European Commission

THE EU FISH MARKET

2022 EDITION

E U M O F A

European Market Observatory for Fisheries and Aquaculture Products

Maritime affairs and fisheries

HIGHLIGHTS
THE EU IN THE WORLD
MARKET SUPPLY
CONSUMPTION
IMPORT – EXPORT
LANDINGS IN THE EU
AQUACULTURE

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Scope

"The EU fish market" aims at providing an economic description of the whole European fisheries and aquaculture industry. It replies to questions such as what is produced/exported/imported, when and where, what is consumed, by whom and what are the main trends.

A comparative analysis allows to assess the performance of fishery and aquaculture products in the EU market compared with other food products. In this report, value and price variations for periods longer than five years are analysed by deflating values using the GDP deflator (base=2015); for shorter periods, nominal value and price variations are analysed.

This publication is one of the services delivered by the European Market Observatory for Fisheries and Aquaculture Products (EUMOFA).

This edition is based on data available as of August 2022. The analyses included in this report do not take into account possible updates occurred in the sources used after this date.

More detailed and complementary data are available in the EUMOFA database: by species, place of sale, Member State, partner country. Data are updated daily.

EUMOFA, developed by the European Commission, represents one of the tools of the Market Policy in the framework of the Common Fisheries Policy. [Regulation (EU) No 1379/2013 on the common organisation of the markets in fishery and aquaculture products, Article 42].

As a market intelligence tool, EUMOFA provides regular weekly indicators, monthly market trends and annual structural data along the supply chain.

The database is based on data provided and validated by Member States and European institutions. It is available in all 24 EU languages.

EUMOFA website, publicly available as from April 2013, can be accessed at www.eumofa.eu.

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METHODOLOGICAL BACKGROUND

The present report is mainly based on consolidated and exhaustive volume and value data collected through different sources and published by EUMOFA at all stages of the supply chain. Within EUMOFA, data on fisheries and aquaculture products are harmonised into "Main commercial species", each referring to "Commodity groups", in order to allow comparisons along the different supply chain stages. At the following links, users can view and download:

- The list of EUMOFA Main commercial species and Commodity groups

  http://www.eumofa.eu/documents/20178/24415/Metadata+2+-+DM+-+Annex%2B1_%2BList%2Bof%2BMCS%2Band%2BCG.pdf/0d849918-162a-4d1a-818c-9edcbb4edfd2

- The correlation table used for harmonizing data on fish species at ERS[1] code level (data on catches, landings, aquaculture production) to the EUMOFA standards

  http://www.eumofa.eu/documents/20178/24415/Metadata+2+-+DM+-+Annex+3+Corr+of+MCS_CG_ERS.PDF/1615c124-b21b-4bff-880d-a1057f88563d

- The correlation table used for harmonizing data at CN-8 code level[2] (data on EU trade) to the EUMOFA standards

  http://www.eumofa.eu/documents/20178/24415/Metadata+2+-+DM+-+Annex+4+Corr+CN8-CG-MCS+%282002+-+2014%29.pdf/ae431f8e-9246-4c3a-a143-2b740a860291

MAIN SOURCES OF DATA

EUMOFA, EUROSTAT, national administrations of the EU, FAO, OECD, Federation of European Aquaculture Producers (FEAP), Europanel, Kantar, GfK, Global Trade Atlas - IHS Markit, and Euromonitor. The sections below in this Methodological background provide detailed information on the sources used.

CATCHES

Catches include all products fished by a country's fleet in any fishing area (both marine and inland waters), independently from the area of landing/selling. Data excludes marine mammals, crocodiles, corals, pearls, mother-of-pearl, shells, and sponges. Catches data are provided in this report in live weight equivalent.

The main sources of data on catches are FAO (for non-EU countries) and Eurostat (for EU Member States, online data code: fish_ca_main, extraction made on 21st July 2022). As catches data are available up to 2020, In line with Eurostat's guidelines on the production and dissemination of statistical data by Commission services after the UK withdrawal from the EU, since the most recent reference period is year 2020, UK is excluded from the EU aggregations of each year.

1 The acronym "ERS" refers to the Electronic Reporting System established by Council Regulation (EU) N° 1966/2006.
2 The acronym "CN" refers to the Combined Nomenclature, i.e. the goods classification used within the EU for the purposes of foreign trade statistics. This classification is based on the Harmonised Commodity Description and Coding System (HS) managed by the World Customs Organisation (WCO). The HS uses a six-digit numerical code for the coding of products and the Combined Nomenclature is further breaking down the coding into an eighth digit level according to EU needs.

For the purpose of properly conducting an analysis on EU-27 catches, since Eurostat does not provide data on catches in inland waters, EUMOFA has integrated EU data with data collected from the FAO database.
In addition, in case data for some species were confidential on Eurostat, figures from FAO were used, if available. The list below reports such instances (for all other instances not reported in this list, only Eurostat data were used):

- Denmark: 2018-2019 data on Northern prawn.
- Greece: 2016, 2017, and 2018 data on several species.
- Ireland: 2018-2019-2020 data on several species, as well as 2010-2011 data on horse mackerels other than Atlantic horse mackerel.
- Latvia: 2017, 2018 and 2019 data on several species.

Moreover, other issues to consider are the following:

- data include FAO forecasts for a number of non-EU and EU countries.
- for some EU Member States, Eurostat data include estimates and provisional figures, as below listed:
    - Bulgaria: 2017 and 2020 data are national estimates.
    - Denmark: 2017 data on Northern prawn are national estimates.
    - Germany: 2017 data for almost all species are provisional.
    - Ireland: 2017 data on saithe, haddock and "anglerfishes nei" are national estimates.
    - France: 2018-2019-2020 data are provisional.
    - Italy: 2018 data, 2020 data, and most of 2019 data are provisional.
    - Romania: 2017 data are national estimates.
    - Finland: 2016 and 2017 data are national estimates, and 2020 data are provisional.

AQUACULTURE

The source of data on aquaculture production in non-EU countries is FAO, most of them representing forecasts. For EU countries, the main source used by EUMOFA for aquaculture data is Eurostat. As aquaculture data are available up to 2020, in line with Eurostat's guidelines on the production and dissemination of statistical data by Commission services after the UK withdrawal from the EU, UK is excluded from the EU aggregations of each year.
For the purpose of properly conducting an analysis on aquaculture production in the EU, in some instances EUMOFA has integrated Eurostat EU data (online data code: fish_aq2a, extraction made on 14th June 2022) with data deriving from FAO database, national sources and sector associations. The list below reports such instances, as well as those instances for which data are estimates or provisional figures. For all other instances not reported in this list, only Eurostat data were used.

- Belgium

2016 Eurostat confidential data were integrated with FAO estimates.
2017-2020 data were collected from FAO.

- Bulgaria

2011 data on catfish and the grouping "other freshwater fish" were collected from FAO.
2013 and 2014 data on mussel Mytilus spp. and pike were collected from FAO.
2014 data on freshwater crayfish were collected from FAO.
2016-2017 values for seaweed and eel were collected from FAO.

2018 data for seaweed were collected from FAO.
2019-2020 data for oyster were collected from FAO.
2020 data on the grouping "other freshwater fish" were integrated with figures from FAO.

- Czechia

2011 data on freshwater catfish and the grouping "other freshwater fish" were collected from FAO.
2020 data on freshwater catfish were integrated with figures from FAO

- Denmark

Data on salmon were collected from FAO.
2013 data on turbot, char, sturgeon, and pike-perch were collected from FAO.
2015-2018 data for seaweed were collected from FAO, those of 2015 and 2016 being forecasts.
2014, 2015 and 2016 Eurostat confidential data were integrated with figures from FAO (those on eel for 2016 being forecasts).
2011, 2017 and 2018 data for pike-perch were collected from FAO.
2017-2018 data for the groupings "other salmonids" and "other freshwater fish" were collected from FAO.
2018 data on eel are FAO forecasts.
2019 data on values were integrated with figures from FAO.
2020 data on most of the species were integrated with figures from FAO.

- Germany

Data on carp for the years 2011-2012 and 2014, 2015, 2016 and 2018 were collected from FAO.
2011-2020 Eurostat confidential data were collected from FAO, those of oyster being forecasts.
2011 Eurostat confidential data on the grouping "other freshwater fish" were collected from FAO.
2011 Eurostat confidential data for trout, pike, pike-perch and eel were integrated with figures collected from the national source (DESTATIS).

- Estonia

2012, 2014 and 2015 Eurostat confidential data were integrated with figures from FAO.
2016-2019 Eurostat confidential data on the grouping "other freshwater fish" were collected from FAO.
2019 Eurostat confidential data on trout were collected from FAO.
2020 data for the grouping "other freshwater fish" were collected from FAO.

- Ireland

For 2014, values are National estimates available in Eurostat except from scallop and the grouping "Other molluscs and aquatic invertebrates", whose confidential values were integrated with figures from FAO.
For 2015, Eurostat confidential values of the grouping "Other molluscs and aquatic invertebrates" were integrated with figures from FAO.

2016 data on the grouping "other molluscs and aquatic invertebrates" were collected from FAO.
2017-2018 data are National estimates available in Eurostat.
2020 data for molluscs were integrated with figures from FAO.

- Greece

2013 Eurostat confidential data were integrated with figures from FAO.
2015 and 2016 Eurostat confidential data on the grouping "other freshwater fish" were integrated with figures from FAO.
2017 data are National provisional figures available in Eurostat.

- Spain

2019-2020 data on most of the species were integrated with figures from FAO.

- France

For sole, data are FAO forecasts.
For salmon, 2015-2017 data are FAO forecasts. 2010-2014 data were integrated with figures provided by FEAP and respective values were estimated by multiplying the volumes to its 2008-unit price, as available in Eurostat.
For turbot, 2015-2017 data are FAO forecasts. 2009-2014 data were integrated with figures provided by FEAP and respective values were estimated by multiplying the volumes to its 2008-unit price, as available in Eurostat.
2012-2013 and 2016-2017 data on carp, catfish and other freshwater fish include National estimates available in Eurostat.
2018-2019 data on values of carp, pike, pike-perch and on the grouping "other freshwater fish" include National estimates available in Eurostat.
2019-2020 data for abalone are FAO's forecasts.

- Croatia

2020 data the grouping "other freshwater fish" were integrated with figures from FAO.

- Hungary

2016 data for the grouping "other freshwater fish" were collected from FAO.
2020 data for freshwater catfish were integrated with figures from FAO.

- Italy

2015 data are National estimates and forecasts available in Eurostat.
2017 data on grooved carpet shell are FAO forecasts.
2020 data for warmwater shrimps were collected from FAO.

- Latvia

2014-2015 and 2017-2018 Eurostat confidential data were integrated with figures from FAO.
2019 data for pike and pike-perch were collected from FAO.

- Lithuania

2019-2020 data for pike-perch were collected from FAO.

- Netherlands

For eel, freshwater catfish and the grouping "other marine fish", 2012, 2015, 2018 and 2019 values are National estimates available in Eurostat.
For mussel, data of 2012 and 2014-2016 are National estimates available in Eurostat.
For turbot, 2012 data are National estimates available in Eurostat, and data of 2008-2010 and 2013-2017 are FAO forecasts.
For pike-perch, all data are FAO forecasts.
2019-2020 data on most of the species were integrated with figures from FAO.

- Austria

2011-2019 Eurostat confidential data were integrated with figures from FAO.

- Poland

2011 data for freshwater crayfish, pike, trout, salmon and other freshwater fish are National provisional figures available in Eurostat.
2016 data on tilapia are FAO forecasts.
2019-2020 data on the grouping "other freshwater fish" were integrated with FAO's forecasts.

- Portugal

2013 and 2014 data on clam are National estimates available in Eurostat.
For 2015, data on trout and clam are National estimates available in Eurostat while data on all other species are National provisional figures available in Eurostat.
2015-2018 data on sea mussels were collected from FAO.
2020 data on the grouping "other marine fish" were integrated with figures from FAO.

- Romania

2015 data are National estimates available in Eurostat.
For turbot, 2015-2016 data are FAO forecasts.
2019 data are National estimates available in Eurostat.
2020 data on freshwater catfish and on the grouping "other freshwater fish" were integrated with FAO's forecasts.

- Slovenia

2012 data on mussel Mytilus spp. were collected from FAO (the latter being forecasts).
2013- 2016 Eurostat confidential data were integrated with figures from FAO.
2016 and 2018 data on European seabass, and 2015, 2017 and 2018 data on clam are FAO forecasts.
2017 and 2019 Eurostat confidential data on the groupings "other freshwater fish" and "other salmonids" were integrated with figures from FAO, and those on European seabass with FAO forecasts.
2020 data on European seabass and on the groupings "other marine fish" and "other freshwater fish" were integrated with FAO's forecasts.

- Slovakia

For 2019, data on pike and pike-perch are FAO forecasts. In addition, data on the following species were integrated with FAO forecasts: carp, freshwater catfish, trout.
2020 data for most of the species were integrated with FAO's forecasts.

- Sweden

Salmon data 2013, 2014 and 2016 were collected from FAO.
2019 Eurostat confidential data on mussel, and on the groupings "other freshwater fish" and "other salmonids" were integrated with FAO's forecasts.

SUPPLY BALANCE SHEET

The supply balance is a proxy that allows to follow the evolutions of the EU internal supply of fishery and aquaculture products destined for human consumption and their "apparent consumption".
In the light of this, the supply balance and apparent consumption should be used in relative terms (e.g., analysing trends) rather than in absolute terms.
The supply balance is built on the basis of the following equation, calculated in live weight equivalent:

(catches + aquaculture production+ imports) – exports

=

apparent consumption

Data included in the supply balance available in EUMOFA are broken down by commodity group and main commercial species. Possible discrepancies in totals are due to rounding.
The sources used are as follows:

- Catches: products caught by fishing vessels of the EU Member States. Amounts of catches not destined for human consumption were estimated using proxies based on destination use of landings (as available in EUROSTAT). Catches data are available in live weight equivalent. Source: EUROSTAT for catches in marine areas (reference dataset: fish_ca_main), integrated with FAO for catches in inland areas.
- Aquaculture production: products farmed in the EU Member States. Aquaculture data are available in live weight equivalent. Sources: EUROSTAT (reference dataset: fish_aq2a), integrated with data from FAO, FEAP and national administrations (for sources' details by year and country, please refer to the related section of this methodological background).
- Imports - Exports: fishery and aquaculture products imported/exported by the EU Member States from/to non-EU countries. Non-food use products are not included. Import and export data are available in net weight. For the supply balance purposes, net weight is converted into live weight equivalent in order to have a harmonized supply balance sheet (for conversion to live weight equivalent, please refer to the specific section below in this methodological background). Through the assessment of origin of imports and exports in terms of production method, it is possible to estimate the share of imports/exports originating from aquaculture and captures by making use of FAO data (for the method applied, please refer to the specific section below in this methodological background). Source: EUROSTAT–COMEXT (reference dataset: DS-645593).
- Apparent consumption (total and per capita): amount of fishery and aquaculture products estimated to be consumed in the EU. Per capita consumption indicates the amount by each individual person in the EU.

CONVERSION OF NET WEIGHT INTO LIVE WEIGHT EQUIVALENT

Since EUROSTAT provides production data in live weight, import/export net volumes are converted by using conversion factors (CF) for the purpose of building a harmonized supply balance sheet.

Example of CF for the item whose CN8 code is 03044410: this item corresponds to "Fresh or chilled fillets of cod '*Gadus morhua, Gadus ogac, Gadus macrocephalus*' and of fish of the species *"Boreogadus saida"*". The CF is set at 2,85, representing an average of those found for skinned and boned fillets for this species in EUROSTAT and FAO publications.

For the complete list of CFs used for the EUMOFA purposes, please refer to the Metadata published within the EUMOFA website at the link http://www.eumofa.eu/documents/20178/24415/Metadata+2+-+DM+-+Annex+7+CF+per+CN8_%252707-%252714.pdf/7e98ac0c-a8cc-4223-9114-af64ab670532 .

ASSESSMENT OF ORIGIN OF IMPORTS AND EXPORTS IN TERMS OF PRODUCTION METHOD

The objective of the assessment of origin in terms of production methods is to quantify the role of aquaculture in the EU supply balance analysis. For each EU Member State, on the basis of the total volumes of extra-EU imports and extra-EU exports, the production methods of the countries of origin of imports and destination of exports is assessed, averaging the latest three years of production volumes in terms of catches and aquaculture.

Further assessment provides an estimate of a weighted average share of aquaculture in the total production (aquaculture + capture) and it is expressed as a coefficient.

Through this proxy, the origin of imports and destinations of exports in terms of production methods is determined, i.e. if imports/exports of a given EU Member State derive from farming or fishery activities.

EXPENDITURE AND PRICES FOR FISHERY AND AQUACULTURE PRODUCTS

EU expenditure data are provided by EUROSTAT. These data are compiled basing on a common methodology elaborated within the "EUROSTAT – OECD PPP Programme" (http://www.oecd.org/std/prices-ppp/eurostat-oecdmethodologicalmanualonpurchasingpowerparitiesppps.htm).

In "The EU fish market" report, the "Nominal expenditure (in euro)" and the "Nominal expenditure per inhabitant (in euro)" have been used. The "expenditure" is taken as a component of the Gross Domestic Product and concerns the final consumption expenditures on goods and services consumed by individual households.

Expenditure is provided in Purchasing Power Parities (PPPs) which are spatial deflators and currency converters that eliminate the effects of the differences in price levels between Member States/countries, thus allowing volume comparisons of GDP components and comparisons of price levels. For the countries outside the Euro-zone, Price Level Indices (PLIs) are used for harmonising different currencies in a single currency (euro in this case). PLIs are obtained as ratios between PPPs and current nominal exchange rates, therefore, PPPs and PLIs values coincide in the Euro-zone countries.

Price indices refer to the Harmonised Index of Consumer Prices (HICP) which gives comparable measures of inflation. It is an economic indicator that measures the change over time of the prices of consumer goods and services acquired by households. In other words, it is a set of consumer price indices calculated according to a harmonised approach and a set of definitions as laid down in Regulations and recommendations.

"Food" is an aggregate of products, corresponding to COICOP 01.1 (https://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LST_NOM_DTL&StrNom=HICP_2019&StrLanguageCode=EN&IntPcKey=43907206&StrLayoutCode=HIERARCHIC). It includes all food products purchased for consumption at home. In this report, analyses are provided for the following items belonging to the "Food" aggregate:

- "Fishery and aquaculture products", corresponding to COICOP 01.1.3. It includes "fresh or chilled", "frozen", "dried, smoked or salted", and "other preserved or processed products", as well as land crabs, land snails and frogs, as well as fish and seafood purchased live for consumption as food.
- "Meat", corresponding to COICOP 01.1.2. It includes "fresh, chilled or frozen, dried, salted or smoked meat and edible offal" and "other preserved or processed meat and meat-based preparations". It also includes meat and edible offal of marine mammals and exotic animals, as well as animals and poultry purchased live for consumption as food.

HOUSEHOLD CONSUMPTION OF FRESH FISHERY AND AQUACULTURE PRODUCTS

Data are collected from EUROPANEL and refer to households' purchases of selected fresh species in 11 EU Member States, which are then aggregated for the EUMOFA purposes into "Main commercial species".

Households' purchases are recorded daily by a sample of households in supermarkets, discount shops, micro-markets, groceries, fishmongers and online sales (Amazon Fresh included), who reports to EUROPANEL many information, among which species, quantities and values.

The sample of households (i.e., "panel") is composed in order to be representative of the population of each country and to appropriately estimate its characteristics. Below, specifications regarding panels from which data derive are provided:

Member State	Sample size (Households)
Denmark	3.000
Germany	30.000
Ireland	5.650
Spain (excluding Canary Islands)	12.000
France	20.000
Italy	10.000
Hungary	4.000
Netherlands	10.000
Poland	8.000
Portugal (excluding Madeira and Azores Islands)	4.000
Sweden	4.000

For each country surveyed (except Hungary), household consumption data cover a selection of most consumed fresh species *plus* the additional item "other unspecified products", aggregating all other fresh species recorded by household panels but not available at disaggregated level. Products monitored include either packaged or loose fish, always without any additional ingredients. Below the complete lists of "main commercial species" monitored for each country is reported:

Denmark	Germany	Ireland	Spain
Cod	Alaska pollock	Cod	Cod
Dab	Carp	Haddock	European seabass
Flounder	Cod	Hake	Gilthead seabream
Halibut	Herring	Mackerel	Hake
Mackerel	Miscellaneous shrimps	Miscellaneous shrimps	Mackerel
Mussel *Mytilus*	Mussel *Mytilus*	Saithe (=coalfish)	Monk
Salmon	Plaice	Salmon	Miscellaneous tunas
Trout	Pollack	Other unspecified products	Salmon
Other unspecified products	Saithe (=coalfish)		Sardine
	Salmon		Sole
	Trout		Other unspecified products
	Other freshwater fish		
	Other unspecified products		

France	Italy	Hungary	Netherlands
Cod	Anchovy	Unspecified products	Cod
Gilthead seabream	Clam		Herring
Hake	European seabass		Mackerel
Mackerel	Gilthead seabream		Mussel *Mytilus*
Monk	Hake		Miscellaneous shrimps
Saithe (=Coalfish)	Mussel *Mytilus*		Pangasius
Salmon	Octopus		Plaice
Sardine	Salmon		Salmon
Trout	Squid		Shrimp *Crangon*
Whiting	Swordfish		Trout
Other unspecified products	Other unspecified products		Other unspecified products

Poland	Portugal	Sweden
Carp	Clam	Cod
Mackerel	European seabass	Flounder
Salmon	Gilthead seabream	Haddock
Trout	Hake	Halibut
Other unspecified products	Mackerel	Herring
	Miscellaneous shrimps	Salmon
	Octopus	Pike-perch
	Salmon	Other salmonids
	Sardine	Other unspecified products
	Scabbardfish	
	Other unspecified products	

RETAIL SALES AND OUT-OF-HOME CONSUMPTION

Data for retail sales and out-of-home consumption are provided by Euromonitor International[1] (https://www.euromonitor.com/), whose data and estimates could be different from other statistics available at national level, as different methodological approaches may be used. They refer to "unprocessed" and "processed" products.

Unprocessed products

Data are provided for the category "fish and seafood", as well as for the sub-categories finfish, crustaceans and molluscs and cephalopods, more detailed below:

Fish and seafood: This is the aggregation of finfish, crustaceans and molluscs and cephalopods. This category includes packaged and unpackaged unprocessed fish and seafood (fresh, chilled, frozen). Chilled and frozen fish and seafood can be cleaned, gutted, peeled/trimmed/filleted/cut to a different extent, but not cooked and no sauces, herbs or condiments can be added.

- Crustaceans: includes all fresh, chilled and frozen but uncooked crustaceans (i.e. animals living in water with firm body and have a hard-outer shell) such as lobsters, shrimps and crabs, whether sold packaged or unpackaged.
- Finfish: includes all fresh, chilled and frozen but uncooked freshwater and marine finfish (wild caught or farmed), whether sold packaged or unpackaged, cut or whole.
- Molluscs and cephalopods: includes all fresh, chilled and frozen but uncooked molluscs (shellfish such as oysters and clams) and cephalopods (such as the octopus, squid, cuttlefish), whether sold packaged or unpackaged.

Processed products

Data are provided for the category "processed fish and seafood", as well as for the subcategories shelf-stable seafood, chilled processed seafood and frozen processed seafood, more detailed below:

Fish and seafood: This is the aggregation of shelf-stable, chilled and frozen fish and seafood.

- Shelf-stable: includes shelf-stable fish, shellfish and seafood typically sold in cans, glass jars or aluminium/retort packaging. It is also usually preserved in oil, brine, salt water or with a sauce (e.g. sardines in tomato sauce). Pickled fish/seafood sold ambient is also included. Product types include: cod, haddock, mackerel, sardines, tuna, prawns, crab, mussels, anchovies, caviar etc.
- Chilled processed: includes all packaged processed chilled fish/seafood products and smoked fish sold in the self-service shelves of retail outlets. Processed fish/seafood products sold together with a sauce and cooked prawns are included. Note: herring products sold in chiller/refrigerator cabinets, and which have a shelf-life of more than 6 months are excluded. These products, which are very common in Scandinavian countries, are included in shelf-stable seafood as they have similar shelf-life to shelf-stable fish sold ambient.
- Frozen processed: includes all processed fish and seafood products which are further prepared with the addition of other ingredients, including breading/batter, sauce, seasoning, etc. Product types include: fish fingers, fish pies, battered or breaded fish, fish with any type of sauce, fish balls, cuttlefish balls, scampi, calamari, etc.

IMPORT-EXPORT

The trade flows of fishery and aquaculture products are analysed for the items referring to the list of CN-8 codes at the link http://www.eumofa.eu/documents/20178/24415/Metadata+2+-+DM+-+Annex+4+Corr+CN8-CG-MCS+%282002+-+2014%29.pdf/ae431f8e-9246-4c3a-a143-2b740a860291.

The source used for collecting import-export data is EUROSTAT – COMEXT (online data code: DS-575274, extraction made on 25th March 2022). For more information on the methodology and principles behind EUROSTAT's recording of "country of origin" and "country of destination", please visit EUROSTAT's "Quality Report on International Trade Statistics", at https://ec.europa.eu/eurostat/documents/7870049/9568307/KS-FT-19-002-EN-N.pdf/856f28e5-e9f6-4669-8be0-2a7aa5b1ee67.

It must be specified that data comprehend instances in which volumes or values are not reported due to confidentiality. The principal of statistical confidentiality of Eurostat is explained at the link: https://ec.europa.eu/eurostat/web/research-methodology/statistical-confidentiality.

EXTRA-EU TRADE FLOWS

They encompass all transactions between European Union (EU) Member States and countries outside the EU (non-member countries). The source used for these trade flows is EUROSTAT - COMEXT. In line Eurostat's guidelines on the production and dissemination of statistical data by Commission services after the UK withdrawal from the EU, and since most recent reference period is year 2021, UK is excluded from the EU aggregations of each year. This means that UK is dealt with as extra-EU country of origin/destination of EU-27 imports and exports. In addition, EU data has included Croatia since 2013, which is when it became an EU Member state.

Finally, it is important to underline that while imports are reported as such by Eurostat-COMEXT according to flows recorded by national customs, in most cases the EU Member States are not the actual destinations. Rather, they are "points of entry" for the fisheries and aquaculture products imported to the EU, which are then traded within the internal market.

INTRA-EU TRADE FLOWS

They encompass all transactions declared by Member States of the European Union (EU) with one another. For the analysis of intra-EU trade, only export flows have been considered. The source used for these trade flows is EUROSTAT - COMEXT.

In general, bilateral comparisons between Member States of intra-EU flows reveal major and persistent discrepancies, thus comparisons dealing with intra-EU trade statistics and related results must be taken into account cautiously and should consider the existence of these discrepancies. This is the official explanation from Eurostat: considering that the intra-EU trade data are based on common and largely harmonised rules, one might expect the intra-EU trade balance to be zero or at least close to it. However, it is worth underlining that a perfect match is made impossible first of all by the CIF/FOB[3] approach: the import value should be higher than the mirror export value as it includes extra transport costs.

A close match could nevertheless be legitimately expected given that trading partners within the EU are often neighbouring countries, but deliveries to vessels and aircraft are another methodological reason preventing this: such movements of goods create asymmetries in intra-EU ITGS as specific legal provisions state that only dispatches are to be reported.

[3] Cost, Insurance and Freight (CIF) and Free on Board (FOB) are international shipping agreements used in the transportation of goods. The CIF rule places an obligation on the seller to arrange insurance for the consignment. If the FOB rule is used, once the goods have been loaded on board, risk transfers to the buyer, who bears all costs thereafter.

At global level, most methodological reasons for asymmetries disappear. The remaining issues are in data reporting (e.g. missing Intrastat declarations, and trade in specific goods like sea-going vessels and aircraft not being properly captured).

LANDINGS

Eurostat data regarding landings (online data code: fish_ld_main, data collected on 9th June 2022) comprise the initial unloading of any fisheries products from on board a fishing vessel to land in a given EU Member State. As landings data are available up to 2020, in line with Eurostat's guidelines on the production and dissemination of statistical data by Commission services after the UK withdrawal from the EU, UK is excluded from the EU aggregations of each year. Data include landings made by vessels from EU Member States and from Canada, Faroe Islands, Greenland, Kosovo, Iceland, Norway and the UK. Data also include landings of species not destined for human consumption and seaweed. The following issues should be mentioned regarding data used for the "Landings in the EU" chapter:

- Confidentiality. As indicated by national data providers to Eurostat, landings are confidential when they originate from less than 3 vessels. Therefore, in some instances, Member States provide data at more aggregated level, in others data are just not available. Details for these instances, broken down by country, year and species involved, are listed below:

  - Denmark
    For 2017, some confidential figures are excluded, related to destination use and/or presentations/preservations of some specific species belonging to the following main commercial species: eel, pike, cod, sole, sardine, bluefin tuna, crab, coldwater shrimps, Norway lobster, oyster, clam and the groupings "other freshwater fish", "other groundfish", "miscellaneous small pelagics" and "miscellaneous tunas". Only totals are available and were collected from Statistics Denmark.
    For 2019, data do not include the following confidential figures:
    - for blue whiting, landings of the Irish fleet
    - for herring, landings of the German and UK fleets destined for industrial use
    - for Atlantic horse mackerel, landings of the Danish fleet destined for industrial use
    - for sandeels, landings of the German fleet
    - for sprat (= Brisling), landings of the German and Estonian fleets as well as landings of the Latvian fleet destined for industrial use.

    For 2020, data do not include the following confidential figures:
    - for herring and sprat, the value of landings of the German fleet destined for industrial use and animal feed, respectively.
    - for sprat, the value of landings of the Lithuanian and Polish fleets destined for animal feed and industrial use, respectively.
    - For blue whiting, the value of landings from the UK fleet.
    - For clam, the value of landings of the species *Spisula solida* from the Danish fleet.

- Ireland
    - 2018 data are confidential for the following main commercial species: abalone, dab, dogfish, European flounder, grenadier, Atlantic halibut, ray's bream, redfish, sardine, scabbardfish, sea cucumber, European seabass, seabreams, swordfish, bluefin tuna and weever. Furthermore, for all other main commercial species, some confidential figures are excluded, related to vessels' flag, destination use and/or presentations/preservations of some specific species.
    - 2019 data are confidential for the following main commercial species: anchovy, European flounder, grenadier, Greenland halibut, mussel Mytilus spp., sardine, sea urchin, warmwater shrimps, swordfish. Furthermore, for all other main commercial species, some confidential figures are excluded, related to vessels' flag, destination use and/or presentations/preservations of some specific species.
    - 2020 data are confidential for the following main commercial species: eel, European flounder, grenadier, haddock, Atlantic halibut, herring, horse mackerel, redfish, sea cucumber, bigeye tuna, weever. Furthermore, for all other main commercial species, some confidential figures are excluded, related to vessels' flag, destination use and/or presentations/preservations of some specific species.

- Greece
  2016 and 2017 data are confidential for those landings made by one single vessel operating in Atlantic, Eastern Central regarding the following main commercial species: cuttlefish, flounder (other than European flounder), John dory and the grouping "other flatfish". Only for 2017, data do not include confidential figures for frozen deep-water rose shrimp.
  Furthermore, for 2016-2017-2018, some confidential figures are excluded related to destination use and/or presentations/preservations of some specific species. These concern:
    - For 2016-2017: some species belonging to the following main commercial species: octopus, red mullet, seabream (other than gilt-head seabream), squid, and the groupings "other sharks" and "other marine fish". Only for 2017, data do not include confidential figures for some species belonging to the grouping "warmwater shrimps".
    - For 2018: some species belonging to the following main commercial species: crab, John dory, octopus, red mullet, squid, seabream (other than gilthead seabream) and the grouping "other marine fish".

- Malta
  Data regarding landings made by vessels with Cyprus flag are excluded as they are confidential.

➢ Provisional data

- France
  2018, 2019 and 2020 volumes and values are provisional data available in Eurostat.

- Italy
  2018, 2019 and 2020 volumes and values are provisional data available in Eurostat.

- Estimates

  - Bulgaria
    2017 and 2020 volumes and values are national estimates available in Eurostat.

  - Denmark
    Most of 2019-2020 values are national estimates available in Eurostat.

  - Ireland
    Most of 2017 volumes and values, and most of 2020 values are national estimates available in EUROSTAT. In addition, the following data were collected from SFPA (Sea-Fisheries Protection Authority) and Central Statistics Office:
    - 2013, 2014, 2018 and 2019 data regarding hake
    - 2014 data regarding mackerel
    - 2016 data regarding herring
    - 2018 data regarding blue whiting and monk
    - 2019 data regarding the value of mackerel and blue whiting

  - Lithuania
    2017 volumes and values are national estimates available in EUROSTAT.

  - Netherlands
    Most of 2017-2018-2019 volumes and values, and most of 2020 values are national estimates available in Eurostat.

  - Portugal
    Most of 2018-2019-2020 volumes and values are national estimates available in Eurostat.

  - Romania
    2017 volumes and values are national estimates available in Eurostat.

  - Moreover, data include estimates for landings expressed in value, produced by Eurostat in cases where zero prices were reported by Member States. Countries and years concerned are listed below:
    - Belgium – 2009, 2010, 2011, 2012, 2013, 2014 and 2015
    - Bulgaria – 2012
    - Cyprus - 2019
    - Denmark – 2009, 2010, 2011, 2012, 2013, 2014, 2018 and 2020
    - Estonia - 2019
    - Germany – 2009 and 2014
    - Croatia – 2019-2020
    - France - 2020
    - Ireland – 2009, 2010, 2018 and 2020
    - Italy – 2020
    - Lithuania - 2020
    - Malta - 2019
    - Netherlands – 2011, 2019 and 2020
    - Poland – 2011, 2012, 2016 and 2019
    - Portugal – 2009, 2010, 2011, 2012, 2015, 2016 and 2020
    - Spain - 2020
    - Sweden – 2009, 2010, 2011 and 2019

HIGHLIGHTS

CONTINUATION OF COVID-19 EFFECTS ON CONSUMPTION OF FISH

In 2021, household expenditure on fishery and aquaculture products in the EU-27 grew 7% from 2020, continuing the upward trend already registered between 2019 and 2020. The increased expenditure from 2020 to 2021 was much higher than the 1,5% inflation of prices for fishery and aquaculture products observed in the same period. This suggested that the expenditure increase was not just a result of inflation, and that EU households had indeed spent more money for fishery and aquaculture products. The main reason can be traced to the lasting effects of the COVID-19 pandemic, which led to an increase in stay-at-home regulations, and thus increased at-home consumption. Nonetheless, according to Euromonitor estimates, out-of-home consumption also grew. Sales of processed fish through food services started to recover in 2021, increasing by 15% from 2020. Euromonitor also estimates that increases will continue for processed products and then stabilise during 2024-2026.

DETERIORATION OF THE EU TRADE BALANCE

The year 2021 saw overall growth in the total value of EU trade flows of fishery and aquaculture products[4], and it also initiated a period of economic recovery from the 2020 pandemic crisis. It is important to note that while most purchases are made in US dollar (USD) or Norwegian krone (NOK), they are reported as Euro (EUR) in this report. When looking at the trends of monthly exchange rates, it can be seen that the EUR strengthened during 2020, then had a slight decrease during 2021, yet still maintained a higher value than in 2019. The steep drop which began in February 2022 is linked to the Russian military aggression of Ukraine[5].

Due to increased imports and decreased exports with third countries, the trade balance[6] deficit in 2021 was 10% or EUR 1,80 billion higher than in 2020. In the 2012-2021 decade, the deficit grew by 31% in real terms. The United States saw an increase in imports together with a decrease in exports in 2021, making it the world's largest net importer of fishery and aquaculture products for the first time in ten years. By comparison, the EU ranked second with slightly increased imports. As for imports, values increased more than volumes from 2020 to 2021, due to an increase in the prices. This can be partly explained by the EUR's 5% loss of value against the NOK during 2021, which made 2021 imports from Norway more expensive than 2020's. Further, since a large percentage of extra-EU imports is from Norway, this contributed extensively to the overall value increase of extra-EU imports while the volume remained quite stable. Moreover, there was a significant increase in imports of high-valued species mainly destined for the HoReCa sector.

2021: RECORD YEAR FOR INTRA-EU FLOWS OF FISHERY AND AQUACULTURE PRODUCTS

In 2021, intra-EU exports were greater than extra-EU imports for the first time in 10 years. Compared with 2020, the value of intra-EU trade grew by 15% or EUR 3,4 million. This indicates that, as EU fishery and aquaculture production has increased, it has led to an increase of goods produced and traded within the EU. Indeed, intra-EU exports increased more than extra-EU imports in both volume and value. However, as consolidated data on EU production of fishery and aquaculture products are only available up to 2020, this cannot be corroborated by facts. It still can be shown that exchanges within the EU largely consist of re-exports of products originally imported

[4] Extra-EU imports + extra-EU exports + intra-EU trade flows.
[5] It is important to keep in mind that this edition of The EU Fish Market only covers data up to 2021.
[6] Extra-EU exports *minus* extra-EU imports.

from third countries[7]. These products may also be subject to multiple exchanges and processing steps taken by Member States once they enter the EU market. The value added along the often complex supply chains and the multiplication of cross-border flows contribute to inflating the value of intra-EU exports.

2020: DECADE LOWS IN SUPPLY AND APPARENT CONSUMPTION

Every year, EUMOFA estimates the total supply of fishery and aquaculture products for EU[8] consumers (catches + aquaculture production + imports). By not including exports, this formula provides an approximation of EU apparent consumption. As mentioned above, consolidated data on EU production of fishery and aquaculture products are available up to 2020, thus the estimates have been made up to 2020 as well.

From 2019 to 2020, EU import and production of aquaculture and fishery products dropped, the latter being the major contributor to a decrease in total supply, which reached one of its lowest amounts registered in the 2011 to 2020 decade. Again, all these decreases can be seen as related to the COVID-19 pandemic's impact on the sector. This included the pandemic's adverse impacts on logistics, which concerned several stages of the supply chain and the international flows of goods, as well as on production activities, in particular fisheries. Although exports decreased as well, the EU dropped to an apparent consumption[9] of 10,41 million tonnes live weight equivalent (LWE) in 2020, which also represented a decade low.

The per capita apparent consumption is estimated to have dropped by 1,7 kg LWE from 2019, reaching 23,28 kg LWE. Of this, 16,79 kg LWE were wild products and 6,49 kg LWE were farmed products. According to EUMOFA and national estimates, Portugal stands out as the major EU consumer of fishery and aquaculture products[10]. This was confirmed in 2020, despite its apparent consumption decreasing from 2019. In contrast with the negative trend at EU level, a few countries reported slight increases. Bulgaria achieved the highest increase, which was estimated at 6%.

Landings of fishery products, including species not destined for human consumption and seaweed, totalled 3,55 million tonnes with a value of EUR 5,36 billion. Of note, this was the lowest value recorded during the 2011 to 2020 decade, in both nominal terms and real terms. This could have been due to the effects of the outbreak of the COVID-19 pandemic, which caused a reduction in fishing efforts[11], as well as to the quotas, which were generally lower in 2020 than in 2019.

RECENT DYNAMICS FOR SOME MAIN SPECIES

EU imports of salmon in 2021 showed significant value increases of close to 10% compared with 2020. It reached EUR 6,5 billion, which was the highest ever recorded. The increase in import quantity was a moderate 2%, so the strong increase in value must be seen in relation to the reopening of the HoReCa segment, which in 2020 had been negatively impacted by COVID-19 pandemic lockdowns. Norway and the Faroe Islands were the main contributors to the 2021 increase in salmon import value and volume.

Alaska pollock is also an important species for the EU processing industry. In 2021, EU imports of Alaska pollock dropped to a 10-year low of 266.305 tonnes, which was 4% less than 2020. The low import volume could be caused by lower accessibility of product from China due to closure of Chinese ports to the Russian Federation and

[7] It has to be underlined that despite "exports" are reported as such by Eurostat-COMEXT according to flows recorded by national customs, in most cases the northern EU Member States are not the actual exporters but rather countries through which products are transported.
[8] In line with Eurostat's guidelines on the production and dissemination of statistical data by Commission services after the UK withdrawal from the EU, since the most recent reference period is year 2020, UK is excluded from the EU aggregations of each year. In addition, EU data include Croatia since 2013, date of the EU's enlargement to this country.
[9] The definition of "apparent consumption" is available in the "Supply balance sheet" section of the Methodological background.
[10] It is worth underlining that the methodologies for estimating apparent consumption at EU and Member State levels are different, the first based on data and estimates as described in the Methodological background, the latter also requiring the adjustment of abnormal trends due to the higher impact of stock changes.
[11] EUMOFA has developed several reports analysing COVID-19 impact on the EU fishery sector, which can be consulted at this link https://www.eumofa.eu/en/market-analysis. Another comprehensive analysis made by the European Parliament in 2021 can be consulted at the link https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2021)690880.

Chinese COVID lockdowns. During the pandemic, the pollock produced in the US gained popularity on the US market due to its favourable price, leading to reduced availability on the EU market. On the other hand, EU imports of Alaska pollock from Russia grew by 29% in quantity and 31% in value from 2020 to 2021. Despite the Russian war of aggression against Ukraine, EU imports of Russian pollock continued on an all-time-high level in the first half of 2022[12].

In 2020, imports of tuna fillets replaced whole tuna as the main product imported to the EU. The trend continued in 2021, with imported fillets maintaining the same quantities as in 2020 at around 190.000 tonnes, while imports of whole tuna dropped by 21% to around 153.000 tonnes. As of the end August 2022, the import gap between fillets and whole tuna had continued widening. EU import prices for whole tuna and tuna fillet were up in 2021 compared with 2020, by 7% and 3%, respectively. However, the 2021 price level was still lower than in the last two pre-pandemic years. Import prices showed a steep rise in the first 8 months of 2022.

EU exports of mackerel saw the highest volume in 4 years in 2021, reaching 180.169 tonnes. The price for mackerel of EU origin exported to third countries in 2021 averaged 1,69 EUR/kg, for a decrease 3% from 2020. In the first 8 months of 2022, export prices rose by around 20%, driven by strong demand from Asian and African markets. The ICES[13] proposed a 7% reduction in Atlantic mackerel quotas for 2022 to 794.920 tonnes[14]. As in for 2021, the coastal states fishing Atlantic mackerel did not manage to reach an agreement on quotas. By the end of September 2022, the coastal states of Norway, Iceland, the Faroe Islands and the UK landed 3% more mackerel than in the same period in 2020.

EU production of farmed seabass and seabream[15] increased more than global production (including the EU) in 2021. EU production increased by around 10%, while global production increased by 5%. Trade flows between Member States showed a 6% increase in prices for seabass and 3% decrease for seabream in 2021 compared with 2020. Production of these two species in the EU is expected to continue to grow in 2022, with a 3–7% growth rate expected over the year. As with several other species, prices of these two species increased steeply in the first half of 2022 (as per August 2022), with intra EU export prices for farmed seabass up 21% and seabream up 12%.

MACROECONOMIC TRENDS

Unlike 2020, the EUR in 2021 depreciated against three currencies of importance to operators in the fish and seafood industry – Icelandic króna (ISK), British pound (GBP), and NOK, while it appreciated against USD. The EUR appreciated close to 4% against the USD but depreciated by 3% against the GBP, 5% against the NOK, and 3% against the ISK. During the first three quarters of 2022, the EUR depreciated against all the above-mentioned currencies.

From September 2019 to July 2022, the European Central Bank (ECB) interest rate had remained unchanged at -0,5% since September 2019[16]. From July 2022 to November 2022, its rate was raised 3 times, up to 1,5%, in order to contain inflation.

Overall, the 2021 inflation rate of 2,9% in the EU-27 was up from the annual 2020 rate of 0,7%[17]. However, in 2022 inflation accelerated and by September, the 12-month average rate had reached 7,7%[18].

[12] As of September 2022, the European Union has only banned imports of Russian caviar and substitutes and some shellfish.
[13] International Council for the Exploration of the Sea
[14] https://ices-library.figshare.com/articles/report/Mackerel_Scomber_scombrus_in_subareas_1_8_and_14_and_in_Division_9_a_the_Northeast_Atlantic_and_adjacent_waters_/18639239.
[15] Source: Kontali, Monthly seabass and seabream report, October 2022
[16] Source: European Central Bank (https://www.ecb.europa.eu/stats/policy_and_exchange_rates/key_ecb_interest_rates/html/index.en.html)
[17] Source: Eurostat Harmonized index of consumer prices – Inflation rate (https://ec.europa.eu/eurostat/databrowser/view/tec00118/default/table?lang=en)
[18] Source: Eurostat Harmonized index of consumer prices - monthly data (12-month average rate of change) (https://ec.europa.eu/eurostat/databrowser/view/PRC_HICP_MV12R/default/table?lang=en&category=prc.prc_hicp)

After a major drop in marine fuel prices in 2020, impacted by lower demand during the COVID-19 pandemic, prices started to rise in 2021, gradually leading to a higher fuel cost for the EU fishing fleet. On average, marine fuel prices rose by 48% from 2020 to 2021, but this was still slightly lower than the 2019 average. However, in 2022, impacted by the Russian military aggression in Ukraine, energy prices, including marine fuel prices, rose to record high levels. In the first 9 months of 2022, marine fuel prices averaged close to 1,00 EUR/litre, with peaks well above 1,00 EUR/litre, which was more than double the 2021 average[19].

The consumer price index for fish and seafood in the EU[20] saw an upward trend in 2021. From January 2021 to December 2021, consumer prices for seafood rose by 2,4%, but in the first 9 months of 2022, they increased by 8,3%.

2021 was the first year the UK was outside the EU[21]. The year started with massive delays at the UK borders following its withdrawal. Even though the situation has progressively come back to normal, non-tariff barriers following Brexit (e.g., administrative or sanitary duties) have negatively impacted trade flows. Indeed, total EU imports of fishery and aquaculture products from the UK decreased by 11% in volume and 14% in value from 2020 to 2021. Also, exports to the UK in the same period dropped by 29% in volume and 38% in value from 2020 to 2021.

[19] Source: EUMOFA macroeconomic dashboard (https://www.eumofa.eu/macroeconomic)
[20] Source: Eurostat food price monitoring tool, EU-27. (https://ec.europa.eu/growth/sectors/food/competitiveness/prices-monitoring_en)
[21] The UK officially left the EU on 31 January 2020, then there has been a transition period (1 February 2020 - 31 December 2020), during which the UK was still subject to certain EU rules.

1/ THE EU IN THE WORLD

1.1 GLOBAL PRODUCTION

From 2019 to 2020, total world production from catches[22] and aquaculture increased 0,1%, with total volumes produced rising from close to 213,6 million tonnes to more than 213,8 million tonnes. This was driven by a 2% increase in farmed production which offset a corresponding 2% decrease in catches. Indeed, apart from Indonesia, all major Asian aquaculture producers reported increases, while significant drops in fishery production were seen in China, the United States and Indonesia.
The share of EU total production on world catches and aquaculture production dropped to 2%, with the volume of catches decreasing 7,4% and volume of aquaculture production decreasing 5,1%.
Details on production by continent are provided below and illustrated in Chart 1, with a focus on major producing countries and their comparison with EU production.

TABLE 1

TOP-15 PRODUCERS IN 2020 (1.000 TONNES)

Source: Eurostat (online data codes: fish_ca_main and fish_aq2a) and FAO. Possible discrepancies in % changes and totals are due to rounding. More details can be found in the Methodological background.

	Catches	Aquaculture	Total production	% of total	% evolution of total production 2020 / 2019
China	13.446	70.483	83.929	39%	+2%
Indonesia	6.989	14.845	21.834	10%	-7%
India	5.523	8.641	14.164	7%	+7%
Vietnam	3.422	4.615	8.037	4%	+2%
Peru	5.675	144	5.819	3%	+16%
Russian Federation	5.081	291	5.372	3%	+3%
EU-27	**3.869**	**1.088**	**4.957**	**2%**	**-7%**
United States	4.253	449	4.702	2%	-11%
Bangladesh	1.920	2.584	4.503	2%	+3%
Philippines	1.912	2.323	4.235	2%	-4%
Japan	3.215	996	4.211	2%	+1%
Norway	2.604	1.490	4.094	2%	+4%
Republic of Korea	1.375	2.328	3.703	2%	-2%
Chile	2.183	1.505	3.688	2%	-3%
Myanmar	1.854	1.145	2.999	1%	-1%
Others	27.940	9.645	37.584	18%	-1%
Total	**91.260**	**122.573**	**213.832**	**100%**	**+0,1%**

[22] Catches include all products fished by a country's fleet in any fishing area (both marine and inland waters), independently from the area of landing/selling. In line with Eurostat's guidelines on the production and dissemination of statistical data by Commission services after the UK withdrawal from the EU, since the most recent reference period is year 2020, UK is excluded from the EU aggregations of each year. In addition, EU data include Croatia since 2013, date of the EU's enlargement to this country.

Aquaculture's share of total world production has increased continuously since 2000, and Its production has been higher than that of catches since 2013. This trend has been driven by Asian countries, as their aquaculture production accounted for close to 92% of the world's total farmed production in 2020.

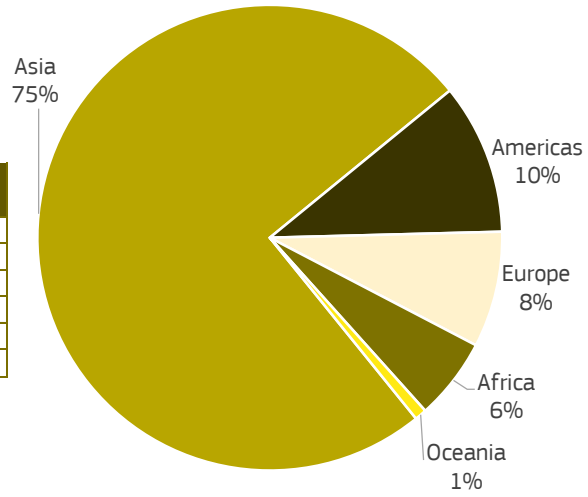
Asia is home to the world's top four top producing countries and in each, the majority of production is from aquaculture, namely: more than 80% in China, close to 70% in Indonesia, more than 60% in India and close to 60% Vietnam. By contrast, in the Americas, Europe and Africa, only one fifth of total production is covered by aquaculture, and the same situation can be seen at EU level. The share of aquaculture on total production is even lower in Oceania.

CHART 1

WORLD PRODUCTION BY CONTINENT IN 2020

Source: Eurostat (online data codes: fish_ca_main and fish_aq2a) and FAO. More details can be found in the Methodological background.

Continent	Volume (1.000 tonnes)	% catches	% aquaculture
Asia	160.250	30%	70%
Americas	22.414	80%	20%
Europe	17.225	81%	19%
Africa	12.179	81%	19%
Oceania	1.765	86%	14%
World	**213.832**	**43%**	**57%**



ASIA

Asia not only leads the world in farmed production, it also leads in fisheries production. In 2020, Asia's farmed production reached 112 million tonnes, up 2% from 2019, while its wild production decreased, settling at close to 48 million tonnes, which was 3% less than 2019.

Most of the wild production in Asia consists of catches of bony fish (Osteichthyes), which account for one fifth of the continent's total catches. The increase recorded by these catches from 2019 to 2020 was driven by the increase registered in China. At the same time, decreases in catches of freshwater fish, skipjack tuna and mackerel caused the overall decrease of Asian catches.

When it comes to aquaculture, China is by far the largest producer as well as the largest contributor to the overall trend at continent level and even at world level. In 2020, with its production of almost 70,5 million tonnes of farmed products, China alone accounted for 58% of world farmed production and for 63% of Asian farmed production. China's most produced species are seaweed which accounts for 30% of its production and carp which accounts for 26%. Production volume of both recorded slight increases from 2019, with seaweed reaching 21 million tonnes and carp reaching 18 million tonnes. If compared with the global farmed production of these two species, China accounted for almost 60% of global total of seaweed and 84% of carp. By comparison, in 2020 the EU produced less than 90.000 tonnes of carp, of which 90% was from aquaculture, and it harvested almost 55.000 tonnes of seaweed. However, EU seaweed production largely originates from wild harvesting for non-food purposes, which limits the relevance of the comparison with Chinese production. To note, the

harvesting of seaweed in the EU saw a 35% drop from 2019 to 2020, most likely due to a reduction in human activities during the outbreak of COVID-19.

AMERICAS

Production of fishery and aquaculture products in the Americas – namely North, Central and South America – is the second highest in the world. In 2020, it totalled 22,4 million tonnes, of which the vast majority – 18 million tonnes – was from catches. Catches in the Americas mainly comprise Peruvian catches of anchoveta (*Engraulis ringens*) designated for fishmeal production. In 2020, Peru's anchoveta production reached 4,4 million tonnes, which covered almost one fourth of the total production. US catches of Alaska pollock also reached significant volumes in 2020, although the total of almost 1,5 million tonnes represented a 3% decrease from 2019. On the other hand, Peruvian catches of anchoveta showed a recovery from the drop seen from 2018 to 2019, registering an increase of 25% from 2019 to 2020. This could be explained by the better state of the stock, with the increased biomass due to favourable environmental conditions[23]. A comparison with the EU is not relevant in this case, as all Alaska pollock consumed in the EU is imported, and EU catches of anchovy, which reached 103.651 tonnes in 2020, only include the species *Engraulis encrasicolus*, which is destined for human consumption.

Aquaculture production, on the other hand, reached 4,4 million tonnes in 2020, largely comprising salmon production in Chile and warmwater shrimps' production in Ecuador. The salmon production totalled 992.000 tonnes, equal to 23% of total aquaculture production in the whole continent, while the shrimp's production of more than 760.000 tonnes equalled 17% of total aquaculture production in the Americas. Production of both salmon and shrimps increased over the last years, and by 2020, they had marked growth of 54% and 80%, respectively, compared with five years before. By comparison, in 2020, the EU's farmed production of salmon totalled only 17.250 tonnes, while its farmed production of warmwater shrimps was only 143 tonnes.

EUROPE

Production of fishery and aquaculture products in Europe – including both EU and non-EU countries – is the third highest in the world. In 2020, it totalled 17,2 million tonnes, of which 14 million was represented by catches which was almost unchanged from 2019. Total EU fishery and aquaculture production amounted to close to 5 million tonnes, which represented 29% of European production. Similar shares can be observed both in terms of catches, for which the EU accounted for 28% of total European catches, and of aquaculture, where the EU accounted for 33% of European production.

Five species represent more than half of Europe's total fishery production: herring with 1,9 million tonnes produced in 2020, Alaska pollock with 1,8 million tonnes, blue whiting with 1,5 million tonnes, cod with 1,2 million tonnes, and mackerel with close to 1,2 million tonnes.

European catches of Alaska pollock only include fish caught by the Russian fleet. As for production of other main species specifically by EU Member States, EU herring production was around 550.000 tonnes in 2020, which was higher than the 527.440-tonne production in Norway and the 504.456 tonnes produced in Russia. EU catches of mackerel amounted to 302.643 tonnes for an increase of 10% from 2019, while those of blue whiting dropped 5% to 277.220 tonnes, and catches of cod dropped 30% to 52.674 tonnes. As for cod, most of the European catches in 2020 were made by Russia with 480.470 tonnes in 2020, Norway with 327.000 tonnes, and Iceland with 276.334 tonnes. As for production of blue whiting, EU catches ranked third after the Faroe Islands which produced 357.750 tonnes in 2020 and Norway which produced 354.000

[23] Source: https://www.tridge.com/stories/peruvian-anchovy-catch-to-reach-5-million-mt-in-2021

tonnes. On the other hand, EU countries were responsible for most of the European catches of mackerel, followed by Russia with 235.700 tonnes, Norway with 211.600 tonnes, and the UK with 205.676 tonnes.

Aquaculture production in Europe totalled 3,3 million tonnes in 2020, 42% of which represented by production of farmed salmon in Norway. It is worth reminding here that of the total volumes of wild and farmed salmon[24] produced in the world, Norwegian farmed salmon accounted for 39% of the global total, followed by salmon farmed in Chile with 28%, wild salmon produced by Russia and the United States, with 9% and 7% respectively, and UK's farmed salmon, which accounted for 5%.

AFRICA

Production of fishery and aquaculture products in Africa is the fourth highest in the world. It totalled 12 million tonnes in 2020, which represented a 3% decrease from 2019.

Catches, which accounted more than 80% of the total production, were responsible for this decrease. More specifically, catches of the main species produced in Africa, namely sardine, dropped just below 2 million tonnes – a four-year low due to a drop registered by Morocco, the continent's largest fishery producer. By comparison, EU catches of sardine totalled only 185.718 tonnes in 2020.

On the other hand, most of aquaculture production in Africa is represented by production of Nile tilapia in Egypt. However, its 2020 production dropped 12% from 2019, to a four-year low of almost 955.000 tonnes.

OCEANIA

Oceania is responsible for only 1% of total world fishery and aquaculture production. In 2020, its production reached 1,76 million tonnes, 86% of which was wild caught.

Skipjack tuna is by far the main species produced in Oceania, with 625.345 tonnes of catches registered in 2020. To note, this was almost four times higher than the EU production of skipjack tuna. The continent's most important producers are Kiribati, Micronesia and Papua New Guinea.

1.2 IMPORT-EXPORT[25]

EU

The EU's trade in fishery and aquaculture products, which is presented here as the sum of imports and exports with third countries, was second only to China in 2021, in both value and volume.

In 2020, the EU had been the world's largest market, due, in part, to the temporary decline of Chinese trade which had been particularly affected by the COVID-19 pandemic. In 2021, the Chinese trade rose to the top again, and at the same time, the EU flows recorded a slight 1% decrease, reaching 8,6 million tonnes, while their value reached EUR 32,6 billion, which was 4% higher than 2020.

The EU's imports amounted to EUR 25,8 billion and 6,2 million tonnes in 2021, an increase of 6% in value and 1% in volume from 2020. It should be noted this represented a recovery from the significant drop recorded in 2020 due to the severe impact of the COVID-19 pandemic on high-value species mainly destined for the hotel, restaurant and catering (HoReCa) market, a sector severely impacted by the consequences of the COVID-19 pandemic.

Exports in 2021, on the other hand, saw a continuation of the 2020 downward trend, with volume decreasing 6% from 2020, reaching 2,4 million tonnes, and value

[24] Farmed salmon production largely includes Atlantic salmon (*Salmo salar*).
[25] Sources used in this chapter are Eurostat for EU (online data code DS-575274), StatBank Norway and Global Trade Atlas - IHS Markit for other non-EU countries.

decreasing 3% to EUR 6,8 billion. As for imports, export prices for high value species made a strong rebound in 2021.

Chapter 4 of this report presents detailed analyses of EU Member States' imports and exports by partner country and as well as a focus on the development of main exchange rates.

This section focuses on the trade flows of the world's top five non-EU traders of fishery and aquaculture products – China, the US, Japan, Norway and Canada. It ranks the countries by value and compares their trade flows with the EU.

CHINA

In 2021, China recorded total import-export flows of 9,4 million tonnes, a 12% drop from 2020, while at the same time, it showed a 7% increase in value, reaching EUR 33 billion.

Although China's export volume plummeted by 25%, dropping from 4,9 million tonnes to 3,7 million tonnes, there was a 5% increase in their total value, which rose from EUR 17,2 billion to EUR 18,1 billion. The drop in volume was most likely still a consequence of restrictions linked to COVID-19.

The main destinations for Chinese exports in 2021 were Japan (15%), US (11%), Republic of Korea (11%) and EU (10%). China's main exports to Japan – frozen prepared and filleted marine fish[26] – accounted for 36% of total export volumes in 2021 to this country. This product category also accounts for 38% of total exports to US and 22% to the Republic of Korea, while the EU mainly imports frozen fillets of Alaska pollock, accounting for 30% of total volume.

Chinese imports were also affected, albeit slightly, by the downturn, registering a 2% decrease in volume from 2020, totaling 5,7 million tonnes. However, in terms of value, they grew by 9%, reaching almost to EUR 15 million.

The EU ranks only 18th among China's suppliers of fishery and aquaculture products. The countries from which China imports the most are Peru, the Russian Federation and Vietnam. From Peru and Vietnam, China mainly imports fishmeal which is an important product for its thriving fish-farming industry. Fishmeal accounted for 82% of total import volumes from Peru and 36% from Vietnam in 2021. Frozen whole Alaska pollock is China's main import from the Russian Federation, accounting for 50% of all imported volumes in 2021. Once imported, the product is then processed and re-exported as frozen fillets/blocks.

In 2021, China's fish import from the EU surpassed 80.000 tonnes with a value of EUR 282 million. Of this, 22% of total volume was frozen whole blue whiting largely supplied by the Netherlands and Germany, and 15% was fishmeal from Denmark.

UNITED STATES

The volume of total flows (import + export) of fishery and aquaculture fell by 25%, dropping from 6,2 million tonnes in 2020 to 4,6 million tonnes in 2021. The flows' value, however, recorded a 14% increase from 2020, reaching a total of EUR 28,8 billion.

The US trade deficit in 2021 grew to EUR 19 billion, which was 38% higher than in 2020 due to the combined effect of decreased exports and increased imports.

In 2021, exports of US fishery and aquaculture products amounted to 1,34 million tonnes, down 52% from the previous year. The 14% decline in value was less significant, with exports reaching a total value of almost EUR 5 million.

In 2021, the top three destinations in value were Canada (29%), EU (17%) and China (15%). US exports to Canada were mainly salmon and lobster, which together accounted for 38% of exports to Canada. US exports to China mainly include fishmeal and salmon which combined account for 38% of total volumes. From the US, the EU

[26] No detail is available in terms of species.

imports mostly frozen fillets of Alaska pollock (28% of total volumes in 2021), followed by hake and salmon.
From 2020 to 2021, US imports of fishery and aquaculture products increased by 23% in value, while decreasing 3% in volume. They reached a total of 3,26 million tonnes valued at EUR 24 million.
In terms of value, the EU ranks 11th among US suppliers after Canada, India, Chile, Indonesia, Vietnam, China, Ecuador, the Russian Federation, Thailand and Norway.
Most of the value of US imports from the EU include salmon (45%), octopus (16%) and small pelagics (6%).

JAPAN

In 2021, Japan's total imports and exports stood at 2,8 million tonnes and EUR 14 billion, establishing it as the world's fifth largest trader of fishery and aquaculture products by value and fourth largest by volume.
The 2021 import volume totalled 2,18 million tonnes and value totalled EUR 12 billion, which signified decreases of 11% and 1%, respectively, and continued the downward trend of 2020.
The main products Japan imports are: fishmeal and other products not destined for human consumption, which in 2021 accounted for 20% of import volume; frozen and prepared/preserved marine fish[27] which accounted for 17%; and salmon which accounted for 9%.
Japan's top three suppliers are China, the US and Chile. Russia holds a strong position in terms of value, due to its supplying salmon and caviar.
Only 2% of Japan's import volume and 3% of value come from the EU. Of this, 55% is frozen tuna which mainly originates from Malta, Spain and Croatia.
Japan's exports in 2021 reached 635.601 tonnes valued at EUR 2,11 billion. Its most traded species are mackerel and molluscs[28] exported to other Asian countries, namely China, the Republic of Korea, Hong Kong and Taiwan. Another important market in value terms for Japan is the US, mainly due to exports of frozen fillets of marine fish[29]. The EU is a minor market for Japan exports.

NORWAY

Norway's total trade flows grew to 3,8 million tonnes worth EUR 13 billion in 2021, with a trade surplus of EUR 10,5 billion. Of this, exports are particularly remarkable and ranked second globally to China, partly due to Norway's exports of salmon, which reached 1,3 million tonnes in 2021 worth almost EUR 8 million.
The EU, Norway's main destination, absorbs 58% of Norway's total exports in value and 55% in volume, while other important destinations in value terms are the US (7% of the total), the United Kingdom (5%), and China (4%).
From 2020 to 2021, Norwegian exports increased by 16% in volume and 21% in value. Prices of export species destined for human consumption increased in 2021, except for cod, redfishes, and wolffish. Although a price rebound took place in 2021, export prices were generally lower in 2021 than pre-pandemic.
Imports to Norway amounted to 690.000 tonnes in 2021 with a total value of EUR 1,25 billion, registering an increase of 11% in volume and 7% in value from 2020.
The EU is Norway's main supplier, accounting for 30% of its total imports in 2021. Most of the imports from EU Member States include fishmeal and fish oil used for breeding salmonids in the aquaculture industry, which has a growing demand for fish feed. Important amounts of fishmeal and fish oil are also imported from Peru and

[27] No detail is available in terms of species.
[28] ibidem
[29] ibidem

Iceland. The UK is another relevant supplier of fish to Norway, with the vast majority of imports including mackerel.

CANADA

In Canada, total flows in 2021 amounted to 1,2 million tonnes worth EUR 9 billion, with a trade surplus of almost EUR 3 billion.

Exports totalled 632.584 tonnes valued at EUR 6 billion. While in terms of volume this represented a 14% decrease from 2020, the value grew by 34%.

The top three destinations for Canadian fish exports in value are the US, China and the EU. Together, these destinations accounted for 78% of Canada's total export value in 2021. The US alone accounted for 70% of the total, due to flows of crab and lobster – which are the main species exported to China as well. Canada's largest exports to the EU, in value, comprised lobster, coldwater shrimp and scallop.

Canada's fishery and aquaculture imports in 2021 were 576.131 tonnes valued at EUR 3 billion. While volumes dropped by 30% from 2020 due to lower imports of non-food use products from the US, it also recorded a 10% value increase.

The US is by far the largest supplier to Canada, followed at a distance by China and Vietnam. From the EU, Canada mainly imports fishmeal.

TABLE 2

EXPORTS OF FISHERIES AND AQUACULTURE PRODUCTS OF MAIN WORLD TRADERS (VOLUME IN MILLION TONNES AND NOMINAL VALUE IN EUR BILLION) AND % OF EXPORTS DESTINED FOR THE EU ON TOTAL IN 2021

Source: EUMOFA elaboration of data from EUROSTAT (for EU trade flows, online data code DS-575274), StatBank Norway and Global Trade Atlas - IHS Markit (for other non-EU countries). Possible discrepancies in % changes are due to rounding.

	2017		2018		2019		2020		2021		2021 / 2020	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
China	5,35	19,17	5,43	19,55	5,46	18,99	4,92	17,17	3,71 (10% to the EU)	18,10 (8% to the EU)	-25%	5%
Norway	2,61	10,06	2,76	10,29	2,64	10,74	2,66	9,74	3,09 (55% to the EU)	11,78 (58% to the EU)	16%	21%
EU	**2,52**	**6,86**	**2,55**	**7,13**	**2,56**	**7,29**	**2,57**	**6,97**	**2,41**	**6,75**	**-6%**	**-3%**
Canada	0,83	4,94	0,80	4,80	0,79	5,31	0,74	4,50	0,63 (7% to the EU)	6,02 (5% to the EU)	-15%	34%
US	3,12	6,86	3,02	6,58	2,91	6,53	2,78	5,68	1,34 (18% to the EU)	4,86 (17% to the EU)	-52%	-14%
Japan	0,59	1,87	0,73	2,04	0,62	2,05	0,62	1,81	0,64 (1% to the EU)	2,11 (3% to the EU)	3%	17%

TABLE 3

IMPORTS OF FISHERIES AND AQUACULTURE PRODUCTS OF MAIN WORLD TRADERS (VOLUME IN MILLION TONNES AND NOMINAL VALUE IN EUR BILLION) AND % OF IMPORTS ORIGINATING FROM THE EU ON TOTAL IN 2021

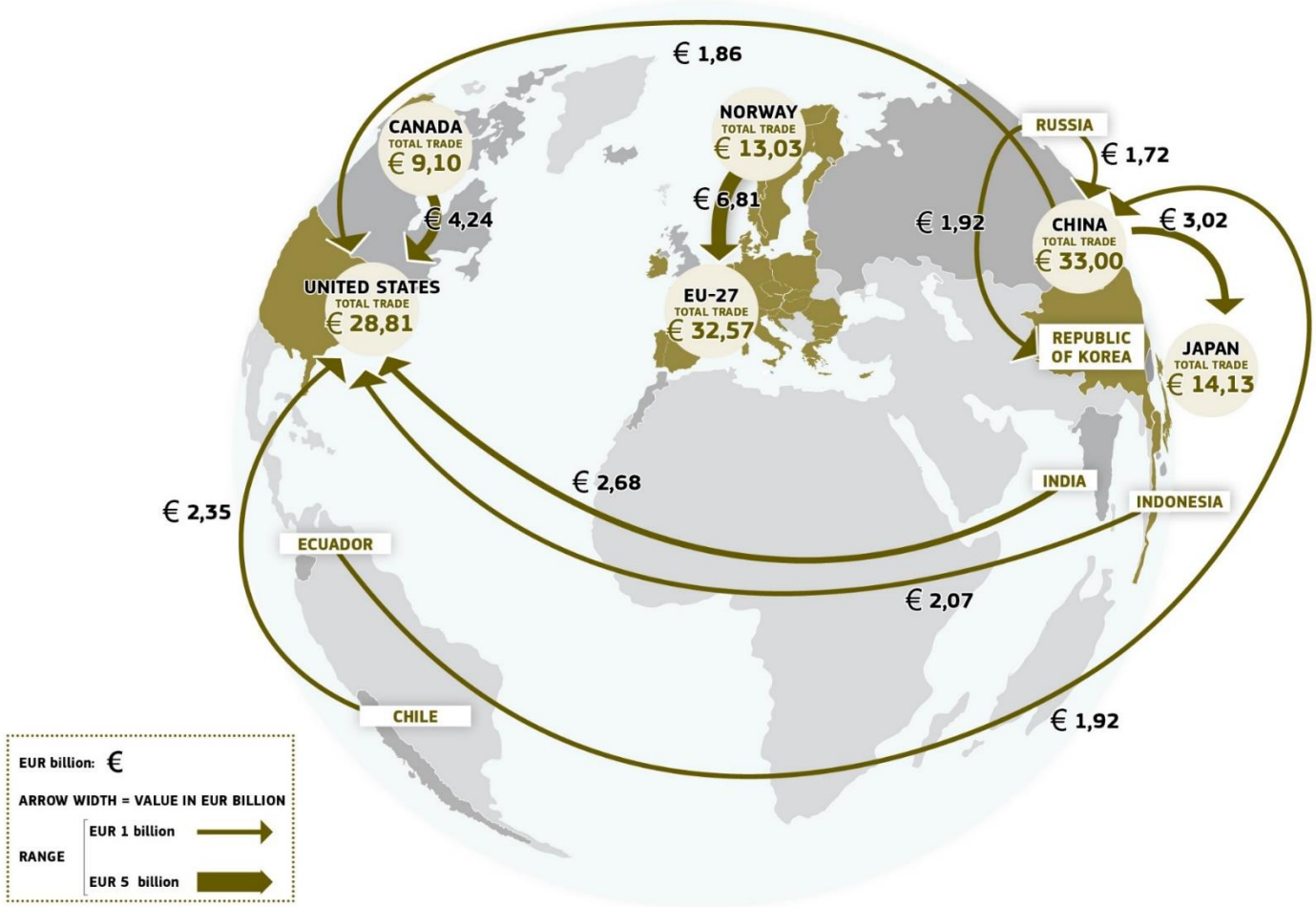
Source: EUMOFA elaboration of data from EUROSTAT (for EU trade flows, online data code DS-575274), StatBank Norway and Global Trade Atlas - IHS Markit (for other non-EU countries). Possible discrepancies in % changes are due to rounding.

	2017		2018		2019		2020		2021		2021 / 2020	
	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value
EU	**6,02**	**25,45**	**6,26**	**25,91**	**6,25**	**26,43**	**6,16**	**24,23**	**6,23**	**25,82**	**1%**	**7%**
US	3,20	19,74	3,27	19,74	3,27	20,38	3,36	19,56	3,26 (3% from the EU)	23,96 (3% from the EU)	-3%	22%
China	4,99	9,93	5,30	12,67	6,34	16,57	5,80	13,62	5,70 (1% from the EU)	14,90 (2% from the EU)	-2%	9%
Japan	2,72	13,87	2,60	13,50	2,68	14,00	2,46	12,12	2,18 (2% from the EU)	12,02 (4% from the EU)	-11%	-1%
Canada	0,82	2,85	0,82	2,79	0,84	3,06	0,81	2,80	0,58 (6% from the EU)	3,07 (4% from the EU)	-29%	10%
Norway	0,66	1,08	0,61	1,08	0,61	1,19	0,62	1,17	0,69 (28% from the EU)	1,25 (30% from the EU)	10%	7%

CHART 2

TOP-10 TRADE FLOWS IN VALUE OF FISHERY AND AQUACULTURE PRODUCTS IN THE WORLD (2021, NOMINAL VALUES)

Source: EUMOFA, based on elaboration of data from EUROSTAT (for EU trade flows, online data code DS-575274), StatBank Norway, and Global Trade Atlas - IHS Markit (for trade flows of other non-EU countries)



1.3 EXPENDITURE AND CONSUMPTION[30]

According to the OECD-FAO Agricultural Outlook forecasts for 2021[31], the EU ranked 13th in terms of per capita fish consumption, amounting to less than half of the forecast for the top three ranked countries – Malaysia, Korea and Norway.
According to OECD forecasts, world consumption of fish increased from 2020 to 2021, rising from 180,2 million tonnes to 180,7 million tonnes. A 2% increase in total consumption is expected in 2022, with total consumption of fishery and aquaculture products expected to reach 184,5 million tonnes.
When looking at EU, total consumption increased 0,5% from 2020 to 2021, and OECD forecasts a further 1,3% increase from 2021 to 2022.

TABLE 4
CONSUMPTION OF FISH, TOP OECD COUNTRIES, 2021 (FORECASTS)
Source: OECD

Country	Per capita consumption (Kg)	Total consumption (1.000 Tonnes)
Malaysia	57,48	1.994
Korea	57,13	3.187
Norway	54,77	1.025
Japan	45,59	6.173
Vietnam	40,98	4.957
China	41,16	61.657
Indonesia	39,97	12.360
Thailand	28,49	2.425
New Zealand	27,27	186
Philippines	26,23	2.919
Australia	25,37	689
Egypt	24,29	2.543
EU	**24,16**	**11.419**

On the other hand, when looking at expenditure data, according to OECD, in 2017[32] the EU as a whole reported the world's highest expenditure on fish. However, when looking at per capita expenditure, it ranked 8th after Iceland, Japan, Korea, Norway, Australia, Israel and Switzerland.

TABLE 5
EXPENDITURE ON FISH, TOP 10 OECD COUNTRIES, 2017
Source: OECD

Country	Per capita nominal expenditure (EUR)	Total nominal expenditure (EUR million)
Iceland	398	137
Japan	368	46.634
Korea	201	10.349
Norway	170	899
Australia	144	3.548
Israel	124	1.080
Switzerland	119	1.002
EU-28	**106**	**54.262**
New Zealand	97	469
Canada	81	2.955

[30] Data in this section are collected from the OECD website (Organization for Economic Co-operation and Development). More details available at the links https://stats.oecd.org/Index.aspx?DataSetCode=PPP2017 (for expenditure) and https://stats.oecd.org/viewhtml.aspx?datasetcode=HIGH_AGLINK_2019&lang=en (for consumption).
[31] There is no consolidated data available at the time of writing, so FAO forecasts are used to indicate the annual trend.
[32] Latest available data.

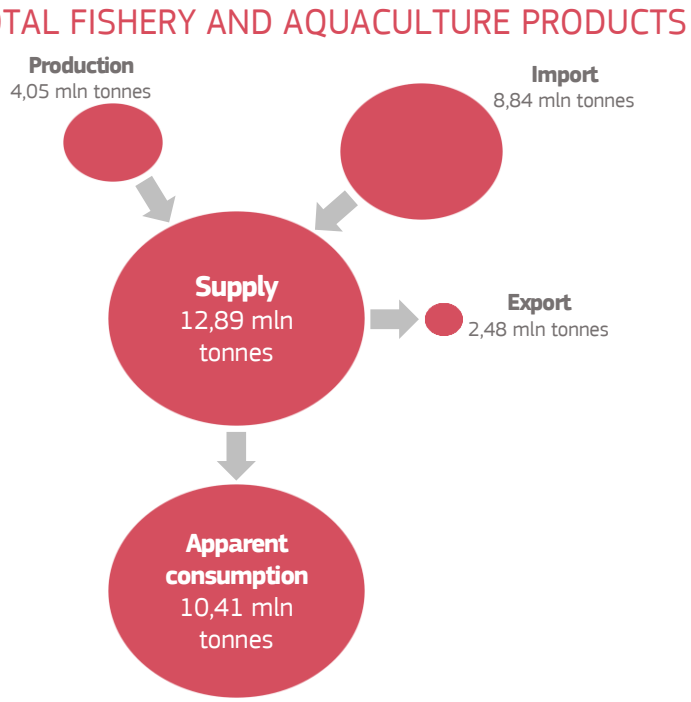
2/ MARKET SUPPLY

2.1 SUPPLY BALANCE AND SELF-SUFFICIENCY OVERVIEW

The EU[33] supply of fishery and aquaculture products for human consumption includes both domestic production and imports. In 2020, this supply totalled 12,89 million tonnes in live weight equivalent (LWE). This represented a decrease of almost 180.000 tonnes LWE from 2019 which was one of the lowest amounts registered in the 2011-2020 decade.

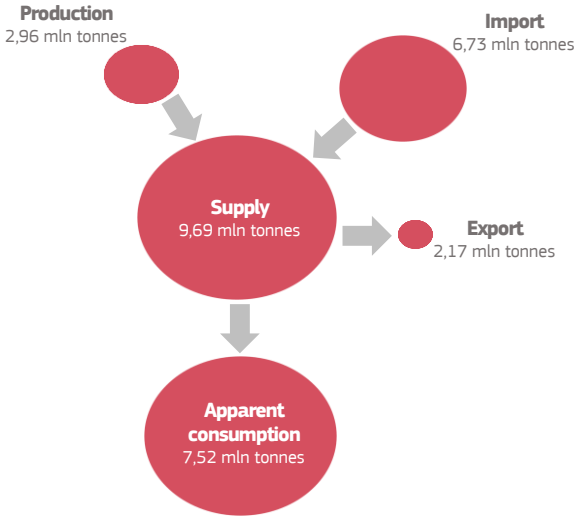
From 2019 to 2020, both imports and production of aquaculture and wild fishery dropped, with the wild fishery drop being the major contributor to the decrease of total supply. Imports ended at 8,84 million tonnes LWE, aquaculture production at 1,09 million tonnes LWE and production of wild fishery ended at 2,96 million tonnes LWE. The volume of EU aquaculture production decreased 3%, for a loss of more than 38.300 tonnes LWE, while the volume of EU catches destined for human consumption dropped a more significant 15%, which meant a loss of almost 540.000 tonnes LWE. The decrease in imports was 2% or 200.000 tonnes LWE. Exports also decreased, dropping by 2% or almost 60.000 tonnes LWE to reach 2,48 million tonnes LWE. Consequently, the EU's apparent consumption[34] of 10,41 million tonnes LWE in 2020 was one of lowest amounts registered in the 2011-2020 decade. Further, its 6% drop from 2019 meant a decrease of more than 720.000 tonnes LWE.

CHART 3
EU SUPPLY BALANCE (2020, LIVE WEIGHT EQUIVALENT, FOOD USE ONLY)
Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274) and FAO data. Details on the sources and on the methodological approach used for assessing the production method of imports and exports and the destination use of catches can be found in the Methodological background.

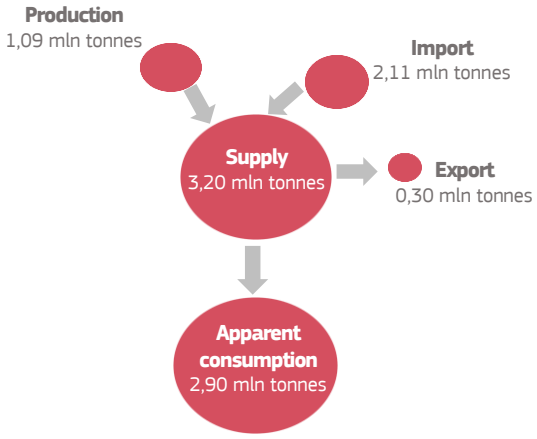


[33] In line with Eurostat's guidelines on the production and dissemination of statistical data by Commission services after the UK withdrawal from the EU, since the most recent reference period is year 2020, UK is excluded from the EU aggregations of each year. In addition, EU data include Croatia since 2013, date of the EU's enlargement to this country.
[34] The definition of "apparent consumption" is available in the "Supply balance sheet" section of the Methodological background.

FISHERY PRODUCTS



AQUACULTURE PRODUCTS



Catches of the EU fleet can be destined for human consumption or non-food use. From 2019 to 2020, according to EUMOFA estimates, catches for food use dropped while catches for non-food catches grew[35]. The decrease in the food use supply was mainly linked to decreased catches of sprat, skipjack tuna and herring, while the increase of supply for non-food uses was mainly due to increased catches of sandeels and sprat.

As shown in Chart 3, most EU consumption of fishery and aquaculture products consists of wild products and, more specifically, of imported wild-caught products[36]. Indeed, the average EU citizen consumed 23,28 kg LWE of fish and seafood in 2020, with 16,79 kg LWE consisting of wild products and 6,49 kg LWE of farmed products. For farmed products, 2020 apparent consumption increased a slight 1% from 2019, while apparent consumption of wild products dropped 9%, reaching the lowest level of the 2011-2020 decade.

More detailed analyses on apparent consumption can be found in Chapter 3.

TABLE 6

EU PRODUCTION (TONNES, LIVE WEIGHT)

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, and fish_ca_main) and FAO data. Details on the sources and on the methodological approach used to assess the destination use of catches can be found in the Methodological background. Possible discrepancies in totals are due to rounding.

		2016	2017	2018	2019	2020
Food use	Catches	3.892.200	3.915.983	3.815.200	3.502.248	2.963.241
	Aquaculture	1.145.996	1.229.511	1.134.819	1.126.709	1.088.399
Total production destined for food use		**5.038.196**	**5.145.494**	**4.950.019**	**4.628.957**	**4.051.641**
Non-food use	Catches	534.047	785.498	840.197	703.690	905.728

[35] For the assessment of the catches considered not to be destined to human consumption, please refer to the Methodological background.
[36] For the assessment of the origin of imports and exports in terms of production method, please refer to the Methodological background.

TABLE 7

EU SUPPLY BALANCE FOR FISHERY AND AQUACULTURE PRODUCTS BY COMMODITY GROUP AND PRODUCTION METHOD (2020, LIVE WEIGHT EQUIVALENT, FOOD USE ONLY)

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274) and FAO data. Details on the sources and on the methodological approach used for assessing the production method of imports and exports and the destination use of catches can be found in the Methodological background.

Commodity group	Production (tonnes)		Import (tonnes)		Export (tonnes)		Apparent consumption (tonnes)			Apparent consumption per capita (kg)		
	Wild	Farmed	Wild	Farmed	Wild	Farmed	Wild	Farmed	Total	Wild	Farmed	Total
Bivalves and other molluscs and aquatic invertebrates	133.153	531.698	150.489	161.461	38.139	22.644	245.503	670.515	916.017	0,55	1,50	2,05
Cephalopods	77.934	0	578.506	1	44.577	0	611.863	1	611.864	1,37	0,01	1,37
Crustaceans	114.976	3.474	416.711	378.901	148.790	4.629	382.897	377.746	760.643	0,86	0,84	1,70
Flatfish	125.232	12.031	156.985	1.004	89.369	274	192.849	12.761	205.610	0,43	0,03	0,46
Freshwater fish	95.572	110.481	67.203	197.307	4.901	4.707	157.874	303.081	460.955	0,35	0,68	1,03
Groundfish	519.732	0	2.427.293	542	544.333	0	2.402.691	542	2.403.234	5,37	0	5,37
Miscellaneous aquatic products	52.794	490	329.615	0	64.360	0	318.049	490	318.539	0,71	0	0,71
Other marine fish	228.959	192.680	395.542	115.019	168.773	43.128	455.728	264.572	720.300	1,02	0,59	1,61
Salmonids	14.498	208.216	65.269	1.256.075	1.308	215.024	78.458	1.249.268	1.327.726	0	2,79	2,97
Small pelagics	1.228.573	0	763.036	0	713.616	0	1.277.994	0	1.277.994	2,86	0	2,86
Tuna and tuna-like species	371.819	29.329	1.377.123	777	356.044	11.626	1.392.897	18.481	1.411.378	3,11	0,04	3,16
Total	**2.963.241**	**1.088.399**	**6.727.773**	**2.111.089**	**2.174.210**	**302.033**	**7.516.804**	**2.897.456**	**10.414.260**	**16,79**	**6,49**	**23,28**

Data as of August 2022. Data may differ from those currently available on the EUMOFA website as these are constantly updated. Possible discrepancies in totals are due to rounding.

The EU is mainly able to maintain a high level of fish and seafood apparent consumption by importing it from other regions of the world.

Self-sufficiency, which is the capacity of EU Member States to meet demand from their own production, can be calculated as the ratio of domestic production over domestic consumption. In 2020, the EU's self-sufficiency was estimated at 38,9%. As can be seen in Chart 4, the EU's self-sufficiency has been following a negative trend since 2018, which reflects both the downward trend of EU production and, even more, the increase of imports – an increasing trend which however stopped in 2020. The highest level of self-sufficiency – 46% – was reached in 2014, which signified a good level of production, especially from the wild fishery segment.

CHART 4

EU APPARENT CONSUMPTION AND SELF-SUFFICIENCY RATES FOR FISHERIES AND AQUACULTURE PRODUCTS

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274), FAO, national administrations and FEAP data. Details on the sources used can be found in the Methodological background.

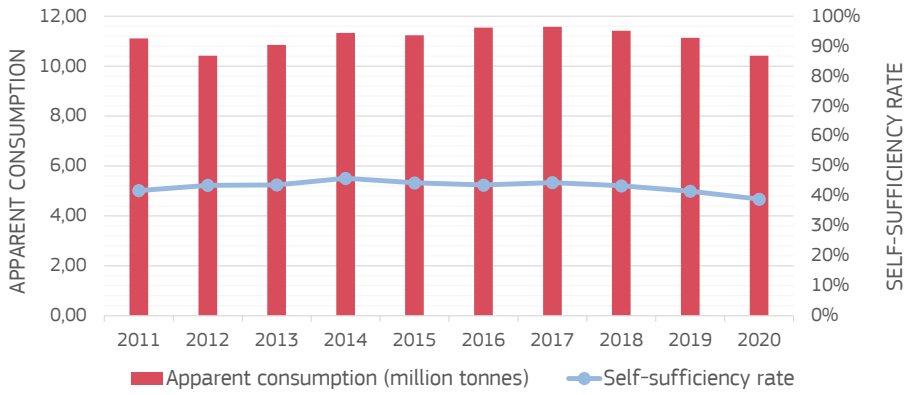


TABLE 8

SELF-SUFFICIENCY RATES BY COMMODITY GROUP

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274), FAO, national administrations and FEAP data. Details on the sources used can be found in the Methodological background.

Commodity groups and share of total apparent consumption in 2020	Self-sufficiency rates									
	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Groundfish (23%)	19%	20%	21%	24%	25%	22%	25%	23%	23%	22%
Tuna and tuna-like species (14%)	28%	32%	34%	39%	31%	33%	31%	38%	33%	28%
Salmonids (13%)	21%	19%	19%	17%	17%	18%	18%	17%	17%	17%
Small pelagics (12%)	111%	121%	115%	130%	121%	107%	108%	107%	102%	96%
Bivalves and other molluscs and aquatic invertebrates (9%)	57%	63%	58%	59%	65%	68%	77%	78%	82%	73%
Crustaceans (7%)	17%	17%	18%	18%	18%	17%	17%	20%	18%	16%
Other marine fish[37] (7%)	57%	69%	69%	66%	64%	62%	62%	57%	56%	59%
Cephalopods (6%)	18%	19%	20%	21%	18%	15%	13%	12%	12%	13%
Freshwater fish (4%)	25%	28%	30%	33%	36%	38%	42%	39%	39%	45%
Miscellaneous aquatic products (3%)	14%	13%	20%	17%	6%	16%	14%	13%	23%	17%
Flatfish (2%)	93%	71%	73%	69%	70%	66%	67%	64%	63%	67%
Total	**41,8%**	**43,5%**	**43,7%**	**45,9%**	**44,4%**	**43,6%**	**44,5%**	**43,4%**	**41,6%**	**38,9%**

2.2 ANALYSIS BY MAIN SPECIES

As explained above, meeting the demand for fish and seafood in the EU mainly relies on imports. Indeed, imports prevail for tuna, salmon, cod, Alaska pollock and shrimps. These are the major species consumed in the EU, and together represent 43% of the EU's total apparent consumption of fishery and aquaculture products. If considering only these five species, the EU had a self-sufficiency of 11% in 2020.

[37] Species belonging to this group are gilthead seabream and other seabreams, seabass, monk, sharks, ray, red mullet, gurnard, scabbardfish, cusk-eel, dogfish, picarel, John Dory, smelt, ray's bream, weever, cobia, and marine species not included in other commodity groups. For more information, please consult the "Harmonisation" page of the EUMOFA website at the link http://www.eumofa.eu/harmonisation.

TABLE 9
SELF-SUFFICIENCY RATES OF TOP-15 MOST CONSUMED PRODUCTS IN THE EU (2020)
Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274) and FAO data. Details on the sources used can be found in the Methodological background.

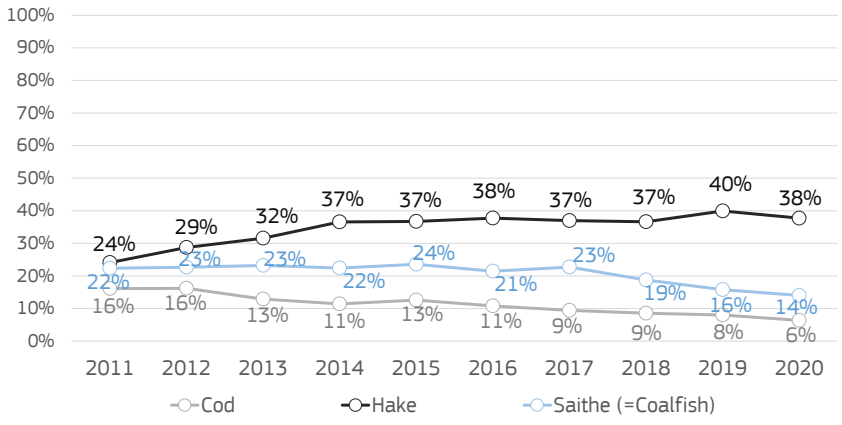
Products[38] and share of total apparent consumption	Per capita consumption (kg, live weight equivalent)	Self-sufficiency rate
Tuna (13%)	3,06	28%
Salmon (10%)	2,44	2%
Alaska pollock (7%)	1,72	0%
Cod (7%)	1,72	6%
Shrimps (6%)	1,46	12%
Mussel (5%)	1,19	80%
Herring (5%)	1,10	79%
Hake (4%)	1,03	38%
Surimi[39] (3%)	0,64	n/a
Squid (3%)	0,62	14%
Mackerel (3%)	0,59	99%
Sardine (2%)	0,56	72%
Trout (2%)	0,49	86%
Saithe (=Coalfish) (1%)	0,35	14%
Clam (1%)	0,32	59%

GROUNDFISH

COD, ALASKA POLLOCK, HAKE, SAITHE

Four groundfish species, namely cod, Alaska pollock, hake and saithe, had a combined per capita consumption of 5,15 kg LWE in 2020. This accounted for more than one fifth of the EU's total apparent consumption of fisheries and aquaculture products.
As all Alaska pollock available in the EU is imported, Member States are completely dependent on non-EU countries to meet their demand.
For the other three species of this group, EU self-sufficiency totalled 18% in 2020. Cod, one of the most highly consumed species in the EU, dropped to a self-sufficiency of 6%, the lowest of the 10-year period analysed, mainly due to the downward trend of Danish, French and Polish catches since 2016.
Saithe self-sufficiency also continued to drop, reaching 14% and registering its lowest level of the decade analysed in 2020. In this case, the decline was caused by increased apparent consumption relying on imports while EU catches were decreasing (especially those of the French fleet). After three years of increasing, the self-sufficiency for hake declined from 40% in 2019 to 38% in 2020, due to decreased catches by the Spanish fleet.

CHART 5
SELF-SUFFICIENCY RATE FOR MOST CONSUMED GROUNDFISH
Source: EUMOFA, based on EUROSTAT data (online data codes fish_ca_main and DS-575274). Details on the sources used can be found in the Methodological background.



[38] Some species are grouped in a single product, namely: mussel (*Mytilus* spp. + other mussels), tuna (skipjack, yellowfin, albacore, bigeye, bluefin and miscellaneous) and shrimp (warmwater shrimps, coldwater shrimps, deep-water rose shrimps, shrimp *Crangon* spp. and miscellaneous shrimps).
[39] As surimi is made of different species and there are no statistics specifically referring to surimi production, the self-sufficiency rate cannot be calculated for this product.

TUNA

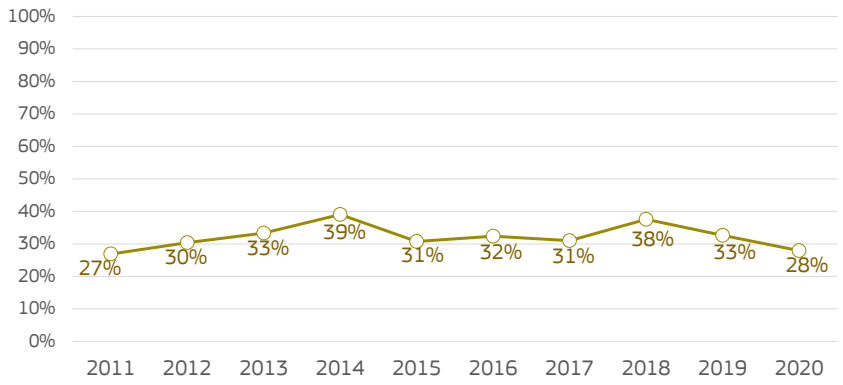
The commodity group "tuna and tuna-like species" includes 97% tuna and 3% swordfish. Overall, the self-sufficiency rate of this category was 29% in 2020, the same as the level of tuna only.

Specifically for tuna, Autonomous Tariff Quotas (ATQs) increased in 2014. This followed the establishment of free trade agreements with major producing countries which contributed to the higher imports. Consequently, due to increased imports of yellowfin and skipjack tuna, the level of self-sufficiency dropped in 2015 and remained almost stable until 2017. In 2018, it rose again – reaching 38% – driven by increased catches of skipjack tuna by the Spanish and French fleets, and also due to reduced imports. However, these catches started a downward trend in 2019 which continued in 2020, causing a new decrease in self-sufficiency.

CHART 6

SELF-SUFFICIENCY RATE FOR TUNA

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274) and FAO data. Details on the sources used can be found in the Methodological background.



SMALL PELAGICS

HERRING, MACKEREL SARDINE

Small pelagics accounted for 30% of the total volume of all fishery and aquaculture products produced in the EU in 2020, reaching 1,23 million tonnes. This is much higher than EU imports of small pelagic species, which totalled just above 763.000 tonnes LWE in the same year, meaning the EU is fully capable of meeting the overall EU demand for these products. Indeed, when looking at the three most consumed species of this group, namely herring, mackerel and sardine, in some years the EU had a self-sufficiency of 100% or higher.

In 2020, herring's self-sufficiency dropped to 79%, a remarkable decline from 93% in 2019. The drop was due to decreased quotas, which resulted in decreased catches.

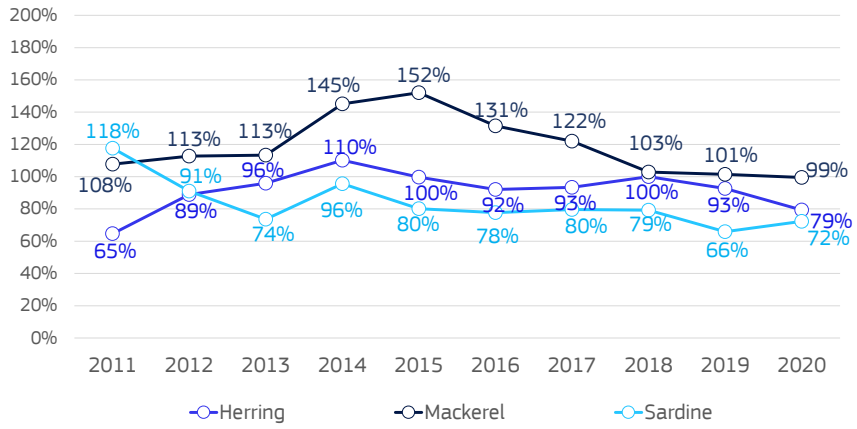
As regards mackerel, the EU was fully capable of meeting the overall EU demand up to 2019, showing self-sufficiency rates above 100% each year. Then, in 2020, the self-sufficiency declined to 99%, just a slight decrease from 2019. That said, it is worth highlighting that catches of mackerel have been experiencing a decreasing trend during the last five years, which has caused a decrease in terms of self-sufficiency.

As for sardine, EU self-sufficiency steadily declined from the 118% peak it reached in 2011. This was due to halving production, mainly in the Netherlands, Lithuania, Portugal, Poland and Spain. However, from 2019 to 2020, the self-sufficiency grew from 66% to 72%. This was linked to an increase in catches by all major producers – Croatia, France, Spain, the Netherlands and Portugal – which offset the decreases in the catches of the Italian and Greek fleets.

CHART 7

SELF-SUFFICIENCY RATE FOR MOST CONSUMED SMALL PELAGICS

Source: EUMOFA, based on EUROSTAT data (online data codes: fish_ca_main and DS-575274). Details on the sources used can be found in the Methodological background.



SALMONIDS

SALMON, TROUT

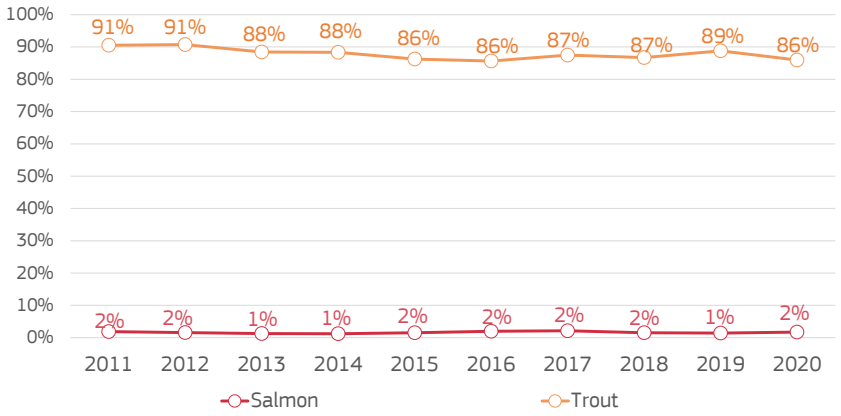
In 2020, it is estimated that only 2% of the salmon consumed in the EU was produced internally. This represented an increase of self-sufficiency compared with 2019, which was made possible by increased farmed production in Ireland.

For trout[40], the EU maintained a good level of self-sufficiency during the 2011-2020 decade. However, the 2020, level was one of the lowest, with its drop to 86% linked to the increased supply from abroad.

CHART 8

SELF-SUFFICIENCY RATE FOR MOST CONSUMED SALMONIDS

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274), FAO, national administrations and FEAP data. Details on the sources used can be found in the Methodological background.



BIVALVES

MUSSEL, CLAM

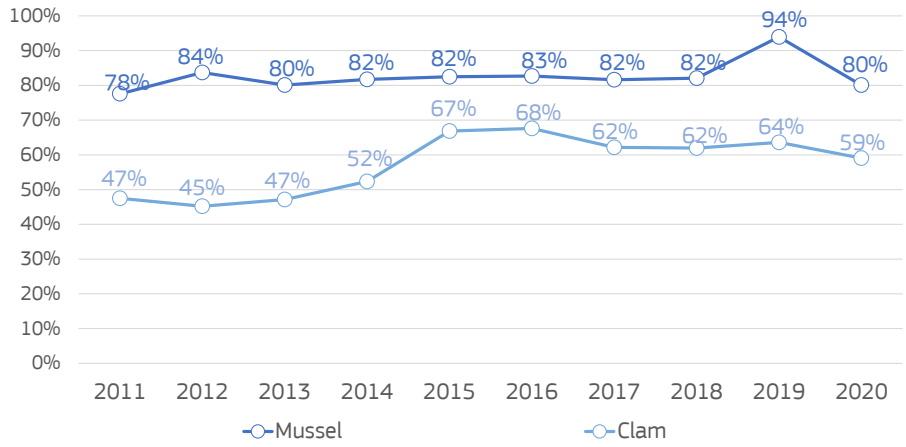
Mussel is one of the few among the EU's most consumed species that has a high level of self-sufficiency. From 2011 to 2018, its level averaged 81%, then it boosted to 94% in 2019, after which it dropped to 80% in 2020. This trend was the reflection of the decline of Spanish farmed production.

The self-sufficiency for clam grew until 2016, when it reached a decade peak of 68%. The following three years, it settled at an average level of 63% due to decreases in the volume of aquaculture production in Italy, its major producer. From 2019 to 2020, despite increased production in Italy from wild fishery, the self-sufficiency declined to 59%, its lowest level in six years.

[40] This consists of freshwater and ocean farmed trout.

CHART 9
SELF-SUFFICIENCY RATE FOR MOST CONSUMED BIVALVES

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274), FAO and national administrations data. Details on the sources used can be found in the Methodological background.



OTHER PRODUCTS OF DIFFERENT COMMODITY GROUPS

SHRIMPS, SQUID, SURIMI

Other highly consumed products in the EU are shrimps (of the group of crustaceans), squid (cephalopods) and surimi (miscellaneous aquatic products).

As concerns surimi, statistics specifically referring to its production do not exist, because it is made of different species – which means its self-sufficiency rate cannot be calculated.

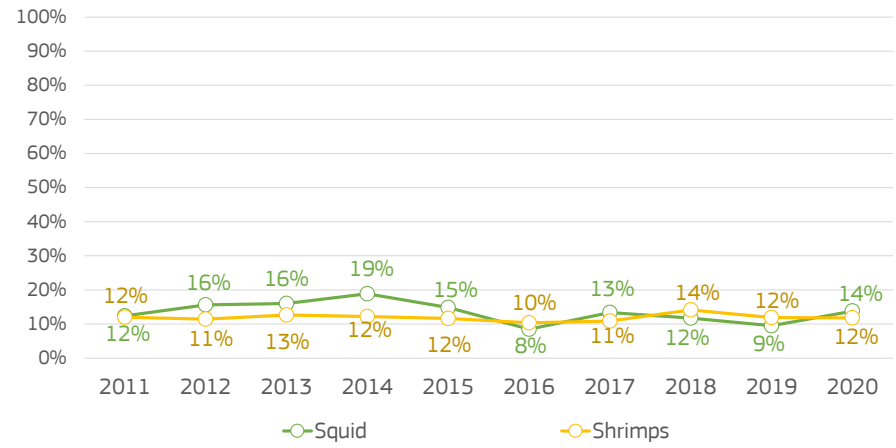
On the other hand, the EU is highly dependent on imports of shrimps and squid.

The self-sufficiency for shrimps averaged 12% in the 10-year period analysed, without showing notable variations. The most consumed shrimp species, which are mainly supplied through imports, are warmwater shrimps and Argentine red shrimp, in the form of frozen or prepared/preserved products.

As for squid, its self-sufficiency of 14% in 2020 represented a significant increase compared with the 9% it had registered back in 2019. The increase was linked to the combined effect of decreased imports and increased Spanish catches of Argentine shortfin squid (*Illex argentinus*).

CHART 10
SELF-SUFFICIENCY RATE FOR OTHER MOST CONSUMED PRODUCTS

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274) and FAO data. Details on the sources used can be found in the Methodological background.



3/ CONSUMPTION

3.1 OVERVIEW FOR TOTAL FISHERY AND AQUACULTURE PRODUCTS

APPARENT CONSUMPTION

With 23,28 kg LWE, in 2020 per capita apparent consumption in the EU reached its lowest amount in ten years.

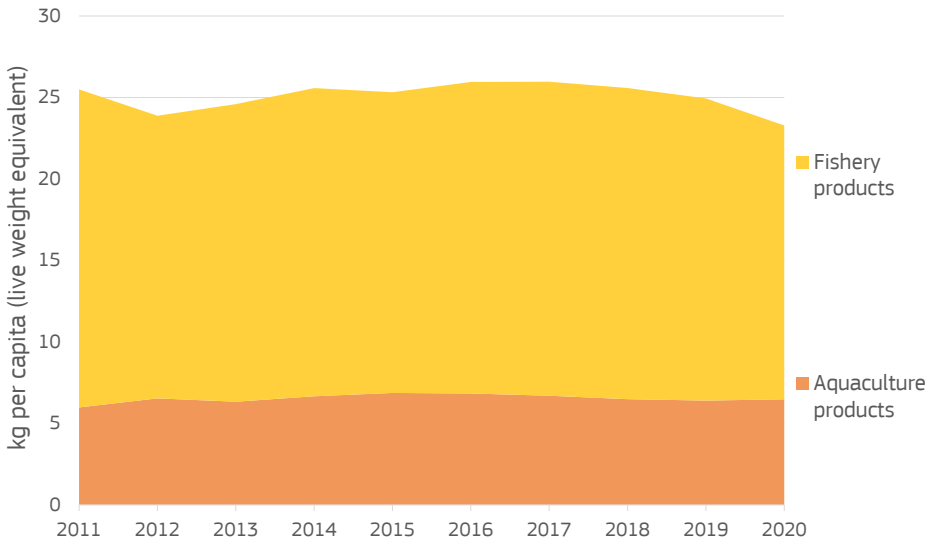
In 2020, apparent consumption[41] of fishery and aquaculture products in the EU[42] dropped to an estimated 10,41 million tonnes LWE, continuing the decreasing trend that began in 2018. Of this, wild products accounted for more than 70% or 7,52 million tonnes LWE, and farmed products for close to 30% or 2,90 million tonnes LWE.

Overall, EU apparent consumption declined by 6% or more than 720.000 tonnes LWE from 2019 to 2020. The decline was mainly driven by a decrease in both wild and farmed production, as well as by a decrease in supplies of fishery and aquaculture products from third countries. All these reductions can be seen as related to the consequences of the COVID-19 pandemic on the sector. These included adverse impacts on logistics at several stages of the supply chain and the international flows of goods, as well as on production activities, in particular fisheries.

The per capita apparent consumption is estimated to have dropped by 1,7 kg LWE from 2019, reaching 23,28 kg LWE, which represented its lowest amount of the decade under analysis. Of this, 16,79 kg LWE were wild products, which saw a 9% drop in apparent consumption from 2019, and 6,49 kg LWE were farmed products which saw a 1% increase.

CHART 11
PER CAPITA APPARENT CONSUMPTION OF FISHERY AND AQUACULTURE PRODUCTS

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274), FAO, national administrations and FEAP data. Details on the sources and on the methodological approach used for assessing the production method of imports and exports and the destination use of catches can be found in the Methodological background.

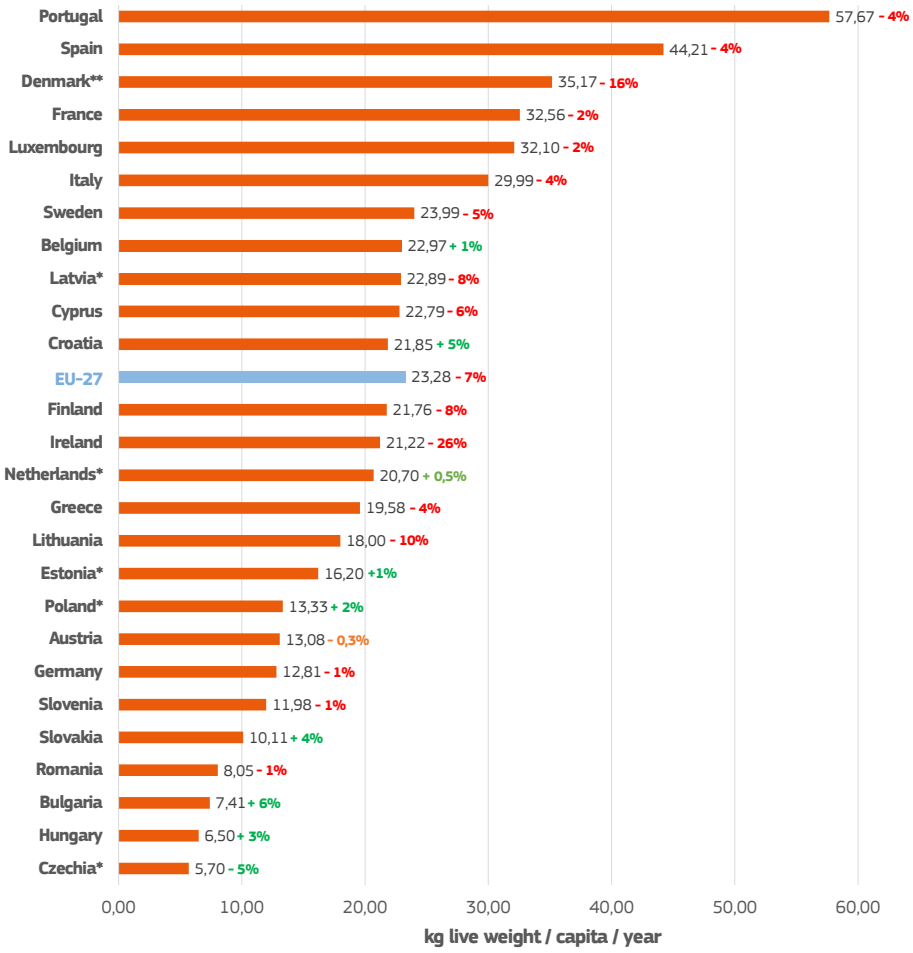


[41] The definition of "apparent consumption" is available in the "Supply balance sheet" section of the Methodological background.
[42] In line with Eurostat's guidelines on the production and dissemination of statistical data by Commission services after the UK withdrawal from the EU, since the most recent reference period is year 2020, UK is excluded from the EU aggregations of each year. In addition, EU data include Croatia since 2013, date of the EU's enlargement to this country.

According to EUMOFA and national estimates, Portugal stands out as the major EU consumer of fishery and aquaculture products[43]. Portugal's standing was confirmed in 2020, although its apparent consumption had decreased from 2019.
In contrast to the negative trend at EU level, a few countries registered slight increases. The highest was a 6% increase estimated for Bulgaria.

CHART 12

PER CAPITA APPARENT CONSUMPTION OF FISHERY AND AQUACULTURE PRODUCTS BY MEMBER STATE IN 2020 AND % VARIATION 2020/2019



Source: EUMOFA estimates.
*Data are provided by the following National sources: CZSO Czech Statistical Office (Czechia), Estonian Institute of Economic Research (Estonia), Latvia University of Life Science and Technology and Ministry of Agriculture of Latvia (Latvia), Dutch Fish Marketing Board (Netherlands) and Statistics Poland (Poland).
**Estimates for Denmark were not confirmed by the National contact point.

Note:
Given the significant relevance of imports of frozen fish likely used directly as fish feed in the Maltese bluefin tuna fattening industry, available data and information for Malta do not allow to produce precise estimates. However, annual per capita apparent consumption can be estimated between 30-40 kg LWE.

[43] It is worth underlining that the methodologies for estimating apparent consumption at EU and Member State levels are different, the first based on data and estimates as described in the Methodological background, the latter also requiring the adjustment of abnormal trends due to the higher impact of stock changes.

TABLE 10

APPARENT CONSUMPTION OF TOP-15 MOST CONSUMED PRODUCTS (2020)

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274) and FAO data. Details on the sources and on the methodological approach used for assessing the production method of imports and exports and the destination use of catches can be found in the Methodological background.

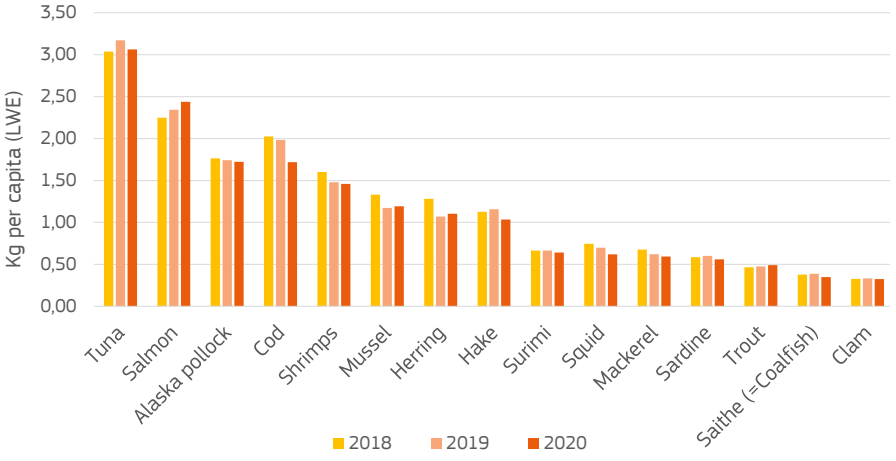
Products	Per capita consumption (kg, LWE)	Consumption evolution 2020/2019	% wild	% farmed
Tuna	3,06	-3%	98,65%	1,35%
Salmon	2,44	+4%	6%	94%
Alaska pollock	1,72	-1%	100%	0%
Cod	1,72	-13%	99,93%	0,07%
Shrimps	1,46	-1%	45,06%	54,94%
Mussel	1,19	+2%	6,21%	93,79%
Herring	1,10	+3%	100%	0%
Hake	1,03	-11%	100%	0%
Surimi	0,64	-3%	100%	0%
Squid	0,62	-11%	100%	0%
Mackerel	0,59	-4%	100%	0%
Sardine	0,56	-7%	100%	0%
Trout	0,49	+3%	1,63%	98,37%
Saithe (=Coalfish)	0,35	-10%	100%	0%
Clam	0,32	-3%	66,82%	33,18%
Other products	5,97	-15%	72,71%	27,29%
Total	**23,28**	**-7%**	**72,18%**	**27,82%**

ANALYSIS BY MAIN SPECIES

CHART 13

APPARENT CONSUMPTION OF TOP-15 MOST CONSUMED PRODUCTS, THREE-YEAR TREND

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274) and FAO data. Details on the sources and on the methodological approach used for assessing the production method of imports and exports and the destination use of catches can be found in the Methodological background.



TUNA

Tuna[44] is by far the most consumed species in the EU. Its apparent consumption averaged 3,10 kg LWE per capita, with a decade peak of 3,17 kg LWE reached in 2019, due to a significant increase of supplies from third countries. Indeed, EU consumption of tuna is largely supported by imports, but there is also internal production, mainly consisting of Spanish and French catches. However, a significant share of these Spanish and French catches is landed abroad close to fishing areas, further processed there and then re-exported. This largely includes canned tuna and, especially skipjack

[44] To be noted, apparent consumption of salmon actually ranks first. However, in this chapter, "tuna" includes several tuna species, so total apparent consumption of "tuna" is higher than that of salmon.

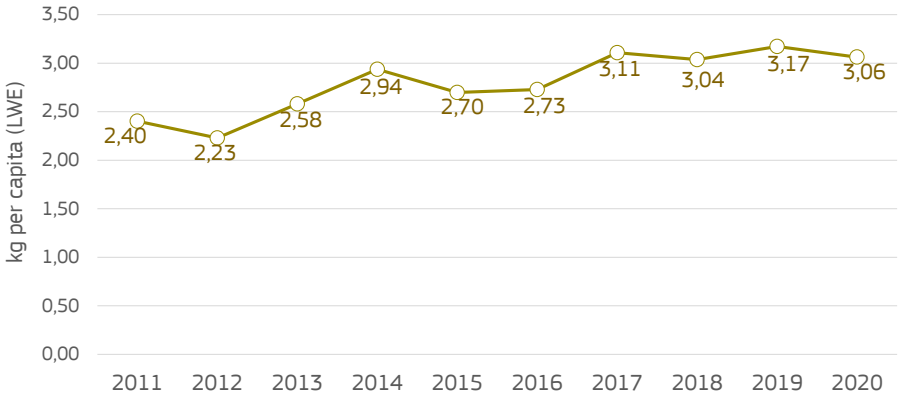
tuna (whose consumption reached 1,64 kg LWE per capita in 2020), and yellowfin tuna (whose consumption reached 930 grams LWE in 2020).

The 3% decrease of apparent consumption per capita from 2019 to 2020 was due to decreased catches.

CHART 14

APPARENT CONSUMPTION OF TUNA

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274) and FAO data. Details on the sources and on the methodological approach used for assessing the production method of imports and exports and the destination use of catches can be found in the Methodological background.



GROUNDFISH

ALASKA POLLOCK, COD, HAKE, SAITHE

Four groundfish species account for more than one fifth of EU apparent consumption of fishery and aquaculture products: Alaska pollock, cod, hake, and saithe (coalfish).

EU cod consumption is mainly supplied by imports. It has been decreasing since its 2016 peak of 2,20 kg LWE per capita, due to the downward trend of both catches and imports in the 2017-2020 period. The apparent consumption reached in 2020, namely 1,72 kg LWE, was the lowest level since 2011.

Decreased catches and imports are also the cause of reduced apparent consumption of hake, as the level it reached in 2020, namely 1,03 kg LWE, was the second lowest in the decade analysed.

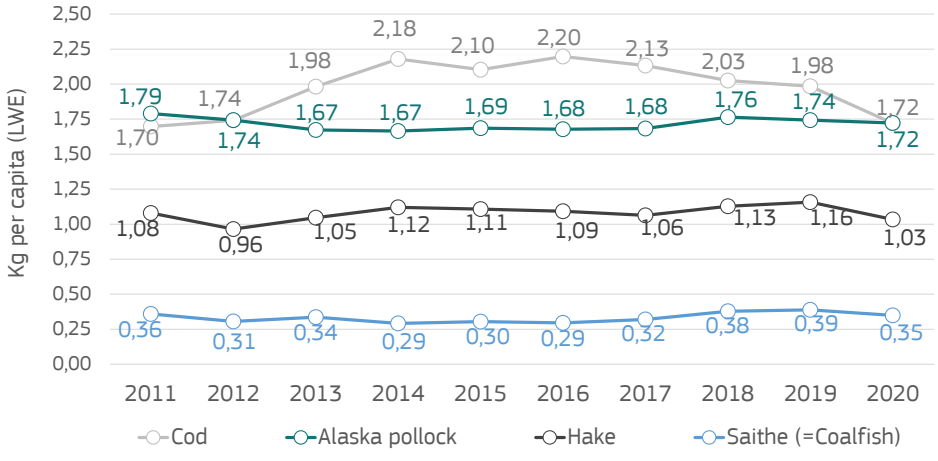
Since the EU does not catch Alaska pollock, apparent consumption is estimated as the total of imports minus exports. During the decade analysed, this remained stable at an average of 1,71 kg LWE.

Apparent consumption of saithe did not show significant variations during 2011-2020. In 2020, it was estimated at close to 350 grams LWE per capita, which was a slight decrease from 2019 that was due to decreased supply from both internal production and imports.

CHART 15

APPARENT CONSUMPTION OF MOST CONSUMED GROUNDFISH

Source: EUMOFA, based on EUROSTAT data (online data codes fish_ca_main and DS-575274). Details on the sources and on the methodological approach used for assessing the production method of imports and exports and the destination use of catches can be found in the Methodological background.



SMALL PELAGICS

HERRING, MACKEREL, SARDINE

The availability of small pelagics in the EU market is mostly linked to the evolution of their catches over time.

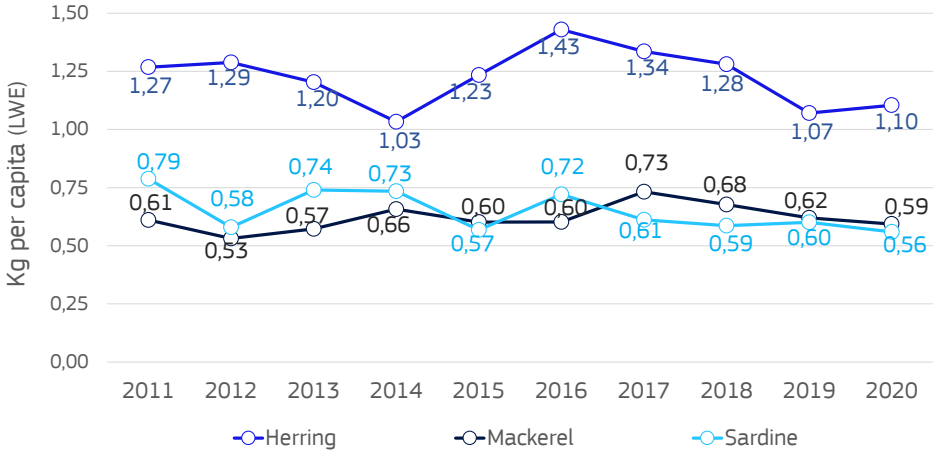
Herring, the most consumed among these species, also has the highest volatility in catches. In 2019 and 2020, its per capita apparent consumption touched two of the lowest levels of the decade analysed, namely 1,07 kg LWE and 1,10 kg LWE. The drop from 2018 to 2019 was due to drops in herring catches. This, in turn, was linked with an overall drop in herring quotas in the North East Atlantic (including the Baltic) that impacted all of its major fishing nations – Denmark, the Netherlands, Sweden, Germany and Poland. On the other hand, apparent consumption reached 1,43 kg LWE per capita in 2016, the highest of the decade analysed, with catches destined for food use[45] reaching peaks in two of the largest producers, namely Denmark and Sweden.

As regards mackerel and sardine, their annual apparent consumption per capita during the decade remained lower than 1 kg LWE. In 2020, both accounted for less than 600 grams LWE per capita.

CHART 16

APPARENT CONSUMPTION OF MOST CONSUMED SMALL PELAGICS

Source: EUMOFA, based on EUROSTAT data (online data codes: fish_ca_main and DS-575274). Details on the sources and on the methodological approach used for assessing the production method of imports and exports and the destination use of catches can be found in the Methodological background.



SALMONIDS

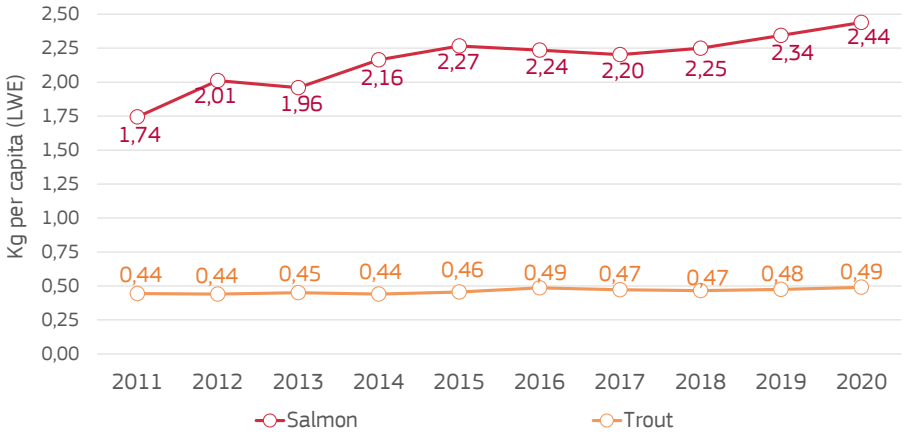
SALMON, TROUT

Apparent consumption of salmon has been on the rise in the last years, primarily supported by imports, as well as by aquaculture production in Ireland. In 2020, each individual person in the EU is estimated to have consumed 2,44 kg LWE of salmon, which was a decade peak. Despite several challenges, this indicates that European producers and processors of salmon managed to maintain a robust supply chain during the first year of the pandemic.

Apparent consumption of trout in the EU remained close to 500 grams LWE per capita each year of the decade analysed. This was in line with an almost flat trend of the volumes farmed in main producing Member States.

[45] Amounts of catches not destined for human consumption were estimated using proxies based on destination use of landings, as available in EUROSTAT.

CHART 17
APPARENT CONSUMPTION OF MOST CONSUMED SALMONIDS
Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274) and FAO data. Details on the sources and on the methodological approach used for assessing the production method of imports and exports and the destination use of catches can be found in the Methodological background.

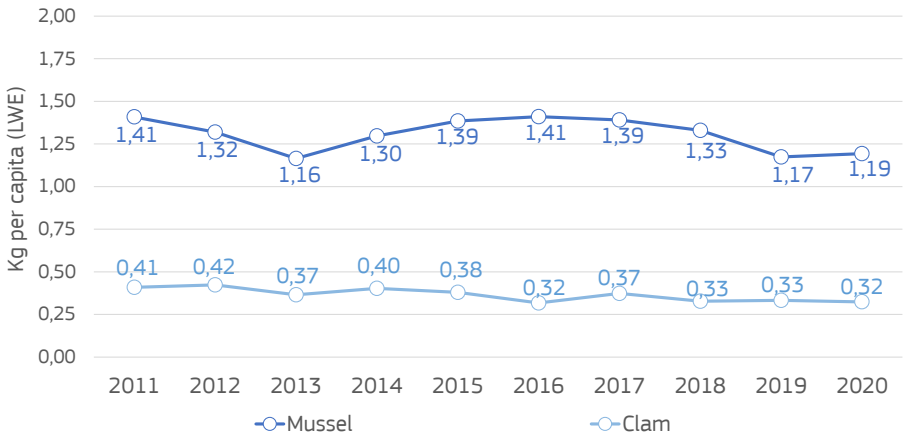


BIVALVES
MUSSEL, CLAM

After salmon, mussel is the main farmed product consumed in the EU, mostly supplied by Spanish production. Indeed, the recovery of total wild and farmed mussels apparent consumption started in 2014, with Spain's aquaculture recovering from a collapse caused by "red tide" or algae blooms in 2013. In recent years – 2019 and 2020 – apparent consumption of mussels was below 1,20 kg LWE per capita, due to a drop in production.

Apparent consumption of clam in the EU remained just above 300 grams LWE per capita during 2018, 2019 and 2020, in line with an almost flat trend of imports and production. To note, it was higher back in 2017, at close to 400 grams LWE, when aquaculture production in Italy was at one of its higher levels of the decade.

CHART 18
APPARENT CONSUMPTION OF MOST CONSUMED BIVALVES
Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274) and FAO data. Details on the sources and on the methodological approach used for assessing the production method of imports and exports and the destination use of catches can be found in the Methodological background.



OTHER PRODUCTS OF DIFFERENT COMMODITY GROUPS
SHRIMPS, SQUID, SURIMI

Shrimps consumption includes equal shares of wild-caught and farmed products. It largely relies on supplies from Ecuador, India, Vietnam, Thailand, Indonesia, Argentina, and Greenland. After a decade peak of 1,60 kg LWE per capita that it reached in 2018, apparent consumption of shrimps in the EU remained below 1,5 kg LWE per capita during 2019 and 2020. The decrease of overall apparent consumption of shrimps from 2018 was largely due to decreased Dutch and German production of *Crangon*. However, for the EU's most imported shrimp species which are thus available for consumption – namely frozen or prepared/preserved warmwater shrimps and Argentine red shrimp – apparent consumption did not show remarkable changes in the same period.

As for squid, it saw a boost in terms of internal production from 2019 to 2020, with Spanish catches of Argentine shortfin squid growing by more than 530%. Yet, due to

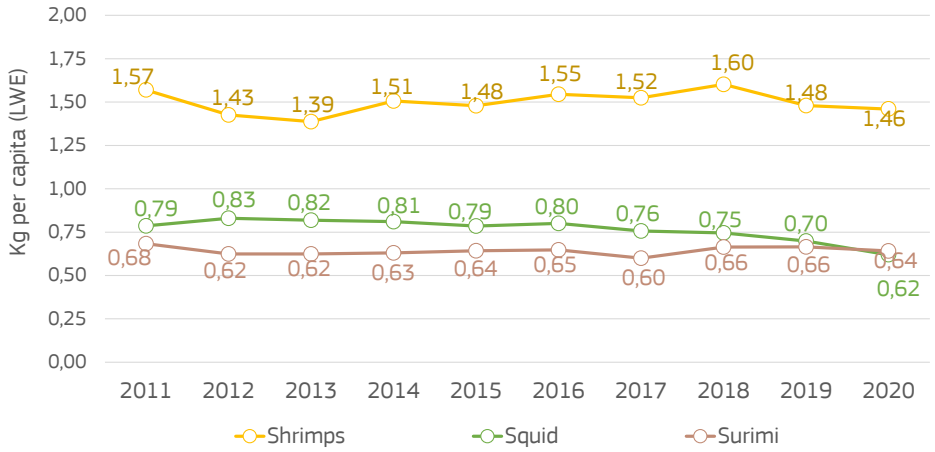
a drop linked with reduced imports, the level of apparent consumption in 2020 was the lowest of the decade under analysis, namely 620 grams LWE.

Finally, for surimi, no statistics concerning its production are available, as it is made of different species. Therefore, apparent consumption is calculated as the result of imports *minus* exports. During 2018, 2019 and 2020, per capita apparent consumption of surimi in the EU was 650 grams LWE on average, largely comprising surimi imported from the United States.

CHART 19

APPARENT CONSUMPTION OF OTHER MOST CONSUMED PRODUCTS

Source: EUMOFA, based on EUROSTAT (online data codes: fish_aq2a, fish_ca_main and DS-575274) and FAO data. Details on the sources and on the methodological approach used for assessing the production method of imports and exports and the destination use of catches can be found in the Methodological background.



HOUSEHOLD EXPENDITURE AND PRICES

Households of all EU countries spent more on fishery and aquaculture products in 2021 than in 2020, which had never occurred from one year to another in the decade analysed

In 2021, household expenditure on fishery and aquaculture products in the EU reached EUR 58,5 billion. While this represented a 7% increase from 2020, it also represented a decade increase of more than 25% in real terms when compared with 2012[46]. This growth continues the upward trend already registered between 2019 and 2020.

The main reason behind households of all EU countries spending more on fishery and aquaculture products in 2021 than in 2020 can be traced to the restrictions of the COVID-19 pandemic, which led to an increase in household consumption. A simultaneous increase in spending in all EU countries from one year to the next had never occurred in the decade analysed. Also, to note, while at EU level the increase was "only" 7%, 10 of the 27 EU countries reported increases of 10% or more, while 6 countries recorded increases lower than 7%.

Italy, which historically is the country with the highest total expenditure on fishery and aquaculture products, recorded the highest increase of total expenditure in absolute terms, as expenditure grew by more than EUR 880 million from 2020 to 2021. In relative terms, the three countries showing the highest expenditure on fish – Italy, Spain and France – all reported a 7% growth. In the case of Spain, the increase in absolute terms was EUR 724 million while that of France was EUR 649 million.

Portugal, historically the largest per capita consumer of fishery and aquaculture products in the EU, saw its per capita expenditure reach EUR 385 in 2021, almost triple the EU average of EUR 131. In Portugal and Luxembourg, per capita expenditure increased by EUR 21 and EUR 17, respectively, representing the highest increases in the EU.

[46] In this report, value and price variations for periods longer than five years are analysed by deflating values using the GDP deflator (base=2015); for shorter periods, nominal value and price variations are analysed.

CHART 20

HOUSEHOLD NOMINAL EXPENDITURE ON FISHERY AND AQUACULTURE PRODUCTS IN 2021 AND % VARIATION 2021/2020 (out-of-home consumption is excluded)

Source: EUROSTAT (online data code: prc_ppp_ind)
Purchasing Power Parities
PPPs – nominal expenditure

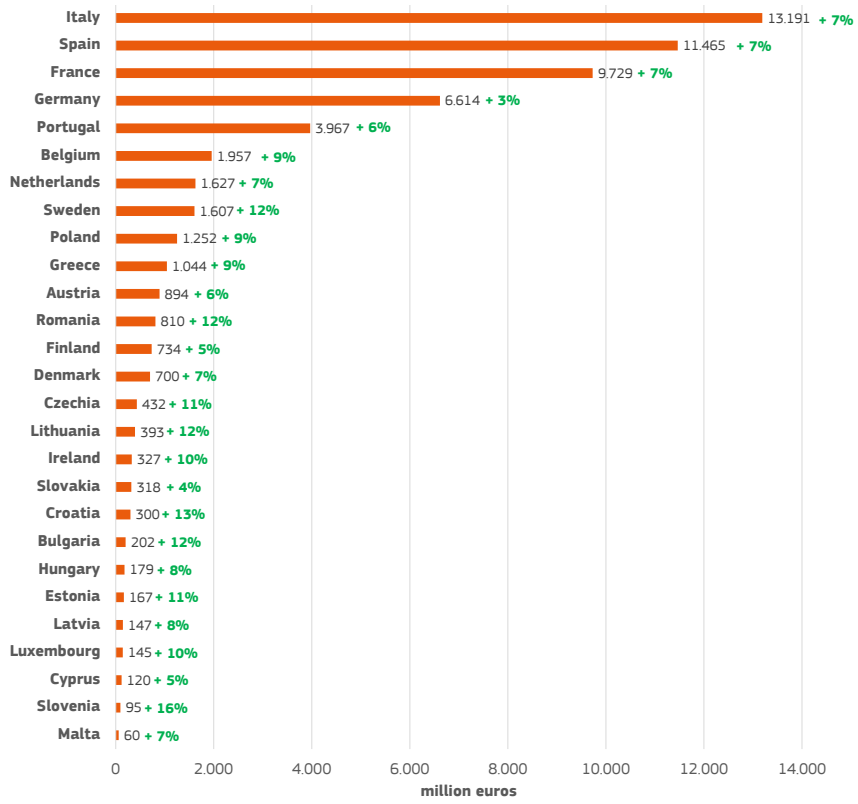
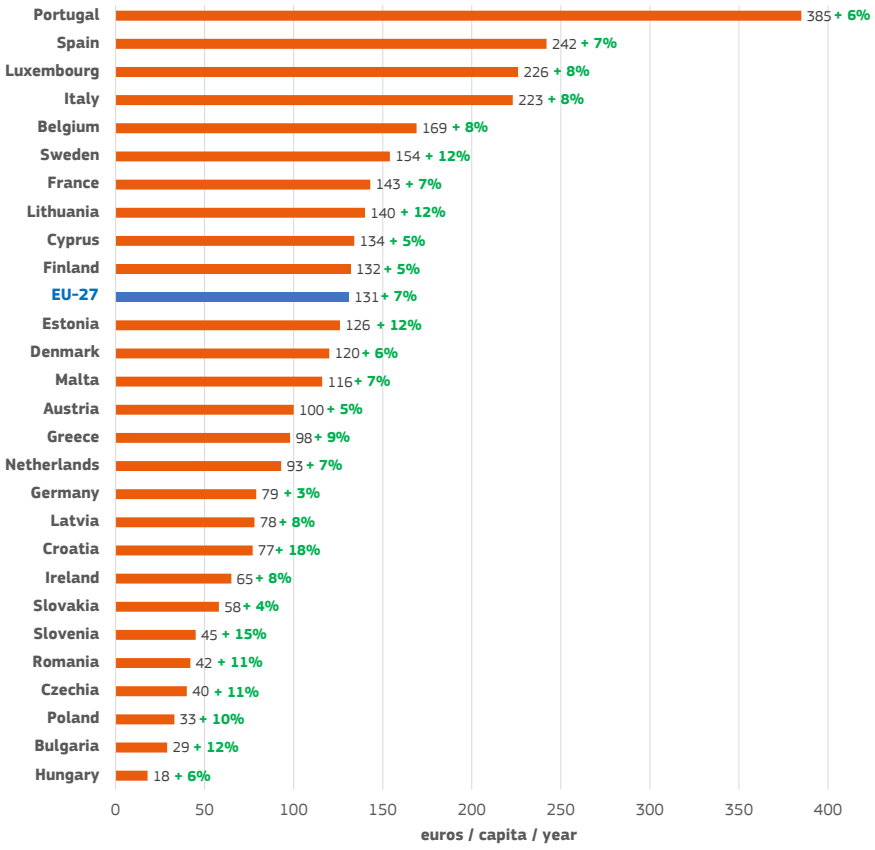


CHART 21

PER CAPITA HOUSEHOLD NOMINAL EXPENDITURE ON FISHERY AND AQUACULTURE PRODUCTS IN 2021 AND % VARIATION 2021/2020 (out-of-home consumption is excluded)

Source: EUROSTAT (online data code: prc_ppp_ind)
Purchasing Power Parities
PPPs – nominal expenditure per inhabitant



FISHERY AND AQUACULTURE PRODUCTS VS. MEAT AND FOOD IN GENERAL

In all EU countries, expenditure on fishery and aquaculture products is historically lower than expenditure for meat. This is also the case when it comes to volumes consumed[47]. One of the reasons behind lower consumption of fish could be that consumer prices of fish have grown much more than meat prices during the last 10 years.

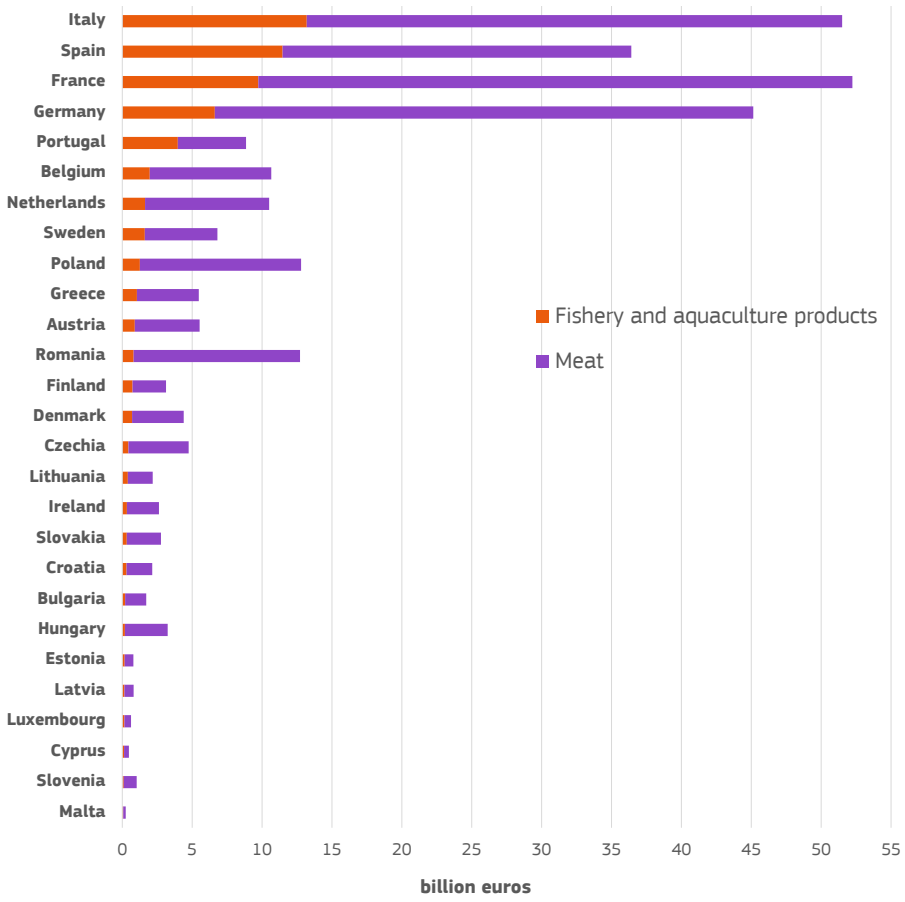
On average, EU households spend around one fourth of the amount spent on meat for purchasing fishery and aquaculture products. In 2021, EU households spent EUR 231 billion on meat and EUR 58,5 billion on fishery and aquaculture products.

Of all the Member States, the ratio between the two categories is most balanced in Portugal. In 2021, of the total amount Portuguese households spent for fish and meat, fish accounted for 45% while meat accounted for 55%. The greatest imbalances were seen in Hungary, which spent 6% for fishery and aquaculture products, and Romania and Czechia, where households spent respectively 6% and 9% of the total for fish. In the four countries with highest consumption of fish – namely Italy, Spain, France and Germany – different habits can be observed. In Italy, the amount households spend on fish is only one fourth the amount they spend on meat. In Spain, the expenditure on fish is less than one third the expenditure on meat. In France, households spend less than one fifth on fish compared with meat and in Germany, it is around one sixth. This is confirmed by 2021 data.

CHART 22

HOUSEHOLD NOMINAL EXPENDITURE ON FISHERY AND AQUACULTURE PRODUCTS VS. MEAT IN THE EU IN 2021 (out-of-home consumption is excluded)

Source: EUROSTAT (online data code: prc_ppp_ind)
Purchasing Power Parities
PPPs – nominal expenditure



[47] This is confirmed by OECD (link: https://stats.oecd.org/viewhtml.aspx?datasetcode=HIGH_AGLINK_2019&lang=en#).

During the 2012-2021-decade, consumer prices of fishery and aquaculture products increased an average of 2,1% per year, a higher growth rate than the 1,5% recorded for the prices of meat and of all food commodities in general. This means that fish prices grew 30% more than meat prices and prices of food in general over the same period.

Average fish prices began to grow significantly in 2016, and by 2021, they were 20% higher than in 2012 in real terms. This was in line with increased prices of imported products, as the EU demand for fishery and aquaculture products is primarily met through imports. The prices of meat and food also grew during the same period, but at much lower rates.

It is also interesting to note that from 2020 to 2021, expenditure on fishery and aquaculture products grew by a remarkable 7%, which was much higher than the 1,5% inflation of prices for fishery and aquaculture products observed in the same period. This could suggest that the 2020–2021 expenditure increase was not just a result of inflation, and that EU households have indeed spent more money for fish products. This also was likely due to COVID-19 restrictions that led to increased household expenditure at the expense of out-of-home expenditure. More recent data show that the first five months of 2022 saw a remarkable 5,9% price rise for fishery and aquaculture products, in line with the rise recorded for meat and other food products. This phenomenon could be linked to the steep rise of energy prices and of operating costs in general, which impacted most operators of these sectors.

CHART 23
CONSUMER PRICES INDICES (2015=100)
Source: EUROSTAT (online data code: prc_fsc_idx)
Harmonised Index of Consumer Prices HICP.

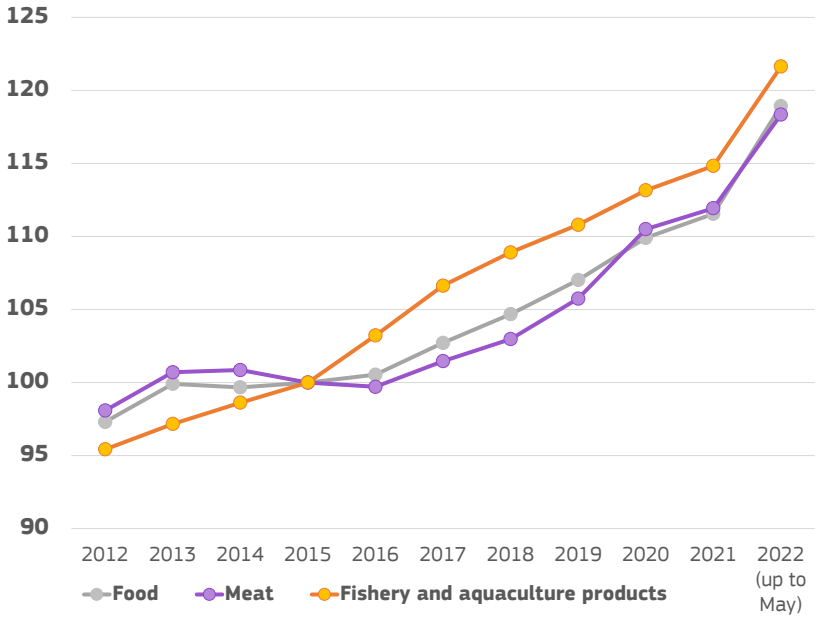


TABLE 11
YEARLY EVOLUTION OF CONSUMER PRICES (2015=100)
SOURCE: EUROSTAT (ONLINE DATA CODE: PRC_FSC_IDX)
HARMONISED INDEX OF CONSUMER PRICES HICP.

Sector	2017	2018	2019	2020	2021	2022 (up to May)	2021/2017
Food	+1,9%	+2,2%	+2,7%	+1,5%	+1,5%	+6,6%	**+8,6%**
Meat	+1,5%	+2,7%	+4,5%	+1,3%	+1,3%	+5,7%	**+10,3%**
Fishery and aquaculture products	+2,1%	+1,7%	+2,1%	+1,5%	+1,5%	+5,9%	**+7,7%**

RELEVANCE BY PRESERVATION STATE

TABLE 12
ITEM WEIGHTS OF EU HOUSEHOLD EXPENDITURE ON "TOTAL GOODS AND SERVICES"
Source: EUROSTAT (online data code: prc_hicp_inw)
Harmonised Index of Consumer Prices HICP.

Category	2020	2021
FOOD (Meat + FAPs + Other food)	14,6%	16,4%
Meat	3,5%	3,9%
Fishery and aquaculture products	0,9%	1,0%
Fresh or chilled	*48%*	*48%*
Frozen	*20%*	*20%*
Dried, smoked or salted	*10%*	*10%*
Other preserved or processed and preparations	*22%*	*22%*
Other food	10,2%	11,5%
OTHER GOODS AND SERVICES	85,4%	83,6%
TOTAL GOODS AND SERVICES	100%	100%

With regard to statistics concerning household expenditure for fishery and aquaculture products, Eurostat provides *"shares of the total household final monetary consumption expenditure"*[48] for four preservation states, which are listed in Table 12.

Of all goods and services purchased by EU households, fishery and aquaculture products cover less than 1%, which is much lower than the 3,9% share of meat.

However, from 2020 to 2021, the share of expenditure on fishery and aquaculture products increased by 10%, as did that of meat. This means they both contributed to an increase in the share of spending on food in general, but the main drivers are to be found in other food commodities, whose share of total expenditure grew 14% from 2020 to 2021.

Looking at country level, the most significant changes were in Cyprus and Ireland. In Cyprus, the share of fishery and aquaculture products grew by 58% and in Ireland by 38%, due to an increase in the share of consumption of fishery and aquaculture products of all preservation categories in total goods and services. In Hungary, there was an overall increase of 26% in the share of expenditure on fishery and aquaculture products, due to a 71% boost in the frozen fish category. Portugal, which has the highest per capita expenditure on fishery and aquaculture products in the EU, saw its share increase 9%, largely due to a 27% increase recorded for fresh and chilled seafood.

[48] Metadata are available at https://ec.europa.eu/eurostat/cache/metadata/en/prc_hicp_esms.htm.

3.2 HOUSEHOLD CONSUMPTION OF FRESH FISHERY AND AQUACULTURE PRODUCTS

OVERVIEW

This chapter analyses the household consumption[49] of fresh fishery and aquaculture products for 11 EU Member States, namely Spain, Italy, France, Germany, Portugal, Poland, Netherlands, Denmark, Ireland, Sweden and Hungary. They are ranked according to the highest volumes consumed in 2021[50]. This ranking has remained stable over the last five years.

To be noted, it can be assumed that these 11 countries are among the most important in the EU in terms of fish consumption. In 2021, they accounted for 87% of the total EU household expenditure on fishery and aquaculture products[51].

In 2021, household consumption of fresh fishery and aquaculture products reached 1,43 million tonnes for a value of EUR 14,7 billion.

In 2021, household consumption in these 11 countries totalled 1,43 million tonnes, which corresponded to a 23.587 tonne or 1,6% decrease from the previous year, a turnaround from two years of growth which had seen increases of 0,7% from 2018 to 2019 and 4,3% from 2019 to 2020. The more significant increase in 2020 and the relative drop in 2021 may be seen in relation to increased consumption at home during the first waves of the COVID-19 pandemic throughout 2020, when foodservice restrictions were stricter. The countries where consumption decreased the most were Sweden, mainly due to drops in salmon and herring consumption, and Spain, mainly due to reduction of hake and sardine.

In value terms, total household consumption in 2021 was worth EUR 14,7 billion, which was the highest value reached in the five-year period under analysis. The most considerable increases from 2020 to 2021 took place in Italy and Poland: in Italy, the value increase was mainly due to price increases of almost all main species consumed, especially hake, while in Poland, the growth was linked to the remarkable 42% increase in the price of carp.

Salmon was the most consumed species in eight of the countries analysed, namely Denmark, France, Germany, Ireland, Netherlands, Poland, Spain, and Sweden[52]. The top species consumed in other monitored countries are detailed in the following paragraphs.

[49] Data analysed in this chapter originate from representative household panels that record volumes and values of every item purchased. More details can be found in the Methodological background.
[50] For six of these countries (namely Germany, Spain, France, Italy, Netherlands and Portugal), as well as for Austria and Belgium, EUMOFA also collects online shops retail prices of a selection of products. Data can be consulted at https://www.eumofa.eu/online-shop-retail-prices.
[51] EU expenditure data are provided by EUROSTAT. These data are compiled based on a common methodology elaborated within the "EUROSTAT – OECD PPP Programme" (http://www.oecd.org/std/prices-ppp/eurostat-oecdmethodologicalmanualonpurchasingpowerparitiesppps.htm). More details can be found in the Methodological background.
[52] For Hungary, total consumption is monitored without details by species.

TABLE 13

HOUSEHOLD CONSUMPTION OF FRESH FISHERY AND AQUACULTURE PRODUCTS, IN VOLUME (TONNES) AND NOMINAL VALUE (1.000 EUR)

Source: EUMOFA elaboration of Europanel data. Possible discrepancies in totals and % changes are due to rounding.
*2017 data for Germany do not include Alaska pollock and saithe (= coalfish), which are monitored starting from 2018.

Member state	2017		2018		2019		2020		2021		2021 / 2020	
	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume
Spain	4.826.921	629.317	4.644.167	601.267	4.696.180	590.559	5.326.492	645.631	5.156.691	590.616	-3,2%	-8,5%
Italy	3.398.032	336.799	3.370.637	325.465	3.455.738	333.585	3.224.659	308.035	3.548.918	324.426	10,1%	5,3%
France	2.407.543	217.641	2.320.901	208.444	2.375.842	205.174	2.506.854	209.085	2.628.148	221.414	4,8%	5,9%
Germany*	818.243	60.363	869.377	63.493	1.059.602	72.924	1.260.973	83.496	1.237.847	88.744	-1,8%	6,3%
Portugal	380.095	57.837	413.675	65.559	467.115	71.514	532.270	79.091	535.657	75.808	0,6%	-4,2%
Poland	308.378	57.399	294.770	51.667	297.868	48.581	310.118	48.862	344.843	50.186	11,2%	2,7%
Netherlands	487.126	33.396	488.919	32.338	520.569	33.307	604.515	37.608	628.424	38.098	4,0%	1,3%
Denmark	169.169	10.737	183.761	11.465	199.942	12.177	225.936	13.620	238.039	13.819	5,4%	1,5%
Ireland	177.548	12.319	183.805	12.695	194.404	13.186	193.685	12.899	202.957	13.281	4,8%	3,0%
Sweden	132.430	9.135	117.650	8.803	124.172	9.310	153.627	12.385	145.469	11.016	-5,3%	-11,1%
Hungary	26.154	4.839	29.440	5.326	32.635	6.085	34.710	6.316	36.869	6.035	6,2%	-4,5%
Total	**13.131.641**	**1.429.782**	**12.917.103**	**1.386.520**	**13.424.066**	**1.396.402**	**14.373.840**	**1.457.029**	**14.703.862**	**1.433.442**	**2,3%**	**-1,6%**

FOCUS ON THE TOP THREE CONSUMING COUNTRIES

In 2021, Spain, Italy and France accounted for close to 80% of the total volumes and values of fresh fishery and aquaculture products consumed by households in the 11 countries analysed.

SPAIN

Spain alone covered 41% of the total volumes consumed and 35% of the total value of household consumption of fresh products in the 11 countries under analysis. In 2021, Spanish households consumed 590.616 tonnes of fresh fish with a value of EUR 5,16 billion, which represented a drop of 9% in volume and 3% in value from 2020. However, as mentioned, it is important to factor in that 2020 was an exceptionally peak year due to the COVID-19 outbreak.

During the five-year period analysed, the main phenomenon seen was hake's consumption steadily dropping an average of 10% a year while salmon had a steady growth of consumption. In fact, salmon consumption rose higher than hake consumption for the first time in 2021. As for salmon, it showed a remarkable 28% increase from 2019 to 2020. In 2021, consumption totalled 68.449 tonnes, which was a five-year peak, and its price declined by 2% from 2020, to reach an average of 9,77 EUR/kg – one of the lowest prices for fresh salmon surveyed, second only to the low price paid by Portuguese households.

As for hake, its consumption continued registering a 10% annual decrease, dropping to 62.495 tonnes in 2021 while its price, which had been increasing annually since 2017, reached 9,25 EUR/kg, which was 9% higher than 2020. Despite the price increases registered each year of the period under analysis, during the five-year period analysed the volume drops generated annual decreases in terms of total value.

Sardine, Spanish households' third most consumed fresh species, reached a five-year price peak of 6,24 EUR/kg in 2021, which was a significant 20% increase from 2020, against a volume reduction of 12%. The volume of sardine consumption registered 56.463 tonnes, the lowest amount of the last five years.

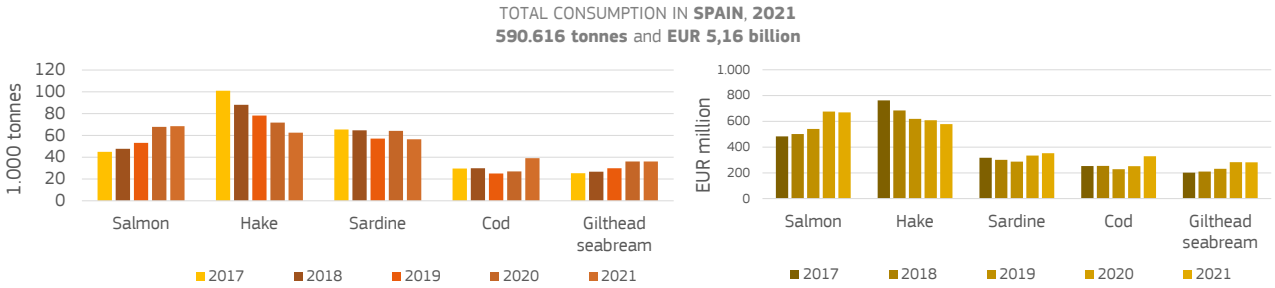
Gilthead seabream's consumption did not see relevant variations from 2020 to 2021 after the significant 21%-growth in volume experienced from 2019 to 2020, while cod registered important increases. With a 46% consumption growth from 2020, the total volume of cod consumption reached a five-year peak of 39.179 tonnes in 2021. Despite the price declining by 10% and reaching 8,40 EUR/kg – the lowest in the period under analysis – the total value of cod consumption still achieved a five-year peak. To note, the price of cod in Spain is around half that found in the other countries surveyed.

One possible explanation could be that the fresh cod consumed in Spain is less processed than in other countries.

CHART 24

TOP-FIVE FRESH SPECIES (IN VOLUME AND NOMINAL VALUE) CONSUMED BY HOUSEHOLDS IN SPAIN

Source: EUMOFA elaboration of Europanel data



ITALY

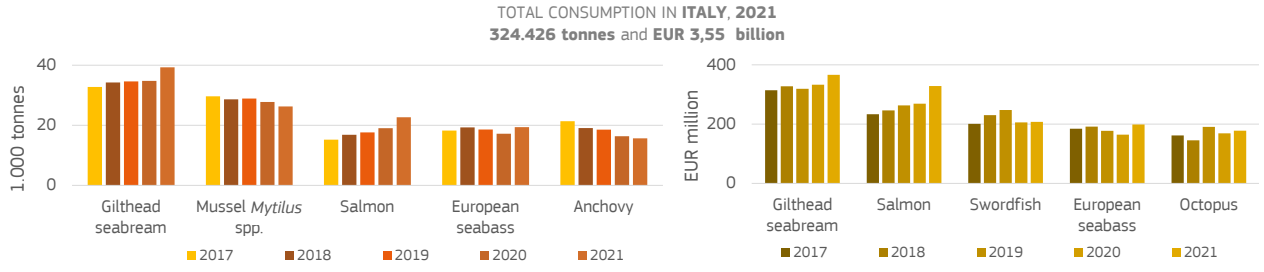
Italy covers almost a quarter of the household consumption of fresh fishery and aquaculture products recorded by the surveyed countries, both in volume and value terms. The development of household consumption in Italy was volatile in the five-year period under analysis, registering a decrease from 2017 to 2018, with a recovery in 2019, and then another decrease in 2020. In review, the 2020 decrease was linked to a reduced supply as logistic and transport issues due to the COVID-19 restrictions impacted products with short shelf lives, such as fresh fish.

In 2021, consumption grew again, increasing 5% from 2020 and reaching 324.426 tonnes. The increase was largely due to increases in consumption of gilthead seabream and European seabass, with both registering 13% increases compared with 2020. For seabream, the increase was accompanied by a slight 3% price decrease, reaching 9,32 EUR/kg, but the total value achieved a five-year peak at EUR 366 million. For seabass, the price of 10,25 EUR/kg, which was 7% higher than in 2020 and the highest of the period under analysis, contributed to the five-year peak in total value. This was also the highest price of seabass of the surveyed countries. Salmon consumption also recorded a significant growth in volumes consumed, reaching a five-year peak of 22.653 tonnes and a 3% price increase that reached 14,50 EUR/kg.

CHART 25

TOP-FIVE FRESH SPECIES (IN VOLUME AND NOMINAL VALUE) CONSUMED BY HOUSEHOLDS IN ITALY

Source: EUMOFA elaboration of Europanel data



FRANCE

In 2021, consumption in France reached a five-year peak with a growth of 6% in volume and 5% in value compared with the previous year. Salmon was the main species responsible for this growth. After the 27% volume increase registered from 2019 to 2020, salmon's growth continued in 2021 with a 12% increase from the previous year and consumption reaching 34.342 tonnes. Its average price continued to decrease,

dropping 3% from 2020 to 17,40 EUR/kg in 2021, but the total value still achieved a five-year peak at almost EUR 600 million.

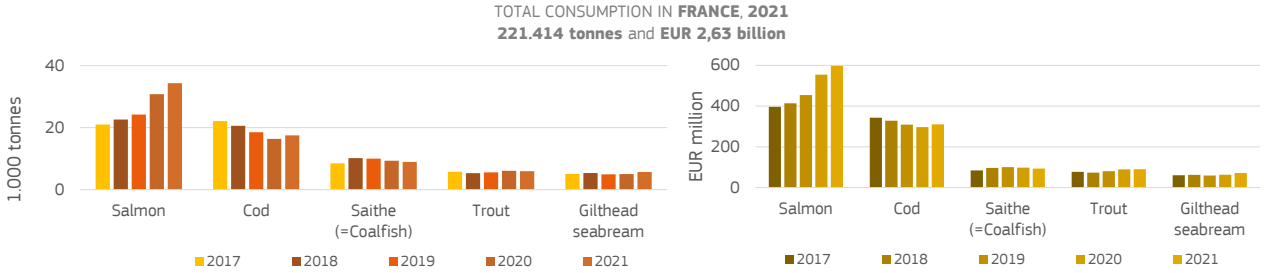
Cod, the second most consumed species in France, saw its consumption recover in 2021 after three years of decline, with its volume increasing by 17.532 tonnes or 7% from 2020. Its average price decreased 2% to 17,70 EUR/kg, yet the total value of consumption increased by 5%.

Consumption of other major species in France did not register significant variations in the period under analysis.

CHART 26

TOP-FIVE FRESH SPECIES (IN VOLUME AND NOMINAL VALUE) CONSUMED BY HOUSEHOLDS IN FRANCE

Source: EUMOFA elaboration of Europanel data



MAIN TRENDS IN OTHER COUNTRIES

GERMANY

Consumption in Germany followed an upward trend during the five years analysed. From 2020 to 2021, it rose by 6% to reach 88.744 tonnes, largely driven by increased consumption of trout, salmon and herring.

For trout and salmon, the volumes consumed in 2021 were five-year peaks, with trout reaching 7.221 tonnes which was a 16% increase from 2020, and salmon reaching 27.792 tonnes which was a 2% increase. As for price, both recorded a 5% price decrease from 2020, with trout dropping to 12,21 EUR/kg and salmon to 16,03 EUR/kg. For salmon, this was also the lowest price registered in the period. Herring's consumption grew by 26% from 2020, reaching 2.435 tonnes, which was lower than the five-year peak it had reached back in 2017. The price decreased by 2%, reaching 10,25 EUR/kg.

PORTUGAL

After three years of growth, consumption in Portugal declined in 2021, registering a 4% decrease from 2020 and reaching 75.808 tonnes. This was largely linked to drops in consumption of mackerel, hake and European seabass, which all recorded their lowest levels of the period under analysis. Mackerel consumption in 2021 was less than 6.180 tonnes, signifying an 18% drop from 2020, while its price grew by 11% to reach 3,56 EUR/kg. Hake saw a 14% drop, as volumes consumed finished below 5.000 tonnes. However, its price rose to 6,87 EUR/kg, which was 3% higher than in 2020. Seabass consumption dropped 11% to reach 5.580 tonnes but sold at an average price of 7,42 EUR/kg which was an 11% increase.

Although octopus consumption plummeted 18% to 3.081 tonnes, it was in line with the average consumption during 2017-2018-2019. Its 2021 price of 10,06 EUR/kg was 7% higher than the previous year.

On the other hand, gilthead seabream, which is by far the main species consumed in the country, grew by 8% from 2020 to 2021, and reached its five-year peak at

11.617 tonnes. Its price, 6,24 EUR/kg, remained almost stable with only a 1% increase.

POLAND

From 2020 to 2021, all major fresh species consumed by Polish households, with the exception of carp, saw consumption increases, which led to an overall increased consumption of 3% in volume and 11% in value. The drop for carp was particularly heavy, as consumption plummeted by 21% to 5.491 tonnes – the lowest amount of the period analysed and half the amount registered five years before. This was against a remarkable 42% increase in terms of price However, the other main species, namely salmon, mackerel and trout, registered increased consumption. Salmon had the highest increase, with its volume rising 16% and reaching 11.808 tonnes, while its average price of 11,65 EUR/kg represented a 2% increase.

NETHERLANDS

Consumption in the Netherlands totalled 38.098 tonnes in 2021, finishing slightly higher than in 2020 and recording a five-year peak. The situation at species level was diversified. Looking at the major species, salmon consumption reached a five-year peak of 11.421 tonnes for a 7% growth. Others included cod, with consumption of 3.216 tonnes for an 11% increase, and mackerel with 2.606 tonnes for a 12% growth. For salmon and mackerel, this corresponded to price decreases of 2% from 2020, ending at 21,29 EUR/kg and 11,37 EUR/kg respectively, while the price of cod reached 17,43 EUR/kg which was a 4% increase. On the other hand, mussels and herring registered the lowest consumption of the five-year period analysed. For mussels, this was a 13% drop from 2020 to 4.193 tonnes, and for herring, it was a 15% drop to 3.188 tonnes. Their prices increased by 5% and 8%, respectively, from 2020, with mussels ending at 4,29 EUR/kg and herring at 16,43 EUR/kg.

DENMARK

Danish household consumption of fresh fishery and aquaculture products is dominated by salmon, which covers close to 40% of the total. In 2021, it totalled more than 5.000 tonnes, which was a five-year peak and a 5% increase from 2020 that generated the overall increased consumption in the country. To note, the price of salmon in Denmark is the highest of the countries surveyed, namely 23,29 EUR/kg in 2021, almost unchanged compared with the previous year. The second major species consumed, flounder, recorded an 18% drop from 2020, with consumption ending at 1.122 tonnes, but a 5% increase in term of price, which grew to an average of 16,40 EUR/kg.

IRELAND

With a 3% increase from 2020, the total household consumption of fresh fishery and aquaculture products in Ireland achieved a five-year peak of 13.281 tonnes in 2021. The increase was linked to the most important consumed and farmed species in the country, namely salmon, which increased 5% from 2020 and reached 6.461 tonnes. Its 2021 price of 17,14 EUR/kg was a 2% drop from 2020.

SWEDEN

Sweden, together with Spain, were the only countries analysed that recorded drop in both volumes (-11%) and value (-5%) of household consumption of fresh fishery and aquaculture products from 2020 to 2021. Also in this case, salmon prevailed and led this trend, with an 11% drop in consumption, However, the 7.415 tonnes volumes Sweden recorded in 2021 were much higher than their average during the four-year period from 2017 to 2020. Its price, which averaged 10,92 EUR/kg in 2021, was only 1% lower than in 2020.

HUNGARY

After the increase registered in 2020, household consumption of fresh fishery and aquaculture products[53] in Hungary decreased by 4% and reached 6.035 tonnes. In value terms, it reached a five-year peak of EUR 37 million, which corresponded to a 6% increase from 2020.

3.3 RETAIL SALES AND OUT-OF-HOME CONSUMPTION

The fishery and aquaculture industry supplies fish and seafood to consumers through different sale channels: retail, which mostly includes fishmongers and large-scale retailers (LSRs); foodservice, which includes catering, restaurants and take-away sales; and institutional channels, which include schools, canteens, hospitals and prisons. Foodservice and institutional channels are referred to as "out-of-home consumption"[54].

This section of "The EU fish Market" analyses retail sales and out-of-home consumption of unprocessed[55] fishery and aquaculture products in the five highest consuming EU countries – Germany, Spain, France, Italy, Poland[56] – and in the UK. In addition, it analyses the out-of-home consumption of processed[57] products through the foodservices of all EU countries.

UNPROCESSED PRODUCTS: SALES BY CHANNEL

Total sales of unprocessed products in in five of the six countries surveyed through all channels under analysis – retail + foodservice + institutional channels – showed slight recovery in 2021 from the drop observed in 2020, when lower foodservices sales were registered during the first waves of COVID-19 pandemic. Germany, the only exception, reported a 1% decrease,

Total sales in Spain are the highest among the surveyed countries. In 2021, they reached almost 998.000 tonnes. Although this was a 2% increase, it remained below its annual average in the pre-pandemic period.

Italy followed at a distance, increasing 1% and reaching close to 509.000 tonnes. Germany and France came next with each reaching almost 352.000 tonnes, which compared to 2020, represented a 1% decrease for Germany and a 6% increase for France from 2020. In Poland, total sales increased 1%, amounting to just above 341.200 tonnes. Total sales of unprocessed products in each of these five EU countries are much higher than those in the UK which, in 2021, dropped to around 187.500 tonnes, an amount close to the decade low it recorded in 2020.

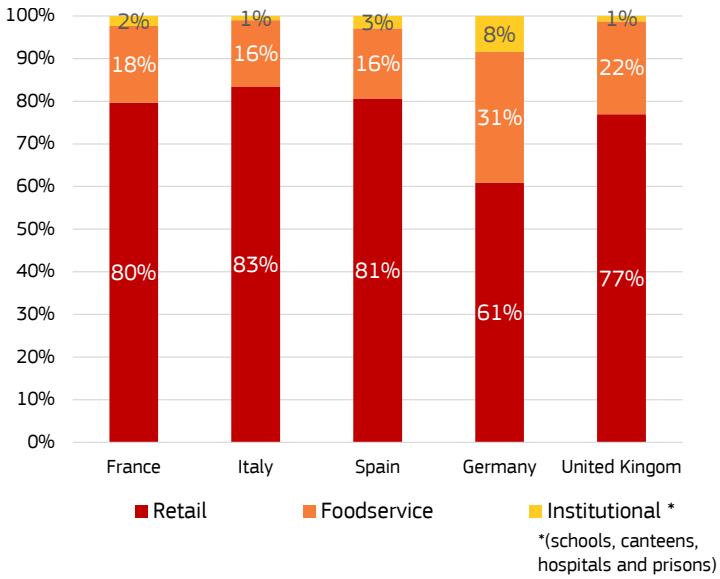
Retail is the main sales channel for unprocessed fishery and aquaculture products, while when it comes to out-of-home consumption plus take-away sales, as one can expect, the foodservice (catering + restaurants + take-away) covers much larger shares than institutional channels. During 2020, due to the COVID-19 pandemic and lockdown measures implemented by national governments, the share of retail sales of unprocessed products had increased significantly compared with 2019 at the expense of foodservice. In 2021, along with gradual re-openings, the share of sales through the foodservice increased again, especially in Germany.

[53] For Hungary, total consumption is monitored without details by species. According to EUMOFA estimates on "apparent consumption", carp is by far the main species consumed in the country.
[54] Out-of-home consumption data are collected from Euromonitor international (https://www.euromonitor.com/). For more details, see the Methodological background.
[55] Unprocessed products are defined as the aggregation of fresh, chilled and frozen finfish, crustaceans, molluscs and cephalopods, packaged and unpackaged. For more details, see the Methodological background.
[56] For Poland, no detail is available in terms of sale channel.
[57] Processed products are defined as the aggregation of shelf-stable, chilled processed and frozen finfish, crustaceans, molluscs and cephalopods. For more details, see the Methodological background.

CHART 27

SALES OF UNPROCESSED FISHERY AND AQUACULTURE PRODUCTS BY CHANNEL IN 2021 (% OF TOTAL VOLUME)

Source: Euromonitor International, Fresh Food, 2022

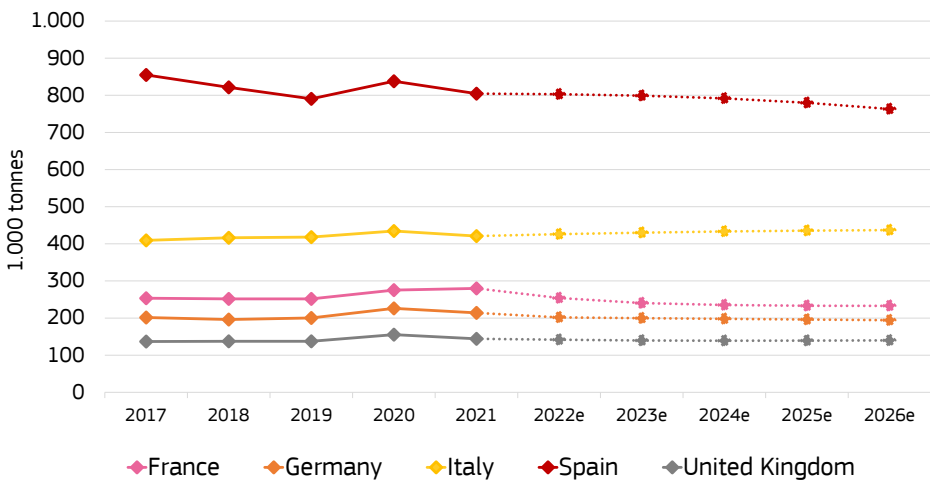


Considering the evolution of retail sales in particular, Chart 28 shows they were back to pre-pandemic levels in 2021, after the increases observed from 2019 to 2020. This was the case for all five countries surveyed except France, where sales continued to increase in 2021 (+2% from 2020). However, according to Euromonitor estimates[58], retail sales in France will follow a negative trend for the next five years. Italy is indeed expected to be the only one among surveyed countries where retail sales will continue to grow, reaching a peak of more than 437.000 tonnes in 2026, while others are expected to report decreases or flat trends. However, the expected growth is not particularly outstanding – even for Italy.

CHART 28

RETAIL SALES OF UNPROCESSED FISHERY AND AQUACULTURE PRODUCTS

Source: Euromonitor International, Fresh Food, 2022

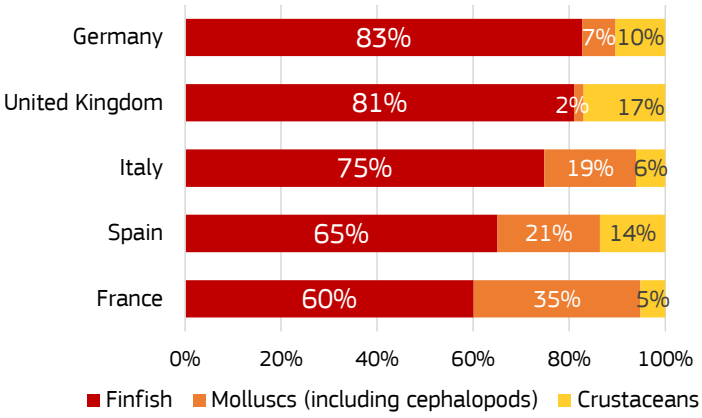


Finfish have a pivotal role in the retail channel of all countries surveyed, followed at a distance by crustaceans and by molluscs including cephalopods. The mollusc products play a more notable role in the southern Member States: cephalopods and mussels in Spain, oysters and mussels in France, and clams, mussels, and cephalopods in Italy. Crustaceans on the other hand cover relatively low shares.

[58] Euromonitor International blends statistical modelling with local market observations and judgment-based predictions. Euromonitor analysts firstly identify factors driving the growth in the past: both hard/macro drivers (demographics, GDP, taxation, inflation, population etc.) and soft drivers (category growth trends, product life cycle, consumer lifestyles, price, manufacturer perspective, weather, regulation etc.). Combined with their knowledge of the market, Euromonitor then speaks to the industry players about these factors along with gauging the potential for new factors to arise. Finally, the analysts further gather information about projected sales of major players in the next five years and/or projected forecasts of industry growth, and begin to generate a consensus estimate of industry growth in the forecast period.

From 2020 to 2021, retail sales decreased for each of these categories in all countries surveyed except France, where finfish' sales rose from almost 164.500 tonnes to more than 168.000 tonnes, molluscs' sales rose from circa 96.800 tonnes to more than 97.000 tonnes, and crustaceans' sales rose from just above 14.000 tonnes to more than 14.500 tonnes.

CHART 29
UNPROCESSED FISHERY AND AQUACULTURE PRODUCTS SOLD THROUGH THE RETAIL CHANNEL IN 2021, SHARES OF TOTAL VOLUME
Source: Euromonitor International, Fresh Food, 2022

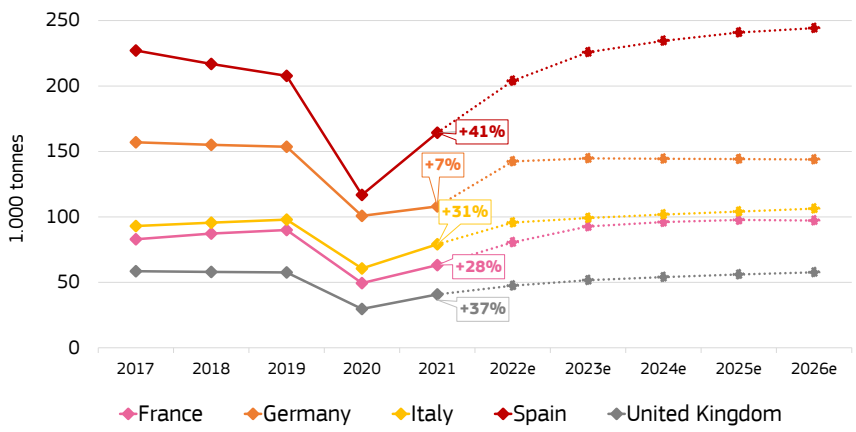


CONSUMPTION THROUGH THE FOODSERVICE

The effects of the COVID-19 pandemic are quite apparent when looking at the annual evolution of out-of-home consumption.

When it comes to unprocessed products, all countries analysed saw dramatic drops in sales through catering and restaurants from 2019 to 2020, with most of them seeing these sales halving. The period of recovery which started in 2021 is expected to continue for the next couple of years, and then to stabilise during 2024-2026.

CHART 30
CONSUMPTION OF UNPROCESSED FISHERY AND AQUACULTURE PRODUCTS THROUGH THE FOODSERVICE. % VARIATIONS ARE FOR 2021 VS. 2020
Source: Euromonitor International, Fresh Food, 2022



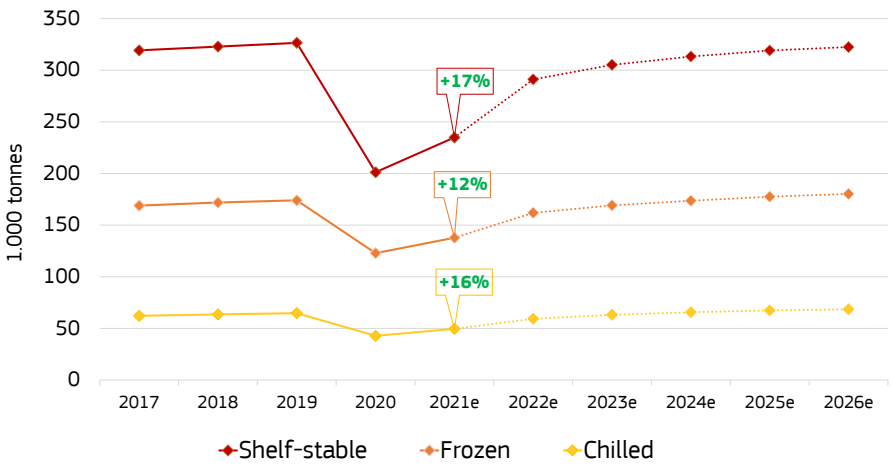
As regards processed products, a more complete overview at EU level shows that total sales through the foodservice dropped severely from 2019 to 2020, reporting an overall 35% loss of almost 200.000 tonnes, which registered as dropping from just above 563.000 tonnes to circa 367.000 tonnes. The decreases were more significant in the largest countries, which were also the ones where restaurants closed for longer periods[59]. It particularly affected shelf-stable products[60], which are the main category of products among processed fish and seafood.

[59] For more details, see https://www.ecdc.europa.eu/en/publications-data/download-data-response-measures-covid-19. It should be noted that regulations concerning response measures to COVID-19 evolve rapidly and are heterogeneous. For example, the closure of restaurants might be implemented in different ways depending on the specific situation of each country or even region.

[60] Shelf-stable products include products typically sold in cans, glass jars or aluminium/retort packaging and usually preserved in oil, brine, salt water or with a sauce. Pickled products sold ambient are also included.

In 2021, sales started to recover, increasing by 15% to reach around 422.000 tonnes. Euromonitor estimates that increases will continue for processed products and then stabilise during 2024-2026.

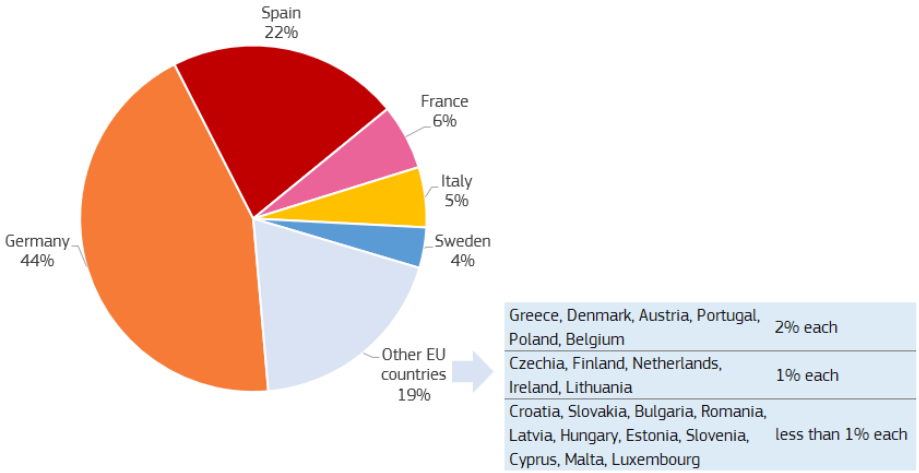
CHART 31
EU[61] CONSUMPTION OF PROCESSED FISHERY AND AQUACULTURE PRODUCTS THROUGH THE FOODSERVICE BY CATEGORY. % VARIATIONS ARE FOR 2021 VS. 2020
Source: Euromonitor International, Packaged Food, 2022



In the EU, consumption of processed fish and seafood through the foodservice is highly concentrated, with more than 80% of the total consumed in five countries, namely Germany, Spain, France, Italy and Sweden. Germany alone accounts for almost half of the total.

The worst drops from 2019 to 2020 – equal or larger than 40% – were observed in France (-51%), Spain and Belgium (-48% each), the Netherlands (-42%), and Portugal and Luxembourg (-40% each). In all these cases, sales strongly recovered in 2021. Only in three countries out of 27, namely in Estonia, Slovenia and Cyprus, sales in 2021 showed no change from 2020 when they had dropped by 13%, 25%, and 29%, respectively. In two countries of the EU's 27, namely Ireland and Croatia, sales were even lower than in 2020: they first registered drops of 19% and 14%, respectively, from 2019 to 2020, then recorded decreases again from 2020 to 2021, of 17% each. In all other EU countries, 2021 represented a year of recovery.

CHART 32
LARGEST EU CONSUMING COUNTRIES OF PROCESSED FISHERY AND AQUACULTURE PRODUCTS THROUGH THE FOODSERVICE IN 2021, SHARES IN VOLUME (% OF TOTAL)
Source: Euromonitor International, Packaged Food, 2022



[61] The UK is excluded from the EU aggregate each year.

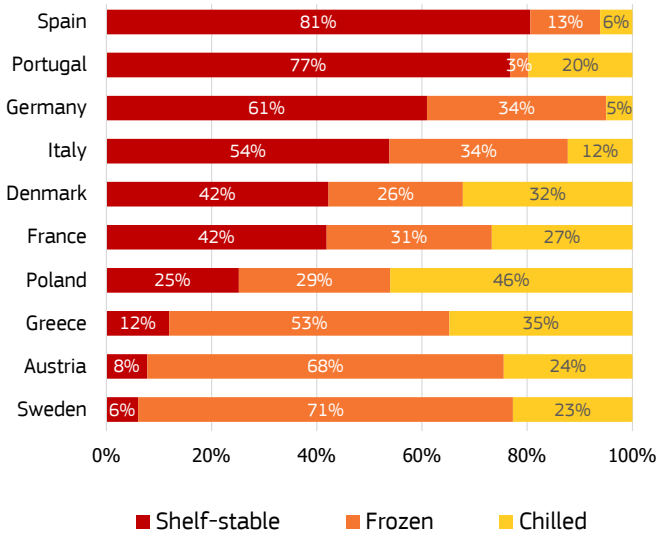
Shelf-stable products have the highest consumption through the foodservice, followed by frozen and chilled products. Nevertheless, shelf-stable products' relative share of total processed fishery and aquaculture products varies a lot among countries. In 2021, it ranged from 5% in Bulgaria, where frozen products are preferred, to 81% in Spain.

Consumption of shelf-stable products through the foodservice is by far the highest in Germany, where it reached 114.000 tonnes in 2021, which was half the EU total. Spain followed at a distance with almost 74.000 tonnes.

These two countries are also the largest in terms of consumption of frozen products, with Germany reaching close to 64.000 tonnes and Spain reaching just above 12.000 tonnes.

When it comes to chilled products, the situation is more diversified: the major EU consumers are Germany (around 7.600 tonnes in 2021), France (almost 7.000 tonnes) and Spain (almost 6.000 tonnes), covering 15%, 14% and 11% of the total, respectively. Sweden follows with circa 3.600 tonnes registered in 2021 (7% of the total).

CHART 33
EU CONSUMPTION OF PROCESSED FISHERY AND AQUACULTURE PRODUCTS THROUGH THE FOODSERVICE IN TOP-10 EU COUNTRIES BY CATEGORY IN 2021, SHARES IN VOLUME (% OF TOTAL)
Source: Euromonitor International, Packaged Food, 2022



3.4 THE ORGANIC SEGMENT

Organic products represent a niche market in the EU. This section focuses on the four EU countries with highest consumption – Germany, Spain, France, Italy. It also includes the UK, due to its leading role in European production of organic salmon and as a major supplier of the EU market.

On average in these five countries, their 2021 total consumption of unprocessed[62] fishery and aquaculture products through retail, foodservice and institutional channels, was 1,7% was organic. More in detail, the coverage was 2,7% in the UK, 2,6% in Germany, 2,5% in France, 0,5% in Italy, and 0,3% in Spain. According to Euromonitor estimates, these shares are going to increase in each of these countries, and by 2026, the average share will be 2%. In absolute terms, Germany and France consume the largest amounts of organic fish and seafood, corresponding to around 9.000 tonnes in 2021, followed by the UK where sales were just above 5.000 tonnes, Spain where they were close to 3.300 tonnes, and Italy where they were less than 2.500 tonnes.

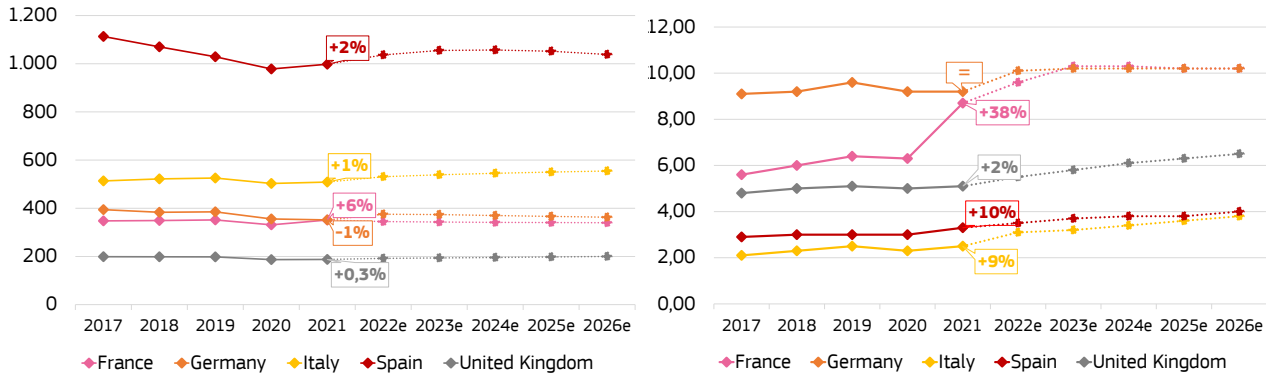
[62] It should be underlined that the most important organic species in these countries are salmon and trout, and to a lesser extent tropical shrimps and mussel, which are for a large share marketed as processed products (such as smoked salmon, smoked trout, cooked shrimp, etc.), so not included in the data analysed in this report.

By comparing the development of consumption of all fishery and aquaculture products with that of organic products in particular, it emerges that for organic products, the average decrease from 2019 to 2020 in the five countries analysed was less significant, and that the recovery recorded from 2020 to 2021 was higher. This indicates that consumption of organic products suffered less from the COVID-19 outbreak than other products, and that the sector proved to be resilient. This was especially true for France, where consumption of organic products grew by a remarkable 38% in 2021.

CHART 34

CONSUMPTION OF UNPROCESSED PRODUCTS THROUGH RETAIL, FOODSERVICE, AND INSTITUTIONAL CHANNELS: TOTAL FISHERY AND AQUACULTURE PRODUCTS (LEFT) AND ORGANIC PRODUCTS (RIGHT).
VOLUMES IN 1.000 TONNES

Source: Euromonitor International, Fresh Food, 2022



On the production side, based on recent statistics from EU and national sources, the total organic aquaculture production[63] at EU-27 level was estimated at 86.180 tonnes[64] in 2020 accounting for 8% of the total EU aquaculture production. Mainly due to a growth in organic mussel production, the EU-27 production increased by more than 60% from 2015, when total organic aquaculture production had reached 46.341 tonnes.

The main species produced in 2020 were mussels (41.936 tonnes) which accounted for more than half of the total organic aquaculture production, followed by salmon (12.870 tonnes), trout (4.590 tonnes), carp (4.590 tonnes), oyster (3.228 tonnes) and European seabass/gilthead seabream (2.750 tonnes of combined production).

The main EU producers of organic aquaculture are Ireland (salmon and mussel), Italy (mussel and finfish), France (oyster, mussel, and trout), the Netherlands (mussel), Spain (mussel and sturgeon), Germany, Denmark and Bulgaria (mussel)[65].

[63] To note, organic fish and seafood is by definition farmed.
[64] Source: Eurostat (online data code: org_aqtspec)
[65] Source: https://www.eumofa.eu/documents/20178/432372/Organic+aquaculture+in+the+EU_final+report_ONLINE.pdf

3.5 EU QUALITY SCHEMES: GEOGRAPHICAL INDICATIONS AND TRADITIONAL SPECIALITIES

The European Union has established quality schemes to protect the names of specific products and promote their unique characteristics. For example, there are two quality schemes that refer to Geographical Indications (GIs) – the Protected Designations of Origin (PDOs) and Protected Geographical Indications (PGIs). A third scheme, the Traditional Specialties Guaranteed (TSG), refers to food products' traditional aspects. As of September, 66 products have been registered under EU quality schemes in the seafood sector in 2022[66]. Of these, 44 are PGIs, 18 are PDOs and 4 are TSGs[67]. The number of GIs largely increased over the last decade, growing from 20 GIs in 2010 to 62 in 2022.
The names registered most recently are:

- TSG *Salată tradițională cu icre de crap* from Romania, which covers traditional aspects of live or filleted carp. It was registered 29 September 2021[68].
- PDO *Vänerlöjrom* from Sweden, which covers the roe of vendace found in Lake Vänern, was registered 17 November 2021[69]. Sweden also had a previous GI registration of vendace roes – the PDO *Kalix Löjrom* – which was registered in 2010.

In 2022, the PGI *Holsteiner Karpfen* (Holstein carp) from Germany was cancelled at the request of the producer group, because its production had dropped from 250 tonnes in 2007 to 65 tonnes in 2018. This high decrease was due to an increase in production costs related to the investments needed to protect the carp from predators such as cormorants, eagles and otters[70].
In 2022, 62 GIs were registered, of which 41 (66%) originated from EU Member States and 21 (34%) from non-EU countries. The applications of the four TSGs originated from EU Member States. The Member States with the largest number of names registered include: Germany, France, Italy, Spain, Hungary and Romania which each register 4 to 6 names. They are followed by Czechia, Finland and Sweden, which have 2 names each. Belgium, Croatia, Greece, Ireland, Latvia, the Netherlands, Poland and Portugal have one name each. As for the non-EU countries, 14 of the registered names come from the UK, followed by China with 5, and Norway and Vietnam with 1 name each.
Among the 66 current denominations, 50 (76%) cover finfish, 14 (21%) cover molluscs, and 2 (3%) cover crustaceans. Of these 66 denominations, 30 (45%) refer to marine species, 26 (39%) to freshwater species, and 9 (14%) to migratory species with life cycles that alternate between the marine environment and fresh water. One GI – the Belgian PGI *Escavèche de Chimay* – includes both marine and freshwater fish. The main species covered by GIs and TSGs include carp with 12 products, notably in Germany and Hungary; mussels with 6 products in France, Italy, Spain, the UK and China; salmon with 5 products, including 4 in the UK and 1 in Ireland; anchovy, oyster and vendace each with 4 products; and trout and tuna, each with 3 products.

[66] Source: EU register eAmbrosia,
[67] PDOs and PGIs also refer to non-EU names.
[68] https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels/geographical-indications-register/details/EUGI00000016995
[69] https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels/geographical-indications-register/details/EUGI00000016084
[70] https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=uriserv%3AOJ.C_.2021.313.01.0016.01.ENG&toc=OJ%3AC%3A2021%3A313%3ATOC

TABLE 14

QUALITY SCHEMES REGARDING FISHERIES AND AQUACULTURE PRODUCTS REGISTERED UP TO SEPTEMBER 2022

Source: based on eAmbrosia, DG AGRI

Country	Protected Designations of Origin (PDO)		Protected Geographical Indications (PGI)		Traditional Specialties Guaranteed (TSG)		TOTAL
	Number	Species concerned	Number	Species concerned	Number	Species concerned	
Germany			6	Carp (4 PGIs), Herring, Trout			**6**
France	1	Mussel	4	Oyster, Anchovy, Scallop, Whelk	1	Mussel	**6**
Italy	3	Mussel, Tench, Anchovy	3	Trout, Arctic char, Anchovy			**6**
Spain	1	Mussel	4	Tuna (mojama) (2 PGIs), Tuna, Mackerel			**5**
Hungary	1	Carp	3	Brown trout, Carp (2 PGIs), Pike-Perch			**4**
Romania			3	Carp, Pontic shad, other Danube delta species (roes)	1	Carp	**4**
Czechia	1	Carp	1	Carp			**2**
Finland	1	Vendace	1	Vendace			**2**
Sweden	2	Vendace (roes)					**2**
Belgium			1	Several species			**1**
Croatia	1	Oyster					**1**
Greece	1	Grey mullet (roes)					**1**
Ireland			1	Salmon			**1**
Latvia			1	Lamprey			**1**
Netherlands					1	Herring	**1**
Poland	1	Carp					**1**
Portugal					1	Cod	**1**
China			5	Freshwater crayfish (2 PGIs), Mussel, Clam, Japanese seabass			**5**
Norway			1	Cod			**1**
United Kingdom	4	Pollan, Mussel, Oyster, Scallop	10	Salmon (4 PGIs), Sea trout, Eel, Sardine, Cod, Haddock, Oyster			**14**
Vietnam	1	Anchovy (sauce)					**1**
TOTAL	**18**		**44**		**4**		**66**

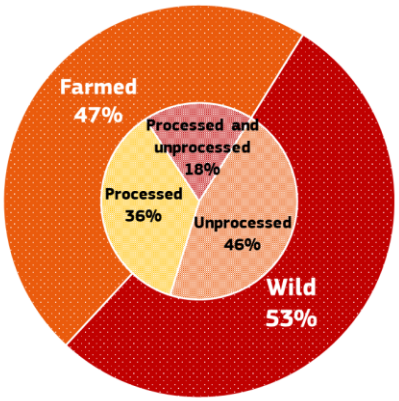
More than half (53%) of the products covered by GIs/TSGs are wild-caught products consisting mainly of anchovy, cod, tuna and vendace. The other 47% are farmed products consisting mainly of carp, shellfish and salmon[71].

About half (45%) of the names refer to unprocessed products, although some of them may be used as ingredients in processed products, such as the Spanish mussel PDO *Mejillón de Galicia* used by the canning industry. More than one-third of the names (36%) cover processed products only. For example, TSG *Hollandse maatjesharing/Hollandse Nieuwe/Holländischer Matjes* is a brined and dry-salted herring registered by Dutch producers. Further, 18% of the names cover both processed and unprocessed products[72], such as the Hungarian PGI *Szegedi tükörponty*, which covers live and filleted carp.

CHART 35

TYPES OF PRODUCTS UNDER EU QUALITY SCHEMES IN THE SEAFOOD SECTOR (SEPTEMBER 2022)

Source: based on eAmbrosia, DG AGRI



	Unprocessed	Processed	Processed and unprocessed	Total
Wild	11	19	5	**35**
Farmed	19	5*	7	**31**
Total	**30**	**24**	**12**	**66**

*The PGIs "London Cure Smoked Salmon" (2017, the United Kingdom), "Escavèche de Chimay" (2021, Belgium) and TSG "Salată tradițională cu icre de crap"(2021) are based on both wild caught and farmed products.

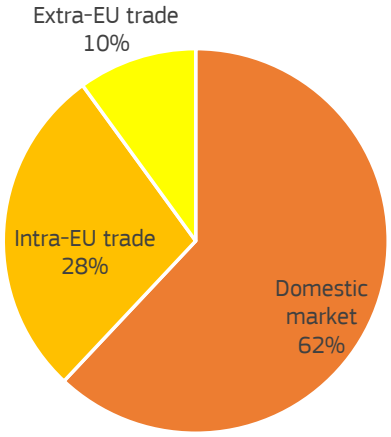
Sales of fish, molluscs and crustaceans under GI/TSG were estimated to reach 246.709 tonnes and EUR 1,42 billion at EU-28 level[73,74] in 2017. This accounted for about 4% of the sales value of the EU-28 seafood sector[75]. The domestic market accounted for 62% of the sales value with EUR 0,88 billion, followed by intra-EU trade which reached 28% for a value of EUR 0,4 billion, and extra-EU trade which reported 10% of the sales value worth EUR 0,14 billion.

[71] This includes three names which cover both farmed and wild fish.
[72] Processed products cover filleted, smoked, dried, salted or preserved products, as well as other types of preparations (for instance fish roes or fish-based products). Unprocessed products may be live, fresh (gutted or not) or frozen.
[73] Source: Study on economic value of EU quality schemes, geographical indications (GIs) and traditional specialties guaranteed (TSGs), AND International for DG AGRI, 2019 - https://op.europa.eu/en/publication-detail/-/publication/a7281794-7ebe-11ea-aea8-01aa75ed71a1 and country fiches - https://op.europa.eu/fr/publication-detail/-/publication/73ad3872-6ce3-11eb-aeb5-01aa75ed71a1/language-fr
[74] This covers the 43 GIs/TSGs registered at EU-28 level before 2017.
[75] Based on EUROSTAT and EUMOFA data, sales value of the fishery and aquaculture sector at EU-28 level can be estimated between EUR 28 billion (processing and preserving activities only) and EUR 40 billion (processing and preserving activities + landings + aquaculture; this is however an overestimate with double counts).

CHART 36

SHARE OF SALES VALUE BY MARKET FOR FISH, MOLLUSCS AND CRUSTACEANS UNDER GI/TSG IN 2017 (EU-28)

Source: Study on economic value of EU quality schemes, geographical indications (GIs), and traditional specialties guaranteed (TSGs), AND International for DG AGRI, 2019



PGIs accounted for 71% of the sales value, followed by TSGs with 22%, and PDOs with 7%. The average economic size of each TSG and PGI, which tends to be higher than the average size of each PDO (respectively EUR 36 million, EUR 32 million and EUR 8 million in 2017).

4/ IMPORT - EXPORT[76]

An overall growth of EU trade flows of fishery and aquaculture products characterised 2021, as it was a period of economic recovery after the 2020 pandemic crisis. From 2020 to 2021, they increased 2% in volume and 9% in value.

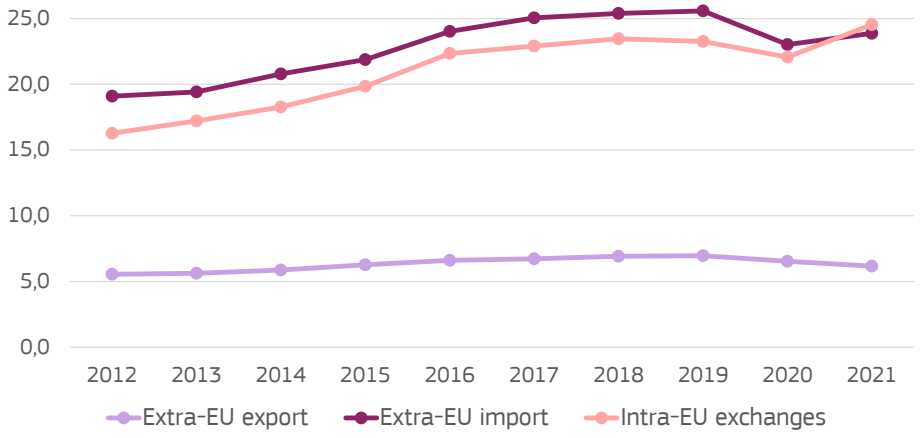
During the 2012–2021 decade, the total value of EU trade flows[77] of fishery and aquaculture products increased at a compound annual growth rate of 3%. This included imports and exports between the EU and the rest of the world, as well as exchanges between EU Member States. The value of the 2021 total trade flows was 33% higher than 10 years before in real terms[78], while they were 2% higher in volume and 9% higher in nominal value than one year before.

Intra-EU exchanges covered 41% of the volume of all fishery and aquaculture products traded both within the EU and with third countries. The extra-EU imports increased by 1% in volume from 2020, and extra-EU exports decreased 6% in volume from 2020, making intra-EU exports the "transactions" with the greatest growth, namely a 6% or 356.205-tonne increase from 2020.

The year 2021 saw overall growth in the total value of EU trade flows, and it also initiated a period of economic recovery from the 2020 pandemic crisis. Indeed, only a 1% compound annual growth rate had been recorded in terms of value from 2019 to 2021. For the first time in ten years, in the nominal value of intra-EU exchanges was higher than that of extra-EU-imports. Intra-EU salmon "exports" from Sweden[79] and France, salmon and cod exports from the Netherlands, and tuna[80] exports from Spain were the items with the greatest increases.

Extra-EU exports play a far less important role, which makes the EU a net importer. In 2021, they registered a 3% drop in value from 2020, reaching the lowest level since 2014. However, for the decade, the growth in real terms was 11% from 2012 to 2021.

CHART 37
EU TRADE FLOWS OF FISHERY AND AQUACULTURE PRODUCTS, IN VALUE (EUR BILLION)
Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274). Values are deflated by using the GDP deflator (base=2015).

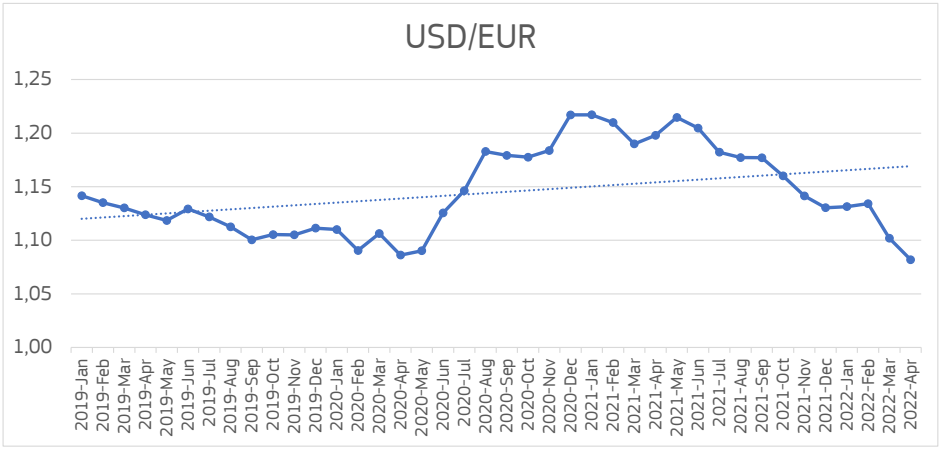


[76] In line with Eurostat's guidelines on the production and dissemination of statistical data by Commission services after the UK withdrawal from the EU, since the most recent reference period is year 2021, UK is excluded from the EU aggregations of each year. This means that UK is dealt with as country of origin/destination of EU imports and exports. In addition, EU data has included Croatia since 2013, which is when it became an EU Member state.
[77] Sum of extra-EU imports, extra-EU exports and intra-EU exchanges. Intra-EU exchanges are based on intra-EU exports. For more details, please refer to the Methodological background.
[78] In this report, value and price variations for periods longer than five years are analysed by deflating values using the GDP deflator (base=2015). For shorter periods, nominal value and price variations are analysed.
[79] As a premise, it is important to underline that while exports are reported as such by Eurostat-COMEXT according to flows recorded by national customs, in most cases the EU Member States are not the actual "origin countries". Rather, these can be considered as "dispatches" rather than "exports".
[80] Mainly yellowfin and skipjack.

This chapter of "The EU Fish Market" provides detailed data and analyses of extra-EU imports, extra-EU exports and intra-EU exchanges, focusing on the major species traded and countries involved. It is important to note that, since the most recent reference period of available data for EU trade is year 2021 – after UK's withdrawal from the EU – UK data is excluded from the EU aggregations for each year analysed in this chapter. This means that UK is dealt with as country of origin/destination of extra-EU imports and extra-EU exports, and thus excluded from the analysis of intra-EU exchanges.

Before moving on, it is also important to note the USD/EUR and NOK/EUR exchange rates during the 2019-2022 period, as most purchases are made in USD dollars or NOK, but reported in this report in EUR. Charts 38 and 39 show the trends of monthly exchange rates, highlighting how the EUR strengthened during 2020, had a slight decrease during 2021, yet still maintained a higher value than in 2019. A steep drop has been seen since February 2022, which is linked to the Russian military invasion of Ukraine. Of note, it is important to keep in mind that this edition of "The EU Fish Market" only covers data up to 2021.

CHARTS 38 AND 39
EXCHANGE RATES
US DOLLAR/EUR
AND NOK/EUR
Source: European Central Bank



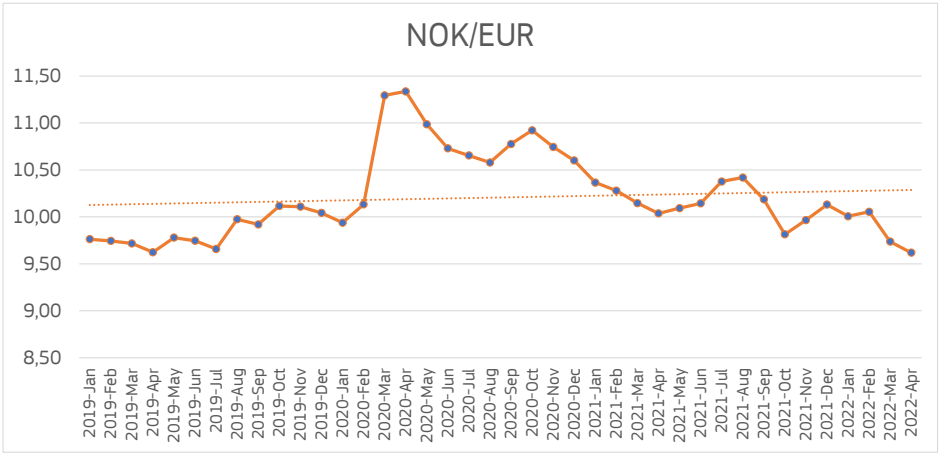


CHART 40

TOP-10 EXTRA-EU TRADE FLOWS IN 2021, IN NOMINAL VALUE (EUR BILLION)

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274).

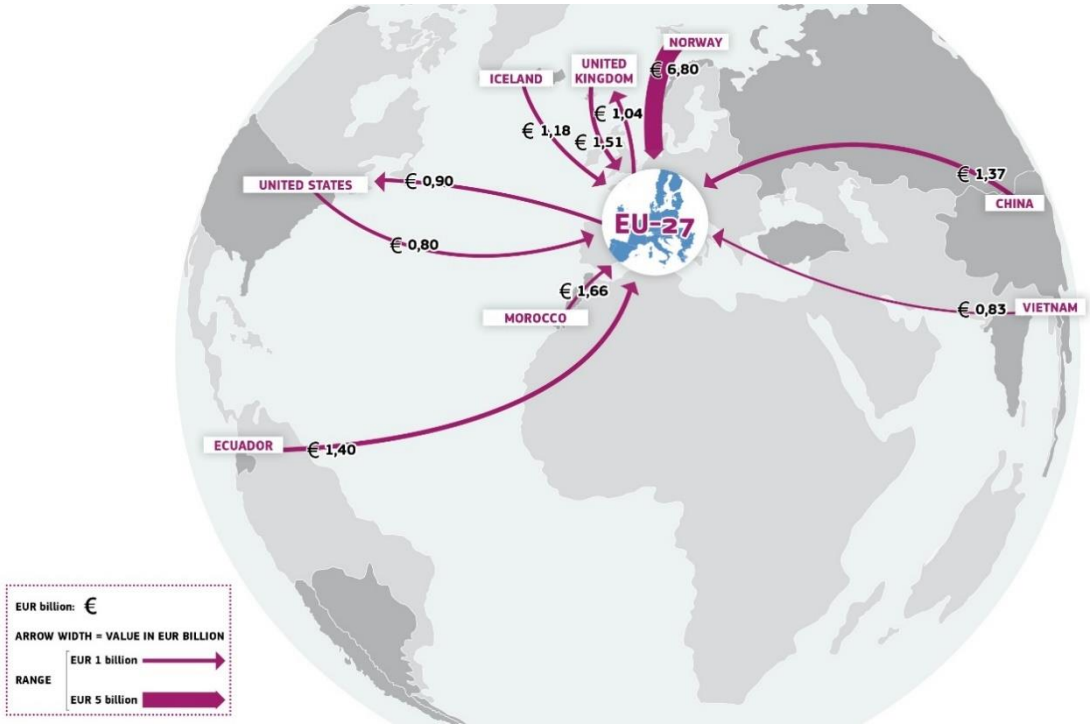
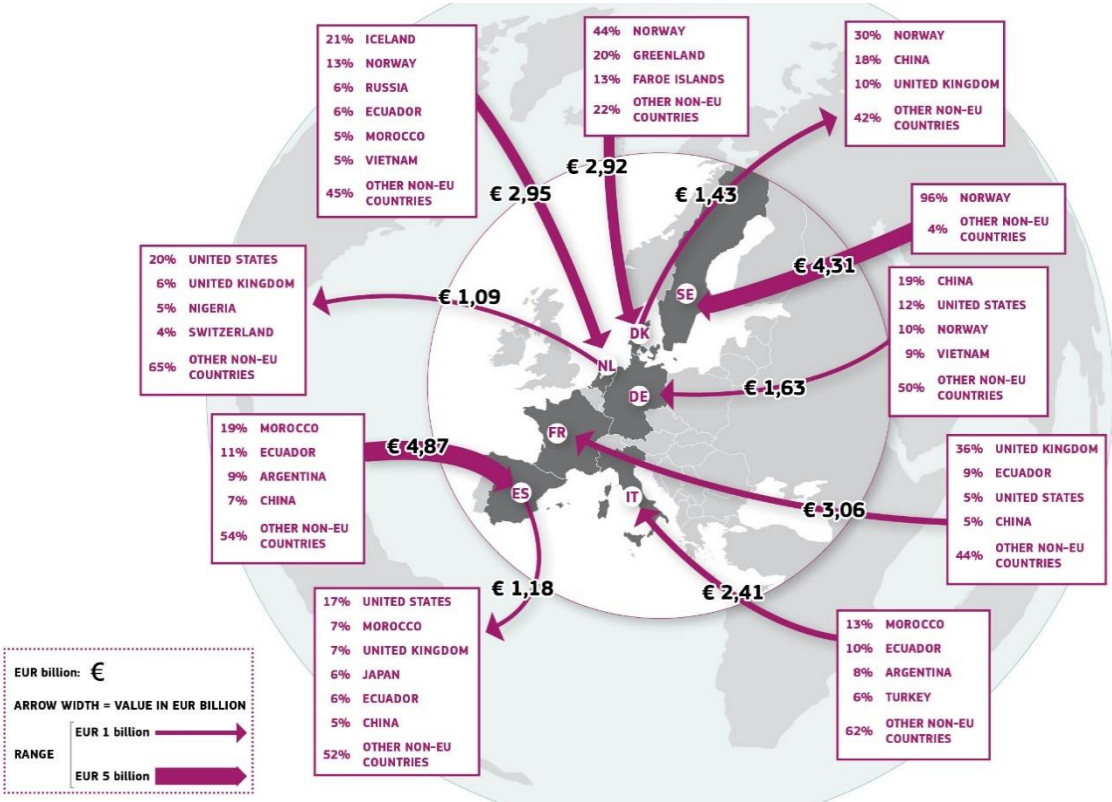


CHART 41

MOST RELEVANT EXTRA-EU TRADE FLOWS BY MEMBER STATE IN 2021, IN NOMINAL VALUE (EUR BILLION)

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274).



4.1 EXTRA-EU TRADE BALANCE

Due to increased imports and decreased exports, which are further analysed in this chapter, the extra-EU trade balance[81] deficit in 2021 was 10% or EUR 1,80 billion higher than in 2020. In the 2012-to-2021 decade, the deficit grew by 31% in real terms.

Among the EU countries, almost all of those with the highest deficits (> EUR 1 billion) saw a worsened situation from 2020 to 2021. The only exception was Germany, which decreased its imports more than its exports. To note, the countries listed in Table 15 are also major entry points for high-value products originating outside the EU and destined for the internal market.

TABLE 15

TRADE BALANCE FOR FISHERY AND AQUACULTURE PRODUCTS OF THE EU AND MAIN EU NET IMPORTERS (NOMINAL VALUE IN EUR BILLION)

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274).

	TRADE BALANCE 2020	TRADE BALANCE 2021	VARIATION 2021-2020
EU	**-17,26**	**-19,06**	**-1,80**
Sweden	-3,67	-4,23	-0,56
Spain	-3,23	-3,68	-0,45
France	-2,05	-2,60	-0,55
Italy	-1,91	-2,16	-0,25
Netherlands	-1,65	-1,85	-0,20
Denmark	-1,41	-1,49	-0,08
Germany	-1,25	-1,16	+0,09

An increase in imports together with a decrease in exports in 2021 made the United States the world's largest net importer of fishery and aquaculture products, for the first time in ten years. By comparison, the EU ranked second with slightly increased imports, while Japan continued to improve its trade balance, mainly driven by a 67% increase in the value of its exports to China and a 63% increase in the value of its exports to the United States compared with 2020. Of course, when looking at absolute values, China is the third largest importer in the world, but is not reported here as it is a net exporter country.

For a more detailed comparative analysis of EU trade and the trade of other main players in the world, see Chapter 1.3.

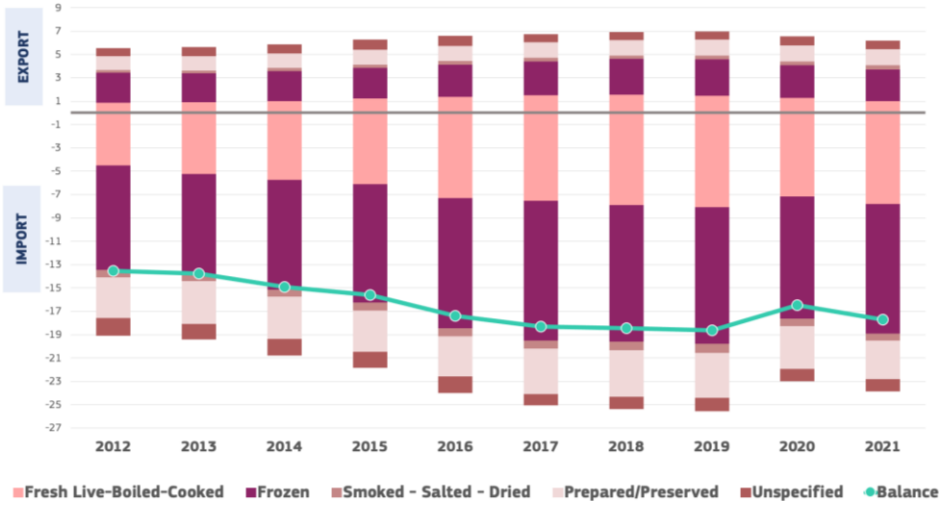
[81] Extra-EU exports *minus* extra-EU imports.

TABLE 16
TRADE BALANCE FOR FISHERY AND AQUACULTURE PRODUCTS OF MAJOR NET IMPORTERS (NOMINAL VALUE IN EUR BILLION)
Source: EUMOFA elaboration of Eurostat-COMEXT (online data code: DS-575274 and Global Trade Atlas - IHS Markit data.

	TRADE BALANCE 2020	TRADE BALANCE 2021	VARIATION 2021-2020
United States	-13,89	-19,10	-5,21
European Union	-17,26	-19,06	-1,80
Japan	-10,31	-9,92	+0,39

The EU deficit for frozen products in 2021 reached EUR 9,08 billion, accounting for 47% of the total deficit. Fresh products followed, with a deficit of EUR 7,26 billion equalling 38% of the total, and finally, the prepared-preserved product category had a deficit amounting to EUR 2,12 billion or 11% of the total deficit. Compared with 2020, the trade deficit increased mainly in the fresh and frozen categories.

CHART 42
EXTRA-EU TRADE BALANCE FOR FISHERY AND AQUACULTURE PRODUCTS BY PRESERVATION STATE, (EUR BILLION)
Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274. Values are deflated by using the GDP deflator (base=2015).



4.2 COMPARISON BETWEEN IMPORTS OF FISHERY AND AQUACULTURE PRODUCTS AND MEAT

In 2021, the combined value of EU imports of agri-food, plus fishery and aquaculture products totalled EUR 155,97 billion[82]. Of this, fish accounted for 14% and meat for 2%[83]. The EU is a net importer of fishery and aquaculture products, while it is a net exporter of meat. Chart 43 compares the values of fish and meat imports from 2012 to 2021, excluding prepared and non-edible products. The chart's blue line illustrates the evolution of the ratio between the value of imports of fish and meat, showing that

[82] This total amount includes extra-EU imports of the items referring to fishery and aquaculture products monitored by EUMOFA (list by CN-8 code available at the link http://www.eumofa.eu/documents/20178/24415/Metadata+2+-+DM+-+Annex+4+Corr+CN8-CG-MCS+%282002+-+2014%29.pdf/ae431f8e-9246-4c3a-a143-2b740a860291) and extra-EU imports of agri-food products (source: DG AGRI).

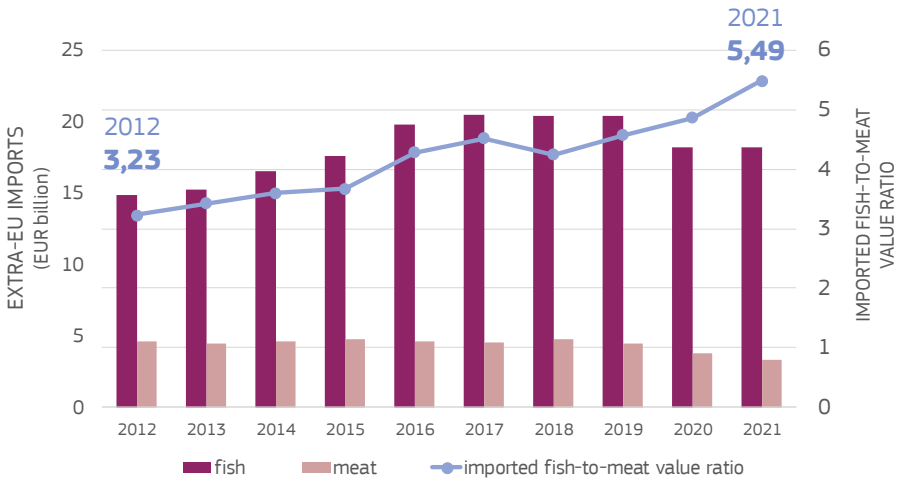
[83] For the sake of clarity, the comparison refers to "Fish" (which includes all items reported under chapter "03 - Fish and crustaceans, molluscs and other aquatic invertebrates" of the Combined Nomenclature commodities) and "Meat" (which includes all items reported under chapter "02 - Meat and edible meat offal") of Section I "Live animals; animal products" of the Combined Nomenclature commodities.

the ratio rose to 5,49 in 2021. This meant that the value of imported fish was more than five times higher than the value of imported meat. The upward trend since 2018 has been due to the value of meat imports dropping more than the value of fish imports.

CHART 43

EXTRA-EU IMPORTS TREND AND RATIO OF IMPORTED FISH VS. MEAT, IN VALUE (EUR BILLION)

Source: EUMOFA elaboration of Eurostat-COMEXT (online data code: DS-575274) and DG AGRI data. Values are deflated by using the GDP deflator (base=2015).



4.3 EXTRA-EU IMPORTS

In 2021, extra-EU imports of fishery and aquaculture products totalled 6,23 million tonnes with a value of EUR 25,82 billion. Compared with 2020, they increased by 7% in value for a gain of EUR 1,59 billion, and by 1% in volume for an increase of than 71.876 tonnes. Imports of some of the major species, including salmon and warmwater shrimps, also increased.

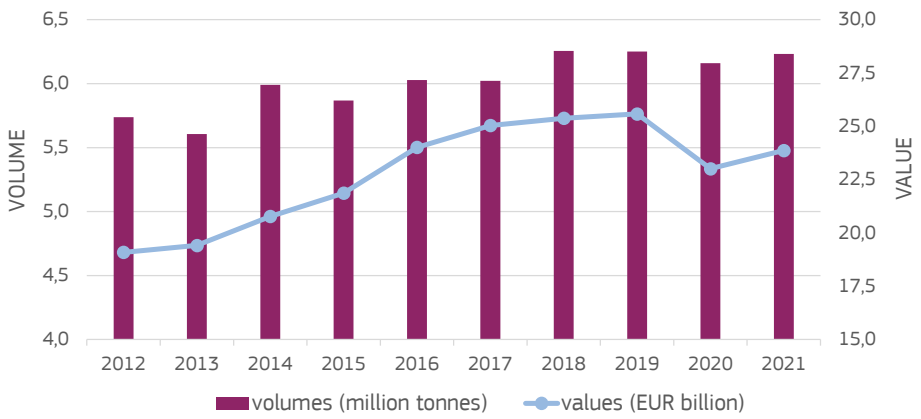
On the longer decade perspective, comparing 2012 with 2021, total imports rose by 9% or 493.812 tonnes in volume and by 25% in value in real terms. Indeed, it should be noted that in 2021, the volume of extra-EU imports reached one of the highest levels of the decade analysed, fully recovering from the drop that followed the outbreak of COVID-19. However, despite showing a recovery, the total value was still much lower than the peak achieved in 2019.

Looking at the last two years, values increased more than volumes from 2020 to 2021, due to an increase in the prices of extra-EU imports. This can be partly explained by the EUR's loss of value against the NOK during 2021, as illustrated in Chart 39. The 2021 EUR/NOK exchange rates made imports from Norway more expensive than 2020 and, since a large portion of extra-EU imports are from Norway, this contributed extensively to the overall value increase of extra-EU imports while the volume remained quite stable. Moreover, there was a significant increase in high-valued species mainly destined for the HoReCa sector, which experienced an economic recovery from 2020 when it had been heavily impacted by the COVID-19 outbreak.

CHART 44

EXTRA-EU IMPORTS OF FISHERY AND AQUACULTURE PRODUCTS

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274). Values are deflated by using the GDP deflator (base=2015).



Salmon, by far the main species imported in the EU, accounted for 17% of total extra-EU imports in volume and 25% in value in 2021, with Norway and the UK as its main countries of origin. Indeed, more than 25% of extra-EU imports of fishery and aquaculture products originates from Norway, followed at a distance by Morocco and the UK, each covering 6% of the total values.

In volume terms, cod comes after salmon among most imported species, again with Norway as the main supplier and, to a lesser extent, Russia and Iceland. Among most valued species, on the other hand, shrimps come after salmon, specifically warmwater shrimps (frozen shrimps of the genus Penaeus), as well as miscellaneous shrimps and prawns[84] other than Pandalidae, *Crangon*, deep-water rose shrimps (*Parapenaeus longirostris*) and *Penaeus*. Ecuador, Argentina and Greenland are their main countries of origin.

Imports from China are mainly frozen fillets of Alaska pollock, while imports from Morocco are more diversified with sardine and fishmeal having the largest shares in volume while most of their value is represented by octopus and also by squid which largely originates from the Falkland Islands.

Skipjack tuna is also among top-valued species imported in the EU, with Ecuador as its largest supplier. It should be noted that a share of these imports consists of tuna caught by the EU fleet, landed in Ecuador for processing and then re-imported in the EU.

Chart 47 illustrates the trend over the last five years of the average import prices of some of the top valued main commercial species imported in the EU. In 2021, salmon had its first nominal price increase in five years, growing 8% from 2020 and reaching 6,16 EUR/kg. Indeed, salmon imports experienced a constant volume growth in the last 5 years, but their value trend remained flat until the increase from 2020 to 2021. However, this increase just represented a recovery after the drop seen in 2020 following the COVID-19 outbreak: if we look at the evolution over the five-year period analysed, salmon price has been following a downward trend since 2017.

[84] No detail is available in terms of species.

CHART 45

TOP EXTRA-EU COUNTRIES OF ORIGIN IN 2021 (IN VALUE)

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)

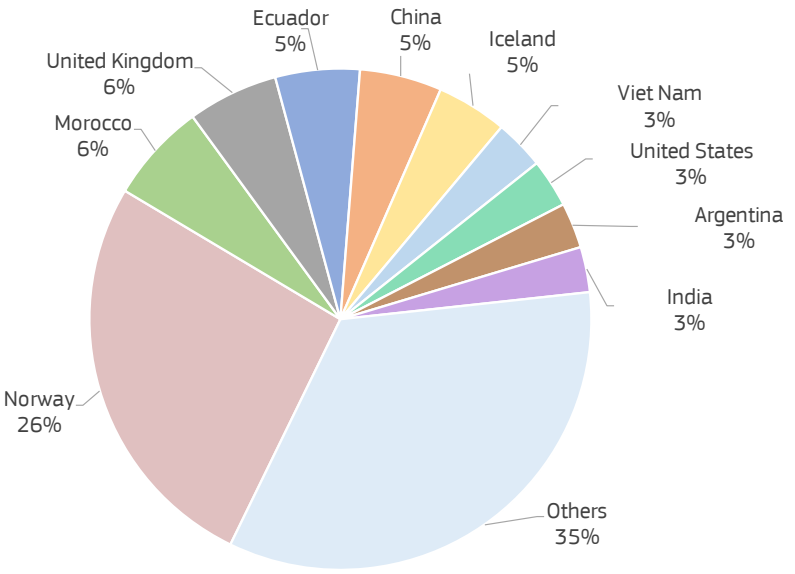


CHART 46

TOP EXTRA-EU COUNTRIES OF ORIGIN IN 2021 (IN VOLUME)

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)

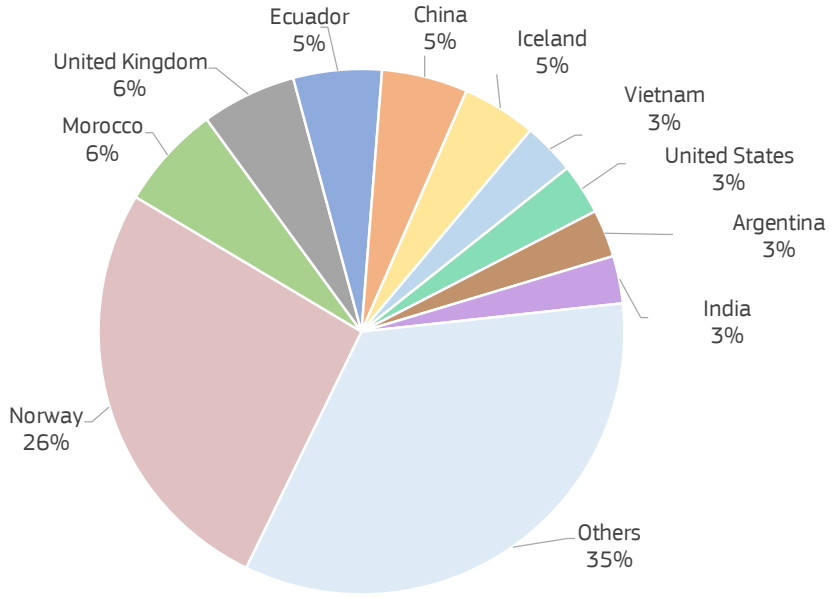
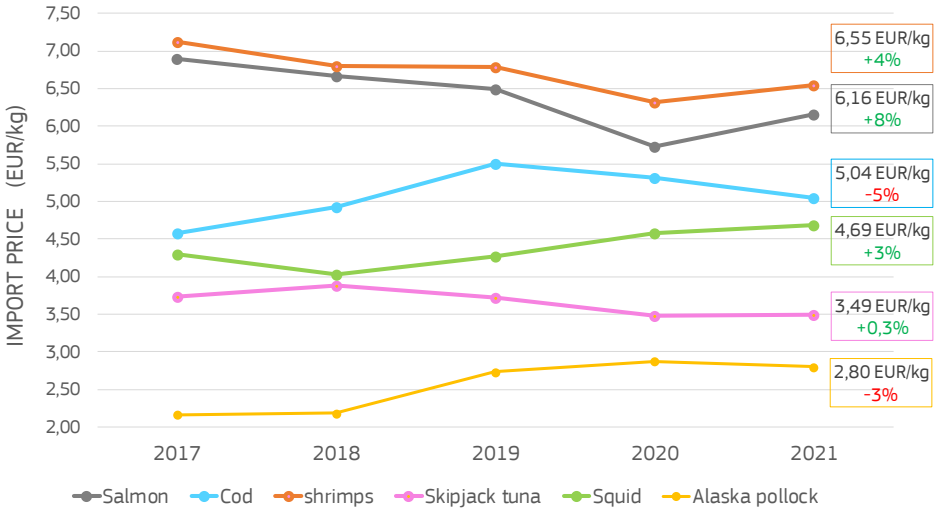


CHART 47

NOMINAL PRICES OF SOME OF THE TOP VALUED MAIN COMMERCIAL SPECIES IMPORTED IN THE EU AND % VARIATIONS 2021/2020

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)



As a premise, it is important to underline that while imports are reported by Eurostat-COMEXT according to flows recorded by national customs, in most cases the EU Member States are not the actual final destinations. Rather, these "importers" are points of entry for the fisheries and aquaculture products imported to the EU, which are then traded within the internal market[85].

Bearing this in mind, the top-five EU "importers" are Spain, Sweden, France, Denmark and the Netherlands. The precise amounts of the main EU importing Member States are in Charts 49 and 50. In 2021, Spain was the top extra-EU importer in terms of value, with an 11% increase from 2020, followed by Sweden, which had no change from the previous year. It is worth noting that France had a 20% increase from 2020, mainly due to the increased value of its salmon imports bringing it to a third-place ranking.

CHART 48

VALUE OF EXTRA-EU IMPORTS PER MEMBER STATE (EUR BILLION)

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274). Values are deflated by using the GDP deflator (base=2015).

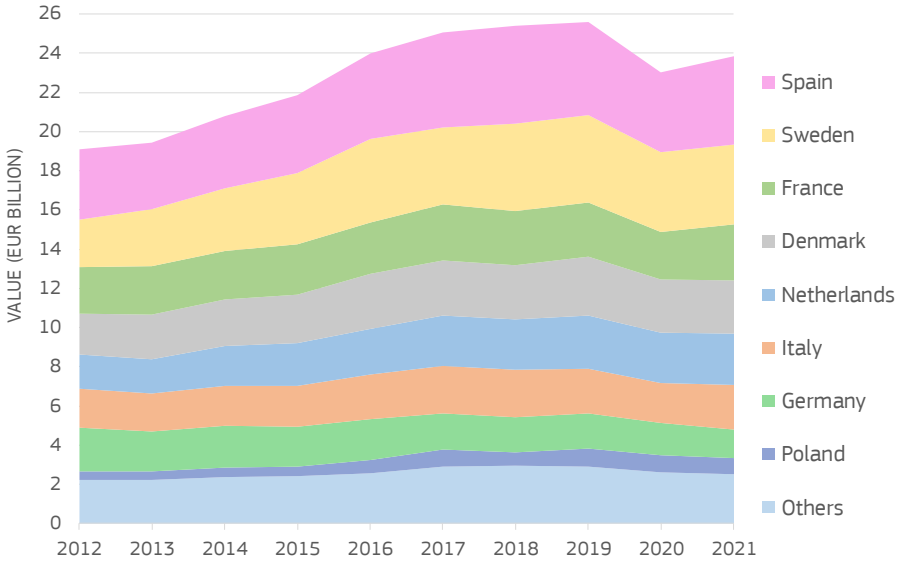
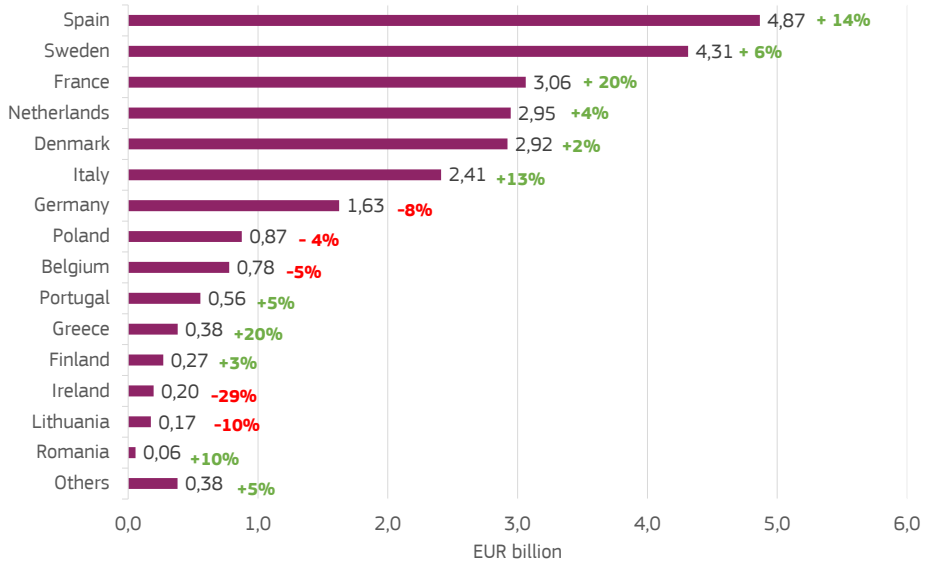


CHART 49

NOMINAL VALUE OF EXTRA-EU IMPORTS BY MEMBER STATE IN 2021 AND % VARIATION 2021/2020

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)

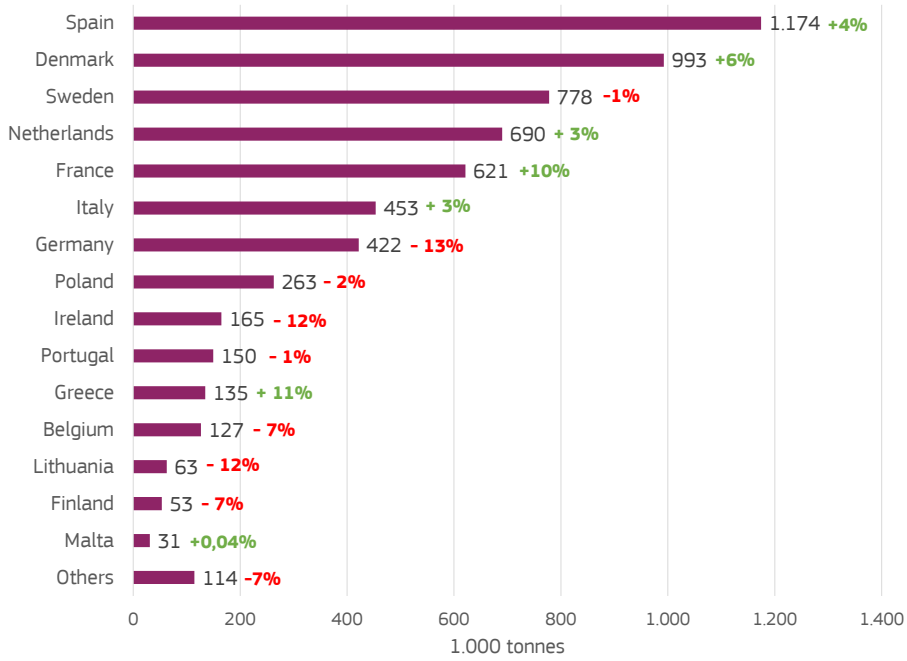


[85] This phenomenon is known as "the Rotterdam effect".

CHART 50

VOLUME OF EXTRA-EU IMPORTS BY MEMBER STATE IN 2021 AND % VARIATION 2021/2020

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)



4.3.1 ANALYSIS BY MAIN SPECIES

SALMONIDS

Salmon, the main species imported in the EU, accounted for 17% of the total volume of extra-EU imports of fishery and aquaculture products in 2021, and one quarter of the total in value. Among imports of salmonids, which also include trout and other salmonid species, salmon represented 97% of the total in both volume and value.

SALMON

In 2021, salmon imports reached a new 10-year peak of 1,06 million tonnes, a 2% volume increase from 2020 that was driven by strong growth in salmon production in Europe. The average price grew 8% from 2020, reaching 6,16 EUR/kg. The corresponding increase of the total value of these imports reached 10%, which was an increase of more than EUR 603 million. This represented a recovery after the drop seen in 2020 following the outbreak of COVID-19. That said, in terms of value, the situation is still far from being in line with the past, when values had been showing an increasing trend. A contributing factor for the increase in unit value from 2020 to 2021 could be related to exchange rates. Even though higher than 2019, the EUR started loosing its strength in 2021, making salmon imported from European producers (non-EU) more expensive than 2020.

Imports of salmon mainly consist of fresh whole products originating from Norway, which amounted to 778.934 tonnes worth EUR 4,44 billion in 2021, with neighbouring Sweden as the first point of entry. The increase of fresh whole salmon imports in the EU from Norway from 2020 to 2021 was 9% in terms of value and 1% in terms of volume.

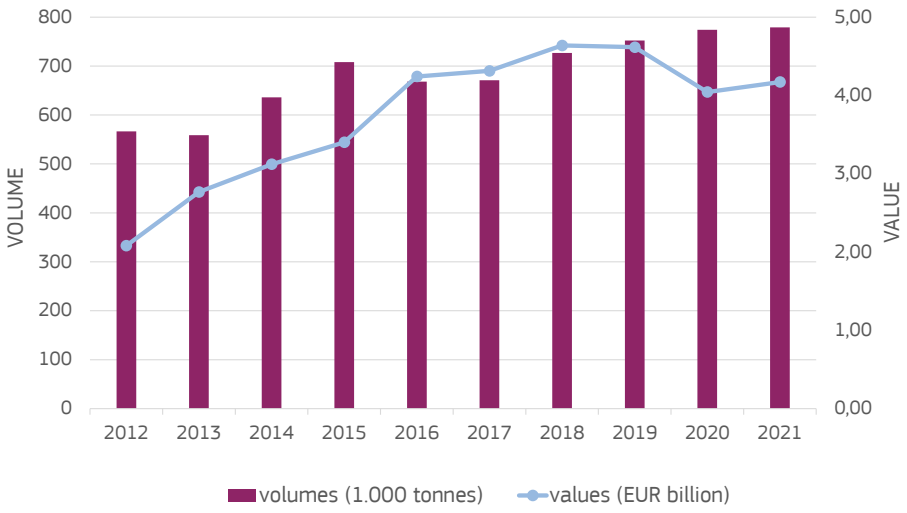
From 2012 to 20, despite the drop from 2019 to 2020 that was likely due to COVID-19 effects, salmon imports from Norway had been increasing at a yearly average growth rate of 4% in volume and 8% in real value.

Chart 51 gives an overview of fresh whole salmon imports from Norway on a longer, 10-year perspective. As shown, there was a drop in 2016 linked to production decreases related to treatments for outbreaks of sea lice – an infestation that impacts farmed salmon causing higher mortality, poorer growth, lower harvest weights of specimens and lower harvest volumes.

CHART 51

FRESH WHOLE SALMON IMPORTED IN THE EU FROM NORWAY

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274). Values are deflated by using the GDP deflator (base=2015).



CRUSTACEANS

EU imports of crustaceans showed a slight but constant decline from 2018 to 2020, after which they reached a decade peak in 2021, with a nominal value of EUR 4,79 billion and 672.209 tonnes. Shrimps represent more than 90% of total volumes and 83% of total values of crustacean imports in the EU.

They mostly include warmwater shrimps and miscellaneous shrimps and prawns[86] – not related to *Pandalidae*, *Crangon*, deep-water rose shrimps "*Parapenaeus longirostris*" and "*Penaeus*". Both categories were main contributors to the value peak of crustacean imports. However, the import price of other species also increased: the price of lobster *Homarus* imported from Canada increased by 32% reaching 18,99 EUR/kg, and the price of warmwater shrimps from Ecuador rose by 8%.

WARMWATER SHRIMPS

Warmwater shrimps imported in the EU consist of frozen shrimps of the genus *Penaeus*. In 2021, their imports amounted to 303.150 tonnes, 12% more than in 2020 and a decade peak, while at the same time, their average import price increased 4% to 6,59 EUR/kg.

Of the EU imports of warmwater shrimps, 48% came from Ecuador, followed by India and Vietnam, which together accounted for another 21%. Imports from Ecuador drove the overall value increase, with their average price increasing to 5,61 EUR/kg. They were mainly "destined for" Spain, France and the Netherlands, although it should be noted that these may not be the final destinations. Indeed, Vigo, Spain, and Rotterdam, the Netherlands, are often transit points for further distribution to other EU Member States.

As concerns the shrimps from Vietnam and India, they are mostly destined for the Netherlands and Belgium[87], and have higher prices than those from Ecuador. Indeed, Ecuador only produces whiteleg shrimp (*Penaeus vannamei*), while India and Vietnam also export the higher-value giant tiger shrimp (*Penaeus monodon*). In addition, most of the shrimps exported from Ecuador are head-on-shell (HOSO), while the majority of shrimps exported from India are peeled.

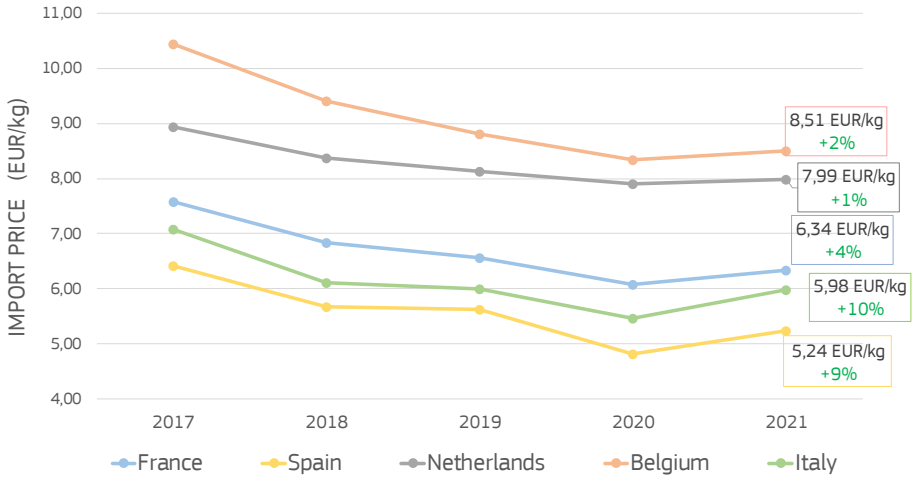
[86] No detail is available in terms of species.

[87] The Netherlands and Belgium might not be the final destinations. Indeed, Rotterdam (NL) and Antwerp (BE) are important ports for landings of frozen seafood from Far East suppliers, and these ports act as "hubs" for shrimps arriving in the EU, so the "actual" destinations might be other countries.

CHART 52

NOMINAL IMPORT PRICES OF WARMWATER SHRIMPS IN THE TOP FIVE EU IMPORTERS AND % VARIATIONS 2020/2019

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)



MISCELLANEOUS SHRIMPS

In 2021, EU imports of shrimps and prawns[88] – not related to *Pandalidae*, *Crangon*, deep-water rose shrimps "*Parapenaeus longirostris*" and "*Penaeus*" – totalled 232.513 tonnes and EUR 1,67 billion. This represented their highest amounts in both volume and value in ten years. From 2020 to 2021, volumes increased by 14% and the average price was quite stable at around 7,11 EUR/kg, thus their total value increased by 17%. The upward trend was mainly driven by the increases in imports and the average prices of frozen whole products from Argentina to Spain – with volume increasing 31% to 57.534 tonnes from 2020, and the price increasing 15% to 6,45 EUR/kg.

GROUNDFISH

In 2021, groundfish imported in the EU totalled 1,21 million tonnes with a value of EUR 4,06 billion. Cod and Alaska pollock, by far the main species imported within this category, are also two of the EU's most imported fishery and aquaculture products.

COD

In 2021, extra-EU imports of cod were similar to 2020 at around 404.491 tonnes, the second lowest volume since 2013. Their value dropped 5% from 2020, reaching EUR 2,04 billion.

Among cod imports, 37% of the volume originated in Norway, 22% in Russia, 20% in Iceland, and 9% in China. Those from Norway and Iceland are more diversified, comprising similar shares of fresh, frozen and salted products, while imports from Russia and China largely include frozen products.

Imports from all major suppliers recovered after the 2020 drop, with the exception of China. Indeed, imports from this country dropped 13% in volume and 21% in value – from more than 40.986 tonnes in 2020 to just above 35.724 tonnes in 2021, and from EUR 211 million to EUR 166 million, along with a 9% drop in price from 5,15 EUR/kg to 4,66 EUR/kg. The decrease was observed in all major importers of cod from China, especially Germany. Other significant increases from 2020 included Denmark's imports of cod originating from Norway which grew by 6.526 tonnes and EUR 11 million, and by Dutch imports from Iceland which grew by 6.586 tonnes and EUR 40 million.

ALASKA POLLOCK

Imports of Alaska pollock decreased by 4% in terms of volume and 7% in terms of value from 2020 to 2021, reaching 266.305 tonnes with a value of EUR 755 million. This was their lowest level since 2017. The average import price in 2021 was in line with the previous year passing from 2,87 EUR/kg to 2,80 EUR/kg.

[88] No detail is available in terms of species.

In 2021, 45% of EU imports of Alaska pollock came from China, and 33% originated from the United States. Russia followed at a distance, accounting for 22% of the total. Germany was the main EU destination of all these main origin countries.
Most of Alaska pollock imported in the EU is in the form of frozen fillets.

TUNA AND TUNA-LIKE SPECIES

This group includes tunas and swordfish species. In 2021, total extra-EU imports of both decreased by 11% in volume reaching 645.272 tonnes and dropping 8% in value to EUR 2,51 billion.
Processed tuna – 30% frozen and 70% prepared-preserved products (mainly canned) – accounted for the largest share of this category in volume terms. In terms of species, skipjack tuna accounted for 53% of the total, followed by yellowfin tuna at around 30%.
To be noted that these imports partly consist of tuna caught and landed by the Spanish and French fleets in remote places close to the fishing areas of Ecuador, China, El Salvador, Guatemala, Seychelles and Papua New Guinea, Côte d'Ivoire, and Ghana, processed in those countries, and then re-imported into the EU as prepared-preserved products.

SKIPJACK TUNA

Almost all skipjack tuna imported in the EU is imported as prepared-preserved products. Its main importers are Spain, the Netherlands and Germany, followed by Italy and France.
Ecuador, by far the main country of origin, provides the EU with 28% of all extra-EU imports of prepared-preserved skipjack tuna. In 2021, this amounted to 97.026 tonnes imported at an average price of 3,78 EUR/kg which represented a decrease of 12% in volume but a 2% increase in price compared with 2020. Indeed, total extra-EU imports decreased 9% from 2020, reaching 342.876 tonnes, driven mainly by decreased arrivals from Ecuador and China, the latter reporting a drop by 33% in volume. The average import price from China was 3,11 EUR/kg, which is slightly lower than the 3,49 EUR/kg average price from all origins.

YELLOWFIN TUNA

From 2020 to 2021, extra-EU imports of yellowfin tuna dropped 18% in volume and 12% in value. The 2021 volume was 191.342 tonnes and the value EUR 769 million, which were the lowest amounts since 2015. At the same time, there was a 7% increase in price, which reached 4,02 EUR/kg.
The decrease was registered within the two main product categories: frozen products, which showed a loss of 40.258 tonnes or EUR 86 million, and prepared/preserved products, with a loss of 1.841 tonnes or EUR 32 million. For frozen products, the biggest decrease was registered from the Philippines with a decrease of 17.180 tonnes or EUR 40 million. For prepared/preserved products, major drops concerned imports from Mauritius which decreased by 3.545 tonnes and EUR 21 million, and imports from Côte d'Ivoire which declined by 3.844 tonnes and EUR 21 million.
For frozen products, Spain prevails among importing countries and is also responsible for further dispatches within the EU. Imports of prepared-preserved products are more diversified in terms of destinations, with Italy, Spain and France as the largest importers.

NON-FOOD USE PRODUCTS

Extra-EU imports of non-food use products in 2021 totalled 813.075 tonnes worth EUR 871 million, which represented decreases of 1% in volume and 3% in value from 2020. The products included a share of 28% for fishmeal and 25% for fish oil, while the rest concerns other products not destined for human consumption, such as fish waste and seaweed. According to available data, however, it is not possible to identify more precisely the products included in this latter category.

FISHMEAL

In 2021, the EU imported 223.609 tonnes of fishmeal, marking a 2% decrease from 2020. It was imported at an average price of 1.312 EUR/tonne, which was 1% higher than in 2020.

Its major suppliers are Morocco and Norway, with the former exporting mainly to Greece and the latter to Denmark. Imports from both Morocco and Norway increased compared with 2020, while the average import price decreased 2% for Norway and increased 6% for Morocco. However, the biggest contributor to 2021 expansion was imports from Iceland, which increased from less than 3.500 tonnes to more than 24.600 tonnes and from EUR 4 million to EUR 33 million.

The overall decrease of extra-EU imports of fishmeal was in fact driven by lower supplies from Peru, South Africa, the US and the UK.

Germany, the largest EU importer of fishmeal, imported 53.382 tonnes in 2021 which was 29% less than 2020, while imports increased in Spain, Denmark and Greece, respectively by 23%, 10% and 7%. Germany remains a major “entry point” to the EU market, primarily due to the logistics of its harbour with overseas routes and trading partnerships. Germany is also a hub for the further distribution of fishmeal, primarily for the aquafeed segment.

FISH OIL

The largest shares of the EU supplies of fish oil originate from Norway and Peru, which in 2021 together covered 61% of total EU imports of fish oil.

Imports of Norwegian origin totalled 65.112 tonnes and were sold at 1.237 EUR/tonne. This represented a 10% decrease in volume while the price was stable. Denmark received most of these imports, followed at a distance by Greece.

Imports from Peru totalled almost 60.000 tonnes and were sold at 1.955 EUR/tonne, which represented a volume increase of 263% and a price decrease of 7%.

4.4 EXTRA-EU EXPORTS

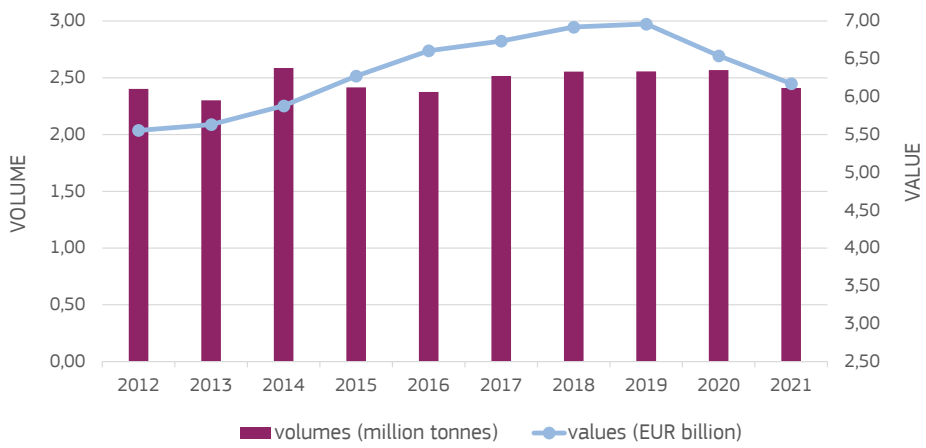
In 2021, EU exports of fishery and aquaculture products to third countries reached a five-year low of 2,41 million tonnes, with a decrease of 104.565 tonnes or 4% from 2017. If compared with 10 years before, the amount was quite stable with just an increase of 9.317 tonnes or 0,39%, while the decrease from 2020 to 2021 reached 6% or 157.767 tonnes.

In value terms, the extra-EU exports totalled EUR 6,75 billion in 2021, which represented a 6% drop of more than EUR 216 million from 2020. However, the 2021 value was 11% higher in real terms compared with 10 years before.

CHART 53

EXTRA-EU EXPORTS OF FISHERY AND AQUACULTURE PRODUCTS

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274). Values are deflated by using the GDP deflator (base=2015).



The EU mainly exports blue whiting, fishmeal and fish oil not destined for human consumption, herring, mackerel, skipjack tuna and salmon. To be noted, EU exports of tuna partly comprise tunas caught by the Spanish and French fleets in remote places. The catches are processed there, and then imported in the EU as prepared-preserved products or frozen loins. In both cases, these landings are also recorded as exports.

Salmon exports experienced a steep decline from 2020 to 2021, dropping 37% in volume and 17% in value. This corresponded to decreases of 49.757 tonnes and EUR 192 million that were consequences of the decreased exports to the UK.

Nevertheless, the UK remained the top destination of EU exports of fishery and aquaculture products in terms of value. The US came next, while China dropped from third to fifth place, mainly due to a decrease in its cod exports.

On the other hand, Norway ranked third, thanks to an increase in fishmeal and mackerel exports. Indeed, fish oil and fishmeal are mostly exported to Norway, while Nigeria is among the top three destinations in volume terms, due to its imports of blue whiting, herring and mackerel. Herring from the EU also has Ukraine and Egypt among its main destinations.

CHART 54

TOP EXTRA-EU COUNTRIES OF DESTINATION IN 2021 (IN VALUE)

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)

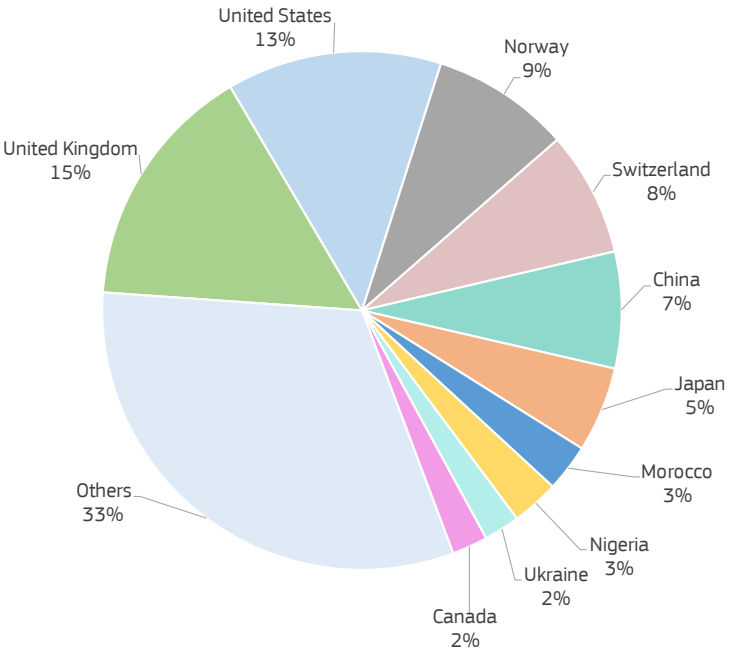


CHART 55

TOP EXTRA-EU COUNTRIES OF DESTINATION IN 2021 (IN VOLUME)

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)

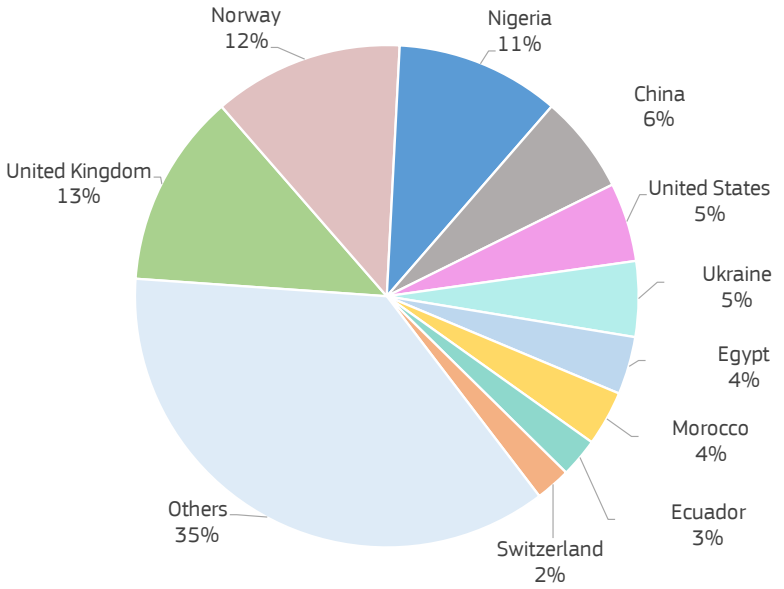


CHART 56

VALUE OF EXTRA-EU EXPORTS BY MEMBER STATE (EUR BILLION)

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274). Values are deflated by using the GDP deflator (base=2015).

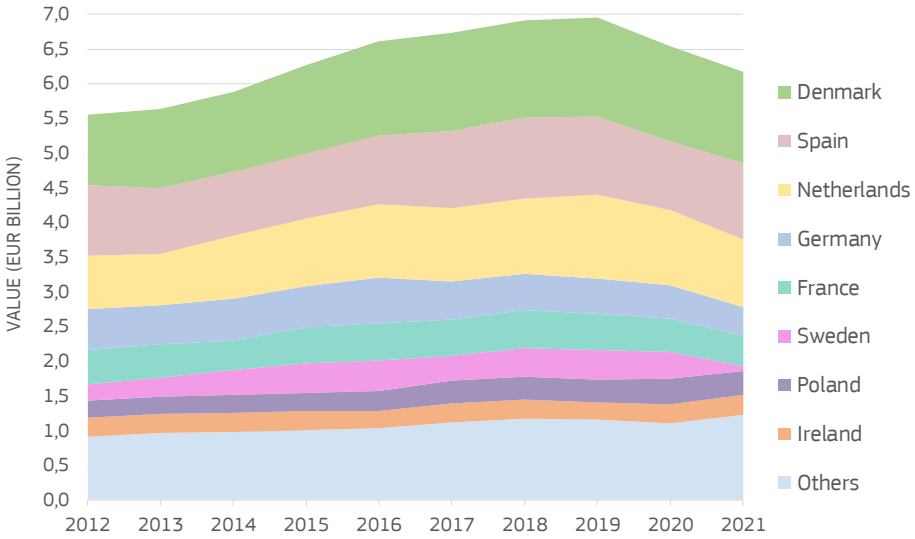


CHART 57

NOMINAL VALUE OF EXTRA-EU EXPORTS BY MEMBER STATE IN 2021 AND % VARIATION 2021/2020

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)

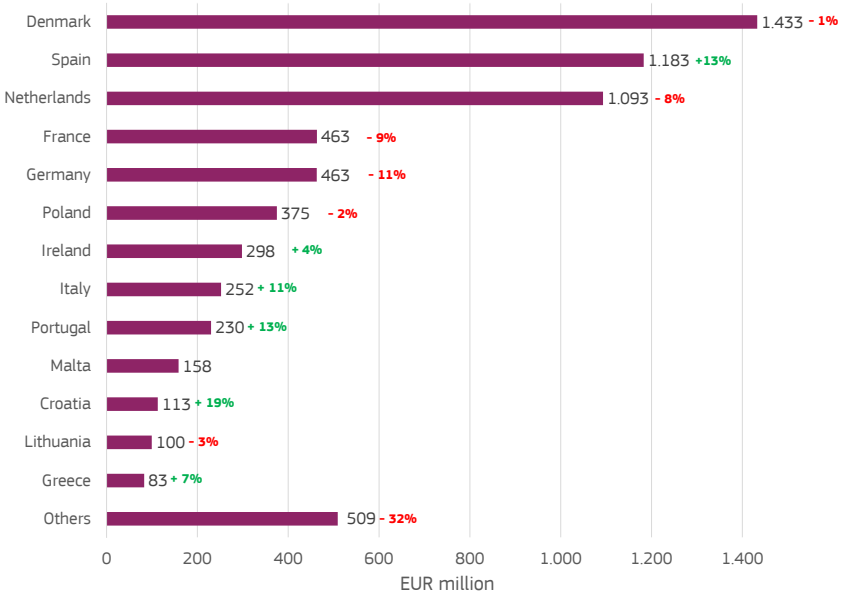
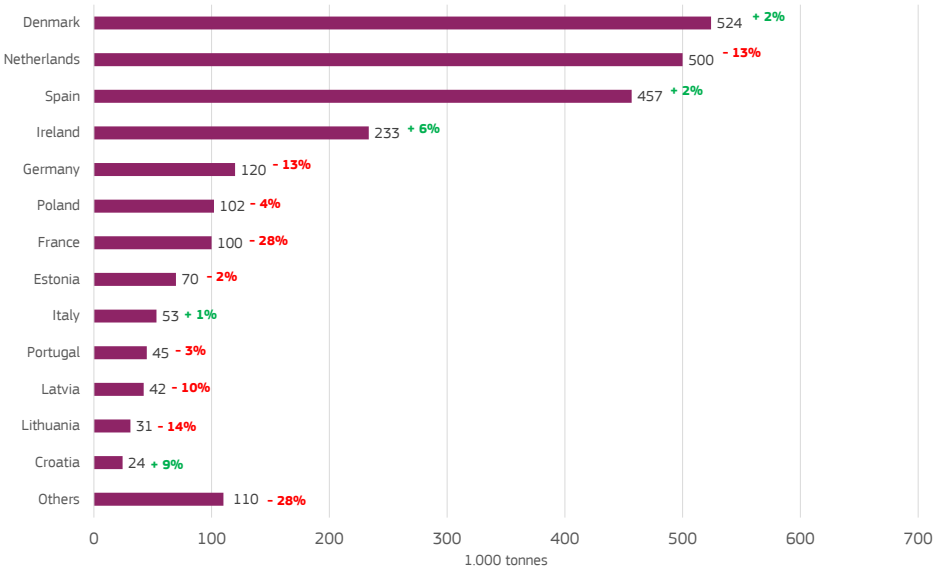


CHART 58

VOLUME OF EXTRA-EU EXPORTS BY MEMBER STATE IN 2021 AND % VARIATION 2021/2020

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)



4.4.1 ANALYSIS BY MAIN SPECIES

SALMONIDS

Salmon is by far the most valued species exported by the EU. Among salmonids, which also include trout and other salmonid species, it represented 93% of the total value of extra-EU exports of salmonids in 2021.

SALMON

Extra-EU exports of salmon reached a five-year low of 85.559 tonnes and EUR 917 million in 2021. This represented a contraction of 17% in terms of value and 37% in terms of volume from 2020, which is the reason behind the overall drop of EU exports in general. In addition, the average export price increased by 31% from 2020 to 2021 moving from 8,19 EUR/kg to 10,72 EUR/kg.

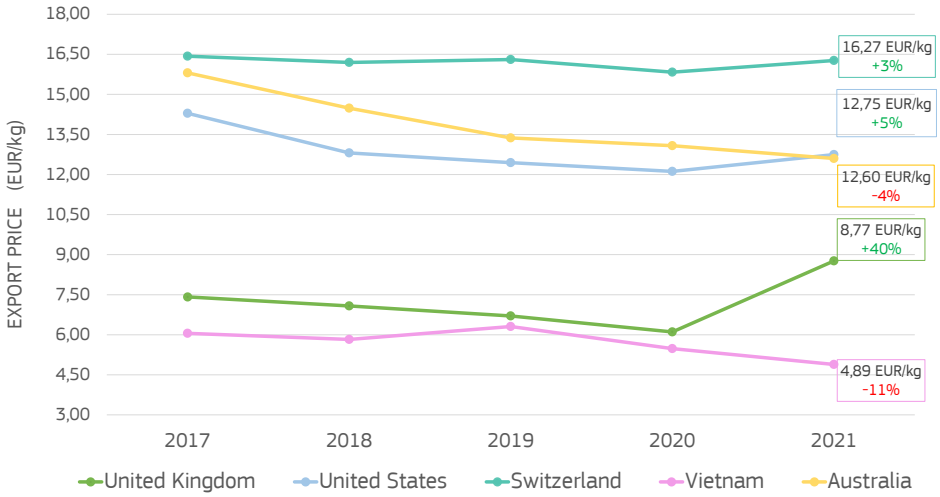
Chart 59 shows the five-year trend of the average price of salmon exported to main extra-EU destinations. The highest price was seen in Switzerland, where salmon is mainly exported as smoked or as fresh fillets.

Although there are no data on the topic, a possible explanation could be that exports of salmon to Switzerland largely consist of special quality grade salmon such as Label Rouge and organic. The second highest price – 12,75 EUR/kg – was registered by the US, which mainly imports live/fresh salmon. The third highest at 12,60 EUR/kg was Australia, which mainly imports smoked products. Exports to UK had an average price of 8,77 EUR/kg and mainly comprised prepared/preserved and smoked products. Vietnam, which ranks lowest of the five, mainly receives frozen fillets.

CHART 59

NOMINAL EXPORT PRICES OF SALMON TO TOP 5 EXTRA-EU DESTINATIONS AND % VARIATIONS 2021/2020

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)



SMALL PELAGICS

In 2021, EU exports of small pelagics to third countries amounted to 584.094 tonnes and EUR 854 million. Two main commercial species in this group, namely herring and mackerel, each accounted for 7% and thus represented 14% of the total volume of all fishery and aquaculture products exported by the EU.

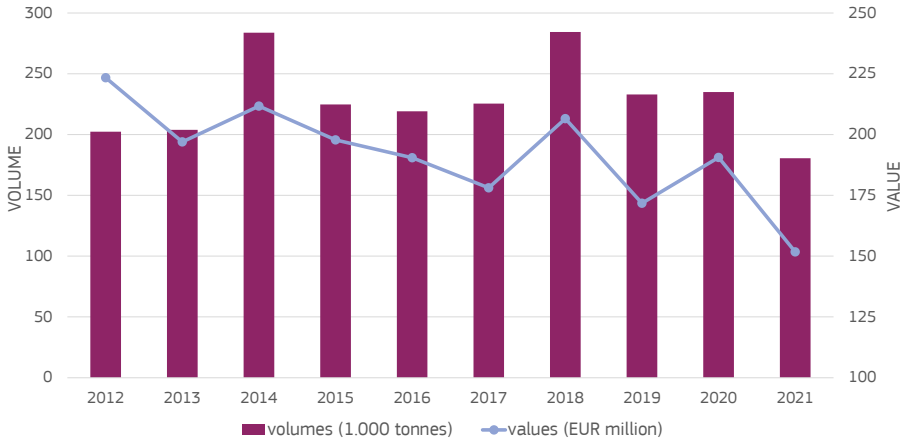
HERRING

Extra-EU exports of herring registered a 10-year low of 180.568 tonnes and EUR 170 milion, which represented a 23% decrease in volume and 18% decrease in value from 2020. This was driven by decreased exports from the Netherlands, by far the major EU supplier of herring to third countries, which saw reduced quotas from 2020 to 2021. Its exports to Nigeria and Egypt, the main destinations, decreased by 25% and 49% in volume and by 21% and 47% in value, respectively.

CHART 60

HERRING EXPORTED FROM THE EU TO THIRD COUNTRIES

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274). Values are deflated by using the GDP deflator (base=2015).



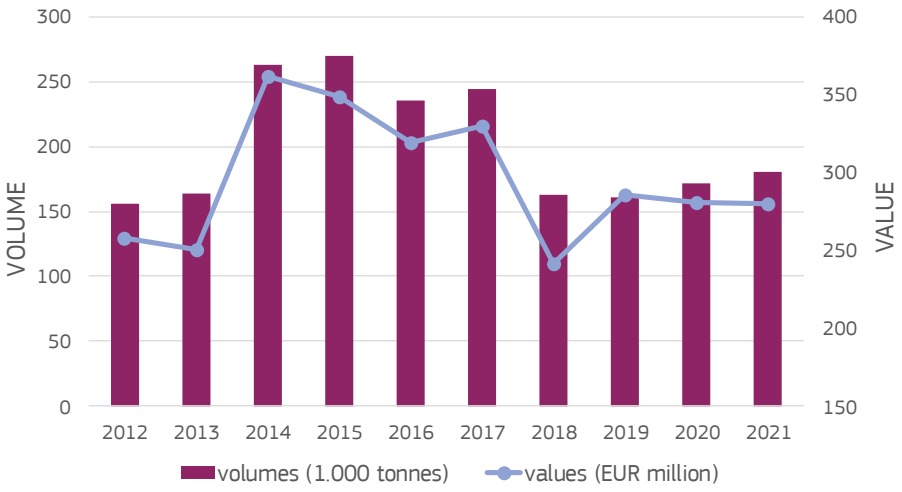
MACKEREL

Extra-EU exports of mackerel plummeted from 2017 to 2018, as did EU catches. From 2019 onwards, there was a slight but steady growth in terms of volume, reaching 180.169 tonnes in 2021. The value of mackerel exports was EUR 304 million in 2021, which represented a 1% increase from 2019. On the other hand, if we consider the value in real terms, there was a 25% decrease from 2019, showing that trade of this species was strongly impacted by the EUR's depreciation. The average export price decreased by 3% in comparison to 2020, reaching 1,69 EUR/kg. Indeed, export prices decreased for all the major exporters, namely Denmark, the Netherlands and Ireland, which had drops in export prices of 13%, 7% and 3% respectively.

CHART 61

MACKEREL EXPORTED FROM THE EU TO THIRD COUNTRIES

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274). Values are deflated by using the GDP deflator (base=2015)



GROUNDFISH

In 2021 extra-EU exports of groundfish species totalled 367.986 tonnes and EUR 624 million. Cod exports accounted for 45% of the total value and 16% of the total volumes, while blue whiting prevailed in volume terms. The latter covered 60% of the total volumes and was second to cod in value, with a share of 20% of the total.

COD

Exports of cod decreased by 18% from 2020, reaching 57.269 tonnes, which was around 20.260 tonnes below its decade average. The drop was due to decreased exports of frozen cod fillets from the Netherlands to China and the UK.

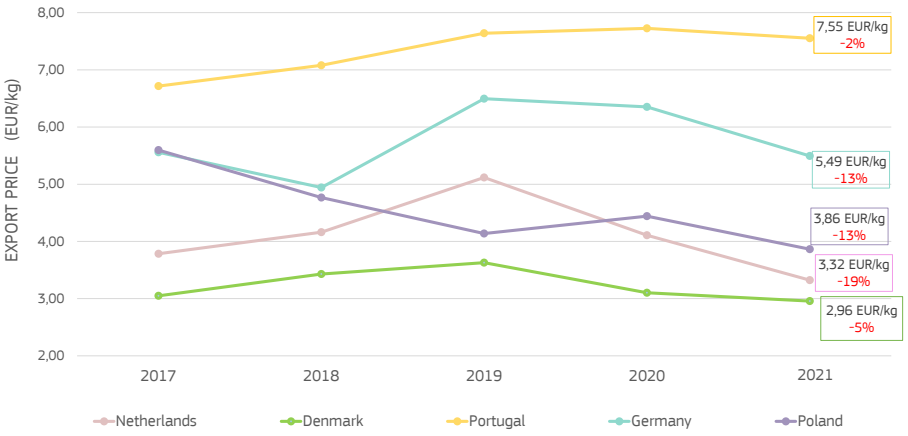
With an 18% value drop from 2020, it touched one of the lowest levels in eight years at EUR 279 million. Again, this trend was mainly impacted by the Netherlands' 14.693-tonne decrease in volume from 2020, and 19% decrease in price, which droppped to 3,32 EUR/kg.

Chart 62 shows average prices of cod from major exporters, and that cod exported by Portugal and Germany had the highest price. This was due to the higher number of processing steps needed before selling it, as it is mainly exported from Portugal as dried fillets or other cuts, and from Germany as frozen fillets.

CHART 62

NOMINAL EXPORT PRICES OF COD FROM MAIN EU EXPORTERS AND % VARIATIONS 2021/2020

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)



BLUE WHITING

In 2021, extra-EU exports of blue whiting registered a ten-year volume peak, reaching 222.133 tonnes, which was a 3% increase from 2020. Their value had remained stable since 2020 at around EUR 123 milion, following a 6% decrease in price from 2020 to 2021, which reached 0,56 EUR/kg.

While the Netherlands remains the major blue whiting exporter, the 2020-2021 positive trend was mostly impacted by Ireland's exports to Nigeria, which increased by 26.333 tonnes from 2020, reaching 48.567 tonnes. Ireland's average export price to

Nigeria was 0,49 EUR/kg, which was slighty less than the average export price of blue whiting from the EU to third countries.

NON-FOOD USE PRODUCTS

Of all fishery and aquaculture products exported by the EU, those not destined for human consumption accounted for 20% in 2021, and their value covered 11% of the total. These corresponded to 493.999 tonnes worth EUR 747 million.

FISHMEAL

Extra-EU exports of fishmeal totalled 183.873 tonnes worth EUR 288 million. This represented a 3% increase in value from 2020, while the volume remained stable. Denmark is responsible for the largest part of these exports, with 136.375 tonnes exported in 2021 for a total value of EUR 215 million. Danish exports were mainly destined for Norway and the UK. Denmark export prices to Norway increased by 9% from 2020 to 2021, reaching 1.595 EUR/tonne, and those to the UK increased by 12% to 1.654 EUR/tonne.

FISH OIL

Fish oil exports in 2021 decreased by 8% from 2020 reaching 161.276 tonnes, which is the second highest amount of the ten-year period analysed. In value, they reached EUR 294 million, dropping 10% from 2020. However, this was again the second highest value of the decade. Overall, the average price of fish oil exports from the EU to third countries was quite stable from 2020 to 2021: with only a 2%-decrease, it reached 1.821 EUR/ton. Denmark, the largest EU exporter, mainly impacted the general trend by decreasing exports to Norway, the major destination. These exports reached 99.819 tonnes and EUR 168 million, which corresponded to 14% and 18% decreases from 2020, respectively.

4.5 INTRA-EU TRADE

In 2021, intra-EU trade[89] of fishery and aquaculture products amounted to 6 million tonnes and EUR 26,8 billion. In volume terms, this represented a 6% or 356.205-tonne increase from 2020. In terms of value, it is worth noting that 2021 was the first time in 10 years that intra-EU exports were greater than extra-EU imports. Compared with 2020, the value of intra-EU trade grew by 15% or EUR 3,4 million.

One possible assumption is that EU fishery and aquaculture production has increased, leading to an increase of goods produced and traded within the EU. Indeed, both volume and value of intra-EU exports increased to a greater extent compared with extra-EU imports. However, consolidated data on EU production of fishery and aquaculture products are available up to 2020, so that cannot be corroborated by facts. To be noted, in any case, that exchanges within the EU largely consist of re-exports of products originally imported from third countries[90]. These products may also be subject to multiple exchanges and processing steps taken by Member States once they enter the EU market. The creation of added-value along the often complex supply chains and multiplication of cross-border flows contributes to inflating the value of intra-EU exports.

[89] Intra-EU trade analysis is based on intra-EU exports only, due to the fact that intra-EU imports and intra-EU exports should coincide. For more details, please refer to the Methodological background.

[90] It has to be underlined that despite "exports" are reported as such by Eurostat-COMEXT according to flows recorded by national customs, in most cases the northern EU Member States are not the actual exporters but rather countries through which products are transported.

The 15 flows with the highest value at country and main commercial species levels in 2021 are shown in Chart 64. Of note, in 2021, the combined value of intra-EU exchanges of salmon and cod accounted for 38% of the total value of intra-EU trade flows of fishery and aquaculture products.

CHART 63

INTRA-EU TRADE OF FISHERY AND AQUACULTURE PRODUCTS

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274). Values are deflated by using the GDP deflator (base=2015).

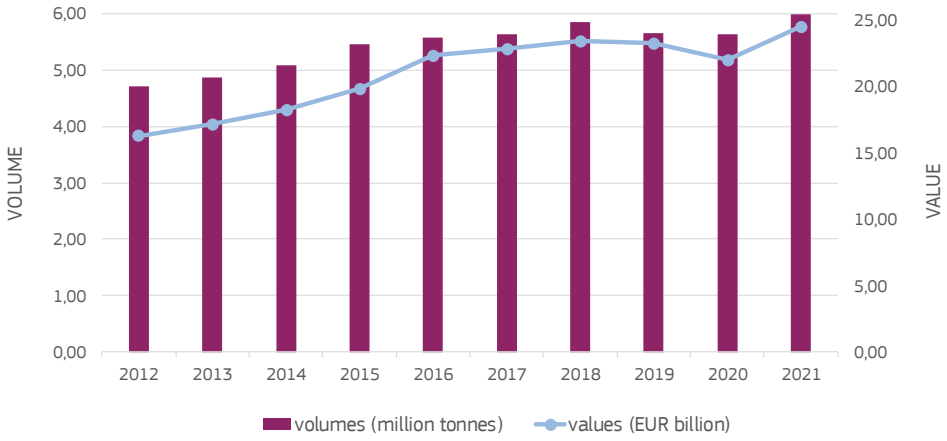


CHART 64

TOP 15 FLOWS OF FISHERY AND AQUACULTURE PRODUCTS WITHIN THE EU IN 2020 (IN NOMINAL VALUE)

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)

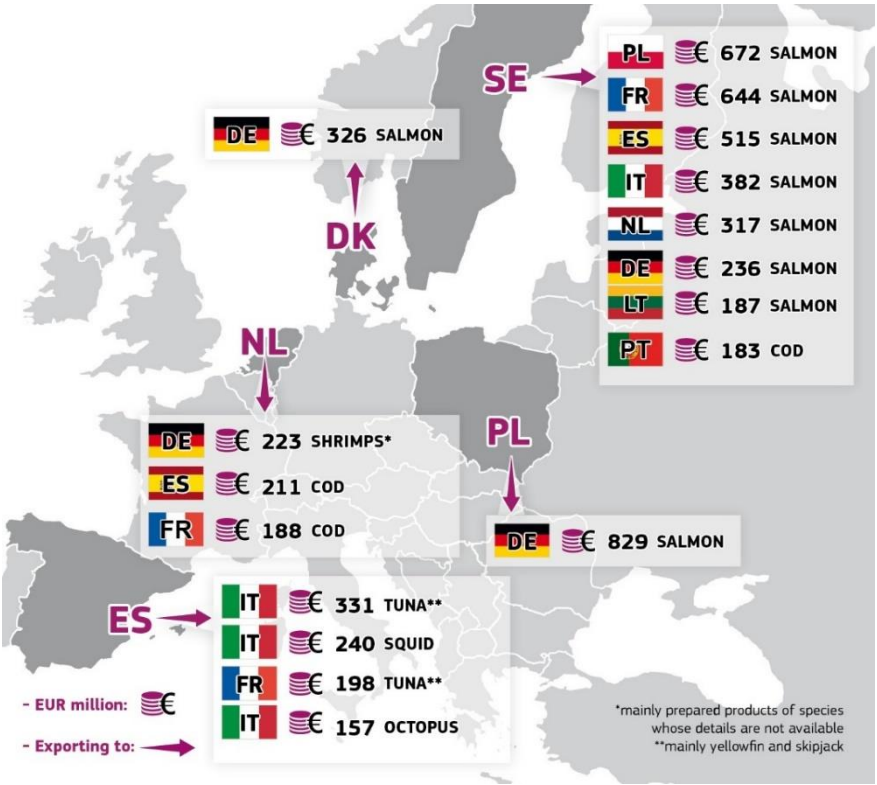


CHART 65

VALUE OF INTRA-EU EXPORTS PER MEMBER STATE (EUR BILLION)

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274). Values are deflated by using the GDP deflator (base=2015).

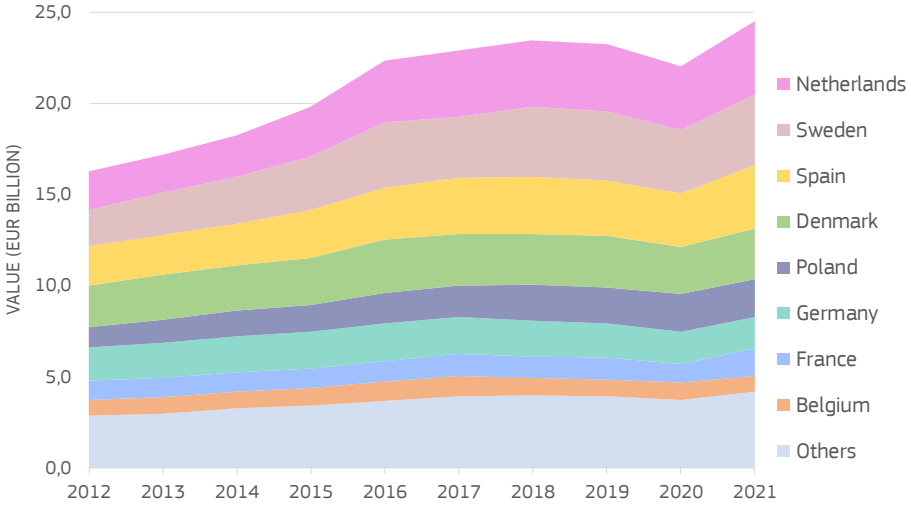


CHART 66

NOMINAL VALUE OF INTRA-EU EXPORTS BY MEMBER STATE IN 2021 AND % VARIATION 2021/2020

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)

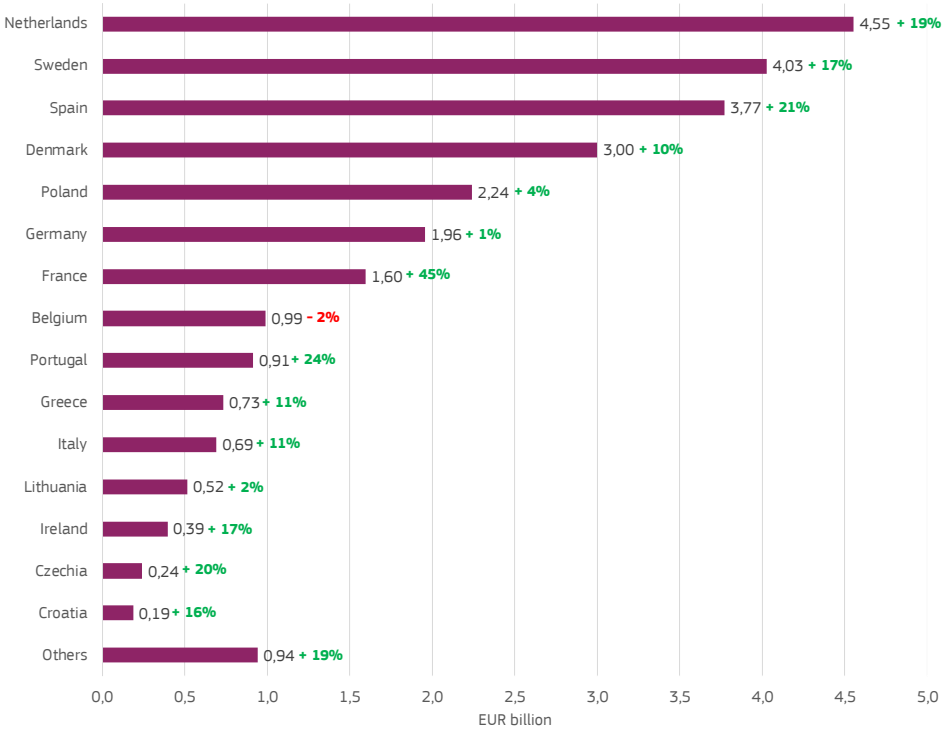
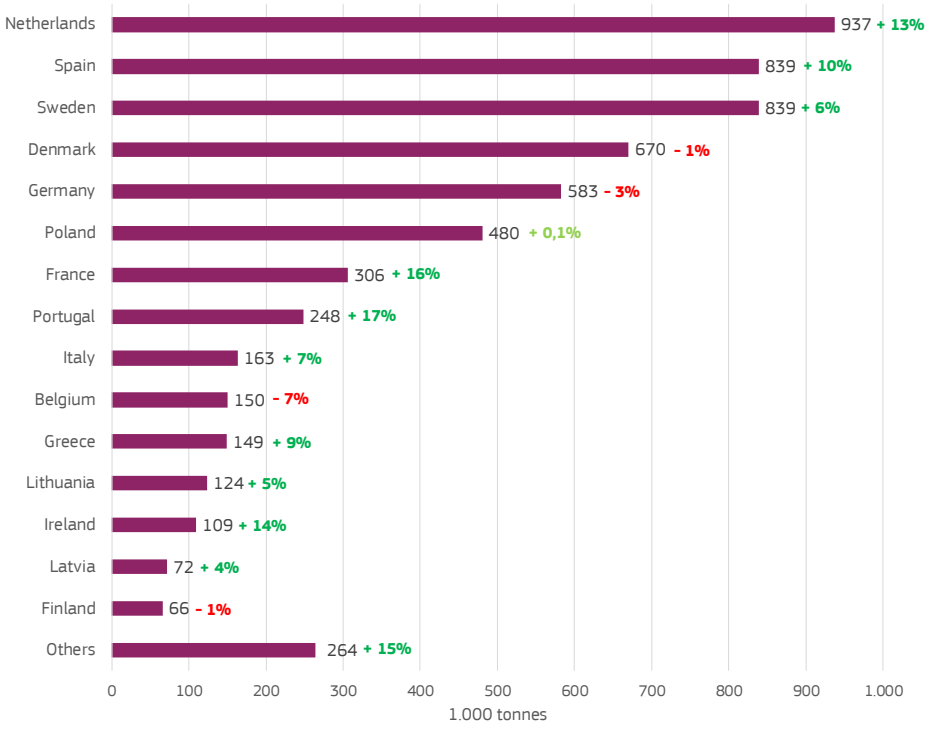


CHART 67

VOLUME OF INTRA-EU EXPORTS BY MEMBER STATE IN 2021 AND % VARIATION 2021/2020

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)



4.5.1 ANALYSIS BY MAIN SPECIES

SALMONIDS

Exports of salmon prevail in the intra-EU trade of fishery and aquaculture products[91]. In 2021, with 1,06 million tonnes and EUR 8 billion, intra-EU exchanges of salmon accounted for 30% of the total in value and 18% of the total in volume.

Among salmonids, which also include trout and other salmonid species, salmon represented 92% of total volume and 93% of total value.

SALMON

79% of the intra-EU exports of salmon came from three Member States in 2021, according to Eurostat-COMEXT: Sweden[92], Denmark and Poland. Sweden's 536.483 tonnes accounted for more than half of the total, Denmark's 178.778 tonnes accounted for 17%, and Poland's 118.902 tonnes accounted for 11%.

Since Poland has a thriving smoking industry, which is mainly fed by salmon from Norway, its exports mainly include smoked products and, to a lesser extent, fresh products. Exports from other Member States, on the other hand, consist almost entirely of fresh products.

In line with extra-EU imports of salmon, all three major EU "dealers" of salmon within the internal market registered increased exports from 2020 to 2021, thus leading to a decade peak of the salmon exchanges in the EU. The Netherlands, which follow at a distance, also registered an increase in volume terms.

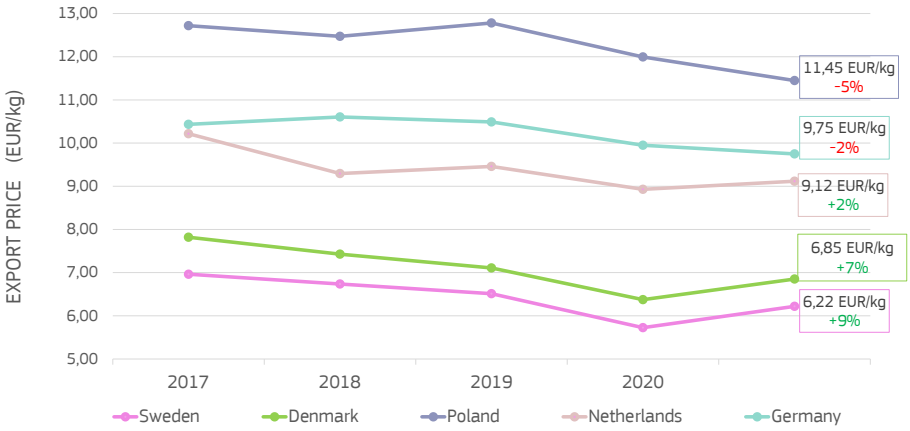
The overall value of intra-EU trade of salmon increased 18%, gaining almost EUR 1,23 billion from 2020, due to an increase in export prices from some of the major suppliers.

[91] *Ibidem.*
[92] *Ibidem.*

CHART 68

NOMINAL PRICES OF SALMON IN THE INTRA-EU TRADE BY THE TOP EXPORTERS IN 2021 AND % VARIATIONS 2021/2020

Source: EUMOFA elaboration of Eurostat-COMEXT data (online data code: DS-575274)



GROUNDFISH

In 2021, groundfish traded in the EU amounted to 835.920 tonnes, a 9% volume increase from 2020. They also increased 6% in value, reaching EUR 3,51 billion. Cod, by far the main groundfish species traded in the EU, drove the overall trend for this category.

COD

Cod is the second most valued species among all fishery and aquaculture products traded in the EU[93]. In 2021, 362.291 tonnes of cod with a value of EUR 2,14 billion were exported by EU countries to other Member States. This represented a 5% value increase of EUR 103 million from 2020 and a volume increase of 7% or 3.309 tonnes. The Netherlands[94] traded more than one third of the total in 2021, equal to 128.141 tonnes, which registered a 9% increase from 2020. These exports mainly included frozen cod to Spain and France, which in 2021 were sold in Spain at an average price of 5,10 EUR/kg which was 4% higher than 2020, and at 6,95 EUR/kg in France which was 6% lower than 2020.

Denmark and Sweden, major cod traders within the EU, followed at a distance with Denmark's 2021 exports increasing 10% from 2020 and reaching 74.801 tonnes, and Sweden's exports increasing 11% from 2020, to reach 62.270 tonnes.

Exports from Denmark mostly include fresh products destined for the Netherlands and France. Those for the Netherlands sold at 4,48 EUR/kg, 3% less than in 2020. Those for France sold at 7,92 EUR/kg, a decrease of 7% from 2020. Exports to France also include significant amounts of fillets, thus explaining the higher prices compared with exports destined for the Netherlands.

Sweden's exports of cod are almost exclusively destined for Portugal, where cod is mainly sold as dried and salted products, at average prices of 8,10 EUR/kg and 5,32 EUR/kg, respectively, in 2021 – both slightly lower than in 2020.

[93] *Ibidem.*
[94] *Ibidem.*

5/ LANDINGS IN THE EU

5.1 OVERVIEW

TOTAL EU

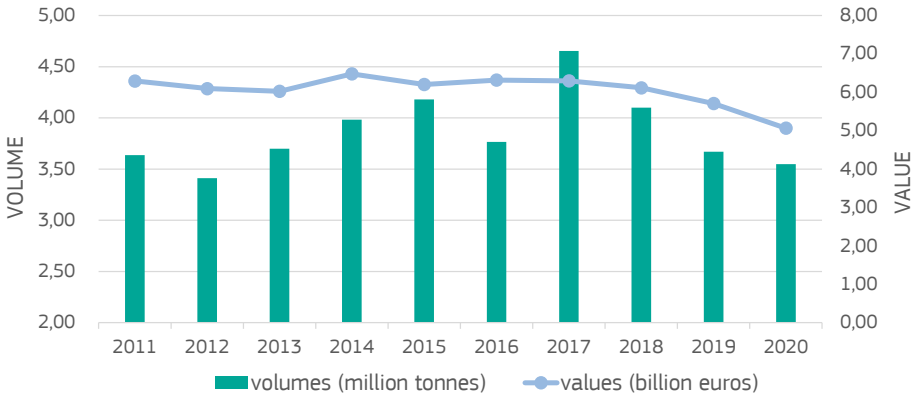
The value of 2020 landings in the EU was the lowest recorded in the decade analysed (2011-2020), both in nominal terms and in real terms.

Data on landings in the EU[95] cover the initial unloading of any fisheries products from a fishing vessel in each EU Member State[96]. In addition to landings of species destined for human consumption, it also included those destined for industrial use, as well as seaweed

In 2020, landings in the EU totalled 3,55 million tonnes with a value of EUR 5,36 billion. Of note, the value of 2020 landings in the EU was the lowest recorded in the decade analysed (2011-2020), in both nominal terms and real terms. This could be due to the effects of the outbreak of the COVID-19 pandemic, which caused a reduction in fishing efforts[97], as well as to the quotas, which were lower in 2020 than in 2019.

Compared with 2019, 2020 landings decreased by 3% or 120.939 tonnes in volume, and by 10% or EUR 595 million in value. The downward trend began in 2018, when the volume and the value had decreased by 12% and 2%, respectively, from 2017. With respect to 2011[98], 2020 landings were 2% or 88.672 tonnes lower in volume and 20% or EUR 1,23 billion lower in value in real terms.

CHART 69
TOTAL LANDINGS IN THE EU
Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data.
More details on the sources used can be found in the Methodological background.
Values are deflated by using the GDP deflator (base=2015).



From 2019 to 2020, landings of several main commercial species decreased in the EU, as can be seen in Chart 70.

The most significant drops in volume – those higher than 20% – concerned skipjack tuna and Atlantic horse mackerel. Skipjack tuna landings have decreased mainly due to a drop registered for frozen tuna landed in Spain, while decreased landings of Atlantic horse mackerel were mainly linked to decreased landings of fresh products in Portugal and frozen products in the Netherlands. Increases were reported for unit prices of both skipjack tuna and Atlantic horse mackerel from 2019 to 2020.

[95] In line with Eurostat's guidelines on the production and dissemination of statistical data by Commission services after the UK withdrawal from the EU, since the most recent reference period is year 2020, UK is excluded from the EU aggregations of each year. In addition, EU data include Croatia since 2013, date of the EU's enlargement to this country.
[96] Data regarding landings do not refer to landlocked countries (Czechia, Luxembourg, Hungary, Austria and Slovakia). The data analysed in this report cover products landed in EU by vessels of: EU Member States, Canada, Faroe Islands, Greenland, Kosovo, Iceland, Norway and the UK.
[97] EUMOFA has developed several reports analysing COVID-19 impact on the EU fishery sector, which can be consulted at this link https://www.eumofa.eu/en/market-analysis. Another comprehensive analysis made by the European Parliament in 2021 can be consulted at the link https://www.europarl.europa.eu/thinktank/en/document/IPOL_STU(2021)690880.
[98] In this report, value and price variations for periods longer than 5 years are analysed by deflating values using the GDP deflator (base=2015); for shorter periods, nominal value and price variations are analysed.

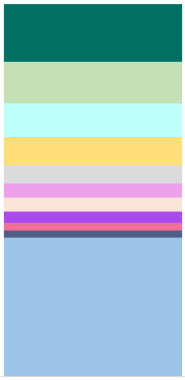
The trend associated with sandeel landings should also be noted. Landings in Denmark destined for industrial use, which had experienced a sharp decline in 2019, recorded a sharp increase from 2019 to 2020, rising from 122.218 tonnes to 240.104 tonnes. In any case, according to the EUMOFA market intelligence activities, sandeel does not constitute a "main commercial species" because of its limited market for human consumption. It thus falls under the aggregation "other groundfish".

In terms of value, the largest decreases were observed for skipjack tuna, Norway lobster and anchovy, as can be seen in Chart 71. In the case of anchovy, this was associated with a decrease in both the average unit price and the volumes landed, especially in Italy and Greece. As for Norway lobster, total landings in the EU dropped by 24% in volume, driven by decreases in all main landing countries. The highest decreases were in Ireland and Denmark.

CHART 70

MOST IMPORTANT MAIN COMMERCIAL SPECIES LANDED IN THE EU
VOLUME IN 2020, % OF TOTAL AND % VARIATIONS 2020 / 2019

Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data.
More details on the sources used can be found in the Methodological background.



	1.000 tonnes	% of total	% variation 2020/2019
Herring	547	15%	-8%
Sprat (=Brisling)	393	11%	-2%
Blue whiting	325	9%	-10%
Mackerel	270	8%	+14%
Sardine	173	5%	+8%
Hake	135	4%	-11%
Skipjack tuna	133	4%	-26%
Anchovy	104	3%	-9%
Atlantic horse mackerel	75	2%	-23%
Yellowfin tuna	69	2%	+2%
Others*	1326	37%	+2%

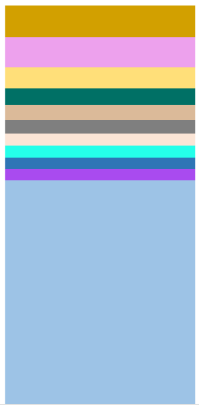
Total: 3,55 million tonnes

*Others largely include the EUMOFA aggregation "other groundfish" – mainly comprising sandeels that covered alone 7% of total volumes landed.

CHART 71

MOST IMPORTANT MAIN COMMERCIAL SPECIES LANDED IN THE EU
NOMINAL VALUE IN 2020, % OF TOTAL AND % VARIATIONS 2020 / 2019

Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data.
More details on the sources used can be found in the Methodological background.



	million euros	% of total	% variation 2020/2019
Shrimps*	419	8%	-3%
Hake	405	8%	-12%
Mackerel	290	5%	+8%
Herring	223	4%	+14%
Common sole	195	4%	-12%
Monk	185	3%	-14%
Skipjack tuna	161	3%	-24%
Norway lobster	160	3%	-23%
Squid	156	3%	-1%
Anchovy	151	3%	-25%
Others**	3.019	56%	-11%

Total: EUR 5,36 billion

* "Shrimps" includes *Crangon* spp., coldwater shrimps, deep-water rose shrimps, warmwater shrimps and miscellaneous shrimps.
**Among other main commercial species, the ones with the highest landing value in 2020 were sardine, clam and blue whiting, each covering 3% of the total.

TABLE 17
AVERAGE NOMINAL PRICES AT LANDING STAGE OF TOP MAIN COMMERCIAL SPECIES IN THE EU (EUR/KG)

Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data.
More details on the sources used can be found in the Methodological background.
Possible discrepancies in % changes are due to rounding.

Main commercial species	2016	2017	2018	2019	2020	2020/2019	2020/2016
Anchovy	1,68	1,67	1,51	1,75	1,46	-17%	-13%
Atlantic horse mackerel	0,77	0,88	0,96	0,90	1,04	+15%	+34%
Blue whiting	0,35	0,23	0,27	0,31	0,41	+34%	+19%
Clam	3,11	3,34	3,08	2,82	2,38	-16%	-23%
Cod	2,37	2,54	3,19	3,21	3,95	+23%	+67%
Crab	1,92	2,27	2,40	2,59	2,22	-15%	+15%
European plaice	1,70	1,88	2,52	2,44	2,62	+8%	+54%
Haddock	2,01	2,11	2,13	2,08	1,79	-14%	-11%
Hake	3,21	3,30	3,18	3,05	3,01	-2%	-6%
Herring	0,51	0,36	0,35	0,33	0,41	+24%	-20%
Mackerel	0,82	0,82	0,90	1,13	1,08	-5%	+31%
Monk	4,88	4,62	5,28	5,34	4,93	-8%	+1%
Mussel *Mytilus* spp.	0,52	0,24	0,23	0,25	0,29	+17%	-44%
Norway lobster	10,02	9,30	9,72	9,27	9,37	+1%	-6%
Sardine	0,84	0,82	0,96	0,98	0,86	-12%	+2%
Scallop	3,05	2,77	2,65	2,69	2,81	+5%	-8%
Seaweed and other algae	0,07	0,08	0,09	0,07	0,07	-8%	-5%
Shrimp *Crangon* spp.	7,37	7,76	3,81	2,89	3,60	+24%	-51%
Skipjack tuna	1,02	1,11	1,08	1,18	1,22	+3%	+19%
Sprat (=Brisling)	0,27	0,20	0,22	0,24	0,23	-3%	-15%
Yellowfin tuna	4,11	4,09	1,93	2,12	1,82	-14%	-56%

BY MEMBER STATE

In 2020, the highest landed volumes were recorded in Denmark, where landings mainly consisted of sprat, sandeels and herring. It was followed by Spain, where almost all EU landings of skipjack tuna take place. Landings in Spain also registered the highest value, mainly due to hake, and skipjack and yellowfin tuna.

From 2019 to 2020, the most important volume decreases were seen: in Spain, which registered a fall of 10% or 80.326 tonnes due to drop in landings of skipjack tuna; in Italy, which recorded a drop of 24% or 43.525 tonnes due to sardine and anchovy; and in France, which had a reduction of 10% or 29.279 tonnes because of decreased landings of blue whiting and molluscs. In contrast, significant increases in the volumes landed were seen in Ireland and Denmark. Ireland recorded an increase of 60.404 tonnes or 6%, mainly due to an increase in landings of blue whiting and mackerel, while Denmark registered an increase of 47.687 tonnes or 6%, mainly due to higher landings of sandeel.

As for value changes, Spain and Italy registered the most significant decreases. In both countries, the value of almost all major species landed decreased, causing an overall value drop of 13% or EUR 250 million in Spain and of 27% or EUR 243 million in Italy.

CHART 72

VOLUMES OF LANDED PRODUCTS IN MAIN EU COUNTRIES IN 2019 AND % VARIATIONS 2020 / 2019

Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data.
More details on the sources used can be found in the Methodological background.

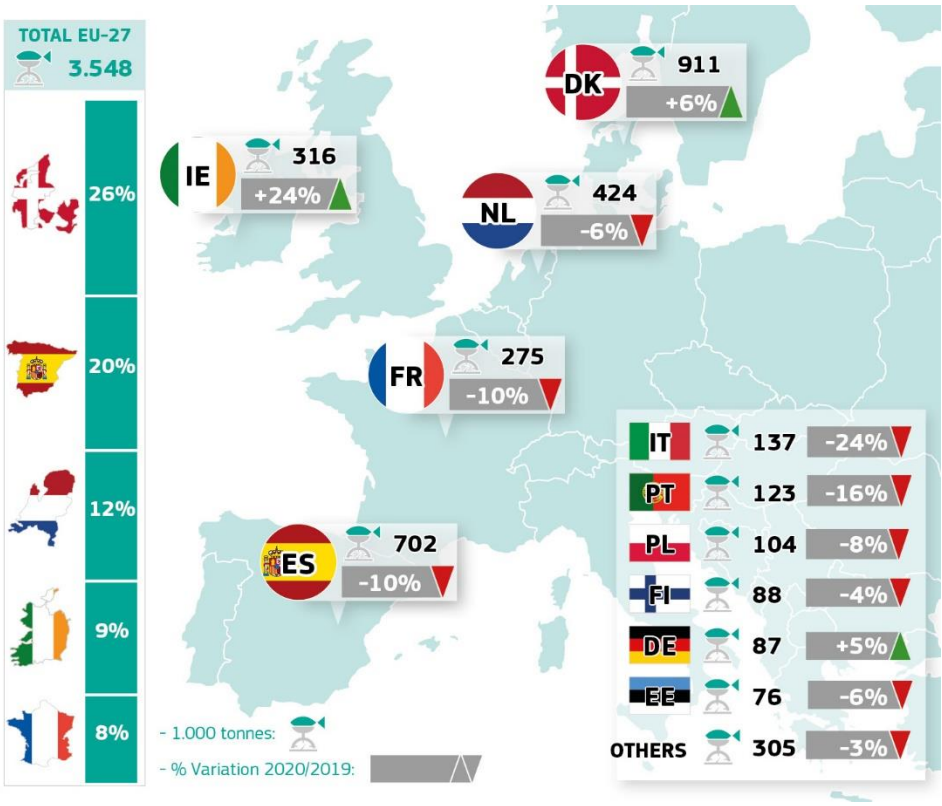
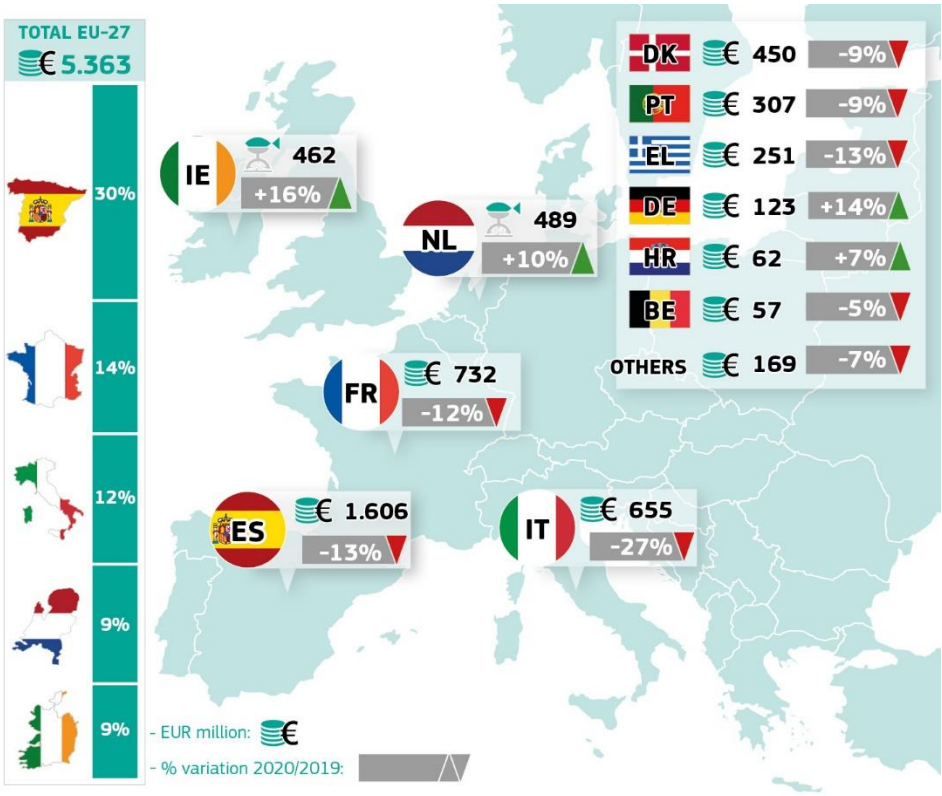


CHART 73

NOMINAL VALUES OF LANDED PRODUCTS IN MAIN EU COUNTRIES IN 2019 AND % VARIATIONS 2020 / 2019

Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data.
More details on the sources used can be found in the Methodological background.



5.2 ANALYSIS BY MAIN SPECIES

SMALL PELAGICS

In 2020, landings of small pelagics in the EU amounted to 1,61 million tonnes and EUR 1,02 billion. In terms of volumes, this was 67.090 tonnes or 4% lower than 2019, and 380.505 tonnes or 21% lower than the 10-year peak registered in 2015. The overall value also decreased from 2019 to 2020, dropping by 3% or EUR 36 million.

Compared with 10 years before, the volume decreased by 200.644 tonnes or 11%, and the value in real terms decreased by EUR 201 million or 32%, touching the lowest value in the decade analysed in real terms.

Five of the small pelagics' main commercial species – namely herring, sprat, mackerel, sardine and anchovy – together accounted for 42% of total landed volumes in 2020 for all commercial species.

HERRING

In 2020, herring, the most landed main commercial species in the EU, totalled 547.071 tonnes, which accounted for 15% of total volumes. This represented a drop of 50.645 tonnes or 8% from 2019, while compared with 2018 which was a 10-year peak, this represented a drop of 26% or 193.741 tonnes.

In value, herring's landings reached EUR 223 million in 2020, which represented an increase of EUR 27 million or 14% from 2019. This value increase was driven by a 24% growth in herring's average landing price in the EU, which rose from 0,33 EUR/kg to 0,41 EUR/kg.

Almost 30% of herring volumes was landed in Denmark, 21% in the Netherlands and 14% in Finland, with most of the rest landed in other northern EU Member States. Also, to note, most herring landings in EU countries are destined to be sold fresh. Only landings in the Netherlands will be processed and sold as frozen products. "

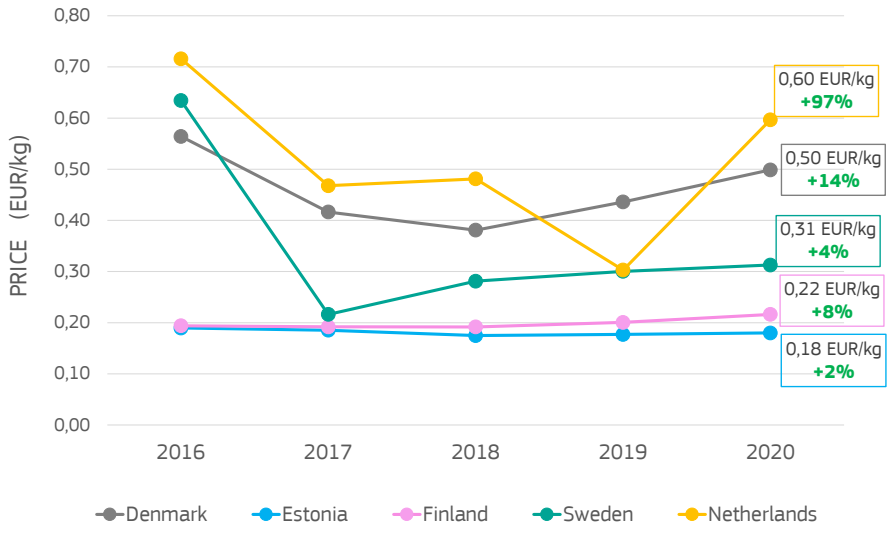
The price increase at EU level was driven by price increases in all major landing countries, especially in the Netherlands where the price doubled against a 17% decrease of the volumes landed.

It should be considered that landings of herring originate from different stocks, including North Sea stock, Atlantic spring spawning stock and Baltic stock. Each of these has unique characteristics that cater to specific market preferences. Thus they bring different prices on the market. Another factor, especially relevant to Denmark and Sweden, is that the share of landings destined for industrial use and those destined for human consumption vary from year to year, resulting in significant price differences.

CHART 74

AVERAGE NOMINAL PRICES OF HERRING LANDED IN MAIN EU MEMBER STATES (EUR/KG)

Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data. More details on the sources used can be found in the Methodological background.



SPRAT

Landings of sprat in the EU amounted to 393.094 tonnes and EUR 91 million in 2020. This represented a 2% volume decline from 2019, reaching the lowest level since 2013. The average price also decreased by 3% from 0,24 EUR/kg to 0,23 EUR/kg.

In 2020, the total value of sprat decreased by 5% or EUR 5 million from the previous year. Denmark, by far the main landing country of this species, accounted for 61% of EU volume in 2020, mainly consisting of products destined for the fishmeal industry. From 2019 to 2020, the value of sprat landed in Denmark decreased by 10%, reaching EUR 54 million, as the average price dropped 11%, from 0,25 EUR/kg to 0,22 EUR/kg. However, at the same time, the volume increased 2%, passing from 235.529 tonnes to 240.548 tonnes.

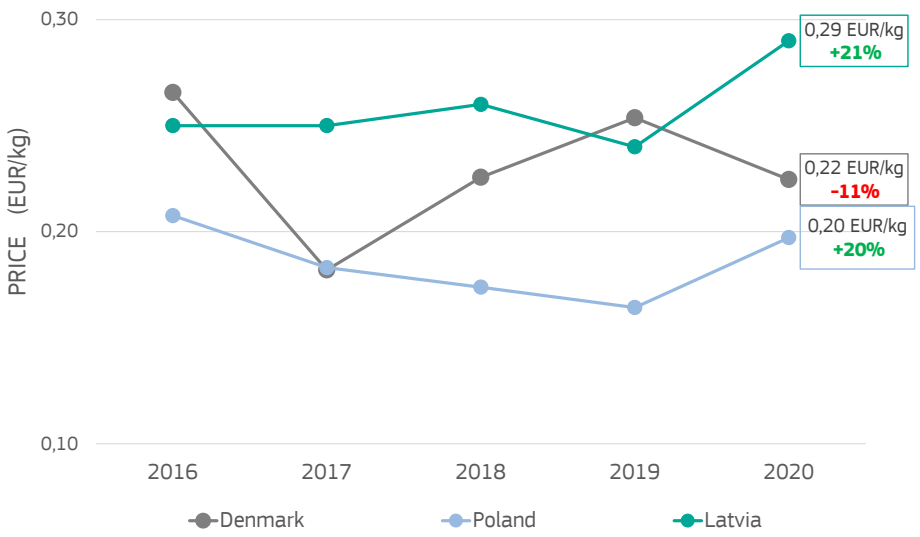
Landings of sprat in Poland and Latvia followed far behind Denmark. Compared with 2019, the volume of sprat landings in Poland declined 15% in 2020, from 52.475 tonnes to 44.673 tonnes, while the value increased 2%, from EUR 8,6 million to EUR 8,8 million.

In Latvia, sprat landings decreased by 18% in volume, from 39.557 tonnes to 32.496 tonnes, while registering a slight 1% decline in value, from EUR 9,5 million to EUR 9,4 million.

CHART 75

AVERAGE NOMINAL PRICES OF SPRAT LANDED IN MAIN EU MEMBER STATES (EUR/KG)

Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data. More details on the sources used can be found in the Methodological background.



MACKEREL

In 2020, the landings of mackerel in the EU totalled 269.606 tonnes worth EUR 290 million. Compared with 2019, this was a rise of 14% in volume and 8% in value.

The largest landing countries for mackerel are Ireland, the Netherlands and Spain, which in 2020 were responsible for 75% of the EU total in volume and 77% of the total in value.

Ireland is responsible for almost one third of mackerel landed in the EU, which in 2020 totalled 79.254 tonnes with a total value of EUR 103 million. Ireland experienced a significant growth of 53% in volume and 38% in value from 2019. The average price experienced a 9% decrease, dropping from 1,44 EUR/kg to 1,30 EUR/kg.

The Netherlands came next, landing 66.960 tonnes valued at EUR 70 million. This represented a 37% increase in value and 51% increase in volume from 2019, and was related to the price dropping 14%, from 1,07 EUR/kg to 0,93 EUR/kg.

In 2020, 54.746 tonnes of mackerel were landed in Spain with a value of EUR 51 million. This represented an increase of 11% in volume, a decrease of 4% in value, and a price that decreased 9% from 1,15 EUR/kg to 1,04 EUR/kg.

SARDINE

In 2020, landings of sardine in the EU totalled 172.608 tonnes worth EUR 148 million. Compared with 2019, they increased by 8% in volume interrupting a downward trend that started in 2017. However, they decreased by 5% in value and the average price decreased by 12%, from 0,98 EUR/kg to 0,86 EUR/kg, likely due to the increased supply.

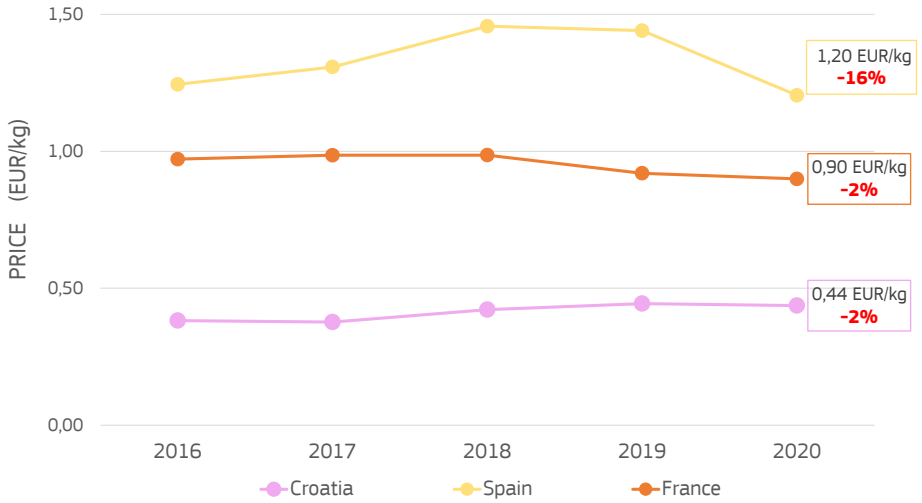
With landings totalling 50.445 tonnes with a value of EUR 22 million, Croatia covered 29% of total EU landings in volume and 15% in value. Compared with 2019, landings of sardine in Croatia increased by 12% in volume and 10% in value.

The EU general volume increase trend was also driven by other countries, namely France and Spain, which rank second and third among the EU Member States landing sardine. In 2020, landings of sardine in France represented 16% of total volume and were sold at an average price of 0,90 EUR/kg. From 2019 to 2020, volumes and values increased by 15% and 12%, respectively: the volume increased from 24.067 tonnes to 27.663 tonnes, and the value grew from EUR 22 million to EUR 25 million. As for Spain, its sardine landings totalled 26.801 tonnes in 2020, thus increasing 4% or 1.152 tonnes from the previous year. Due to a 16% price drop, their value decreased to EUR 32 million, which was 13% or EUR 5 million lower than in 2019.

CHART 76

AVERAGE NOMINAL PRICES OF SARDINE LANDED IN MAIN EU MEMBER STATES (EUR/KG)

Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data. More details on the sources used can be found in the Methodological background.



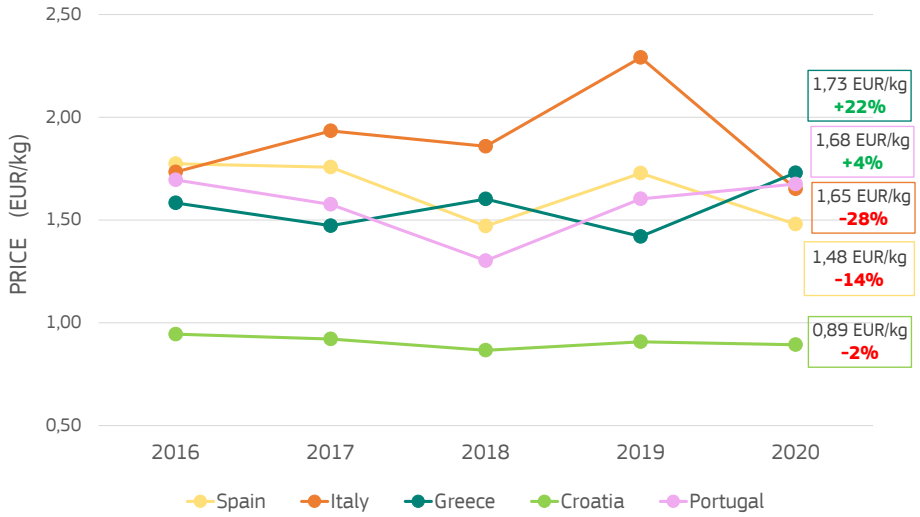
ANCHOVY

In 2020, anchovy landings continued a downward trend that began in 2019, dropping 9% from 2019 to 2020 and touching their lowest level in six years at 103.599 tonnes. In value terms, landings dropped to their lowest level in 10 years in both nominal and real terms. The nominal value recorded in 2020 was EUR 150 million, which represented a 25% decrease from the previous year. In the same period, the average price decreased 18%, from 1,75 EUR/kg to 1,46 EUR/kg.

The EU downward trend was driven by Spain, which is the main country in the EU for anchovy landings. As such, it accounted for 47% of total volume and 48% of total value of anchovy landings in the EU in 2020. Compared with 2019, the volume of Spain's landings increased 2%, from 47.776 tonnes to 48.607 tonnes, while their value decreased 13%, from EUR 83 million to EUR 72 million.

The other main EU countries for landings of anchovy – Italy, Greece and Croatia – together contributed 43% of total volume in 2020. While Italy and Greece reported decreases in both volume and value from 2019, Croatia had opposite trends. In particular, Italy suffered a remarkable 24% drop in volume, from 31.068 tonnes to 23.736 tonnes, and a 45% fall in value, from EUR 71 million to EUR 39 million. The price also decreased by 28%, from 2,29 EUR/kg to 1,65 EUR/kg.

CHART 77
AVERAGE NOMINAL PRICES OF ANCHOVY LANDED IN MAIN EU MEMBER STATES (EUR/KG)
Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data. More details on the sources used can be found in the Methodological background.



GROUNDFISH

After suffering significant drops in 2018 and 2019, the EU's groundfish landings increased 8% in 2020. They rose from 776.140 tonnes to 835.315 tonnes, registering an 8% volume increase. As for values, the downward trend continued in 2020, dropping EUR 36 million to EUR 927 million, which signified a 4% loss from 2019.

As in the previous years, the evolution of groundfish landings in the EU in volume terms was linked to sandeel landings. In 2020, they almost doubled in volume, from 122.218 tonnes to 240.104 tonnes, and more than doubled in value, from EUR 32 million to EUR 66 million. The growth was mainly due to the increased landings in Denmark mentioned earlier in this chapter.

BLUE WHITING

Blue whiting is the most landed main commercial species in the EU among groundfish. In 2020, it accounted for 39% of total volumes of this commodity group, followed by hake and cod, which accounted for shares of 16% and 3%, respectively.

It is worth noting that most of the blue whiting landings in the EU are not destined for human consumption, with the exception of Mediterranean catches. Indeed, the majority of landings of this species is destined for the production of fishmeal and fish oil[99].

In 2020, landings of blue whiting in the EU dropped 10%, reaching 325.446 tonnes, thus continuing the downward trend seen in 2019 that had followed the 2018 peak. On the other hand, the value of these landings increased by 21%, from EUR 111 million to EUR 134 million. The average price registered a 34% increase, rising from 0,31 EUR/kg to 0,41 EUR/kg.

In 2020, a majority, or 88% of EU blue whiting landings, was registered in the Netherlands, Ireland and Denmark, which accounted for 36%, 27% and 25%, respectively, of the total volume of blue whiting landings in the EU.

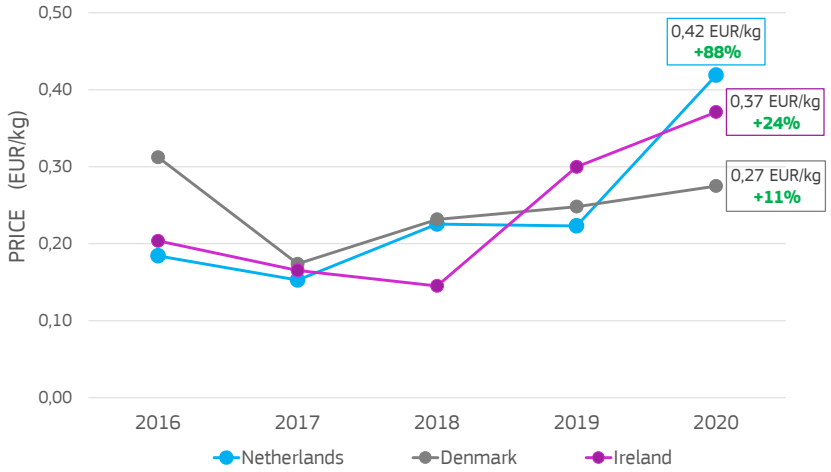
The downward trend in volume at EU level was driven by Denmark. Indeed, compared with 2019, blue whiting landings in Denmark decreased by 35%, from 124.667 tonnes to 81.647 tonnes, while the values dropped by 27%, from EUR 31 million to EUR 22 million. The average price also increased from 0,25 EUR/kg to 0,27 EUR/kg.

The Netherlands, the largest landing country, experienced a 12% drop in volume from 132.968 tonnes in 2019 to 116.347 in 2020. It also had a sharp increase in values, passing from EUR 30 million to EUR 49 million, due to the average price growing from 0,22 EUR/kg to 0,42 EUR/kg, amounting to an 88% increase.

Ireland reported the largest volume increase, passing from 65.407 tonnes in 2019 to 87.698 tonnes in 2020.

[99] More information on this can be found in the EUMOFA study on EU fishmeal and fish oil production available at the link https://www.eumofa.eu/documents/20178/432372/Fishmeal+and+fish+oil.pdf/d3c6e416-6b50-c68b-af61-799022da2404?t=1631084568023.

CHART 78
AVERAGE NOMINAL PRICES OF BLUE WHITING LANDED IN MAIN EU MEMBER STATES (EUR/KG)
Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data. More details on the sources used can be found in the Methodological background.



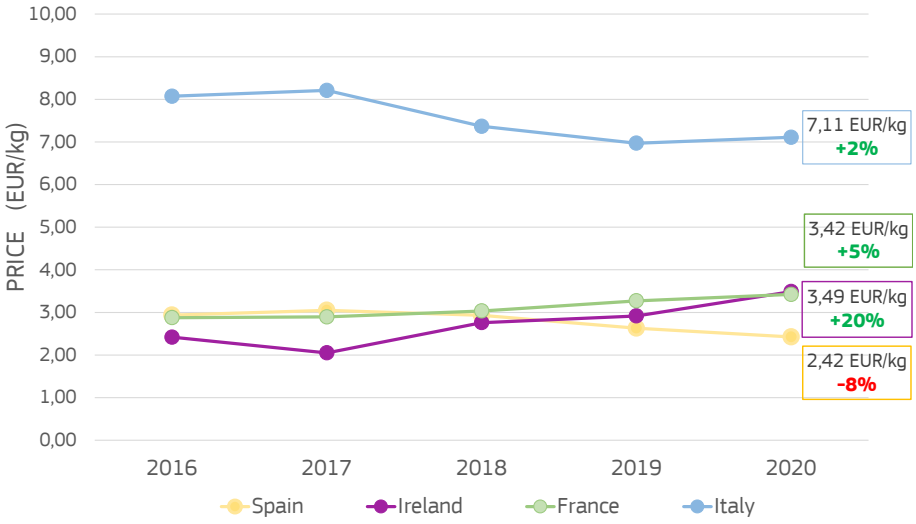
HAKE

In 2020, the 134.690-tonne volume of hake landings in the EU was 11% lower than in 2019. The average price declined by 2%, from 3,05 EUR/kg to 3,01 EUR/kg, and with it, the total value of hake landings dropped by 12%, to EUR 405 million. In terms of volume, main species landed were European hake (*Merluccius merluccius*), which accounted for 60% of the total, followed by Argentine hake *(Merluccius hubbsi*) which covered one third of the total.

In 2020, Spain accounted for two thirds of total landings of hake in the EU, with almost equal shares of landings of European and Argentine hake. In total, after reaching a 10-year peak in 2019, the volume of hake landings in Spain amounted to 89.052 tonnes in 2020, with a value of EUR 216 million. These represented decreases of 14% in volume and 21% in value from 2019.

Ireland, which ranked second among hake landing countries, landed 18.251 tonnes of hake (almost entirely European hake) in 2020, which was a 13% decrease from 2019. As for the value, it recorded a sharp 35% increase from 2019, reaching EUR 64 million.

CHART 79
AVERAGE NOMINAL PRICES OF HAKE LANDED IN MAIN EU MEMBER STATES (EUR/KG)
Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data. More details on the sources used can be found in the Methodological background.



COD

In 2020, landings of cod in the EU reached to 24.574 tonnes worth EUR 97 million. These amounted to drops of 39% in volume and 25% in value from 2019, reaching the lowest levels of the last 10 years in both volume and value. The average price increased by 23% from 2019 to 2020, rising from 3,21 EUR/kg to 3,95 EUR/kg.

Germany and Denmark are the largest landing Member States for cod, covering shares of 29% and 27%, respectively, of the EU total volumes. They are followed by Spain and Portugal, which account for 15% and 12% of the total, respectively.

The landings in Denmark drove the overall downward trend at EU level, since its volume and value both decreased by around 40% compared with 2019 – dropping from 11.167 tonnes to 6.715 tonnes and from EUR 41 million to EUR 26 million.

CRUSTACEANS

In 2020, landings of crustaceans in the EU totalled 103.908 tonnes worth EUR 722 million, which were the lowest levels in eight years.

SHRIMPS

Shrimps are the highest valued product landed in the EU. After reaching a 10-year peak in 2018, they dropped in both volume and value in 2019. Their downward trend continued in 2020 when landings totalled 56.519 tonnes, which was a 1% decrease from 2019, and value dropped to EUR 419 million, which was 3% lower than in 2019.

The main EU countries where shrimps are landed vary depending on the species.

Crangon shrimp is by far the most landed shrimp. In 2020, landings of this species accounted for 46% of the volumes of shrimps landed in the EU, but only 22% of the total values. It was mainly landed in the Netherlands, where it totalled 15.682 tonnes worth EUR 51 million. From 2019, landed volumes increased by 12%, while values registered a sharp 31% increase.

Other types of coldwater shrimps were mainly landed in Denmark and Sweden. Compared with 2019, Denmark's 2020 landings nearly doubled in volume and increased by 4% in value, totalling 2.507 tonnes worth EUR 9 million. Sweden, after dropping to its lowest point in 10 years in 2019, showed an increase of 17% in volume and of 8% in value in 2020, reaching 1.277 tonnes and EUR 14 million.

Italy, Spain and Greece, the three main landing countries for deep-water rose shrimps (*Parapenaeus longirostris*), together covered more than 90% of the total landed volumes in 2020. Compared with 2019, landings in Italy decreased by 24%, from 9.011 tonnes to 6.841 tonnes, and their value decreased by 27%, from EUR 62 million to EUR 45 million. In the same period, Spain's volume decreased by 9%, from 5.145 tonnes to 4.680 tonnes, and value decreased a slight 2%, from EUR 46 million to EUR 45 million. Greece, on the other hand, recorded a 6% increase in volume, from 3.387 tonnes to 3.578 tonnes, but did not register any significant change in value which, as the previous year, amounted to EUR 15 million.

The group "miscellaneous shrimps" mainly includes giant red shrimp (*Aristaeomorpha foliacea*), blue and red shrimp (*Aristeus antennatus*), and striped red shrimp (*Aristeus varidens*). Italy and Spain together accounted for around 90% of all these shrimps' landings recorded in the EU in 2020, both in volume and value. While landings in Italy mainly included giant red shrimp, those in Spain mainly comprised striped red shrimps, and blue and red shrimps.

In Italy, landings of "miscellaneous shrimps" amounted to 2.873 tonnes worth EUR 78 million, dropping 28% in volume and 10% in value from 2019. Spain landed 2.977 tonnes worth EUR 62 million, which represented a 6% decrease in volume and an 8% decrease in value compared with 2019.

CHART 80

LANDINGS OF SHRIMPS IN THE EU IN 2020

Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data.
More details on the sources used can be found in the Methodological background.

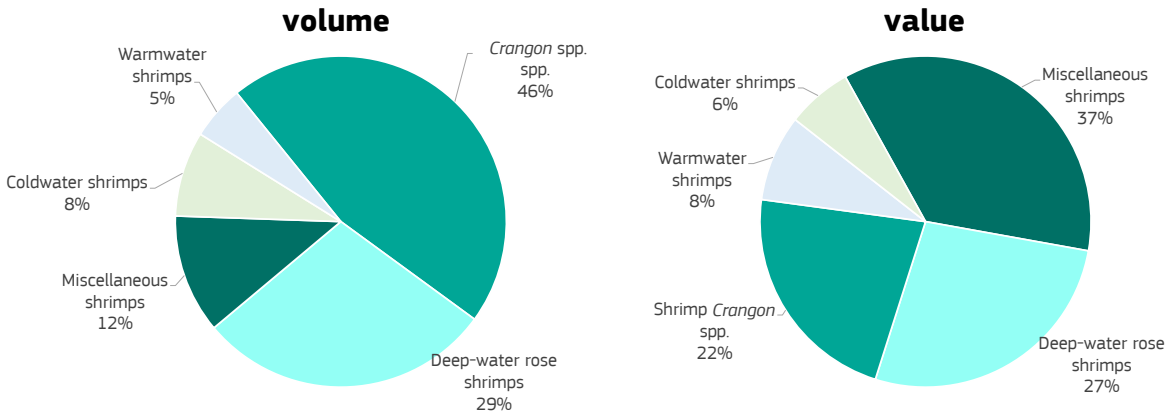


TABLE 18

AVERAGE NOMINAL PRICES OF SHRIMPS IN THE EU COUNTRIES WHERE MOST LANDINGS WERE RECORDED IN 2020 (EUR/KG)

Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data.
More details on the sources used can be found in the Methodological background.

Main commercial species	Member State	2016	2017	2018	2019	2020	2020/2019	2020/2016
Shrimp *Crangon* spp.	Netherlands	6,98	7,28	3,34	2,77	3,25	+17%	-53%
	Germany	7,66	7,99	3,92	2,72	3,70	+36%	-52%
Coldwater shrimps mainly Northern prawn (*Pandalus borealis*)	Denmark	4,65	4,44	5,41	4,97	3,55	-29%	-24%
	Sweden	8,51	9,69	10,37	11,92	10,97	-8%	+29%
Deep-water rose shrimps (*Parapenaeus longirostris*)	Italy	6,33	6,20	5,77	6,84	6,56	-4%	+4%
	Spain	10,47	10,35	8,40	8,95	9,64	+8%	-8%
	Greece	2,28	3,80	4,58	4,36	4,11	-6%	+80%
Warmwater shrimps mainly caramote prawn (*Penaeus kerathurus*)	Italy	17,40	15,45	14,99	15,60	15,92	+2%	-9%
Miscellaneous shrimps mainly giant red shrimp (*Aristaeomorpha foliacea*), blue and red shrimp (*Aristeus antennatus*), and striped red shrimp (*Aristeus varidens*)	Italy	21,43	21,61	20,25	21,73	27,15	+25%	+27%
	Spain	16,96	17,03	23,93	21,38	20,97	-2%	+24%

TUNA AND TUNA-LIKE SPECIES

In 2020, the volume of tuna and tuna-like species landed in the EU dropped by 16% compared with 2019, reaching 299.891 tonnes. Their value also dropped, decreasing 14%, from EUR 797 million to EUR 682 million.
Spain is the country where most tuna is landed in the EU, and skipjack is by far the main tuna species landed. In 2020, landings of skipjack tuna covered 44% of total volumes of tuna and tuna-like species landed in the EU and almost half of the total if considering Spain only.

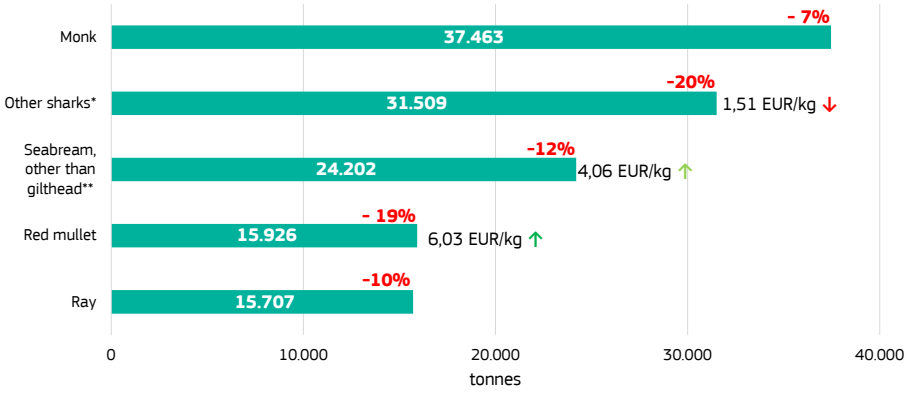
SKIPJACK TUNA

Landings of skipjack tuna in 2020 totalled 132.664 tonnes and EUR 161 million, amounting to decreases of 26% in volume and 24% in value from 2019.
Of the total volume, 97% was landed in Spain and mainly included frozen products. Spain thus determined the overall EU trend. In 2020, it totaled 128.384 tonnes worth EUR 153 million, with 25% decreases in both volume and value from 2019. The average price increased 2%, from 1,18 EUR/kg to 1,20 EUR/kg.

OTHER MARINE FISH

In 2020, the landings of the group "Other marine fish" in the EU reached 286.578 tonnes worth EUR 797 million. Chart 81 provides an overview of the landings of main commercial species belonging to this group.

CHART 81
MAIN SPECIES OF "OTHER MARINE FISH": VOLUME LANDED IN 2020, % VARIATIONS 2020/2019 AND NOMINAL PRICES AT LANDING STAGE
Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main). More details on the sources used can be found in the Methodological background.



The grouping "Other sharks" mainly includes blue shark (61% of the total), small-spotted catshark (17%), smooth-hounds (9%), shortfin mako (8%), and tope shark, catsharks nei and catsharks, nursehounds nei (1% each).

**The grouping "Seabream, other than gilthead" mainly includes bogue (35% of the total), black seabream (14%), common pandora (11%), white seabream (6%), axillary seabream (6%), red porgy (5%), blackspot seabream (4%), large-eye dentex, ,and saddled seabream, sand steenbras, common dentex, annular seabream, common two-banded seabream (2%) each) and dentex nei,red pandora and pink dentex (1%).

MONK

In 2020, landings of monk in the EU reached 37.463 tonnes, which was a 7% decrease from 2019. Its value amounted to EUR 185 million, which was 14% lower than in 2019. Of the total volume, 44% was reported under "monkfishes nei[100]" (*Lophius spp*), 26% under "blackbellied angler" (*Lophius budegassa*), and 21% under "angler" (*Lophius piscatorius*). The rest was reported under "anglerfishes nei" (*Lophiidae*) and "American angler" (*Lophius americanus*).
Ireland, Spain and France together accounted for 87% of total volumes of monk landed in 2020. All three countries saw decreased monk landings from 2019 to 2020, both in volume and value terms.
As shown in Chart 82, in France and Spain, the average prices were similar in both their levels and trends. The price was lower in Ireland, where most monk landings

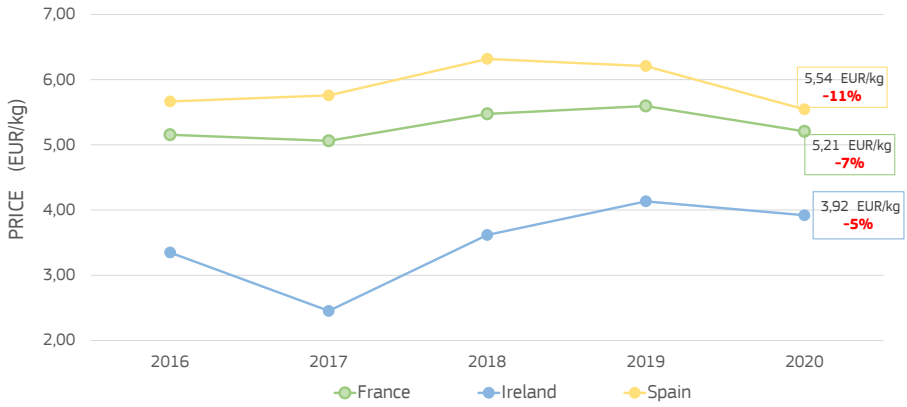
[100] Not elsewhere included.

are recorded under fresh gutted "anglerfishes nei", in France under fresh gutted "monkfishes nei", and in Spain under fresh whole "blackbellied angler".

CHART 82

AVERAGE NOMINAL PRICES OF MONK LANDED IN MAIN EU MEMBER STATES (EUR/KG)

Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data. More details on the sources used can be found in the Methodological background.



SEAWEED AND OTHER ALGAE

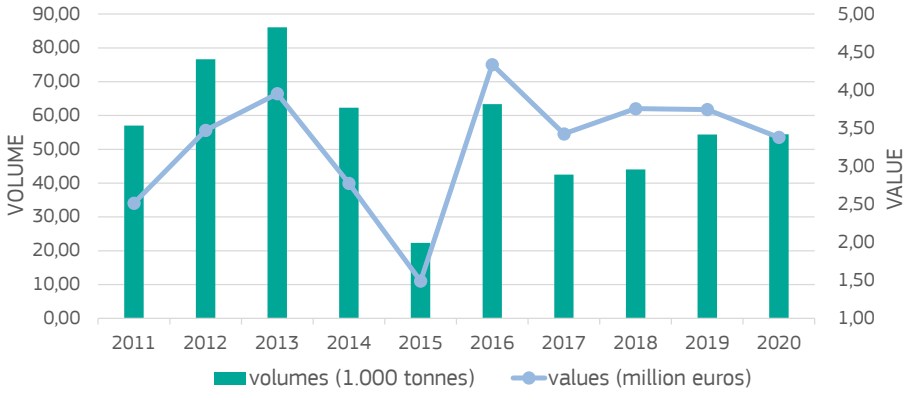
Seaweeds and other algae account for minor shares of total landings of fishery products in the EU.

In 2020, their landings settled at 54.451 tonnes and EUR 4 million, almost entirely landed in France, with Spain following behind.

CHART 83

TOTAL LANDINGS OF SEAWEED AND OTHER ALGAE IN THE EU

Source: EUMOFA, based on EUROSTAT (online data code: fish_ld_main) and national sources' data. More details on the sources used can be found in the Methodological background



From 2019 to 2020, the value of these landings decresed by 8%, driven by the decrease experienced in Spain.

There is a clear price difference between landings of these species in France and in Spain. In 2020, the average price in France was 0,04 EUR/kg, while in Spain it was 0,59 EUR/kg. Tangle (*Laminaria digitata*), the most common seaweed landed in France, is harvested offshore. It is used in manufacturing alginic acid, mainly for industrial uses, such as comestics.

Data for Spain do not allow for distinguishing the most landed seaweed in the country.

6/ AQUACULTURE[101]

6.1 OVERVIEW

TOTAL EU

In 2020, EU[102] aquaculture production reached a total of 1,09 million tonnes, with a value of EUR 3,67 billion. This represented a 3% or 38.309-tonne decrease in volume, and a 1% or EUR 27 million decrease in value compared with 2019.

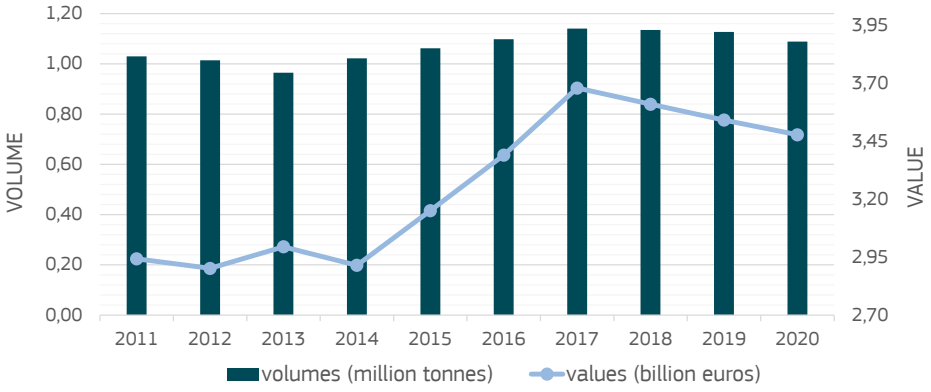
Mussel was the most produced species by volume, while trout recorded the highest overall value.

EU aquaculture production decreased from 2019 to 2020, as it did between 2018 and 2019.

Looking at the decade perspective[103], total EU aquaculture production increased by 58.595 tonnes or 6% from 2011 to 2020, while its value grew a noteworthy 18% in real terms, which meant an increase of almost EUR 535 billion. The value increase during the 2011–2020 decade was due to increased production of high value species, such as trout, salmon, seabass and bluefin tuna, combined with the strong price increase of some major species, such as gilthead seabream, oyster, clam and seaweed that entered the market with booming production during the last decade. Price increases were partially connected to an increase in demand, but were also related to other factors that came into play, such as a supply decrease linked to high mortality of some species such as oysters, and the increased production of products with higher quality, such as organic products. Indeed, based on EU and national sources, the total 2020 organic aquaculture production in the EU[104] was estimated at 86.180 tonnes[105] which accounted for 8% of the total EU aquaculture production. It should also be noted that the decade's 6% volume boost combined with a more significant increase of demand contributed to price increases and, in turn, to the growth of the overall value of EU aquaculture production. However, 2018, 2019 and 2020 – the last three years of the decade under analysis – saw a decline in the value of production of some high-valued species, especially oyster and clam, both in nominal and real terms.

CHART 84
AQUACULTURE PRODUCTION IN THE EU

Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a), FAO, national administrations and FEAP data. Details on the sources used can be found in the Methodological background.
Values are deflated by using the GDP deflator (base=2015).



[101] The main source of data for EU aquaculture production is EUROSTAT. Data were integrated using FAO, FEAP and national sources for several Member States: more details on the integrations made and on data collected for each country can be found in the Methodological background.
[102] In line with Eurostat's guidelines on the production and dissemination of statistical data by Commission services after the UK withdrawal from the EU, since the most recent reference period is year 2020, UK is excluded from the EU aggregations of each year. In addition, EU data include Croatia since 2013, date of the EU's enlargement to this country.
[103] In this report, value and price variations for periods longer than 5 years are analysed by deflating values using the GDP deflator (base=2015); for shorter periods, nominal value and price variations are analysed.
[104] EUMOFA has published a report analyzing EU organic aquaculture, which is available at the link: https://www.eumofa.eu/en/market-analysis
[105] Source: Eurostat (online data code: org_aqtspec)

Almost half – some 48% – of EU aquaculture production volume consists of bivalves and other molluscs and aquatic invertebrates, mainly due to the production of mussel in Spain and oyster in France. Salmonids and the grouping "other marine fish" follow, with salmonids including mainly trout and salmon, and "other marine fish" including mainly gilthead seabream and European seabass.

In 2020, more than half of the EU trout volume was produced in France, Italy and Denmark, while 75% of salmon from aquaculture in EU was produced in Ireland. As for seabass and seabream, the largest producer is by far Greece, which alone was responsible for 66% of gilthead seabream and 50% of European seabass EU production.

Freshwater species, also relevant for EU aquaculture production, largely comprise carps which are produced mainly in Poland, Czechia and Hungary.

In the period 2016 to 2020, other groups of species, when combined, registered only around 37.000 tonnes of annual production on average.

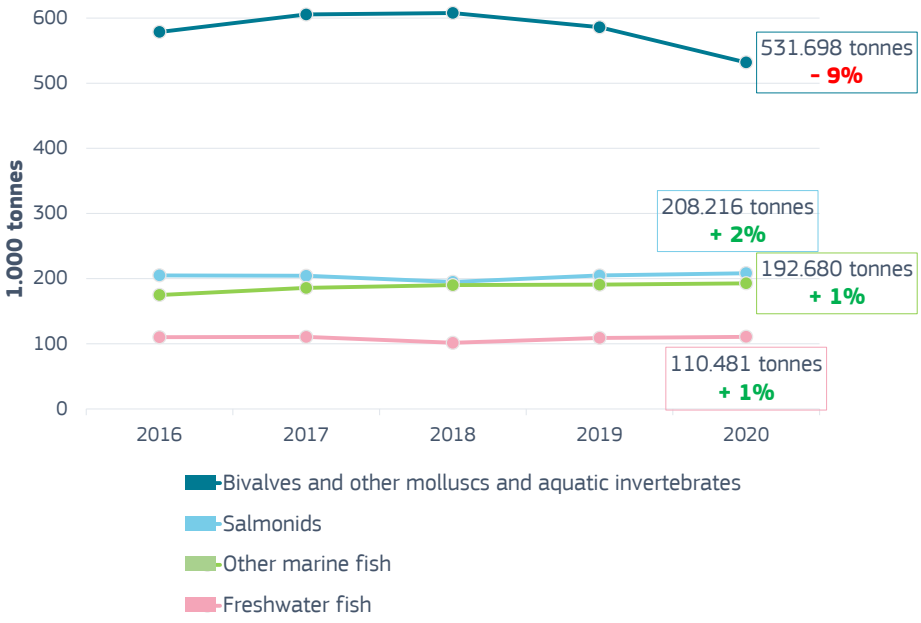
As shown in Charts 85 and 86 below, there was a 9% decline in bivalve production in both volume and value terms from 2019 to 2020. This was mainly due to a drop in mussel production in Spain. Indeed, the report "Impacts of the COVID-19 pandemic on EU fisheries and aquaculture[106]" suggests that mussel production in Spain (the main producing country) was negatively impacted, with main producers reporting negative impacts on production performance and across the value chain due to a drop in out-of-home consumption. This was confirmed by Euromonitor estimates, which found a more than 40% drop in mollusc sales through foodservices from 2019 to 2020.

The other groups recorded slight increases in both volume and value terms. Freshwater fish, while recording a 1% increase in production volume but also a 4% decrease in value.

CHART 85

VOLUMES OF MOST PRODUCED COMMODITY GROUPS FARMED IN THE EU AND % VARIATIONS 2020/2019

Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a) and FAO data. More details on the sources used can be found in the Methodological background.



[106] The report is available at the link https://op.europa.eu/en/publication-detail/-/publication/07e5b4e2-1116-11ec-9151-01aa75ed71a1.

CHART 86

NOMINAL VALUES OF MOST VALUED COMMODITY GROUPS FARMED IN THE EU AND % VARIATIONS 2020/2019

Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a) and FAO data. More details on the sources used can be found in the Methodological background.

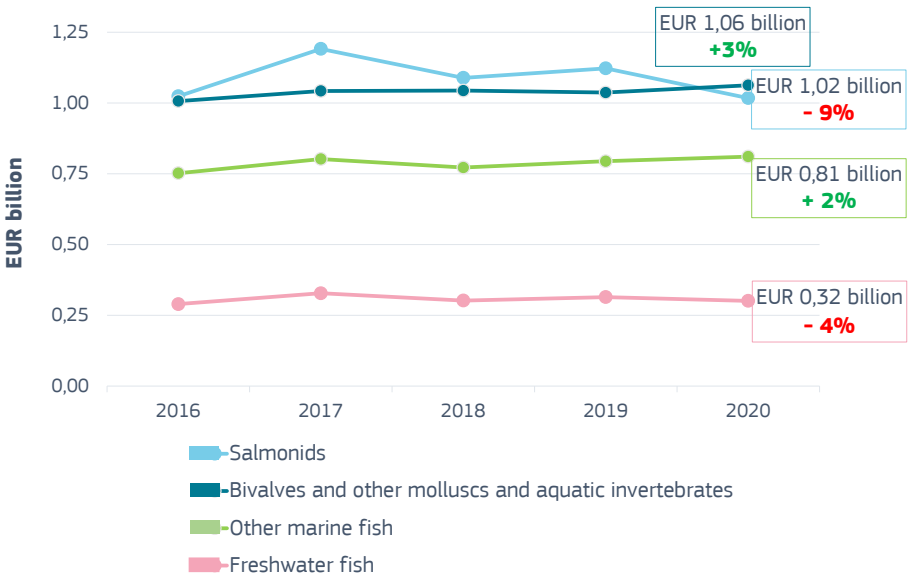


CHART 87

COMPOSITION OF EU AQUACULTURE PRODUCTION BY MAIN COMMERCIAL SPECIES (IN VOLUME): 2011 VS. 2020

Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a), FAO and FEAP data.
More details on the sources used can be found in the Methodological background.

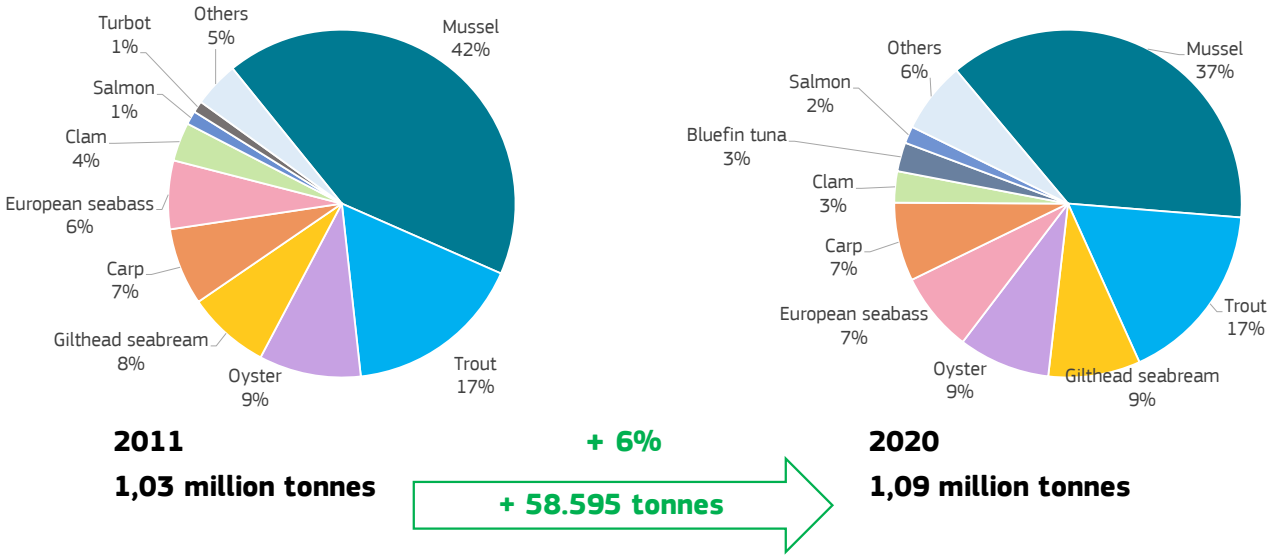
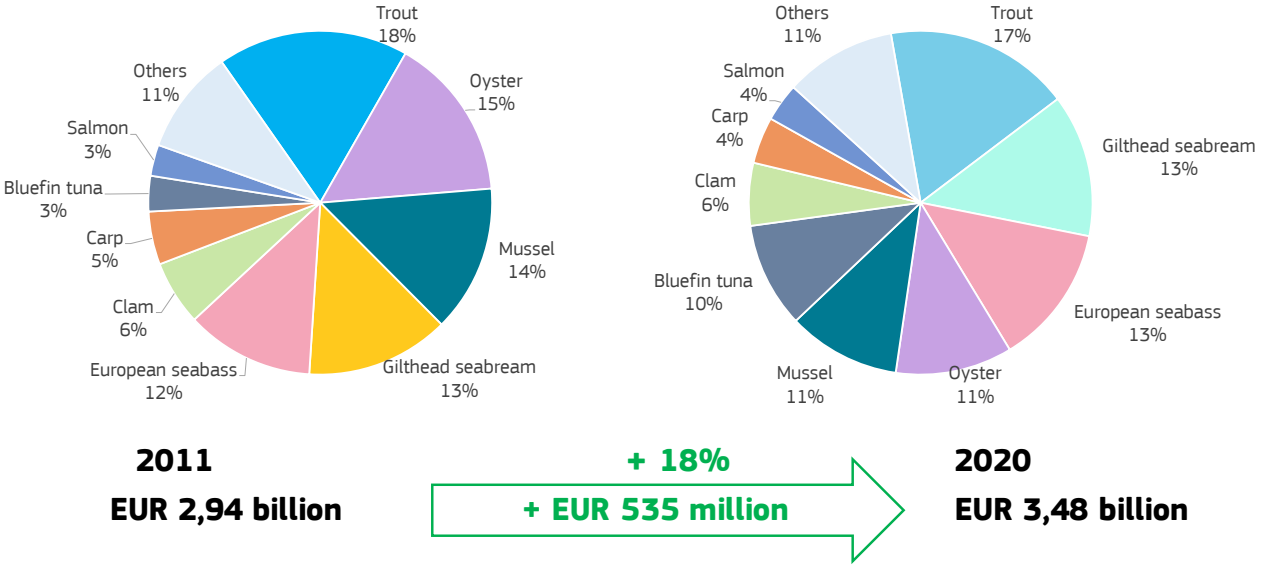


CHART 88

COMPOSITION OF EU AQUACULTURE PRODUCTION BY MAIN COMMERCIAL SPECIES – IN REAL VALUE (BASE=2015) 2011 VS. 2020

Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a), FAO and FEAP data.
More details on the sources used can be found in the Methodological background. Values are deflated by using the GDP deflator.



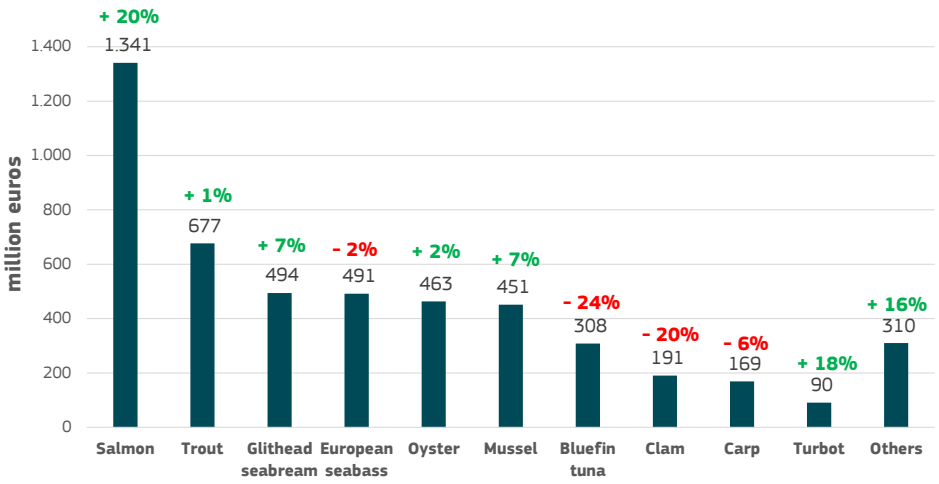
In 2020, the species that recorded the highest value was trout, while mussel showed the highest production in terms of volume.

In terms of volume, the species composition of EU aquaculture production remained similar to that of 10 years earlier, although there were some significant changes in the value structure in real terms. For example, bluefin tuna's share of the total more than tripled from 2011 to 2020.

Notable examples of changes in shares of the total volume of EU aquaculture production include mussel, which decreased from 43% to 37%, and bluefin tuna, which increased from 0,5% to 3%. This increase in the bluefin tuna production was due to an exceptional trend in Maltese production from 2011 to 2020, which soared by 387% in volume and 243% in value, an increase of more than 15.000 tonnes and EUR 138 million, even after adjusting for inflation. In 2020, Malta's bluefin tuna production reached 19.829 tonnes and EUR 215 million. As for mussel and oyster, the value and volume of their production increased but their shares in the total decreased due to more significant increases in other important species.

As mentioned, the total organic aquaculture production at EU level is estimated at 86.180 tonnes in 2020, accounting for 8% of the total EU aquaculture production. The production showed an increase of 27% or 18.460 tonnes from 2019, mainly due to a growth in organic production in France.

CHART 89
NOMINAL VALUES OF MAIN SPECIES FARMED IN THE EU IN 2020 AND % VARIATION 2020/2019
Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a) and FAO data. More details on the sources used can be found in the Methodological background.



BY MEMBER STATE

Aquaculture in the EU is characterised by production specialisations in a few Member States: Greece for gilthead seabream and European seabass, Spain for mussel, France for oyster, mussel and trout, Italy for clam and trout, Poland for carp, Denmark for trout and Malta for bluefin tuna.

In 2020, more than 50% of total EU aquaculture production in both volume and value was represented by these top seven producing countries.

Since 2019, the two main producing countries, Spain and France, recorded production decreases in both volume and value terms, mainly due to the decline in mussel production in Spain and oyster production in France. Mussel was also the main species contributing to the drop in Dutch aquaculture production from 2019 to 2020.

Greece recorded a slight increase in 2020, mainly due to increased production of gilthead seabream. Italy, on the contrary, is among the major producers the one that recorded the biggest drop in production in 2020 in value terms, mainly due to a collapse in clam and trout production.

The five largest producers in 2020 by volume were Spain, France, Italy, Greece and the Netherlands, while France, Spain, Greece, Italy and Ireland recorded the highest production in value terms. Ireland's position in the top producing countries by value is mainly due to the country's large salmon production, of which 100% is certified as organic.

TABLE 19
VOLUME OF AQUACULTURE PRODUCTION IN THE EU TOP-5 PRODUCING COUNTRIES (1.000 TONNES)
Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a), and FAO data. More details on the sources used can be found in the Methodological background. Discrepancies in % changes are due to rounding.

Member State	2016	2017	2018	2019	2020	2020/2019
Spain	287	315	319	307	277	-10%
France	177	182	188	194	191	-2%
Italy	142	159	143	132	123	-7%
Greece	123	126	132	129	131	+2%
Netherlands	62	51	53	46	40	-13%

TABLE 20
NOMINAL VALUE OF AQUACULTURE PRODUCTION IN THE EU TOP-5 PRODUCING COUNTRIES (MILLION EUROS)
Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a), and FAO data. More details on the sources used can be found in the Methodological background.

Member State	2016	2017	2018	2019	2020	2020/2019
France	705	736	689	759	723	-5%
Spain	559	578	648	633	582	-8%
Greece	526	546	536	508	552	+9%
Italy	420	555	439	446	392	-12%
Ireland	154	185	165	158	163	+3%

As far as the other main producers are concerned, the following important developments were recorded.

The upward trend in Malta's bluefin tuna production resumed after a decline in 2019. At the end of 2020 this amounted to 17.092 tonnes for EUR 184 million, in line with 2018. The increase from 2019 to 2020 reached 34% in terms of value and 43% in terms of volume.

Poland and Ireland recorded an increase in production of their largest species, carp and salmon, respectively, which led both countries to substantial growth in volume and value.

In 2020, Dutch aquaculture production, driven mainly by mussel farming, continued the declining trend that began in 2015 in both volume and value.

Germany experienced peaks in volume and value in 2019 due to trout and carp production, but recorded a decline in 2020 due to decreased mussel production.

Production in Hungary recorded a significant increase in 2020, mainly driven by production of freshwater catfish.

CHART 90
VOLUME OF AQUACULTURE PRODUCTION IN THE MAIN EU PRODUCING COUNTRIES IN 2020 AND % VARIATION 2020/2019
Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a) and FAO data. More details on the sources used can be found in the Methodological background.

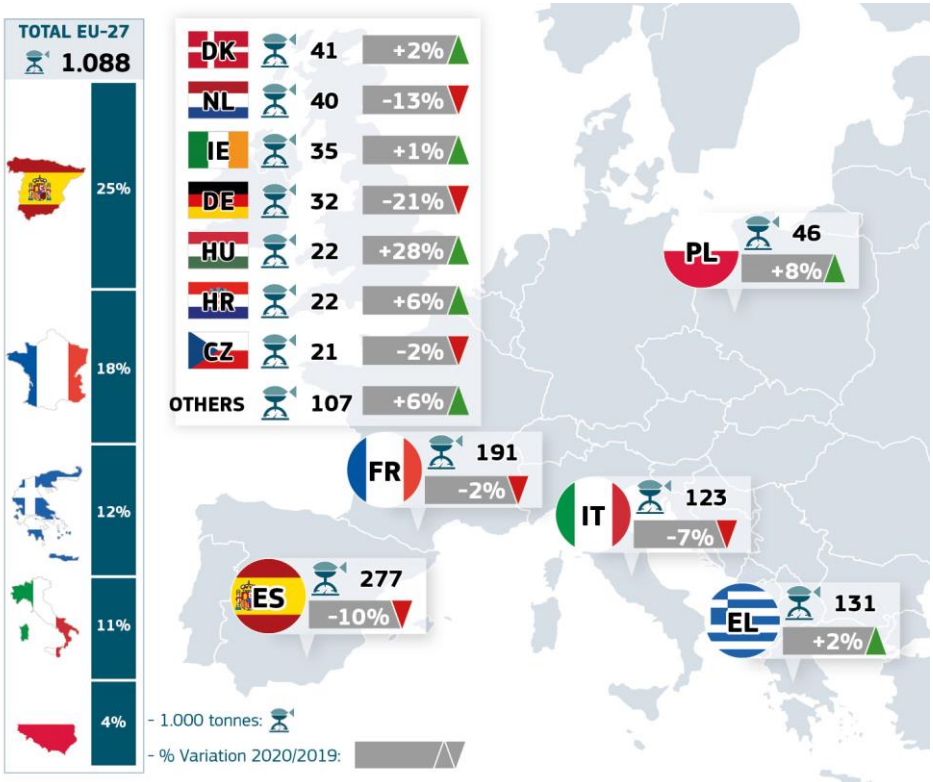
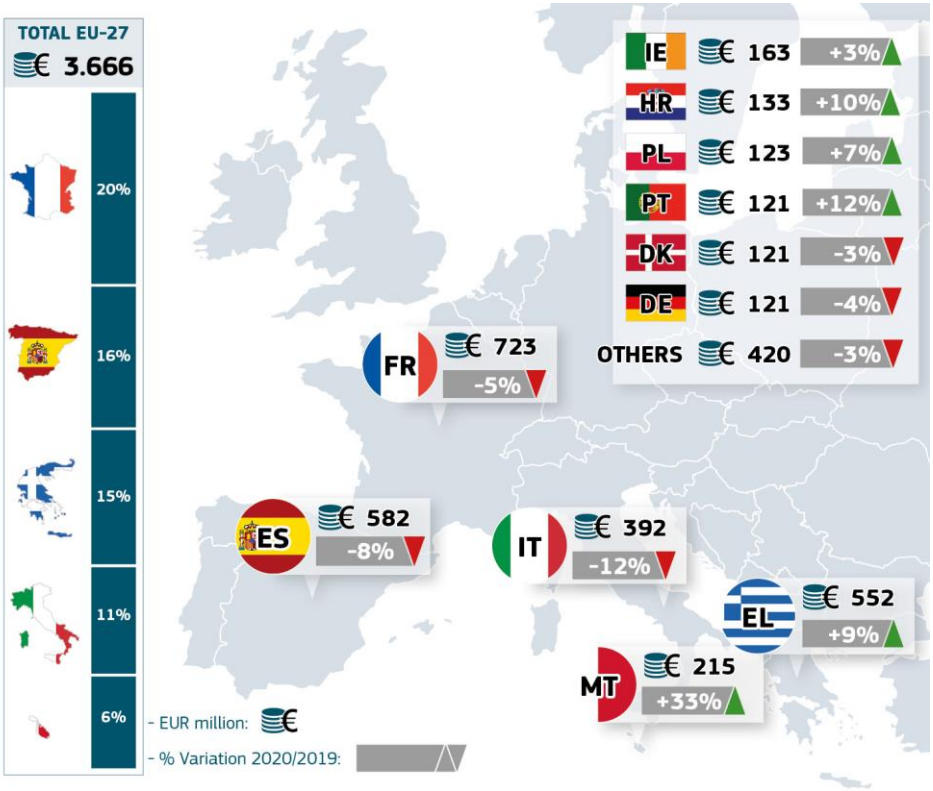


CHART 91
VALUE OF AQUACULTURE PRODUCTION IN THE MAIN EU PRODUCING COUNTRIES IN 2020 AND % VARIATION 2020/2019
Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a) and FAO data. More details on the sources used can be found in the Methodological background.



6.2 ANALYSIS BY MAIN SPECIES

BIVALVES AND OTHER MOLLUSCS AND AQUATIC INVERTEBRATES

In 2020, EU Member States farmed 531.697 tonnes of bivalves and other molluscs and aquatic invertebrates. This was a drop of 9% from 2019 and the lowest level recorded by this group since 2013. Their value only reached EUR 958 million, which was a significant decrease of 11% from 2019. Oyster, mussel and clam accounted for more than 99% of the total volume and value of EU aquaculture production of this group.

MUSSEL

Each year, mussel covers more than one third of the total volume of aquaculture production. However, when compared to the increasing aquaculture production of mussels worldwide, EU production registered a decreasing trend over the last years, although it showed a slight increase in 2018 and 2019.

In 2020, the EU's volume of 406.910 tonnes with a total value of EUR 392 million indicated decreases of 10% in volume and 9% in value from 2019. The value decrease was driven by a drop recorded in Spain, where production decreased by 10% from 2019, reaching 204.466 tonnes, and value decreased 13% to EUR 100 million. The EU mussel production decrease was probably due to a set of causes, such as diseases, lack of mussel seed (spat) and low profitability.

Spain is the most important mussel producing area in the EU. It mainly uses the off-bottom raft technique, which is also used in Italy and the French Mediterranean. Bottom culture is mostly used in the northern EU countries of the Netherlands, Germany and Ireland.

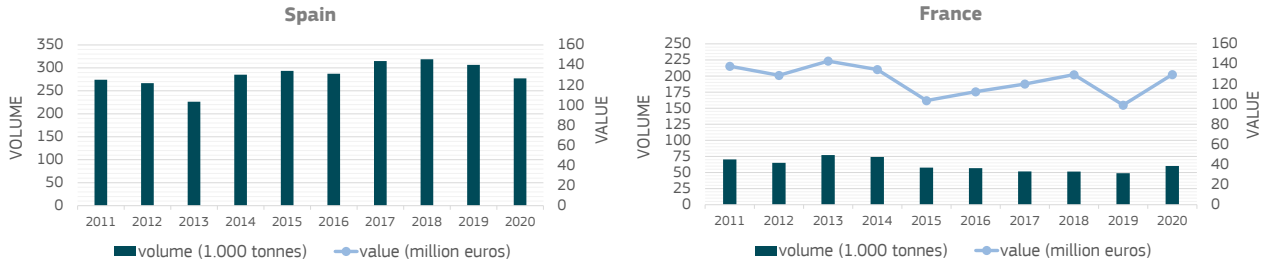
To be noted, Spain and Italy mainly produce Mediterranean mussel (*Mytilus galloprovincialis*), which sold at average prices of 0,52 EUR/kg and 0,88 EUR/kg, respectively, in 2020. Both countries used a large share of these volumes as raw

material for processing. On the other hand, France mostly produces the more valuable blue mussel (*Mytilus edulis*), which was sold at an average price of 2,26 EUR/kg in 2020.

CHART 92

PRODUCTION OF FARMED MUSSEL IN MAIN EU PRODUCING COUNTRIES

Source: EUMOFA, based on EUROSTAT data (online data code: fish_aq2a). Values are deflated by using the GDP deflator (base=2015).



CLAM

In 2020, clam production in the EU fell by 3% to 31.650 tonnes, after a significant 18% drop from 2018 to 2019. This represented the lowest quantity of the decade under analysis.

Italy alone produces 77% of the EU's farmed clams, reaching 24.452 tonnes for a total value of EUR 134 million.

Portugal and France also produce clams, but at very different prices than Italy.

In 2020, Italy's clams were 5,50 EUR/kg, 12% lower than in 2019; French clams sold for 5,82 EUR/kg, an increase of 21% compared to 2019; and in Portugal, the average price of 11,72 EUR/kg was 22% lower than in 2019. This difference could be related to the different species of clams farmed: Japanese carpet shell in Italy and grooved carpet shell in Portugal.

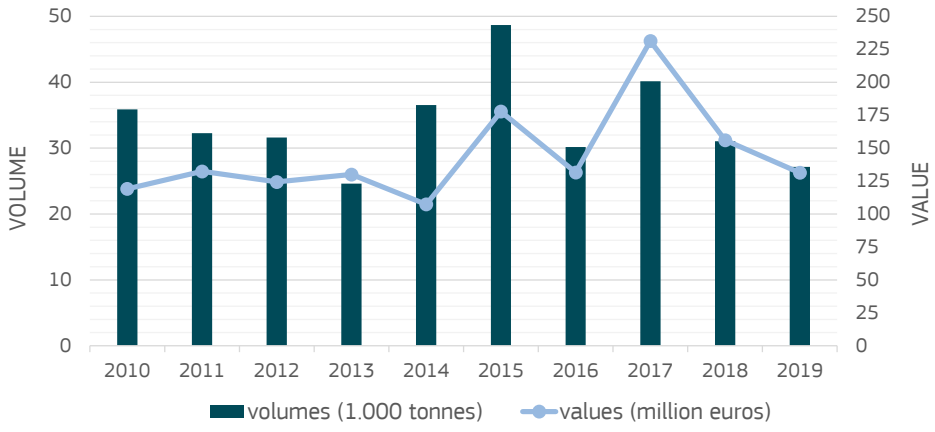
With regard to the methods used, clams of all species are generally bottom farmed in the EU.

The Mediterranean coastal environment is particularly suitable for clam farming, thanks to its brackish waters, low tidal movements, the presence of a rather shallow mixed-texture (sand-mud) seabed and, above all, an abundance of nutrients in the form of phytoplankton.

CHART 93

PRODUCTION OF FARMED CLAM IN ITALY

Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a) and FAO data. More details on the sources used can be found in the Methodological background. Values are deflated by using the GDP deflator (base=2015).



OYSTER

In 2020, the EU farmed 92.925 tonnes of oysters with a total value of EUR 405 million. This represented a 7% decrease in volume from 2019 and a 10% decrease in value, confirming the downward trend already seen from 2018 to 2019.

This trend could be explained by the occurrence of noroviruses *(gastroenteritis virus)* in some areas of production in France since December 2019, which had led to temporary closures and several sales bans in the Nouvelle-Aquitaine region during 2020.

The main producer is France, with almost 87% of EU oyster production taking place on its Atlantic coast. France is also a major consuming market, as most of French production is marketed domestically. In 2020, farmed oysters in France were sold at an average ex-farm price of 4,42 EUR/kg, which was 5% less than in 2019.

A few niches of production have also emerged in Ireland and in the Netherlands, which are more export-oriented.

In Ireland, production amounted to 6.905 tonnes in 2020 worth a total value of EUR 28 million. Irish production decreased by 12% in volume and by 18% in value with respect to 2019; the price also decreased, dropping 7% to 4,10 EUR/kg.

Pacific cupped oyster (*Crassostrea gigas*) is by far the main oyster species farmed in France and Ireland and, as a result, in the EU.

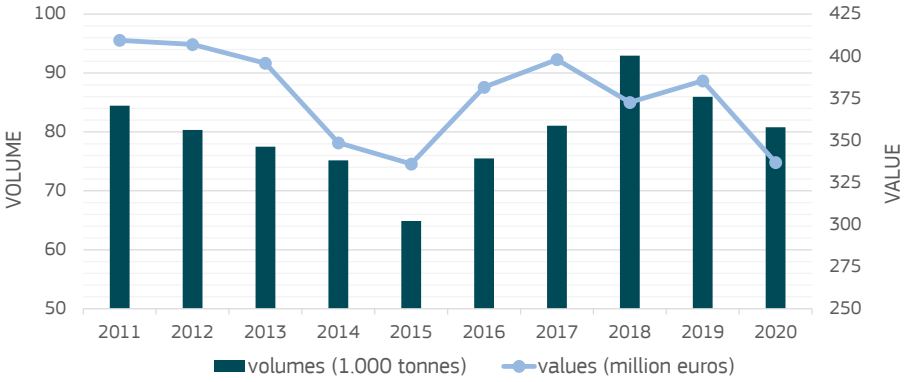
In the Netherlands, oyster production fell by 8% from 2019 to 2020, reaching 2.351 tonnes. At the same time, its price rose by 40%, thus the total value grew by 29% to EUR 9 million. This was mainly due to the price increase of cupped oyster, which accounts for 94% of Dutch production.

Although oyster production traditionally takes place in intertidal zones with bottom culture, cases of rack-and-bag production are not uncommon.

CHART 94

PRODUCTION OF FARMED OYSTER IN FRANCE

Source: EUMOFA, based on EUROSTAT data (online data code: fish_aq2a). Values are deflated by using the GDP deflator (base=2015).



SALMONIDS

Salmonids accounted for more than 20% of the value of EU farmed production in 2020, and almost 20% of its volume.

TROUT

Trout alone accounted for 17% of total volume of EU aquaculture production and 18% of its value.

In 2020, the EU produced 184.840 tonnes of trout – mostly rainbow trout (*Oncorhynchus mykiss*) – valued at EUR 644 million. Compared with 2019, volume of trout production remained stable, but it registered a slight 1% decrease in value. The average price also registered a slight decrease, dropping from 3.49 EUR/kg to 3.45 EUR/kg.

More than half of EU trout production takes place in France, Italy and Denmark, which in 2020 accounted for 20%, 19% and 16% of total volume, respectively. Compared with 2019, Italy saw a significant drop, with volumes decreasing by 11% to reach the lowest level since 2014, and value decreasing 14%.

Among other main EU producers, Poland, Spain and Finland totalled 19.962 tonnes, 15.806 tonnes and 14.293 tonnes, respectively. For Poland and Finland, these were

10-year volume peaks. Spain saw a 25% spike in production, while the price decreased by 2% to 2,82 EUR/kg, the lowest price recorded since 2015. Finland registered a 5% reduction in price from 2019, reaching a yearly average of 3,40 EUR/kg, against an 1% volume increase. Poland saw a slight 1% volume decrease from 2019, so also the price yearly average of 3,12 EUR/kg. The production systems for rainbow trout are similar throughout the EU. Fish are cultured in sea and brackish water with flow-through systems consisting of earthen ponds and concrete raceways or cages. Freshwater systems include ponds, cages and recirculating systems.

TABLE 21
PRODUCTION OF FARMED TROUT IN MAIN EU PRODUCING COUNTRIES
Source: EUMOFA, based on EUROSTAT data (online data code: fish_aq2a). More details on the sources used can be found in the Methodological background

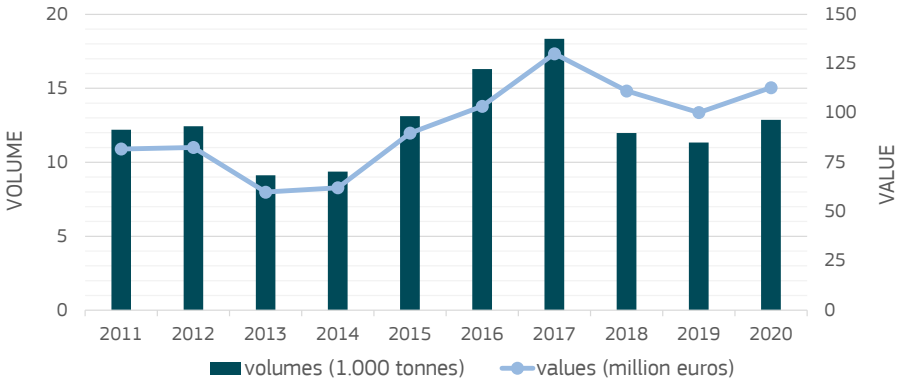
	2020			% variations 2020/2019		
Member State	Volume (tonnes)	Price (EUR/kg)	Value (million euros)	Volume	Price	Value
France	37.200	3,51	130	+6%	-2%	+4%
Italy	34.473	2,90	100	-11%	-3%	-14%
Denmark	29.479	3,09	91	-5%	-2%	-7%

SALMON

EU production of salmon reached 17.252 tonnes in 2020, a 29% increase from 2019 when it had touched the lowest amount since 2014. It was sold at an average ex-farm price of 7,25 EUR/kg, recording a slight decrease of 1%. Overall, it reached a total value of EUR 125 million.

Salmon is largely farmed in Ireland, which produced 75% of the total in 2020, farming 12.870 tonnes of salmon for a total value of EUR 113 million in 2020. This represented an increase of 13% in volume and 14% in value compared with 2019. The average price increased a slight 1%, from 8,77 EUR/kg to 8,85 EUR/kg. Ireland's prices are higher than those of other producing countries, such as Denmark and Poland, because Ireland's salmon production is exclusively organic.

CHART 95
PRODUCTION OF FARMED SALMON IN IRELAND
Source: EUMOFA, based on EUROSTAT data (online data code: fish_aq2a). Values are deflated by using the GDP deflator (base=2015).



FRESWATER FISH

Freshwater species farmed in the EU largely comprise carps and eels.

CARP

In 2020, carp accounted for 7% of total EU aquaculture production, in terms of both volume and value. Production totalled 79.491 tonnes worth EUR 169 million, which represented decreases of 1% in volume and by 3% in value compared with 2019. On a longer perspective, production has increased by 8% since 2011 and its value in real terms has increased by 4%.

Most carp production in the EU takes place in Poland, Czechia and Hungary. In 2020, Poland's production reached 21.397 tonnes and EUR 44 million in 2020; Czechia's reached 18.365 tonnes and EUR 32 million; and Hungary's reached 13.296 tonnes and EUR 25 million. For Czechia, this represented decreases of 4% in volume and 8% in value from 2019 to 2020, while at the same time, production in Poland and Hungary increased by 7% and 4%, respectively. Poland also saw a value increase of 10%, while in Hungary, the value of carp production decreased 5%.

EEL

EU production of eel amounted to 5.326 tonnes in 2020, which marked a 3% increase from 2019. Production is highly concentrated in three countries, namely the Netherlands with more than 2.000 tonnes farmed in 2020, Germany with 1.157 tonnes, and Denmark with 1.134 tonnes. In value terms, total production was worth EUR 46 million, which was a 9% drop from 2019 due to unit prices halving in Denmark. The total values of eel aquaculture production in the three major countries were EUR 17 million in the Netherlands, EUR 15 million in Germany and EUR 5 million in Denmark.

OTHER MARINE FISH

Two species of this commodity group, namely gilthead seabream and European seabass, each accounted for over 10% of the total value of EU aquaculture production in 2020. They are usually farmed in the same sites in the Mediterranean, prevalently in Greece and Spain.

GILTHEAD SEABREAM

In 2020, the EU production of gilthead seabream reached 93.205 tonnes, growing by 1% compared with the previous year. The overall production reached EUR 454 million which was a 3% increase from 2019. The EU total production of this species increased by 17% over the last decade.

Greece is by far the leading producer in the EU, having produced 61.754 tonnes, accounting for 66% of the EU total in 2020. Other major farming countries included Croatia which accounted for 8%, Spain for 7%, and Italy for 7%, and producing 7.780, 6.458 and 6.201 tonnes respectively.

However, the production trends have been very different among major producing countries. During the 2011-to-2020-decade, production increased significantly in Greece, Italy, Croatia and France while it decreased in Spain.

Spain was the second largest producer of seabream after Greece until 2019, but in 2020, its production plummeted 48%, likely due to the Spanish seabream sector experiencing heavy losses due to damages caused by Storm Gloria.

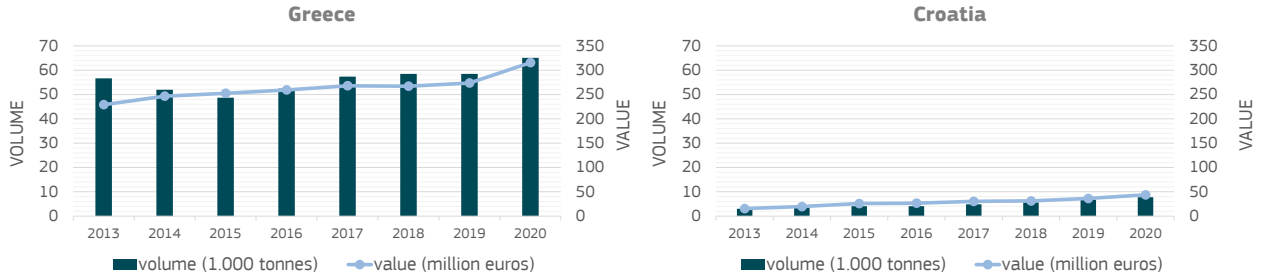
Prices also changed significantly, decreasing by 5% in Spain, from EUR 4,88/kg to EUR 4,66/kg, and by 26% in Croatia, from EUR 8,06/kg to EUR 5.94/kg. In Italy, prices jumped 29% from EUR 5,77/kg to EUR 7,45/kg.

Almost all production in EU is raised in offshore farming facilities with cages and open net pens.

CHART 96

PRODUCTION OF FARMED GILTHEAD SEABREAM IN MAIN EU PRODUCING COUNTRIES

Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a) and FAO data. More details on the sources used can be found in the Methodological background. Values are deflated by using the GDP deflator (base=2015).



EUROPEAN SEABASS

The EU seabass aquaculture industry grew strongly during the last decade and, despite a slight decrease of 1% in both volume and value from 2019 to 2020, its production stood at 80.786 tonnes with a value of EUR 470 million.

The most important producers, Greece and Spain, respectively produced 50% and 28% of the total seabass volume. Other relevant producers are Italy, France and Cyprus.

The 2020 production decrease was led by the two largest producing countries, Greece and Spain, which recorded drops of 3% and 10% in volume, respectively. Spain consequently recorded an 8% drop in value, while Greece recorded growth in value, thanks to an increase in prices.

The average price in Greece increased 1% to 6,13 EUR /kg while in Spain it was 6,01 EUR/kg. Higher prices were recorded in Italy and France, where seabass was sold at an average price of 7,73/kg EUR and 7,84/kg EUR, respectively.

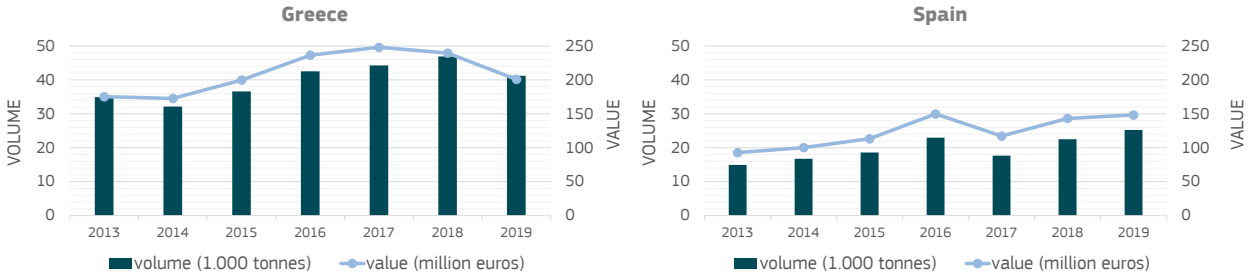
Seabass is cultured intensively, predominantly in cages or open net-pens in the coastal waters of southern EU.

The market for seabass production in the EU is dominated by European seabass. Only a negligible percentage is accounted for by other marine fish belonging to the family Moronidae.

CHART 97

PRODUCTION OF FARMED EUROPEAN SEABASS IN MAIN EU PRODUCING COUNTRIES

Source: EUMOFA, based on EUROSTAT (online data code: fish_aq2a) and FAO data. More details on the sources used can be found in the Methodological background. Values are deflated by using the GDP deflator (base=2015).



SEAWEED AND OTHER ALGAE

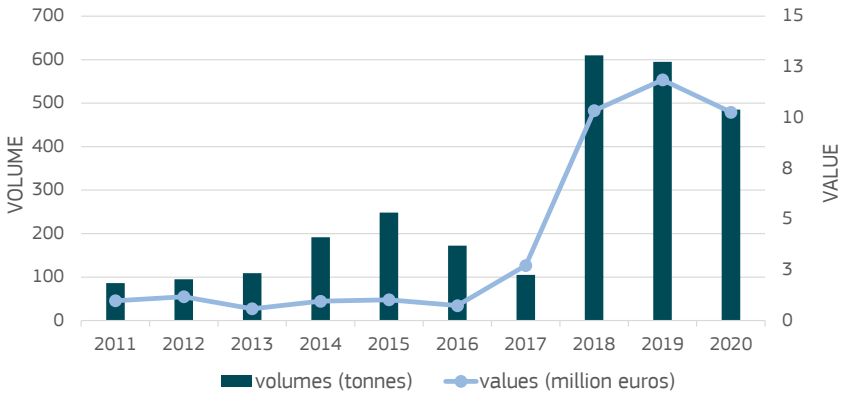
Aquaculture production of seaweed and other algae, presently reported in 5 EU countries – Bulgaria, France, Greece, Ireland and Spain – is at an early stage of development in Europe in terms of production volumes and number of production units. Algae production in EU remains limited, accounting for only 0,045% of the total aquaculture volume and 0,30% of the value. Nevertheless, compared with 2011, volume of algae production from aquaculture in EU grew 464% in 10 years.

In 2020, the total EU production was 485 tonnes for a total value of EUR 10 million, and an average price of 21,17 EUR/kg.

CHART 98

PRODUCTION OF SEAWEED AND OTHER ALGAE IN EU

Source: EUMOFA, based on EUROSTAT data (online data code: fish_aq2a). Values are deflated by using the GDP deflator (base=2015).



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