



European
Commission



THE EU FISH MARKET

2018 EDITION



EUMOPA

European Market Observatory for
Fisheries and Aquaculture Products

Maritime affairs
and fisheries

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

WWW.EUMOFA.EU

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. The report is made analysing nominal values (and prices).

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 June 2018. 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/od849918-162a-4d1a-818c-9edcbb4edfd2>
- The correlation table used for harmonizing data on fish species at ERS¹ 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 level² (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, Euromonitor. The sections below in this Methodological background provide detailed information on the sources used.

SUPPLY BALANCE SHEET

The supply balance is a proxy that allows to follow the evolutions of internal supply and apparent consumption of fishery and aquaculture products in the EU. 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:

$$\text{(catches for food use + aquaculture + imports) – exports} \\ = \\ \text{apparent consumption}$$

Data included in the supply balance available in the chapter “EU market supply” of this report are broken down by commodity group. 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 and destined to human consumption. Amounts of catches not destined to human consumption were estimated using proxies based on destination use of

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 a eighth digit level according to EU needs.

landings (as available in EUROSTAT). Catches data are available in live weight equivalent.

Source: [EUROSTAT](#) (reference dataset: fish_ca).

- **Aquaculture:** 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 "Aquaculture" section of this methodological background).

- **Import:** fishery and aquaculture products imported by the European Union from non-EU countries. Non-food use products are not included.

Import 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).

Through the assessment of origin of imports in terms of production methods, it is possible to estimate the share of imports originating from aquaculture and capture making use of FAO data (for the method applied, please refer to the specific section below).

Source: [EUROSTAT – COMEXT](#).

- **Export:** fishery and aquaculture products exported by the European Union to non-EU countries. Non-food use products are not included.

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).

Through the assessment of origin of exports in terms of production methods, it is possible to estimate the share of exports originating from aquaculture and capture making use of FAO data (for the method applied, please refer to the specific section below).

Source: [EUROSTAT – COMEXT](#).

- **Apparent consumption (and per capita consumption):** total amount of fishery and aquaculture products consumed in the European Union. Per capita consumption indicates the amount of fish (wild + farmed) consumed by each individual person in the EU.

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 Member State, on the basis of the total imports and exports volumes from extra-EU countries, the production methods of the countries of origin and destinations 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, i.e. if imports/exports of a given Member State derive from farming or fishery activities, is determined.

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.

Taking the example of CF for cod, or more specifically for the item whose CN8 code is 0304 44 10: this item corresponds to the following description: “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+8+CF+per+CN8+%252707-%252714.pdf/7e98ac0c-a8cc-4223-9114-af64ab670532>.

EXPENDITURE FOR FISHERY AND AQUACULTURE PRODUCTS

Expenditure data of this “EU fish market” are provided by EUROSTAT (for EU countries, see Charts 13, 14 and 16). 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 at national prices in euro (millions)” and the “Nominal expenditure per head at national prices in euros” have been used. The “expenditure” is taken as a component of the GDP 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.

“Fishery and aquaculture products” is an aggregate of products, corresponding to COICOP 01.1.3, including fresh, chilled, frozen, preserved and processed seafood

(http://ec.europa.eu/eurostat/ramon/nomenclatures/index.cfm?TargetUrl=LS_T_NOM_DTL&StrNom=HICP_2000&StrLanguageCode=EN&IntPcKey=&StrLayoutCode=EN).

OUT-OF-HOME CONSUMPTION

Data for the out-of-home consumption of fish products are provided by EUROMONITOR for 5 EU Member States: France, Germany, Italy, Spain and the UK.

Data are provided for the category “fish and seafood”, as well as for the subcategories fish, crustaceans and molluscs and cephalopods, more detailed below:

Fish and seafood: This is the aggregation of fish, crustaceans and molluscs (including 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 fish (wild caught or farmed), whether sold packaged or unpackaged, cut or whole.

Molluscs (including cephalopods): Includes all fresh, chilled and frozen but uncooked molluscs (shell fish such as oysters and clams) and cephalopods (such as the octopus, squid, cuttlefish), whether sold packaged or unpackaged.

**HOUSEHOLD
CONSUMPTION OF
FRESH FISH PRODUCTS**

Data are collected from EUROANEL and refer to households' purchase in 12 EU Member States of selected fresh species, which are then aggregated for the EUMOFA purposes in "Main commercial species".

Households' purchases are recorded daily by a sample of households, reporting to EUROANEL many information, among which species of the fish, quantity and value.

The sample of households (i.e. "panel") is composed in order to be representative of the population and to appropriately estimate its characteristics.

Below specifications regarding panels from which data derive.

Member State	Sample Size (Households)	Notes on geographic population coverage
Denmark	3.000	
France	20.000	
Germany	30.000	
Hungary	2.000	
Ireland	5.000	
Italy	10.000	
Netherlands	10.000	
Poland	8.000	
Portugal	4.000	Total Portugal, excluding Madeira and Azores Islands
Spain	12.000	Total Spain excluding Canary Islands
Sweden	3.000	
United Kingdom	30.000	All Great Britain (Northern Ireland is excluded)

For each country surveyed (except Hungary), household consumption data cover a selection of most consumed fresh species + an additional item "other unspecified products", aggregating all other fresh species recorded by household panels but not available at disaggregated level.

Below the complete lists of “main commercial species” covered for each country is reported:

Denmark	France	Germany	Hungary
Salmon	Cod	Salmon	Other unspecified products
Other flounders	Salmon	Cod	
Trout	Saithe(=Coalfish)	Trout/Char	
Mackerel	Trout	Miscellaneous shrimps	
Cod	Whiting	Pollack	
Mussel Mytilus spp	Mackerel	Mussel Mytilus spp	
Other halibuts	Hake	Other freshwater fish	
Dab	Gilt-head seabream	Herring	
Other unspecified products	Monk	Carp	
	Sardine	Plaice	
	Other unspecified products	Other unspecified products	

Ireland	Italy	Netherlands	Poland
Salmon	Mussel Mytilus spp	Salmon	Mackerel
Cod	Gilt-head seabream	Shrimp Crangon spp.	Salmon
Mackerel	Anchovies	Mussels	Carp
Hake	Octopus	Herring	Trout
Saithe (=coalfish)	Squids	Mackerel	Other unspecified products
Miscellaneous shrimps	European seabass	Cod	
Haddock	Cod	Pangasius	
other unspecified products	Clams	Trout	
	Cuttlefish	Plaice	
	Salmon	Other cold-water shrimps	
	Other unspecified products	Other unspecified products	

Portugal	Sweden	Spain	United Kingdom
Mackerel	Salmon	Hake	Salmon
Salmon	Cod	Sardine	Cod
Hake	Herring	Salmon	Haddock
Gilt-head Seabream	European flounder	Sole	Trout
Octopus	Other salmonids	Cod	Plaice
Sardines	Pike-perch	Miscellaneous tunas	European seabass
European seabass	Other halibut	Gilt-head seabream	Miscellaneous tunas
Miscellaneous shrimps	Haddock	Mackerel	Sole
Scabbardfish	Other unspecified products	Monk	Mackerel
Clams		European seabass	Pollack
Other unspecified products		Other unspecified products	Other unspecified products

IMPORT - EXPORT

The trade flows of fisheries and aquaculture products are analysed for the items referring to the list of CN-8 codes 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>.

The source used for collecting import-export data is EUROSTAT - COMEXT. 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 <http://ec.europa.eu/eurostat/documents/3888793/6866187/KS-TC-15-002-EN-N.pdf/4232bea9-1fb6-4c3e-ab84-746989ce73ff>.

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>

Moreover, 305 "suspicious" instances of prices > 100 EUR/kg for low valued species. However, volumes concerned by these instances range between 100 kg and 15 tonnes, so these observations may be considered as negligible.

EXTRA-EU TRADE FLOWS They encompass all transactions between European Union (EU) Member States and countries outside the EU (non-member countries).

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 exports have been considered.

Actually, intra-EU trade flows as reported by EUROSTAT cover both arrivals (i.e. imports) and dispatches (i.e. exports). Because of different valuation principle

(CIF > FOB)³, arrivals should be slightly higher valued than dispatches. This is one of the main reasons explaining asymmetries between import and export figures. In general, bilateral comparisons between MS of intra-EU flows have revealed major and persistent discrepancies. Therefore, comparisons dealing with intra-EU trade statistics and related results must be taken into account cautiously and should consider the existence of these discrepancies.

**SPECIFICATIONS
ABOUT LANDINGS DATA**

Eurostat data regarding landings (fish_ld) comprise the initial unloading of any fisheries products from on board a fishing vessel to land in a given EU Member State. Landings are made by vessels from EU Member States and from Iceland and Norway. Data include landings of species not destined to human consumption and seaweed.

The following issues should be mentioned regarding data used for the “EU landings” chapter:

- Greece
2016 data do not include confidential figures related to landings of some items of the following main commercial species: cuttlefish, john dory, octopus, squid, sole (other than common sole), seabream (other than gilt-head seabream), flounder (other than European flounder), other sharks and other marine fish.
- Malta
Data for the period 2012-2016 do not include confidential figures related to landings made by vessels with Cyprus flag.
- Ireland
The following data were collected from SFPA:
 - 2013 and 2014 data regarding hake
 - 2014 data regarding mackerel
 - 2016 data regarding herring
- 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
 - Denmark – 2009, 2010, 2011, 2012, 2013 and 2014
 - Germany – 2009 and 2014
 - Ireland – 2009 and 2010
 - Netherlands – 2011
 - Poland – 2011 and 2012
 - Portugal – 2009, 2010, 2011, 2012 and 2015
 - Sweden – 2009, 2010 and 2011
 - United Kingdom – 2009, 2010, 2011 and 2012

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.

**AQUACULTURE DATA:
ESTIMATES AND
EXTRAPOLATIONS
FROM EUROSTAT,
FAO, FEAP AND
MEMBER STATES'
PUBLICATIONS**

For the purpose of properly conducting an analysis on aquaculture production in the EU, EUROSTAT data (fish_aq2a) have been integrated with data deriving from FAO, national sources and sector associations.

Below are listed both the instances in which EUROSTAT data were integrated with figures from other sources and those instances for which data are estimates or provisional figures:

- Austria
2012, 2014 and 2015 confidential data were integrated with figures from FAO.
- Belgium
2010-2016 confidential data were integrated with figures from FAO.
- Bulgaria
2016 values for seaweed and eel were collected from FAO.
- Denmark
2010 and 2013 confidential values were estimated by multiplying the volumes of each main commercial species to its average price (average calculated using the price corresponding to year-1 and year+1) if available within Danish AgriFish Agency.
2014, 2015 and 2016 confidential data were integrated with figures from FAO. Those on eel and seaweed for 2016 are FAO estimates.
- Estonia
2012, 2014 and 2015 confidential data were integrated with figures from FAO.
- France
2010-2014 data for salmon were integrated with figures provided by FEAP; respective values were estimated by multiplying the volumes to its 2008 unit price, as available in EUROSTAT.
2009-2014 data for turbot were integrated with figures provided by FEAP; respective values were estimated by multiplying the volumes to its 2008 unit price, as available in EUROSTAT.
2016 data are FAO estimates.
- Germany
Data on carp for the years 2008-2012 and 2014-2015 were collected from FAO.
2011 confidential data were integrated with figures provided by the national source (DESTATIS). They refer to trout, pike, pike-perch, eel, other freshwater fish and molluscs. Specifically as concerns mollusc figures, since no details at species level is provided by DESTATIS, the aggregate amount was entirely assigned to the species "mussel". In fact, mussel is the main mollusc farmed in Germany (oyster production is limited). Since DESTATIS does not report values for 2011, they have been estimated by multiplying the volumes to its price as for year-1 (namely, 2010).
2012 and 2014 data were collected from FAO, as data for almost all species were confidential in EUROSTAT. Data on oyster are FAO estimates.
For 2013, data on salmon were collected from EUROSTAT; for other species, confidential data were integrated with figures from FAO. Data on oyster are FAO estimates.
2015 and 2016 confidential data were integrated with figures from FAO. Those on oyster for 2015 are FAO estimates.
- Greece
2013 confidential data were integrated with figures from FAO.

For 2015, data are National provisional figures available in EUROSTAT; the instances of confidential data were integrated with FAO estimates. 2016 data on the grouping “other freshwater fish” were collected from FAO.

- Hungary
2016 data 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, 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.
 - Italy
2015 data are National estimates and forecasts available in EUROSTAT. 2016 data are FAO estimates.
 - Latvia
2014 and 2015 confidential data were integrated with figures from FAO.
 - Netherlands
2015 data on mussel, eel, freshwater catfish and the grouping “other marine fish” are National estimates available in EUROSTAT.
2016 data on pike-perch are FAO estimates.
 - Poland
2010 data were collected from FAO. Data on pike, freshwater catfish and other freshwater fish are FAO estimates.
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 estimates.
 - 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.
 - Romania
2015 data are National estimates available in EUROSTAT.
2016 data were collected from FAO.
 - Slovenia
2013, 2014, 2015 and 2016 confidential data were integrated with figures from FAO.
2016 data on clam and European seabass are FAO estimates.
 - United Kingdom
2008 values of Atlantic halibut, European seabass, clam, warmwater shrimp, turbot, great Atlantic scallop and the grouping “Other molluscs and aquatic invertebrates” were integrated using FAO; values of Queen scallop were estimated by multiplying the volumes to its 2009 unit price, as available in EUROSTAT.
2014 and 2015 values are National estimates available in EUROSTAT.
-

Slight increase in consumption of seafood in the EU and contraction of self-sufficiency

In 2016, the EU supply of seafood (domestic production + imports) rose by 3%, increasing 450.000 tonnes above 2015 and reaching 14,22 million tonnes. Imports proved to be the main driver of the supply increase, reaching a 10-year peak. As a result, and despite increased internal production, the EU registered a self-sufficiency ratio⁴ of 41,7%, which was the lowest since 2011. Indeed, the top five species consumed in the EU – tuna, cod, salmon, Alaska pollock and shrimps – representing 43% of the market in 2016, were mostly imported from non-EU countries.

Per capita consumption reached 24,33 kg, which was an increase of 763 grams, or 3% above 2015. An upward trend was registered for almost all main commercial species consumed in the EU. Among them, the per capita consumption of herring increased the most. Compared with 2015, it rose from 0,93 to 1,23 kg, an increase of 32% that equalled its average per capita consumption during the period 2007–2013.

Portugal's apparent consumption of fish and seafood increased 3% from 2015 to 2016, reaching 57 kg, the highest in the EU. This was more than twice the EU's average per capita consumption of 24,3 kg.

Relevance of wild seafood supply

In general, wild products continued to predominate in the EU seafood market, accounting for 76% of the total per capita consumption. In 2016, consumption of farmed products reached 5,72 kg per capita, slightly higher than in 2015. Salmon and mussels accounted for more than half of farmed-product consumption.

Higher prices and increasing expenditure of the EU households for purchasing fish

Starting in 2014, fish prices began to grow significantly and, by 2017, they had increased 10% compared with 2013. Over the same period, the prices of meat and food in general followed a flat trend.

The EU household expenditure for fisheries and aquaculture products in 2017 grew to EUR 56,6 billion, a 2,9% increase from 2016, and an all-time peak. The UK, the only Member State registering a decrease, had a 3% drop in household expenditure, while Portugal again had the highest per capita household expenditure at EUR 337, which was three times the EU average.

Expenditure for fish compared with meat

The amount spent for purchasing fish in 2017, namely EUR 56,6 billion, was around one quarter of the EUR 221,3 billion spent for purchasing meat. In the EU countries with the highest total expenditures for purchasing fish, namely Italy, France and Spain,

⁴ Ratio between EU production and apparent consumption of the EU market.

Pivotal role of the EU in the global fish and seafood trade

different behaviours could be observed: in Italy, expenditure on meat was three times higher than on fish; in Spain, it was twice as high; in France, households spent four times as much on meat as on fish. The greatest 2017 imbalance was observed in Hungary, where consumers spent 20 times more on meat than fish.

The EU is the world's largest trader of fishery and aquaculture products in terms of value. In 2017, trade flows between the EU and the rest of the world surpassed those of China, the second ranked, by over EUR 2,3 billion.

In 2017, the sum of trade flows with non-EU countries and exchanges among Member States (exports only) amounted to EUR 57 billion, an increase of EUR 2,6 billion from 2016. Intra-EU exports contributed the most to the overall growth, increasing by EUR 1,44 billion, for a 6% growth from EUR 25,2 billion in 2016 to EUR 26,7 billion in 2017. However, the largest flows were salmon originating from Norway, and entering in the EU market through northern Member States.

Despite exports to third countries reaching a 13-year value peak in 2017, the deficit reached a negative peak of EUR 20,2 billion, 3% or EUR 558 million greater than in 2016. This was due to the growing role of both frozen and prepared/preserved products imported by EU Member States in terms of value, whereas the deficit for fresh products is decreasing.

Extra-EU imports increased 4% from 2016 and reached a 10-year peak of EUR 25,3 billion. This was mainly due to increased imports of frozen cuttlefish and squid, mostly originating from India and China, and of prepared/preserved skipjack tuna from Ecuador. However, of all fisheries and aquaculture products imported in the EU, salmon accounted for the largest share, with 14% in volume and 22% in value terms. In 2017, imports of salmon totalled 802.443 tonnes worth EUR 5,5 billion, mainly consisting of fresh whole products originating from Norway.

Five Member States account for over 70% of the volume of extra-EU exports of fisheries and aquaculture products: the Netherlands, which is responsible for almost one-quarter of the total, Spain, Denmark, Ireland and the UK. In value terms, France is among the top five instead of Ireland, as it exports high-value products such as oyster and smoked salmon.

The US and China are the main destination markets of EU exports in terms of value, but the highest volumes are destined for Norway and Nigeria. This is due to the different product categories involved in such flows: while the US and China mainly import salmon and cod, Norway is a major importer of fish oil, and Nigeria of small pelagics, herring and mackerel in particular.

Increasing value of landings and aquaculture production in the EU

In 2016, the EU ranked fifth in world production of fisheries and aquaculture, after the four main Asian producers (China, Indonesia, India and Viet Nam).

The main products landed in the EU recorded a price increase, as a result of which the total value of all EU landings reached EUR 7,38 billion, the highest amount of the last ten years. The species registering the most intense value growth were yellowfin tuna, herring and shrimp *Crangon spp.*, with major growth recorded, respectively, in Spain, Denmark and the Netherlands.

Landings of fisheries products in the EU registered a 7% drop and totalled 4,30 million tonnes. This was 312.276 tonnes less than in 2015. The drop was mostly due to decreased landings of sandeels and sprat in Denmark, and mackerel and blue whiting in the Netherlands.

Aquaculture production in the EU continued the recovery started in 2014, reaching 1,29 million tonnes with a value of EUR 4,25 billion. Indeed, 2016 was a record year for the production of European seabass, especially in Greece and Spain. However, declined production of mussel generated a decrease of Spanish aquaculture, as this species covers 3/4 of the overall aquaculture production of this country. France and Italy registered an increasing trend in volume terms of their aquaculture production, but volumes produced were well below that of 10 years ago, when more oysters and clams were farmed, respectively, in the two countries.

The value of farmed salmon has continued to increase, driven by production in both the UK and Ireland.

Recent dynamics for some main species

Prices of fisheries and aquaculture products imported by Member States from non-EU countries were on average 5% higher in 2017 than in 2016. A decrease was registered in the first four months of 2018, but they increased again during summer. Still, the average price in July 2018 was 8% lower than December 2017 and 5% lower than July 2017.

From an all-time high in 2016, EU import prices for salmon (fresh whole) trended a slight 1% up in 2017, averaging 6,53 EUR/kg. Retail prices for salmon fillets increased 10% in France, 18% in Poland and 6% in the UK.⁵ This indicated higher margins along the supply chain in 2017 compared with 2016. The price gap widened in the first seven months of 2018, as EU import prices for fresh whole salmon fell 9% compared with the same period in 2017, while prices for fresh fillets at retail level decreased 6% in France and 2% in Poland, and increased 3% in the UK.

EU imports of tuna rose by 8% in volume terms, mostly driven by the increase recorded by those from Ecuador, a country that, alone, provides close to 20% of EU imports of tuna. Ecuador and the EU

⁵ Source: EUMOFA.

entered into a Free Trade Agreement in January 2017. Stimulated by the elimination of tariffs on industrial and fisheries products, EU imports of tuna from Ecuador rose by 22% in terms of volume from 2016 to 2017. In value terms, they rose by 45%, mainly driven by an increase in prices for skipjack and yellowfin tuna. The increase in skipjack tuna import prices continued in the first seven months of 2018.

Imports of European seabass and gilthead seabream, mainly consisting of farmed products, rose by 12% in volume terms and 9% in value from 2016 to 2017. The 51.208 tonnes imported in the EU in 2017, of which 98% originated in Turkey, represented an historic high in import volume. As for EU import price for these species, from 2015 to 2017 they fell by 7% for seabass and 14% for gilthead seabream, a downward trend that continued in the first 7 months of 2018.

Macroeconomic trends

Over the last eight years, price inflation⁶ for fish in the EU has been higher than for food in general. From 2016 to 2017, it reached 3,6% while prices of food in general increased by 2,2%. The inflation for fish was highest in the northern EU countries.

In the first 8 months of 2018, consumer prices for fish in the EU have remained stable, but almost 2% lower than the same period last year.

In 2017, the EUR recorded different behaviours compared with 2016 for four currencies of importance to seafood suppliers to the EU: it appreciated 2% compared with USD; was relatively stable with a slight 0,4% increase compared with the Norwegian NOK; and depreciated compared with the Icelandic króna (ISK) and British pound (GBP), dropping 10% compared with ISK, and 7% compared with GBP. Although the GBP had weakened 7% compared with the EUR in 2017, it has remained stable during the first 9 months of 2018⁷.

In 2017, marine fuel prices⁸ in the EU increased 6% compared with 2016 and have continued to follow an upward trend in 2018⁹. In September 2018, they were 23% higher than December 2017 and 34% higher than a year earlier, in September 2017.

⁶ Source: EUROSTAT.

⁷ Source: European Central Bank (ECB), Bank of Norway.

⁸ Sources: EUMOFA based on MABUX.

⁹ Data up to September 2018.

The EU in the world 1

1.1 Production

In 2016, world production of fisheries and aquaculture products decreased by 5% compared with 2015, dropping from 212 million tonnes to 200 million¹⁰.

The EU covered 3,1% of the total, ranking fifth after the four main Asian producers, China, Indonesia, India and Viet Nam. More specifically, catches made by the EU fleet accounted for 5,6% of wild production, while the EU aquaculture production accounted for 1,2% of the global total.

Table 1

World production of fisheries and aquaculture in 2016 (1.000 tonnes)

Source: EUROSTAT and FAO (for fishery and aquaculture EU-28) and FAO estimates (for extra-EU countries)

Country	Fishery ¹¹	Aquaculture	Total production	% of total
China	17.807	63.722	81.529	41%
Indonesia	6.584	16.616	23.200	12%
India	5.082	5.703	10.785	5%
Viet Nam	2.786	3.635	6.421	3%
EU - 28	5.014	1.290	6.304	3%
USA	4.931	444	5.375	3%
Russian Federation	4.773	174	4.947	2%
Japan	3.275	1.068	4.343	2%
Philippines	2.028	2.201	4.229	2%
Peru	3.812	100	3.912	2%
Bangladesh	1.675	2.204	3.879	2%
Norway	2.203	1.326	3.529	2%
Republic of Korea	1.396	1.859	3.255	2%
Myanmar	2.072	1.018	3.090	2%
Chile	1.829	1.050	2.879	1%
Thailand	1.531	963	2.494	1%
Others	23.347	6.834	30.181	15%
Total	90.145	110.207	200.352	100%

¹⁰ Source: EUROSTAT and FAO (for fishery and aquaculture EU-28) and FAO estimates (for extra-EU countries). For EU fishery, data on Finland are national estimates available in Eurostat and Greece confidential data were integrated with figures from FAO. For EU aquaculture, details on the sources used can be found in the Methodological background.

¹¹ Eurostat does not include inland waters.

Globally, aquaculture’s share in the total production of fisheries and aquaculture accounts for a remarkable 55%. This is mainly due to farming production in Asia, where aquaculture is much larger than fisheries. China and Indonesia together cover more than 70% of global aquaculture production¹²: in China, aquaculture production is almost four times greater than fisheries production, in Indonesia it is almost three times the size. By contrast, only one-fifth of EU production comes from aquaculture, which increased by 2% from 2015 to 2016.

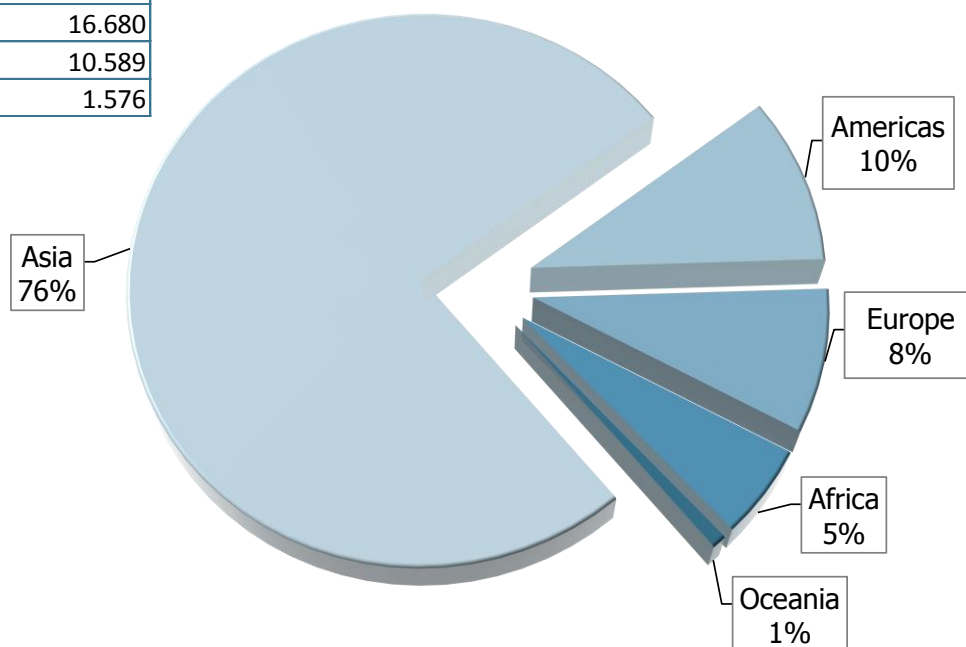
Overall, EU production of fishery and aquaculture products amounted to 6,3 million tonnes in 2016¹³. This represented a 2% decline from 2015, mainly due to the 12% fall recorded for catches of Atlantic mackerel and the 16% fall in European sprat, which together represented close to 20% of the EU total fishery in terms of volume.

Chart 1

World production of fisheries and aquaculture in 2016

Source: EUROSTAT and FAO (for fishery and aquaculture EU-28) and FAO estimates (for extra-EU countries)

Continent	Volume (1.000 tonnes)
Asia	151.896
Americas	19.611
Europe	16.680
Africa	10.589
Oceania	1.576



¹² Both fisheries and aquaculture include production from marine and inland areas.

¹³ Figures mentioned here refer to catches and aquaculture total production (including non-food use).

Asia maintained the world leadership for both fishery and aquaculture production. In 2016, the total Asian production reached 152 million tonnes, of which China, Indonesia and India represented 54%, 15% and 7%, respectively.

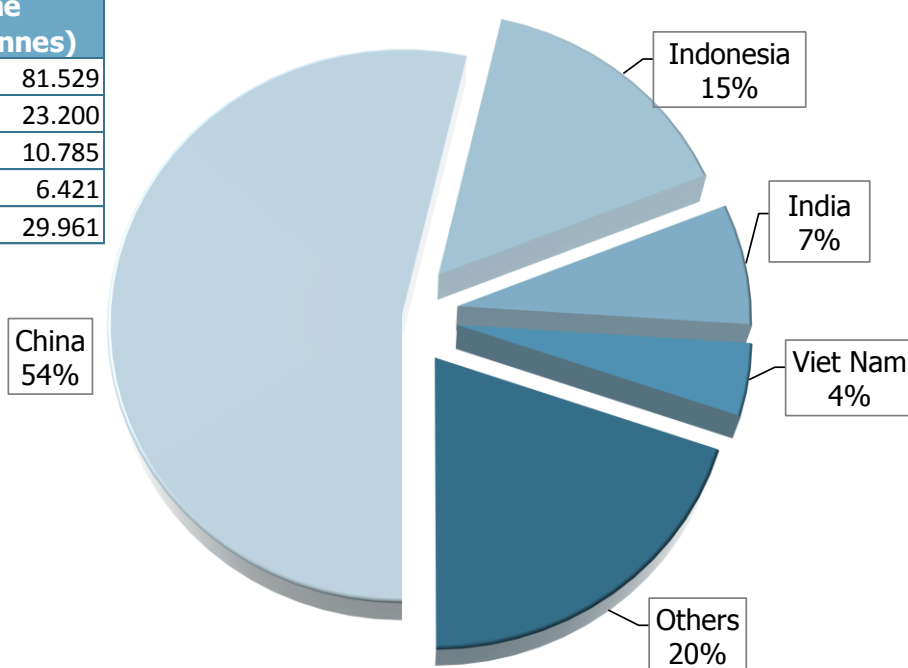
In China, the main producing country in the world, farmed production amounted to 63,7 million tonnes, mainly consisting of freshwater species (mostly carp and, to a lesser extent, tilapia). This was a 4% increase from 2015 and represented 58% of total world aquaculture production.

Chart 2

Total production of fisheries and aquaculture in Asia by country in 2016

Source: FAO estimates

Country	Volume (1.000 tonnes)
China	81.529
Indonesia	23.200
India	10.785
Viet Nam	6.421
Others	29.961



The Americas had a modest production increase in 2015, but registered a 6% fall in 2016, with an amount of 19,6 million tonnes. The main producing countries, namely the US, Peru, Chile, Mexico and Brazil, together covered 78% of total American production, with anchovy (especially Peruvian) the main caught species in terms of volume. Aquaculture represents 17% of America's production, and the main species farmed are whiteleg shrimp (mostly Ecuador) and Atlantic salmon (mostly Chile).

In Africa, fish production in 2016 amounted to 10,6 million tonnes, of which 80% were wild catches. The main producing countries were Egypt, Morocco and Nigeria, and the main species caught was sardine, which accounted for 11% of the total. African aquaculture is mainly established in freshwater and brackish water. Nile tilapia, the main species farmed, accounted for 53% of Africa's 2016 aquaculture production.

1.2 Import - Export

The value of the EU trade flows¹⁴ of fisheries and aquaculture products, which reached EUR 30,3 billion in 2017, is the highest in the world. It mostly consists of imports, which cover around 70% of the EU domestic consumption¹⁵.

In 2017, the EU imported fisheries and aquaculture products with a value of EUR 25,3 billion, mainly consisting of salmon, cod, shrimps and tuna. The EU's exports, which amounted to EUR 5 billion, mainly included salmon, tuna, mackerel and fishmeal.

China ranked second to the EU in terms of total trade value, with EUR 27,9 billion. Unlike the EU, it is a net exporter – its 2017 exports reached EUR 18,2 billion and were two times higher than its imports, which totalled EUR 9,7 billion.

The main EU supplier is Norway, with exports totalling 1,44 million tonnes worth EUR 6,16 billion in 2017. Salmon accounted for 73% of the value of products imported from Norway in 2017, followed by cod, with 14% of the total. Salmon was mainly imported fresh and whole, while cod was mainly imported frozen, whole or in fillets.

The Russian Federation is also a main supplier of (frozen) cod to the EU. In 2017, its cod exports to EU countries increased by 13% compared with 2016, from 98.024 to 110.606 tonnes, which corresponded to a 20% value rise, from EUR 368 million to EUR 444 million.

Ecuador, Viet Nam, India and Argentina are other relevant suppliers, mainly providing the EU with frozen warmwater shrimps and miscellaneous shrimps and prawns, either frozen or prepared/preserved.

Ecuador, together with Seychelles and Mauritius, are also important suppliers of tuna products. In value terms, tuna imported in the EU mainly consists of processed products: canned tuna and frozen tuna loins for the canning industry. In terms of species, skipjack and yellowfin tuna cover 49% and 31%, respectively, of the total value of tuna imported in the EU.

¹⁴ Extra-EU imports + extra-EU exports.

¹⁵ In 2016, imports covered 72% of EU domestic supply, according to a EUMOFA analysis, based on elaboration of data from Eurostat and FAO.

1.3 Expenditure

In February 2018, the OECD released updated 2014 data about world expenditure for purchasing fish.

The EU showed the highest expenditure among OECD countries. However, looking at per capita expenditure, the EU ranked second to Japan: the EU's expenditure of 103 EUR per capita was about one-third of Japan's per capita expenditure of 310 EUR.

Table 2

Expenditure of main OECD countries for fish in 2014 (million euro)

Source: OECD

Country	Expenditure ¹⁶	Expenditure per capita ¹⁷
EU-28	52.328	103
Japan	39.447	310
Russian Federation	12.812	88
United States	9.324	29

1.4 Consumption

According to last updated data from FAO¹⁸, per capita world consumption in 2015 increased by 8% compared with 2005, moving from 18,8 to 20,2 kg/per capita.

In this period, Asia registered the highest growth, with a 12% increase, followed by Europe, Africa, and Latin America and the Caribbean, which increased by 9%, 9% and 5%, respectively. With an amount of 24 kg/per capita, it almost reached the level of Oceania, which still records the highest per capita consumption of 25 kg/per capita, despite a 7% decrease since 2005. In the same period, North America registered a 7% reduction as well.

¹⁶Nominal expenditure in euros (millions).

<http://stats.oecd.org/Index.aspx?DataSetCode=PPP2014>

¹⁷Nominal expenditure per capita in euros.

<http://stats.oecd.org/Index.aspx?DataSetCode=PPP2014#>

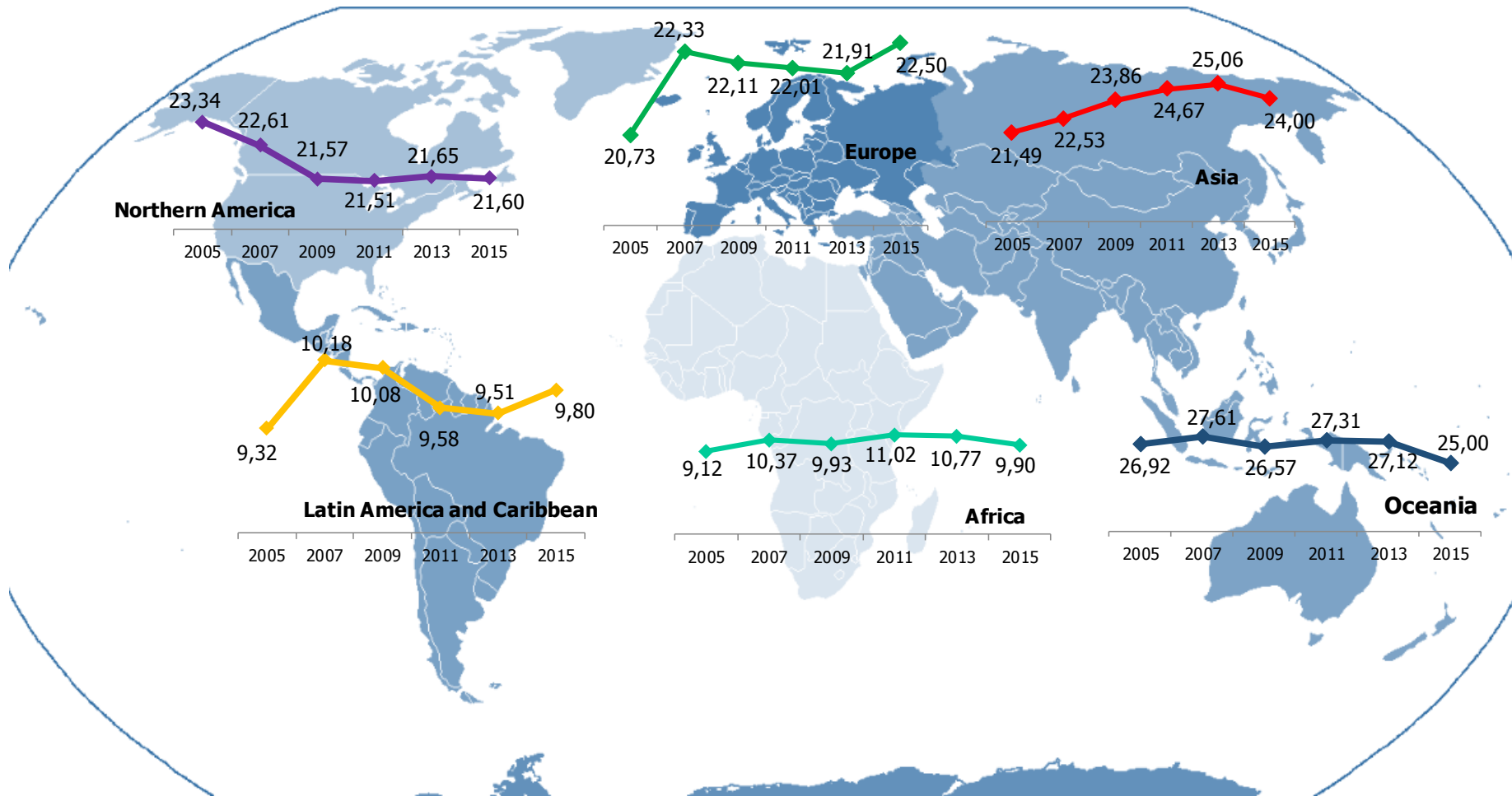
¹⁸Data on world consumption are available from FAO until 2013. Data for 2015 are taken from the "State of world fisheries and aquaculture 2018" <http://www.fao.org/state-of-fisheries-aquaculture>

Data referring to 2014 are averages between 2013 and 2015.

Chart 4

World consumption of fisheries and aquaculture products by continent (kg per capita)

Source: FAO



EU market supply

2

2.1 Supply balance and apparent consumption

The EU supply of fishery and aquaculture products destined for food use increased by almost 450.000 tonnes from 2015 to 2016, moving from 13,77 million to 14,22 million tonnes.

Production originating from both fisheries and aquaculture increased, but imports proved to be the main driver of the supply increase, reaching a 10-year peak with the 2016 live-weight import total of 9,05 million tonnes. This represented a 363.332-tonne or 4% increase over 2015.

Consequently, despite increased exports (+18.845 tonnes of live weight equivalent), apparent consumption reached a 10-year peak as well, totalling 12,41 million tonnes, which were 431.072 tonnes more than in 2015.

Of the main commercial species, herring contributed the most to this trend. In 2016, herring imports reached 258.544 tonnes of live weight equivalent, which marked an increase of 108.553 tonnes or 72% above 2015 imports. This was accompanied by catches that totalled 574.189 tonnes in 2016, which represented a 31.038-tonne or 6% increase from 2015. Together, this made herring the species that recorded the most significant growth in apparent consumption, with a 33% increase of 154.254 tonnes that brought total apparent consumption to 628.844 tonnes.

Chart 5

EU supply balance for fisheries and aquaculture products (2016, live weight equivalent FOOD USE ONLY)

Source: EUMOFA based on elaboration of EUROSTAT and FAO data

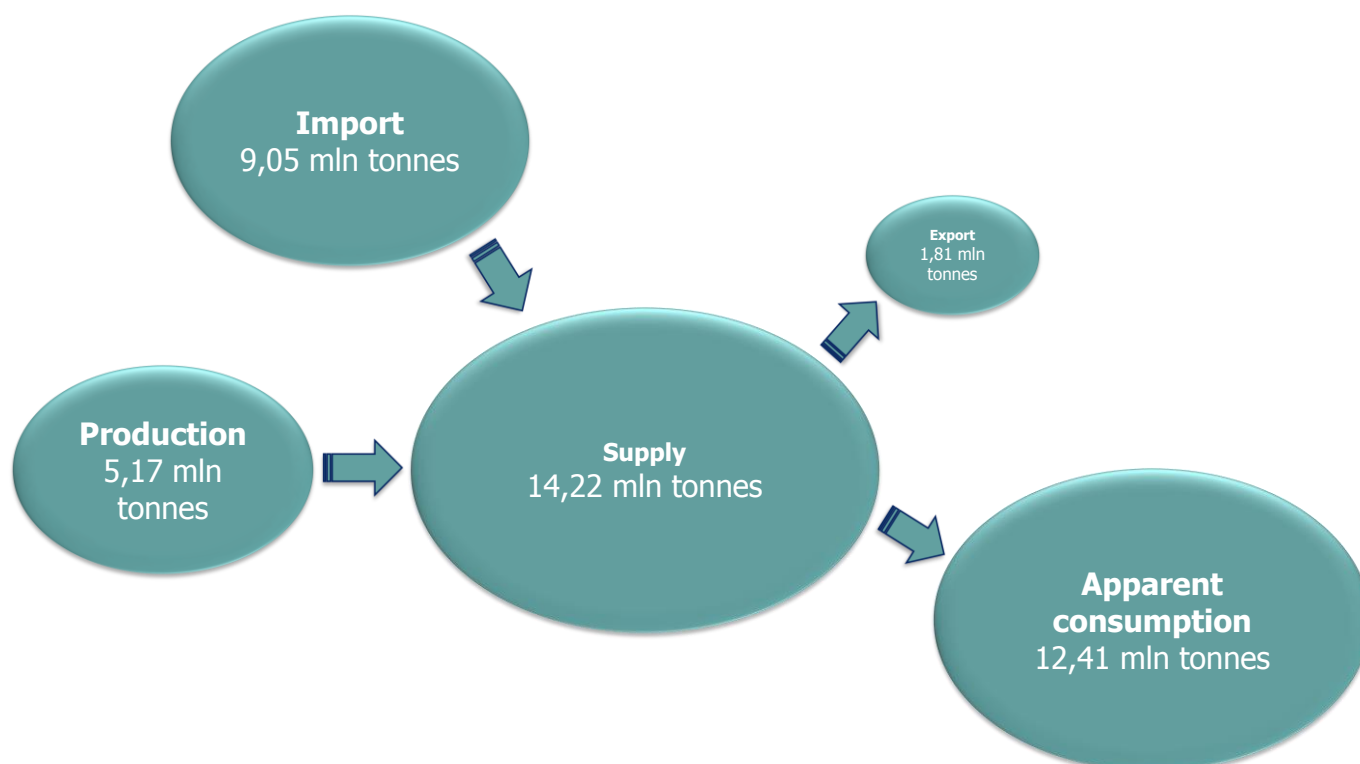


Table 3

EU production details (tonnes)

Source: EUMOFA based on elaboration of EUROSTAT, National sources, FEAP and FAO data

		2011	2012	2013	2014	2015	2016
Food use	Catches	3.644.690	3.614.409	3.834.079	4.216.254	3.824.012	3.883.916
	Aquaculture	1.271.816	1.235.825	1.186.672	1.252.608	1.263.141	1.289.823
Total production destined to food use		4.916.506	4.850.234	5.020.751	5.468.862	5.087.153	5.173.739
Non-food use	Catches	1.117.468	741.332	994.911	1.165.413	1.320.207	1.130.563

Of EU production destined for food use, 75% comes from wild products. In 2016, catches increased by 2%, marking a recovery from 2015's 9% decrease. Aquaculture production increased as well, growing by 2% and continuing the upward trend started in 2014.

Non-food catches¹⁹ interrupted the positive trend started in 2013 and registered a 14% fall. This was mostly due to decreased catches of sandeels and sprats, which dropped by 169.013 and 68.439 tonnes, respectively.

Table 4

**EU supply balance
for fisheries and aquaculture products
by commodity group and production method
(2016, live weight equivalent
FOOD USE ONLY)**

Source: EUMOFA based on elaboration of EUROSTAT and FAO data

Commodity group	Production (tonnes)		Import (tonnes)		Export (tonnes)		Apparent consumption (tonnes)			Apparent consumption per capita (kg)		
	Fishery	Aquaculture	Fishery	Aquaculture	Fishery	Aquaculture	Fishery	Aquaculture	Total	Fishery	Aquaculture	Total
Bivalves and other molluscs and aquatic invertebrates	224.464	602.043	372.773	86.278	34.614	9.072	562.623	679.249	1.241.872	1,10	1,33	2,43
Cephalopods	93.217	2	541.428	0	30.617	1	604.027	1	604.027	1,18	0	1,18
Crustaceans	169.271	402	570.830	308.218	107.644	474	632.457	308.146	940.604	1,24	0,60	1,84
Flatfish	198.179	11.244	155.633	697	67.807	334	286.004	11.607	297.611	0,56	0,02	0,58
Freshwater fish	17.222	106.000	101.596	311.373	8.511	8.344	110.307	409.030	519.337	0,22	0,80	1,02
Groundfish	623.099	0	2.754.331	682	254.772	0	3.122.658	682	3.123.341	6,12	0	6,12
Miscellaneous aquatic products	55.390	672	310.184	0	15.399	0	350.175	672	350.847	0,69	0	0,69
Other marine fish	334.806	175.741	401.481	61.237	114.323	12.666	621.964	224.312	846.276	1,22	0,44	1,66
Salmonids	4.936	376.119	97.064	1.002.610	39.993	102.222	62.007	1.276.507	1.338.514	0,12	2,50	2,62
Small pelagics	1.762.776	0	603.119	0	686.842	0	1.679.054	0	1.679.054	3,29	0	3,29
Tuna and tuna-like species	400.556	17.599	1.365.450	95	301.969	9.754	1.464.037	7.941	1.471.977	2,87	0,02	2,88
Total	3.883.916	1.289.823	7.273.889	1.771.191	1.662.493	142.866	9.495.313	2.918.148	12.413.461	18,61	5,72	24,33

Data as of June 2018. Data may differ from those currently available on the EUMOFA website as these are constantly updated (see methodological background for the details).

¹⁹ Source: Eurostat. For the species considered not to be destined to human consumption, please refer to the Methodological background.

In 2016, the average EU citizen consumed 24,33 kg of fisheries and aquaculture products, 763 grams more than in 2015.

In 2016, per capita consumption of fisheries and aquaculture products in the EU reached 24,33 kg, which was an increase of 763 grams or 3% from per capita consumption in 2015. Wild products predominated the market in 2016, accounting for 18,61 kg per capita or 76% of the total. This represented the highest amount of the 2012–2016 period and an increase of 723 grams over 2015. The most remarkable consumption increases were for herring (+299 grams), sardine (+157 grams) and skipjack tuna (+95 grams). On the other hand, the main decreases were with sprat (-67 grams) and the groupings “other groundfish”²⁰ (-90 grams) and “miscellaneous tunas”²¹ (-63 grams). Per capita apparent consumption of farmed products in 2016 increased a slight 1% from the previous year, bringing it to 5,72 kg, almost at the 10-year peak level of 5,73 kg reached in 2014. More than half of total per capita apparent consumption of farmed products is represented by salmon (2,08 kg) and mussels (1,01 kg), both stable compared with 2015.

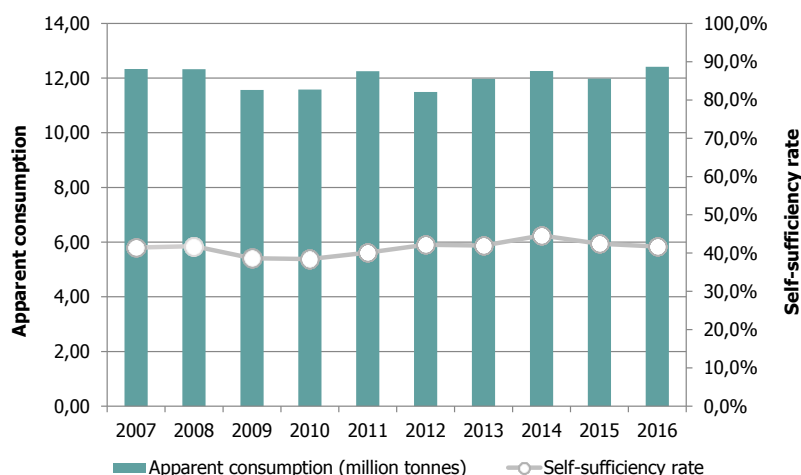
2.2 EU self sufficiency

The supply of a market is ensured by production and imports. Self-sufficiency is the ratio of domestic production over domestic demand, which namely indicates what is consumed. Within the EU market for fisheries and aquaculture products, this ratio decreased from 42,5% in 2015 to 41,7% in 2016 – meaning that a higher share of demand had been met through imports than through EU catches or aquaculture production. This decrease was mainly due to a substantial increase of imports which was much more intense than that registered for farmed and wild EU production. Indeed, the top-5 species consumed in the EU – tuna, cod, salmon, Alaska pollock and shrimps – representing 43% of the market in 2016, were mostly imported from third countries.

Chart 6

EU market trend and self-sufficiency rates

Source: EUMOFA based on elaboration of EUROSTAT, National sources, FEAP and FAO data



²⁰ Mostly consisting of sandeels.

²¹ Mostly consisting of Atlantic bonito.

Table 5

**Self-sufficiency rate
of most consumed products (2016)**Source: EUMOFA based on elaboration of EUROSTAT and
FAO data

Products and share of total apparent consumption	Self-sufficiency rate
Mackerel (2%)	123%
Herring (5%)	91%
Trout (2%)	89%
Mussel (5%)	82%
Sardine (3%)	74%
Hake (4%)	38%
Scallop (1%)	30%
Tuna (11%)	28%
Salmon (9%)	16%
Cod (10%)	9%
Squid (3%)	9%
Shrimp (6%)	9%
Freshwater catfish (2%)	4%
Alaska pollock (7%)	0%
Surimi (2%)	0%

Table 6

**Self-sufficiency rate by commodity group,
ranked by share of total apparent
consumption**Source: EUMOFA based on elaboration of EUROSTAT,
National sources, FEAP and FAO data

Commodity groups and share of total apparent consumption	Self-sufficiency rates									
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Groundfish (25%)	21%	21%	18%	18%	17%	19%	19%	22%	22%	20%
Small pelagics (14%)	104%	103%	100%	107%	105%	110%	107%	131%	121%	105%
Tuna and tuna-like species (12%)	23%	32%	14%	15%	23%	26%	29%	34%	27%	28%
Salmonids (11%)	34%	33%	34%	34%	33%	31%	31%	30%	28%	28%
Bivalves and other molluscs and aquatic invertebrates (10%)	65%	62%	61%	58%	59%	64%	61%	60%	64%	67%
Crustaceans (8%)	20%	18%	16%	16%	17%	17%	18%	18%	18%	18%
Other marine fish (7%)	48%	49%	51%	51%	57%	68%	67%	65%	63%	60%
Cephalopods (5%)	18%	17%	15%	14%	18%	20%	20%	22%	19%	15%
Freshwater fish (4%)	18%	16%	16%	14%	15%	17%	18%	21%	23%	24%
Miscellaneous aquatic products (3%)	13%	13%	0%	0%	13%	13%	20%	17%	6%	16%
Flatfish (1%)	86%	93%	92%	95%	97%	76%	78%	73%	74%	70%
Total	41,5%	41,8%	38,6%	38,4%	40,1%	42,2%	41,9%	44,6%	42,5%	41,7%

Groundfish

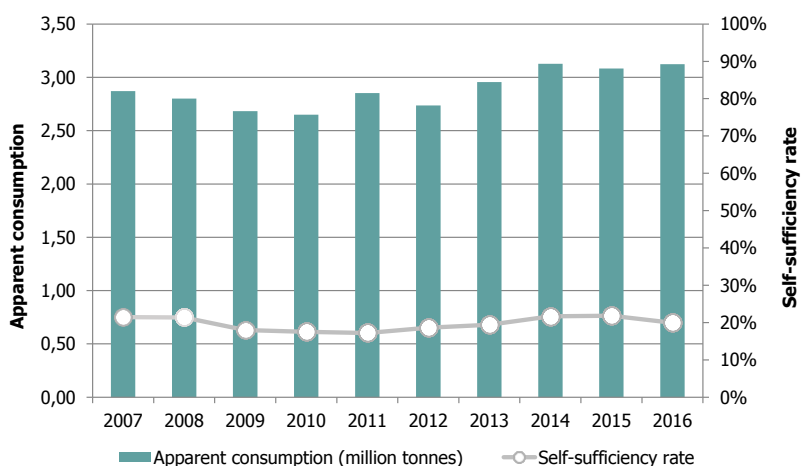
In 2016, the EU self-sufficiency rate for groundfish fell to 20%, a decrease of 2% compared with both 2014 and 2015. The decrease was largely driven by reduced catches of cod and increased imports of both cod and Alaska pollock.

The two species accounted for 64% of the apparent consumption of groundfish in 2016: cod had a self-sufficiency rate of 9% while all Alaska pollock was imported. Together, these products significantly contribute to making the EU less self-sufficient.

Chart 7

EU market trend and self-sufficiency rates for groundfish

Source: EUMOFA based on elaboration of EUROSTAT, National sources, FEAP and FAO data



Small pelagics

In 2016, increased imports of herring determined the decline of the EU self-sufficiency for fisheries and aquaculture products compared with 2015.

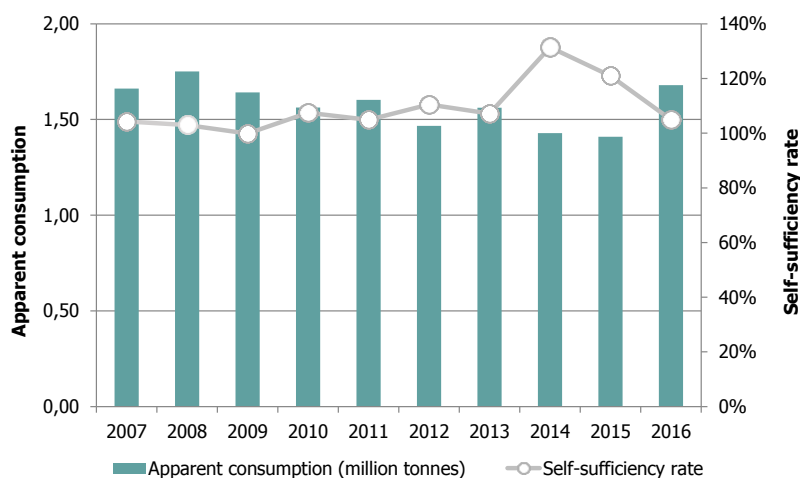
The EU is fully capable of meeting the demand of small pelagics through fisheries production.

The self-sufficiency rate for this commodity group has averaged 109% during the last ten years. In 2014, it skyrocketed to 131%, thanks to increased catches of mackerel, but then began a downward trend. In 2015, the self-sufficiency rate decline was due to lower production of sardine and horse mackerel; in 2016, it continued to drop due to increased imports of herring, which also contributed to the overall decline in the EU self-sufficiency rate for fisheries and aquaculture products.

Chart 8

EU market trend and self-sufficiency rates for small pelagics

Source: EUMOFA based on elaboration of EUROSTAT, National sources and FAO data



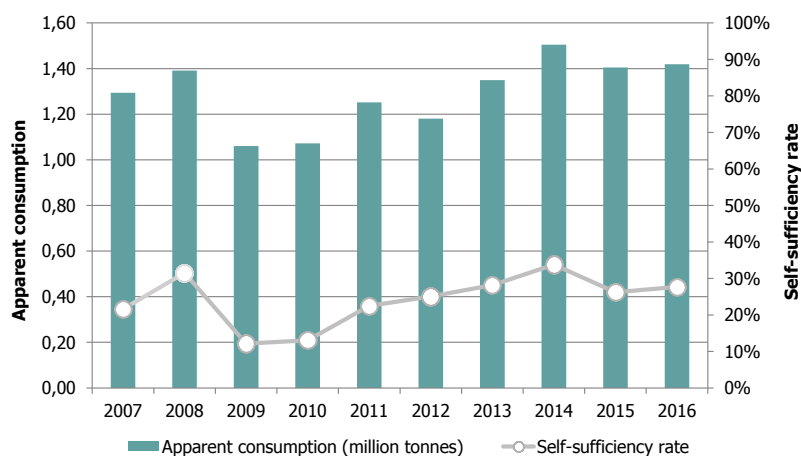
Tuna Apparent consumption of the commodity group “tuna and tuna-like species” included 96% tuna and 4% swordfish in 2016. Overall, the self-sufficiency rate of this category reached 28% in 2016, marking a slight recovery from 2015 when it was at 27%.

In terms solely of tuna, the EU self-sufficiency in 2016 compared with 2015 increased from 26% to 28%. This followed the drop observed in 2015 with respect to 2014 that was due to a tumble in catches of skipjack and yellowfin tuna. In 2016, catches of skipjack tuna registered an increase of 22.960 tonnes, which contributed to a slight recovery of the self-sufficiency rate for tunas in general.

Chart 9

EU market trend and self-sufficiency rates for tuna

Source: EUMOFA based on elaboration of EUROSTAT, National sources, FEAP and FAO data



Salmonids

In 2016, 16% of the salmon consumed in the EU was produced internally.

The EU self-sufficiency rate for salmonids averaged 34% during 2007–2011 but has been declining since 2012, dropping to 28% in both 2015 and 2016.

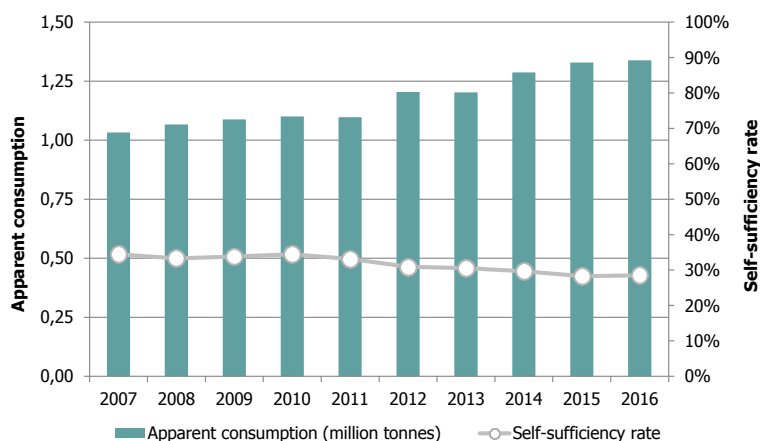
This evolution was driven by the upward trend registered for imports of salmon, especially imports originating from aquaculture in Norway. In 2016, 16% of the salmon consumed in the EU was produced internally. Farmed salmon imported in the EU totalled 960.409 tonnes (live weight) – 223.701 tonnes more than in 2011.

At the same time, trout continues to register a high self sufficiency rate, reaching 89% in 2016, thanks to increased farmed production. However, trout represents a relatively small share of salmonids consumption – 16% in 2016 – and therefore has a limited impact on the self-sufficiency trend of the salmonids commodity group.

Chart 10

EU market trend and self-sufficiency rates for salmonids

Source: EUMOFA based on elaboration of EUROSTAT, National sources, FEAP and FAO data



Crustaceans

The EU self-sufficiency rate for crustaceans has shown a relatively stable trend during the last ten years. Since 2013, it has been at 18%, which was also its 10-year average.

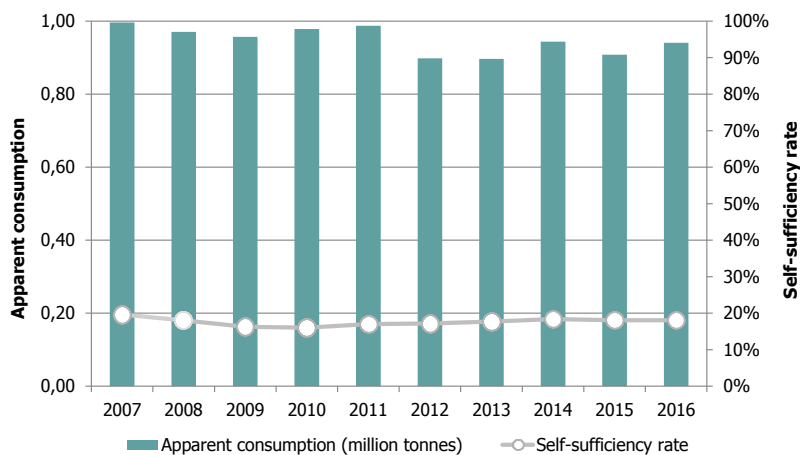
The EU is self-sufficient for squillid, Norway lobster and crab, with ratios of 100%, 97% and 97% respectively in 2016. As for shrimp *Crangon*, the biggest part of what is exported to non-EU countries (mostly Morocco) is not consumed there but comes back to the EU after peeling.

For other species of crustaceans, imports are predominant. The lowest self-sufficiency rates are those concerning the most consumed types of shrimps, namely warm-water shrimps (1%) and miscellaneous shrimps (2%), the latter consisting mainly of Argentine red shrimp, frozen or prepared/preserved.

Chart 11

EU market trend and self-sufficiency rates for crustaceans

Source: EUMOFA based on elaboration of EUROSTAT, National sources, FEAP and FAO data



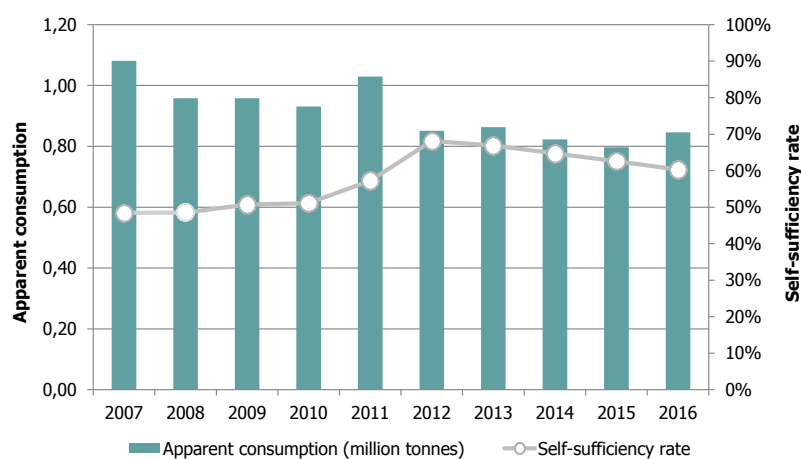
Other marine fish The EU self-sufficiency rate for other marine fish²² averaged 50% during 2007–2010, but reached 63% during 2011–2016. While it increased from 2007 to 2012, it began declining in 2013 due to decreased catches. The increase between 2011 and 2012 (from 57% to 68%) was caused by a substantial 30% import decline of 187.800 tonnes which, together with a shrinkage in aquaculture production, impacted its drop in apparent consumption.

Within this category, the self-sufficiency levels vary for the most consumed species, namely gilthead seabream, European seabass and monk²³, at 79% for gilthead seabream and 86% for European seabass, which are both ensured by aquaculture production. From 2015 to 2016, farmed production of both species increased, contributing to increased apparent consumption and self-sufficiency. For monk, almost half of the demand was met through EU catches in 2016. Still, the self-sufficiency rate dropped from 52% in 2015 to 49% in 2016, due to a large increase in imports.

Chart 12

EU market trend and self-sufficiency rates for other marine fish

Source: EUMOFA based on elaboration of EUROSTAT, National sources, FEAP and FAO data



²² This group includes seabream, seabass, monk, ray, red mullet, gurnard, dogfish, scabbardfish, cusk-eel, john dory, picarel, smelt and sharks.

²³ Apparent consumption of each one represents a similar share of the total at commodity group level: 13% for gilthead seabream, 12% for European seabass and 11% for monk.

Consumption

3.1 Expenditures and volume of fish consumption

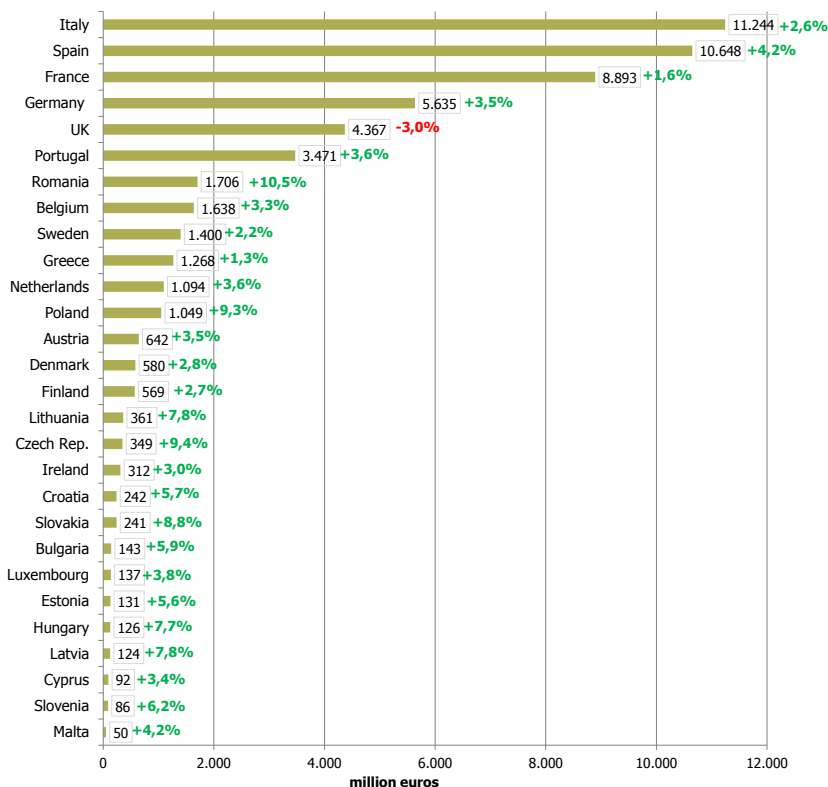
In 2017, the EU household expenditure on fishery and aquaculture products reached a 15-year peak, totalling EUR 56,6 billion.

At EU level, 2017 expenditure increased 2,9% from 2016. Italy was the Member State registering the highest level of expenditure, with EUR 11,2 billion (+2,6% over 2016), followed by Spain with EUR 10,7 billion (+4,2%) and France with EUR 8,9 billion (+1,6%). The United Kingdom with EUR 4,4 billion (-3%) was the only Member State registering a decrease in expenditure in 2017 compared with the previous year.

Chart 13

Household expenditure on fishery and aquaculture products in 2017 and % variation 2017/2016 (Out-of-home consumption is excluded)
 Source: EUROSTAT (Purchasing Power Parities – PPPs –nominal expenditure)

In 2017, EU households spent EUR 56,6 billion for fisheries and aquaculture products.



In 2017,²⁴ Portugal registered again the highest per capita household expenditure (EUR 337). This amount is triple the EU average and represents an increase of 4% over 2016, and of 68% over 2000.

These data follow the trend recorded in 2016, when Portugal had a per capita household consumption of EUR 325, which was 3% higher than 2015 and three times the EU average of EUR 108. In the same period, Portugal also had the highest per capita apparent

²⁴ Last available data on EUROSTAT.

consumption of fish and seafood, which increased by 3% in 2016²⁵ compared with 2015, rising from 55,4 to 57,0 kg. This was more than twice the average EU per capita consumption (24,3 kg).

In 2016, nine Member States had a per capita consumption higher than the EU average. The most substantial increases were observed in Greece (+15%) and Latvia (+11%).

Chart 14

Per capita household expenditure on fishery and aquaculture products in the EU in 2017 and % variation 2017/2016 (out-of-home consumption is excluded)

Source: EUROSTAT (Purchasing Power Parities – PPPs – per capita nominal expenditure)

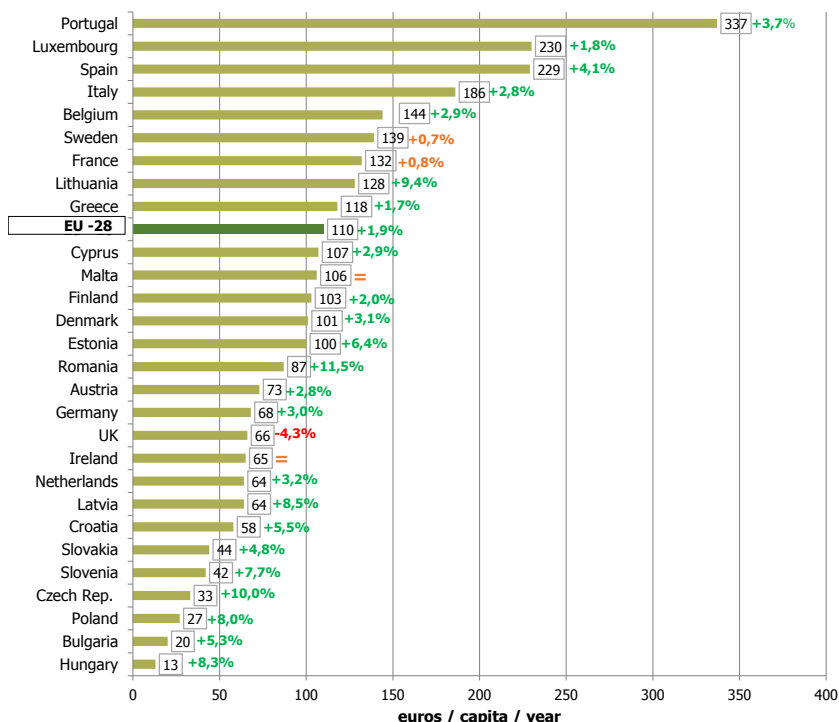
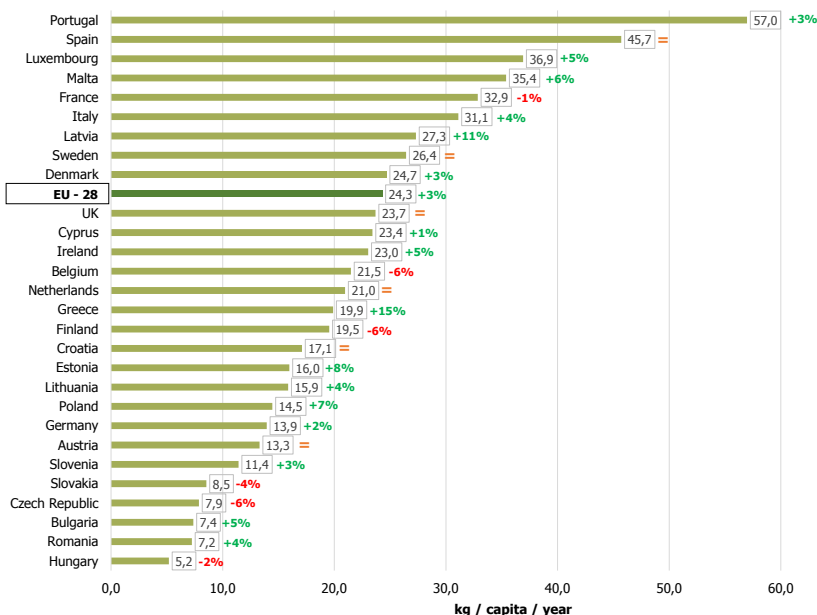


Chart 15

Per capita consumption (including out-of-home) of fishery and aquaculture products (kg capita/year) per Member State, 2016 and % variation 2016/2015 (Live weight equivalent)

Source: EUMOFA based on elaboration of EUROSTAT, national sources, FEAP and FAO data



²⁵ Data on apparent consumption come from the supply balance by Member State developed by EUMOFA up to 2016.

Overall, at EU level, households spent EUR 56,6 billion for purchasing fish in 2017, which was around one-quarter of the EUR 221 billion spent for purchasing meat.

Expenditure on fish had the highest share of total expenditure for animal protein in Portugal, where it was more than 3 / 4 that of meat.

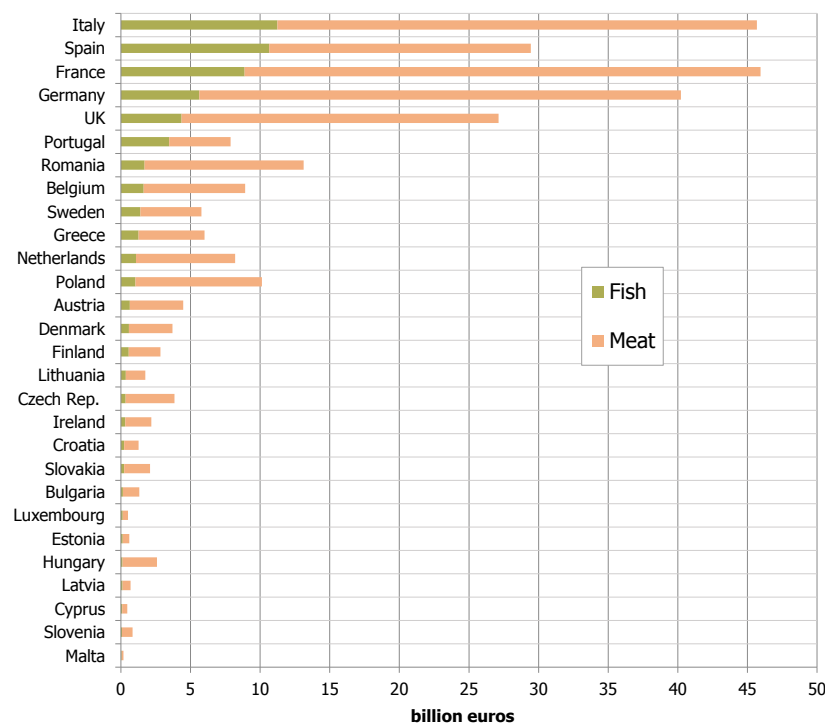
The top-3 fish-consuming Member States, namely Italy, France and Spain, displayed different purchasing patterns. In Italy, expenditure on meat was three times higher than for fish; in Spain, it was twice as high; and in France, households spent four times as much on meat as on fish.

The greatest imbalance was observed in Hungary, where in 2017 expenditure for meat was 20 times higher than expenditure for fish.

Chart 16

Total household expenditure on fishery and aquaculture products vs meat in the EU in 2017 (out-of-home consumption is excluded)

Source: EUROSTAT: (Purchasing Power Parities – PPS - nominal expenditure)



3.2 Consumer prices – fish vs meat and food in general

In the 2010–2017 period, consumer fish prices increased an average of 3% per year, which was a higher rate than prices of meat and food in general.

From 2010 to 2013, prices of fish, meat and food in general increased at similar growth rates, but, starting from 2014, they drifted apart. Indeed, fish prices began to grow significantly and, by 2017, they had increased by 10% compared with 2013. Over the same period, the prices of meat and food remained relatively the same.

Chart 17

**Consumer prices
(2010=100)**
Source: EUROSTAT

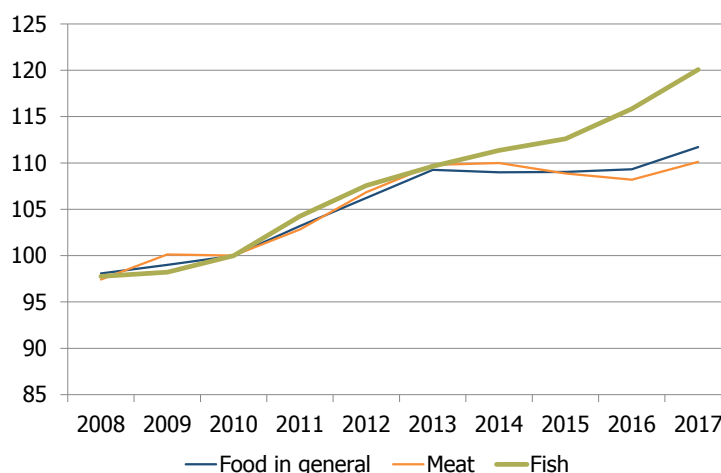


Table 7

**Consumer prices
(percentage change)
sectoral comparison**
Source: EUROSTAT

Sector	2013	2014	2015	2016	2017	2017/2013
Food in general	+2,8%	-0,2%	0,0%	+0,3%	+2,2%	+2%
Meat	+2,8%	+0,2%	-1,0%	-0,6%	+1,8%	=
Fish	+1,9%	+1,6%	+1,1%	+2,9%	+3,6%	+10%

3.3 Apparent consumption

In 2016, apparent consumption²⁶ of fishery and aquaculture products amounted to 12,41 million tonnes, increasing by 4% compared with 2015 and reaching a 10-year peak.

This corresponded to 24,33 kg per capita.

The 15 products listed in Table 8 accounted for 73% of apparent consumption.

²⁶ The definition of “apparent consumption” is available in the “Supply balance” section of the Methodological background.

Table 8

Apparent consumption of most important species (live weight equivalent, 2016)

Source: EUMOFA based on elaboration of EUROSTAT and FAO data

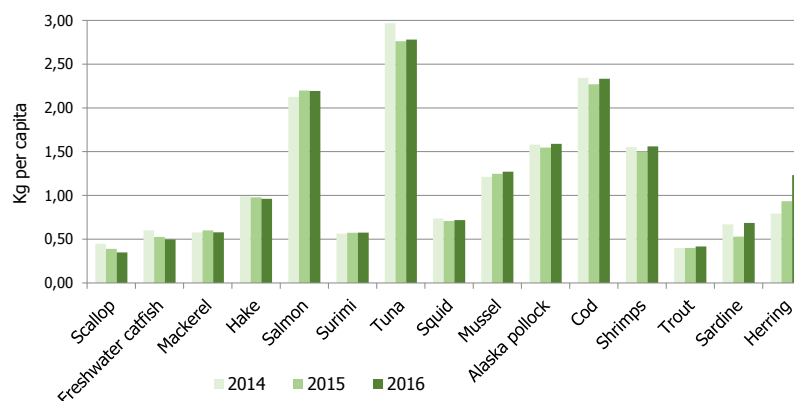
In 2016, apparent consumption of fishery and aquaculture products amounted to 24,33 kg per capita. Tuna confirmed to be the most consumed species.

Products ²⁷	Per capita (kg)	% wild	% farmed
Tuna	2,78	99%	1%
Cod	2,33	100%	0%
Salmon	2,19	5%	95%
Alaska pollock	1,59	100%	0%
Shrimps	1,56	62%	38%
Mussel	1,27	20%	80%
Herring	1,23	100%	0%
Hake	0,96	100%	0%
Squid	0,72	100%	0%
Sardine	0,69	100%	0%
Mackerel	0,58	100%	0%
Surimi	0,58	100%	0%
Freshwater catfish (including pangasius)	0,50	1%	99%
Trout	0,42	1%	99%
Scallop	0,35	84%	16%
Others	6,59	84%	16%
Total	24,33	76%	24%

Chart 18

Apparent consumption of most consumed products in 2014, 2015 and 2016

Source: EUMOFA based on elaboration of EUROSTAT, FEAP and FAO data



In 2016, per capita consumption of tuna, cod and salmon accounted for 30% of the total consumption of fishery and aquaculture products.

Tuna (mostly canned) remained the most consumed species in the EU, followed by cod and salmon. This ranking has been the same since 2009, with the exception of 2012, when salmon was the second most consumed species, driven by the price of imported salmon from Norway dropping 12% from 2011. In the same period, global and European production quantity of farmed Atlantic salmon rose by 22% and 16%, respectively.

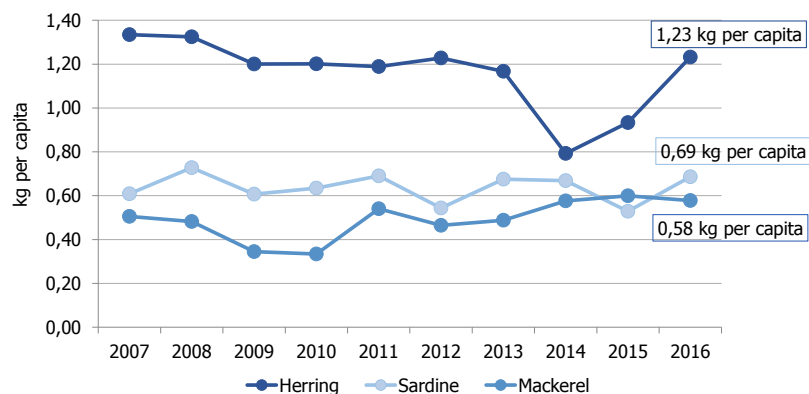
²⁷ Some species are grouped in a single product, in particular: mussel (*Mytilus spp.* + other mussels), tuna (skipjack, yellowfin, albacore, bigeye, bluefin and miscellaneous) and shrimps (warmwater shrimps, coldwater shrimps, deep-water shrimps, shrimp *Crangon spp.* and miscellaneous shrimps).

Small pelagics

Chart 19

Apparent consumption of most consumed small pelagics species

Source: EUMOFA based on elaboration of EUROSTAT, national sources, FEAP and FAO data



Among all “main commercial species²⁸”, per capita consumption of herring increased the most. Compared with 2015, it rose from 0,93 to 1,23 kg per capita, an increase of 32% that equalled the average per capita consumption of the period 2007–2013. An increase was also observed for sardine, as its consumption grew from 0,53 to 0,69 kg per capita (+30%), driven by increased imports of prepared/preserved and frozen products from Morocco for meeting EU (mainly Spanish) canning industry demand.

In 2016, per capita consumption of mackerel declined by 4% with respect to 2015, due to a negative trend of catches, mainly due to reduced quotas for all EU countries. Ireland, which is the leading Member State for mackerel catches, registered a drop of 14%. The leading Member States for consumption, France and Spain, also registered decreases in 2016 compared to 2015, especially France, where household consumption fell 9% for fresh mackerel and 4% for canned mackerel. Spain also experienced a 4% decrease in its household consumption of canned mackerel and a slight 1% increase in fresh consumption.

In 2016, compared to the previous year, fresh consumption prices increased 6% in France and 1% in Spain but, for canned mackerel, decreased 1% in both countries. The consumption patterns are not the same in the two countries: Spanish households prefer fresh mackerel, consuming 18.900 tonnes in 2016 compared with the 4.500 tonnes consumed by French households, while for canned mackerel, France consumed 17.800 tonnes in 2016 compared with the 6.300 tonnes consumed in Spain.

²⁸ The list of EUMOFA “main commercial species” is available at the link http://www.eumofa.eu/documents/20178/24415/Metadata+2+-+DM+-+Annex%2B1_%2BList%2Bof%2BMCS%2Band%2BCG.pdf/od849918-162a-4d1a-818c-9edcb4edfd2

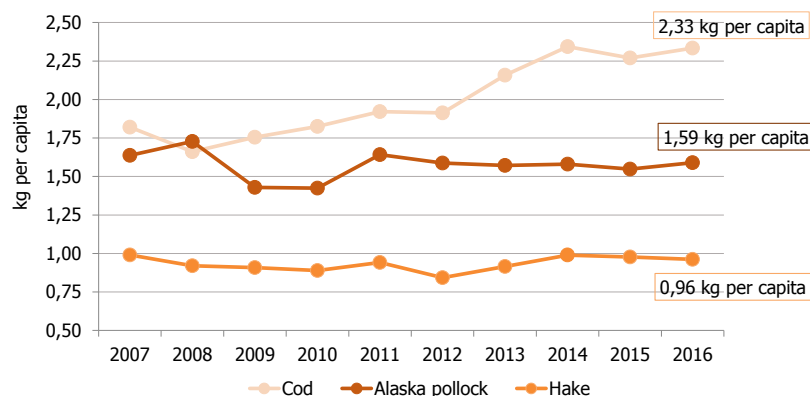
Consumption

Groundfish

Chart 20

Apparent consumption of most consumed groundfish species

Source: EUMOFA based on elaboration of EUROSTAT, National sources, FEAP and FAO data



The consumption of cod and Alaska pollock was basically flat in the period 2014–2016, with only marginal annual changes. However, in the ten-year period from 2007 until 2016, the two species showed a different trend: cod had shown a positive trend for years, increasing in 2013 and 2014 due to record high quotas in the North Atlantic and at the same time to reduced prices of this product in imports; Alaska pollock recorded a very slight decline over the period, due to import prices increasing from 1,88 EUR/kg in 2007 to 2,37 EUR/kg in 2016. In the years 2012–2016, the positive evolution of Alaska pollock fishing quotas, which increased 14% in Russia and 22% in the USA, ensured a smooth supply to the EU processing industry, which then satisfied the demand.

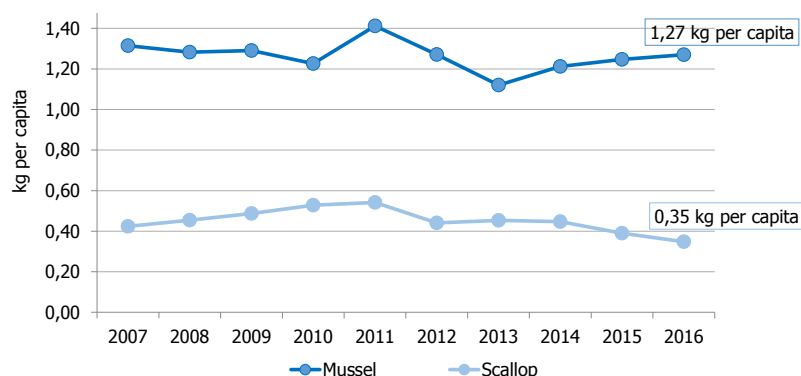
Consumption of hake registered a slight decrease for the second year in a row. Although there was a catch increase, it did not offset the decline of imports and 2016 consumption declined by 2% compared with 2015. Catch increases have generated a slight reduction of hake prices at production level, getting closer to prices of hake imported from non-EU countries.

Bivalves and other molluscs and aquatic invertebrates

Chart 21

Apparent consumption of most consumed bivalves and other molluscs and aquatic invertebrates

Source: EUMOFA based on elaboration of EUROSTAT, national sources, FEAP and FAO data



Apparent consumption of mussel has been increasing since 2014. From 2015 to 2016, it grew by another 2%, mainly due to increased farmed production as well as to augmented catches.

In the same period, apparent consumption of scallops showed a different evolution. In 2016, it continued the downward trend started in 2014, recording an 11% decrease from 2015 and reaching its lowest level of the previous 10 years. This was mainly due to the increase in scallop prices – 21% at production level and 49% at import levels – which led to its reduced demand at consumption stage. In France, the largest consuming EU Member State, scallop household consumption decreased by 19% between 2014 and 2016, falling from 10.765 to 8.973 tonnes. This resulted from fresh consumption rising 5% while frozen consumption collapsed 52%. This differentiated evolution can be explained by the price evolution: a moderate 5% increase for fresh scallop, from 12,00 to 12,60 EUR/kg, and a large 42% increase for frozen scallop, from 21,40 to 30,30 EUR/kg.

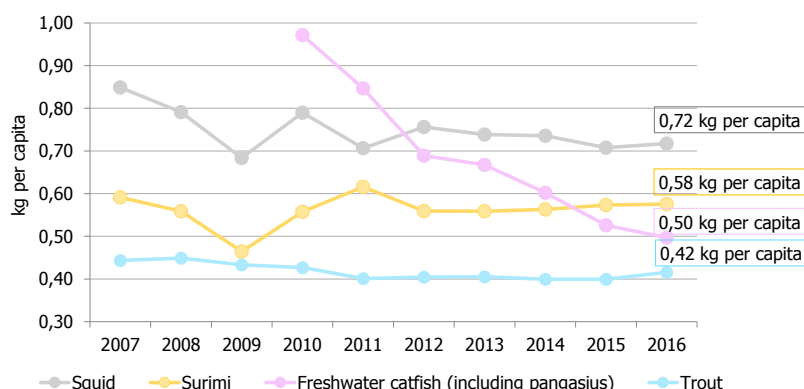
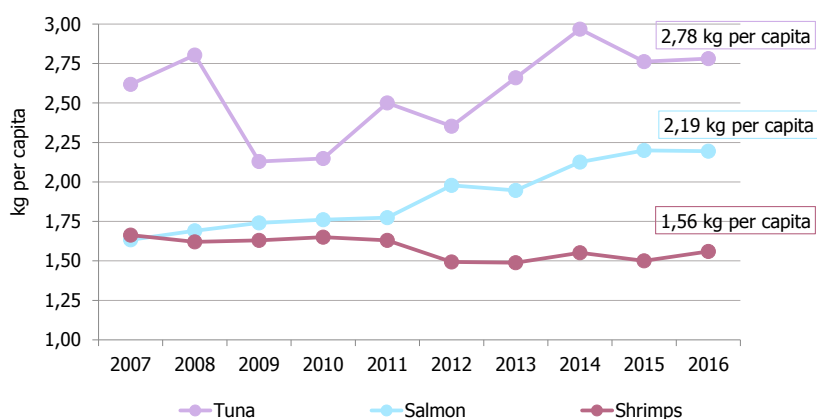
Other products

Charts 22 and 23

Apparent consumption of other most consumed products

Source: EUMOFA based on elaboration of EUROSTAT, national sources, FEAP and FAO data

This section analyses apparent consumption of other most consumed species belonging to different commodity groups.



In 2016, tuna was confirmed as the most consumed fish product in the EU – mostly as canned products of skipjack and yellowfin tuna, as well as albacore, bigeye, bluefin and miscellaneous tunas. However, its apparent consumption fluctuated over the years

2007–2016. After a 1% fall recorded in 2015, it recovered by the same extent in 2016 thanks to increased catches of skipjack tuna.

Apparent consumption of salmon showed a general upward trend from 2007 to 2016, despite a brief decrease from 2012 to 2013. In 2016, it totalled 2,19 kg per capita, which was only 1 gram lower than the previous year.

As for shrimps, per capita consumption reached a 5-year peak in 2016, marking a 4% increase over 2015 thanks to increased imports. In the EU, 90% of shrimps consumed are warm-water and miscellaneous shrimps,²⁹ frozen or prepared/preserved.

As for freshwater catfish (mainly pangasius), per capita consumption has continued to decline following the downward trend of its imports. In 2016, the lowest amount of the previous seven years was recorded at 0,50 kg, which was 5% less than in 2015.

3.4 Household consumption of fresh seafood

The household consumption of fresh seafood is analysed for the 12 Member States shown in Table 9. Together, they accounted for 86% of total EU expenditure on fishery and aquaculture products in 2017.

Overall, consumption of fresh seafood in these countries decreased by 2% in 2017 compared with 2016, reaching 1,75 million tonnes. In value terms, it was stable at EUR 16 billion.

Table 9

Household consumption of fresh seafood, in volume (tonnes) and in value (1000 EUR) and % variation 2017/2016

Source: EUMOFA based on elaboration of Europanel data

Among the EU top-consumers, only Italy and Germany saw an increase in consumption, while Denmark, Hungary, Ireland, Poland and Portugal suffered the biggest decreases, both in value and volume terms.

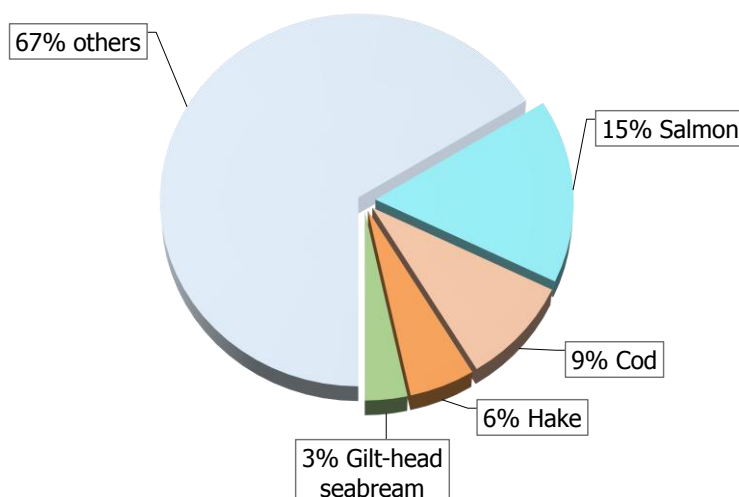
Member State	2013		2014		2015		2016		2017		2017/2016	
	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume
Denmark	122.813	9.076	134.938	9.275	132.338	8.907	125.603	8.349	111.915	7.160	↓ -11%	↓ -14%
France	2.367.194	233.390	2.355.527	229.034	2.347.189	225.988	2.464.758	225.659	2.474.958	222.351	⬚ 0%	👉 -1%
Germany	701.055	50.937	769.837	56.020	885.686	65.656	960.051	68.307	1.005.114	70.845	↑ +5%	↑ +4%
Hungary	27.693	7.337	27.421	6.758	29.720	6.320	29.085	5.934	26.238	4.846	↓ -10%	↓ -18%
Ireland	157.927	12.007	165.940	12.356	182.568	13.595	192.502	13.667	177.548	12.319	↓ -8%	↓ -10%
Italy	2.527.258	305.145	2.690.607	322.160	2.804.672	331.255	2.846.485	330.088	2.988.321	340.927	↑ +5%	↑ +3%
Netherlands	317.195	24.631	324.549	24.084	446.709	32.995	457.029	32.448	456.112	31.642	⬚ 0%	👉 -2%
Poland	299.259	60.991	313.242	61.873	335.542	66.009	317.639	62.839	304.390	56.645	↓ -4%	↓ -10%
Portugal	338.659	60.553	333.727	57.349	365.568	62.435	373.204	60.401	362.287	54.548	↓ -3%	↓ -10%
Spain	5.143.541	740.746	4.946.814	704.050	4.951.108	686.097	4.913.212	666.055	4.826.921	629.317	👉 -2%	↓ -6%
Sweden	114.529	8.945	125.982	9.882	139.942	11.187	130.002	9.400	130.997	9.025	👉 +1%	↓ -4%
United Kingdom	2.907.630	309.344	3.143.213	302.016	3.648.780	307.797	3.283.644	304.738	3.249.608	308.687	👉 -1%	👉 +1%
Total	15.024.754	1.823.103	15.331.796	1.794.857	16.269.821	1.818.241	16.093.214	1.787.887	16.114.411	1.748.311	⬚ 0%	👉 -2%

²⁹ Apparent consumption of miscellaneous shrimps consists almost entirely (92%) of imported products. No information is available on the specific species imported.

Chart 24

Main fresh products consumed by households (2017), in value

Source: EUMOFA based on elaboration of Europanel data



In 2017, the most valued fresh products consumed in the EU were salmon, cod, hake and gilt-head seabream, which together accounted for one-third of the total value of EU household consumption of fresh seafood.

SALMON – Fresh salmon consumption increased from 2013 to 2015, but the growth stopped in 2016, when both volumes and values significantly declined. In 2017, volumes consumed continued to decrease, falling 3% from 2016, but, due to a parallel 7% price increase, overall value registered a 3% growth. The UK is the largest consumer of fresh salmon, spending EUR 860 billion for 52.126 tonnes, accounting for 30% of the EU household consumption of this species in volume terms. The UK was followed by Spain, which accounted for 26%, and France which accounted for 12%. Together, the three countries were responsible for 68% of the total EU consumption of salmon, both in value and volume terms.

COD – Household purchase of fresh cod in 2017 was the highest since 2013, reaching EUR 1,5 billion for 143.782 tonnes. The UK household purchases ranked first, totalling EUR 531 million, followed by France with EUR 351 million, Spain with EUR 253 million, and Italy with EUR 151 million. Compared with 2016, these countries registered a positive trend, the most significant of which was witnessed in Spain, which had increases of 10% in volume and 17% in value.

HAKE – In 2017, EU consumption of fresh hake registered a decrease of 7% in value and 10% in volume compared with 2016, reaching EUR 851 million and 111.089 tonnes. Spain, the country responsible for 90% of the total EU consumption of hake in value terms, recorded a drop in expenditure of EUR 57 million. The decline of hake consumption can be related to the significant production shrinkage imposed by TACs in the North Sea and in the north-eastern and central Atlantic.

GILT-HEAD SEABREAM – In 2017, fresh gilthead seabream consumption increased by 2% in value and 1% in volume over the previous year. Italy and Spain were the largest consumers, accounting together for about 81% of total EU consumption of this species.

Chart 25

Household consumption of fresh fish products in 2017 for the 12 Member States covered, in volume

Source: EUMOFA based on elaboration of Europanel data

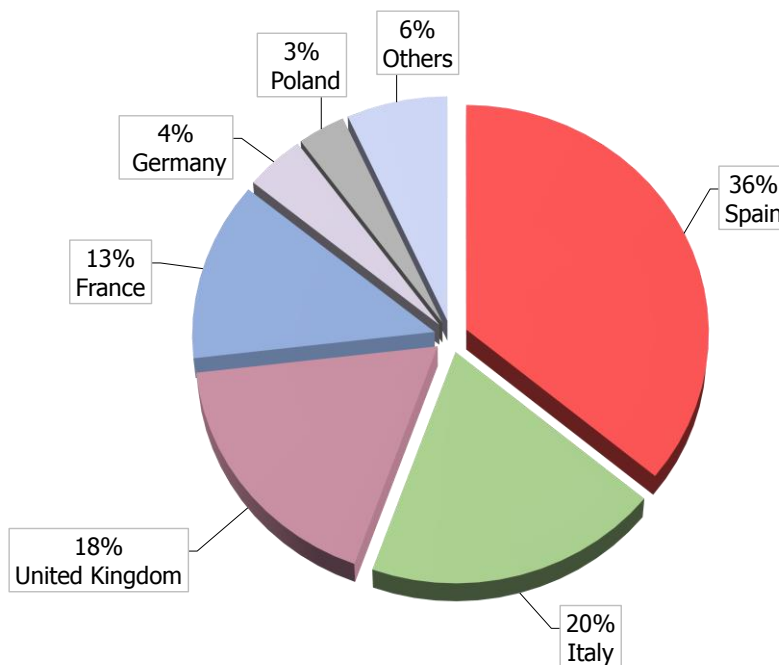
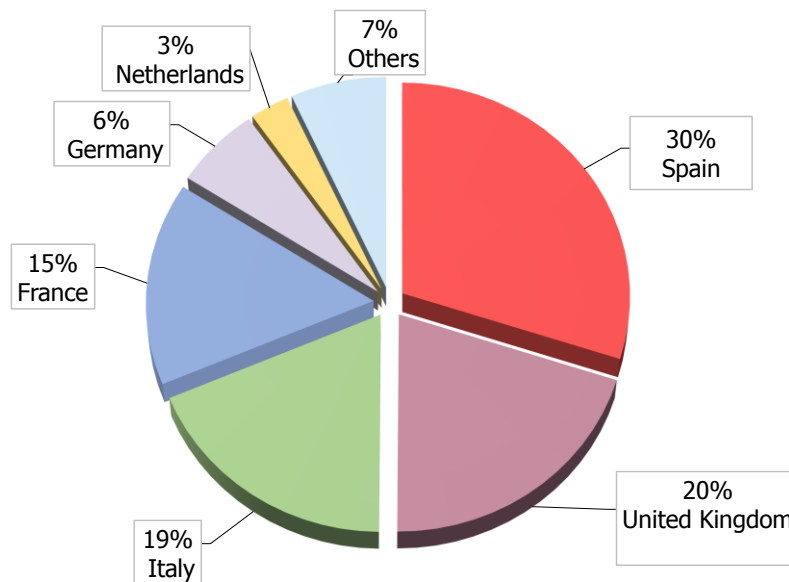


Chart 26

Household consumption of fresh fish products in 2017 for the 12 Member States covered, in value

Source: EUMOFA based on elaboration of Europanel data



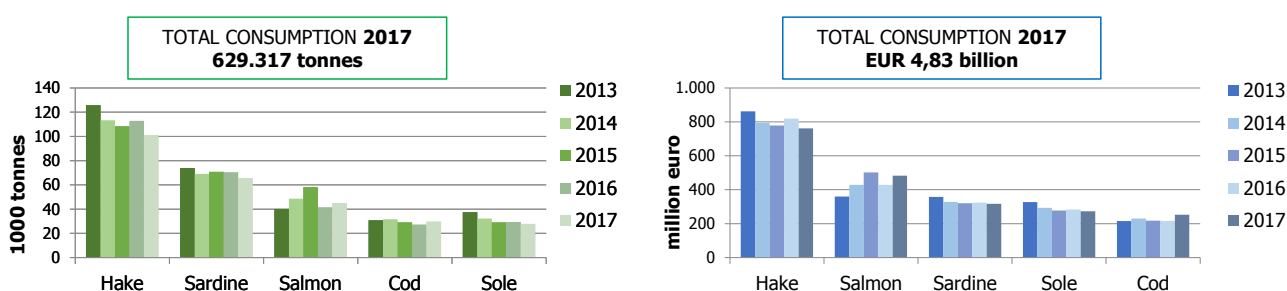
Four countries, namely Spain, the UK, Italy and France, accounted for 86% in volume of the total consumption registered by the 12 Member States analysed (84% in value).

Spain Spain is the largest consuming country of fresh fish in the EU. In 2017, it showed a consumption decrease of 6% in volume and 2% in value, moving from 666.055 to 629.317 tonnes and from EUR 4,91 to 4,83 billion. The most consumed fresh species in 2017 was hake, with 101.032 tonnes worth EUR 762 million, followed by sardine, salmon, cod and sole. Together, these species accounted for around 43% of the total Spanish household consumption, in both value and volume.

Chart 27

Main fresh species consumed by households in Spain, in volume and in value

Source: EUMOFA based on elaboration of Europanel data



United Kingdom

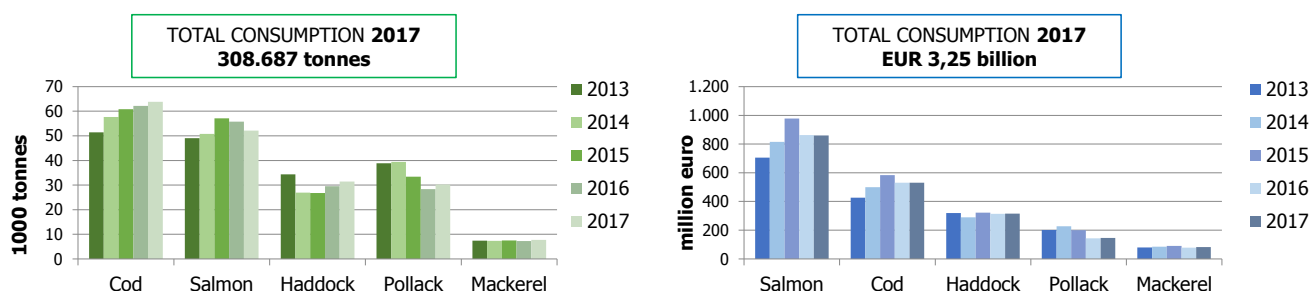
In 2017, the United Kingdom was the second largest EU consumer of fresh fish in value and third in volume, with EUR 3,25 billion spent for 308.687 tonnes. After recording a decline in 2016, volumes increased a slight 1%, but values continued to register a negative trend, in this case, decreasing by 1%.

The most important species consumed in the UK – cod, salmon, haddock, pollack and mackerel – together covered around 60% of the total fresh fish species consumed by households. Cod and salmon are by far the main fish species consumed fresh.

Chart 28

Main fresh species consumed by households in the UK, in volume and in value

Source: EUMOFA based on elaboration of Europanel data



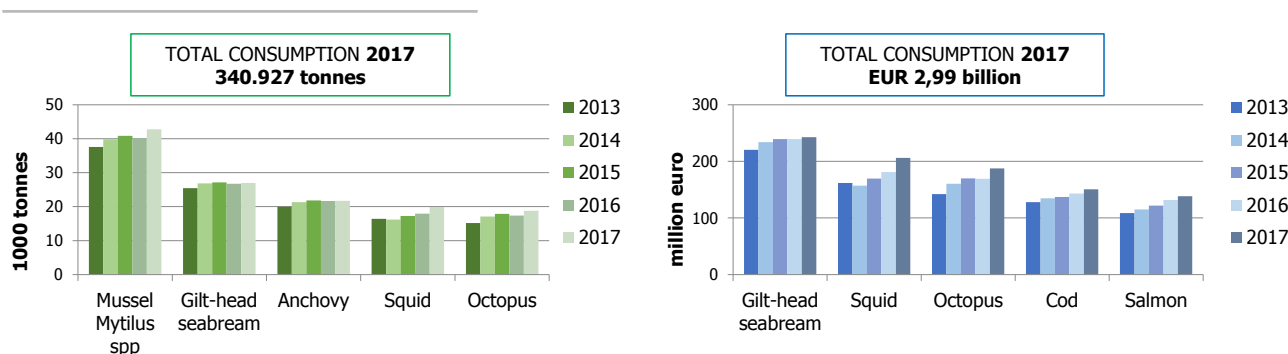
Italy In 2017, Italy increased expenditures by 5% over 2016, spending EUR 3 billion to purchase 340.927 tonnes of fish. In doing so, it reached a 5-year peak for fresh fish consumption. It ranked second in volume terms compared with other Member States, and third in value terms.

The most valued species consumed in Italy were gilt-head seabream, squid, octopus, cod and salmon. Combined, they covered 31% of the total consumption of fresh fish in Italy. In volume terms, mussel is by far the most consumed species, followed by gilt-head seabream, anchovy, squid and octopus.

Chart 29

Main fresh species consumed by households in Italy, in volume and in value

Source: EUMOFA based on elaboration of Europanel data



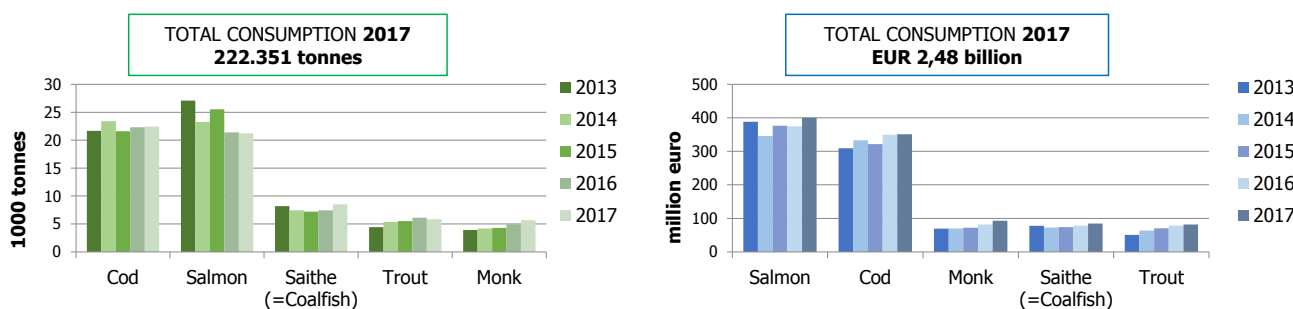
France In 2017, France ranked fourth in the EU in terms of fresh fish household consumption. It showed a stable trend compared with the previous year, and totalled 222.351 tonnes worth EUR 2,48 billion.

Consumption of cod and salmon predominated in both volume and value terms, followed at a distance by saithe, trout and monk.

Chart 30

Main fresh species consumed by households in France, in volume and in value

Source: EUMOFA based on elaboration of Europanel data



Germany In 2017, German households spent EUR 1 billion for purchasing 70.845 tonnes of fresh seafood. This amounted to increases of 4% in volume and 7% in value.

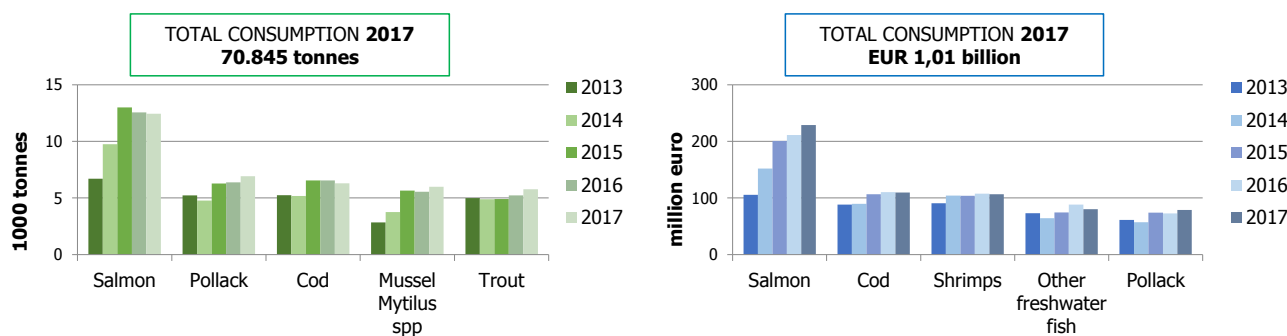
The main species consumed in Germany is salmon, with 12.446 tonnes consumed in 2017 (2% less than 2016) for a value of EUR 229 million (8% more than 2016). Salmon, together with pollack, cod, mussel and trout, accounted for 53% of fresh fish consumption in volume terms.

In value terms, with EUR 107 million for 4.924 tonnes, shrimps are the third main species after salmon and cod.

Chart 31

Main fresh species consumed by households in Germany, in volume and in value

Source: EUMOFA based on elaboration of Europanel data



Poland In 2017, household consumption of fresh fish products in Poland continued a negative trend, decreasing by 10% in volume and 4% in value from 2016 and reaching the lowest levels of the last 4 years: 56.645 tonnes for EUR 304 million.

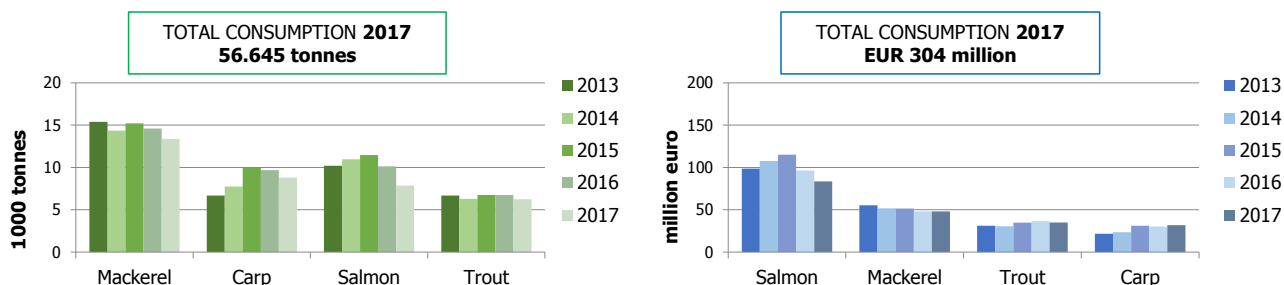
The main species consumed were mackerel, carp, salmon and trout, which in 2017, covered together around 65% of the total fresh seafood consumed by households in both volume and value terms.

Among them, salmon was the species registering the strongest consumption drop since 2016, as it fell by 13% in value and 22% in volume.

Chart 32

Main fresh species consumed by households in Poland, in volume and in value

Source: EUMOFA based on elaboration of Europanel data

**Other Member States**

Netherlands – Consumption of fresh fish slightly decreased in 2017 compared with 2016, but its value remained stable. Despite a 21% decrease in volume terms, salmon remained the main species consumed, accounting for 33% in value and 20% in volume of the total.

Portugal – Household consumption of fresh fish registered a 10% reduction in volume from 2016, mainly due to decreased consumption of mackerel, hake, salmon, European seabass and sardine, which, together, represented 38% of the total fresh fish consumed.

Sweden – Total consumption of fresh fish increased 1% in value and decreased 4% in volume. The main species consumed was salmon. With its 19% increase in value and 9% increase in volume, it was the only one of the top species that registered growth from 2016.

Ireland – In 2017, consumption of fresh fish decreased 8% in value and 10% in volume from 2016. Two species, namely salmon and cod, together accounted for 63% of the total consumption of fresh fish products in value and 56% in volume.

Denmark – In 2017, consumption of fresh fish continued to decline, dropping 14% in volume and 11% in value, due to lower consumption of salmon, the main species.

Hungary – Household consumption of fresh fish products recorded a remarkable drop in 2017, falling by 18% in volume and 10% in value compared with 2016.

3.5 Sales channels

The fishery and aquaculture industry supplies fish and seafood through different sales channels: retail, which includes fishmongers and large-scale retail (LSR); foodservice, which includes catering and commercial restaurants; and institutional, which includes schools, canteens, hospitals and prisons.

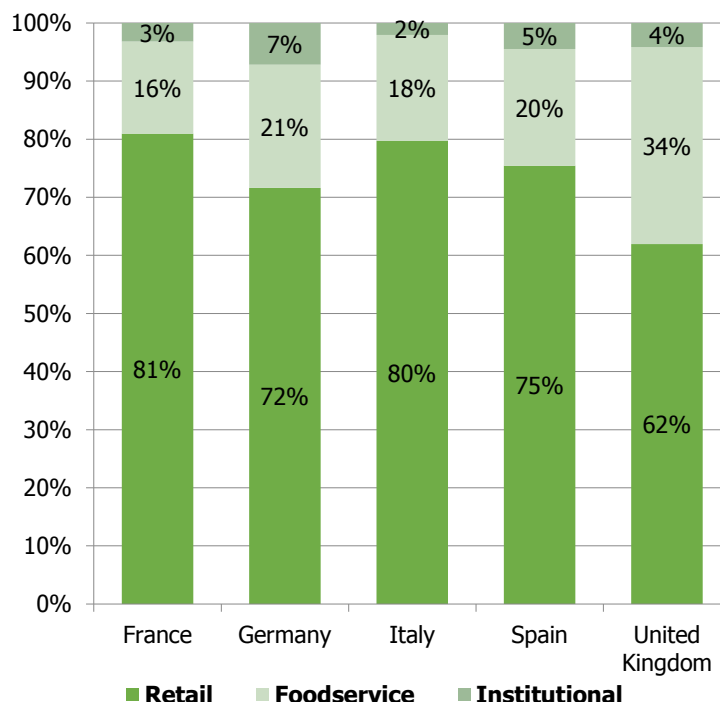
Italy, Spain, France, Germany and the UK accounted for 72% of the total EU expenditure for fish and seafood products in 2017.

Chart 33

Fish and seafood sales by channel (2017), in volume

Source: EUMOFA based on elaboration of Euromonitor data

Retail is the main sales channel for fish and seafood.



Out-of-home consumption

Out-of-home consumption (foodservice and institutional channels) has a different relevance in each of the surveyed countries, ranging between 19% and 38% of total consumption. The UK has registered the highest percentage of out-of-home consumption (38%), due to the specific importance of “fish & chips” shops. On the other hand, the lowest percentages were observed in France (19%) and Italy (20%).

Within out-of-home consumption, institutional channels play a minor role in all the surveyed countries.

Table 10

Out-of-home consumption of fish and seafood, (volume, 1.000 tonnes)

Source: EUMOFA based on elaboration of Euromonitor data

Member State	2016	2017	% variation 2017/2016
Spain	273	279	+2%
United Kingdom	288	278	-4%
Germany	193	195	+1%
Italy	101	104	+3%
France	57	60	+4%

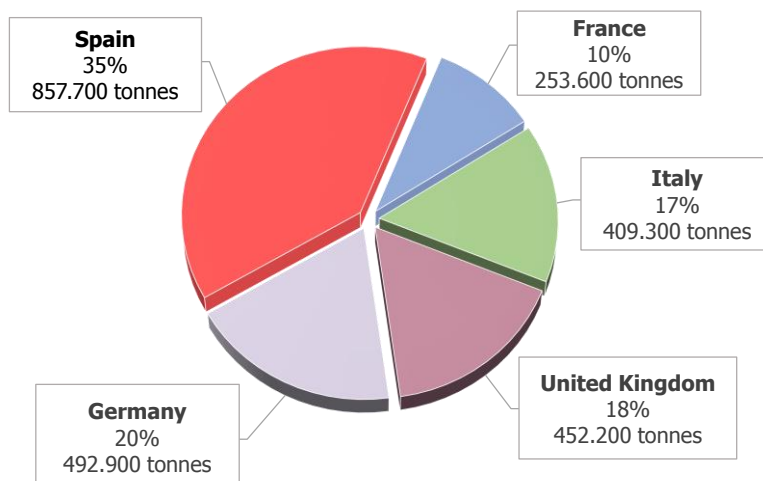
Retail Fish and seafood sold through retail was highest in Spain, where, in 2017, 857.700 tonnes were sold through this channel. Nonetheless, sales recorded in Spain through retail have been decreasing, dropping 14% as compared with 2013 and 5% from 2016.

Italy, Germany and the UK, on the other hand, showed an upward trend. Italy registered a 7% increase compared with 2016, as well as a steadiness with respect to 2013 (+0,4%). Germany and the UK reached 5-year peaks in 2017, both increasing 1% compared with 2016, and 8% compared with 2013.

Chart 34

Fish and seafood sales through retail channel and in the main EU countries (2017), in volume

Source: EUMOFA based on elaboration of Euromonitor data



Finfish are the main species purchased through the retail channel in all the five Member States, followed at distance by cephalopods and other molluscs and crustaceans. In absolute terms, Spain purchased the largest amount of finfish in 2017, although its 559.200 tonnes purchased was a 4% drop from 2016.

On the other hand, finfish show the highest share of all fish and seafood in the UK and Germany, respectively covering 89% and 87% of total retail purchases in the two countries.

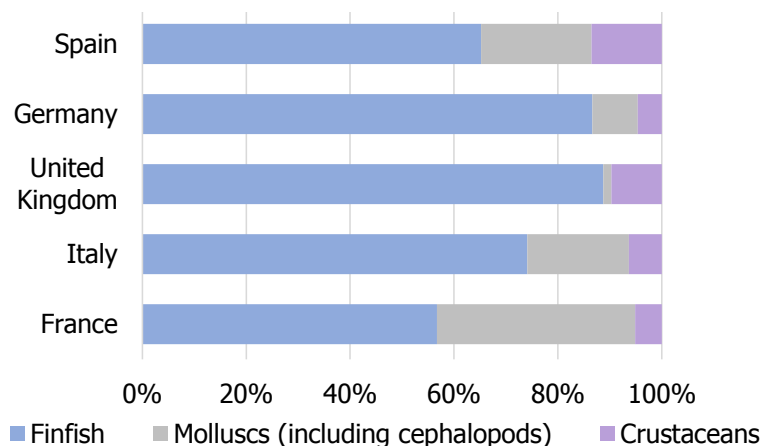
Cephalopods and other molluscs covered a significant share of the total in France, with 38%; Spain, with 21%; and Italy with 20%.

Purchases of crustaceans were relatively low in all five countries. The highest shares were recorded in Spain, where crustaceans accounted for 14%, and in the UK, where they accounted for 10%.

Chart 35

Fish and seafood sales through retail channel (2016), shares in volume terms

Source: EUMOFA based on elaboration of Euromonitor data



3.6 Production and consumption of organic fish and seafood

Consumption of organic fish and seafood in the EU has grown by 49% in the period 2013-2017.

Production and consumption of organic fish and seafood represent a niche market in the EU. Indeed, of the fish and seafood consumed in the main EU markets, only 1,3%, or 43.400 tonnes, originated from organic production in 2017. While this represented a significant 49% growth compared with 2013 the segment still remained small.

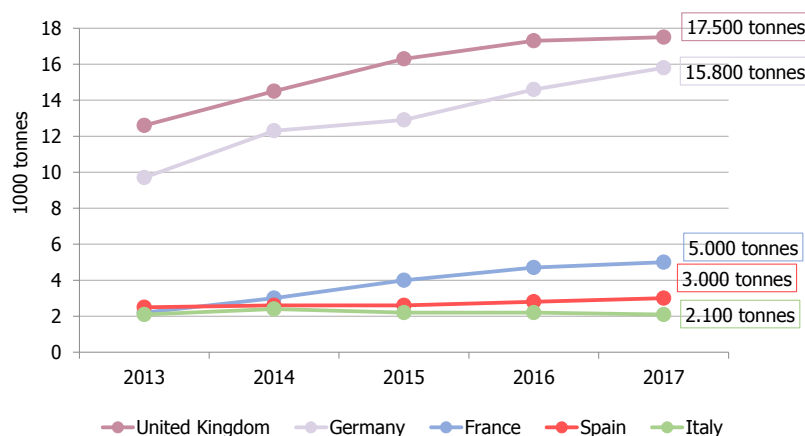
In 2017, the main EU markets for organic fish consumption, namely United Kingdom, Germany, France, Germany and Spain, showed remarkable increases of 127%, 63%, 20% and 39% in volume from 2013, respectively. Italy registered a stable trend.

In absolute terms, the UK led the EU consumption of organic fish, reaching 17.500 tonnes in 2017, its all-time peak.

Chart 36

Consumption of organic fish

Source: EUMOFA based on elaboration of Euromonitor data



The organic fish and seafood market is still new in the EU, although EU consumers' awareness of what they eat grows year by year, which has led to an increasing demand for organic aquaculture products.³⁰ This trend is reflected in supply chain strategies: organic aquaculture producers are increasing their production worldwide, while leading food retail companies, and fish and seafood brands are adapting their offers of organic food and promoting specific organic fish and seafood product lines.

The most important organic fish species consumed in the EU include salmon, trout and carp, as well as seabass, seabream and mussel.

Production of salmon, seabass, seabream and trout experienced relatively strong growths in the period 2012–2015 – with salmon increasing 24%, seabass and seabream increasing 25%, and trout increasing 100%. However, for the other species, the volumes farmed organic were rather low. Moreover, in terms of economic performance, the leading challenge for organic farming is the relatively low scale of production. This is the reason why the production of organic seafood focuses mainly on more profitable species, namely trout, mussel and, to a lesser extent, salmon, while tropical species are mostly farmed outside Europe, particularly in developing countries, and therefore have to be imported.

Imports consist mainly of shrimps, but also tilapia and pangasius. Shrimps come from Ecuador, Bangladesh, Madagascar, India, Indonesia and Viet Nam; tilapia is imported from Central America; and pangasius is imported from Viet Nam. In general, organic fish is imported frozen and through the same market channels as conventional seafood products, with retail being the most privileged distribution channel.

Another result of the small dimension of the organic fish and seafood market is their considerably higher prices than conventional fish products. The low volumes, as well as the standard requirements, push up production costs as well as the costs of sales and distribution.

3.7 Geographical indications and traditional specialities

There are 51 products registered with EU quality schemes in the seafood sector. They carry geographical indications (GIs): Protected Designations of Origin (PDOs), and Protected Geographical Indications (PGIs) as well as Traditional Specialities Guaranteed (TSG).³¹

³⁰<https://www.cbi.eu/market-information/fish-seafood/organic-seafood>

³¹ To know more about quality schemes in the EU: https://ec.europa.eu/info/food-farming-fisheries/food-safety-and-quality/certification/quality-labels/quality-schemes-explained_en

Table 11

Quality schemes regarding fisheries and aquaculture products registered up to 2018

Source:
DOOR, DG AGRI

Country	Protected Designations of Origin (PDO)		Protected Geographical Indications (PGI)		Traditional Specialities Guaranteed (TSG)		Total
	number	species concerned	number	species concerned	number	species concerned	
Czech Republic	1	Carp	1	Carp			2
Finland	1	Vendace	1	Vendace			2
France	1	Mussel	3	Oyster, Anchovy, Scallop	1	Mussel	5
Germany			7	Carp (5 PGIs), Herring, Trout			7
Greece	1	Grey mullet (roes)					1
Ireland			1	Salmon			1
Italy	2	Mussel, Tench	3	Trout, Arctic char, Anchovy			5
Latvia			1	Lamprey			1
Netherlands					1	Herring	1
Poland	1	Carp					1
Portugal					1	Cod	1
Romania			1	Carp			1
Spain	1	Mussel	4	Tuna (mojama) (2 PGIs), Tuna, Mackerel			5
Sweden	1	Vendace (roes)					1
United Kingdom	4	Pollan, Mussel, Oyster, Scallop	10	Salmon (4 PGIs), Seawin, Eel, Sardine, Cod and haddock, Haddock, Oyster			14
Norway			1	Cod			1
China			1	Freshwater crayfish			1
Viet Nam	1	Anchovy (sauce)					1
TOTAL	14		34				51

One product has been registered since July 2017, namely PDO Lough Neagh Pollan (April 2018, UK), a wild fish of the species *Coregonus pollan* caught only in Lough Neagh (Northern Ireland) which may be sold whole, gutted or filleted. The fishing method is draft netting and gill netting.

Two-thirds of the products (34) are PGIs, while more than one-quarter (14) are PDOs, and 6% (3) are TSGs.

Among the 51 products registered, 29 are fishery products (19 different species), 21 are aquaculture products (mainly carp, mussel, salmon and oyster) and one product (processed) may use fishery or aquaculture product (PGI "London Cure Smoked Salmon").

Almost half (45%) of the GIs/TSGs covers unprocessed products, while 35% cover processed products, and 20% cover both unprocessed and processed products. Processing methods include smoked, cured, dried, cooked and canned, including fish roes and fish sauce.

Table 12

Types of products under protected names in the seafood sector (August 2018)

Source:
DOOR, DG AGRI

	Unprocessed	Processed	Unprocessed / Processed	Total	% of total
Fishery	8	16	5	29	57%
Aquaculture	15	1	5	21	41%
Fishery / Aquaculture	0	1	0	1	2%
Total	23	18	10	51	100%
% Total	45%	35%	20%	100%	

The main species covered by GIs and TSGs include carp (9 products, notably in Germany, Czech Republic and Poland), mussels (5 products in France, Italy, Spain and the UK), salmon (5 products, of which 4 in the UK and 1 in Ireland), anchovy, cod, oyster, tuna and vendace (3 products each). Among the 51 denominations, 78% cover finfish (40), 20% molluscs (10) and 2% crustaceans (1).

Import - Export³² 4

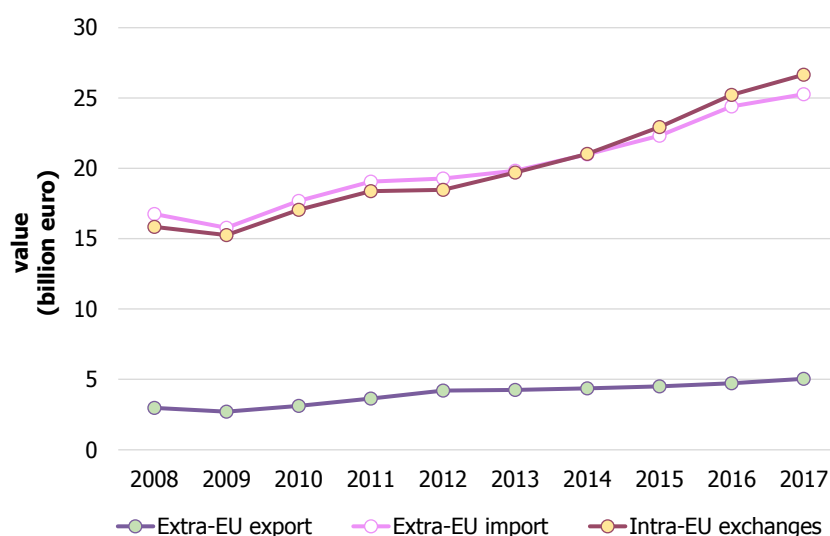
EU trade, which encompasses trade flows with extra-EU countries and exchanges between Member States³³, has been increasing in value since 2010, with an average annual growth rate of 6%.

In 2017, EU trade amounted to EUR 57 billion, an increase of EUR 2,6 billion from 2016. Intra-EU exports, the main contributor to the overall growth, increased by EUR 1,44 billion, a 6% gain from EUR 25,2 billion in 2016 to EUR 26,7 billion in 2017.

The value of fishery and aquaculture products exchanged with non-EU countries increased as well, with imports growing by 4% and exports growing by 7%. This corresponded to import value increasing EUR 868 million, from EUR 24,4 billion to EUR 25,3 billion, and to exports increasing EUR 310 million, from EUR 4,7 billion to EUR 5 billion.

Chart 37

EU trade flows
Source: EUROSTAT



³² 2013-2017 data are at EU-28 level, as they include Croatia among reporting countries.

³³ Intra-EU exports.

Chart 38

**Most relevant extra-EU trade flows
(2017, in EUR billion)**

Source: EUROSTAT

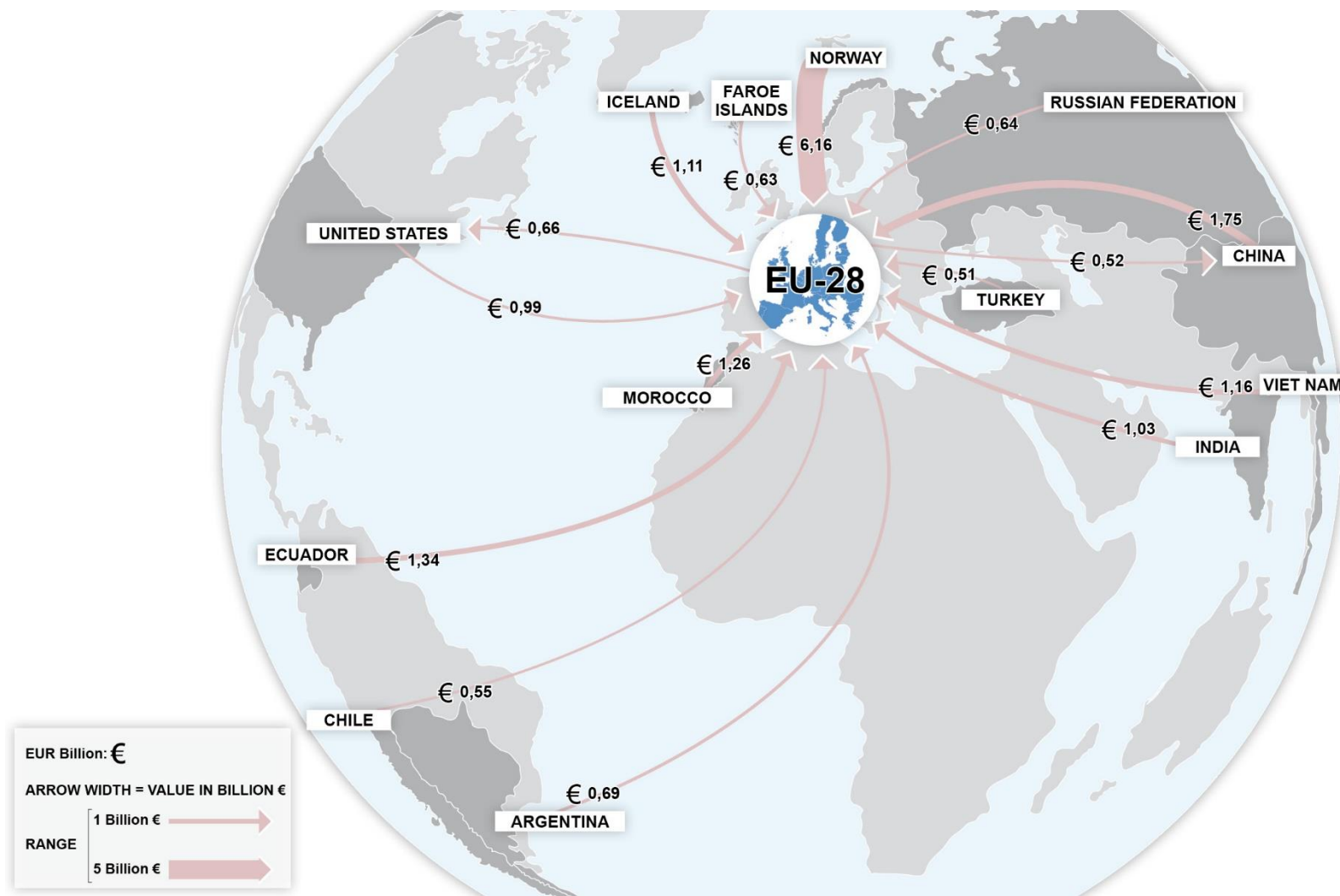
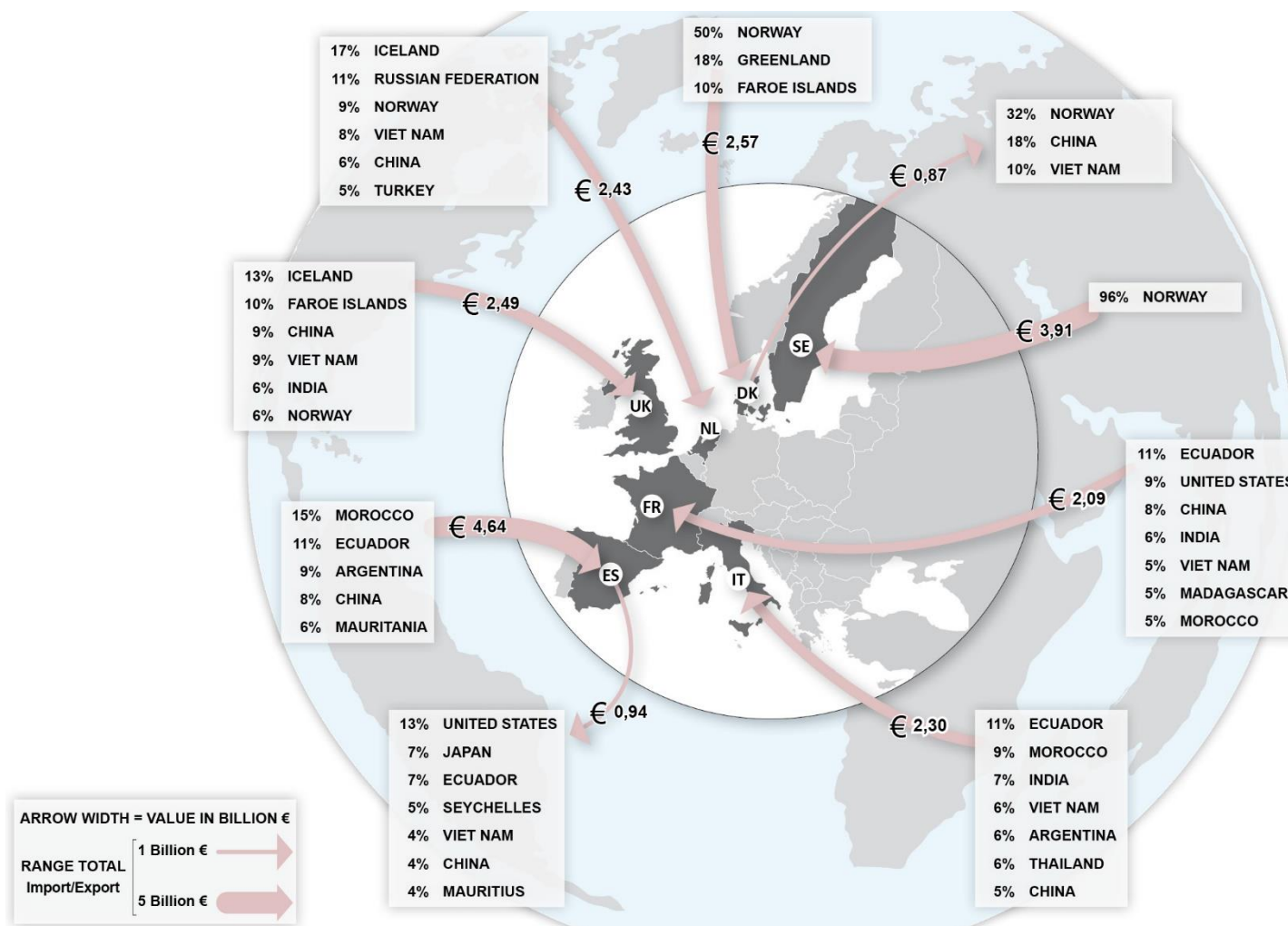


Chart 39

**Most relevant extra-EU trade flows
by Member States
(2017, in EUR billion)**

Source: EUROSTAT



4.1 Extra-EU balance trade

The EU trade balance deficit of fisheries and aquaculture products has been rising since 2013. Despite exports reaching a 13-year value peak in 2017, the deficit also reached a negative peak. Compared with 2016, the deficit increased EUR 558 million or 3% in 2017, reaching a total of EUR 20,2 billion.

It is worth noting that Sweden ranks first among main net importers because it is the country of entry of Norwegian exports to the EU.

Table 13

EU trade deficit for fisheries and aquaculture products compared to other major net importers (EUR billion, 2017)

Source: EUROSTAT and IHS

Country	Trade deficit	% variation 2017/2016
European Union	20,2	+3%
United States	13,8	-7%
Japan	11,5	+7%

Table 14

Trade deficit for fisheries and aquaculture products of main EU net importers (EUR billion, 2017)

Source: EUROSTAT

EU Member State	Trade deficit	% variation 2017/2016
Sweden	3,9	-8%
Spain	3,7	+12%
Italy	2,2	+6%
United Kingdom	1,8	-8%
France	1,7	+13%
Netherlands	1,7	+15%

The deficit increase was due to the growing value of both frozen and prepared/preserved products imported by EU Member States.

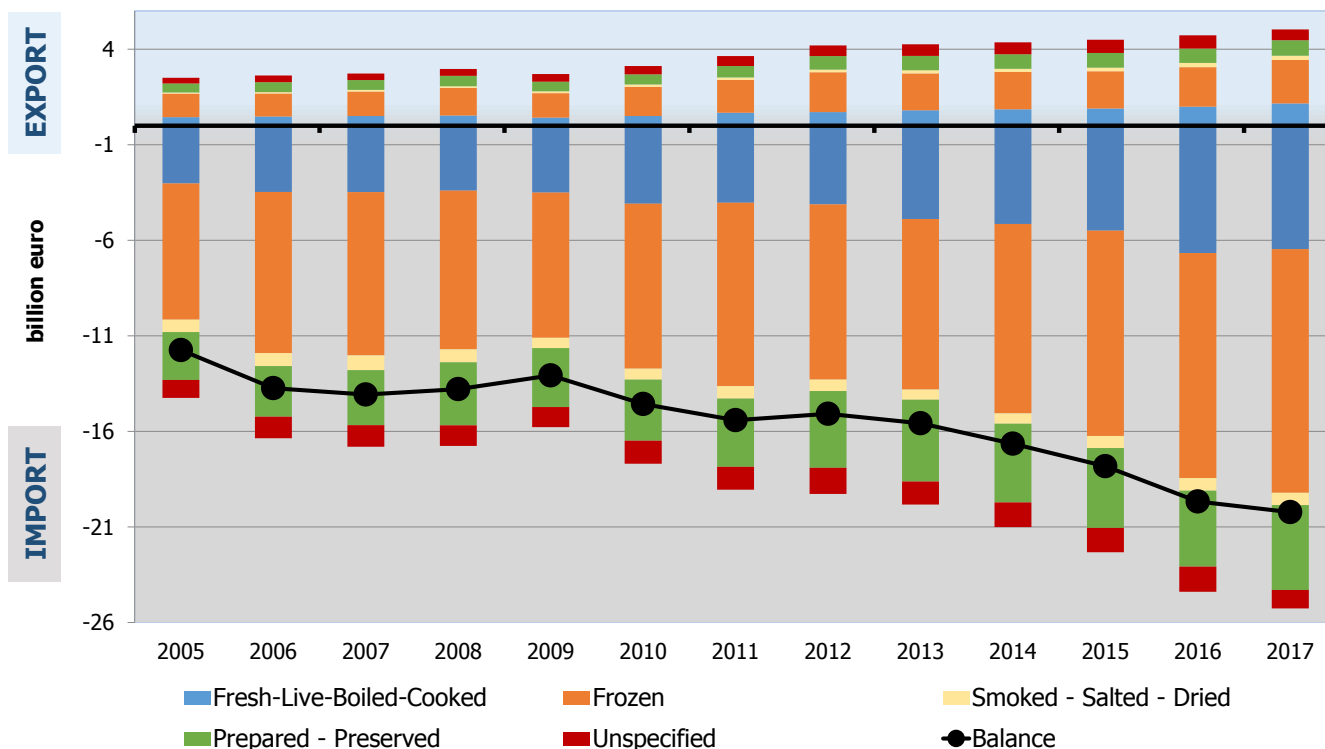
In 2017, the deficit for such products amounted to EUR 10,5 billion for frozen and EUR 3,6 billion for prepared/preserved, representing deficit increases of 8% for frozen and 13% for prepared/preserved.

For fresh products, the deficit of EUR 5,3 billion in 2017 marked a decrease of 6% from the previous year.

Chart 40

Structure of extra-EU trade of fishery and aquaculture products by preservation state, in value

Source: EUMOFA elaboration of EUROSTAT data



4.2 Comparison between imports of fish and meat

In 2017, the EU imported food products with a value of EUR 143 billion, of which 18% was fish.³⁴

Chart 41 compares the values of imported fish and meat from 2008 to 2017, excluding prepared meat and fish.³⁵ The grey line represents the evolution of the ratio between imported fish value and meat. In 2017, the ratio rose to 5,55, meaning that the imported fish had over five times the value of imported meat.

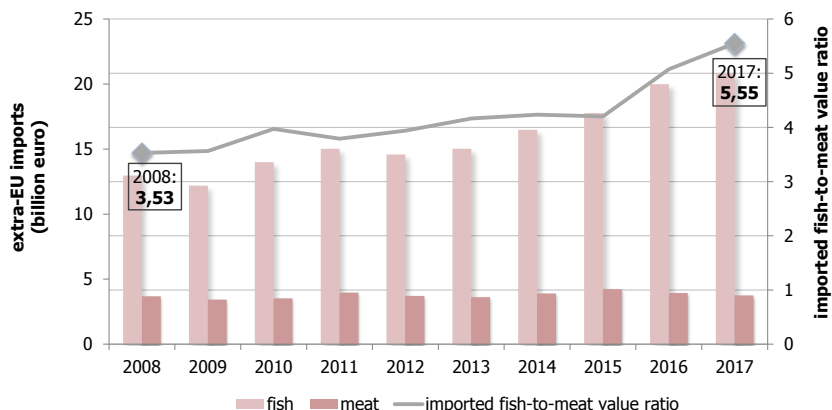
The ratio was 32% higher than in 2015, but 9% higher than in 2016.

³⁴ The comparison takes into account extra-EU trade for the items referring to the list of CN-8 codes 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 EU agri-food imports from extra-EU countries, source: "AGRI-FOOD TRADE STATISTICAL FACTSHEET" of the European Commission – DG Agri, available at https://ec.europa.eu/agriculture/sites/agriculture/files/trade-analysis/statistics/outside-eu/regions/agrifood-extra-eu-28_en.pdf.

³⁵ The comparison takes into account extra-EU trade for the Combined Nomenclature commodities "03 - Fish and crustaceans, molluscs and other aquatic invertebrates" and "02 - Meat and edible meat offal" of Section I "Live animals; animal products".

Chart 41

Extra-EU imports trend and ratio of imported fish value vs. meat
Source: EUROSTAT



4.3 Extra-EU imports

In 2017, extra-EU imports of fisheries and aquaculture products declined a slight 1% from the peak reached the previous year and totalled 5,9 million tonnes. However, they were 106.000 tonnes above their 10-year average.

In value terms, they increased 4% over 2016, reaching a peak of EUR 25,3 billion. This growth was mainly determined by increased imports of frozen cuttlefish and squid, mostly originating from India and China, and of prepared/preserved skipjack tuna from Ecuador. A free trade agreement (FTA) between Ecuador and the EU that entered into force in January 2017 is a contributing factor in the increased import value (and volume) from Ecuador. Under the FTA, Ecuador benefits from zero tariffs on tropical tunas, including skipjack.

Chart 42

Total extra-EU imports of fisheries and aquaculture products
Source: EUROSTAT

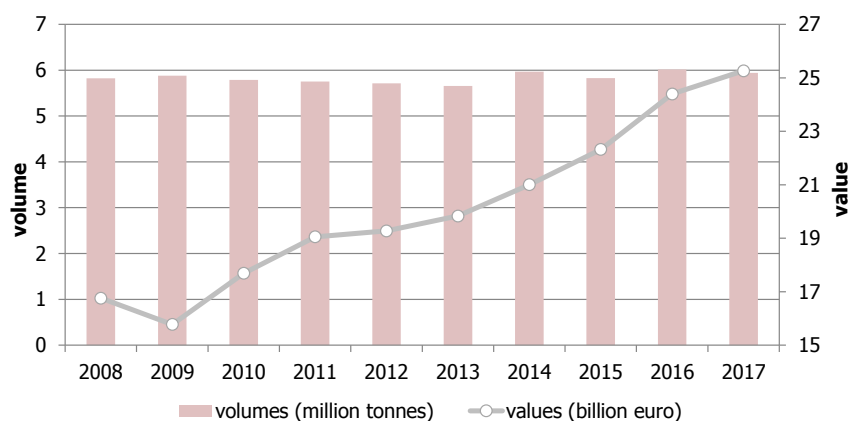


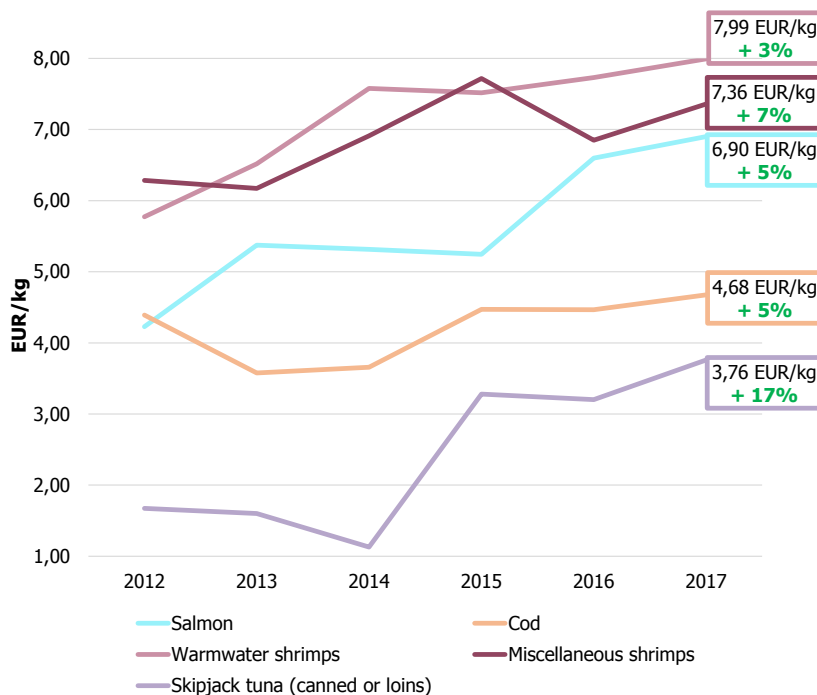
Chart 43 illustrates the trend of average import prices for the five top-valued categories from 2012 to 2017. Among these products, salmon is mostly imported fresh, while cod and shrimps are mainly imported frozen, and skipjack tuna is imported as prepared/preserved products (canned or loins).

Apart from miscellaneous shrimps, import prices of all top valued products reached a 6-year peak in 2017, although the increase over 2016 was very slight for all of these species. The most intense growth was observed for tuna products, which increased from 3,20 to 3,76 EUR/kg.

Chart 43

Prices of top 5 valued imported "main commercial species" and % variations 2017/2016

Source: EUMOFA elaboration of EUROSTAT data



Spain is the major EU importer. Imports from Ecuador (mostly due to skipjack tuna) and Peru (cuttlefish and squid) drove the overall increasing trend of 2017.

Most of the fisheries and aquaculture products imported in the EU originate in Norway. Denmark and Sweden are the main entry points for Norwegian products into the internal market, allowing the imports to reach other Member States' markets. In 2017, Denmark reported reduced imports of fishmeal, and Sweden reported reduced imports of salmon with respect to 2016.

Spain, the major EU importer, is mainly supplied by Morocco, China and, to a lesser extent, by four South-American countries, namely Ecuador, Argentina, Peru and Chile. Imports from Ecuador and Peru drove the overall increasing trend of 2017, mostly due to skipjack tuna from Ecuador and cuttlefish and squid from Peru.

The Netherlands and the UK, which are among the top-5 EU importers, reported opposite trends: an increase in the Netherlands and decline in UK.

The Netherlands recorded increased imports of cod originating from its main suppliers – Iceland, Norway and Russia. To some extent, the Netherlands is also the country of entry for some seafood products, such as frozen products from outside the EU shipped to the Netherlands through its main ports for distribution to their final destinations.

The UK decline mostly concerned cod imported from Iceland.

Chart 44

Values of extra-EU imports per Member State
Source: EUROSTAT

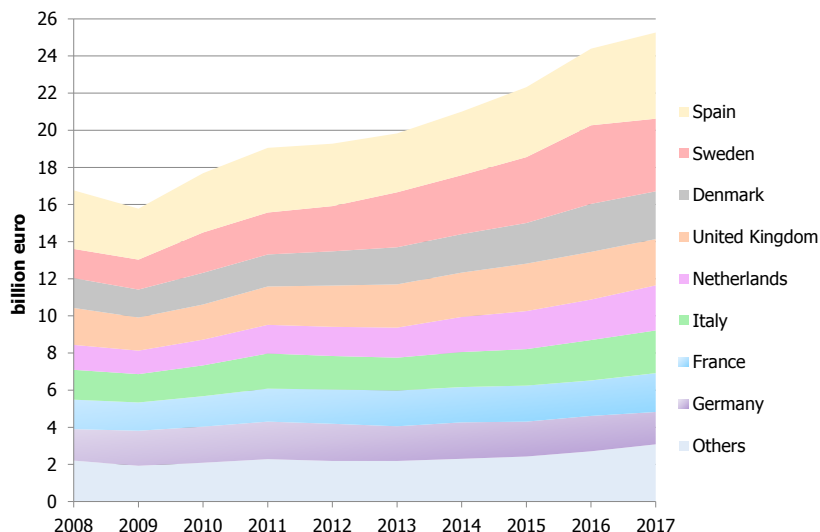


Chart 45

Values of extra-EU imports by Member State in 2017 and % variation 2017/2016
Source: EUROSTAT

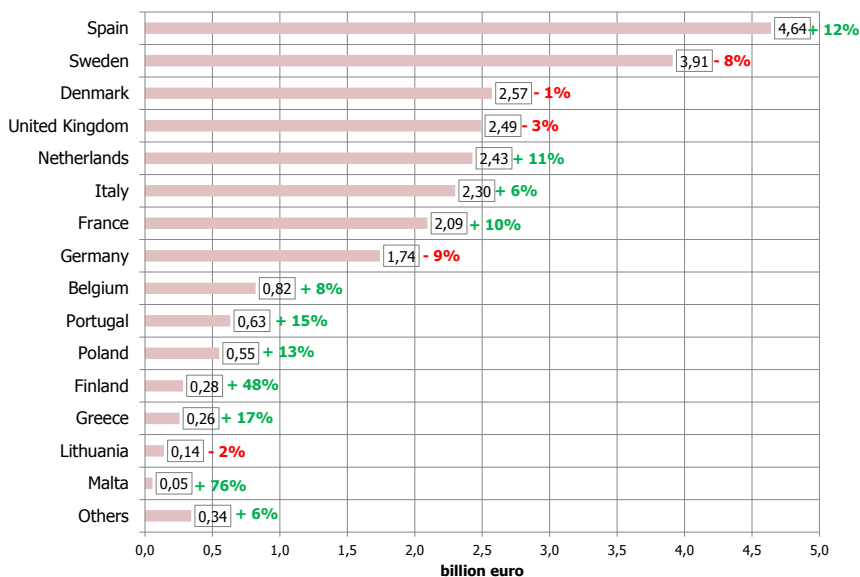


Chart 46

Volumes of extra-EU imports by Member State in 2017 and % variation 2017/2016
Source: EUROSTAT

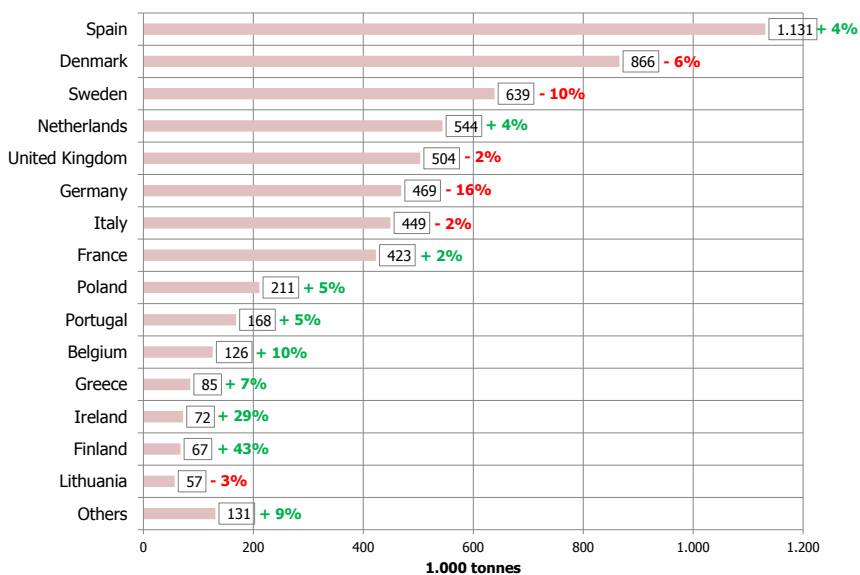


Chart 47

Top extra-EU countries of origin by value (2017)
Source: EUROSTAT

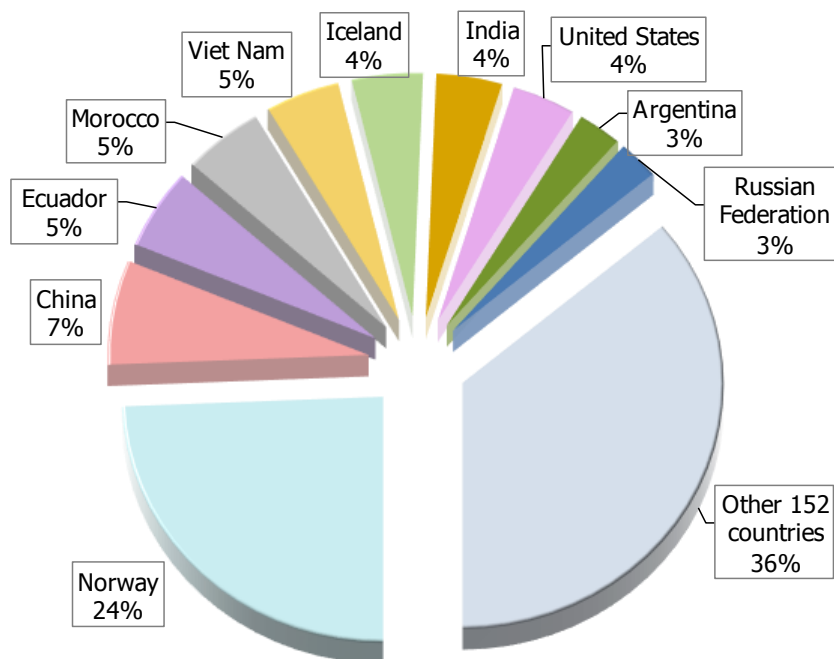


Chart 48

Top extra-EU countries of origin by volume (2017)
Source: EUROSTAT

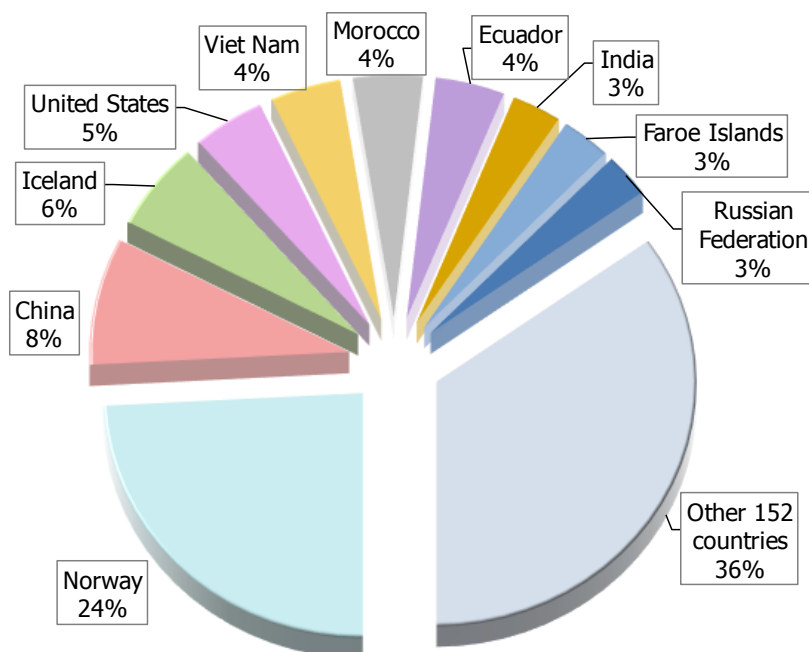


Chart 49

EU imports by commodity group by value (2017)

Source: EUMOFA elaboration of EUROSTAT data

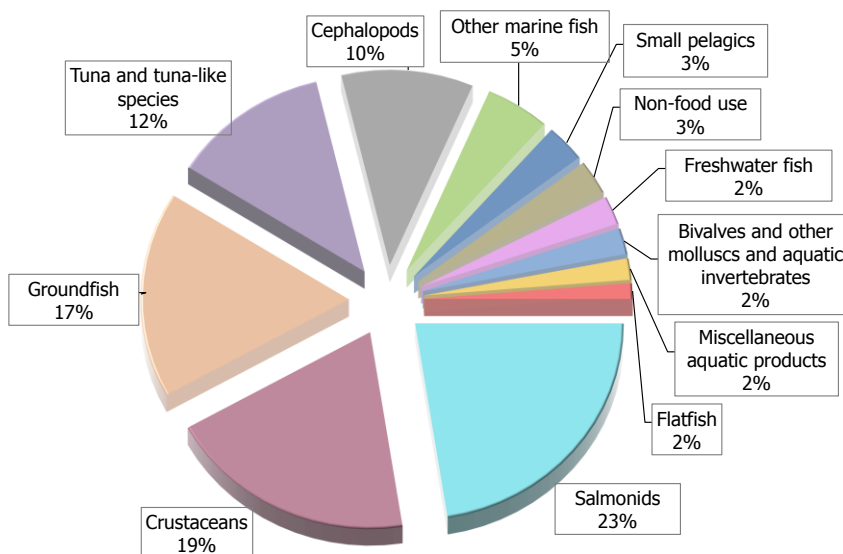


Chart 50

EU imports by commodity group by volume (2017)

Source: EUMOFA elaboration of EUROSTAT data

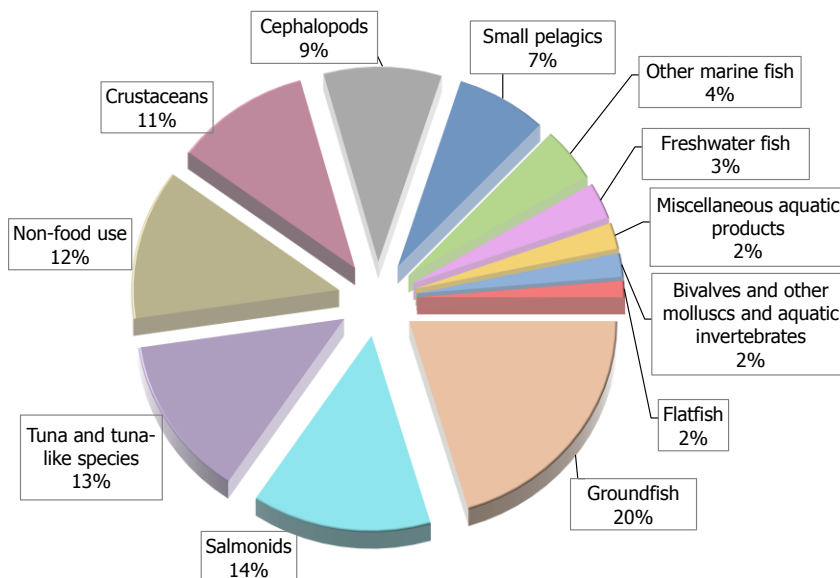


Table 15

**Value of extra-EU imports
by commodity group
(million euro)**

Source: EUMOFA elaboration of EUROSTAT data

Commodity group	2012	2013	2014	2015	2016	2017	% variation 2017/2016	%variation 2017/2012
Salmonids	3.228	4.146	4.430	4.579	5.754	5.686	-1%	+76%
Crustaceans	3.667	3.763	4.488	4.643	4.718	4.903	+4%	+34%
Groundfish	3.578	3.418	3.616	4.146	4.280	4.303	+1%	+20%
Tuna and tuna-like species	2.561	2.860	2.562	2.581	2.561	3.109	+21%	+21%
Cephalopods	1.371	1.110	1.236	1.447	1.842	2.593	+41%	+89%
Other marine fish	1.016	981	987	1.091	1.205	1.261	+5%	+24%
Small pelagics	796	717	689	740	848	783	-8%	-2%
Non-food use	995	874	914	877	911	714	-22%	-28%
Freshwater fish	685	645	618	637	601	593	-1%	-13%
Bivalves and other molluscs and aquatic invertebrates	651	629	763	846	878	545	-38%	-16%
Miscellaneous aquatic products	464	433	424	447	448	447	-0,02%	-3%
Flatfish	264	253	276	287	350	327	-7%	+24%
Total	19.275	19.830	21.003	22.321	24.395	25.263	+4%	+31%

Table 16

**Volume of extra-EU import
by commodity group
(1.000 tonnes)**

Source: EUMOFA elaboration of EUROSTAT data

Commodity group	2012	2013	2014	2015	2016	2017	% variation 2017/2016	%variation 2017/2012
Groundfish	1.103	1.153	1.188	1.162	1.230	1.213	-1%	+10%
Salmonids	763	776	837	877	880	832	-6%	+9%
Tuna and tuna-like species	666	701	719	723	732	787	+8%	+18%
Non-food use	884	766	937	837	843	742	-12%	-16%
Crustaceans	604	596	622	602	628	630	+0,3%	+4%
Cephalopods	379	370	363	375	396	547	+38%	+44%
Small pelagics	379	354	358	358	393	421	+7%	+11%
Other marine fish	236	235	235	229	258	267	+3%	+13%
Freshwater fish	256	256	230	209	200	179	-11%	-30%
Miscellaneous aquatic products	183	169	150	129	130	128	-1%	-30%
Bivalves and other molluscs and aquatic invertebrates	189	206	252	252	238	116	-51%	-39%
Flatfish	70	72	79	75	89	81	-9%	+15%
Total	5.713	5.654	5.969	5.829	6.017	5.943	-1%	+4%

Analysis by species

Salmonids

Salmon

EU imports of salmon and trout, the main commercial species of this group, had followed an increasing trend since 2016, but in 2017, they reported an overall drop of 48.421 tonnes and EUR 67 million.

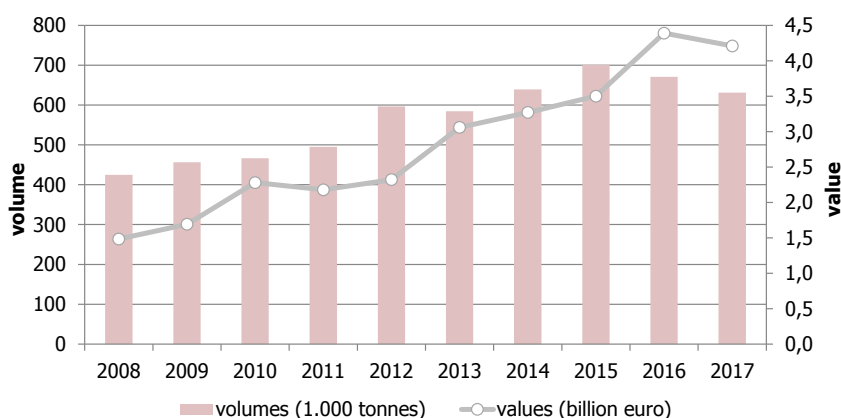
Of all fisheries and aquaculture products imported in the EU, salmon accounts for the largest share in both volume (14%) and value (22%) terms. In 2017, imports of salmon totalled 802.443 tonnes worth EUR 5,5 billion, mainly consisting of fresh whole products originating from Norway.

The evolution of such imports over the last ten years is shown in Chart 51. The Russian import ban which included products from the EU, Norway and other countries, entered into force in August 2014; 2015 was its first full year. Consequently, Norway had to find other markets for more than 100.000 tonnes of salmon intended for the Russian market. A majority of the salmon ended up on the EU market, causing downward pressure on prices in the second half of 2014 and in 2015. In 2016, production of salmon worldwide dropped by close to 4% due to biological challenges, including when toxic algae bloom in Chile caused high mortality, and massive sea lice treatment in Norway led to increased mortality and reduced growth. This caused an enormous overall increase in prices, as salmon farmers were not able to meet demand. In 2017, the global supply growth rate ended slightly below 2%, still not enough to meet the market demand. The average price of fresh salmon imported in the EU from Norway increased from 4,99 EUR/kg in 2015 to 6,55 EUR/kg in 2016 and 6,67 EUR/kg in 2017. However, in 2017, the value dropped by EUR 182 million to reach EUR 4,2 billion.

Chart 51

Fresh salmon imported in the EU from Norway

Source: EUMOFA elaboration of EUROSTAT data



Crustaceans

Crustacean imports reached a 10-year value peak in 2017 at EUR 4,9 billion for 630.295 tonnes. Compared with 2016, the value increased by EUR 185 million, or 4%, while the volume increased by only 2.130 tonnes, or 0,3%.

In terms of volume, 45% of crustaceans imported in the EU are represented by warmwater shrimps, more specifically by frozen shrimps of the genus *Penaeus*. Their import value in 2017 increased by EUR 189 million over 2016, and was thus responsible for the value increase of the

commodity group. Another relevant import, comprised of miscellaneous shrimps and prawns, either frozen or prepared/preserved, accounted for almost 40% of the total crustaceans imported in the EU.

Warmwater shrimps

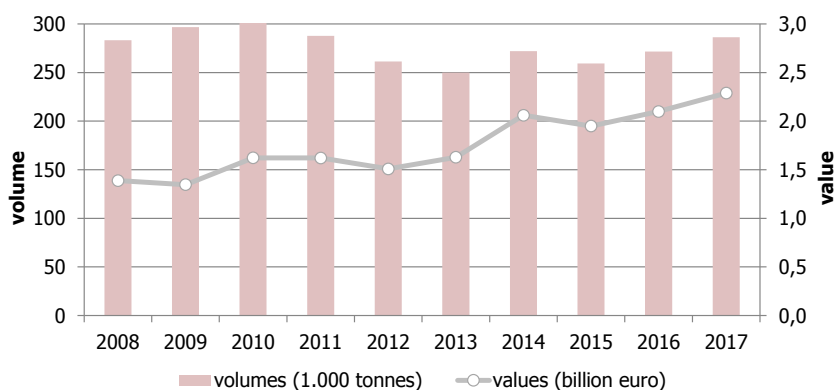
One-third of the EU's import volume of warmwater shrimps originates from Ecuador which, in 2017, totalled 95.071 tonnes and EUR 644 million, which were both 10-year peaks. As warmwater shrimps are the highest valued shrimp imported in the EU, this makes Ecuador rank third after Norway and China among most relevant EU suppliers in value terms.

India and Vietnam are also relevant providers of warmwater shrimps. India accounted for 18% of the total volume of this species' imports in the EU, exporting in 2017 52.756 tonnes worth EUR 420 million. Vietnam followed, accounting for 12% of the total volume of EU imports of warmwater shrimps with 34.793 tonnes worth EUR 324 million.

Chart 52

Warmwater shrimps imported in the EU from extra-EU countries

Source: EUMOFA elaboration of EUROSTAT data



Spain, France and Italy are the main EU markets for Ecuadorian warmwater shrimps. In 2017, the three countries accounted for 88% of the volume imported from Ecuador. Imports from India and Vietnam are mostly destined for the UK, Netherlands and Belgium.

Overall, Spain and France imported, respectively, 68.272 and 68.223 tonnes of warmwater shrimps in 2017. This represented a slight increase from 2016.

In the Spanish market, warmwater shrimps sold at an average annual import price of 6,41 EUR/kg, 3% lower than in 2016, while the price in France was 7,57 EUR/kg, which was a 5% increase from 2016. Despite showing different price trends, the total value grew for both: increasing by EUR 13 million in Spain to reach EUR 437 million, and by EUR 29 million in France to reach EUR 517 million.

Extra-EU imports of warmwater shrimps in the other four major markets averaged 30.000 tonnes. Those in the UK, Netherlands and Belgium were sold at average annual import prices, of 9,56, 8,96 and 10,42 EUR/kg, respectively, while the price of those sold to Italy was at a lower level 7,07 EUR/kg.

Miscellaneous shrimps In 2017, the EU imported 243.486 tonnes of miscellaneous shrimps for a total value of EUR 1,79 billion. This corresponded to a drop of 10.786 tonnes and a 7% price increase, which caused an overall value growth of some EUR 50 million.

Frozen products covered 56% of the total, accounting for 135.945 tonnes, while prepared/preserved products accounted for the remaining 44%, or 107.295 tonnes. As for value, frozen products reached a value of EUR 854 million or 48%, and prepared/preserved products were valued at EUR 931 million, or 52%.

Argentina, the main country of origin of miscellaneous shrimps, covers one-third of EU supplies, mostly wild-caught red shrimp *Pleoticus muelleri*. In 2017, Argentine imports reached a 10-year peak of 80.300 tonnes worth EUR 481 million, all consisting of frozen products. Vietnam is another relevant supplier, mainly of farmed Giant tiger prawn *Penaeus monodon* and white-leg shrimp *Penaeus vannamei*. It mainly exports prepared/preserved products which, in 2017, also reached a decade peak of 28.287 tonnes worth EUR 266 million.

Spain, the major importer of miscellaneous shrimps, accounted for 31% of the total volume in 2017. Its import consists almost entirely of frozen products originating from Argentina and China. In 2017, Argentina imports reached 57.949 tonnes sold at 5,82 EUR/kg, and imports from China reached 11.592 tonnes at a cost of 5,68 EUR/kg.

The other major importers – the UK, Denmark, the Netherlands and Italy – together accounted for 49% of the total volume in 2017. While the three northern countries mostly import prepared/preserved products, miscellaneous shrimps sold to Italy are mainly frozen.

Groundfish

In 2017, groundfish accounted for 20% of EU imports from third countries, covering 17% in value terms.

This amounted to 1,2 million tonnes, 17.147 tonnes less than in 2016, and EUR 4,3 billion, which was a EUR 22 million increase from 2016 and represented a 10-year peak.

Cod With 512.640 tonnes imported, cod's volume share of this commodity group was 43% in 2017. In value terms, it had a 56% share, reaching EUR 2,4 billion. A large share of the cod originating from extra-EU countries enters the EU through the Netherlands, which in 2017 received 28% of the total. Other relevant EU markets – Denmark, the UK and Sweden – each covered around 15% of the 2017 total.

Norway was the main supplier, providing 182.404 tonnes valued at EUR 864 million to EU Member States. This represented 36% of cod imported by third countries in both volume and value terms. A 4% price increase from 4,57 to 4,74 EUR/kg caused a value growth of EUR 43 million, 5% more than 2016. Cod imports from Norway are quite diversified: equal shares of frozen and fresh/chilled products (around 35% each), 16% dried, 12% salted, almost all sold as whole products.

Russia and Iceland are also relevant suppliers of cod, responsible for, respectively, 22% and 18% of total extra-EU imports of this species in volume terms.

Russian supplies consist of frozen products, which were 65% whole and 35% filleted in 2017. Overall, they amounted to 110.606 tonnes worth EUR 444 million, increasing by 13% in volume and 20% in value from 2016. The average price reached a 10-year peak of 4,01 EUR/kg, an increase of 7 % over 2016.

Of the cod imported from Iceland, 45% of total supplies are frozen, 29% fresh, 16% salted, and the rest comprises products with unspecified preservation states. Overall, the EU imported 93.115 tonnes of cod from Iceland for a total value of EUR 585 million. These marked decreases of 9.522 tonnes and EUR 36 million from 2016. The average price recorded a 4% increase, from 6,05 to 6,29 EUR/kg.

Tuna and tuna-like species

Tunas imported in the EU recorded remarkable growth in 2017, reaching a 10-year peak. In volume terms, they totalled 787.037 tonnes, increasing by almost 55.000 tonnes. The value increase was even more outstanding, increasing to EUR 548 million more than in 2016, and reaching EUR 3,11 billion.

Processed tuna

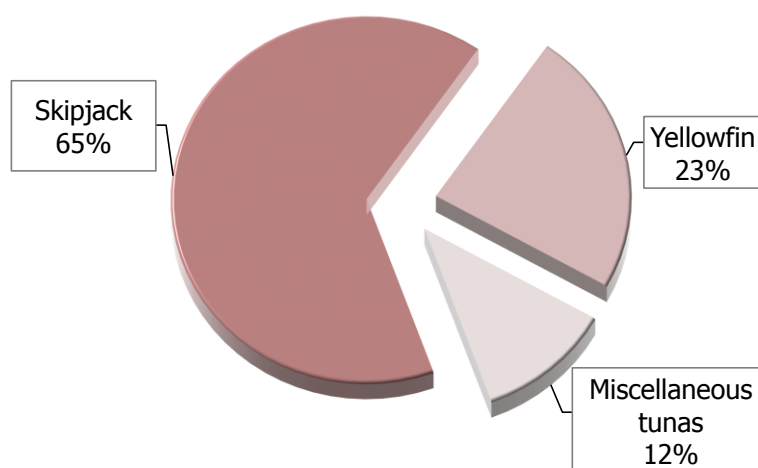
The major part of this commodity consists of “processed tuna”, 80% of which is canned and 20% frozen loins for the canning industry. In 2017, its value of EUR 2,3 billion accounted for over 75% of total imported tuna and, compared with 2016, it increased by EUR 449 million or 24%. As for volumes imported, it reached 537.149 tonnes, which was 8% or 41.321 tonnes more than in 2016.

In terms of species, skipjack tuna covered 65% of the total, with 350.435 tonnes valued at EUR 1,4 billion. With respect to 2016, it increased by 11% in volume and by 29% in value terms. Yellowfin tuna followed, with 125.941 tonnes for an increase of 5% and EUR 652 million, for an increase of 16%.

Chart 53

Processed tuna imported from extra-EU countries (by volume, 2017)

Source: EUMOFA elaboration of EUROSTAT data



Extra-EU imports of processed tuna are first absorbed by Spain and the United Kingdom. In 2017, they covered 23% and 18%, respectively, of the EU total in terms of volume.

Ecuador, the predominant EU supplier, sold these products at 4,41 EUR/kg in 2017, 18% more than the 2016 price.

A similar price trend was observed for other relevant suppliers, namely Mauritius, the Philippines and Seychelles. The average price of processed tuna imported from Mauritius was 4,39 EUR/kg, which was 14% more than 2016, while that originating from the Philippines was sold at 3,86 EUR/kg, which was a 20% increase. Seychelles sold these products at 4,41 EUR/kg, a 7% increase.

Non-food use products

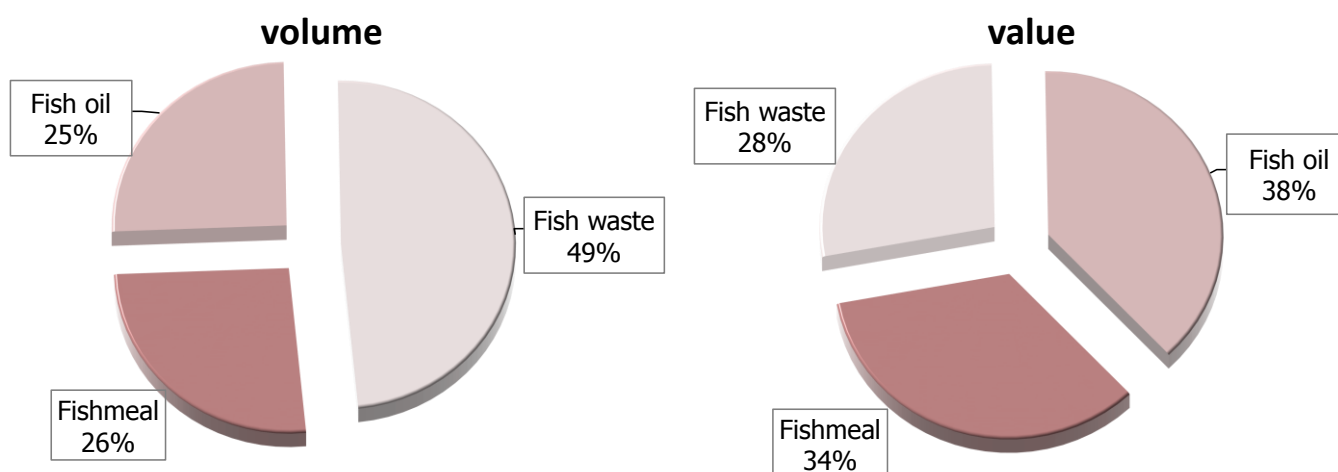
Non-food use products represented 12% of the volume of fish imported by the EU, ranking fourth after groundfish, salmonids and tuna and tuna-like species.

In 2017, this category totalled 742.167 tonnes with a value of EUR 714 million. Compared with 2016, this showed decreases of 12% and 22%, respectively, in volume and value. While fish waste represents almost half of the total in volume terms, fish oil is the most valued item, accounting for 38% of the total.

Chart 54

Non-food use products imported from extra-EU countries (2017)

Source: EUMOFA elaboration of EUROSTAT data



Fish oil In 2017, EU imports of fish oil were 6% higher than in 2016, totalling 187.884 tonnes, which was an increase of 10.845 tonnes. It was sold at an average import price of 1.452 EUR/tonne, which was 14% lower than the 2016 price of 1.685 EUR/tonne. This caused EUR 25 million drop in the total value, which decreased from EUR 298 million to EUR 273 million.

Almost 50% of fish oil imported in the EU is absorbed by Denmark, where 90.484 tonnes were sold in 2017, with a total value of EUR 113 million. In Denmark, the majority of fish oil is used in animal feeds, mostly poultry and pig and, to a lesser and decreasing extent, salmonid aquaculture. Greece and France follow, covering 13% and 11% of the total, respectively.

Norway is the main supplier of fish oil to the EU: in 2017, it exported 55.701 tonnes of fish oil worth EUR 57 million. While this was a slight

decrease of 2% or 1.231-tonnes in volume terms, the value fall was more intense, dropping by 11% or EUR 7 million. Peru and the US, which follow Norway as main countries of origin, registered opposite trends. Imports from Peru rose by 60% in volume and 13% in value, to reach 35.191 tonnes and EUR 54 million, while the US registered declines of 37% in volume and 45% in value, totalling 25.221 tonnes and EUR 36 million.

Fishmeal In 2017, the EU imported 192.852 tonnes of fishmeal, marking a significant decrease of 32% or 90.784 tonnes from 2016. Its average price dropped by 7%, from 1.357 to 1.264 EUR/tonne, but this was still 15% above its 10-year average. Nonetheless, the total value of fishmeal imported in the EU fell substantially, as it decreased 37%, or EUR 141 million, to reach EUR 244 million.

In 2017, Peru exported 45.060 tonnes of fishmeal to EU countries, 71% less than 2016. Norway, recorded a decline of 19%, while Iceland, the second-ranked, had an opposite trend, with exports increasing by 65% from 20.365 to 33.658 tonnes.

Of extra-EU imports of fishmeal entering the EU, 30% arrived in Germany. Denmark followed, importing 20% of the total.

Germany, traditionally supplied mainly by Peru, in 2017 imported most of the fishmeal from Morocco. Imports in Denmark mainly come from Iceland, whose exports of fishmeal in 2017 increased to the detriment of Norway, which had been the main supplier of animal feed in the period 2009–2016.

4.4 Extra-EU exports

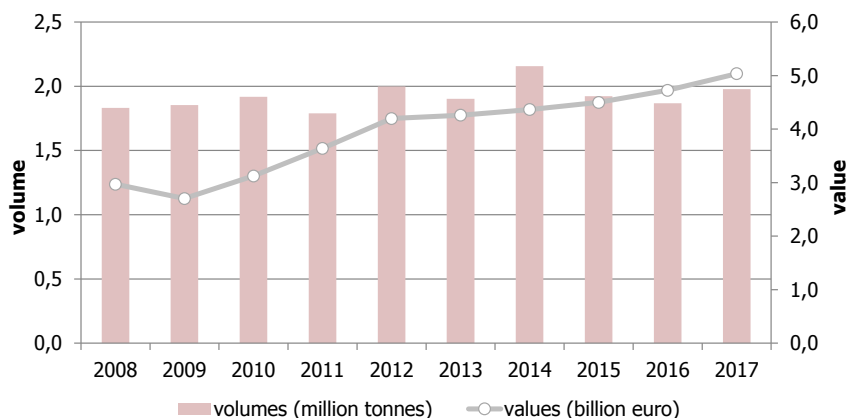
The total value of fisheries and aquaculture products exported by the EU to third countries reached a 10-year peak in 2017 at over EUR 5 billion.

The total value of fisheries and aquaculture products exported by the EU to third countries reached a 10-year peak in 2017 of more than EUR 5 billion, which was 7% or EUR 310 million more than in 2016.

In terms of volume, after the drop occurred in 2016 from 2015, a recovery was observed, as in 2017 it grew by 6% to reach 1,98 million tonnes, which was 109.984 tonnes more than in 2016, but still 178.190 tonnes less than the 10-year peak set in 2014.

Chart 55

Extra-EU exports
Source: EUROSTAT



Five Member States account for over 70% of the volume of extra-EU exports of fisheries and aquaculture products: the Netherlands, which is responsible for almost one-quarter of the total, Spain, Denmark, Ireland and the UK. Apart from the UK, they all reported increased exports in 2017 compared with 2016.

The Netherlands mostly exports blue whiting and herring, Spain mainly skipjack tuna, Denmark mostly trades fishmeal and fish oil, Ireland mainly exports mackerel, Atlantic horse mackerel and fish waste, and the UK is the major EU exporter of salmon. It is worth noting that Dutch exports of herring determined the overall positive trend at EU level.

In value terms, France is among the top-5 instead of Ireland, as it exports higher valued products such as oyster and (smoked) salmon.

Chart 56

Values of extra-EU exports by Member State in 2017 and % variation 2017/2016

Source: EUROSTAT

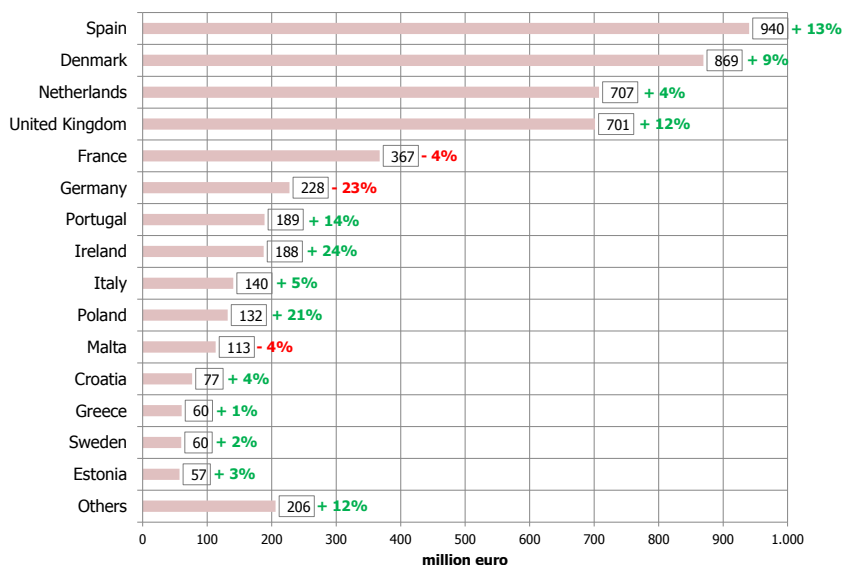
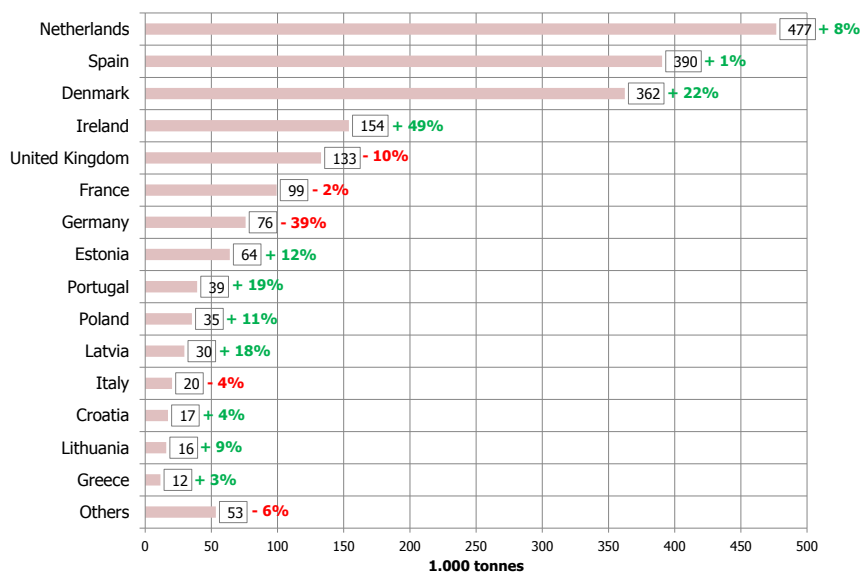


Chart 57

Volumes of extra-EU exports by Member State in 2017 and % variation 2017/2016

Source: EUROSTAT



The US and China are the main markets in value terms for EU exports of fisheries and aquaculture products, but the highest volumes are actually destined for Norway and Nigeria. This is due to the different product categories involved in such flows. Indeed, while the US and China mainly import high valued products, respectively salmon and cod, Norway imports fish oil and Nigeria imports small pelagics, herring and mackerel in particular. Nigeria is also an important importer of blue whiting.

In 2017, exports to Norway registered a strong 20% decrease from 2016, with volumes falling to 205.247 tonnes and the value falling to EUR 399 million. Exports to Nigeria increased by 6% to 254.588 tonnes, but a parallel decrease was observed as value dropped to EUR 201 million.

The most remarkable increase concerned the Chinese market, where exports grew by 53% in volume and 43% in value, reaching 169.580 tonnes and EUR 518 million, both representing 10-year peaks. Exports to the US grew by 13% in volume to reach 94.826 tonnes and by 17% in value to reach EUR 656 million.

Chart 58

Top extra-EU countries of destination by value (2017)
Source: EUROSTAT

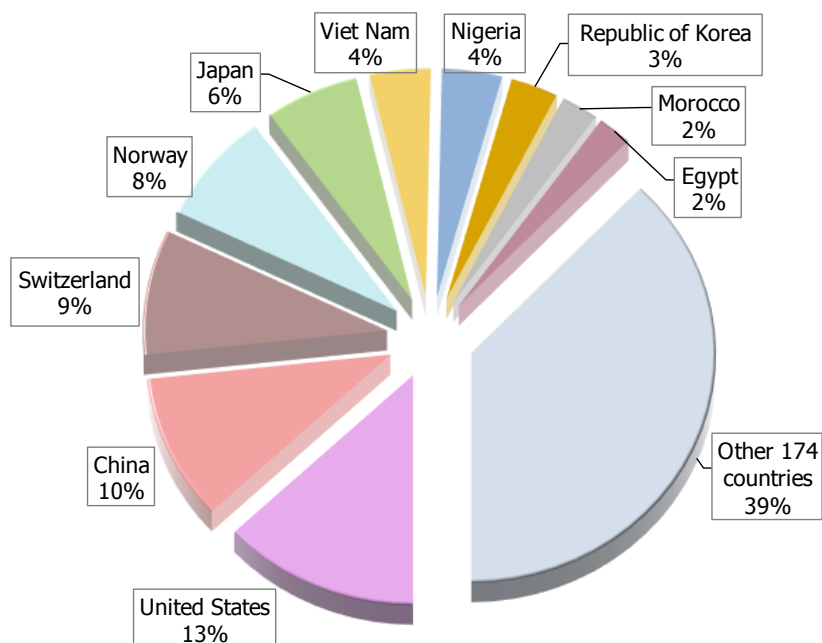


Chart 59

**Top extra-EU countries of destination
by volume (2017)**

Source: EUROSTAT

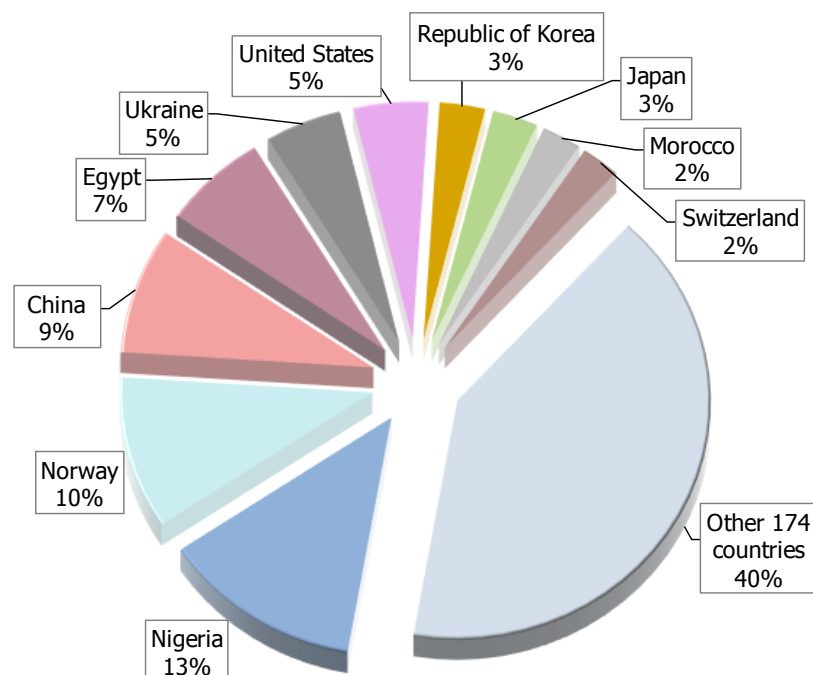


Table 17

**EU exports by commodity group
(million euro)**

Source: EUMOFA elaboration of EUROSTAT data

Commodity group	2012	2013	2014	2015	2016	2017	% variation 2017/2016	% variation 2017/2012
Salmonids	513	627	704	674	753	839	+11%	+64%
Small pelagics	812	747	867	786	694	700	+1%	-14%
Tuna and tuna-like species	639	673	529	561	628	682	+9%	+7%
Non-food use	453	505	518	563	552	472	-15%	+4%
Crustaceans	307	291	316	346	407	471	+16%	+53%
Groundfish	341	313	292	309	345	431	+25%	+26%
Other marine fish	407	379	346	365	417	418	+0,2%	+3%
Miscellaneous aquatic products	265	287	299	321	299	328	+10%	+24%
Flatfish	194	204	216	251	276	267	-3%	+38%
Bivalves and other molluscs and aquatic invertebrates	99	110	126	156	176	195	+10%	+97%
Cephalopods	116	75	101	117	131	185	+42%	+59%
Freshwater fish	52	49	50	51	46	47	+2%	-11%
Total	4.197	4.258	4.364	4.499	4.725	5.035	+7%	+20%

Table 18

**EU exports by commodity group
(1.000 tonnes)**

Source: EUMOFA elaboration of EUROSTAT data

Commodity group	2012	2013	2014	2015	2016	2017	% variation 2017/2016	% variation 2017/2012
Small pelagics	718	644	846	706	632	641	+1%	-11%
Non-food use	343	354	390	353	338	327	-3%	-5%
Groundfish	195	171	162	155	181	285	+58%	+46%
Tuna and tuna-like species	291	278	279	256	255	250	-2%	-14%
Salmonids	98	114	118	105	107	105	-2%	+8%
Other marine fish	117	102	101	89	96	95	-1%	-19%
Miscellaneous aquatic products	66	76	86	93	82	84	+3%	+27%
Crustaceans	73	67	67	64	67	72	+7%	-1%
Flatfish	44	47	48	46	49	50	+2%	+14%
Cephalopods	28	22	28	25	23	32	+38%	+13%
Bivalves and other molluscs and aquatic invertebrates	16	17	19	20	25	26	+1%	+60%
Freshwater fish	11	12	12	11	12	13	+9%	+16%
Total	1.998	1.903	2.157	1.923	1.868	1.978	+6%	-1%

Chart 60

**EU exports by commodity group
in volume (2017)**

Source: EUMOFA elaboration of EUROSTAT data

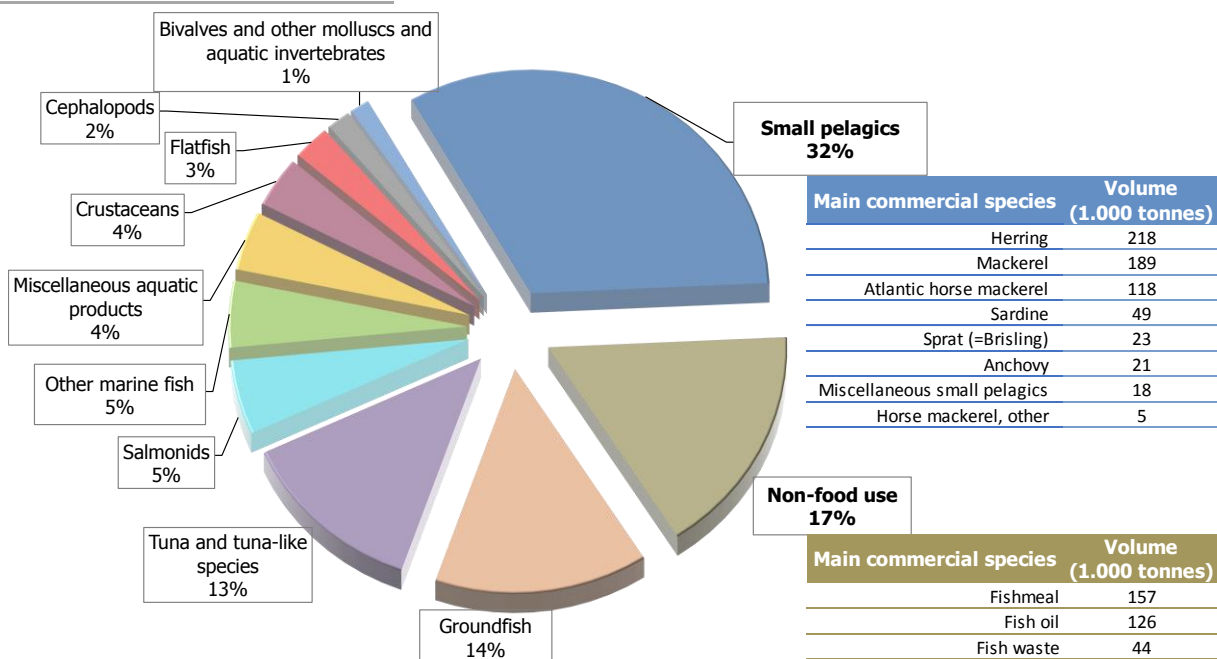
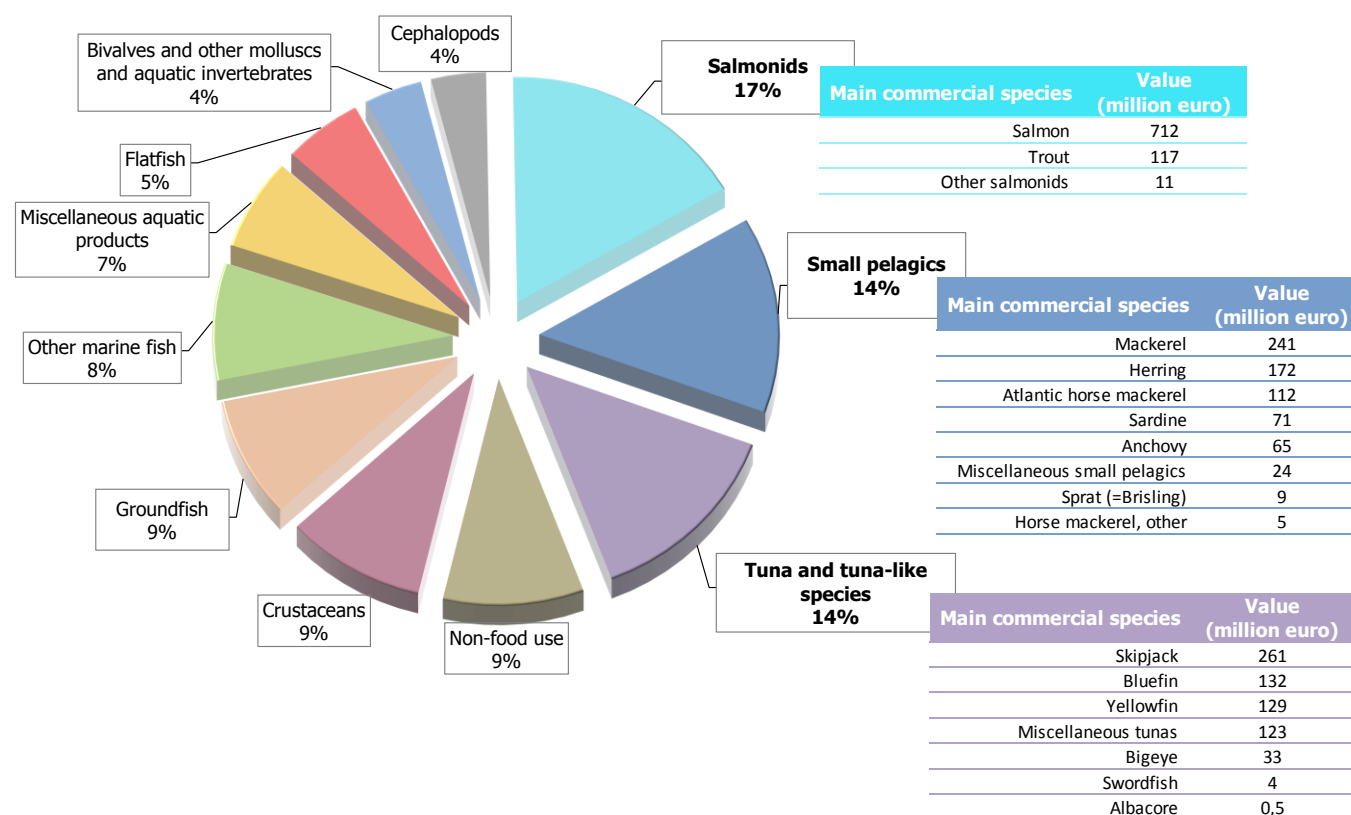


Chart 61

EU exports by commodity group in value (2017)

Source: EUMOFA elaboration of EUROSTAT data

**Analysis by species****Small pelagics**

Of all fisheries and aquaculture products exported by the EU, two main commercial species of small pelagics, namely herring and mackerel, account for over 20% of the total in volume terms.

Overall, exports of small pelagics to third countries amounted to 640.875 tonnes in 2017 and were worth EUR 700 million. They slightly recovered from the downward trend that began in 2015 which had affected herring sold to Nigeria and Egypt in particular.

Herring

In 2017, the EU exported 217.868 tonnes of herring, almost entirely as frozen products sold at an average price of 0,68 EUR/kg. The Netherlands, which is the home to the largest EU freezer trawler company involved in pelagic fishing exported the largest share, 65%, totalling 141.287 tonnes. Estonia, Latvia and the UK followed at a distance, exporting 28.189, 12.521 and 10.135 tonnes, respectively. While the two Baltic countries mainly supply the neighbouring Ukrainian market, Dutch and UK herring exports are mostly destined to Nigeria and Egypt.

In value terms, the Netherlands accounted for almost 60% of the EU total, exporting EUR 100 million in herring to third countries. The UK followed at EUR 17 million. Germany, despite not being among major exporters, sold 8.245 tonnes of herring with a value of EUR 14 million,

mostly destined for Nigeria and Egypt. Herring exported by Estonia and Latvia in 2017 had a value of EUR 10 million and EUR 5 million, respectively.

Mackerel EU exports of mackerel continued the decreasing trend that began after their 2014 peak. In 2017, they fell by 5%, decreasing 9.247 tonnes from 2016, and reaching 189.243 tonnes worth EUR 241 million. The average price increased from 1,22 to 1,28 EUR/kg, making the value drop a less intense 1% or EUR 2 million decrease.

With 72.058 tonnes sold in 2017, Dutch exports represented around 40% of the EU exports of this species. Other relevant EU suppliers of mackerel are Ireland, which covered 23% of the total in 2017 with 43.474 tonnes, and Spain, which covered 16% of the total with 30.393 tonnes. The three Member States mainly sell frozen products to African markets such as Nigeria, which is the destination of almost all Dutch exports of small pelagics, Egypt and Morocco. Japan is another relevant market for Irish exports of this species.

Non-food use products

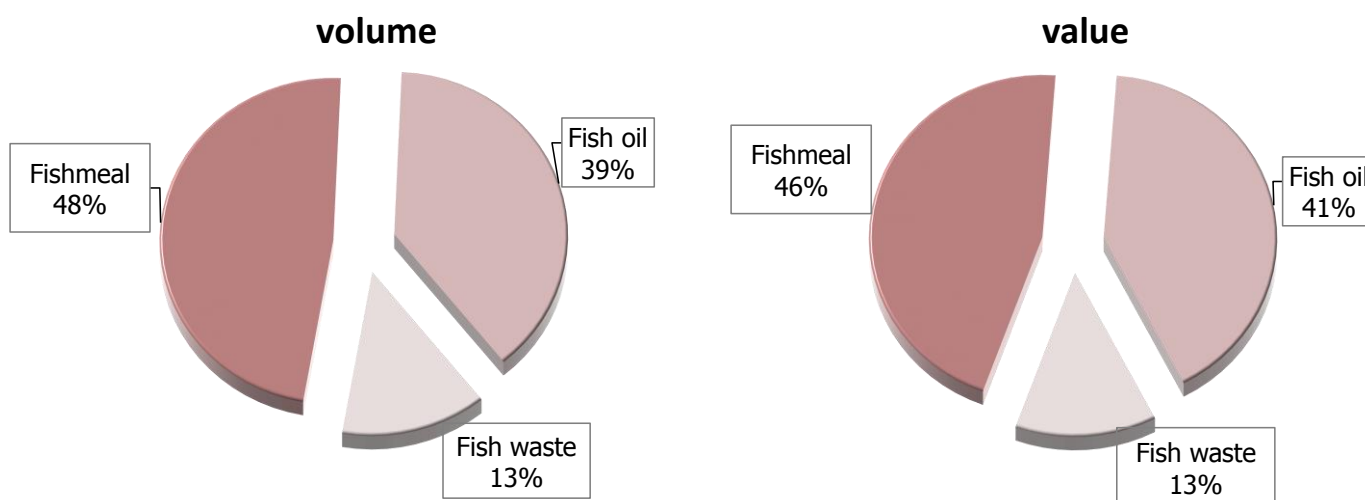
In 2017, EU exports of non-food use products amounted to 327.072 tonnes worth EUR 472 million, declining by 3% in volume and by 15% in value from 2016. The value plummet was linked to decreased export prices of both fishmeal and fish oil, although it was basically the fishmeal that determined the drop of volumes exported.

The composition of exports of this commodity group is considerably different from EU imports, especially as concerns the share of fish oil and fish waste traded. In volume terms, fish waste was less relevant within exports, as it covered only 13% of the total.

Chart 62

Non-food use products exported to extra-EU countries (2017)

Source: EUMOFA elaboration of EUROSTAT data



Fishmeal In 2017, EU exports of fishmeal plummeted well below their 10-year average. They dropped to 156.697 tonnes and EUR 216 million, which were 25.842 tonnes and EUR 64 million less than in 2016, which indicated decreases of 14% and 23%, respectively.

In 2017, EU exports of fishmeal plummeted well below their 10-year average. The decline was determined by Germany and the UK, two of the main EU exporters.

The decline was driven by Germany and the UK, two of the main EU exporters.

Germany totalled 5.177 tonnes and EUR 8 million in 2017, down from 57.785 tonnes worth EUR 81 million exported in 2016. This negative trend was most likely due to a decline in supplies of fishmeal coming into the country from Peru and Morocco, as Germany mainly acts as “trade hub” for fishmeal rather than producing it internally. As for the UK, 2017 extra-EU exports of fishmeal were worth EUR 13 million for 9.063 tonnes, while one year before they had totalled EUR 40 million for 26.675 tonnes.

On the other hand, a strong increase was observed for the major EU supplier of fishmeal, namely Denmark, mainly due to exports to the Chinese market increasing by 51% and reaching a volume peak of 132.669 tonnes. Their value increased by 27%, totalling EUR 178 million.

Norway remained the main destination for these products, despite declined exports from Germany and the UK.

Fish oil EU Member States exported 125.964 tonnes of fish oil in 2017, slightly less than in 2016 when the 10-year peak was reached. Their total value amounted to EUR 194 million, representing a 18% drop from 2016. Nonetheless, this amount was EUR 31 million higher than the 10-year average.

Close to 90% of EU exports of fish oil, which are almost entirely destined for Norway, originate from Denmark. In 2017, fish oil was sold to Norway at 1.394 EUR/tonne, marking a 15% price drop from 2016.

Extra-EU exports of tunas to third countries amounted to 249.871 tonnes and EUR 682 million in 2017. Volumes were a slight 2% lower than in 2016, while a 9% growth of their value led to a 10-year high.

They mostly consist of catches by the French and Spanish fleets, landed and registered as exports in African countries (Atlantic and Indian Oceans) and Ecuador. Such catches are either subject for transshipment (frozen whole from these third countries to the EU) or for processing of frozen loins and canned products destined to the EU market. At a later stage, France and Spain process the tuna and export it, as loins or canned tuna, to other EU Member States as well as to third countries.

As a matter of fact, almost all extra-EU exports of this commodity group (swordfish excluded) come from Spain and France. Spain sold 171.465 tonnes and France sold 57.258 tonnes to third countries, for total values of EUR 389 million and EUR 92 million, respectively.

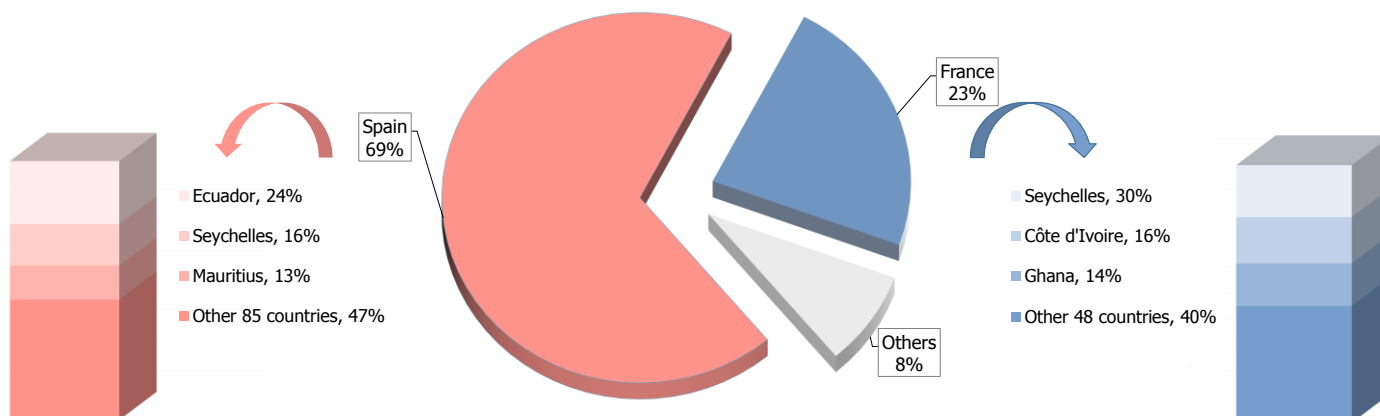
Frozen products represent more than 90% of the volumes of their exports of tuna and 77% of their value. Relevant shares in terms of value include prepared/preserved tuna which accounts for 13% and fresh tuna for 10%.

Tuna and tuna-like species

Chart 63

Composition of extra-EU exports of tuna by countries involved (volume, 2017)

Source: EUMOFA elaboration of EUROSTAT data



The main tuna species exported by the EU in terms of volume are skipjack which accounted for 56% of the total in 2017, and yellowfin tuna, which accounted for one-quarter of the total. In value terms, other species cover relevant shares as well, with skipjack tuna responsible for 38% in 2017, while yellowfin and bluefin tuna, as well as the grouping “miscellaneous tunas” accounting for 19% each. The vast majority of the exports of skipjack and yellowfin tuna are raw materials for the canning industry.

Skipjack tuna

EU Member States exported 139.657 tonnes of skipjack tuna in 2017 with a total value of EUR 261 million. With respect to the previous year, this was an increase of 8.035 tonnes and EUR 63 million, which generated a 10-year value peak. Spain and France sold frozen skipjack tuna at average prices of 1,48 and 1,33 EUR/kg respectively, which, compared with 2016, was an increase of 37% for Spain, and 20% for France.

Yellowfin tuna

Extra-EU exports of yellowfin tuna totalled 62.911 tonnes and EUR 129 million in 2017, recording a decrease of 13.444 tonnes and EUR 1 million from 2016. Frozen products of this species exported by Spain and France had average prices of 1,79 and 2,01 EUR/kg respectively, which were 22% and 19% higher than in 2016.

Salmonids

In 2017, the EU exported 105.349 tonnes of salmonids to third countries, including 88.601 tonnes of salmon and 14.686 tonnes of trout, with the rest combining various species of salmonids. Both main species achieved a 10-year value peak.

Salmon

Salmon is by far the most valued species exported by the EU. In 2017, exports to third countries had a total value of EUR 712 million, which accounted for 14% of the total of all fisheries and aquaculture products exported by the EU.

The UK exported the majority of salmon originating from the EU. In 2017, over 80% of the total extra-EU exports of salmon by the UK consisted of fresh salmon which was sold at 8,08 EUR/kg – reaching the highest average annual export price ever. This generated a 19% value growth of EUR 59 million, reaching a peak of EUR 375 million.

In 2017, smoked salmon contributed more than 20% to the overall value of salmon products exported by the EU, with 8.754 tonnes sold at an average price of 16,94 EUR/kg. Major EU exporters of this product are responsible for around 80% of the total volumes: the Netherlands and Germany, which cover 20% each, exported smoked salmon in 2017 at average prices of 20,80 and 19,74 EUR/kg respectively; Denmark and the UK cover 15% each and registered export prices of 13,96 and 8,32 EUR/kg; Poland follows, contributing 10% to total EU exports of smoked salmon, sold at 16,94 EUR/kg. For all Member States, the main destinations were the US and Swiss markets.

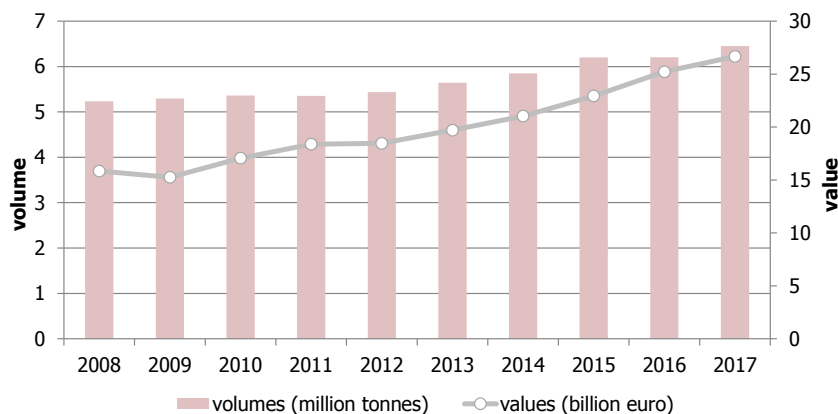
4.5 Intra-EU trade

Exchanges between EU Member States have been growing since 2009. They reached 6,5 million tonnes and EUR 26,7 billion in 2017.

Almost half of fish products traded within and outside the EU consists of exchanges between EU Member States. Intra-EU trade has been growing since 2009, at average annual growth rates of 3% volume and 7% value. In 2017, they reached 6,5 million tonnes and EUR 26,7 billion. Compared with 2016, this represented an increase of 247.526 tonnes and EUR 1,4 billion.

Chart 64

Intra-EU trade of fisheries and aquaculture products
Source: EUROSTAT

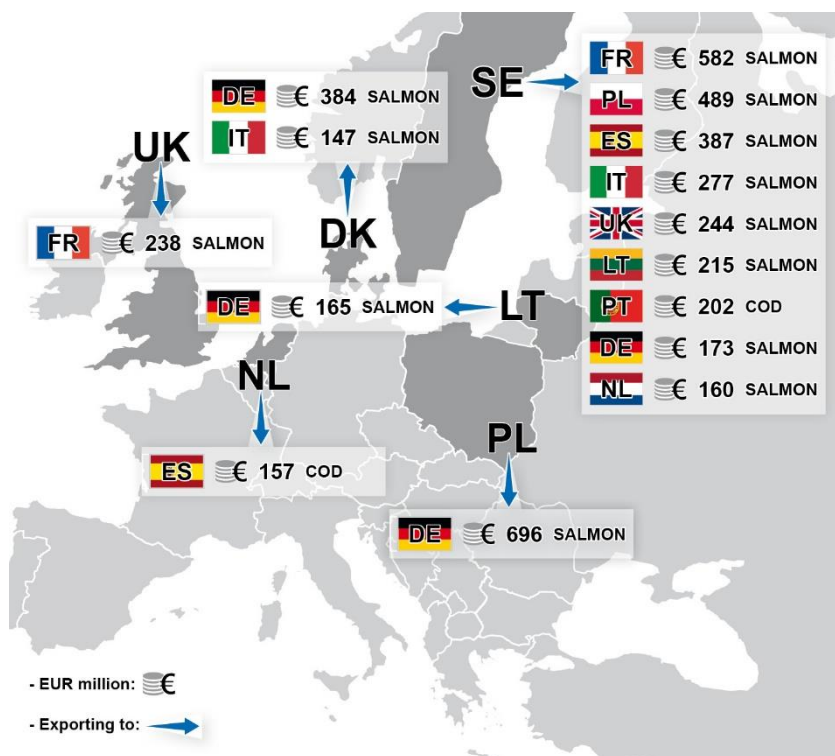


The largest 15 flows, shown in Chart 65, accounted for 17% of the 2017 total value and, combined, amounted to over EUR 4,5 billion. They all refer to salmon and cod exported by northern Member States to other EU countries.

Chart 65

15 top flows of fisheries and aquaculture products within the EU in value (2017)

Source: EUMOFA elaboration of EUROSTAT data



All main commercial species are exchanged within the EU. After salmonids, groundfish are the second most valued commodity group traded within the EU, with cod as the main commercial species. Crustaceans follow, thanks to values of warmwater and miscellaneous shrimps exported by Denmark and Spain, but also by the Netherlands and Belgium which are countries of entry of extra-EU imports of these products. Looking at the volume composition of intra-EU exchanges, small pelagics account for the largest share, equal to 18%. They mostly consist of herring traded by Denmark and Sweden, and mackerel traded by the Netherlands and the United Kingdom.

Chart 66

Intra-EU trade by commodity group in value (2017)

Source: EUMOFA elaboration of EUROSTAT data

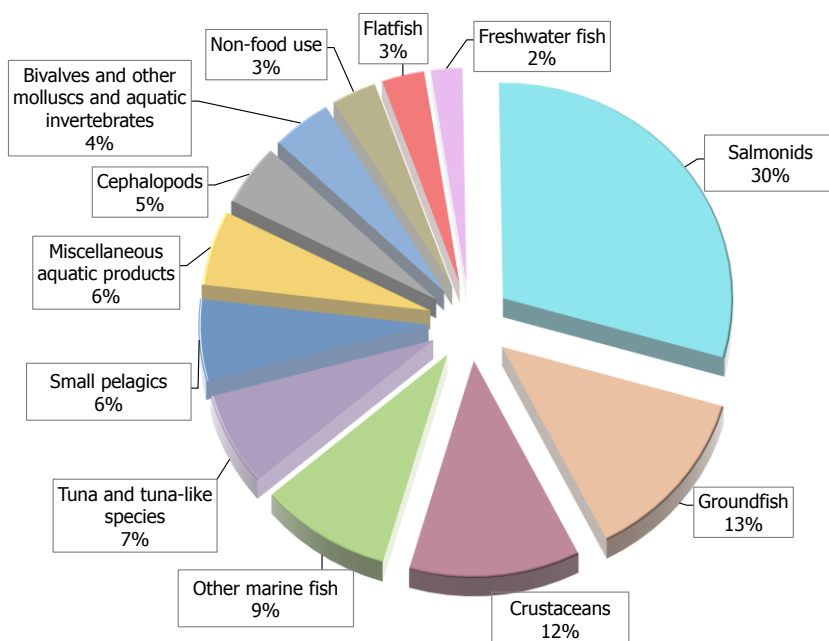
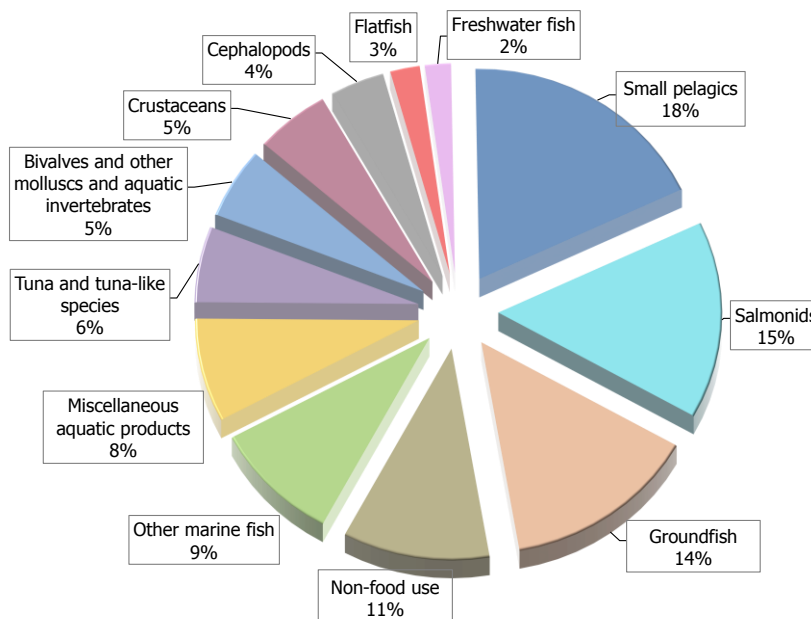


Chart 67

Intra-EU trade by commodity group in volume (2017)

Source: EUMOFA elaboration of EUROSTAT data

**Analysis by species****Salmonids**

In 2017, intra-EU exchanges of salmonids amounted to 977.151 tonnes: 886.416 tonnes of salmon and 82.012 tonnes of trout, the rest being other species of salmonids. Overall, this commodity group showed an increase of EUR 122 million over 2016, against a volume reduction of almost 65.000 tonnes.

Salmon

Salmon alone represents 14% of total intra-EU trade of fisheries and aquaculture products in terms of volume. It was worth EUR 7,4 billion in 2017, which was 28% of the total value. This was an increase of almost EUR 120 million with respect to 2016 thanks to an 8% increase in the average export price, which moved from 7,75 to 8,35 EUR/kg.

Swedish exports of fresh salmon to other Member States are the most relevant, totalling 407.214 tonnes in 2017 with a total value of EUR 2,8 billion. They basically consist of re-exports of salmon imported from Norway. The main destinations are: France, where in 2017 the export price of salmon was 6,97 EUR/kg; Poland, where it was 6,61 EUR/kg; Spain, where it was 7,00 EUR/kg.

Smoked salmon is mainly traded by Poland, the major EU producer of this product. In 2017, the value of such exports reached a 10-year peak at EUR 648 million, marking a 3% increase over 2016, while volumes declined 13%, dropping to 41.213 tonnes.

Germany is by far the main destination of Polish exports of smoked salmon, and where, in 2017, 20.061 tonnes were sold at 16,02 EUR/kg. This was the highest price ever reached, 22% above that of 2016 and 34% higher than the 10-year average. Consequently, the overall value of Polish exports of smoked salmon to Germany achieved a 10-year peak at EUR 466 million against a volume reduction of 6.187 tonnes compared with 2016.

Groundfish

Groundfish traded in the EU continued the upward trend started in 2013, reaching 911.792 tonnes and EUR 3,5 billion in 2017, which was the highest amount of the last ten years. Compared with 2016, this was an increase of almost 70.000 tonnes and EUR 220 million.

Cod Cod is by far the main groundfish species, and the second most valued species in general, traded within the EU. In 2017, 425.646 tonnes of cod were exchanged for a total value of EUR 2,1 billion.

Most of these exports originate from the Netherlands which exported 133.788 tonnes in 2017, Denmark which exported 84.066 tonnes, and Sweden which exported 74.890 tonnes.

Cod exported by Denmark mostly consists of fresh cod, covering almost 70% of the total, sold to France and the Netherlands at average prices of 7,89 and 4,23 EUR/kg, respectively.

Dutch exports mainly include frozen products which account for 70% of the total. They were sold to Portugal and Spain, at 3,31 and 3,49 EUR/kg.

As for Sweden, exports are more diversified. 37% of cod is exported fresh, mainly to Denmark and Poland where it was exported at average prices of 3,27 and 2,78 EUR/kg, respectively. Salted cod and dried (unsalted) cod each account for one quarter of the total, and are mainly destined for Portugal, where they were exported at average prices of 5,26 and 7,54 EUR/kg, respectively.

Small pelagics

Intra-EU trade of small pelagics species reached a 10-year peak in 2017 at EUR 1,6 billion, for an increase of EUR 51 million over 2016. Volumes increased by 51.780 tonnes reaching to 1,2 million tonnes.

Herring Herring is the second most traded main commercial species in the EU, after salmon. In 2017, flows of herring between EU Member States totalled 463.728 tonnes worth EUR 575 million. Volumes augmented by 1% compared with 2016, increasing by 3.956 tonnes; the average price dropped by 5% to 1,24 EUR/kg, which meant total value recorded a decrease of EUR 26 million.

In 2017, 44% of herring was sold frozen and 30% fresh. Prepared/preserved product accounted for almost one quarter of the total but was responsible for the highest value share (55%). The rest was sold as salted and smoked products.

Intra-EU exchanges of herring almost entirely originate from Denmark, but Polish exports are the highest valued, as they mainly consist of prepared/preserved products. For both countries, Germany is by far the main market of destination.

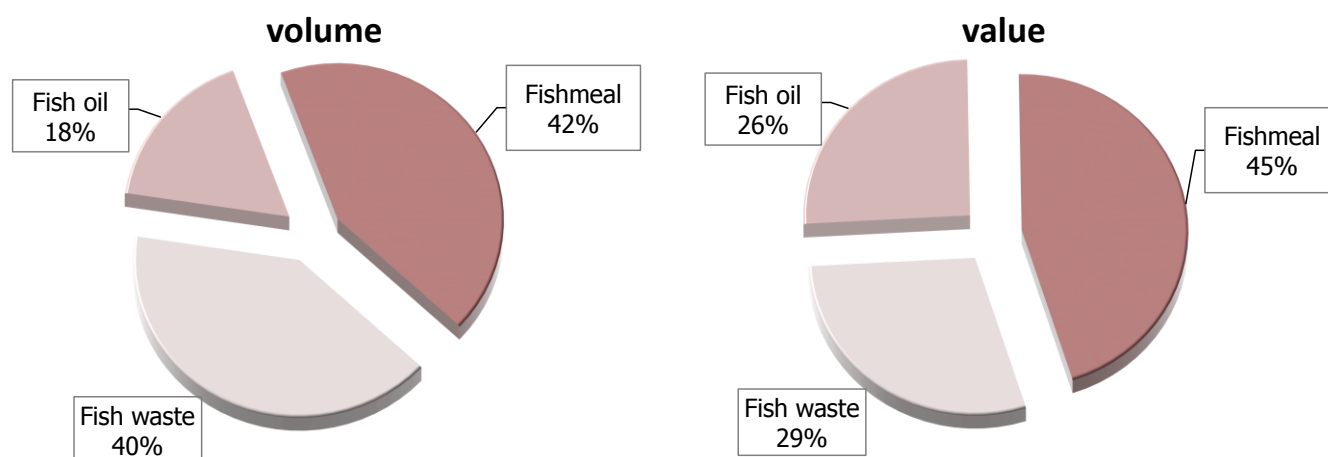
Non-food use products

Despite a decline registered with respect to 2016, flows of non-food use products between Member States in 2017 were above their 10-year average, totalling 685.132 tonnes and EUR 833 million.

Chart 68

Non-food use products traded within the EU (2017)

Source: EUMOFA elaboration of EUROSTAT data



Fishmeal

Denmark and Germany are by far the main dealers of non-food use products in the EU. In 2017, they covered 23% and 19%, respectively, of the total in volume terms. Both countries mostly export fishmeal to the main markets listed in Tables 19 and 20.

Table 19

Most relevant countries of destination of intra-EU exports of fishmeal from Denmark in 2017

Source: EUMOFA elaboration of EUROSTAT data

Importing Member State	Volume (tonnes)	Price (EUR/tonne)	% price variation 2017/2016
Greece	30.031	1.217	-13%
Italy	14.216	1.315	-13%
United Kingdom	12.792	1.254	-19%
Spain	12.049	1.330	-17%
Germany	11.228	1.335	-14%
Other EU Member States	31.766	1.386	-10%
Total	112.082	1.306	-13%

Table 20

Most relevant countries of destination of intra-EU exports of fishmeal from Germany in 2017

Source: EUMOFA elaboration of EUROSTAT data

Importing Member State	Volume (tonnes)	Price (EUR/tonne)	% price variation 2017/2016
Greece	15.503	1.225	-6%
France	14.220	1.340	-9%
Italy	10.180	1.268	-8%
Denmark	7.673	1.359	-5%
Czech Republic	5.836	1.157	+47%
Other EU Member States	20.136	1.373	-7%
Total	73.548	1.302	-5%

Crustaceans

The value of crustaceans traded within the EU achieved a 10-year peak in 2017 at EUR 3,2 billion, which was an increase of EUR 179 million over 2016. In volume terms, crustaceans registered a growth of 27.373 tonnes, which led to a total of 348.551 tonnes, the highest since 2011. While miscellaneous shrimps were mainly responsible for the upward trend of volumes, warmwater shrimps (frozen shrimps of the species *Penaeus*) generated the value rise.

Warmwater shrimps

Warmwater shrimps account for almost one-quarter of the value of intra-EU trade of crustaceans. In 2017, their exchanges were the highest ever recorded, totalling 83.931 tonnes worth EUR 775 million. This was an increase of EUR 120 million and over 10.000 tonnes with respect to the previous year.

They are mainly traded by the Netherlands, Belgium and Spain, which exported 73% of the total to other EU Member States in 2017. The three countries sold them at average prices of 8,96, 9,72 and 7,94 EUR/kg, respectively.

Miscellaneous shrimps

Miscellaneous shrimps account for 38% of the value of crustaceans traded within the EU, mostly comprising prepared/preserved and frozen products. While the prepared/preserved products registered a decrease in 2017 compared with 2016, declining by EUR 2 million to reach EUR 779 million for 76.221 tonnes, the frozen products rose by EUR 64 million to EUR 389 million for 49.263 tonnes.

The main traders of warmwater shrimps, Netherlands, Belgium, Spain and Denmark, are the major traders for miscellaneous shrimps.

Main findings

EU level

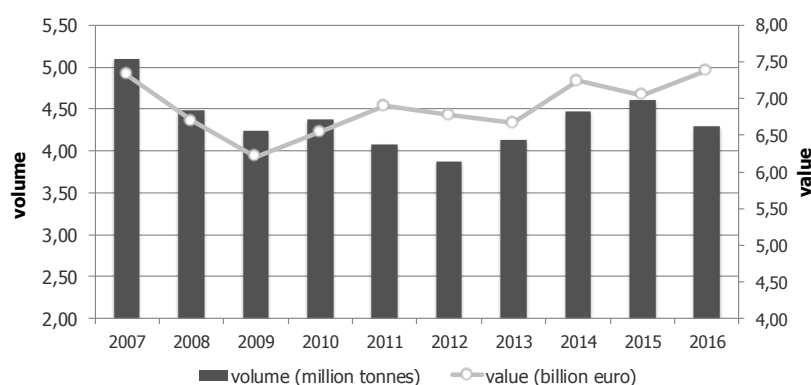
In 2016, the value of products landed in the EU reached a 10-year peak at EUR 7,38 billion.

Chart 69

Total landings in the EU

Source: EUMOFA based on elaboration of EUROSTAT and national sources' data

Details on the sources used can be found in the Methodological Background



Almost all landings in the EU were made by EU vessels, which covered 97% of volume. The Norwegian fleet accounted for 2% of the total, with the rest landed by Faroese and Greenland vessels. The EU share was even higher in value terms, reaching 99%.

As for the EU fleet, Spain's vessels had the highest landings, covering 19% of volume and 28% of value. Of the landings made by the Spanish fleet, 98% were in Spain. Ireland covered 1% of the total, and minor amounts were landed in France, the UK and Portugal.

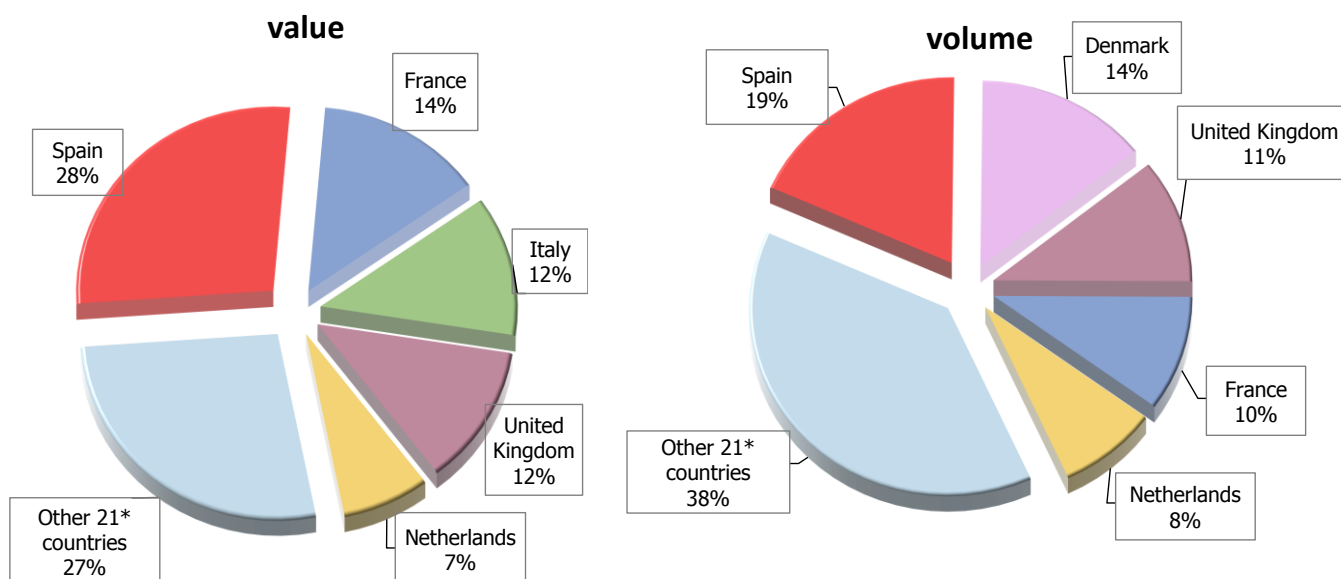
³⁶ Data regarding landings do not refer to landlocked EU Member States, namely Austria, Czech Republic, Hungary, Luxembourg and Slovakia.

³⁷ The source for EU landings is EUROSTAT. At the time of writing, consolidated data for landings in all EU-28 Member States were available up to 2016.

Chart 70

EU landings by vessel nationality in 2016

Source: EUROSTAT



* Of the 21 “other countries”, the top-3 in value terms are Denmark (6% of the total), Ireland (5%) and Portugal (3%); the top-3 in volume terms, are Ireland (5%), Italy (4%) and Sweden (4%).

The most landed species in the EU belong to four commodity groups, namely small pelagics, groundfish, tuna and tuna-like species,³⁸ and the grouping “other marine fish.”³⁹ Together, they represent over 80% of the EU landings in volume terms.

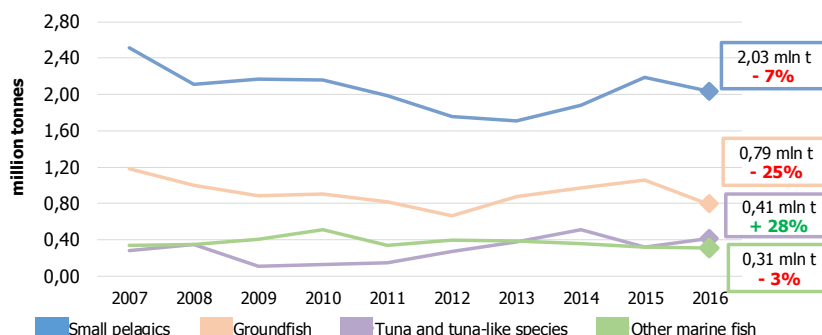
The evolution of their volumes landed during the last ten years is shown in Chart 71.

Chart 71

Volumes of landings of most important commodity groups and % variations 2016/2015

Source: EUMOFA based on elaboration of EUROSTAT and national sources' data

Details on the sources used can be found in the Methodological Background



³⁸This group includes swordfish and all species of tuna (albacore, bigeye, bluefin, yellowfin, skipjack and miscellaneous tunas).

³⁹This group includes monk, seabream, red mullet, seabass, ray, ray's bream, cobia, cusk-eel, john dory, scabbardfish, gurnard, picarel, smelt, dogfish, weever and other sharks.

In terms of value, the commodity groups registering the highest landing value in the EU are small pelagics, groundfish, tuna and tuna-like species, and crustaceans.

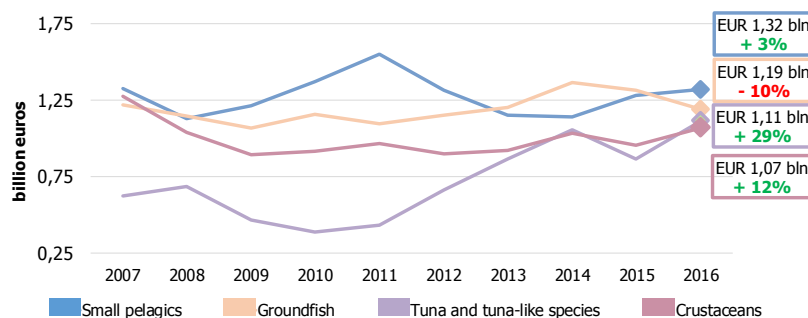
The evolution of the values during the last ten years is shown in Chart 72.

Chart 72

Values of landings of most important commodity groups and % variations 2016/2015

Source: EUMOFA based on elaboration of EUROSTAT and national sources' data

Details on the sources used can be found in the Methodological Background



The shares of EU landings of tuna and groundfish recorded the highest variations in 2016 with respect to 2015. The share of tuna species increased from 7% to 9% in volume and from 12% to 15% in value, while the share of groundfish decreased from 23% to 18% in volume and from 19% to 16% in value.

Chart 73

Composition of landings in the EU by commodity group - volume, 2016

Source: EUMOFA based on elaboration of EUROSTAT and national sources' data

Details on the sources used can be found in the Methodological Background

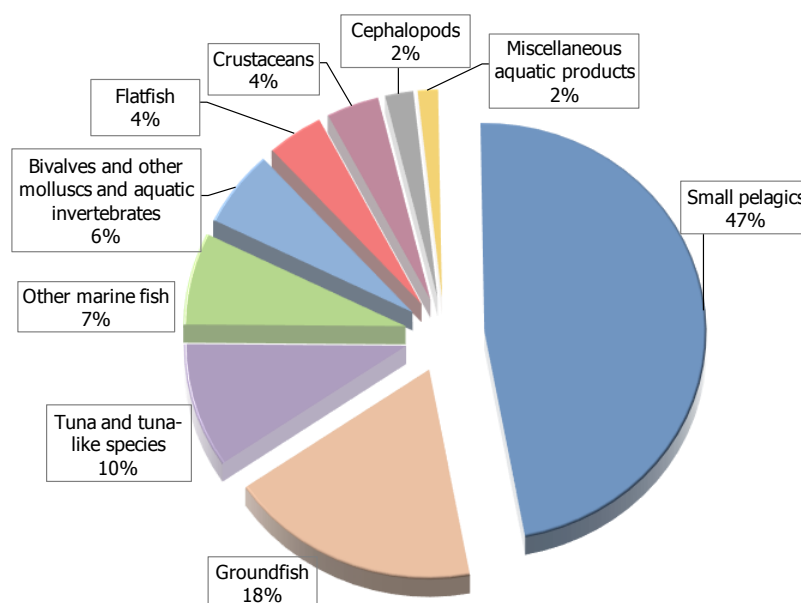


Chart 74

Composition of landings in the EU by commodity group – value, 2016

Source: EUMOFA based on elaboration of EUROSTAT and national sources' data

Details on the sources used can be found in the Methodological Background

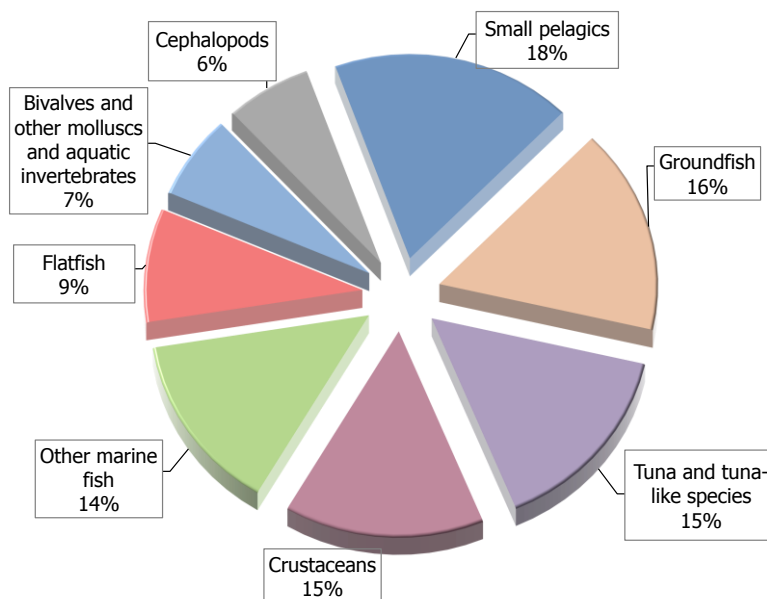
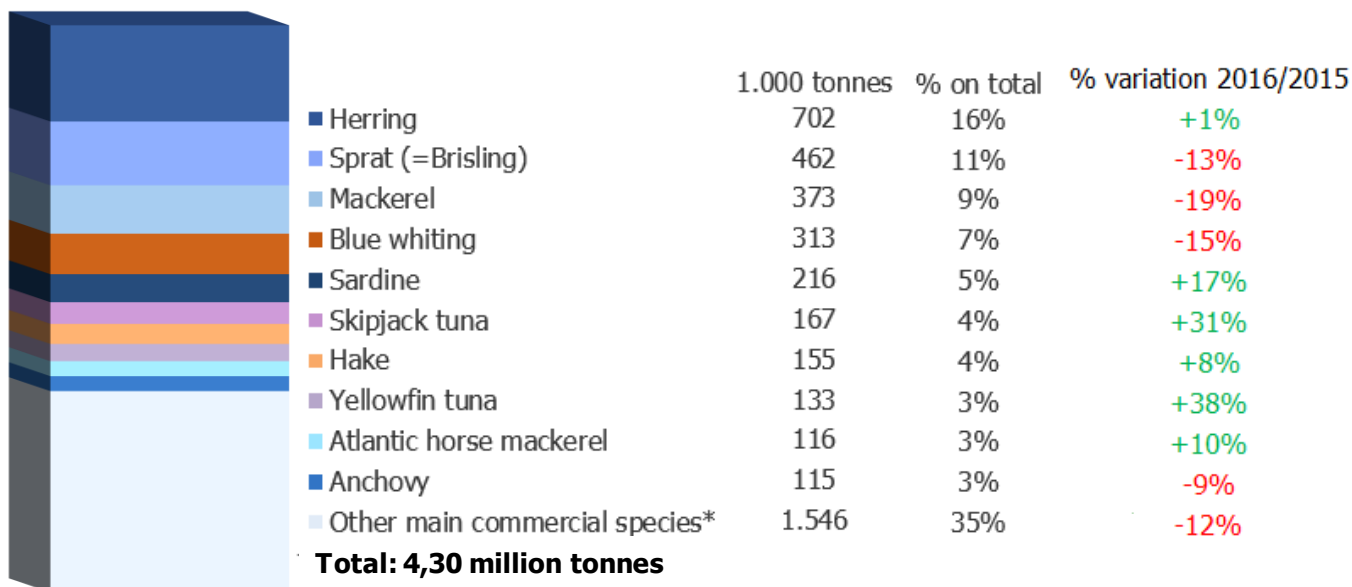


Chart 75

Most important main commercial species landed in the EU – volume in 2016, % of total and % variation 2016/2015

Source: EUMOFA based on elaboration of EUROSTAT and national sources' data

Details on the sources used can be found in the Methodological Background



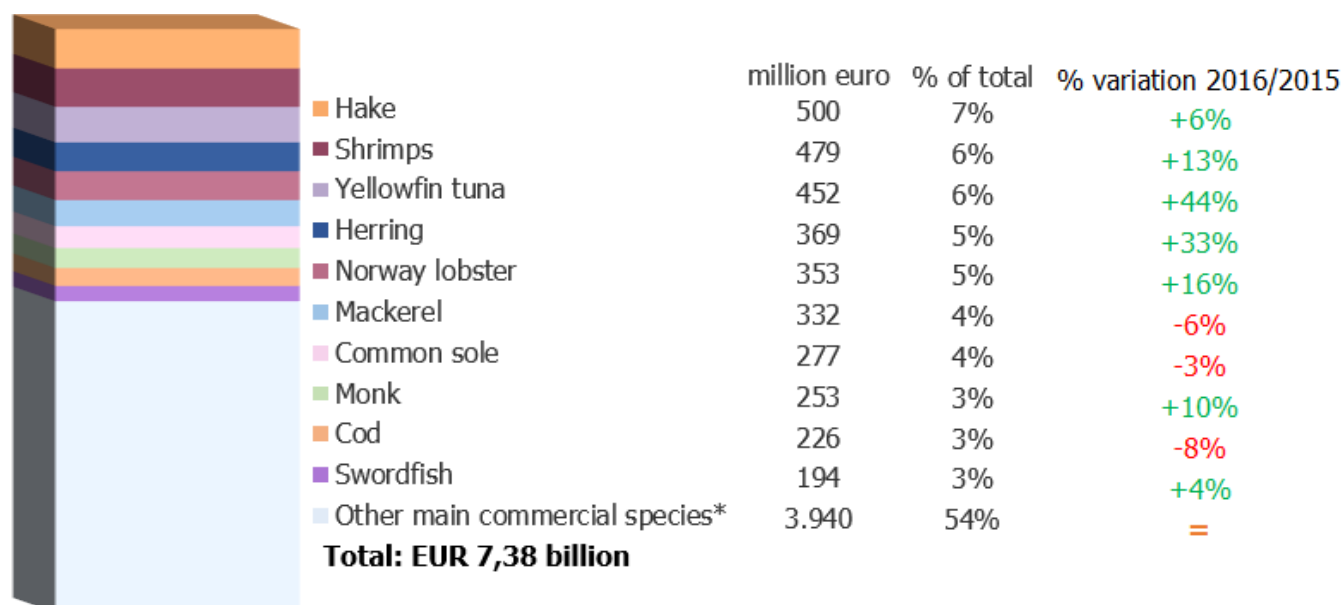
*Among “other main commercial species”, the most landed are cod, European plaice, scallop and mussel *Mytilus* spp., each one covering 2% of the total.

Chart 76

Most important main commercial species landed in the EU – value in 2016, % of total and % variation 2016/2015

Source: EUMOFA based on elaboration of EUROSTAT and national sources' data

Details on the sources used can be found in the Methodological Background



* Among “other main commercial species” the ones with the highest landing value are anchovy and clam (each one covering 3% of the total), as well as scallop and sardine (each one covering 2% of the total).

Table 21

Prices at landing stage of most important main commercial species for the EU market (EUR/kg)

Source: EUMOFA based on elaboration of EUROSTAT and national sources' data

Details on the sources used can be found in the Methodological Background

Main commercial species	2007	2015	2016	variation 2016/2015	variation 2016/2007
Anchovy	1,85	1,55	1,68	↑	↓
Clam	2,15	2,41	2,96	↑	↑
Cod	2,30	2,34	2,47	↑	↑
Cuttlefish	3,68	4,50	5,32	↑	↑
Hake	3,87	3,28	3,23	↓	↓
Herring	0,38	0,40	0,53	↑	↑
Norway lobster	8,79	8,38	8,35	↓	↓
Mackerel	0,91	0,77	0,89	↑	↓
Monk	5,51	5,07	4,91	↓	↓
Octopus	4,18	5,07	5,33	↑	↑
Sardine	0,64	0,94	0,82	↓	↑
Scallop	2,36	2,52	2,64	↑	↑
Shrimp <i>Crangon</i> spp.	3,83	3,63	7,28	↑	↑
Common sole	11,63	10,90	11,59	↑	↓
Squid	4,38	3,60	5,32	↑	↑
Swordfish	7,74	6,50	6,42	↓	↓
Skipjack tuna	0,89	0,99	1,01	↑	↑
Yellowfin tuna	1,65	3,26	3,41	↑	↑

Chart 77

Volumes of landed products in the main EU countries in 2016 and % variation 2016/2015

Source: EUMOFA based on elaboration of EUROSTAT and National sources' data

Details on the sources used can be found in the Methodological Background

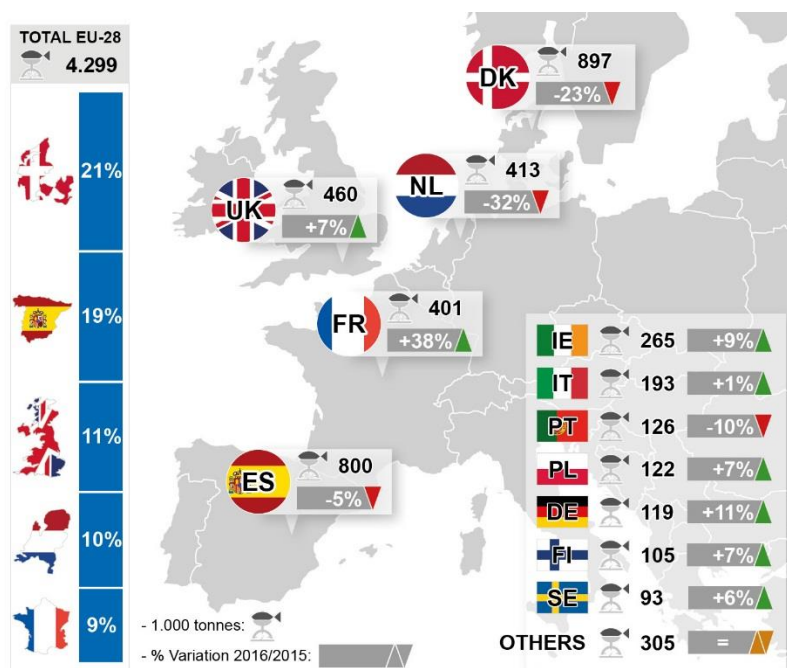
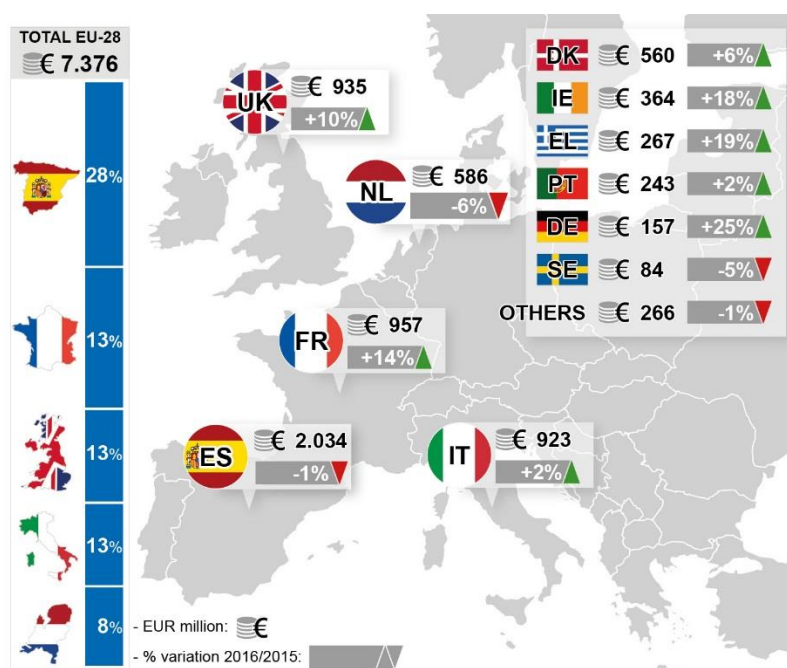


Chart 78

Values of landed products in the main EU countries in 2016 and % variation 2016/2015

Source: EUMOFA based on elaboration of EUROSTAT and national sources' data

Details on the sources used can be found in the Methodological Background



Analysis by species

Small pelagics

Total landings of small pelagics in the EU dropped to 2,03 million tonnes in 2016 (7% or 154.751-tonne lower than 2015), driven by the fall registered in the Netherlands. Nevertheless, their value grew by 3% and reached EUR 1,32 billion, with the highest growth registered in the United Kingdom.

Landings of five of the main small pelagics commercial species – namely herring, sprat, mackerel, sardine and anchovy – accounted for 1,87 million tonnes, representing 43% of total EU landings.

Herring

Herring is the most landed main commercial species in the EU, accounting for 16% of the total volume. In 2016, its landings amounted to a 9-year peak at 702.283 tonnes, increasing 1% over 2015. The value growth, more remarkable due to a 33% or EUR 92 million growth, reached the 10-year peak of EUR 369 million, driven by Germany and the United Kingdom.

In 2016, 26% of herring was landed in Denmark, 18% in the Netherlands, 13% in Finland, 9% in Germany and 9% in Sweden. Most of the remaining catch was landed in other northern Member States.

Apart from the Netherlands, the main landing countries registered an increase with respect to the previous year, the most remarkable being a 19% increase in Germany, where volumes of landed herring rose from 55.611 to 66.095 tonnes.

In the Netherlands, landings of herring decreased by 27%, from 173.239 to 126.559 tonnes. However, due to a significant 62% price increase from 0,44 to 0,72 EUR/kg, its value grew by 18%, from EUR 77 million to EUR 91 million. Among the top five producers, Germany also experienced a substantial 63% price increase, growing from 0,41 to 0,66 EUR/kg.

Table 22

Prices of herring landed in main Member States (EUR/kg)

Source: EUMOFA based on elaboration of EUROSTAT and national sources' data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
Denmark	0,33	0,47	0,56	↑	↑
Netherlands	0,61	0,44	0,72	↑	↑
Germany	0,31	0,41	0,66	↑	↑
United Kingdom	0,28	0,48	0,75	↑	↑
Sweden	0,29	0,59	0,63	↑	↑
Finland	0,13	0,19	0,19	=	↑
Poland	0,31	0,29	0,33	↑	↑
Ireland	0,20	0,35	0,53	↑	↑
Latvia	0,17	0,25	0,23	↓	↑
Estonia	0,14	0,19	0,19	=	↑
France	0,31	0,38	0,44	↑	↑

Almost half of the herring landings in Denmark were made by national vessels, with Swedish vessels contributing another important share of 30%. In the Netherlands, national vessels also made the majority of the herring landings, accounting for 81%, while the German fleet was responsible for the remaining 19%.

Sprat Sprat is the second species landed in the EU among the small pelagics in terms of volume. In 2016, sprat landings totalled 461.958 tonnes, which was a decline of 13% from 2015. Furthermore, it experienced a 5% value reduction from 2015, dropping from EUR 132 million to 125 million, while its average price moved up slightly from 0,25 to 0,27 EUR/kg.

Denmark, the most important Member State for sprat landings, accounted for 69% of total EU volume in 2016, mainly consisting of sprat destined for the fishmeal industry. Nevertheless, its share declined compared with 2015, when it covered 72% of the total. Volumes landed declined from 384.841 tonnes in 2015 to 319.698 tonnes in 2016, and from EUR 91 million to EUR 85 million, which meant decreases of 17% in volume and 6% in value terms.

Most sprat landings in Denmark (74%) were made by national vessels, followed by the Swedish fleet and vessels from other northern EU countries.

In Sweden, larger volumes of products landed in 2016 compared to 2015 triggered a 12% decline of prices.

Table 23

**Prices of sprat landed
in main Member States (EUR/kg)**

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
Denmark	0,17	0,24	0,27	↑	↑
Sweden	0,19	0,57	0,50	↓	↑
Poland	0,19	0,16	0,21	↑	↑
Latvia	0,15	0,30	0,25	↓	↑
Estonia	0,15	0,19	0,18	↓	↑

Mackerel

EU mackerel landings in 2016 dropped 19% from 2015 landings, reaching 373.491 tonnes. In value terms, they amounted to EUR 332 million, registering a 6% drop.

In the EU, 31% of mackerel landings take place in the United Kingdom, where 114.475 tonnes were landed in 2016, a 10% increase from 2015. Of this, over 90% came from national vessels, with other minor shares landed by the Irish and Danish fleets.

Mackerel landings in the United Kingdom increased by 30% in 2016 compared with 2015, amounting to EUR 119 million.

The other top EU producers of mackerel – Ireland, Spain and the Netherlands – registered decreases in the volume of mackerel landed between 2015 and 2016. The most significant fall was registered in

the Netherlands, which dropped from 188.889 to 57.669 tonnes and from EUR 107 million to EUR 52 million.

Table 24

Prices of mackerel landed in main Member States (EUR/kg)

Source: EUMOFA based on elaboration of EUROSTAT and national sources' data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
United Kingdom	0,98	0,88	1,04	↑	↑
Ireland	1,81	0,58	0,74	↑	↓
Spain	0,37	0,66	0,75	↑	↑
Netherlands	1,04	0,90	0,89	↓	↓
Denmark	1,00	0,87	1,14	↑	↑
France	0,84	1,22	1,40	↑	↑
Portugal	0,27	0,28	0,37	↑	↑
Italy	2,38	2,37	2,76	↑	↑
Greece	2,47	2,51	2,12	↓	↓

Sardine

EU 2016 landings of sardine showed an increase of 17% over 2015, reaching a 5-year peak of 216.014 tonnes.

This positive trend involved almost all landing Member States, with the most intense growth experienced by the Netherlands, where landings rose by 108% in volume and 50% in value.

In 2016, the average price at EU level declined by 13% compared with 2015, dropping from 0,94 to 0,82 EUR/kg. Moreover, total value reached EUR 178 million, which was 2% higher than the previous year.

Table 25

Prices of sardine landed in main Member States (EUR/kg)

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
Croatia	n/a ⁴⁰	0,38	0,38	=	n/a
Netherlands	n/a ⁴¹	0,74	0,54	↓	n/a
Spain	0,68	1,37	1,24	↓	↑
Italy	0,93	0,78	0,77	↓	↓
France	0,49	0,85	0,97	↑	↑
Portugal	0,57	2,19	2,03	↓	↑
Greece	1,64	1,87	1,25	↓	↓
United Kingdom	0,56	0,52	0,40	↓	↓

In terms of volume, Croatia is the main Member State landing sardine, covering 25% of the total. In 2016, it reported increases of around 7% in both volume and value, registering 54.432 tonnes worth EUR 21 million. Its price remained stable at 0,38 EUR/kg.

The Netherlands and Spain each accounted for 17% of EU sardine landings in volume terms. While the Netherlands showed a

⁴⁰ Croatia is analysed from 2013 on, since it joined the EU in 2013.

⁴¹ Data on value is confidential.

skyrocketing growth in 2016 compared with 2015, Spain maintained a flat trend.

Anchovy After the peaks reached in 2015 in both volume and value terms, EU landings of anchovy decreased 9% in 2016, dropping to 115.052 tonnes. The average price increased by 9%, moving from 1,55 to 1,68 EUR/kg, thus determining an overall value of EUR 193 million, which was 2% lower than in 2015.

Spain, the main EU landing country, accounted for 40% of the total. However, this marked a decrease in its share, as landings of anchovy decreased from 49.922 in 2015 to 46.192 tonnes in 2016, and from EUR 86 million to EUR 82 million. The price slightly augmented, reaching 1,77 EUR/kg, 3% more than 2015 and 6% above the EU average price.

Italy, another important landing country for anchovy, contributed 33% of EU landings. Here, a 3% price increase led to a total value of EUR 66 million, the highest since 2013.

Table 26

Prices of anchovy landed in main Member States (EUR/kg)

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
Spain	2,27	1,72	1,77	↑	↓
Italy	1,70	1,68	1,73	↑	↑
Greece	2,08	1,50	1,58	↑	↓
Portugal	3,32	1,90	1,70	↓	↓
Croatia	n/a ⁴²	0,85	0,94	↑	n/a
France	2,17	1,85	1,96	↑	↓

Groundfish

In 2016, landings of groundfish in the EU decreased by 25% from 2015, reaching 789.753 tonnes, the lowest total of the last 4 years. In value terms, landings dropped to EUR 1,19 billion, a 10% decrease from 2015.

The most landed groundfish species in the EU are blue whiting, hake, and cod. In 2016, landings of the three totalled 559.167 tonnes, which amounted to 13% of total landings.

Hake Of all finfish landed, hake has the highest value, with European hake (*Merluccius merluccius*) representing 76% of the total hake in the EU.

In 2016, the volume of hake landings increased by 8% over 2015, reaching 154.877 tonnes, a 10-year peak resulting from a fluctuating but generally upward trend. Moreover, despite a slight 2% price reduction, total value increased by 6%, from EUR 470 million to EUR 500 million.

Hake landed in Spain had the highest value, covering 45% of the total. Italy followed at 13% while Ireland and the UK each accounted

⁴² Croatia is analysed from 2013 on, since it joined the EU in 2013.

for 12%. France, also an important landing country, was responsible for 8% of the EU total.

Of the five countries, only Spain has hake landings other than European hake (*Merluccius merluccius*). While European hake did account for 54% of Spain’s 2016 hake landings, Argentine hake (*Merluccius hubbsi*) covered around 36% of the total volume and another 11 hake species⁴³ accounted for the remaining 10%. Both European and Argentine hake landings increased in volume and value in 2016 compared to 2015, but European hake registered the highest growth, increasing 17% in volume and 26% in value.

Chart 79
Price trend at landing stage of hake in main landings countries

Source: EUMOFA based on elaboration of EUROSTAT data and national sources’ data

Details on the sources used can be found in the Methodological Background

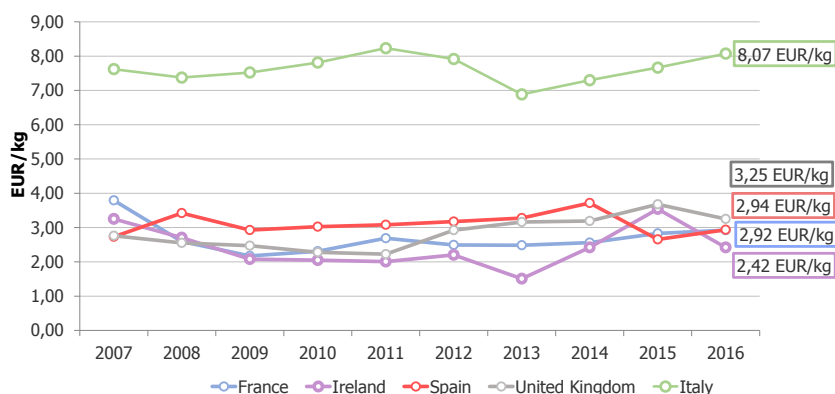


Table 27
Prices of hake landed in other relevant Member States (EUR/kg)

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
Greece	6,25	7,08	7,36	↑	↑
Denmark	2,72	2,15	2,28	↑	↓
Portugal	3,07	2,90	2,52	↓	↓
Croatia	n/a ⁴⁴	3,77	3,68	↓	n/a

Cod

In 2016, EU landings of cod had a value of EUR 226 million, which was a 8% decrease from 2015. This was linked to a 12% reduction in landed volumes, that reached 91.608 tonnes. The average price grew by 5%, from 2,34 to 2,47 EUR/kg.

Of the top three EU players in the cod fishery – Denmark, the UK and Spain – only the UK experienced an opposite trend, with an 11% increase in value and a 17% growth in volume, accompanied by a 5% fall in price.

Most of the cod landings in Spain are frozen, while those in Denmark and UK are almost entirely fresh products. The volume of frozen cod landed in Spain in 2016 reached 15.359 tonnes, which was 23% less than 2015 and the lowest volume since 2012. The corresponding price of 2,85 EUR/kg was 5% less than 2015.

⁴³ *Merluccius senegalensis*; *Merluccius capensis*; *M.paradox*; *Merluccius paradoxus*; *Merluccius capensis*; *Merluccius bilinearis*; *Merluccius australis*; *Urophycis tenuis*; *Merluccius spp*; *Merluccius patagonicus*; *Urophycis chuss*; *Phycis chesteri*.

⁴⁴ Croatia is analysed from 2013 on, since it joined the EU in 2013.

Fresh cod landed in the UK reached a 10-year peak at 15.471 tonnes. Moreover, despite a 3% decrease in fixed cod price at 2,97 EUR/kg, its total value touched a new decade peak.

The 20.188 tonnes of fresh cod landed in Denmark were sold at 2,78 EUR/kg. This was a 10% price increase from 2015, while volume remained steady.

Table 28

Prices of cod landed in main Member States (EUR/kg)

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
Denmark	2,78	2,49	2,78	↑	=
United Kingdom	3,04	3,07	2,90	↓	↓
Spain	0,63	3,02	2,85	↓	↑
France	3,15	3,25	3,65	↑	↑
Poland	1,60	1,11	1,26	↑	↓
Germany	2,33	2,84	2,94	↑	↑
Sweden	1,92	1,36	1,45	↑	↓

Blue whiting

EU landings of blue whiting in 2016 recorded a significant fall, dropping to 312.682 tonnes and EUR 107 million, which were, respectively, 15% and 16% less than 2015.

Landings of this species mainly consist of fresh products, of which half were landed in Denmark. This country recorded a downward trend, as blue whiting landings diminished by 16% to 155.262 tonnes. However, due to a 26% price increase, from 0,25 to 0,31 EUR/kg, its value grew by 6% and reached the 10-years peak of EUR 48 million. It has to be underlined that, while other EU Member States use blue whiting for human consumption, Denmark uses it almost entirely for fishmeal production.

The Netherlands accounted for 20% of EU landings of blue whiting, mainly dealing with frozen products. They experienced the strongest reduction compared with 2015, as volumes decreased by 37%, reaching 63.763 tonnes. However, except for the 2015 peak, total volumes were the highest of the last 8 years. Nonetheless, a 46% value fall dropped the total to EUR 12 million.

Table 29

Prices of blue whiting landed in main Member States (EUR/kg)

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
Denmark	0,20	0,25	0,31	↑	↑
Netherlands	0,40	0,22	0,18	↓	↓
Ireland	0,14	0,47	0,20	↓	↑
Spain	0,88	0,98	1,05	↑	↑
United Kingdom	0,22	0,23	0,24	↑	↑
Germany	0,30	0,31	0,34	↑	↑
France	0,10	1,55	0,60	↓	↑

Crustaceans

Shrimps

Crustacean landings increased by 13% in value and by a slight 2% in volume from 2015. With 164.924 tonnes landed, they occupied the seventh position in volume terms among all commodity groups, but ranked fourth in value, with a total of EUR 1,07 billion.

With 54.517 tonnes worth EUR 479 million, shrimps ranked second after hake among most valued products landed in the EU in 2016. The main EU countries where they are landed vary, because they land different species.

Deep-water rose shrimps are mainly landed in Italy, where in 2016, their landings amounted to 8.833 tonnes worth EUR 56 million, marking a 3% decrease from 2015. Spain, the second largest market, landed 2.278 tonnes valued at EUR 24 million which represented decreases of 31% and 48%, respectively, in volume and value.

Italy is also an important landing country for warmwater shrimps, represented exclusively by Caramote prawns (*Penaeus kerathurus*). Its 2016 Caramote landings reached 1.126 tonnes and EUR 20 million, which were increases of 5% and 12%, respectively, from 2015.

The Netherlands accounts for more than 60% of the *Crangon* shrimp landed in the EU. In 2016, the species landings in this country amounted to 16.157 tonnes, 3% less than 2015. However, a 92% price increase gave the landings a value of EUR 113 million, which represented a significant 85% increase from 2015. Germany followed with 5.880 tonnes and EUR 45 million, which meant a 46% decrease in volume and, at the same time, a 121% price growth and, in turn, a 19% increase in value terms. The remarkable price increases of *Crangon* shrimp registered in almost all EU Member States were due to a deficit suffered by the overall EU production.

Other types of cold-water shrimps landed in the EU are mainly northern prawn, almost entirely landed in Sweden, which accounted for 1.954 tonnes worth EUR 17 million, and Denmark, which landed 1.719 tonnes worth EUR 8 million. Compared with 2015, Sweden registered a growth of 14% in volume and 6% in value, while Denmark recorded a drop of 17% in volume and a slight 1% increase in value.

When it comes to the “miscellaneous shrimps” grouping, Italy registered landings for 3.350 tonnes worth EUR 72 million, mostly of giant red shrimp (*Aristaeomorpha foliacea*). This represented a 4% increase in volume and a value steadiness with respect to 2015.

In Spain, landings of miscellaneous shrimps consisted mainly of striped red shrimps (*Aristeus varidens*) and blue and red shrimps (*Aristeus antennatus*), the first being responsible for the overall 6% value growth of this grouping’s landings in the country. Overall, their landings totalled 3.164 tonnes with a value of EUR 54 million.

Chart 80

EU landings of shrimps (2016)

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

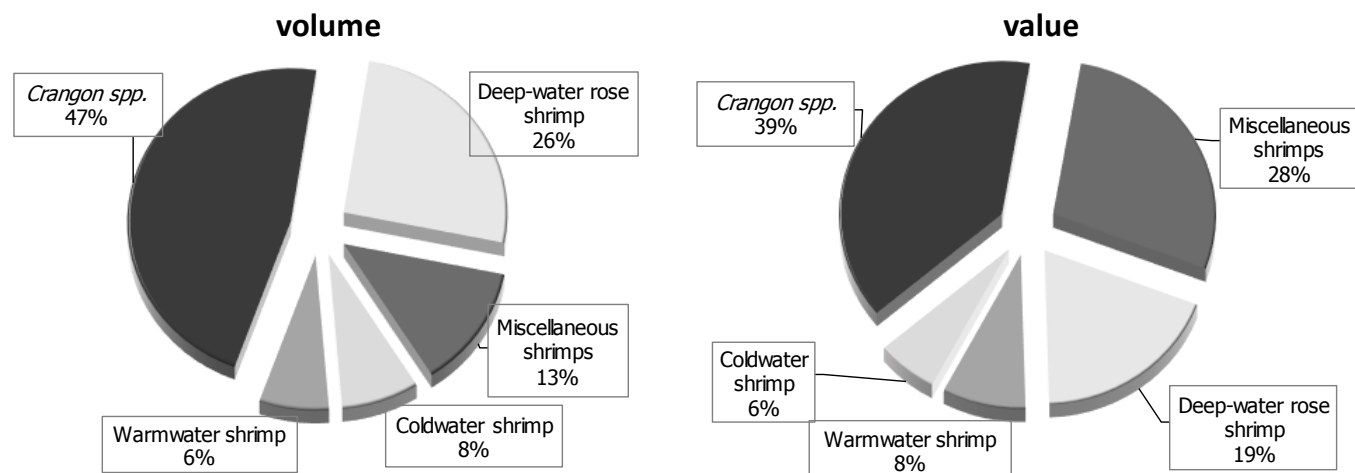


Table 30

Prices of shrimps landed in main Member States (EUR/kg)

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

Main commercial species	Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
Deep-water rose shrimp	Italy	9,84	6,35	6,33	↓	↓
	Spain	15,93	14,02	10,47	↓	↓
	Greece	7,92	4,80	2,28	↓	↓
Shrimp Crangon spp.	Netherlands	3,83	3,65	6,98	↑	↑
	Germany	3,45	3,47	7,66	↑	↑
	Denmark	3,34	3,59	8,99	↑	↑
Cold-water shrimps	Sweden	4,87	9,15	8,51	↓	↑
	Denmark	1,71	3,79	4,65	↑	↑
	Spain	5,03	7,02	7,70	↑	↑
Miscellaneous shrimps	Italy	21,70	22,02	21,43	↓	↓
	Spain	29,79	15,93	16,96	↑	↓
	France	19,17	18,33	18,25	↓	↓
Warmwater shrimps	Italy	21,78	16,30	17,40	↑	↓
	Spain	17,68	16,66	13,56	↓	↓
	Greece	5,25	2,95	4,17	↑	↓

Tuna and tuna-like species

In 2016, volumes of tuna and tuna-like species landed in the EU registered a significant 28% growth with respect to 2015 and totalled 413.559 tonnes – an amount 42% higher than the 10-year average. Values also increased, rising 29% to EUR 1,11 billion, which was 55% more than their decade average and the highest of the period.

Spain, the main EU producer of tuna, was responsible for 72% of total volumes and 74% of total values in 2016. The country was thus responsible for the overall increase at EU level, as its national landings reached 296.723 tonnes or 4% over 2015, with a value of EUR 826 million or 18% over 2015. The major growth was recorded for landings of bigeye tuna, for which volume rose by 37% and value by 71%. As a consequence, the share of this species on total tuna landings in Spain moved from 8% in volume and 9% in value in 2015, to 10% in volume and 13% in value in 2016.

Yellowfin tuna

Yellowfin tuna is among the top three species landed in the EU in value terms. In 2016, its value of EUR 452 million represented 41% of the total value of all tunas. With respect to 2015, volume grew by a significant 38%, from 96.499 to 132.756 tonnes, while the average price increased by 4%.

In 2016, 67% of yellowfin tuna landings, amounting to 89.377 tonnes, occurred in Spain, almost entirely frozen. There, the price increased from 3,27 to 4,14 EUR/kg. This 27% increase followed the general price growth registered for tropical species of tuna (e.g. yellowfin, skipjack and bigeye) both in the Atlantic (ICCAT area) and Indian Oceans. This corresponded to a 3% or 3.018-tonne loss in volume and to a 27% increase in value terms that led to a EUR 68 million increase and a total value of EUR 370 million.

Table 31

Prices of yellowfin tuna landed in main Member States (EUR/kg)

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
Spain	1,66	3,27	4,14	↑	↑
France	n/a ⁴⁵	3,93	1,89	↓	n/a
Italy	1,51	1,85	1,90	↑	↑

Skipjack tuna

The majority of skipjack tuna landed in the EU is registered by Spain and France – Spain accounted for 76% in volume and 72% in value, and France accounted for 21% in volume and 23% in value. The catch is mainly from tropical waters close to the west coast of Africa.

After the remarkable loss experienced in 2015, Spain recorded a slight 2% growth in both volume and value in 2016. The price declined by 2%, dropping from 0,99 EUR/kg to 0,96 EUR/kg.

⁴⁵ Data on value is confidential.

Table 32

Prices of skipjack tuna landed in main Member States (EUR/kg)

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
Spain	0,90	0,99	0,96	↓	↑
France	5,19	0,58	0,95	↑	↓
Italy	0,93	1,87	4,74	↑	↑

Swordfish

The EU swordfish fisheries stretch from the Mediterranean and the Atlantic, to the Indian Ocean and the Pacific. This species is among the top ten landed in the EU in value terms. In 2016, it grew by 4% in value and 5% in volume, reaching EUR 194 million and 30.232 tonnes.

Of this, Spain landed 78%, which totalled 23.585 tonnes worth EUR 137 million, recording increases of 7% in value and 9% in volume against 2015. Its price was 5,85 EUR/kg, 2% lower than the previous year and 9% less than the EU average.

Table 33

Prices of swordfish landed in main Member States (EUR/kg)

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
Spain	6,84	5,92	5,81	↓	↓
Italy	12,52	9,23	9,27	↑	↓
France	10,51	6,12	9,11	↑	↓

Other marine fish

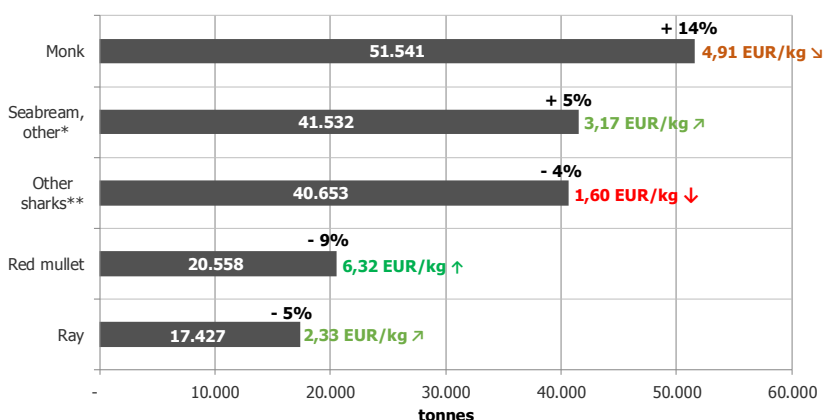
Chart 81

Main species of "Other marine fish" in 2016: volume, % variation 2016/2015 and prices at landing stage

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

In 2016, EU landings of the commodity group "Other marine fish" decreased by 3% in both volume and value terms from 2015, reaching 307.129 tonnes and EUR 1,03 billion. On the other hand, monk, one of the main species of this group, registered both volume and value increases.



* The grouping "Other seabreams" includes bogue (48% of the total), common pandora and black seabream (8% each), large-eye dentex (7%), white seabream and axillary seabream (5% each), red porgy (4%), blackspot seabream (3%), sand steenbras, saddled seabream, common two-banded seabream, common dentex and dentex nei (2% each) and annular seabream and red pandora (1% each).

** The grouping "Other sharks" includes blue shark (59%), small-spotted catshark (19%), shortfin mako and smooth-hounds nei (7% each) and smooth-hound, catsharks, nursehounds nei, tope shark, catsharks nei and blackspotted smooth-hound (1% each).

Monk Landings of monk increased by 14% in volume and 10% in value, totalling 51.541 tonnes and EUR 253 million. France, the Member State which lands most of the monk, accounted for 28% of the EU total in 2016. After reaching a peak in 2013, when it landed 38% of the total monk in the EU, France's share started to decline. This was due to increasing amounts of monk landed in the UK and Ireland, where the upward trends drove the growth at EU level.

Monk landed in France and the UK was sold at 5,15 and 5,01 EUR/kg, respectively, which was almost the same level as in 2015 for both countries. Conversely, in Ireland, the price decreased 6% from 2015, moving from 3,56 to 3,35 EUR/kg.

Table 34

**Prices of monk landed
in main Member States (EUR/kg)**

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
France	5,34	5,21	5,15	↓	↓
United Kingdom	5,57	5,11	5,01	↓	↓
Ireland	4,15	3,56	3,35	↓	↓
Spain	6,03	5,46	5,67	↑	↓
Denmark	5,46	5,44	5,08	↓	↓
Italy	8,21	8,15	8,41	↑	↑

Red mullet In 2016, EU landings of the main commercial species “red mullet” totalled 20.558 tonnes for a value of EUR 130 million. Two species, *Mullus barbatus* and *Mullus surmuletus* (i.e. surmullet) accounted for 95% of the total.

Italy, the main market, landed 7.736 tonnes, accounting for 38% of EU landings of red mullet. In value terms, Italy accounted for 39% of the total, with an overall value of EUR 50 million, of which 63% was *Mullus barbatus* and 37% surmullets.

Greece, which ranked second to Italy in value terms, reached EUR 27 million and 3.165 tonnes, with increases of 6% in value and 13% in volume over 2015. Landings in Greece were 55% surmullet and 45% *Mullus barbatus*.

Prices in these two countries are different and, for 2015–2016, showed a dissimilar trend. In Italy, red mullet species were sold on average at 6,46 EUR/kg in 2016, a 4% price increase from 2015. On the other hand, Greece had a 6% decrease in landings which led to 8,64 EUR/kg price, which was 37% higher than the EU average.

Table 35

**Prices of red mullet landed
in main Member States (EUR/kg)**

Source: EUMOFA based on elaboration of EUROSTAT data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	variation 2016/2015	variation 2016/2007
Italy	6,54	6,21	6,46	↑	↓
Greece	10,29	9,23	8,64	↓	↓
Spain	5,63	5,86	5,76	↓	↑
France	4,14	4,18	6,67	↑	↑
Netherlands	n/a ⁴⁶	3,67	6,26	↑	n/a

Production of algae

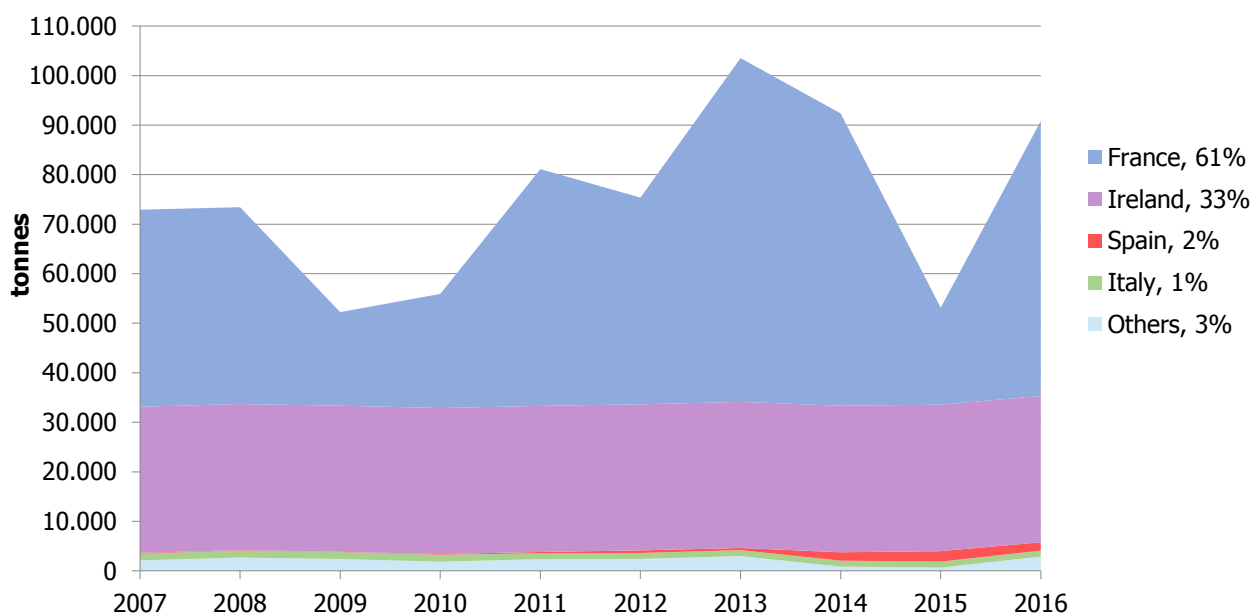
The EU ranks tenth in the world for algae production, almost entirely wild-harvested. Its 2016 production of 90.855 tonnes was almost twice the volume registered in 2015.

France and Ireland are the main producers, followed at a distance by Spain and Italy. While production in France and Ireland consists almost exclusively of brown algae (*phylum Ochrophyta*, class *Phaeophyceae*), Spain's production includes red algae (*phylum Rhodophyta*) and Italy's includes both red and green algae (*phylum Chlorophyta*, classes *Bryopsidophyceae*, *Chlorophyceae*, *Dasycladophyceae*, *Prasinophyceae* and *Ulvophyceae*).

Chart 82

**Production of aquatic plants
in main EU countries
and % over 2016 total**

Source: FAO


⁴⁶ Data on value is confidential.

The evolution of production over the decade has been dissimilar in the four countries: increasing a significant 189% in France and 248% in Spain, but staying stable in Ireland with a minimal 0,2% increase, and decreasing 14% in Italy.

In the EU, seaweed is primarily used for the commercial production of additives for food and for non-food applications, with *Laminaria hyperborea*, *Laminaria digitata* and *Ascophyllum nodosum* as the main exploited species. The European seaweed processing industry is traditionally divided into two main categories: those producing alginic acid (alginate) and those producing products for agriculture (fertilizer, animal feed). Both require large quantities of raw material.

Local seaweed production is not fully sufficient to satisfy the high demand of the processing industries, especially for those extracting alginates. Those industries that have access to the raw material locally also import dried seaweed when local supplies are out of season or not sufficient. For example, in France, seaweed and other algae are mainly supplied by Chile and China. In order to limit transportation costs of wet material and to remain competitive with the importation of dried material, industries often decide to settle close to seaweed harvesting areas.

Some processors can also choose to relocate their processing plants to non-EU countries, where they can access cheaper raw materials and labour, such as in Chile, the Philippines or China.

Nonetheless, the potential for algae market development in Europe is strong. There is an increase of public concern about the use of “chemicals” and about finding alternative ones, which indicates there is significant potential for seaweed extracts market. Moreover, the EU is passing legislation to limit the use of synthetic additives and antibiotics in feed ingredients. This is a powerful market driver for sustainable feed ingredients and a good opportunity for algae extracts.

In addition, several growing niche markets, such as “algototherapy”, are providing new opportunities for algae products. For instance, in Ireland, seaweed baths are becoming increasingly popular. The market for algotherapy, which is expected to expand, could represent a very attractive area for niche companies to exploit.

Aquaculture production⁴⁷

6

Main findings

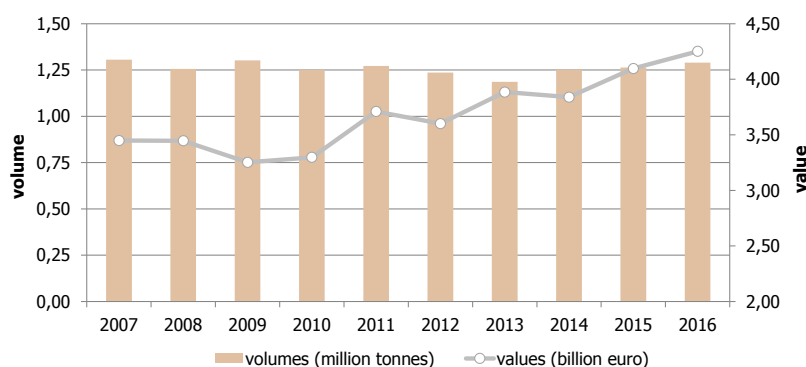
EU level

Chart 83

Total aquaculture production in the EU

Source: EUMOFA elaboration of EUROSTAT, national sources, FEAP and FAO data

Details on the sources used can be found in the Methodological Background



In 2016, the value of EU aquaculture production rose by over EUR 155 million compared with 2015.

In 2016, the value of aquaculture products farmed in the EU⁴⁸ reached an all-time high of EUR 4,25 billion. This represented a 4% increase over 2015, when the value was EUR 4,10 billion.

In terms of volume, aquaculture production continued the recovery started in 2014 and reached 1,29 million tonnes in 2016, increasing 26.681 tonnes or 2% from 2015. The 2016 production level remains a slight 1% below the 1,31 million tonnes registered in 2007.

The main groups of species farmed are bivalves, salmonids⁴⁹, freshwater fish⁵⁰ and other marine fish. However, it is worth mentioning that, despite its minor role in terms of volumes produced, the value of bluefin tuna has been rising since 2010 at a remarkable average annual growth rate of 21%.

European seabass production had a record year in 2016, in both volume and value terms, especially due to increased production in Greece and Spain.

The value of farmed salmon has continued to grow as well, driven by production in both the UK and Ireland.

Bivalve value, which in 2015 recovered from a drop that occurred in 2014, decreased again in 2016, mostly due to the decrease registered for clam (see species analyses for details). Its negative trend did not offset the increased value of mussel *Mytilus* spp., the main species among bivalves.

Production of freshwater fish declined slightly in 2016 and its value achieved a 10-year peak. Carp and eel were the main contributors to this upward trend, with carp's production decline pushing prices up, and both production and price increasing for eel.

⁴⁷ The main source of data for EU aquaculture production is EUROSTAT. Data were integrated using FAO, FEAP and national sources for the following Member States: Austria, Belgium, Bulgaria, Denmark, Estonia, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, the Netherlands, Poland, Portugal, Romania, Slovenia and the United Kingdom. More details can be found in the Methodological Background.

⁴⁸ 2013-2016 data are for EU-28.

⁴⁹ Salmonids includes salmon and trout.

⁵⁰ Freshwater fish excludes trout.

Aquaculture production

Chart 84

Values of most important groups of species and % variations 2016/2015

Source: EUMOFA elaboration of EUROSTAT, national sources, FEAP and FAO data

Details on the sources used can be found in the Methodological Background

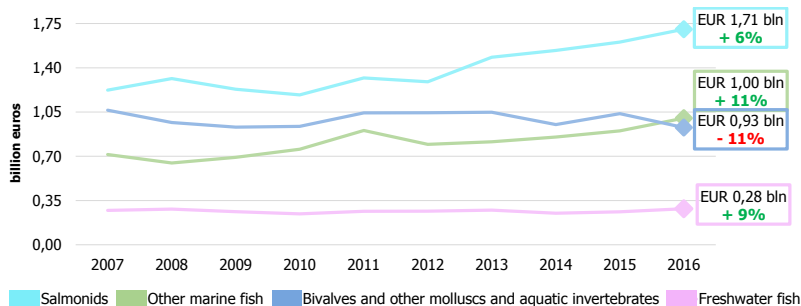


Chart 85

Volumes of most important groups of species and % variations 2016/2015

Source: EUMOFA elaboration of EUROSTAT, national sources, FEAP and FAO data

Details on the sources used can be found in the Methodological Background

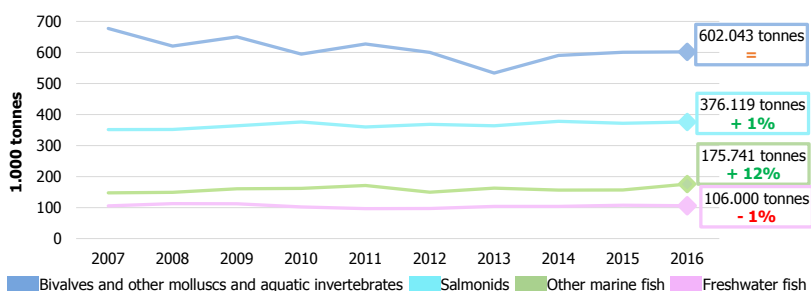


Chart 86

Composition of farmed species in the EU by volume

Source: EUMOFA elaboration of EUROSTAT and FAO data

Details on the sources used can be found in the Methodological Background

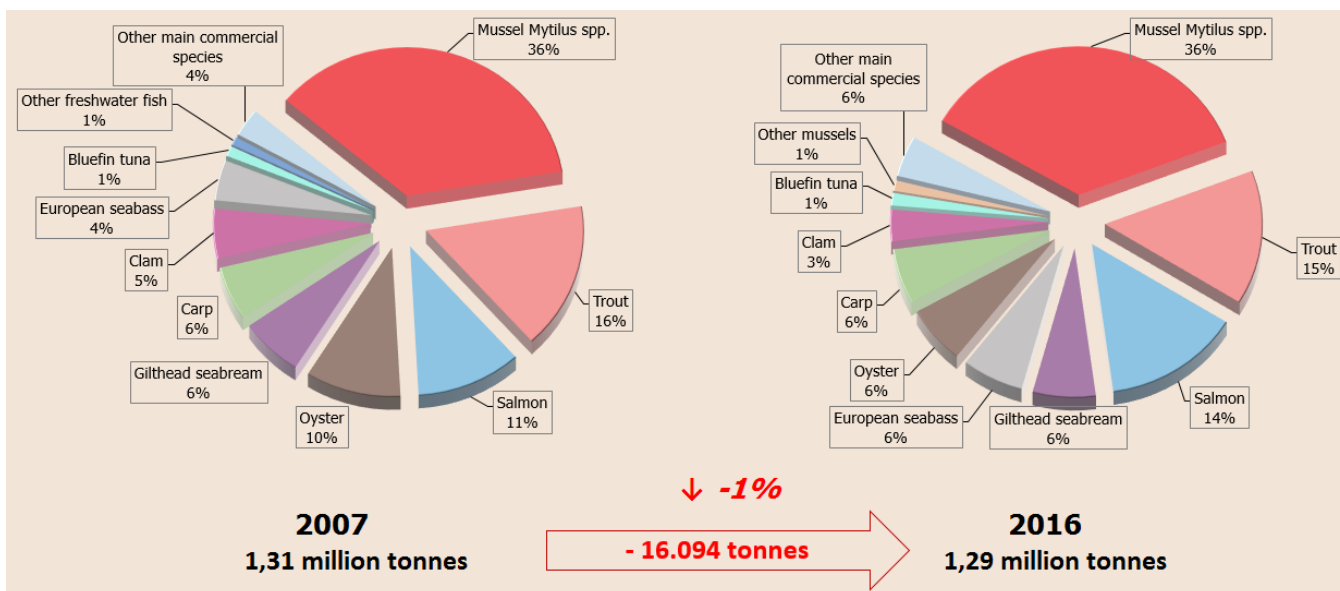
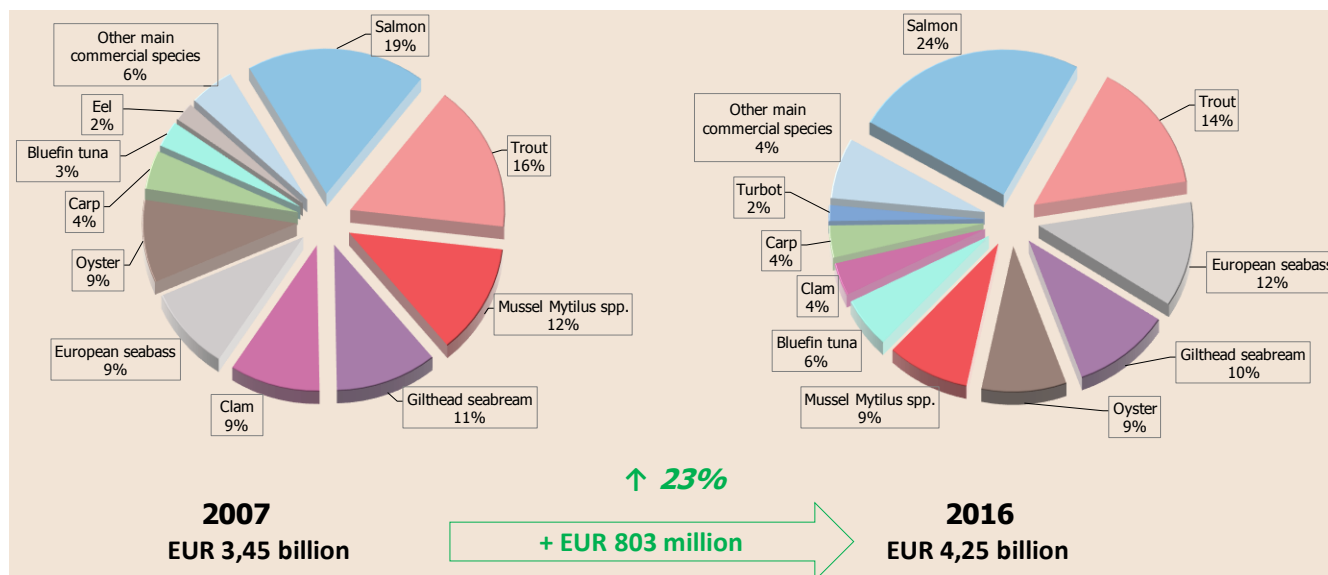


Chart 87

Composition of farmed species in the EU by value

Source: EUMOFA elaboration of EUROSTAT and FAO data

Details on the sources used can be found in the Methodological Background



Looking at volumes produced, EU aquaculture in 2016 was almost at the same level as ten years ago. The increased production of salmon and European seabass offset the declining trend registered for oyster, clam, trout and mussels.

Farmed products sold in 2016 were worth over EUR 800 million more than in 2007.

Compared with 2007, a value growth was observed for almost all main commercial species, especially for salmon, which increased value by EUR 400 million and its value share of EU farmed production by 5%. With this, salmon accounted for almost one-quarter of total farmed production in 2016 to the detriment of trout, which dropped from covering 16% to 14% of the total, despite its EUR 58 million increase. European seabass and bluefin tuna recorded substantial increases as well during the decade, with seabass increasing EUR 181 million and bluefin increasing EUR 138 million.

Such evolutions were driven by their main producing countries, namely the UK for salmon, Greece and Spain for seabass, and Malta for bluefin tuna.

Mussel and seabass shifted their rankings, with mussel dropping from third to sixth among most valued farmed species. This was due to seabass skyrocketing in value combined with mussel's EUR 51 million value loss.

As for the evolution between 2015 and 2016, Chart 88 shows that seven of the top-ten species farmed in the EU increased in value. Conversely, the significant 35% drop observed for clam corresponded to a decrease of EUR 84 million for which Italy had the main responsibility (there, farmed clams registered a value drop from EUR 178 million to EUR 100 million).

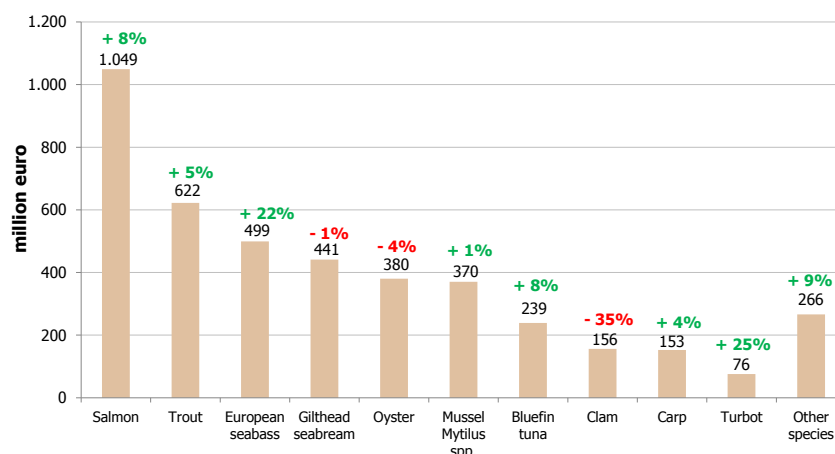
Aquaculture production

Chart 88

Values of main farmed species in the EU in 2016 and % variation 2016/2015

Source: EUMOFA elaboration of EUROSTAT and FAO data

Details on the sources used can be found in the Methodological Background



Member State level

Spain, the major EU producer in volume terms, saw a slight decline in its aquaculture production after a record high in 2015, but it remained above its 10-year average. Declined production of mussel *Mytilus spp.*, which cover 3 / 4 of Spanish aquaculture, is the reason for this trend.

In the UK, the 2016 aquaculture production was below both its 2015 level and its average volume of the last ten years. Nonetheless, it was over 20.000 tonnes higher than in 2007. Salmon, which represents 84% of UK production, is the main driver of its evolution.

Aquaculture production in Greece reached a 10-year peak in 2016, rising by 17.291 tonnes with respect to 2015, mostly linked to seabass and seabream production.

France and Italy also registered increases compared with 2015, but their production was well below that of ten years ago, when France farmed more oysters and Italy farmed more clams.

Table 36

Volumes of farmed species in EU top 5 producer countries (1.000 tonnes)

Source: EUMOFA elaboration of EUROSTAT and FAO data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	% variation 2016/2015	% variation 2016/2007
Spain	284	294	287	-2%	+1%
United Kingdom	174	212	194	-8%	+12%
France	238	163	167	+2%	-30%
Italy	181	148	157	+6%	-13%
Greece	113	106	123	+16%	+9%

As for other main producers, Ireland and Germany registered 5-year peaks, thanks to increased production of salmon in Ireland and mussel *Mytilus spp.* in Germany.

Carp and trout contributed to the increase registered by Poland.

In the Netherlands, Denmark, the Czech Republic and Croatia, production remained stable from 2015 to 2016.

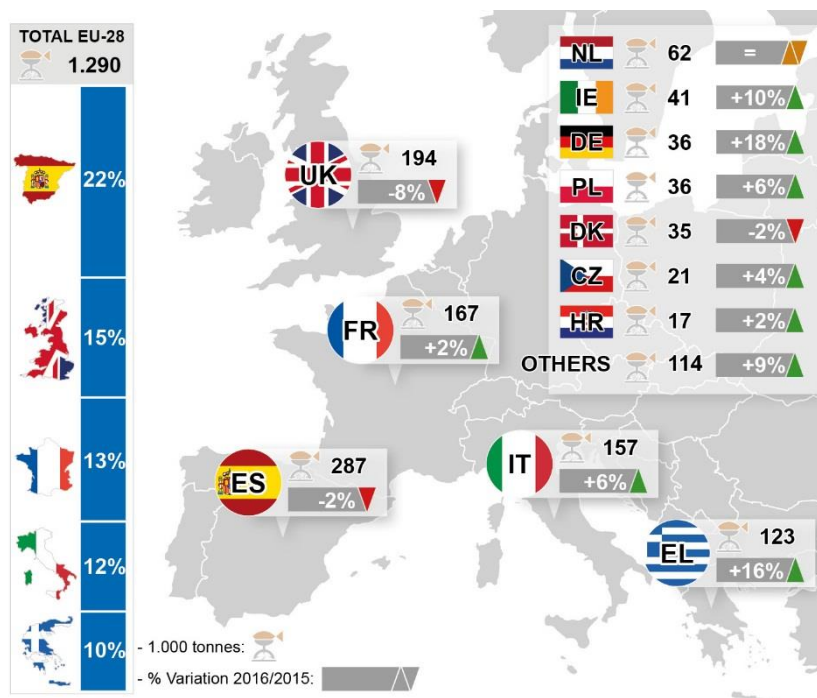
Aquaculture production

Chart 89

Volumes of farmed species in the main EU producer countries in 2016 and % variation 2016/2015

Source: EUMOFA elaboration of EUROSTAT, national sources and FAO data

Details on the sources used can be found in the Methodological Background



In value terms, all top-10 EU producers except France and Italy reached 10-year peaks in 2016.

For the UK, the 2016 value of farmed salmon almost doubled with respect to 2007, thus driving the overall positive trend of the country.

For Spain and Greece, the two main Mediterranean Member States that produce European seabass, the species led the overall increase of aquaculture production value. In Spain, European seabass value was triple the value it recorded ten years before.

Italy registered a drop from both 2007 and 2015, due to a decline in the value of clam.

France followed a 10-year upward path thanks to the increased value of oysters, although in 2016 a decrease was registered from 2015.

Table 37

Values of farmed species in EU top 5 producer countries (million euro)

Source: EUMOFA elaboration of EUROSTAT and FAO data

Details on the sources used can be found in the Methodological Background

Member State	2007	2015	2016	% variation 2016/2015	% variation 2016/2007
United Kingdom	677	995	1.019	+2%	+51%
France	552	620	589	-5%	+7%
Spain	440	513	559	+9%	+27%
Greece	389	464	526	+13%	+35%
Italy	584	437	387	-11%	-34%

Ten-year production records in value terms were also set by Ireland, Malta, Denmark and Croatia.

In Ireland, the value of farmed salmon more than doubled in 2016 compared to 2007, thus determining the overall trend of the country.

Maltese aquaculture production is almost entirely represented by bluefin tuna fattening. In Croatia, bluefin, seabass and seabream are the top- three farmed species, with seabass and seabream driving the overall increasing trend for the country.

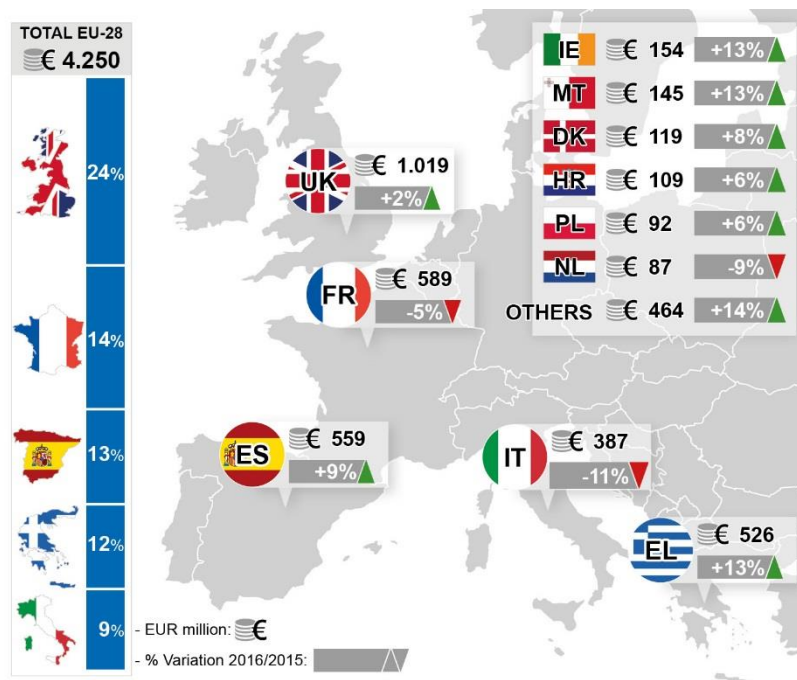
Of the products farmed in Denmark, 83% is represented by trout, whose value continued the recovery started in 2015 after the plummet occurred in 2014.

Chart 90

Values of farmed species in the main EU producer countries in 2016 and % variation 2016/2015

Source: EUMOFA elaboration of EUROSTAT, national sources and FAO data

Details on the sources used can be found in the Methodological Background



Analysis by species

Bivalves and other molluscs and aquatic invertebrates

Bivalves represent almost half of the volume of EU aquaculture production, and of that, mussels covered 37% in 2016. Three species of this group, namely oyster, mussel *Mytilus* spp. and clam, accounted for 22% of the total in value terms. Production of bivalves reached a 5-year peak in 2016 of 602.043 tonnes worth EUR 927 million. Compared with 2015, they were stable in volume terms but their value dropped by 10% due to the production shrinkage of clams in Italy. In fact, Italy generated this trend because aquaculture of clams in this country accounts for 11% of the overall value of bivalves produced in the EU and 6% of their total volume⁵¹.

Mussel

Of the mussels farmed in the EU, 97% belong to the species *Mytilus*. The remaining share is represented by other types of *mytilidae*, all farmed in the UK. In 2016, the EU farmed production of mussels totalled 476.956 tonnes and EUR 391 million. This represented a 3% growth in volume and a 3% drop in value compared with 2015.

The Mediterranean mussel (*Mytilus galloprovincialis*), the main species in the Mediterranean countries (mostly Spain, Italy, Greece

⁵¹ Data of 2016.

and France), reached a volume of 317.951 tonnes in 2016. The blue mussel (*Mytilus edulis*), with a production level of 142.845 tonnes, is farmed in the northern Member States bordering the Atlantic Ocean and the North Sea – mainly the Netherlands, France, Germany and Ireland.

Spain, by far the main EU producer of Mediterranean mussel, accounted for over half of total mussel production in 2015. Its share declined by 4% in 2016 dropping to 215.855 tonnes, but it represented 47% of EU production. Increased mussel production in Italy, where it grew by 21% to 63.700 tonnes, and in Germany, where it doubled to 22.264 tonnes, contributed to the relative reduction of the Spanish share.

In value terms, Spain and France respectively accounted for 32% and 29% of the total: Spain registered a slight increase over 2015, reaching EUR 118 million, while France reported a 5% decrease, dropping to EUR 106 million.

Italian and Dutch production follow at distance – Italy with 13% of the total at EUR 47 million, and the Netherlands with 12% of the total, at EUR 45 million.

Mussel price dropped in all main producing countries except Spain, where the increase was quite slight, and Germany, where the price remained stable despite a huge increase in production, more than doubling from 10.875 tonnes in 2015 to 22.264 tonnes in 2016.

Table 38

**Prices of mussel
in main producer countries (EUR/kg)**

Source: EUMOFA elaboration of EUROSTAT and national sources data

Details on the sources used can be found in the Methodological Background

Member State	2015	2016	% variation 2016/2015
Spain	0,51	0,55	+7%
Italy	0,82	0,74	-10%
France	1,98	1,85	-6%
Netherlands	1,06	0,84	-20%
Greece	0,37	0,36	-1%
Germany	1,09	1,09	=

Clam

EU production of clam suffered a significant collapse with 2016, volumes dropping by almost one-quarter compared with 2015, moving from 58.327 to 44.350 tonnes. The average price at EU level decreased by 15%, from 4,12 to 3,51 EUR/kg, generating a 35% fall in value from EUR 240 million to EUR 156 million. This negative trend was driven by Italy, which farmed 36.500 tonnes in 2016, accounting for 82% of EU production of clams. Italy was followed at distance by Spain, with 2.608 tonnes, and Portugal, with 2.452 tonnes.

Italy's clam production fell by more than 12.000 tonnes from 2015 to 2016, although it remained within the average of the last years. The production decline could be linked to an infection by the *Perkinsus olseni* parasite and Italy's intensive farming conditions.⁵² Its Venetian lagoon area is quite conducive to the development of this parasite, which produces an inflammation of the molluscum

⁵² Source: Istituto Zooprofilattico Sperimentale delle Venezie.

tissues that compromises its growth and reproduction. However, the action of the pathogen alone is not sufficient to explain the phenomenon. Animal welfare is also relevant as well, considering that the productive load – the initial sowing quantity – has not been compatible with the nutritive resources the lagoon environment offers these molluscs.

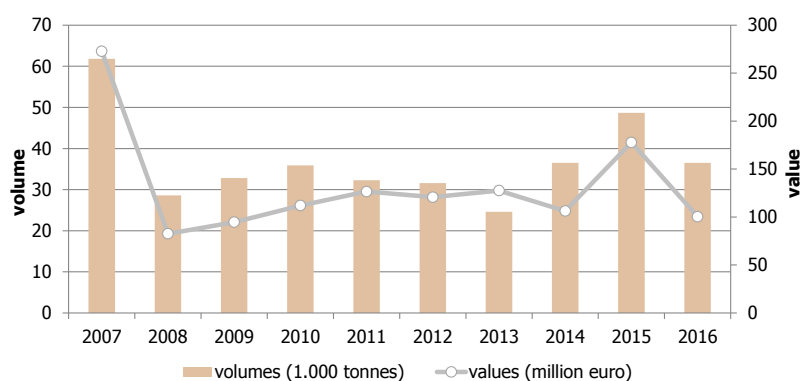
In addition, a 25% price cut for clams farmed in Italy was recorded, likely due to competition from the lower valued clams imported from Vietnam, which caused value to drop by almost EUR 80 million. Italian farmed clams were sold at an average price of 2,75 EUR/kg, reaching a total value of EUR 100 million, the lowest value since 2010.

Chart 91

Production of clam in Italy

Source: EUMOFA elaboration of EUROSTAT and FAO data

Details on the sources used can be found in the Methodological Background



Oyster

Oyster is among the five most valued species farmed in the EU. In 2016, its production increased a slight 2% from 2015, growing from 79.338 tonnes worth EUR 395 million to 80.687 tonnes worth EUR 380 million. A 5% price decrease, from 4,98 EUR/kg in 2015 to 4,71 EUR/kg in 2016, caused the value drop.

The trend at EU level was driven by France. Indeed, 93% of oysters farmed in the EU are Pacific cupped oysters (*Crassostrea gigas*), 80% of which are produced in France.

Table 39

Prices of oyster in main producer countries (EUR/kg)

Source: EUMOFA elaboration of EUROSTAT and National sources data

Details on the sources used can be found in the Methodological Background

Member State	2015	2016	% variation 2016/2015
France	5,18	4,82	-7%
Ireland	4,11	4,42	+7%
Netherlands	4,84	4,69	-3%
United Kingdom	3,24	3,38	+4%
Spain	3,89	4,01	+3%
Portugal	2,55	2,84	+12%

Salmonids

Farmed production of salmonids in the EU hit a 10-year peak in 2016, totalling 376.119 tonnes with a value of EUR 1,71 billion. While in volume terms, the shares of salmon and trout production in the total of this commodity group are similar – salmon with 48% and trout with 50% – salmon value represents 62% of the total while trout value is 36%.

Salmon Aquaculture of salmon declined by 2%, reaching 181.302 tonnes, but production remained above the average of the last decade. In value terms, it reached the 10-year peak of EUR 1,05 billion, rising by 8% from 2015.

UK salmon production covers 90% of the EU total in volume terms, followed at a distance by Ireland, which covers 9%.

In the UK, the downward production trend that emerged in 2015 continued, as production dropped another 5% in 2016, reaching 163.135 tonnes. However, its price of 5,74 EUR/kg reached a 10-year peak, 12% higher than in 2015, contributing to a record value of EUR 936 million.

Ireland, which focuses on organic farming, experienced both volume and value peaks. Total volumes of salmon production in this country increased by 24% to 16.300 tonnes, sold at 6,41 EUR/kg. This generated a 16% increase in value for a total of EUR 104 million.

Trout EU trout production, which mostly consists of rainbow trout (*Oncorhynchus mykiss*), has been rising since 2011. In 2016, it totalled 188.437 tonnes worth EUR 622 million, which represented a 5% increase from 2015 in both volume and value terms.

Italy, Denmark and France, the main producers, accounted for 36.800, 30.424 and 27.100 tonnes, respectively. Denmark saw a 6% decrease in production from 2015, accompanied by a 9% price increase which reached 3,25 EUR/kg in 2016. In Italy and France, volumes of farmed trout rose by 14% and 10%, respectively. Italy had a more intense price drop of 14%, with the price falling to 2,71 EUR/kg, the lowest since 2013. Trout farmed in France was sold at 3,61 EUR/kg in 2016, marking a 5% price decrease from the previous year.

Other marine fish

Two species of this group, namely gilt-head seabream and European seabass, together account for over 20% of the total value of EU aquaculture production. They are normally farmed together in the Mediterranean even though they are different species. Greece is the major EU producer of both, followed by Spain. Greece had been the Mediterranean's largest producing country, but it was bypassed in 2016-2017 by the fast-growing production in Turkey.

Gilthead seabream In 2016, 83.185 tonnes of gilthead seabream were produced in the EU, which was 1.676 tonnes or 2% more than in 2015. A 3% price decrease from 5,46 to 5,30 EUR/kg led to a 1% reduction in the overall value, bringing it to EUR 441 million.

The same trend was observed in Greece, where production rose from 47.008 tonnes (sold at 5,14 EUR/kg) to 49.265 tonnes (sold at 4,88 EUR/kg), causing a slight value decrease.

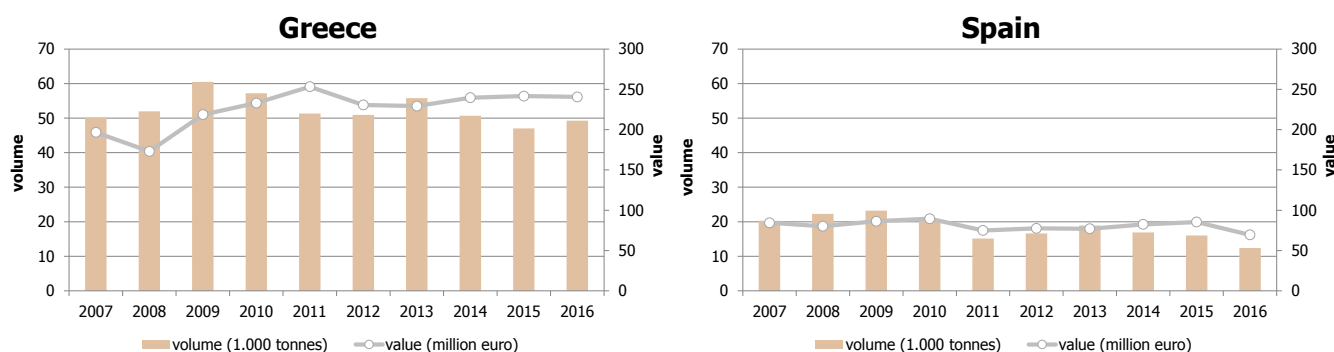
In Spain, production collapsed in 2016, dropping to the lowest volume of the decade, with farmed gilthead seabream falling by 23% to 12.396 tonnes. The drop was most likely related to a strategic switch from seabream to seabass production. Even though its average price, 5,60 EUR/kg, was 5% higher than the previous year and the second highest of the period, there still was a 19% decrease in the overall value, which dropped from EUR 85 million to EUR 69 million.

Chart 92

Production of gilt-head seabream in the main EU producers

Source: EUMOFA elaboration of EUROSTAT and FAO data

Details on the sources used can be found in the Methodological Background



Cyprus experienced a noteworthy 38% increase of gilthead seabream production in 2016 with respect to 2015. Farmed volumes rose from 3.656 to 5.039 tonnes, and a 30% value increase of EUR 6 million brought the total value to EUR 26 million. Price, however, dropped from 5,40 to 5,08 EUR/kg, for a 6% decrease.

European seabass

European seabass saw increases in both volume and value terms for all main producing countries which meant 10-year highs at EU level as well, reaching 81.852 tonnes with a value of close to half a billion euro.

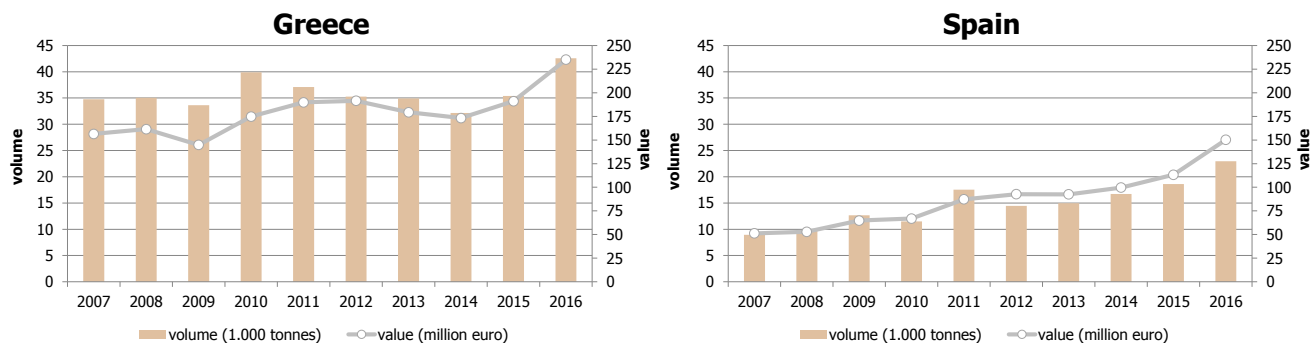
In Greece and Spain, 2016 production rose to 42.557 and 22.956 tonnes respectively, which were 20% and 23% higher than in 2015. Greek seabass was sold at 5,52 EUR/kg, a 2% increase and the highest price of the last decade. This led to a 23% increase of the overall value, which reached EUR 235 million. Similarly, the price in Spain was 6,55 EUR/kg, which represented an 8% increase. This was also a decade peak and led to a 33% boost of production value which reached EUR 150 million.

Chart 93

**Production of European seabass
in the main EU producers**

Source: EUMOFA elaboration of EUROSTAT and FAO data

Details on the sources used can be found in the Methodological Background



In Croatia, production continued its upward trend and totalled 5.310 tonnes in 2016, an 18% increase from 2015. It also had a 19% increase in value, reaching EUR 34 million.

Tuna and tuna-like species

Bluefin tuna

With 17.599 tonnes farmed, mostly in Malta, Spain and Croatia, 2016 was a record year for bluefin tuna “production”, which consists of fattening of small fish caught by purse seiners. With total production of EUR 239 million, bluefin ranked seventh among most valued species being farmed in the EU.

The growth at EU level was driven by Malta’s production, which totalled 10.103 tonnes and EUR 133 million. Although these were increases of 25% in volume and 20% in value terms, and were 10-year highs, they were accompanied by a price decrease, dropping 4% from 13,80 to 13,20 EUR/kg.

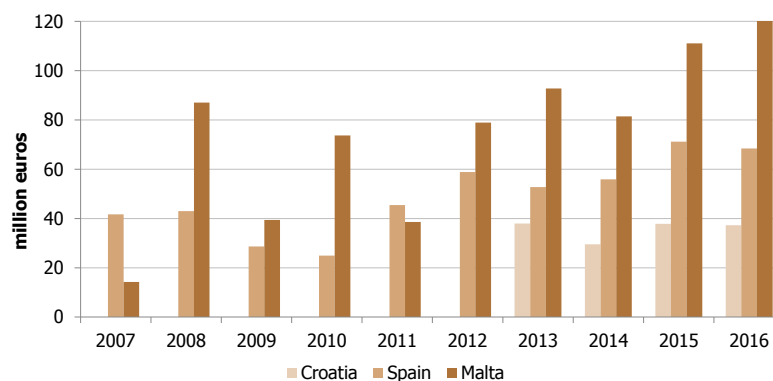
Croatia observed a 331-tonne volume increase in 2016, producing a total of 2.934 tonnes. The price drop from 14,54 to 12,70 EUR/kg caused an overall 2% value shrinkage.

Spanish production declined by 3% in volume and 4% in value, reaching 4.562 tonnes and EUR 68 million. However, it has to be noted that these amounts were 40% higher than their 10-year averages. The price decreased slightly, from 15,18 EUR/kg in 2015 to 15,00 EUR/kg in 2016.

Chart 94

**Value of farmed bluefin tuna
in the main producers**

Source: EUMOFA elaboration of EUROSTAT data

**Freshwater fish***

*Freshwater fish excludes trout.
Trout is included with salmonids.

In 2016, EU-farmed production of freshwater fish amounted to 106.000 tonnes and EUR 285 million. This represented a 1% decrease from 2015 volume and a decade-high value, thanks to a 9% or EUR 24 million growth. Both carp and eel contributed to this upward trend.

Carp

Carp production of 77.932 tonnes in 2016 accounted for 74% of freshwater species volume. This represented 4% decrease from 2015, complemented with a parallel value growth to EUR 153 million. The upward value trend was caused by a price increase, which rose 8% from 1,80 to 1,96 EUR/kg, the highest since 2012.

The same trend was observed in the two major producer countries, namely Poland and Czech Republic. In the latter, carp production reached a 10-year high of 19.418 tonnes with an overall value of EUR 41 million, which was 33% or EUR 10 million more than in 2015, thanks to a price increase from 1,64 to 2,09 EUR/kg.

Polish production totalled 18.330 tonnes and EUR 41 million, which were a 7% increase in volume and 9% increase in value. The price of 2,24 EUR/kg was 2% higher than in 2015.

Eel Eel accounts for over 20% of the value of freshwater fish aquaculture. In 2016, production amounted to 6.356 tonnes worth EUR 61 million, a 10-year high in value terms and a 24% increase over 2015.

Eel production mostly takes place in the Netherlands, Italy, Germany, Denmark and, to a lesser extent, in Greece, Spain, Sweden and Romania. All countries reported increased value of farmed eel, but the growth at EU level was driven by Italy, where production more than doubled from 2015 to 2016, reaching 1.250 tonnes and EUR 13 million. This was accompanied by a 6% price drop from 11,02 to 10,40 EUR/kg.

6.1 Most relevant market updates in 2017 and 2018

In the previous sections, market trends related to the EU aquaculture sector have been analysed up to 2016, based on data collected from EUROSTAT and other institutional sources. In this section, some updates are reported for the years 2017 and 2018, based on EUMOFA experts' insights and on data collected from other sources.

Salmon

Harvest quantity of farmed Atlantic salmon in Europe rose a slight 3–5% in 2017, while harvest value was up by 6–7%. A higher harvest growth rate was observed for the EU Member States.⁵³

Irish and UK production grew in the range of 7–10% in 2017. Despite growth in production in Europe, there was a slight increase in prices for UK salmon from 2016 to 2017. The export price for fresh whole salmon of UK origin averaged 7,44 EUR/kg in 2017 which was the highest price observed in at least two decades.

Prices for Irish salmon, which generally trend on a higher level as it is farmed according to organic standards, rose by 17% from 2016, indicating strong market demand for organic salmon.

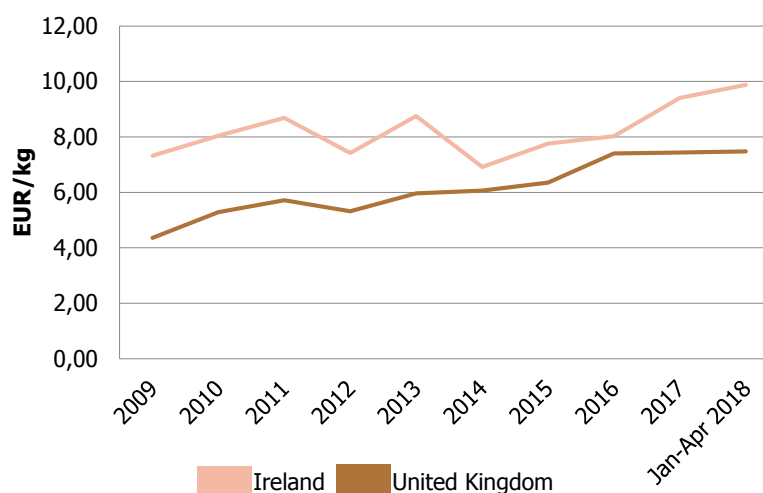
In the first four months of 2018, prices for fresh whole Irish salmon were up by 5% from 2017, while prices for UK salmon remained stable.

A 3–5% growth in production of Atlantic salmon is expected in Europe in 2018. With this growth rate, European production will reach a record high.

Chart 95

Export price of fresh whole salmon from Ireland and the UK

Source: EUMOFA elaboration of EUROSTAT data



⁵³ Source: Kontali Monthly Salmon Report, May 2018, appendix 3.

Trout

Prices and demand for trout vary according to fish size and the market into which the trout is sold. In general, there was an upward price trend for trout in 2017. For the main producers – Denmark, France and Italy – prices rose by 4% from 2016 to 2017.

Export prices for fresh whole trout from the northern EU countries reached a record high in 2017. Prices in the first quarter of 2018 trended on average at the same high level seen in the corresponding quarter of 2017.

Producers of large sized trout (>1,2 kg) benefitted from high market prices for farmed salmon in 2016 and 2017. In some market segments, large trout and salmon are exchangeable – especially in fresh segments and for processed products. In periods when the price gap between salmon and large trout is wide, demand for trout rises as it is a less expensive alternative to salmon (with the consequence that prices for trout also rise).

In the first quarter of 2018, prices for large sized trout trended slightly lower than in 2017, as did prices for farmed salmon. However, the prospect for 2018 is good, as market prices for farmed salmon in the second quarter trended on a higher level compared with 2017.

European seabass and gilt-head seabream

Consumption of seabass and seabream in the EU is increasing, and traded volumes have increased at an average growth rate of 6% in recent years. A similar average increase is expected for 2018, and can be taken as a surrogate measure for increase in demand.

In 2016, Greece regained production levels for both species and, in 2017, its exports of fresh whole seabass and seabream increased compared with the previous year, by 12% and 25% respectively. By comparison, Turkish exports to the EU increased by 20% for fresh whole seabass and 4% for seabream.

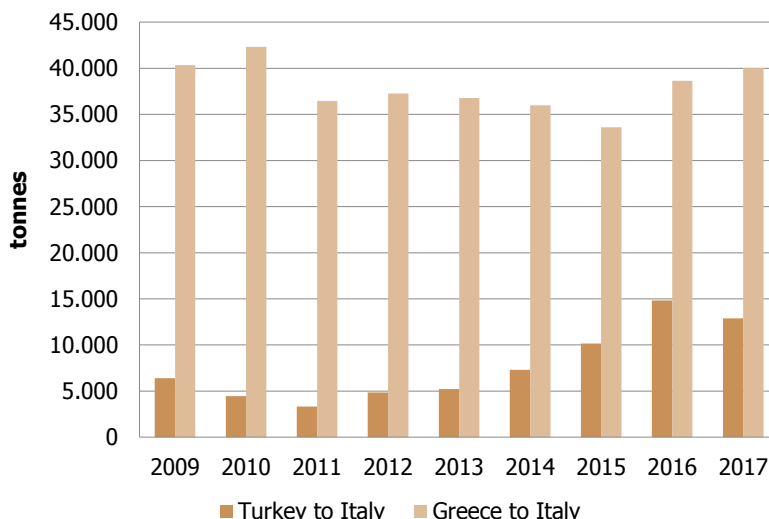
For fresh whole seabass and seabream pooled, the Turkish market value share in the main EU markets – Italy, Spain, France, Portugal, Germany, UK and the Netherlands – was 12% in 2009, but grew to 26% in 2017. At the same time, the Greek market share dropped from 58% to 43%.

When looking at Italy as a main destination for these products, Greek exports in 2017 were 26% above the 2009 level for seabass, while 17% below for seabream, meaning the average for the two species was up by 5%. At the same time, Turkish export to Italy in 2017 was 31% above the 2009 levels for seabass and 257% above for seabream, which averaged to an increase of 144%.

Chart 96

Exports of gilt-head seabream and European seabass from Turkey and Greece to Italy

Source: EUMOFA elaboration of EUROSTAT data



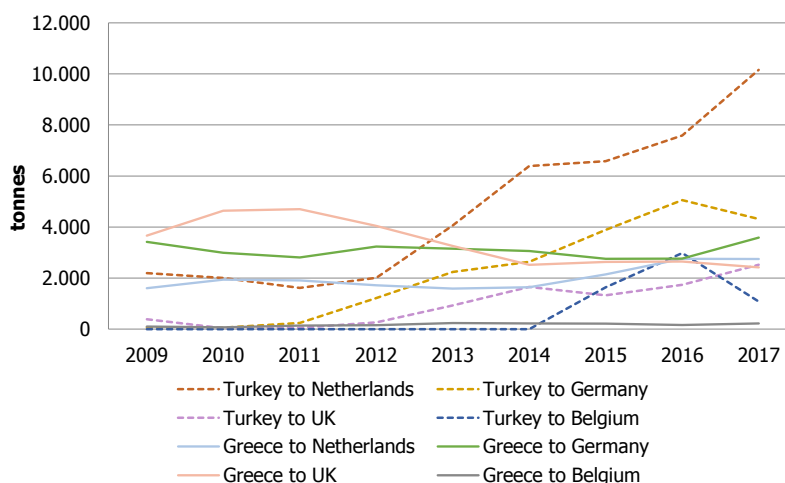
As for exports to the main northern European markets – Belgium, the UK, the Netherlands and Germany – those from Greece slightly increased from 2009 to 2017. This was due to decreased exports to the UK, which dropped 34% from 3.659 to 2.416 tonnes. In the same period, Turkish exports to the UK increased from 384 to 2.522 tonnes.

The Netherlands is another developing market where Turkey has expanded, with exports increasing from 2.196 tonnes in 2009 to 10.155 tonnes in 2017. During the same period, Greek exports also increased, up from 1.605 to 2.749 tonnes.

Chart 97

Exports of gilt-head seabream and European seabass from Turkey and Greece to main EU markets

Source: EUMOFA elaboration of EUROSTAT data



Increased demand or market growth for both seabass and seabream can be estimated at 5–6% per year.

The Mediterranean sector has a history of “boom and bust”: after a rapid increase in supplies over the last years, the sector went into a “bust” period in 2017 with strong price pressure. This situation is expected to continue throughout 2018, for seabass more than for seabream.

Due to new markets being opened, such as those in the Middle East, and those in northern Europe (UK, Germany) being further

developed, there are positive trends for demand in the market. However, the growth of the market has not been able to accommodate the rapid increase in supplies. Nonetheless, since the 2018 growth in juvenile stocking within the sector is slowing, it can be expected that a better market balance will be regained by 2019.

Bluefin tuna

Bluefin tuna farming in the EU takes place in the Mediterranean. From 2015 to 2017, quotas of bluefin tuna in the Atlantic increased by 60%. In addition, tuna caught by purse seiners is being used for farming. Thus, with the combination of the increased quotas and more tuna available for farming, the farming potential in the Mediterranean is increasing.

Most of the tuna farmed in the EU is intended for the Japanese market. From highs in 2011 and 2012 of around 20,00 EUR/kg, prices for bluefin tuna sold to Japan have shown a downward trend. Export prices of fresh farmed bluefin tuna from Croatia to Japan fell from 12,24 EUR/kg in 2016 to 10,94 EUR/kg in 2017. On the other hand, prices from Malta rose from 12,57 to 13,01 EUR/kg.

In the first four months of 2018, the export price for fresh whole bluefin tuna from Spain, Malta and Croatia to the Japanese market averaged 9,93 EUR/kg, down from 11,39 EUR/kg in the corresponding period in 2017.

“The EU fish market” is published by the Directorate-General for Maritime Affairs and Fisheries of the European Commission.

Editor: European Commission, Directorate-General for Maritime Affairs and Fisheries, Director-General.

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KL-AP-18-001-EN-N

ISBN: 978-92-79-79971-6

ISSN: 2363-4154

DOI: 10.2771/41473

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