 tonnes in 2021 and then stabilised roughly 110.000 tonnes. While total export volumes fell after 2020, there was also a notable reorientation of destination markets: exports to China and the UK declined sharply, while exports to African markets such as Nigeria, Egypt, and Ghana increased their relative importance. This shift likely reflects the combined effects of pandemic-related logistical disruptions and Brexit-related trade adjustments. In the years that followed, exports to China and the UK remained below pre-2020 levels, whereas African destinations continued to absorb a substantial share of extra-EU sales.

²⁴² STECF (2023). *Economic report on the EU fish processing industry*. [Europa.eu](#)

²⁴³ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

²⁴⁴ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

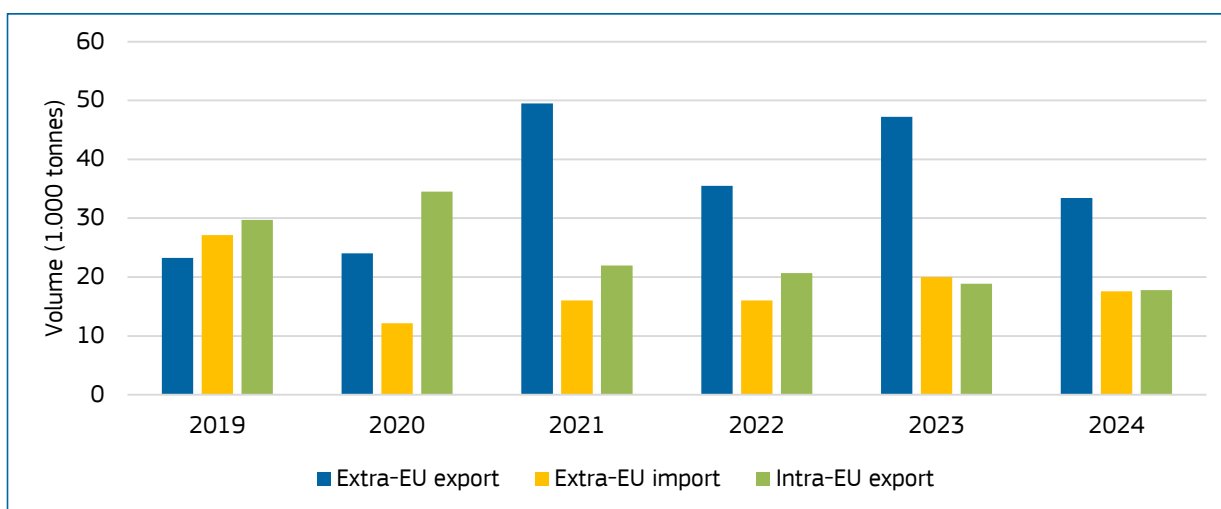
Figure 101: EU-27 trade balance and intra-EU export of frozen whole mackerel



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

For fresh whole mackerel (Figure 102), the EU has retained a consistent export surplus²⁴⁴. Exports nearly doubled between 2019 and 2021, reaching close to 50,000 tonnes, before fluctuating in subsequent years: declining to around 35,000 tonnes in 2022, rebounding to 47,000 tonnes in 2023, and easing again to approximately 33,000 tonnes in 2024. Imports, by contrast, fell sharply from about 27,000 in 2019 to 12,000 tonnes in 2020, and thereafter oscillated between 16,000 and 20,000 tonnes, remaining well below both pre-pandemic levels and EU export volumes. EU imports of fresh whole mackerel were closely linked to supplies from the UK, and the combined shocks of COVID-19 and Brexit disrupted these trade routes, contributing to the sustained reduction in import volumes from 2020 onwards.

Figure 102: EU-27 trade balance and intra-EU exports of fresh whole mackerel



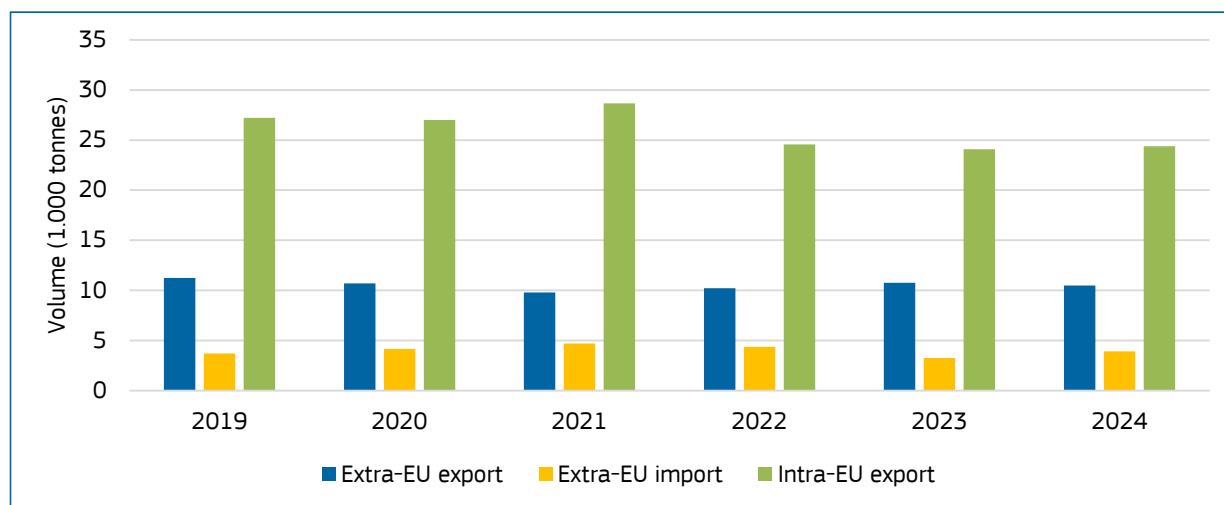
Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Trade in prepared and preserved mackerel fillets (Figure 103) proved comparatively stable between 2019 and 2024, fluctuating within a relatively narrow range despite pandemic disruptions, Brexit-related adjustments, and subsequent cost inflation²⁴⁴. Intra-EU exchanges dominate the segment, with exports averaging around 26,000 tonnes annually, supplied mainly by Portugal, Denmark, and Latvia. Exports were primarily destined for France, Sweden, the Netherlands, and Italy, reflecting well-established consumer demand for canned and marinated mackerel products. Extra-EU exports, averaging roughly 10,000 tonnes per year, were largely shipped to the UK (about 58% of total exports) and Norway (around 27%). While volumes remained broadly stable, trade values increased steadily

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after 2020, reflecting higher input, energy, and packaging costs, alongside a gradual shift toward higher-value retail products.

Figure 103: EU-27 trade balance and intra-EU export of prepared and preserved mackerel fillets



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Overall, mackerel processing and trade dynamics in the EU since 2020 point to an increasingly value-oriented and regionally specialised sector. Despite fluctuations in raw material availability and successive external shocks — including the COVID-19 pandemic, Brexit, and the energy crisis — the EU mackerel supply chain has demonstrated resilience. Stable processing volumes, deeper intra-EU integration, and diversification of export markets have enabled the sector to adapt while progressively shifting toward higher-value formats and branded products.

4.8.3 Market and consumption trends

At EU level, apparent consumption of mackerel has remained relatively stable over the past decade and continues to represent a modest share of total fish consumption (Figure 104). Between 2014 and 2024, apparent consumption fluctuated between 235.000 and 350.000 tonnes, corresponding to about 0,50-0,70 kg per capita²⁴⁵. After peaking in 2017, consumption declined and stabilised at around 270.000 tonnes in 2018–2020. A further dip occurred in 2021, when apparent consumption fell to around 235.000 tonnes (0,53 kg per capita), followed by a gradual recovery to about 260.000 tonnes and 0,58 kg per capita in 2023. Throughout this period, the EU consistently remained a net exporter in volume terms, with imports and exports moving within a relatively narrow band, while domestic availability adjusted mainly to quota constraints and stock dynamics.

Household consumption data for fresh mackerel, available for a limited number of Member States, indicate that demand is concentrated in a small group of key markets²⁴⁶ (Figure 105). Spain and Poland are the largest retail markets in absolute terms, with annual household purchases typically ranging between 10.000 and 14.000 tonnes over 2019–2024. In both Member States, volumes increased slightly in 2020, declined in 2021–2022, and then remained relatively high, although Spanish household purchases fell to around 8.800 tonnes in 2024 and Polish volumes to approximately 9.800 tonnes. France and Portugal form a second tier of markets: French household purchases were broadly stable at around 4.000–4.300 tonnes up to 2021, before declining to 2.800 tonnes by 2024. Smaller but

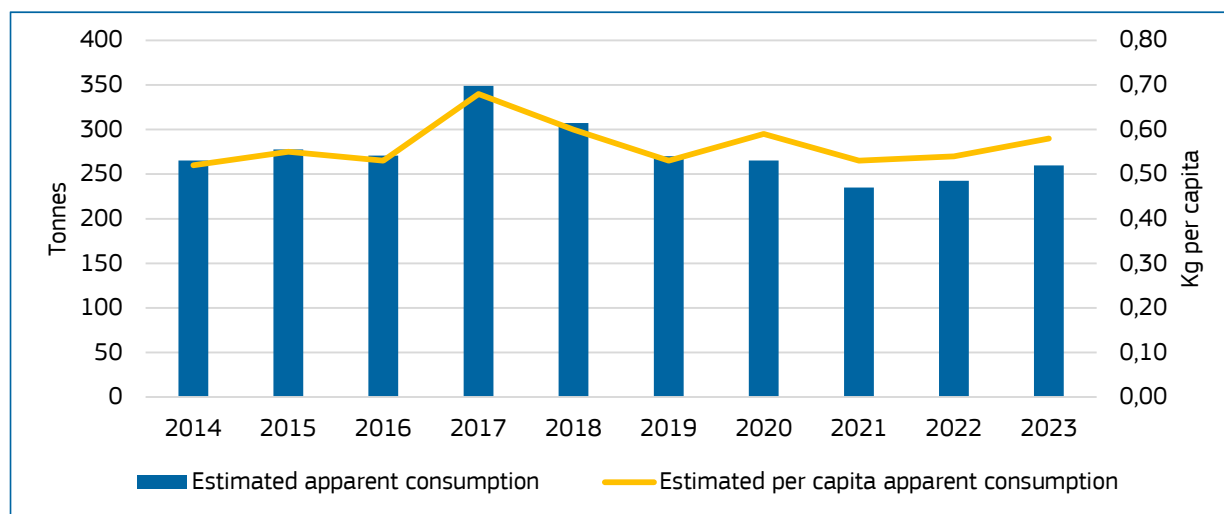
²⁴⁵ EUMOFA [supply balance](#) dashboard.

²⁴⁶ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

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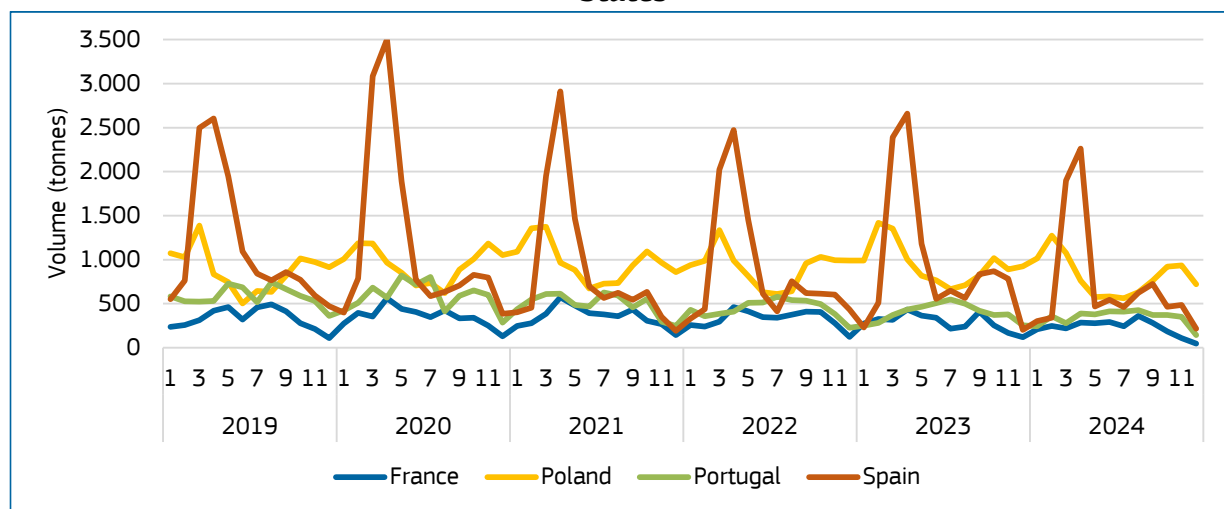
relatively steady markets are observed in the Netherlands, Ireland, and Denmark, where annual volumes range between roughly 300 and 2.800 tonnes.

Figure 104: Estimated apparent consumption and per capita apparent consumption of mackerel in the EU²⁴⁷ (live weight equivalents)



Source: EUMOFA [supply balance](#) dashboard.

Figure 105: Household consumption volume of fresh mackerel in selected EU Member States



Source: EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

In value terms, retail spending on fresh mackerel has increased more strongly than volumes, indicating rising consumer prices rather than strong volume growth²⁴⁸. Between 2019 and 2024, the total value of household purchases rose in most Member States despite flat or declining volumes. For example, in Poland and Spain, expenditure on fresh mackerel continued to increase or remain elevated even as quantities stabilised or fell, suggesting the pass-through of higher catching, processing, and distribution costs. Similar trends are visible in Denmark, France, and the Netherlands, where average unit values increased noticeably after 2020.

It is important to note that household data capture only fresh mackerel purchased for home consumption and therefore reflect only part of total EU demand. A substantial share of mackerel is

²⁴⁷ From 2014-2019 data includes the UK (EU-28), from 2020 onward data concerns the EU-27.

²⁴⁸ EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

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marketed as frozen or prepared and preserved products, including canned, marinated, and smoked items, which are particularly important in countries such as Portugal, Spain, France, and Poland. As highlighted in the previous section, the prominence of prepared and preserved products in intra-EU trade and in exports to the UK and Norway underscores the continued central role of processed mackerel in supplying both retail and foodservice channels²⁴⁹.

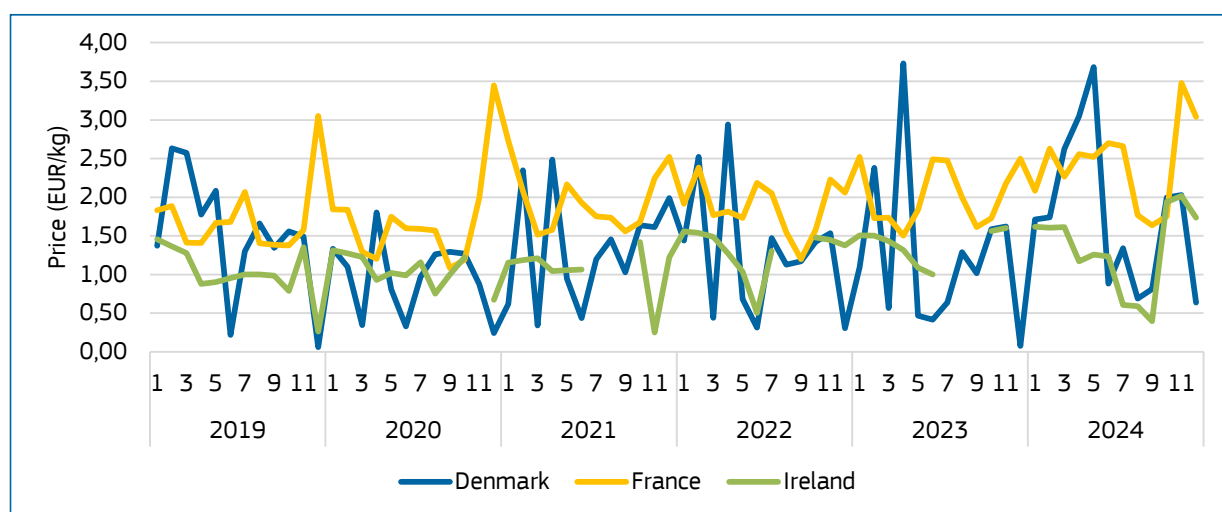
Overall, EU mackerel consumption has remained broadly stable in volume terms but has increased in value, reflecting resilient demand combined with rising prices along the supply chain rather than a structural expansion of consumption.

4.8.4 Price trends

Prices for mackerel across the EU supply chain have generally trended upward since 2019, with a pronounced acceleration from 2021 to 2022. This increase reflects the combined effects of higher energy, fuel, and packaging costs, alongside inflationary pressures affecting seafood supply chains.

First-sale prices of fresh whole mackerel show marked seasonality but a clear increase in average levels²⁵⁰ (Figure 106 and Figure 107). In northern producing Member States such as Denmark, France, and Ireland, monthly prices typically ranged between 1,00 and 2,00 EUR/kg in 2019. From 2021 onward, values above 2,50 EUR/kg became increasingly frequent, peaking above 3,00 EUR/kg in several months of 2023-2024. In Portugal and Spain, ex-vessel prices were structurally lower, reflecting smaller-scale landings, stronger domestic orientation, and the use of mackerel as raw material for canning rather than high-value export. Nevertheless, prices in these countries also trended upward, rising from 0,50-0,90 EUR/kg in 2019-2020 to approximately 1,20-1,60 EUR/kg from 2022 onward.

Figure 106: First-sale prices of fresh whole mackerel in selected Member States

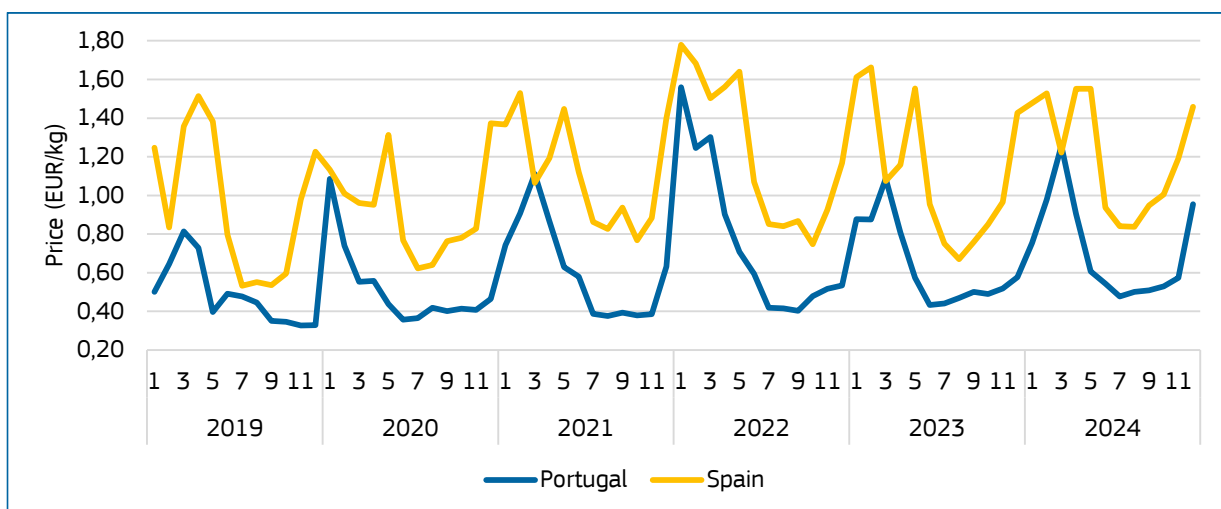


Source: EUMOFA [first sales](#) (monthly) dashboard.

²⁴⁹ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

²⁵⁰ EUMOFA [first sales](#) (monthly) dashboard.

Figure 107: First-sale prices of fresh whole mackerel in selected Member States

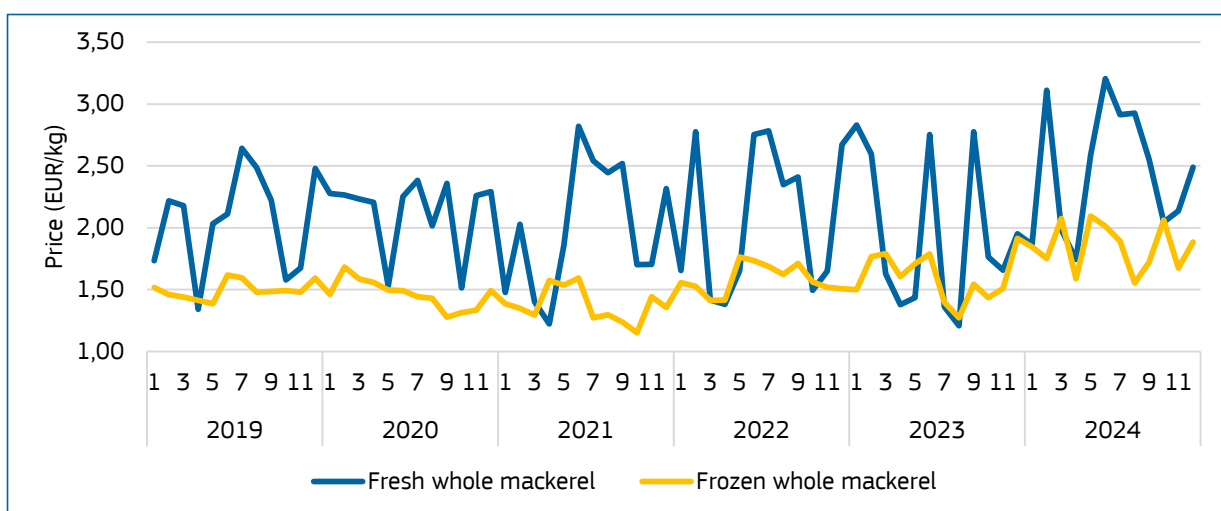


Source: EUMOFA [first sales](#) (monthly) dashboard.

At the trade level, average unit values of both fresh and frozen whole mackerel increased significantly over the same period²⁴⁹ (Figure 108, Figure 109, and Figure 110). Extra-EU import prices for fresh whole mackerel rose from around 1,70-2,30 EUR/kg in 2019-2021 to above 2,50-3,00 EUR/kg in 2023-2024, with several monthly peaks exceeding 3,00 EUR/kg. For frozen whole mackerel, import prices increased more moderately, from about 1,40-1,60 EUR/kg before 2022 to roughly 1,80-2,00 EUR/kg in 2023-2024. Intra-EU import prices followed similar patterns: fresh whole mackerel rose from approximately 1,80-2,20 EUR/kg to 2,50-3,50 EUR/kg, while frozen whole mackerel increased from around 1,20-1,50 EUR/kg to 1,60-1,90 EUR/kg over the same period.

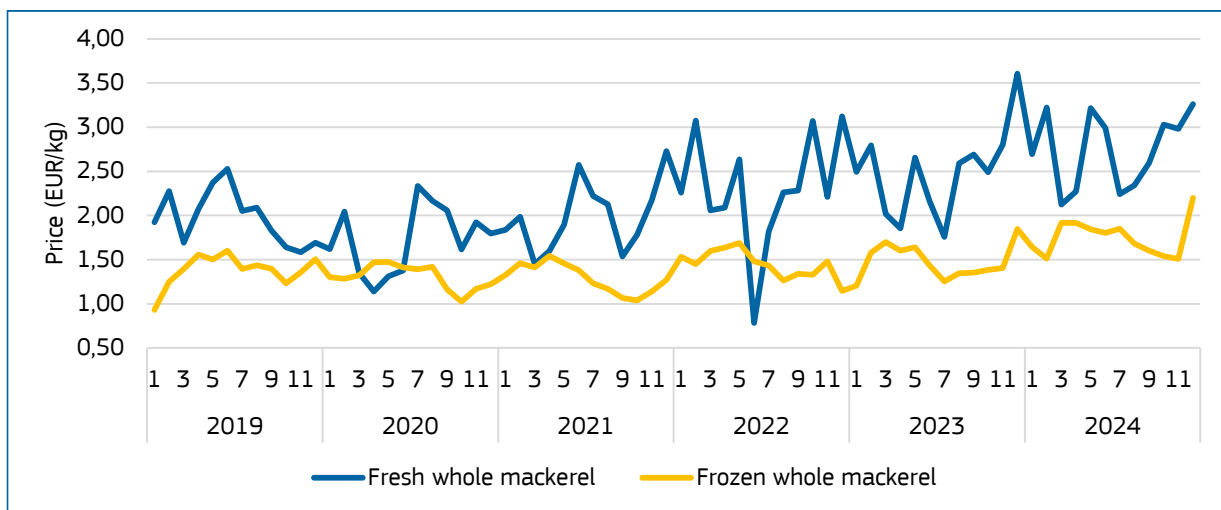
Price increases were more pronounced for processed mackerel products. Average intra-EU import prices for prepared and preserved mackerel fillets rose from 5,20-5,60 EUR/kg in 2019-2021 to 5,80-6,30 EUR/kg in 2022-2024, while smoked mackerel prices increased from approximately 4,30-4,80 EUR/kg to about 5,50-6,00 EUR/kg or more. These developments indicate that cost pressures were passed through the processing and wholesale stages, especially for higher-value convenience products.

Figure 108: Extra-EU import price of fresh and frozen whole mackerel



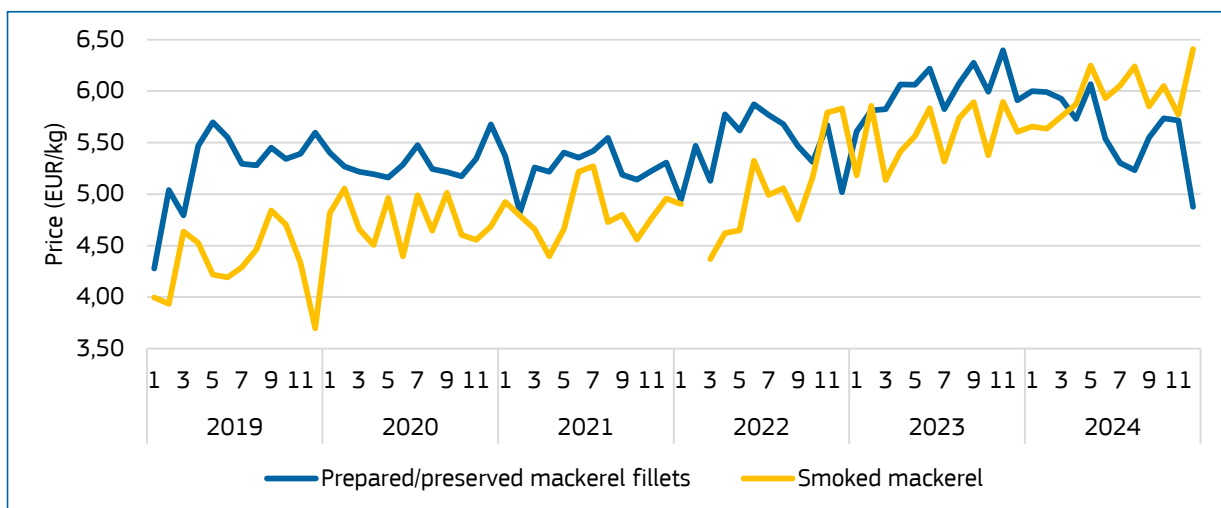
Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 109: Intra-EU import price of fresh and frozen whole mackerel



Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Figure 110: Intra-EU import price of prepared and preserved mackerel fillets and smoked mackerel



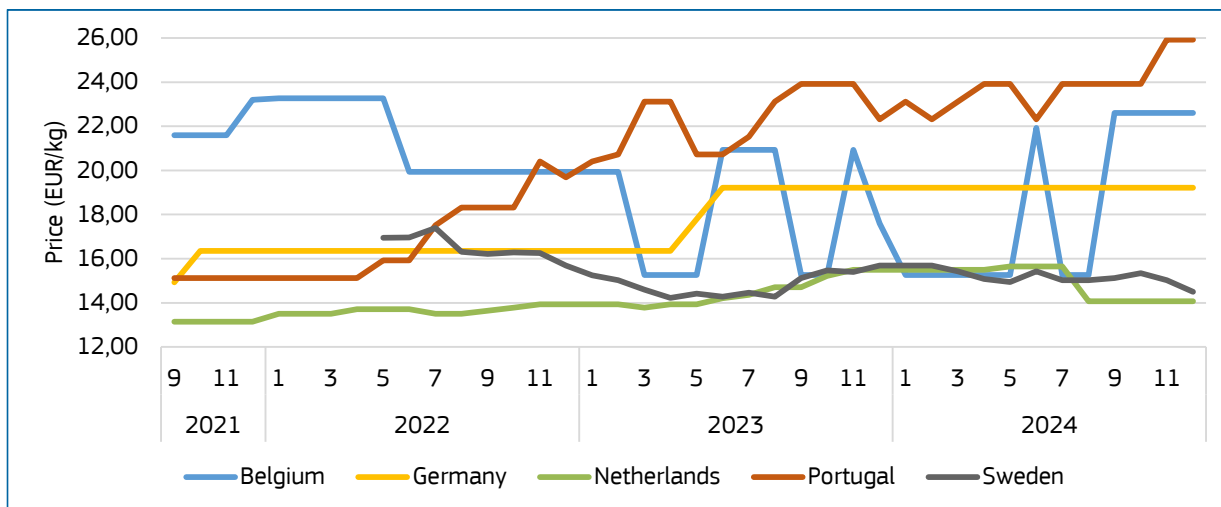
Source: EUMOFA [trade](#) dashboard (Eurostat COMEXT).

Retail-level prices confirm this broad upward movement^{251, 252}. Household consumption data for fresh mackerel show that, while purchase volumes fluctuated during the pandemic period, total household expenditure increased more strongly, implying rising average retail prices. Online retail price data for prepared and preserved mackerel fillets further demonstrate a gradual increase across major EU markets (Figure 111 and Figure 112). In 2021, most products were priced between 8,00 and 11,00 EUR/kg, but by 2023-2024, prices commonly ranged between 10,00 and 13,00 EUR/kg, with even higher levels in markets such as Belgium and Portugal. Smoked mackerel fillets followed a similar trajectory, with steady price increases throughout 2022-2024 and notable jumps in Belgium, the Netherlands, and Sweden.

²⁵¹ EUMOFA [online retail prices](#) dashboard.

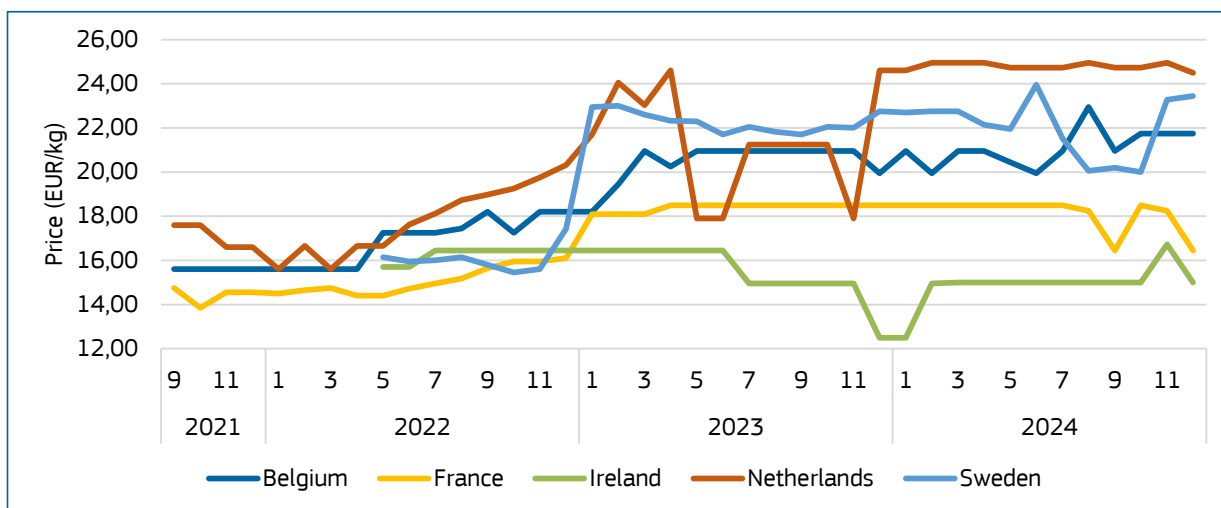
²⁵² EUMOFA [household consumption of fresh products](#) dashboard (Europanel).

Figure 111: Online retail prices of prepared and preserved mackerel fillets in selected Member States



Source: EUMOFA [online retail prices](#) dashboard.

Figure 112: Online retail prices of smoked mackerel fillets in selected Member States



Source: EUMOFA [online retail prices](#) dashboard.

Overall, prices along the EU mackerel supply chain have adjusted upward since 2020, driven primarily by higher operating, transport, and packaging costs rather than strong demand growth. Despite these increases, EU consumption of mackerel has remained relatively stable, underscoring the species' continued role as an accessible and affordable source of protein within EU seafood markets.

5 CASE STUDIES

This chapter presents case studies from selected EU Member States that represent distinct structural and geographic profiles within the fishery and aquaculture sector. Each case study highlights how COVID-19, Brexit, and the Russian war of aggression against Ukraine affected local production systems, market access, trade dynamics, and policy responses. The selected countries are:

- **Spain** (diverse production base; strong seafood consumption; export-oriented aquaculture)
- **Ireland** (small but export-heavy sector; highly exposed to Brexit and UK trade routes)
- **Greece** (Mediterranean aquaculture hub; strong dependence on seabass and seabream)
- **Germany** (large seafood importer and processor; no significant domestic production)

5.1 Spain: supply chain resilience amid market volatility

Spain is one of the EU's largest seafood producers and consumers, with a broad production base spanning fisheries, aquaculture, and processing. In 2023, the Spanish fleet's capacity reached around 766.700 tonnes, accounting for roughly one fifth of total EU capacity²⁵³. Aquaculture output totalled 266.000 tonnes in 2023, worth about EUR 750 million, led by mussels from Galicia and marine finfish such as seabass, seabream, and turbot farmed in southern regions²⁵⁴. Spain also hosts one of the EU's largest seafood-processing industries, concentrated in Galicia and the Basque Country, specialising in canned tuna, cephalopods, and frozen products for both domestic and export markets²⁵⁵.

The COVID-19 pandemic severely disrupted Spain's seafood economy in 2020. Lockdowns and the closure of the HORECA sector caused a sharp fall in demand for fresh and live products, particularly mussels, oysters, and premium whitefish. Galicia's shellfish industry experienced oversupply and logistical bottlenecks, while exports of chilled fish slowed amid transport restrictions²⁵⁶. At the same time, household seafood purchases increased, with retail and online sales of frozen and canned products rising by more than 10%, partially offsetting the collapse in out-of-home consumption^{257, 258}. As restrictions eased in 2021-2022, demand rebounded, prompting investments in cold storage, value-added processing, and e-commerce distribution.

Spain was less directly affected by Brexit than northern producers, as most quota adjustments under the EU-UK TCA concerned fleets from Ireland, France, and the Netherlands²⁵⁹. Nevertheless, Spanish fleets and processors experienced temporary delays and certification issues for seafood exports routed through UK ports in early 2021, when new customs and health documentation became mandatory²⁵⁷. Operators adapted by rerouting consignments through continental hubs such as Rotterdam and Antwerp and by expanding intra-EU trade with France, Portugal, and Italy²⁵⁸. The main Brexit exposure arose within the Galician tuna and canning industry, which operates globally but maintains supply and processing links through the UK; these flows faced additional administrative and logistical costs after 2021^{260, 261}.

²⁵³ FAO statistics.

²⁵⁴ APROMAR (2024). *Aquaculture in Spain*. [Apromar.es](https://apromar.es)

²⁵⁵ ANFACO-CECOPECA (2022). *Memoria 2022*. [Anfaco.es](https://anfaco.es)

²⁵⁶ Villasante, S., et al. (2021). *Rapid assessment of the COVID-19 impacts on the Galician seafood sector*. [Frontiersin.org](https://frontiersin.org)

²⁵⁷ MAPA (2021). *Informe del Consumo Alimentario en España 2021*.

²⁵⁸ EUMOFA (2025). *The EU Fish Market – 2025 edition*.

²⁵⁹ European Parliament (2022). *Brexit and the reduction in EU fishing quota shares*. [Europa.eu](https://europa.eu)

²⁶⁰ ANFACO-CECOPECA (2022). *Memoria 2022*. [Anfaco.es](https://anfaco.es)

²⁶¹ Rodriguez, G., Llamas, E.S. (2023). *Informe Socioeconómico del Sector Pesquero en España*. [Researchgate.net](https://researchgate.net)

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The war of aggression against Ukraine triggered a sharp escalation in energy and input costs across Spain's seafood sector. Marine gasoil prices rose from an average of 0,50 EUR/litre in 2021 to a peak of 1,20 EUR/litre in June 2022, more than doubling within a year, before easing to about 0,75 EUR/litre in 2023-2024²⁶². The surge forced temporary tie-ups of trawlers in Galicia and the Basque Country as operating costs exceeded revenues; similar pressures were reported EU-wide, with Spain among the most affected fleets²⁶³. Aquaculture producers, particularly in Andalusia and Catalonia, faced feed-cost increases of 30-40%, driven by global grain and energy inflation, which raised total production costs for seabass and seabream farms by roughly 25%²⁶⁴.

In response, Spain adopted Royal Decree-Law 6/2022 (29 March 2022)²⁶⁵, granting fuel rebates of up to 0,20 EUR/litre and emergency liquidity support for affected fleets. The European Commission subsequently approved an EUR 18,2 million national aid scheme under the *Temporary Crisis Framework*²⁶⁶ to assist fisheries and aquaculture operators²⁶⁷. Additional relief under EMFAF crisis measures supported energy-efficiency upgrades, port electrification, and renewable-integration projects, strengthening long-term resilience.

Despite overlapping shocks, Spain's seafood sector demonstrated strong adaptive capacity. The recovery of foodservice demand from 2021 onward coincided with a rebound in processing and exports. Industry organisations such as ANFACO-CECOPECA promoted initiatives in energy efficiency and circular-resource use, while household expenditure on seafood rose by 7% in 2024, reaching EUR 12,9 billion, the largest increase in the EU²⁶⁸. Overall, Spain weathered successive crises through scale, diversification, and coordinated policy support, although the sector remains vulnerable to energy-price volatility and import dependence for key inputs such as feed and frozen raw materials.

5.2 Ireland: Brexit's frontline

Ireland's seafood sector is small in scale but highly export-oriented, making it one of the Member States most exposed to Brexit and external shocks. In 2024, total landings into Irish ports reached nearly 300.000 tonnes, an 11% increase from 2023. Of this, 207.100 tonnes were landed by Irish vessels, valued at EUR 324 million (+4% year-on-year)²⁶⁹. Landings by foreign vessels accounted for a further 91.900 tonnes, reflecting the importance of pelagic landings into Killybegs. The composition of Irish landings remains highly concentrated: mackerel (EUR 82 million) and lobsters (EUR 76 million) together represented almost half of total landed value in 2024, leaving the fleet structurally vulnerable to quota fluctuations and external market pressures.

Aquaculture plays a stabilising role, particularly in rural regions. The sector grew strongly in 2024, with volume rising by 6% and value increasing by 25% to EUR 221 million, driven by a 61% increase in salmon harvest volumes after a weak 2023²⁶⁹. Mussel and oyster producers, however, faced weaker prices and biological constraints, reflecting uneven recovery across subsectors.

²⁶² EUMOFA [key economic drivers](#) dashboard.

²⁶³ European Commission (2024). *The 2024 annual economic report on the EU fishing fleet*. [Europa.eu](#)

²⁶⁴ APROMAR (2023). *Aquaculture in Spain*. [Apromar.es](#)

²⁶⁵ BOE (2022). *Real Decreto-ley 6/2022*. [Boe.es](#)

²⁶⁶ European Commission (2025). *Temporary crisis and transition framework*. [Europa.eu](#)

²⁶⁷ GTA (2025). *Spain: EUR 18,2 million production subsidy scheme to support the fisheries sector in the context of the Russian invasion of Ukraine*. [Globaltradealert.org](#)

²⁶⁸ EUMOFA (2025). *The EU Fish Market – 2025 edition*.

²⁶⁹ BIM (2025). *Business of seafood 2024*. [Bim.ie](#)

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Brexit continues to shape Ireland's fisheries landscape. The TCA resulted in the transfer of Irish quotas worth EUR 26 million in 2021, rising to EUR 43 million annually by 2025, representing a 15% reduction in Ireland's pre-Brexit quota baseline²⁷⁰. These quota losses particularly affected pelagic vessels targeting mackerel and blue whiting, as well as demersal vessels. Brexit also increased administrative and logistical burdens for exporters: new customs, sanitary and IUU documentation requirements generated significant delays in 2021–2022 for live shellfish and chilled products routed to or through the UK.

COVID-19 affected Ireland primarily through the collapse of the foodservice sector and logistical constraints for live bivalve exports. Mussel and oyster producers experienced sharp contractions in demand in 2020–2021, followed by uneven recovery as access to UK markets remained restricted under post-Brexit certification rules. While volumes improved somewhat in 2022–2023, price volatility persisted, reflected in oscillating export values for oysters, mussels, and live shellfish²⁷¹.

The Russian war of aggression against Ukraine created new cost shocks. Average marine gasoil prices in Ireland increased from 0,55 EUR/l in 2021 to 1,00 EUR/l in 2022, an 80% year-on-year increase with monthly prices peaking at 1,14 EUR/l in June 2022²⁷². This strongly eroded profitability in the pelagic and demersal segments²⁷³. Rising feed and electricity costs also impacted aquaculture, particularly salmon and trout hatcheries. The Irish Government responded with emergency supports through the BAR and EMFAF crisis frameworks, offering temporary cessation aid, liquidity support, and capital investments for processors and aquaculture operators²⁷⁴. The processing sector received EUR 37 million in BAR funding in 2023, enabling investments in cold-chain capacity, automation, and energy efficiency²⁷⁵.

Despite these overlapping crises, Ireland's export performance remained resilient. In 2024, aquatic food exports increased by 9% to EUR 677 million, driven by strong sales of salmon, mackerel, lobster, crab, and fishmeal, with the EU, UK, and Asian markets all recording growth²⁷⁵. However, rising import volumes (+25% in 2024) and sustained exposure to volatile pelagic quotas underscore the structural vulnerabilities of Ireland's seafood supply chain. The sector's long-term adaptation will depend on continued investment, diversification, and the stability of future EU-UK fisheries agreements.

5.3 Greece: aquaculture under pressure

Greece remains one of the EU's leading producers of farmed gilthead seabream and European seabass. According to the Hellenic Aquaculture Producers Organisation (HAPO), combined production of the two species reached about 114.500 tonnes in 2024, with a sales value of roughly EUR 721 million, even though volumes declined by 5,5% compared with 2023 due to continuing restructuring among major companies²⁷⁶. Seabass and seabream together still account for the dominant share of Greek aquaculture volume and value, and Greece retains its position as the top producer in the EU and the second largest producer globally.

Greek aquaculture production of seabream and seabass is export driven, as evidenced by the substantial volumes seen in export data²⁷⁷. Between 2019 and 2024, total exports of gilthead seabream rose from about 53.300 tonnes to 59.000 tonnes (\approx +11%), although they peaked in 2023

²⁷⁰ DAFM (2021). *Preliminary analysis of reduction of fisheries quota shares under TCA*. [Gov.ie](#)

²⁷¹ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

²⁷² EUMOFA [key economic drivers](#) dashboard (MABUX).

²⁷³ European Commission (2024). *The 2024 annual economic report on the EU fishing fleet*. [Europa.eu](#)

²⁷⁴ BIM (2025). *The Brexit Adjustment Reserve fund*. [Bim.ie](#)

²⁷⁵ BIM (2025). *Business of seafood 2024*. [Bim.ie](#)

²⁷⁶ HAPO (2025). *Aquaculture annual report 2025*. [Fishfromgreece.com](#)

²⁷⁷ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

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at just over 67.300 tonnes and then fell by around 12% in 2024. Over the same period, exports of European seabass increased more strongly, from about 45.600 tonnes in 2019 to 54.500 tonnes in 2024 ($\approx +19\%$), with a particularly marked rise between 2023 and 2024 ($\approx +20\%$). In value terms, seabream exports increased from roughly EUR 244 million in 2019 to EUR 345 million in 2024, while seabass exports grew from around EUR 210 million to EUR 322 million over the same period. Taken together, this indicates that seabream and seabass exports reached roughly 113.500 tonnes in 2024, with a combined export value of about EUR 677 million, and that export values have generally grown faster than volumes, signalling higher unit prices.

For seabream, average export unit values rose from about 4,60-4,70 EUR/kg in 2019-2020 to roughly 5,00-5,10 EUR/kg in 2022-2023, and then jumped to around 5,80 EUR/kg in 2024, with an even higher level in 2025 year-to-date²⁷⁸. For seabass, export prices moved from about 4,60 EUR/kg in 2019 to approximately 6,00-6,40 EUR/kg by 2022-2024, and they continued to rise in 2025. This price pattern is consistent with international analyses showing that tighter supply has kept seabass and seabream prices firm despite demand shocks, and that export prices for Greek fresh whole fish have trended upward since 2020²⁷⁹.

The evolution of Greek exports reflects the sequence of external shocks that have affected the sector. During the COVID-19 pandemic, the collapse of HORECA demand in Europe hit fresh seabass and seabream particularly hard, given their strong dependence on restaurant and tourism channels. EU-level and Greek-specific assessments document sharp falls in demand and serious marketing difficulties for aquaculture producers, including seabass/seabream farmers in Greece^{280, 281}. Overall seabream and seabass export volumes in 2020 remained broadly like 2019 levels rather than growing, and unit prices edged up only modestly, consistent with producers shifting output to retail and export markets to compensate for lost foodservice demand.

The Russia's war of aggression against Ukraine and the subsequent spike in energy and feed ingredient prices have affected the cost side of Greek aquaculture. EU policy analyses note that higher prices for energy and raw materials have substantially increased operating costs for aquaculture farmers across the EU, prompting emergency support measures and flexibility in the use of EMFAF resources²⁸². Trade data show that Greek export volumes of seabream and seabass remained relatively stable after 2022, while export unit prices rose sharply. This combination is consistent with a sector that has largely succeeded in passing some of its cost increases downstream into international markets, helped by strong demand and limited supply growth.

The Greek seabream-seabass industry is highly export oriented, geographically concentrated in a few key EU markets, and increasingly characterised by high unit values rather than expanding volumes. COVID-19, Brexit, and the Russian war of aggression have each reshaped the operating environment – through demand shocks, new trade frictions, and higher input costs – but export data suggest that Greek producers have responded by consolidating their position in core EU markets and sustaining prices rather than expanding production. This combination of tight supply, high prices, and ongoing corporate restructuring frames the outlook for the sector as it moves through 2025.

²⁷⁸ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

²⁷⁹ FAO GLOBEFISH (2021). *Tighter market balance mitigates COVID-19 impact for seabass and seabream sector*. [Fao.org](#)

²⁸⁰ European Parliament (2021). *Impacts of the COVID-19 pandemic on EU fisheries and aquaculture*. [Europarl.europa.eu](#)

²⁸¹ Seafoodsource (2021). *Greek fish farmers in urgent need of state support*. [Seafoodsource.com](#)

²⁸² European Parliament (2022). *Russia's war on Ukraine: Support for the fishing, aquaculture and fish-processing sectors*. [Europarl.europa.eu](#)

5.4 Germany: processing and import resilience

Germany's seafood sector is organised around large-scale processing and wholesale distribution, supported by extensive imports. Between 2017 and 2024, imports of fishery and aquaculture products remained relatively stable at around 1,1-1,2 million tonnes annually, including 1,1 million tonnes in 2024 worth EUR 5,71 billion²⁸³. Domestic catches and aquaculture cover only a limited part of demand and Germany consistently ranks among the most import-dependent seafood markets in the EU. Over this period, the key change is not in import volumes but in prices: average import unit values rose from roughly 4,30-4,40 EUR/kg in the late 2010s to over 5,30 EUR/kg after 2021, reflecting higher global prices for raw material, energy, transport, and packaging.

The product structure of imports reflects Germany's role as a processing hub. In 2024, salmon was the dominant import by value, with nearly 153.500 tonnes generating EUR 1,76 billion, more than 30% of total import value while accounting for less than 15% of volume²⁸³. Alaska pollock, used mainly in fish fingers and other coated products, contributed around 120.600 tonnes, while skipjack tuna (83.800 tonnes) and herring (81.100 tonnes) supplied the canning, marinating, and frozen segments. By comparison, imports of Mediterranean aquaculture species were minimal: gilthead seabream (6.500 tonnes) and European seabass (1.900 tonnes) together made up less than 1% of total volume, illustrating the industrial character of German processing and its reliance on high-volume global commodity species.

Processing data reinforce this picture. Production of fish fillets in batter or breadcrumbs, including fish fingers, the sector's single largest category, reached nearly 211.100 tonnes in 2023, rising from 176.800 tonnes in 2017, with value increasing from EUR 595 million to over EUR 1,00 billion²⁸⁴. Other significant processing categories include prepared or preserved fish (about 38.500 tonnes in 2023), prepared or preserved herrings (about 36.900 tonnes), and fish-based prepared meals (around 21.000 tonnes). Germany also processes substantial volumes of smoked trout, smoked salmon, and fresh fillets. The parallel evolution of import volumes and processed output indicates a tightly coupled relationship between Germany's global sourcing patterns and its domestic value-adding activities.

A series of external shocks since 2020 has affected this system primarily through changes in demand channels and input costs, rather than through disruptions in supply volume. During the COVID-19 pandemic, imports increased – from 1,13 million tonnes in 2019 to 1,23 million tonnes in 2020 – even as the foodservice sector contracted²⁸³. This shift reflected a redirection of supply toward supermarkets and discount stores, with German processors adapting by emphasizing frozen, smoked, and ready-to-use formats. Processing volumes for major retail categories such as coated fillets and prepared meals remain stable or expand during 2020, underscoring the resilience of industrial processing and the rapid adaptation of distribution channels²⁸⁴.

The Russia's war of aggression against Ukraine brought a different kind of shock. Import volumes remained broadly steady in 2022 and 2023, but import values surged – from EUR 4,95 billion in 2021 to EUR 6,08 billion in 2022 – driven by higher global prices for energy, freight, packaging, and fishmeal²⁸³. These cost pressures are visible across processing categories: the value of fish-finger production rises sharply to EUR 873 million in 2022 and exceeds EUR 1,00 billion in 2023, despite only modest shifts in volume²⁸⁴. Similar patterns appear in prepared herring, smoked salmon, and chilled fillets, indicating that rising input costs were passed through to downstream markets. For a sector whose operations are energy-intensive and heavily dependent on cold-chain logistics, the war-related inflationary shock had a pronounced impact on margins and retail pricing.

The Brexit-related reconfiguration of trade is clearly visible in bilateral data with the UK but remains modest in the context of Germany's overall seafood supply. Imports from the UK decline from about 22.000 tonnes in 2017 (roughly 1,8% of Germany's total seafood imports that year) to around 1.800

²⁸³ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

²⁸⁴ EUMOFA [processing](#) dashboard (Eurostat PRODCOM).

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tonnes in 2024 (approximately 0,2% of total volume)²⁸⁵. Over the same period, the value of imports from the UK falls from roughly EUR 125 million to about EUR 6 million, and the average import price drops from around 5,70 EUR/kg to 3,30 EUR/kg, reflecting both lower volumes and a shift in product mix. These imports consist mainly of herring, mackerel, fishmeal, and a variety of minor categories, with salmon imports from the UK virtually disappearing after 2021.

Exports from Germany to the UK show an even more pronounced adjustment. Outbound volumes fall from 54.000 tonnes in 2017 to just over 20.000 tonnes in 2024, while the value of these exports declined from about EUR 214 million to around EUR 87 million²⁸⁵. The main exported categories include “other marine fish”, cod, salmon, fishmeal, and a range of processed products, indicating that Germany has traditionally supplied the UK with value-added aquatic food produced from imported raw materials. The bilateral trade data therefore point to a substantial contraction – of around 60% in export volume and value – in Germany-UK seafood flows since the late 2010s. However, because trade with the UK represents only a small share of Germany’s total fishery and aquaculture products imports and processing output, these changes have not altered the underlying structure of the sector; they are best understood as a significant, but geographically limited, adjustment for certain product lines and companies.

Overall, Germany’s fishery and aquaculture sector is globally integrated, heavily industrialised, and structurally dependent on international supply chains. The core features – high import reliance, concentration on commodity species such as salmon, Alaska pollock, tuna, and herring, and strong processing and wholesale capacity – remain stable across the period. COVID-19 reshaped consumption channels but left import volumes intact; Brexit sharply reduced bilateral trade with the UK without changing the overall sourcing model; and the Russian war of aggression generated a broad-based cost shock that raised the value of both imports and processed output. Germany’s main vulnerabilities thus lie less in domestic supply and more in exposure to global commodity prices, energy markets, logistics, and trade conditions.

²⁸⁵ EUMOFA [trade](#) dashboard (Eurostat COMEXT).

6 POLICY RESPONSE

The successive shocks examined in the previous chapters – the COVID-19 pandemic, Brexit, and Russia's war of aggression against Ukraine – prompted a range of policy responses at EU and Member State level. This chapter reviews the principal instruments mobilised in response to these crises, focusing on their legal basis, scope, and implementation experience. It distinguishes between emergency stabilisation measures and structural adaptations introduced to strengthen crisis preparedness and complements institutional reporting with evidence from stakeholder interviews.

6.1 COVID-19 pandemic

When the COVID-19 pandemic broke out, the fishery and aquaculture sector was immediately and heavily affected across segments and Member States, although impacts were uneven depending on product type, market channel, and geographic exposure. The shock was transmitted through the sudden closure of hospitality channels, disruptions to logistics and international trade, and labour constraints affecting fishing operations and processing activities. These characteristics made the sector particularly vulnerable to the abrupt demand and supply disruptions observed during the early stages of the pandemic.

Compared to many other sectors, the fishery and aquaculture products supply chain faced specific structural constraints. Fishery and aquaculture products are highly perishable and require rapid distribution, while a large share of fresh production is destined for the HORECA sector, which was abruptly closed in many Member States. In addition, EU supply for both final consumers and the processing industry depends significantly on imports from extra-EU countries involving complex cross-border logistics. In aquaculture, biological production cycles and limited live storage capacity further reduced short-term flexibility.

6.1.1 Policy instruments and institutional response

At the outset of the crisis, professional organisations called for rapid mobilisation of available support under the European Maritime and Fisheries Fund (EMFF) and requested enhanced market intelligence to help operators adapt their strategies. In parallel, the European Commission engaged with sector stakeholders to assess on-the-ground impacts and identify priority needs in terms of market information and policy support.

Immediate measures included the weekly publication of targeted market information by EUMOFA, providing quantified data and analysis on market developments, as well as guidance to Member State competent authorities to facilitate the swift deployment of EMFF resources within the existing legal framework.

In parallel, the Commission prepared and adopted a comprehensive package of temporary support measures at EU level²⁸⁶, which could be rolled out by the Member States promptly to beneficiaries. These included both sector-specific instruments and broader horizontal measures available to Member States.

Specifically for the fishery and aquaculture sector, the package included:

- Financial compensation to fishers for the temporary cessation of fishing activities;
- Financial compensation to aquaculture farmers and processing enterprises for:
 - the suspension or reduction of production or sales;
 - additional storage costs;
- Financing of working capital for aquaculture farmers and processing enterprises;

²⁸⁶ Regulation (EU) 2020/560.

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- Support to fishery and aquaculture producer organisations for the temporary storage of products.

In addition, broader horizontal measures were made available, including:

- A Temporary State Aid Framework increasing the ceiling from EUR 30.000 to EUR 120.000;
- Measures financed under EU structural funds, notably:
 - The Coronavirus Response Investment Initiative²⁸⁷;
 - The SURE scheme²⁸⁸ to support initiatives mitigating unemployment risks in an emergency context.

6.1.2 Implementation experience and stakeholder perspectives

In practice, Member States made significant use of the additional flexibility introduced under the EMFF during 2020 and 2021. Temporary cessation schemes under the amended EMFF were activated in several Member States, including Spain, France, Italy, Portugal, Greece, Ireland, Belgium, and Croatia, reflecting the exposure of fleet segments to market disruption and the collapse of foodservice demand²⁸⁹. Aquaculture compensation measures were activated in Member States with significant aquaculture sectors, including Spain, France, Italy, Greece, Ireland, and Portugal, although uptake varied depending on sector structure, administrative capacity, and the availability of complementary national support instruments.

The reprogramming of EMFF resources enabled Member States to redirect funding toward crisis-related measures within the limits of the amended regulatory framework. In some cases, EMFF support was complemented by broader national COVID-19 relief instruments, including wage-support schemes and liquidity measures applicable across sectors.

Stakeholder interviews confirm that the pandemic shock was transmitted primarily through the abrupt closure of hospitality channels and disruptions in logistics. Irish oyster producers reported severe difficulties linked to the loss of foodservice demand and the limited storage possibilities for live products, which must be harvested at defined commercial size grades and are highly time-sensitive²⁹⁰. In contrast, salmon producers indicated that retail demand increased during lockdown periods, allowing a partial redirection of volumes toward frozen and retail-oriented formats. Processors and retailers also described a rapid shift from foodservice to retail sales, with strong growth in household demand during lockdowns.

Operational pressures were reported across segments. Freight costs increased sharply during 2020, and container availability and route reliability deteriorated in several supply chains²⁹⁰. Processing facilities introduced split shifts and additional health and safety measures, contributing to higher unit costs. Aquaculture operators reported higher input costs and labour constraints, including difficulties in retaining trained staff in shellfish production.

Stakeholder interviews also indicate that recovery trajectories differed by product type. Producers supplying frozen or retail-oriented markets were generally able to adjust more rapidly than operators dependent on live or premium fresh segments²⁹⁰. In this context, emergency financial support and temporary storage mechanisms were described as important for managing short-term liquidity pressures during the acute phase of the crisis, rather than reversing the structural market adjustments triggered by the pandemic.

²⁸⁷ European Commission (2020). *Coronavirus Response Investment Initiative*. [Europa.eu](https://european-council.europa.eu/media/en/press-room/default.aspx?id=15182)

²⁸⁸ European Commission (2020). *SURE*. [Europa.eu](https://european-council.europa.eu/media/en/press-room/default.aspx?id=15182)

²⁸⁹ European Commission (2021). *Study on the main effects of the COVID-19 pandemic on the EU fishing and aquaculture sectors*. [Researchgate.net](https://www.researchgate.net/publication/354111111)

²⁹⁰ Stakeholder interviews.

6.2 Brexit

The withdrawal of the UK from the EU introduced a structural change in the operating environment for the fishery and aquaculture sector. While the EU-UK TCA preserved tariff-free trade for fishery and aquaculture products, the reallocation of fishing opportunities and the introduction of new customs, sanitary and phytosanitary procedures altered access conditions, logistics and transaction costs. Unlike the pandemic shock, the effects of Brexit were primarily procedural and structural in nature, requiring operators and administrators to adapt to new regulatory and trading arrangements.

6.2.1 Policy instruments and institutional response

To address the economic consequences of Brexit for sectors and regions most affected, the EU adopted a regulation establishing the Brexit Adjustment Reserve (BAR), which entered into force in October 2021²⁹¹. The maximum amount available under the Reserve was EUR 5,4 billion, covering the period from 1 January 2020 to 31 December 2023.

This special²⁹² instrument aimed to mitigate the short-term economic impacts of Brexit across sectors, local communities, and organisations. While all Member States and sectors were potentially eligible, the instrument was designed to concentrate resources on those most affected, recognising that the impact of Brexit differed significantly across Member States, regions, sectors, and communities.

In particular, the withdrawal of the UK from the EU posed specific risks to the fisheries sector, notably in relation to access to UK waters and quota shares. The allocation of BAR resources among Member States reflected this differentiated exposure. It was for Member States to design and implement support measures targeting the operators and communities most affected, and to demonstrate the existence of adverse consequences linked directly to Brexit to justify the measures adopted.

6.2.2 Implementation experience and stakeholder perspectives

The European Commission conducted an initial review of the implementation of the BAR and reported²⁹³ that, although Brexit formally took effect more than four years ago, its economic and political consequences continue to unfold beyond the reference period of the Reserve. Available information suggests that, despite the flexibility built into the instrument, several Member States encountered difficulties in designing national measures demonstrating a sufficiently clear link to Brexit, potentially affecting the full use of available funds. In addition, the overlapping impact of multiple crises and broader geopolitical uncertainty required rapid policy responses at national level, which in some cases complicated the implementation of the BAR. A full evaluation of the instrument is scheduled for 2027.

Beyond institutional reporting, stakeholder interviews indicate that Brexit-related impacts were most visible in trade procedures and cross-border logistics rather than in immediate market collapse. Irish stakeholders described increased administrative requirements, additional SPS controls, and higher transaction costs associated with movements involving the UK, particularly for fresh and live products requiring rapid transit²⁹⁴. The use of the UK land-bridge for exports to continental Europe was reported as more complex and less predictable after 2021, prompting adjustments in routing and logistics planning.

²⁹¹ European Parliament (2021). *Regulation (EU) 2021/1755, establishing the BAR*. [EUR-Lex](#)

²⁹² The BAR is a special temporary instrument outside the EU budget ceilings of the Multiannual Financial Framework 2021-2027.

²⁹³ Commission Staff Working Document (2024). *The Brexit Adjustment Reserve - State of implementation and the way forward, SWD 154 final*. [Europa.eu](#)

²⁹⁴ Stakeholder interviews.

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Processors and retailers similarly reported higher documentation requirements and longer clearance procedures in EU-UK trade, contributing to structurally higher compliance costs. While operators adapted over time, including through diversification of transport routes and revised contractual arrangements, both interview and data evidence suggests that trading conditions did not revert to pre-2020 levels and that additional administrative burdens remain embedded in EU-UK trade relations.

In contrast to the acute demand shock observed during the COVID-19 pandemic, Brexit-related effects were described as more procedural and structural in nature, altering transaction costs and logistics without necessarily producing immediate volume contractions across all commodity groups. The implementation experience therefore reflects a gradual adjustment to new trading conditions rather than a short-term stabilisation phase comparable to that observed during the pandemic.

6.3 Russia's war of aggression against Ukraine

Russia's war of aggression against Ukraine, which began in February 2022, generated a different type of shock for the EU fishery and aquaculture sector. Rather than causing an immediate collapse in demand, the crisis was transmitted mainly through sharp increases in energy, fuel, feed and transport costs, reflecting broader disruptions in global commodity and energy markets. These developments placed significant pressure on operating margins across fishing fleets, aquaculture farms and processing operations, prompting the activation of crisis response mechanisms at EU level.

6.3.1 Policy instruments and institutional response

In the light of the experience gained during the COVID-19 crisis, several structural provisions were introduced to respond to significant market disruptions. Under Article 26(2) of the European Maritime, Fisheries and Aquaculture Fund (EMFAF), the Commission may trigger exceptional crisis measures where significant market disruption occurs because of an exceptional event.

These provisions allow Member States to support operators in the fishery and aquaculture sector through:

- Financial compensation to fisheries and aquaculture operators for additional costs and foregone revenues;
- Support for producer organisations making use of the storage aid mechanism.

In parallel, the Commission developed a Contingency Plan²⁹⁵ under the Farm to Fork Strategy to safeguard food supply and food security in times of crisis. The plan established a European Food Security Crisis preparedness and response Mechanism²⁹⁶ (EFSCM), designed to strengthen preparedness and coordination across the food chain in the event of major disruptions. The EFSCM includes a dedicated forum, information exchange mechanisms, contact points, and coordinated response procedures.

Regarding market intelligence, EUMOFA monitored price developments for species most affected by the crisis and published regular updates to support informed decision-making by Member States and stakeholders.

Following the outbreak of the war in February 2022, the Commission assessed that the conditions for triggering the EMFAF crisis mechanism were met, namely:

- a significant disruption of the functioning of the market;
- caused by an exceptional event.

²⁹⁵ European Commission (2021). *Commission adopts contingency plan for food supply and food security in times of crisis*. [Europa.eu](https://european-council.europa.eu/media/en/press-room/image/asset-detail/Commission-adopts-contingency-plan-for-food-supply-and-food-security-in-times-of-crisis)

²⁹⁶ European Commission (2021). *Ensuring global food supply and food security*. [Europa.eu](https://european-council.europa.eu/media/en/press-room/image/asset-detail/Ensuring-global-food-supply-and-food-security)

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On 25 March 2022, the Commission adopted an Implementing Decision²⁹⁷ activating the crisis measures. From that point, Member States were able to grant financial compensation to fisheries and aquaculture operators affected by market disruptions linked to the crisis.

6.3.2 Implementation experience and stakeholder perspectives

Implementation experience indicates that the primary objective of these measures was to mitigate acute cost pressures rather than to address a collapse in demand. European Parliament and Commission communications during 2022 emphasised that the war's immediate impact was transmitted through higher fuel prices, increased electricity and logistics costs, and rising raw material prices, particularly for aquaculture feed²⁹⁸. These developments significantly compressed margins across fishing fleets, aquaculture farms, and processing operations.

However, sector organisations reported that, despite the rapid activation of the crisis mechanism at EU level, the disbursement of financial compensation at national level was not immediate in all Member States. In a September 2022 statement, the Federation of European Aquaculture Producers (FEAP) noted that compensation funds had not yet reached many operators several months into the crisis, citing administrative complexity and delays in national implementation procedures²⁹⁹. This suggests that, while the regulatory framework allowed for swift activation, practical implementation varied depending on national administrative capacity and procedures.

Stakeholder interviews confirm that the 2022 shock was perceived as predominantly cost-driven and inflationary. Fishing operators described sharp increases in fuel prices that directly affected trip viability and profitability³⁰⁰. Processors and retailers reported higher electricity, packaging, and freight costs, while aquaculture producers pointed to substantial increases in feed prices and operating expenses. Unlike the COVID-19 pandemic, demand for products did not collapse; rather, higher production and logistics costs required price adjustments throughout the value chain.

Interview evidence further suggests that crisis support measures helped alleviate short-term liquidity pressures for some operators but did not offset the structural increase in operating costs experienced during 2022-2023³⁰⁰. Market adjustment therefore occurred primarily through cost pass-through, operational efficiency measures, margin compression and strategic sourcing adjustments.

Overall, implementation experience indicates that the EMFAF crisis mechanism functioned as a short-term stabilisation tool during a period of exceptional cost volatility. However, the longer-term adjustment to elevated energy and input costs was driven largely by market mechanisms rather than sustained public compensation.

²⁹⁷ European Commission (2022). *Implementing Decision (EU) 2022/500*. [EUR-Lex](#)

²⁹⁸ European Parliament (2022). *Russia's war on Ukraine: Support for the fishing, aquaculture and fish-processing sectors*. [Europarl.europa.eu](#)

²⁹⁹ FEAP (2022). *Press release concerning the slow unfolding of compensation aid for fish farmers suffering losses because of the war in Ukraine and rising production costs*. [Feap.info](#)

³⁰⁰ Stakeholder interviews.

7 CONCLUSIONS

Between 2019 and 2024, the EU fishery and aquaculture sector was confronted with a sequence of shocks that unfolded in distinct phases and produced both short-term disruptions and longer-lasting structural effects. The COVID-19 pandemic, Brexit, and Russia's war of aggression against Ukraine did not occur in isolation; rather, they overlapped and compounded one another, creating an extended period of stress that reshaped supply chains, market dynamics, and business behaviour across the aquatic food value chain.

The COVID-19 pandemic represented the most acute initial shock. In 2020, the collapse of HORECA demand, combined with labour shortages, mobility restrictions, and logistical bottlenecks, generated immediate disruptions across fisheries, aquaculture, and processing. Fresh and live products – notably oysters, mussels, and premium finfish – were disproportionately affected, while frozen and shelf-stable products experienced a surge in demand. These impacts were largely short terms in nature, but severe. Emergency measures under the EMFF and national aid schemes played a stabilising role by providing liquidity, compensating for temporary cessation, and enabling operators to redirect volumes toward retail and export channels. Stakeholder interviews consistently indicate that these interventions prevented widespread business failure during the height of the crisis.

As the pandemic shock receded, Brexit introduced more persistent, structural adjustments. From 2021 onward, the loss of quota shares, new SPS controls, and increased documentation requirements altered trade flows and raised transaction costs on a lasting basis. Fresh and chilled products were most affected, as certification requirements and border delays disrupted just-in-time logistics. While the BAR mitigated some of the immediate adjustment costs – particularly for Ireland, the Netherlands, Belgium and France – administrative burdens remained structurally higher, especially for smaller operators, but also for Member States. For many firms, the reconfiguration of logistics routes, including reduced reliance on the UK land bridge, became a permanent adaptation rather than a temporary workaround.

Russia's war of aggression against Ukraine introduced a third shock with enduring cost implications. Unlike the pandemic, which primarily disrupted market outlets, the war triggered a sharp and sustained increase in energy, fuel, feed, and other input costs. Fuel-intensive fleets, electricity-dependent processors, and feed-reliant aquaculture operations were particularly exposed. Crisis support under the EMFAF helped cushion the immediate impact, but stakeholders widely noted that aid only partially offset higher operating costs, while general pressure on household revenues made consumers more sensitive to aquatic food prices. Targeted sanctions on selected Russian seafood exporters and shipping companies further complicated sourcing for whitefish processors dependent on Barents Sea supply, adding compliance and reputational risks even in the absence of a full trade ban.

These successive shocks accelerated adaptive strategies that now appear structural rather than transitory. Across the value chain, firms expanded frozen, pre-packed, and value-added formats to reduce exposure to market volatility and logistical disruption. Digitalisation advanced rapidly: online retail, direct-to-consumer sales, and digital traceability tools grew markedly from a low base, becoming structurally more embedded in the sector, even though traditional wholesale, retail, and foodservice channels continue to dominate overall sales. Supply chains diversified, with reduced reliance on UK transit routes and, in some cases, on Russian-processed or Chinese-reprocessed raw materials. Investment in cold storage, automation, and energy-efficient technologies gained momentum, reflecting both cost pressures and alignment with the EU's sustainability agenda.

Consumption patterns reinforced these longer-term shifts. While nominal household expenditure on fishery and aquaculture products increased under inflation, consumption volumes – especially for fresh products – declined. Consumers adjusted along multiple margins, favouring frozen, preserved, and lower-priced options, while organic and premium segments weakened. Although some of these patterns emerged before 2020, the shock sequence of 2019-2024 appears to have consolidated them into a more durable rebalancing of demand across key species such as salmon, cod, seabass/seabream, and molluscs.

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At policy level, the sequence of shocks triggered a combination of emergency stabilisation measures and longer-term adjustments aimed at strengthening the sector's resilience. During the COVID-19 pandemic, flexibility under the EMFF and temporary state aid frameworks enabled Member States to deploy rapid financial support, including temporary cessation schemes, compensation for aquaculture producers, and market storage mechanisms. These measures played a stabilising role during the acute phase of the crisis by alleviating liquidity pressures and supporting the redirection of supply toward alternative market channels. In the context of Brexit, the BAR provided targeted financial support to Member States and sectors most affected by changes in fishing opportunities and the introduction of new trade procedures. More recently, the EMFAF crisis mechanism was activated in response to the market disruptions triggered by Russia's war of aggression against Ukraine, allowing Member States to compensate operators for exceptional cost increases and foregone revenues. Taken together, these instruments illustrate a policy framework that combines short-term crisis response with mechanisms designed to facilitate structural adjustment across the sector.

Looking ahead, EU policy increasingly emphasises long-term resilience, sustainability, and strategic autonomy within aquatic food systems. Under the EMFAF and related EU policy frameworks, priorities include decarbonisation, energy efficiency, circular economy approaches, and the development of low-impact aquaculture. These objectives align with many of the adaptive investments already underway across the value chain. However, structural constraints persist: smaller operators face barriers to funding access and administrative compliance, labour shortages remain acute in processing and aquaculture, and biological limits – notably for cod – constrain domestic supply growth.

Overall, the EU fishery and aquaculture sector emerges from the 2019–2024 period more adaptive, more digitalised, and more risk-aware than before. Yet it also operates in a fundamentally altered environment characterised by higher baseline costs, reconfigured trade relations, and more price-sensitive demand. A return to pre-2020 conditions appears unlikely. Instead, the sector is settling into a new equilibrium in which resilience, sustainability, and strategic diversification are no longer crisis responses but core determinants of long-term competitiveness and supply security.

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