



THE EU FISH MARKET

2017 EDITION



E U M O F A

European Market Observatory for
Fisheries and Aquaculture Products

Maritime affairs
and Fisheries

HIGHLIGHTS
THE EU IN THE WORLD
EU MARKET SUPPLY
CONSUMPTION
TRADE
EU LANDINGS
AQUACULTURE PRODUCTION

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Scope

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

A comparative analysis allows to assess the performance of fishery and aquaculture products in the EU market compared with other food products.

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 2017. 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

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 harmonized 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:

$$\begin{aligned} & \text{(catches for food-use + aquaculture + imports) – exports} \\ & = \\ & \text{apparent consumption} \end{aligned}$$

Data included in the supply balance and the sources used are as follows:

- **Catches:** fishery products caught by fishing vessels of the EU Member States and destined for human consumption. Danish and Swedish catches of sprat, sandeels, horse mackerel, Norway pout and pouting (=bib) are therefore excluded, as they are considered entirely destined for industrial use³.

Catches data are available in live weight equivalent. Source: EUROSTAT (fish_ca).

- **Aquaculture:** fish and shellfish farmed in the EU Member States. Aquaculture data are available in live weight equivalent.

Sources: EUROSTAT (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).

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.

³ Amounts of catches not destined to human consumption were estimated based on 2012 production data reported by the Danish and Swedish Administrations.

- **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 (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 (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 supply balance analysis. For each EU Member State, on the basis of the total imports and exports volumes (source: EUROSTAT-COMEXT), the production methods of the countries of origin and destinations of exports is assessed, averaging the latest three years of production volumes (source: FAO) 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/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 14, 15 and 17). 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=LST_NO_M_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 EUROPANEL 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 EUROPANEL 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

TRADE

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 trade 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>.

EXTRA-EU TRADE	It encompasses all transactions between European Union (EU) Member States and countries outside the EU (non-member countries).
INTRA-EU TRADE	It encompasses 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 taken into account. Actually, intra-EU trade as reported by EUROSTAT covers both arrivals (i.e. imports) and dispatches (i.e. exports). Because of different valuation principle (CIF for imports and FOB for exports) ⁴ , arrivals should be slightly higher 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 have to be taken into account cautiously and should consider the existence of these discrepancies.
EU LANDINGS	<p>EUROSTAT data regarding landings (fish_ld) in the EU refer to the initial unloading of any quantity of fisheries products from on board a fishing vessel (also including foreign and non-EU vessels) to land in a given EU-28 Member State. 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:</p> <ul style="list-style-type: none"> ➤ Malta 2012-2015 data do not include confidential figures related to landings made by vessels with Cyprus flag. ➤ Ireland 2013 and 2014 data regarding hake, and 2014 data regarding mackerel, were collected from SFPA. ➤ Netherlands 2013-2014 data are not complete as they include only a very small proportion of landings made by foreign vessels. As these represent a very significant part of the Netherlands total landings, the missing 2013-2014 data make both years not fully comparable with the rest of the time series and call for a cautious analysis of the results. ➤ 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: <ul style="list-style-type: none"> ○ Belgium – 2009-2015 ○ Bulgaria – 2012 ○ Cyprus – 2006-2007 and 2011-2015 ○ Denmark – 2009-2014 ○ Germany – 2009 and 2014 ○ Ireland – 2009, 2010 and 2015 ○ Italy – 2010 ○ Lithuania – 2009-2011 ○ Netherlands – 2011 ○ Poland – 2011-2012 ○ Sweden – 2009-2011 ○ United Kingdom – 2009-2012

⁴ 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
2010-2015 confidential data were integrated with figures 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) as provided by Danish AgriFish Agency.
2014 and 2015 confidential values were integrated with figures from FAO.
- 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.
2015 data are FAO estimates.
- Germany
2008-2015 data on carp 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, data were collected from FAO, as they were confidential in EUROSTAT. Data on oyster are FAO estimates.
2015 confidential data were integrated with figures from FAO. Data on oyster 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.
- 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.

- Italy
2015 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.
 - 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.
 - Portugal
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.
 - Slovenia
2014 confidential data were integrated with figures from FAO.
2015 confidential data on European seabass were integrated with FAO estimates.
 - United Kingdom
2008 values of Atlantic halibut, European seabass, clam, tropical 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.
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Highlights 0

The EU seafood market has been growing steadily in the last years

In 2015, the EU supply (domestic production + import) decreased a slight 381.872 tonnes reaching 14,56 million tonnes, compared with 14,94 in 2014. The main driver was internal production originating from fishing activities, which lessened by 299.699 tonnes.

The household expenditure for fisheries and aquaculture products in the EU reached its peak in 2016, at EUR 54,8 billion. Compared with 2015, consumers of all Member States except the UK and Poland spent more money for purchasing seafood.

Spain has the highest household expenditure in the EU, while Portugal has maintained the leadership in terms of per capita spending. It recorded EUR 327, which was three times the EU average. Moreover, among the top countries, it has also recorded the most intense growth rate, with an increase of 63% since 2000.

Contraction of self-sufficiency and consumption

Despite imports declining by 2% in 2015 compared with 2014, EU self-sufficiency (ratio between EU production and apparent consumption of the EU market) dropped from 47,4% to 46,0%. This meant that more consumption of seafood was supplied through products imported from non-EU countries rather than through EU catches or aquaculture production.

As production and imports declined in 2015 compared with 2014, the fish consumption followed the same trend, falling from 25,44 to 25,11 kg per capita. This meant that in 2015, the average EU citizen consumed 330 gr of fish less than in 2014, which was a 1,4% decrease.

The most consumed species, tuna and cod, had gained relevance from 2012 to 2014, but the growth stopped in 2015 as their consumption fell by 7% and 3%, respectively, from 2014. In contrast, farmed salmon, which ranks third among consumed species in the EU, registered a 4% increase in 2015 compared with 2014.

In general, consumption of products from aquaculture grew and reached its highest level since 2011 at 6,47 kg per capita. However, even while declining by 2,1% to 18,64 kg per capita, consumption of wild products represented 74% of total fish consumption in 2015 and still dominates the EU fish market.

Another record year for fish imports

The EU is the largest trader of fishery and aquaculture products in the world in terms of value. In 2016, the trade flow grew to EUR 54,3 billion and 14,1 million tonnes.

The trade balance deficit (exports minus imports) of 2016 was the largest ever, confirming the EU as a net importer of fisheries and aquaculture products.

The value of imported fish grew 9% from 2015 and reached EUR 24,4 billion. This was mainly determined by imports of salmon, and was linked to its significant 27% price increase. Of the main products imported, only tuna (mostly consisting of canned tuna and loins)

Continuous growth of the value of Member States' exports to non-EU countries

registered a price drop.

All top-10 EU suppliers reached their all-time peaks in the values of exports of fisheries and aquaculture products to EU countries. The most significant ones concerned Norway (+20%), Morocco (+14 %) and Ecuador (+10%). Value of Chinese exports grew remarkably, driven by frozen squid sold to Spain (+115%).

In 2016, the value of EU exports continued the upward trend started six years before, totalling EUR 4,7 billion. Although its 3% decline in volume reached 1,87 million tonnes, it still has shown a stable trend since 2007.

Exports to Norway grew from 2015, due to rising exports of non-food use products. Lower exports of mackerel to Nigeria, its second most relevant market, caused an overall decrease of exported fisheries and aquaculture products (FAPs).

Almost half of the fish products trade within and outside the EU consists of exchanges between EU Member States, corresponding to 6,2 million tonnes in 2016. The 2016 value of EUR 25,2 billion was EUR 2,2 billion more than the previous year.

Intra-EU trade rose by over EUR 2 billion in 2016 compared with 2015

In 2015, products landed in the EU reached an 8-year peak at 4,68 million tonnes, mostly driven by Denmark, which benefitted from a quota increase, especially for sprat. On the other hand, a 4% value drop made EU landings fall to EUR 6,95 billion. Spain, the main EU fishing country, was the main contributor to the overall value loss.

With respect to the previous year, most relevant variations of the species composition of EU landings concerned small pelagics and tuna. The total share of small pelagics increased from 42% to 48% in volume and from 16% to 18% in value, while that of tuna fell from 11% to 7% and from 15% to 11%, respectively, in volume and value terms.

Main market trends and dynamics

The EU self-sufficiency for seafood showed a slight decrease from 2014 to 2015. However, in a longer time perspective, the 2015 self-sufficiency rate of 46% was higher than both the 10-year and 5-year averages.

Bivalves/molluscs, cephalopods, freshwater fish, groundfish, small pelagics and other marine fish were the groups of products for which the EU reported an improved self-sufficiency in the last 5-year period. On the other hand, self-sufficiency of flatfish and salmonids fell in 2015, with salmonids dropping below 30% for the first time.

EU import prices (from outside the EU) for FAPs were in average up 27% from 2015 to 2016. The price increase continued in the first 7 months of 2017, but at a lower growth rate.

Salmon, which is the most consumed farmed species in the EU, saw a significant increase in import prices (for fresh whole) from 2015 to 2016 of 1,60 EUR/kg or 33%⁵. Prices for fresh processed salmon (fillets) at retail level increased less, by 21%⁶. This indicated lower

⁵Source: EUMOFA elaboration of EUROSTAT-COMEXT data

⁶Source: FranceAgriMer

processor margins in 2016. High salmon prices continued in the first half of 2017⁷.

According to preliminary data, EU production⁸ of seabass rose by 10% in 2015 and seabream production fell by 4%. The two species are the main finfish species farmed in the Mediterranean EU.

Industry reports indicate a significant increase in produced seabream volumes in the Mediterranean from 2015, stimulated by high market prices in 2014 and 2015.⁹ The increase in harvest volumes explains a significant drop in 2017 prices for seabream. Despite the increase in seabass production, 2017 prices have so far trended at the same level as in 2016.

In 2015, groundfish was the second most important fish group landed in the EU, both in terms of volume and value. The top species in volume was blue whiting while hake ranked highest in terms of value. Average landing price for groundfish in the EU rose by 6% from 2015 to 2016. The average price in 2016¹⁰ was the highest in at least 10 years, and the main species behind the rise were saithe, pollack and blue whiting.

Mackerel is the third most important species in terms of landing volume in the EU. Despite an increase in European mackerel quotas in 2016, market prices rose sharply in the second half of 2016. High mackerel prices were driven by strong demand from Far East markets. In the first 7 months of 2017, EU mackerel prices¹¹ continued higher than in 2016.

The Russian import ban for fisheries and aquaculture products from the EU is still in force, with Russia prolonging the ban to 2018.¹² The only European country bordering the North Atlantic Ocean which is not on the list of banned countries is the Faroe Islands. Significant volumes of FAPs (mackerel, herring and salmon) previously supplied from the Faroe Islands to the EU market were exported to Russia in 2016.

Over the last 8 years, price inflation¹³ for FAP in the EU has been higher than for food in general. From 2015 to 2016, FAP inflation reached 3% while no increase in prices was observed for food in general. The inflation for FAP was highest in the northern part of the EU.

In the first 5 months of 2017, consumer prices for FAPs in the EU remained stable. On the other hand, compared with the same period last year, consumer prices in 2017 were up by close to 4%.

⁷Source: EUMOFA elaboration of EUROSTAT-COMEXT data

⁸Source: EUMOFA elaboration of EUROSTAT, FAO and National sources data

⁹Source: Kontali

¹⁰Source: EUROSTAT

¹¹Source: EUMOFA elaboration of first sale data collected from Member States

¹²Source: Amendments to Decree of the Government of the Russian Federation No. 778 of August 2014/ec.europa.eu/agriculture/russian-import-ban_en

¹³Source: EUROSTAT

The currencies¹⁴ for 2 main seafood markets, the EU (EUR) and the USA (USD), remained stable from 2015 to 2016. Compared with the currency from one important seafood supplier to the EU, Norway (NOK), the EUR strengthened by 4%. On the other hand, the EUR depreciated by 8% compared with the currency of another important supplier, Iceland (Icelandic króna - ISK).

During the first 7 months of 2017, the Euro continued to strengthen compared with main trade partners currencies.

During 2016, the Pound Sterling (GBP) weakened 11% compared with the EUR, with a further 6% weakening observed during the first 8 months of 2017.

From 2014 to 2015, marine fuel prices¹⁵ in the EU fell by 20%. Despite an upward price trend through 2016, marine fuel prices averaged at 0,36 EUR/litre during 2016, which was 20% and 53% lower compared with 2015 and 2014, respectively. In the first half of 2017 fuel prices were in average up 10% from the 2016 average.

¹⁴ Source: European Central Bank (ECB), Bank of Norway, Oanda.com

¹⁵ Sources: Chamber of Commerce of Forlì-Cesena, Italy; DPMA, France; Spain; ARVI (January 2013–May 2015); MABUX (July 2015–July 2017)

The EU in the world

1

1.1 Production

Table 1

World production in 2015 (1.000 tonnes)

Source: EUROSTAT (for fishery EU-28), EUMOFA elaboration of EUROSTAT, National sources and FAO data (for aquaculture EU-28) and FAO estimates (for extra-EU countries)

Country	Fishery ¹⁷	Aquaculture	Total production	% total
China	17.853	61.536	79.389	38%
Indonesia	6.565	15.649	22.215	11%
India	4.862	5.238	10.100	5%
EU - 28	5.144	1.307	6.451	3%
Viet Nam	2.757	3.450	6.208	3%
USA	5.045	426	5.471	3%
Peru	4.839	91	4.930	2%
Japan	3.553	1.103	4.657	2%
Russia	4.464	153	4.617	2%
Philippines	2.155	2.348	4.503	2%
Norway	2.441	1.381	3.822	2%
Bangladesh	1.624	2.060	3.684	2%
Korea, Republic of	1.657	1.676	3.333	2%
Chile	2.132	1.058	3.190	2%
Myanmar	1.954	1.000	2.953	1%
Thailand	1.693	897	2.590	1%
Malaysia	1.496	507	2.003	1%
Others	34.400	6.213	41.394	20%
Total	104.635	106.094	211.511	100%

In 2015, total world production of the catching and aquaculture increased by 3% in terms of volume compared with 2014, moving from 204 to 211 million tonnes¹⁶.

Compared to other producer countries, the EU covered 3% of the total world production (5% for catches and 1,2% for aquaculture) in 2015, and ranked fourth surpassing Viet Nam.

Globally, the percentage of aquaculture production out of total production is remarkable, accounting about 50,2%, mainly due to Asia, where the farming production is higher than fisheries. By contrast, the EU accounts only for 1,2% of the global aquaculture production. This figure represents about 20% of its own domestic production.

According to EUROSTAT, after two years of increase, in 2015 the EU production of fisheries and aquaculture products decreased to 6,4 million tonnes¹⁸. This represents a 4% drop over the previous year, when it amounted to 6,6 million tonnes.

This reduction was mainly due to the 10 % fall recorded for catches of pelagics species, in particular for sardine (-32%), yellowfin tuna (-25%) and skipjack tuna(-37%). Therefore, even if a positive trend was registered for the EU aquaculture products, this was not enough

¹⁶ Source: EUROSTAT (for fishery EU-28), EUMOFA based on elaboration of EUROSTAT, National sources, FEAP and FAO data (for aquaculture EU-28) and FAO estimates (for extra-EU countries)

¹⁷ EUROSTAT does not include inland waters.

¹⁸ Figures mentioned here refer to catches and aquaculture total production (including non-food use).

for balancing the declining trend of the EU total production.

Asia continued to maintain the world leadership for both fishery and aquaculture production. In 2015, total production in Asia amounted to 149 million tonnes, of which China, Indonesia and India represented 53%, 15% and 7%, respectively. For these countries production from aquaculture is far higher than production from fisheries¹⁹.

Chart 1

**World production in 2015 (fishery and aquaculture)
by continent, in volume**

Source: EUROSTAT (for fishery EU-28), EUMOFA
elaboration of EUROSTAT, National sources and FAO
data (for aquaculture EU-28)
and FAO estimates (for extra-EU countries)

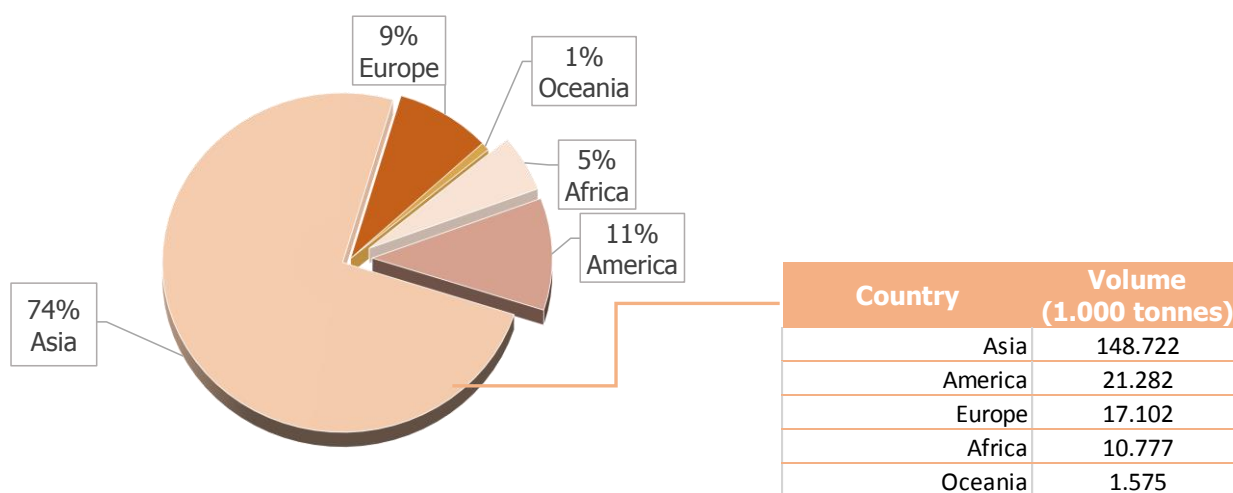
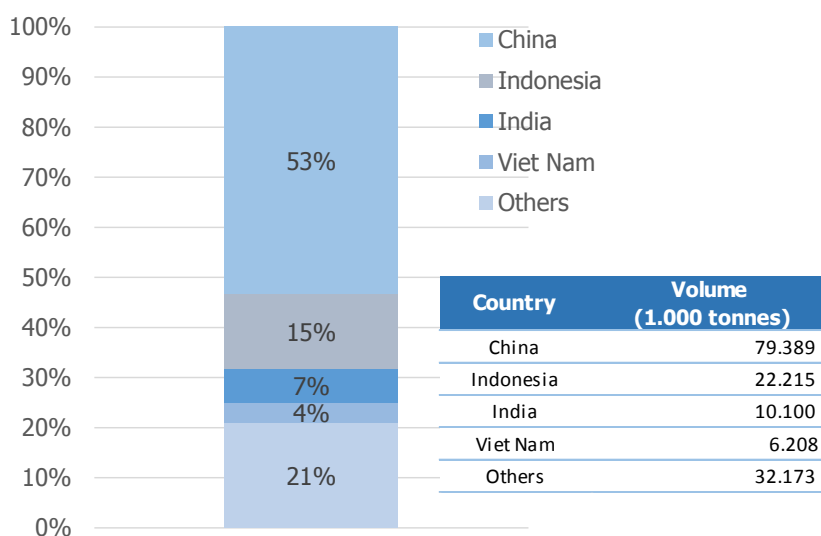


Chart 2

**Total production in 2015
(fishery and aquaculture)
in Asia by country**

Source: FAO estimates

Asia is the leading continent for production of fish products both in marine and inland areas, totalling 95,57 and 53,12 million tonnes, respectively.



¹⁹ Both fisheries and aquaculture productions come from marine and inland areas

China remained the main producer in the world and aquaculture continued to be the main production sector: in 2015, farmed fish production in China amounted to 61,5 million tonnes²⁰ (+5% from 2014), representing 58% of total world aquaculture production.

Freshwater fish products are the main species produced in Asia. Compared with 2014, their production grew by 5%. The main freshwater species farmed were carp (mostly grass carp and silver carp, and common carp with 5,8 million tonnes and 4,5 million tonnes, respectively) and tilapias (3,5 million tonnes).

In **America**, after the reduction in 2014 (-7%), a modest increase was registered in 2015, as production totalled 21,2 million tonnes. Main producing countries were the US, Peru, Chile, Mexico and Ecuador, covering together 77% of total American production. The most important species are anchovy, Alaska pollock and herring, mainly produced in Peru, the US and Chile, respectively.

In **Africa**, fish production in 2015 amounted to 11 million tonnes, of which 5,5 were caught in marine waters. Sardine, anchovy and herring accounted together for 2,5 million tonnes while freshwater fish amounted to 4,5 million tonnes. In 2015, the leading African countries of aforementioned fish species were Nigeria, Morocco and Egypt. Nile perch from Tanzania is the most relevant freshwater species of the EU imports from African countries.

1.2 Trade

The EU is the top trader of fishery and aquaculture products in the world in value terms. Shrimps, tuna, white fish and fishmeal are the most imported products. On the other hand, the EU exports in particular salmon, mackerel, fishmeal and fish oil.

In 2016, total extra-EU trade (imports plus exports) amounted to EUR 29,10 billion, an increase of 9% from 2015. China's trade value ranked second to the EU, with EUR 26,5 billion, a 3% increase from 2015.

Imports cover 68% of the EU domestic consumption (according to EUMOFA elaboration of data from EUROSTAT, FAO and National sources). Norway is the main supplier, with EUR 6,33 billion (+20% from 2015) for 1,45 million tonnes (-5% from 2015).

In 2016 the main species imported in the EU by Norway were salmon (99,6% of the total of its salmon exported in the EU were fresh and whole) and cod (45% of the total of its cod exported in the EU were smoked and dried). However, in general, products imported in the EU are frozen or prepared meals.

In 2016, EU imports of freshwater fish products from Asia accounted for 80% in volume and 66% in value over the total of freshwater fish imported, decreasing from 2015 both in volume (from 209 million tonnes to 199 million tonnes) and in value (from EUR 636 million to EUR 601 million). Freshwater fish are mainly imported in the EU cut

²⁰ Data were extracted from FAO Fishstat. According to the Highlights on FAO Statistics (<http://www.fao.org/fishery/statistics/en>), "The FAO Capture, Aquaculture and Global production databases have been updated with an additional year and now include data from 1950 to 2015".

and frozen. They are worth around EUR 462 million. The most relevant Asian country exporting these species - in particular freshwater catfish - to the EU market was Viet Nam. The EU imports from this country were worth EUR 246 million, equal to 51% of total imported freshwater fish.

Shrimps are imported by the EU mainly from Ecuador, India, Viet Nam and Argentina, accounting together in value terms 50% of the total shrimps imported.

Tuna species were mainly supplied by Ecuador, Seychelles and Mauritius. The most relevant tuna species imported in the EU is skipjack tuna, cut and prepared. The main country of origin to the EU imports of this species is Ecuador. Yellowfin tuna was mainly supplied by Seychelles.

With around EUR 210 million, the EU imported fishmeal from Peru, Morocco and Norway.

1.3 Expenditure

In terms of (nominal) expenditure for purchasing seafood, according to OECD the EU keeps occupying the first place in the global ranking, meeting its domestic demand mostly through imports, the majority of which are either frozen or prepared products.

However, looking at expenditure per capita at global level, the EU ranks second, with an expenditure of 103 EUR per capita representing about one third to that of Japan.

Table 2

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

Source: OECD

Country	Expenditure ²¹	Expenditure per capita ²²
EU-28	52.304	103
Japan	38.402	302
Russian Federation	12.827	88
United States	9.931	31

1.4 Consumption

World consumption moved from 16,1 kg/per capita in 2001 to 19,7 in 2013, marking a 22% increase. In this period, Asia registered the highest percentage variation, with a 32% increase. In 2013, Europe and Asia increased per capita consumption by 2% and 8%, respectively, compared with 2011, while the rest of the world registered a decrease in 2013. In 2013, Oceania recorded the highest per capita consumption, despite a 6% decrease from 2011.

²¹ Nominal expenditure in euros (millions).
<http://stats.oecd.org/Index.aspx?DataSetCode=PPP2014#>

²² Nominal expenditure per capita in euros
<http://stats.oecd.org/Index.aspx?DataSetCode=PPP2014#>

Chart 3

Main trade flows of fishery and aquaculture products in the world
(2016)

Source: EUROSTAT (for EU trade flows)
and GTA (for bilateral trade flows between extra-EU countries)

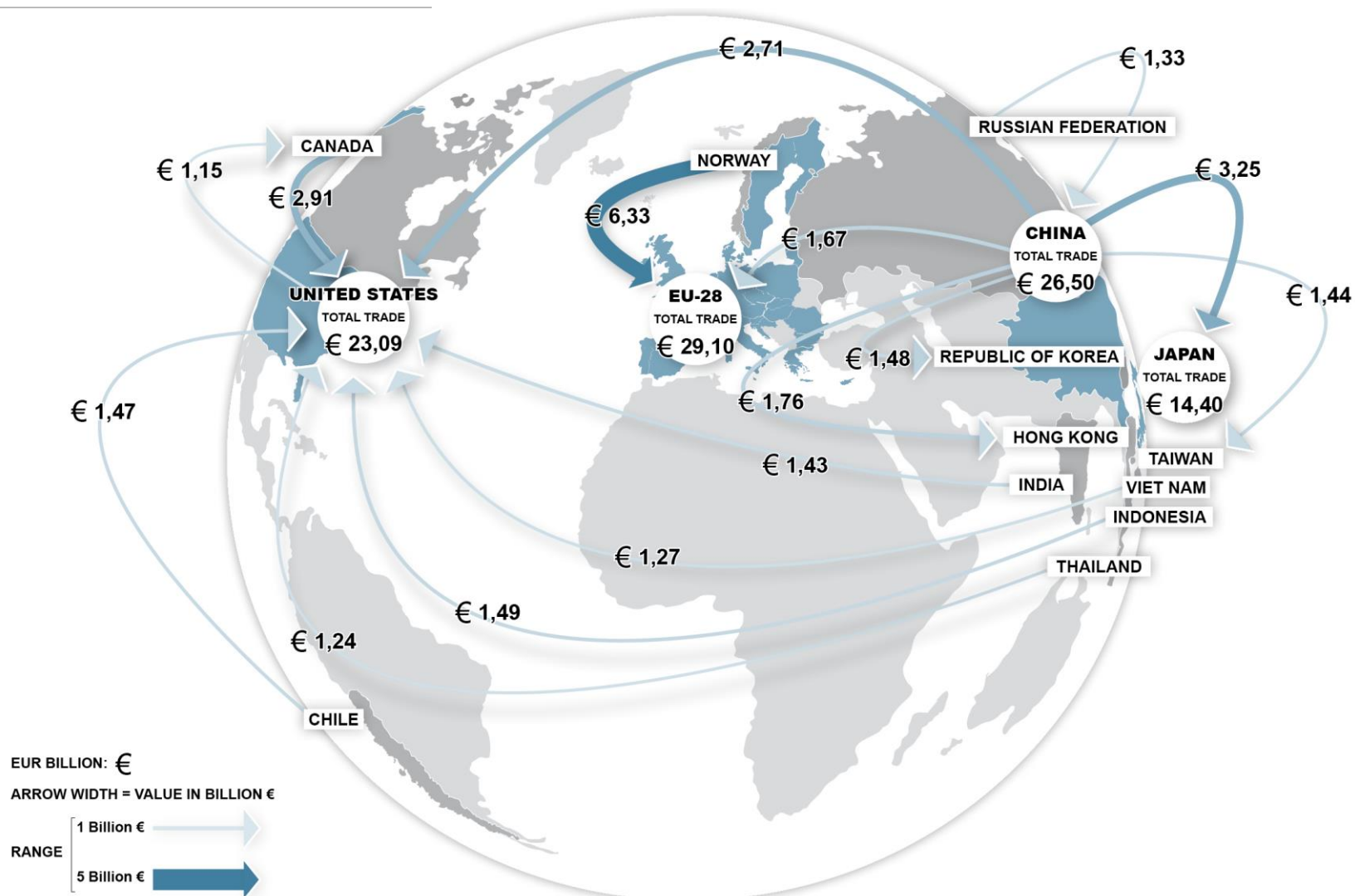
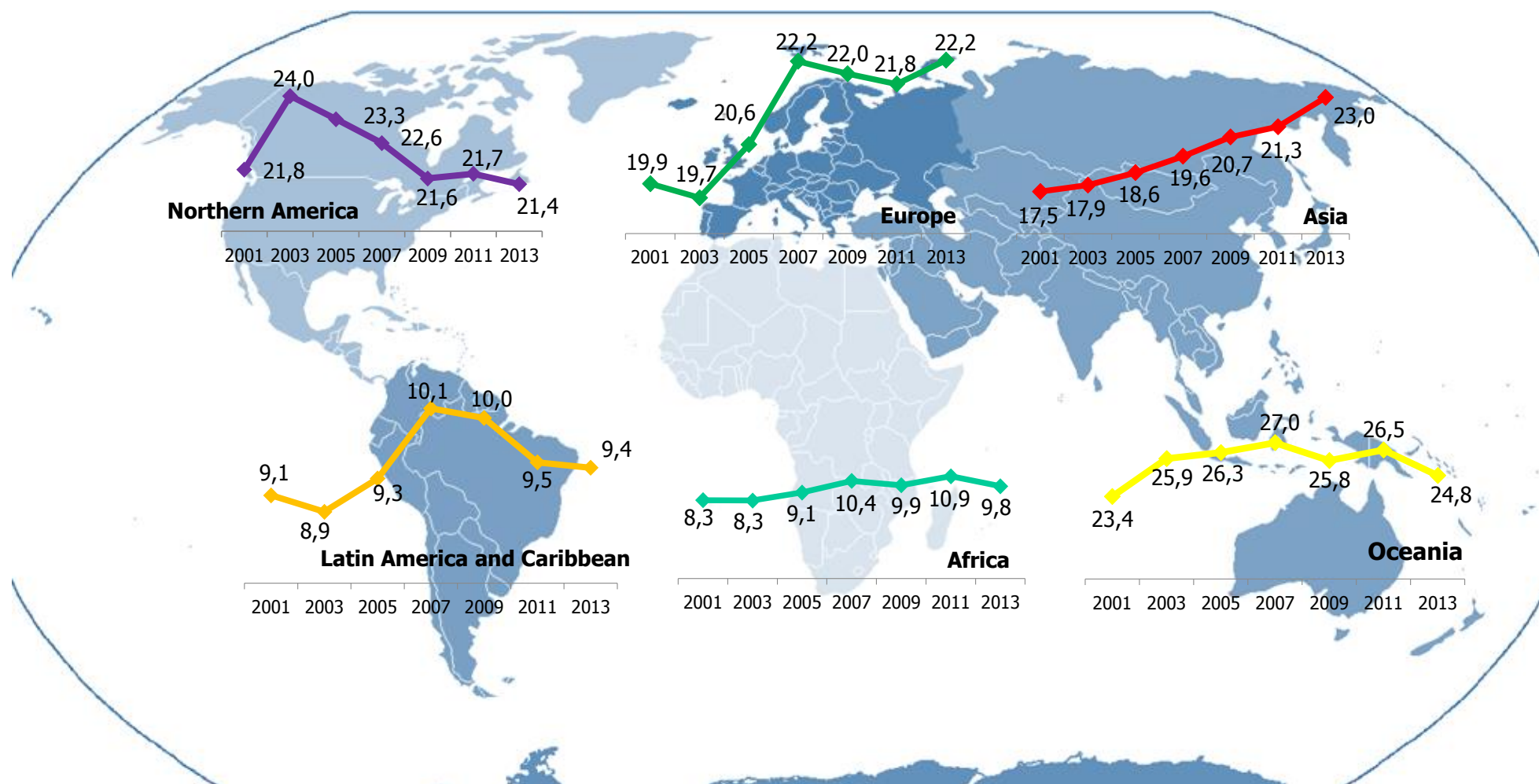


Chart 4

Consumption per capita in the world (kg, 2001 - 2013)

Source: FAO



EU market supply 2

2.1 Supply balance and apparent consumption

In 2015, the EU supply of fishery and aquaculture products (domestic production + import, non-food use excluded for both) decreased by 381.872 tonnes compared with 2014, moving from 14,94 to 14,56 million tonnes.

The main cause of the decline was internal production originating from fishing activities, which decreased by 299.699 tonnes. Imports also declined, dropping 2%, from 8,82 to 8,68 million tonnes (live weight).

Despite a 12% decline in EU exports, which fell from 2,03 to 1,79 million tonnes (live weight), apparent consumption decreased a slight 1%, corresponding to 142.778 tonnes.

The most consumed species, tuna and cod, had consistent increases from 2012 to 2014. However, this growth stopped in 2015, when their consumption fell by 7% and 3%, respectively, from the previous year. On the other hand in 2015, salmon, the third most consumed species in the EU, registered a 4% increase compared with 2014.

Chart 5

Supply balance in 2015
(Live weight equivalent – FOOD USE ONLY)
 Source: EUMOFA elaboration of EUROSTAT, National sources and FAO data

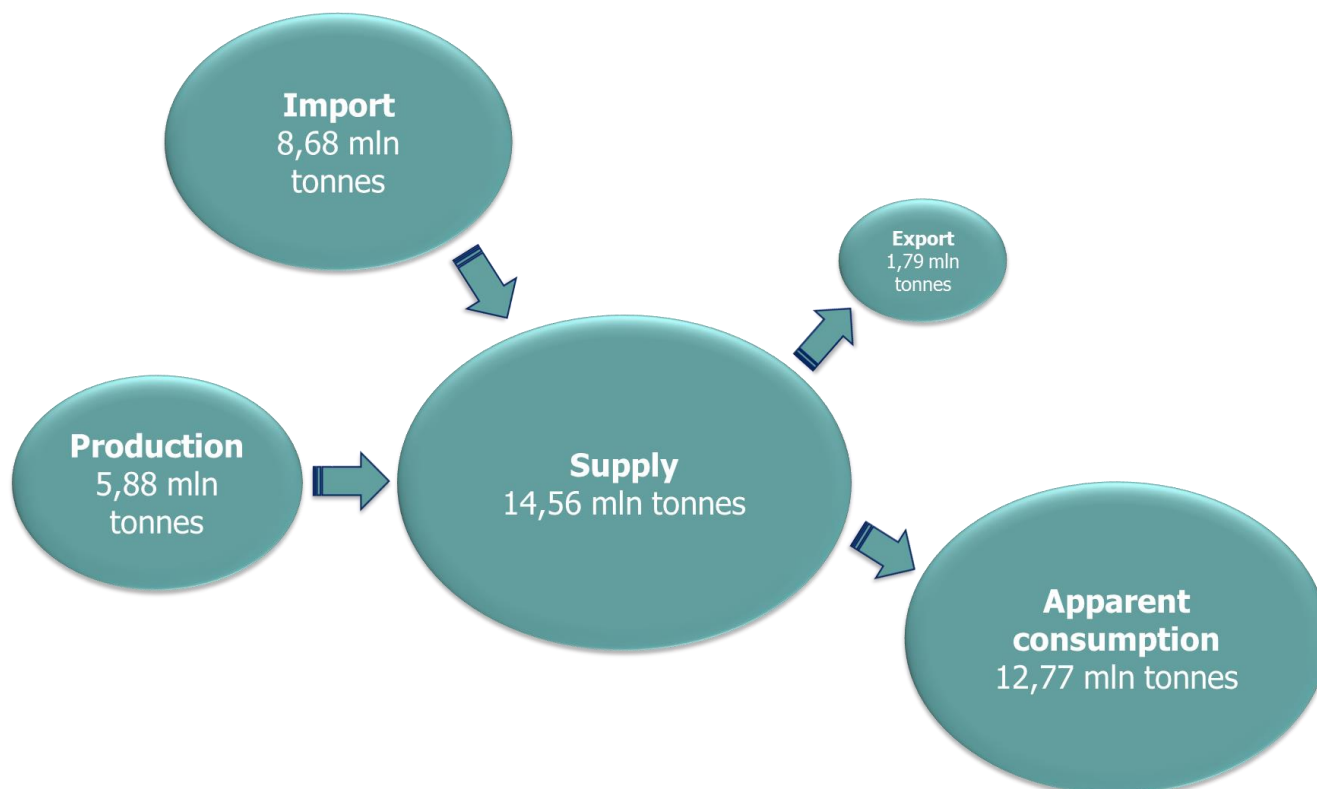


Table 3

EU production details (tonnes)

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

		2010	2011	2012	2013	2014	2015
Food use	Catches	4.239.416	4.311.093	4.103.957	4.394.563	4.867.720	4.568.021
	Aquaculture	1.251.681	1.271.818	1.235.825	1.185.198	1.252.618	1.307.020
Total production destined to food use		5.491.097	5.582.911	5.339.782	5.579.761	6.120.338	5.875.041
Non-food use	Catches	672.108	549.323	253.010	434.414	454.460	575.630

Around 80% of EU production of fish destined for food use comes from wild products. In 2015, it experienced a 6% decline, which followed the 19% boost it had experienced during the period 2012–2014. On the other hand, aquaculture production has shown an upward trend, increasing 10% since 2013. Non-food catches²³ have continued the growth started in 2013, increasing by a significant 26% in 2015 compared with 2014, thanks to increased catches of sprat.

Table 4

Supply balance in 2015 at EU level by commodity group and production method (Live weight equivalent – FOOD USE ONLY)

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

Commodity group	Production (tonnes)		Import (tonnes)		Export (tonnes)		Apparent consumption (tonnes)			Per capita (kg)		
	Fishery	Aquaculture	Fishery	Aquaculture	Fishery	Aquaculture	Fishery	Aquaculture	Total	Fishery	Aquaculture	Total
Bivalves and other molluscs and aquatic invertebrates	249.859	629.449	226.368	274.936	20.359	14.281	455.868	890.104	1.345.972	0,90	1,75	2,65
Cephalopods	115.949	1	511.385	0	33.564	0	593.770	1	593.770	1,17	0,00	1,17
Crustaceans	198.208	304	480.809	358.985	95.644	208	583.374	359.081	942.456	1,15	0,71	1,85
Flatfish	199.941	11.100	131.908	1.168	64.707	351	267.141	11.917	279.058	0,53	0,02	0,55
Freshwater fish	15.106	106.950	81.865	355.332	12.654	6.421	84.317	455.861	540.178	0,17	0,90	1,06
Groundfish	822.247	0	2.613.101	14.051	217.687	0	3.217.661	14.051	3.231.712	6,33	0,03	6,36
Miscellaneous aquatic products	21.972	386	307.931	0	14.823	0	315.080	386	315.466	0,62	0,00	0,62
Other marine fish	389.146	158.631	355.750	59.556	110.170	6.758	634.726	211.430	846.155	1,25	0,42	1,66
Salmonids	4.251	384.783	11.214	1.078.676	6.373	130.859	9.092	1.332.600	1.341.692	0,02	2,62	2,64
Small pelagics	2.173.513	0	450.128	0	745.146	0	1.878.495	0	1.878.495	3,69	0,00	3,69
Tuna and tuna-like species	377.828	15.415	1.368.306	43	306.013	0	1.440.121	15.458	1.455.579	2,83	0,03	2,86
Total	4.568.021	1.307.020	6.538.765	2.142.747	1.627.143	158.877	9.479.644	3.290.889	12.770.533	18,64	6,47	25,11

Data in this table may not align with data found currently on the EUMOFA website, which is constantly updated. All details on the methodological approach followed to build a harmonized Supply balance sheet are reported in the Methodological background of the present publication. Possible figures' inconsistencies are due to rounding.

In 2015, the average EU citizen consumed 330 gr of fish less than in 2014

In 2015, apparent consumption of fishery and aquaculture products in the EU totalled 12,77 million tonnes, a 1,1% drop from the 2014. Per capita consumption also fell, dropping to 25,11 kg, 1,4% lower than in 2014. While a decreasing trend was recorded for wild products, which declined 2,1% to 18,64 kg per capita, farmed products consumption grew by 0,7% and reached its highest level since 2011 at 6,47 kg per capita. Although wild products dominated the EU market with 9,48 million tonnes, farmed products accounted for 3,29 million tonnes, or one quarter of the fish consumption in the EU market. Farmed products prevail in three commodity groups: salmonids, bivalves and freshwater fish.

²³ Source: EUROSTAT. For the species considered to be destined to industrial use, please refer to the Methodological background.

2.2 EU self sufficiency

Compared with 2014, the EU self-sufficiency in 2015 decreased from 47,4% to 46,0%

A market's supply is ensured by production and imports. A market's self-sufficiency rate is the ratio of domestic supply (what is produced) over domestic demand (what is consumed). The self-sufficiency of a market is calculated on a scale of 0 to 100%, where 0 and 100 are theoretical conditions: at a 0% self-sufficiency rate, a market would depend solely on imports, while at a 100% rate, a market would be independent from external resources and fully satisfy demand through domestic production.

In the EU, this ratio decreased from 47,4% (2014) to 46,0% (2015), meaning that more of the consumed fisheries and aquaculture products were supplied through products imported from non-EU countries than through EU catches or aquaculture production.

The top four species consumed in the EU – tuna, cod, salmon and Alaska pollock – represented 35% of the market, and were mostly imported from non-EU countries.

Chart 6

EU market trend and self-sufficiency rates

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

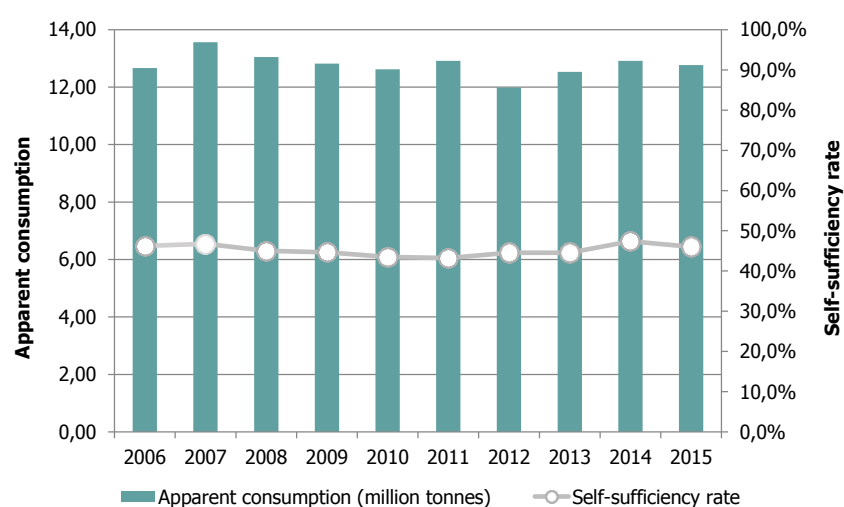


Table 5

Self-sufficiency rate of most consumed products (2015)

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

Products	Self sufficiency rate
Mackerel	120%
Herring	110%
Trout	89%
Mussel	82%
Sardine	76%
Hake	38%
Scallop	31%
Tuna	26%
Salmon	17%
Squid	16%
Cod	12%
Tropical shrimp	6%
Freshwater catfish	4%
Alaska pollock	0%
Surimi	0%

Table 6

Self-sufficiency rate by commodity group

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

Commodity group	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
Bivalves and other molluscs and aquatic invertebrates	65%	68%	62%	63%	60%	60%	64%	62%	61%	65%
Cephalopods	16%	18%	17%	17%	17%	18%	21%	21%	21%	20%
Crustaceans	23%	24%	23%	23%	21%	21%	21%	21%	21%	21%
Flatfish	83%	87%	93%	93%	95%	98%	77%	79%	75%	76%
Freshwater fish	20%	18%	26%	25%	22%	17%	17%	18%	20%	23%
Groundfish	29%	27%	24%	22%	22%	18%	21%	22%	25%	25%
Miscellaneous aquatic products	7%	13%	13%	8%	8%	10%	13%	20%	18%	7%
Other marine fish	49%	51%	51%	57%	61%	61%	70%	69%	66%	65%
Salmonids	36%	34%	34%	35%	35%	33%	31%	31%	30%	29%
Small pelagics	110%	103%	103%	100%	106%	104%	109%	106%	124%	116%
Tuna and tuna-like species	26%	24%	35%	24%	21%	26%	26%	29%	34%	27%
Total	46,2%	46,8%	45,0%	44,6%	43,5%	43,2%	44,6%	44,5%	47,4%	46,0%

Groundfish

The self-sufficiency of groundfish improved in 2015, moving from 24,6% registered in 2014 to 25,4%, but at a lower rate than in previous years.

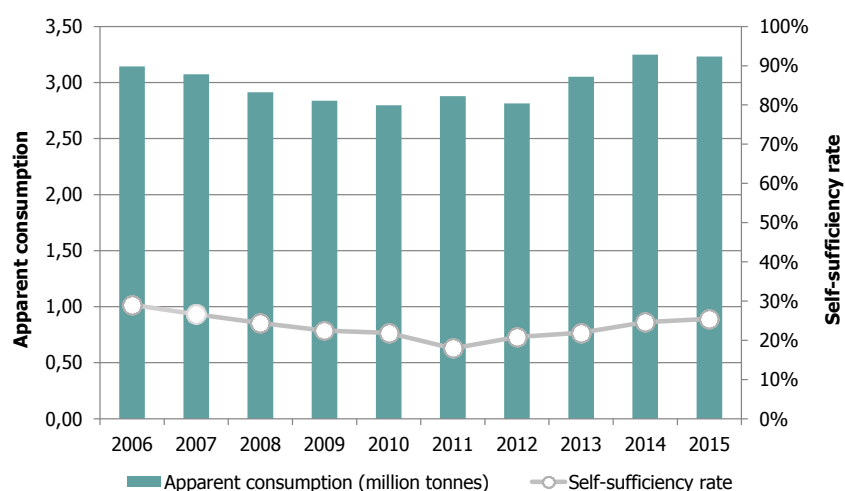
While in 2014 the recovery of the self-sufficiency of the whole category was due to increased catches of blue whiting and hake, in 2015 declining imports of cod (-53.546 tonnes) were the main contributors.

Nonetheless, cod has its internal demand predominantly met through imports. In 2015, 12% of the total supply was produced in the EU. This situation of cod, together with Alaska pollock, which is not produced in the EU at all, significantly reduces the self-sufficiency of the groundfish commodity group and the overall capacity of the EU to supply its internal demand.

Chart 7

EU market trend and self-sufficiency rates for groundfish

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



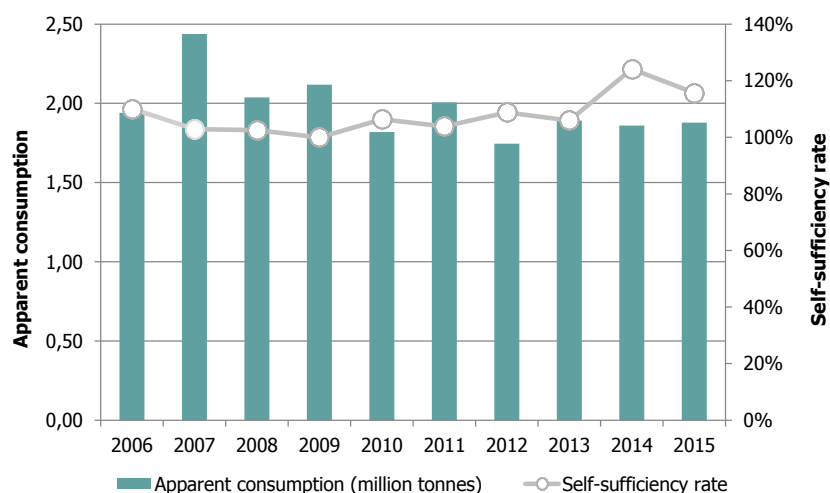
Small pelagics

This category traditionally has the highest self-sufficiency in the EU. However, following a 9-year peak achieved in 2014, it dropped significantly in 2015, due to a 6% production shrinkage that saw catches move from 2,31 to 2,17 million tonnes, especially for sardine, mackerel and horse mackerel. A slight rise registered in imports also contributed to the overall self-sufficiency fall. On the other hand, the EU demand for small pelagics registered a moderate increase, benefitting from an 18.380-tonne increase in apparent consumption above the 1,86 million tonnes of the previous year, and also from a 150.949-tonne decrease in exports.

Chart 8

EU market trend and self-sufficiency rates for small pelagics

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



Tuna

Both the EU self-sufficiency and consumption of tuna fell in 2015 compared with 2014

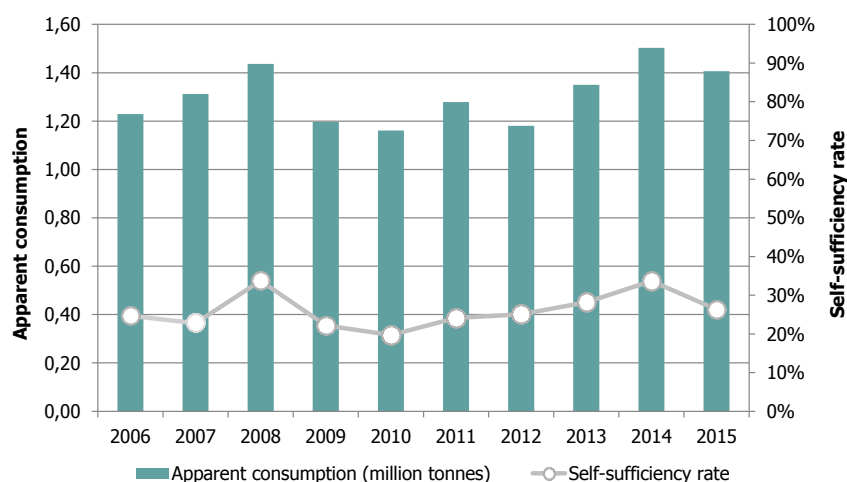
Apparent consumption of the commodity group “tuna and tuna-like species” is largely represented by tuna, which accounts for 97% of the total, and swordfish, which accounts for 3%. Overall, the self-sufficiency of this category declined to 27% in 2015, after a 6-year peak of 34% was reached in 2014. If we only consider tuna, the EU self-sufficiency dropped from 34% to 26%. This was the consequence of a tumble of Spanish catches of skipjack and yellowfin tuna, of 79.297 and 47.145 tonnes, respectively, and, to a minor extent, to tuna imports to the EU market increasing 16.212 tonnes.

Demand for tuna in the EU market was also lower than in 2014, as apparent consumption plummeted by 96.030 tonnes and totalled 1,41 million tonnes, corresponding to 2,77 kg per capita. Nonetheless, this amount was 8% higher than its 10-year average of 2,62 kg per capita.

Chart 9

EU market trend and self-sufficiency rates for tuna

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



Bivalves and other molluscs and aquatic invertebrates

In 2015, EU self-sufficiency for this commodity reached an 8-year peak of 65%. This was determined by both a growth of internal production and a decline of imported products. On the production side, the growth mainly concerned mussels (+48.598 tonnes), whose increase was largely driven by that registered for mussels originating from farming activities. As regards imports, the downward trend that was observed in 2015 compared with 2014 for scallops (-31.356 tonnes) and clams (-28.584 tonnes) contributed to the overall decline of this commodity group's imports.

Chart 10

EU market trend and self-sufficiency rates for bivalves and other molluscs and aquatic invertebrates

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



Salmonids

*17% of the salmon
consumed in the EU is
produced internally*

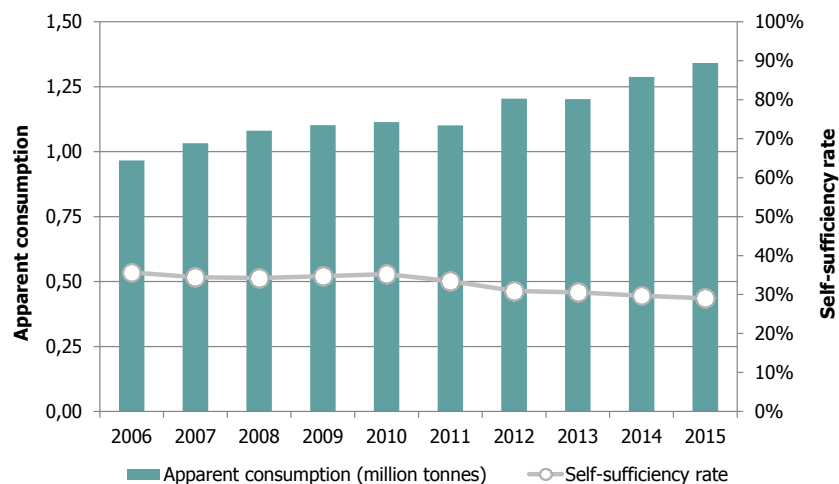
EU self-sufficiency for salmonids averaged 35% during the period 2006–2011 and 30% during the period 2012–2015. The most significant drop occurred in 2012 compared with 2011 was caused by a significant import increase of 117.654 tonnes, which mainly concerned salmon and also impacted the growth of salmonids' apparent consumption.

Salmon alone had a remarkable impact on the salmonids' self-sufficiency decrease in 2015 compared with 2014, when its imports grew by 34.280 tonnes and its internal production dropped by 3.517 tonnes. On the other hand, trout continued to register a high self-sufficiency of 89% in 2015, a slight drop from 2014, when it was at 90%.

Chart 11

EU market trend and self-sufficiency rates for salmonids

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



Crustaceans

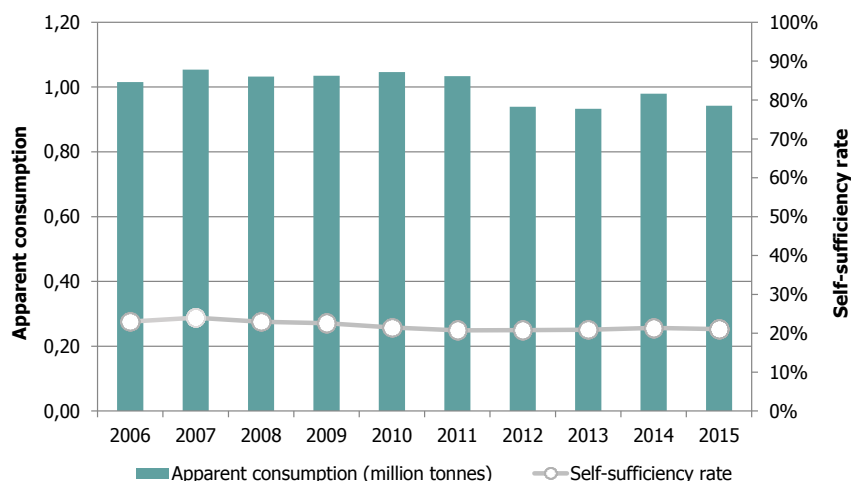
The EU self-sufficiency for crustaceans has shown a flat trend during the last ten years. Since 2012, it has been at 21%.

While squillid, Norway lobster and crab have consistent self-sufficiency rates of 100%, 97% and 83%, respectively, the EU largely depends on imports for other species of this group. The lowest self-sufficiency rates are those concerning most consumed types of shrimps, namely tropical shrimps (6%) and miscellaneous shrimps (2%), the latter consisting of unspecified shrimps and prawns, frozen or prepared/preserved.

Chart 12

EU market trend and self-sufficiency rates for crustaceans

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



Other marine fish

The EU self-sufficiency for other marine fish²⁴ averaged 55% during 2006–2011 and 67% during 2012–2015. The increase, which occurred in 2012 compared with 2011, was caused by a noteworthy imports decline of 187.788 tonnes which, together with a production shrinkage, also contributed to the drop in this commodity's apparent consumption.

Within this category, the self-sufficiency levels vary for the most consumed species, namely gilthead seabream and monk, each accounting for 200 grams per capita of apparent consumption in 2015, and European seabass, accounting for 170 grams per capita.

For both gilthead seabream and European seabass, self-sufficiency was at 86% in 2015. While it was unchanged from 2014 in the case of European seabass, gilthead seabream's increased imports of 4.875 tonnes combined with farmed production shrinkage of 3.634 tonnes caused a drop from the 90% self-sufficiency it registered in 2014. For European seabass, the 6.010-tonne growth of its aquaculture production tempered its 1.349-tonne imports growth.

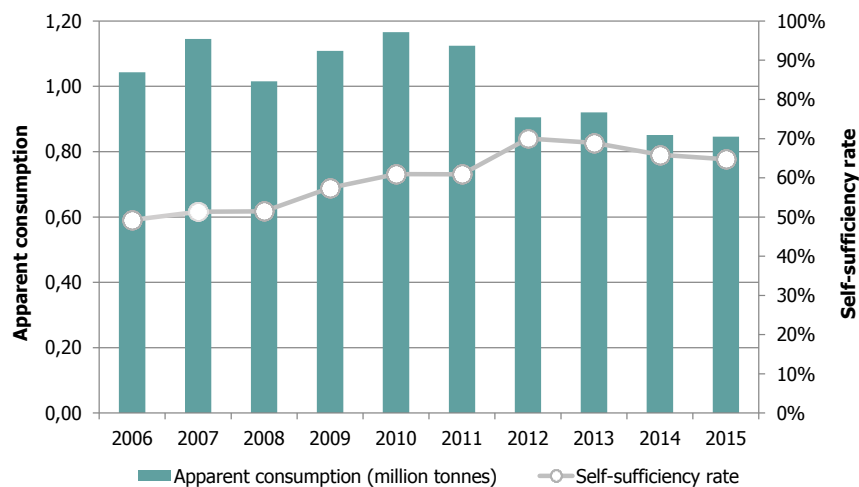
Monk's self-sufficiency reached a 10-year peak of 60% in 2015, continuing the upward trend started in 2011. Indeed, comparing 2015 to 2010, imports have declined by 44% or 31.886 tonnes, while catches have increased by 22% or 10.525 tonnes. On the other hand, it should be noted that its apparent consumption fell by 18% in the same period.

²⁴ This group includes monk, seabream, red mullet, seabass, ray, john dory, scabbardfish, gurnard, cobia, picarel, smelt, dogfish and weever, sharks.

Chart 13

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

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



The EU supply of fishery and aquaculture products grew by almost 650.000 tonnes in 2014 compared with the previous year. The main driver was internal production, which rose by 570.000 tonnes, mostly originating from fishing activities.

Apparent consumption increased by over 400.000 tonnes in 2014. Its structure had been changing since 2012, with cod gaining relevance as its consumption increased 25% from 2012 to 2014.

3.1 Expenditures and volume of fish consumption

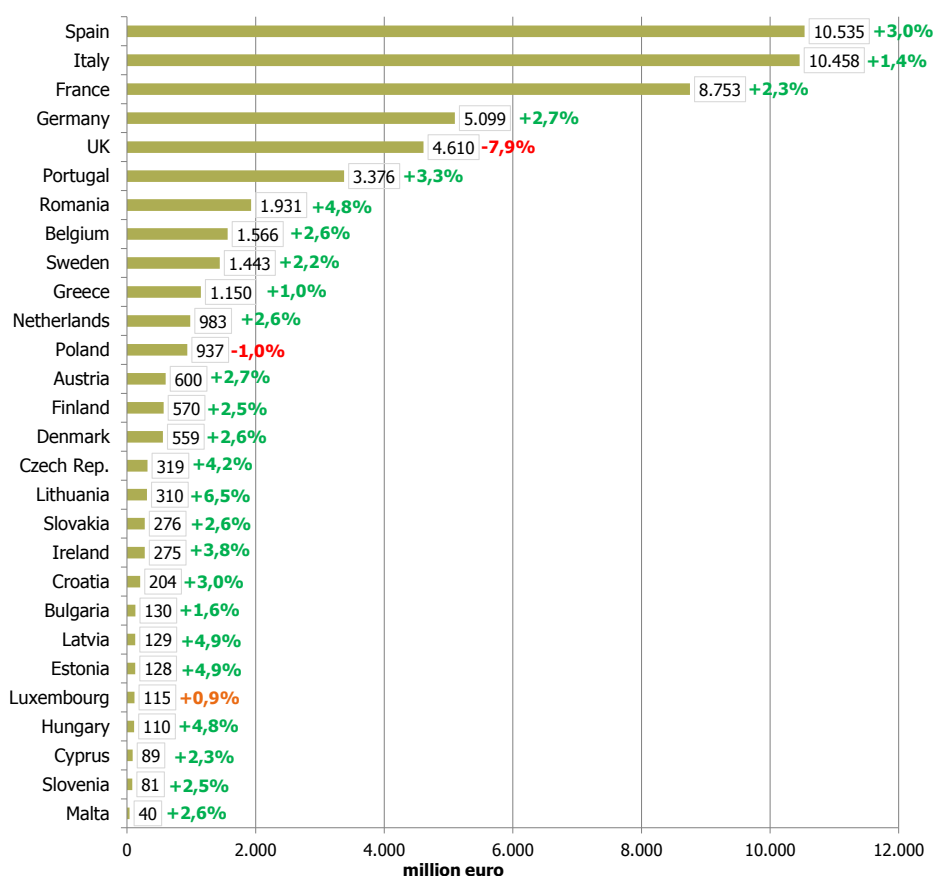
In 2016, the EU household expenditure for fishery and aquaculture products totalled EUR 54,8 billion, 1,5% higher than in 2015. This reflected a generally positive trend in almost all Member States. The exceptions were the United Kingdom and Poland, particularly, the United Kingdom, which registered a significant 7,9% decrease in household expenditure for fishery and aquaculture products and was overtaken by Germany in the EU ranking. Spain, the leading country, recorded a 3% increase, reaching EUR 10,5 billion.

Chart 14

Household expenditure for fishery and aquaculture products in 2016 and % variation 2016/2015 (out-of-home consumption is excluded)

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

Since 2003, the EU household expenditure for FAP registered a general increase, reaching its peak in 2016, with EUR 54,8 billion



Portugal continued to register the highest per capita household expenditure, recording EUR 327 in 2016, about three times the EU average. This represented a 63% increase from 2000.

Consumption

Chart 15

Per capita household expenditure for fishery and aquaculture products in the EU in 2016 and % variation 2016/2015 (out-of-home consumption is excluded)

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

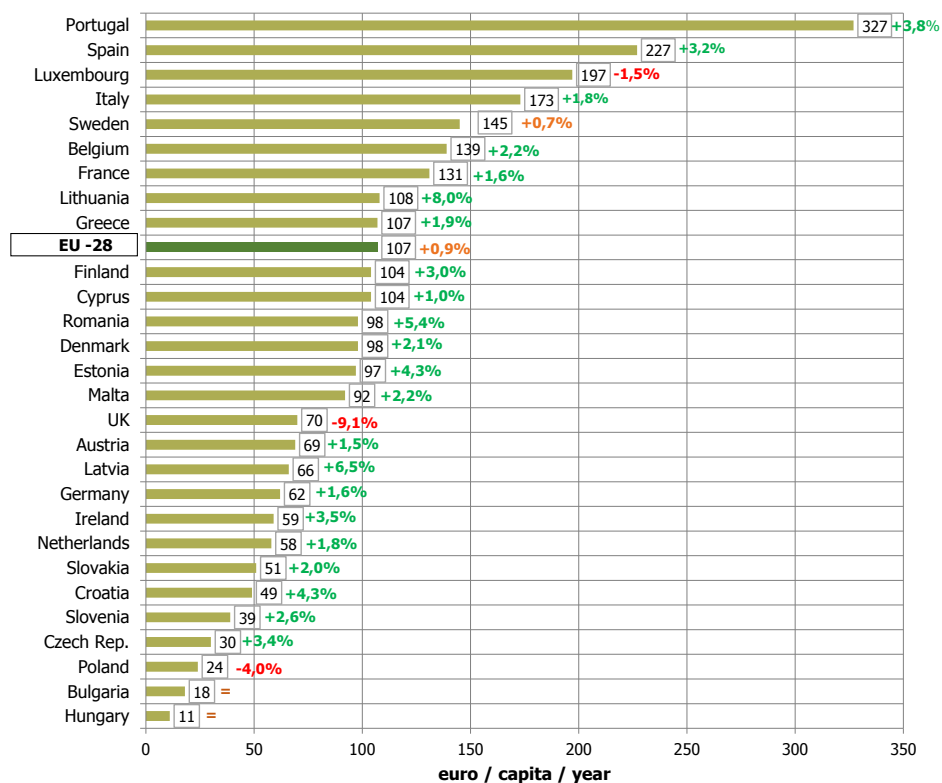
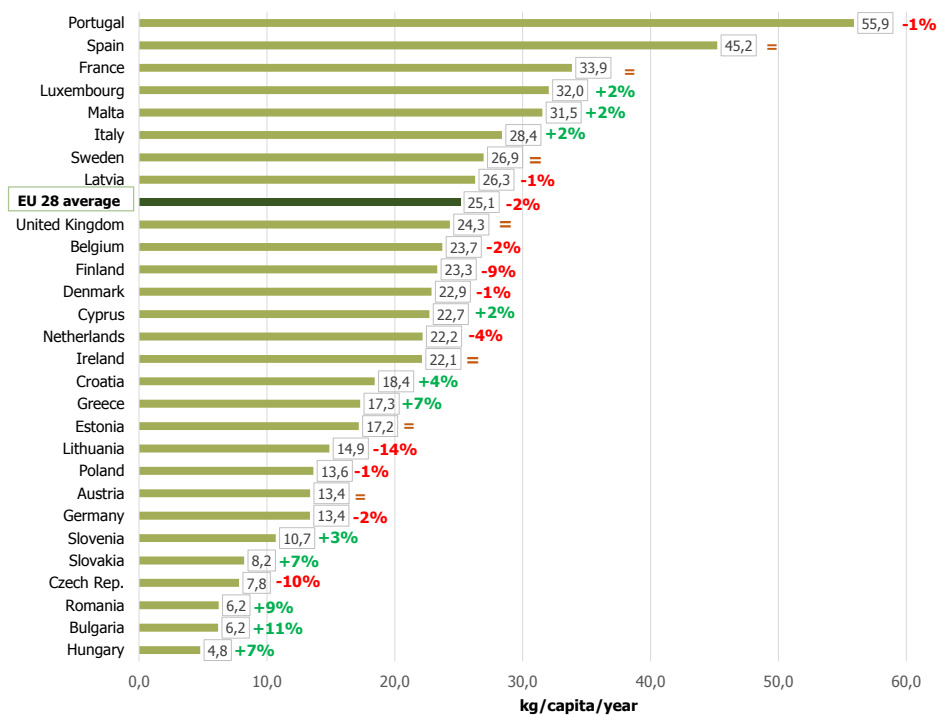


Chart 16

Per capita consumption of fish and seafood (kg capita/year) per Member State, 2015 and % variation 2015/2014 (Live weight equivalent)

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



Portugal has continued to have the highest per capita consumption of fishery and aquaculture products since 2001, although it contracted slightly, from 57,5 kg in 2001 to 55,9 kg in 2015. Nonetheless, Portuguese fish and seafood per capita consumption remained 30 kg higher than the EU average.

Eight Member States had a per capita consumption higher than the EU average in 2015 and of them, as shown in Chart 16, only Luxembourg, Malta and Italy registered increases from 2014.

The fact that per capita expenditures increased while apparent consumption decreased²⁵ indicates an overall price increase at consumption level. This is confirmed by the Harmonised Index of Consumer Prices, which shows an increase in inflation by 2,9% in 2016 (see Table 7). In other words, at EU level, consumers are spending more to consume less fishery and aquaculture products.

Albeit at a lower rate than meat and other food, the household expenditure for fishery and aquaculture products in the EU increased by 13% in ten years, moving from EUR 48,5 billion in 2006 to EUR 54,8 billion in 2016.

In 2016, the EU expenditure was EUR 220 billion for meat and EUR 54,8 billion for fish. Italy, Spain and France maintained their traditional positions as Member Nations with the top household expenditures for fishery and aquaculture products. In 2016, Spain overtook Italy, recording the highest amount in the EU with EUR 10,5 billion, marking a 3% increase from 2015.

The EU consumer spends, on average, four times more for meat than for fish. Portugal's expenditure for fish was around three-quarters that of meat in 2016. In Spain, expenditure for meat was double the expenditure for fish. In Italy, expenditure for meat was three times more than for fish, while France's expenditure for fish was close to the EU average, which is four times more for meat than fish. Germany spent almost 7 times more for meat than for fish. Hungary presented the greatest imbalance, with an expenditure for meat that was 22 times that of fish.

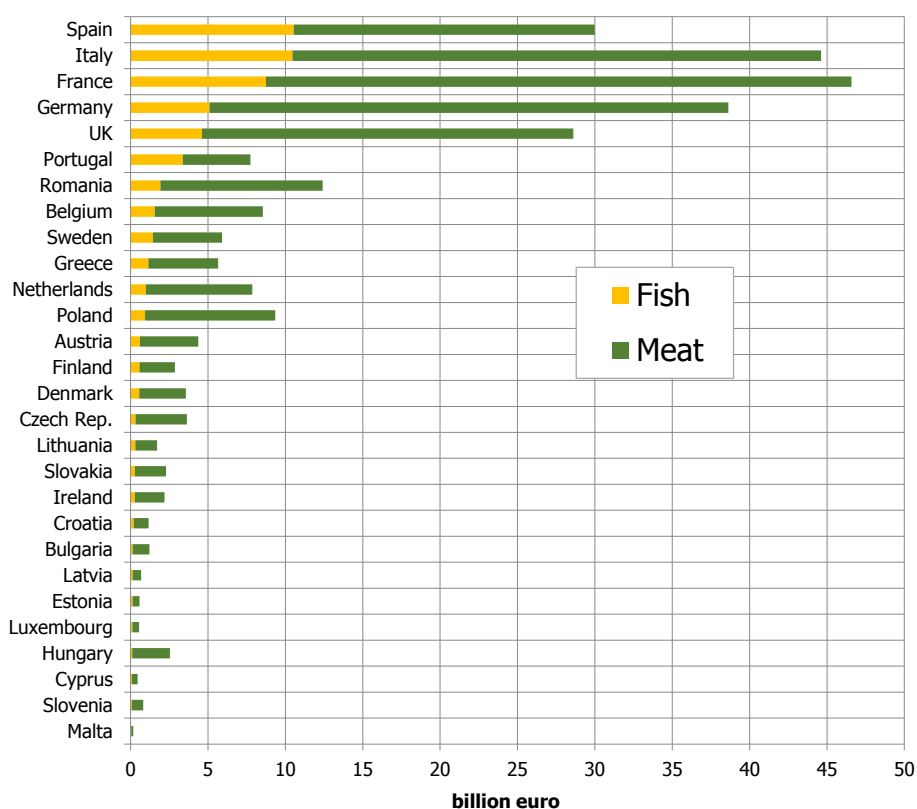
For Italy and Spain, the ratio between expenditures for fish and meat has been the same since 2003.

²⁵ For the definition of "apparent consumption", please refer to the "Methodological Background".

Chart 17

Total household expenditure for fishery and aquaculture products vs meat in the EU in 2016
(out-of-home consumption is excluded)

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



3.2 Consumer prices – fish vs meat and food

Between 2010 and 2013, fish, meat and food consumer prices increased at the same rate. However, since 2013, food and meat prices have slightly decreased, while fish prices registered a significant growth in 2016 compared with 2015, continuing an upward trend that began in 2006.

Chart 18

Consumer prices (2010=100)
Source: EUROSTAT

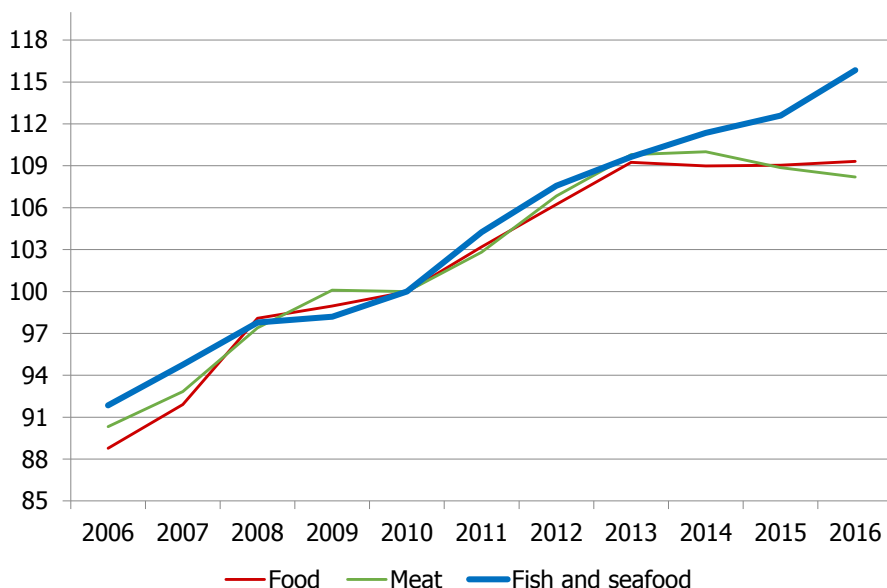


Table 7

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

Sector	2011	2012	2013	2014	2015	2016	2016/2011
Food	+3,2%	+2,9%	+2,8%	-0,2%	0,0%	+0,3%	+9%
Meat	+2,8%	+3,9%	+2,8%	+0,2%	-1,0%	-0,6%	+8%
Fish and seafood	+4,3%	+3,2%	+1,9%	+1,6%	+1,1%	+2,9%	+16%

Consumer prices for fish and seafood products have been constantly rising in the last six years, with an average increase of 2,6% per year. The most significant growth was registered between 2011 and 2013, with the rate then slowing in 2014 and 2015 before accelerating again in 2016.

The consumer price of meat increased faster than the fish price in 2012 and 2013, but its rate slowed significantly in 2014 and became negative in 2015.

Over the 6-year period monitored, all consumer prices increased, but fish and seafood prices increased twice as fast.

3.3 Apparent consumption

Table 8

**Apparent consumption
of most important products
(live weight equivalent, 2015)**

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

*Tuna confirmed to be the
product mostly
consumed in the EU*

Products ²⁶	Per capita (kg)	% wild	% farmed
Tuna (mostly canned)	2,77	99%	1%
Cod	2,32	99%	1%
Salmon	2,17	0%	100%
Alaska pollock	1,55	100%	0%
Herring	1,38	100%	0%
Mussel	1,33	11%	89%
Mackerel	1,07	100%	0%
Hake	1,00	100%	0%
Squid	0,71	100%	0%
Tropical shrimp	0,67	23%	76%
Surimi	0,57	100%	0%
Freshwater catfish	0,53	0%	100%
Sardine	0,53	100%	0%
Trout	0,43	0%	100%
Scallop	0,42	81%	19%
Others	7,66	80%	20%
Total	25,11	74%	26%

The 15 products listed in Table 8 were responsible for 63% of total apparent consumption of captured and farmed products in 2015. Of them, only five were consumed more in 2015 than in 2014, namely salmon, herring, mussels, surimi and trout. After the drop registered in 2014, the apparent consumption of herring showed the most substantial growth, increasing 16% in 2015, while the apparent consumption of sardine, freshwater catfish and scallop decreased a significant 18%, 12% and 12%, respectively.

²⁶ Some fish species are grouped in a single product, in particular: mussel (*mussel Mytilus spp.* + other mussels), tuna (skipjack, yellowfin, albacore, bigeye, bluefin and miscellaneous).

Consumption

Tuna (skipjack, yellowfin, albacore, bigeye, bluefin and miscellaneous tunas) remained the most consumed product in the EU, although its consumption registered a 7% decrease from 2014.

Chart 19

Apparent consumption of most important products in 2013, 2014 and 2015

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

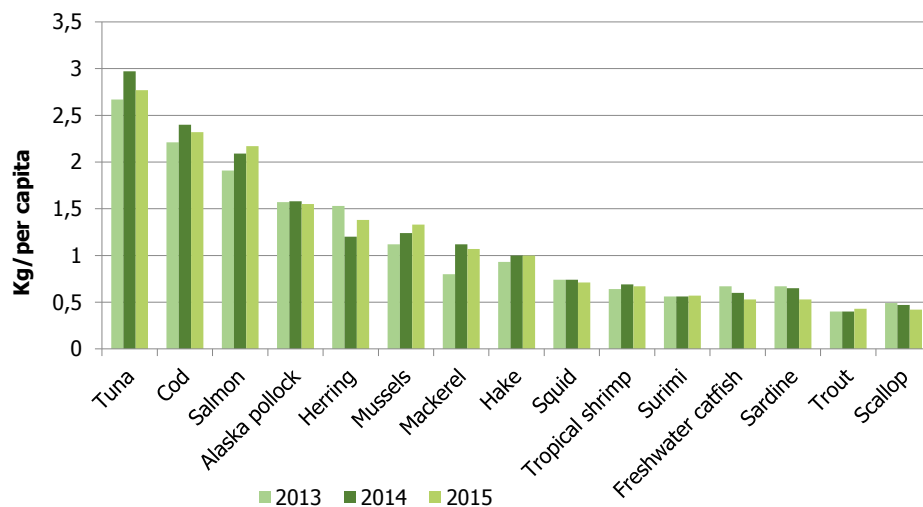
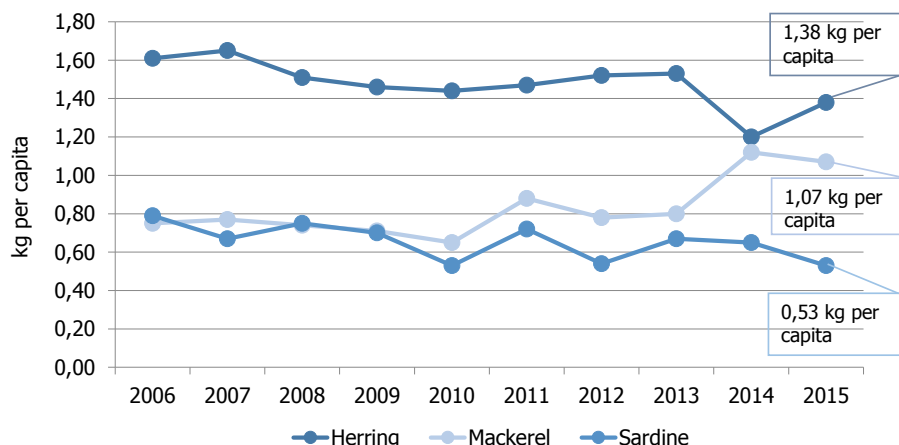


Chart 20

Small pelagics

Apparent consumption of most important small pelagics species

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



In 2015, the most consumed small pelagic species were herring, mackerel and sardine. With 1,38 kg per capita, the apparent consumption of herring increased by 16% in 2015 while sardine and mackerel showed decreases of 18% and 4%, respectively.

The growth of herring's apparent consumption was due to increased catches in Poland, Estonia, Germany and Sweden (+41%, +40%, +21% and +20%, respectively). Denmark and Finland, the main fishing nations in 2015, together accounted for 35% of the total.

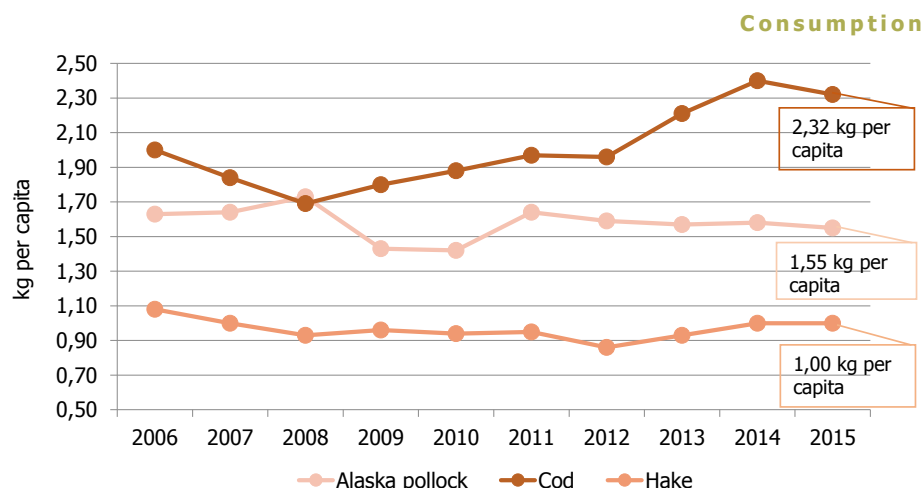
Mackerel, on the other hand, had a decline in apparent consumption, mainly due to the general negative trend of EU catches in 2015, particularly in the United Kingdom, Ireland, Lithuania and Latvia. Specifically the United Kingdom, which is the leading country of EU mackerel catches, registered a 14% or 40.000-tonne decrease in caught volumes in 2015. Sardine also had a decrease in apparent consumption in 2015, a consequence of decreased EU catches, particularly by Dutch and Lithuanian fleets.

Groundfish

Chart 21

Apparent consumption of most important groundfish species

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



The most consumed groundfish species in 2015 were cod, Alaska pollock and hake.

Cod registered a drop in consumption during 2006-2008, recording in 2008 the lowest amount of the last decade at 1,69 kg per capita. However, it then maintained an upward trend until 2015, when it experienced a 3% decrease. Nonetheless, after tuna, cod has remained the most consumed species in the EU since 2006.

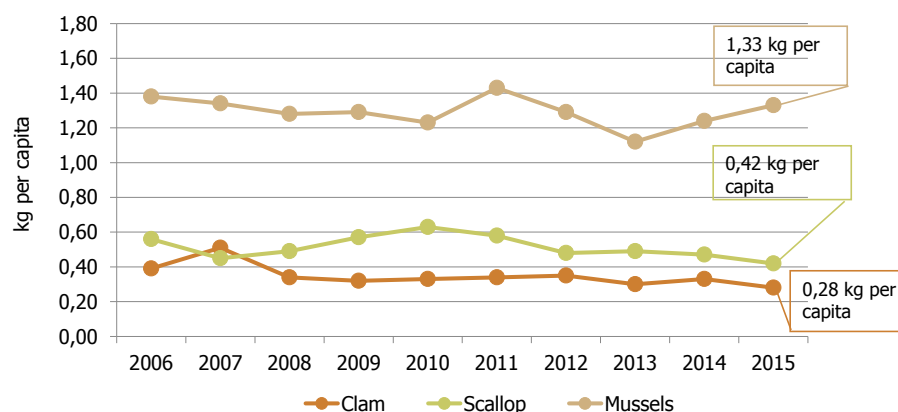
Alaska pollock consumption has been on a slight downward trend since 2011, while hake consumption has shown an upward trend since 2012. This has been mainly due to the catches of European hake in France and Spain increasing by 4% and 11%, respectively, which was in line with hake quotas increasing in the period 2012-2016.

Bivalves and other molluscs and aquatic invertebrates

Chart 22

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

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



Apparent consumption of mussels has been increasing since 2013. In 2015, it grew by 7% compared with 2014 and reached 1,33 kg per capita, mainly due the production in Spain, which is the EU's largest mussel farming country. The consumption came back to the level it had reached in 2012, before the red tide episodes that strongly affected mussel farming in Galicia in 2013.

Scallop consumption slightly declined in 2015, continuing a downward trend that began in 2010, when it registered an apparent consumption peak of 0,63 kg per capita. Of note, the 2015 apparent consumption was 14% less than in 2013, due to reduced catches in the United Kingdom and France of 16% and 21%, respectively.

Since 2008, apparent consumption of clam has been quite stable, averaging 0,35 kg per capita.

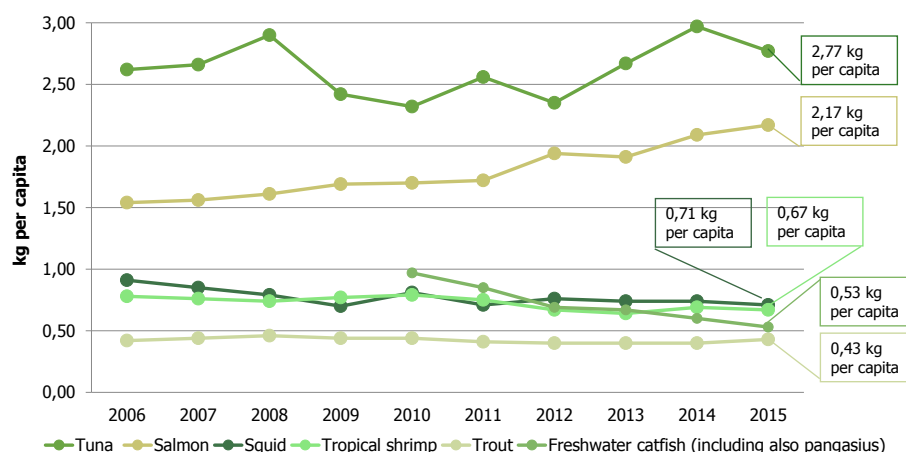
Consumption

Other products

Chart 23

Apparent consumption of other products

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



The demand of salmon increased by 4% in 2015 compared with 2014, in particular in Spain and in the United Kingdom, the main consuming EU Member States

In 2015, despite decreasing by 7% from 2014, tuna (skipjack, yellowfin, albacore, bigeye, bluefin and miscellaneous), mostly canned, was still the most consumed fish product in the EU, a position it had held for the last decade. Over the years, its apparent consumption has fluctuated, reaching a peak of 2.97 kg per capita in 2014.

Apparent consumption of salmon – mainly consumed fresh or smoked – totalled 2.17 kg per capita in 2015, 4% higher than 2014. However, this number represented a growth of 40% when compared with ten years before.

Freshwater catfish, mainly pangasius, registered decreased apparent consumption during the period 2010-2015, due to a 46% decrease in EU imports, which fell from 486.031 to 259.515 tonnes. Decreases in pangasius imports were recorded in the main consuming countries, namely Spain, the Netherlands and the United Kingdom.

For squid and tropical shrimps, apparent consumption showed slight decreases in 2015 compared with 2014 of 4% and 3%, respectively. Trout consumption rose by 7% after three years of steadiness.

3.4 Household consumption of fresh fish products

The household consumption of fresh fish products has been analysed for 12 EU Member States, where 86% of total EU fishery and aquaculture products expenditure takes place.

After showing an overall clearly positive trend in 2015, with significant increases in most countries, the fresh consumption of fish and aquaculture products registered a slight decrease in 2016, in both value and volume. Nonetheless, the prospects for fresh products seem positive in the medium term. In the stakeholder survey carried out within the study “EU consumer habits regarding fishery and aquaculture products”, large-scale retailers were found to envisage increasing sales of fresh fish, as well smoked and “convenience” products.

Table 9

Household consumption of fresh fish products, in volume (tonnes) and in value (1000 EUR) and % variation 2016/2015

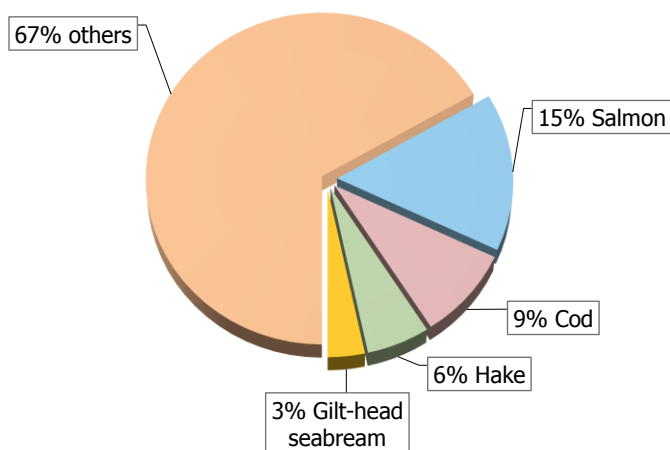
Source: EUMOFA elaboration of Europanel data

COUNTRY	2012		2013		2014		2015		2016		2016/2015	
	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume	Value	Volume
Denmark	120.998	8.900	122.813	9.076	134.938	9.275	132.338	8.907	125.603	8.349	↓ -5%	↓ -6%
France	2.365.053	239.869	2.367.194	233.390	2.355.527	229.034	2.347.189	225.988	2.464.758	225.659	↑ 5%	→ 0%
Germany	695.244	51.935	701.055	50.937	769.695	56.015	883.449	65.427	957.519	68.083	↑ 8%	↑ 4%
Hungary	24.493	6.556	27.693	7.337	27.421	6.758	29.720	6.320	29.085	5.934	↓ -2%	↓ -6%
Ireland	145.319	11.350	157.927	12.007	165.940	12.356	182.568	13.595	192.502	13.667	↑ 5%	↑ 1%
Italy	3.109.788	316.394	2.527.258	305.145	2.690.607	322.160	2.804.672	331.255	2.846.485	330.088	→ 1%	→ 0%
Netherlands	321.838	24.802	317.195	24.631	324.549	24.084	336.977	25.517	345.978	25.374	→ 3%	→ -1%
Poland	206.702	40.837	299.259	60.991	313.242	61.873	335.542	66.009	317.639	62.839	↓ -5%	↓ -5%
Portugal	331.821	56.402	338.659	60.553	333.727	57.349	365.568	62.435	373.204	60.401	→ 2%	→ -3%
Spain	N/A	N/A	5.143.541	740.746	4.946.814	704.050	4.951.108	686.097	4.913.212	666.055	↓ -1%	↓ -3%
Sweden	117.072	10.769	114.529	8.945	125.982	9.882	139.942	11.187	130.002	9.400	↓ -7%	↓ -16%
United Kingdom	2.844.502	296.863	2.907.630	309.344	3.143.213	302.016	3.648.780	307.797	3.283.644	304.738	↓ -10%	→ -1%
Total	10.282.831	1.064.678	15.024.754	1.823.103	15.331.655	1.794.852	16.157.853	1.810.534	15.979.632	1.780.589	→ -1%	→ -2%

Chart 24

Main fresh products consumed by households (2016), in value

Source: EUMOFA elaboration of Europanel data



In 2016, the most valued products consumed fresh in the EU were salmon, cod, hake and gilt-head seabream, which together covered 33% of the total value of fresh fish consumption in EU households.

SALMON – Fresh salmon consumption followed an upward trend from 2012 until 2015. This stopped in 2016, when volumes consumed declined by 14% from the previous year, and an 8% value shrinkage was registered, in relation to the decreasing Norwegian production and resulting price increase. The UK is the largest consumer of fresh salmon products in absolute terms. The UK, Spain and France, together, are responsible for 68% of the total consumption in value, amounting to EUR 863 million, EUR 429 million and EUR 375 million, respectively.

COD – Total household purchases of fresh cod amounted to EUR 1,4 billion in 2016. The UK ranked first, with household purchases totalling EUR 530 million, followed by France with EUR 349 million, Spain with EUR 216 million and Italy with EUR 143 million. Compared with 2015, Spain saw decreases in both volume and value, of 6% and 1% respectively. The UK registered a 9% value drop against a 2% volume increase. Italy and France registered positive trends in value, of 4% and 9% respectively. In volume terms, Italy registered a 4% increase while France a 3% increase.

HAKE – In 2016, compared with 2015, EU consumption of fresh hake

Consumption

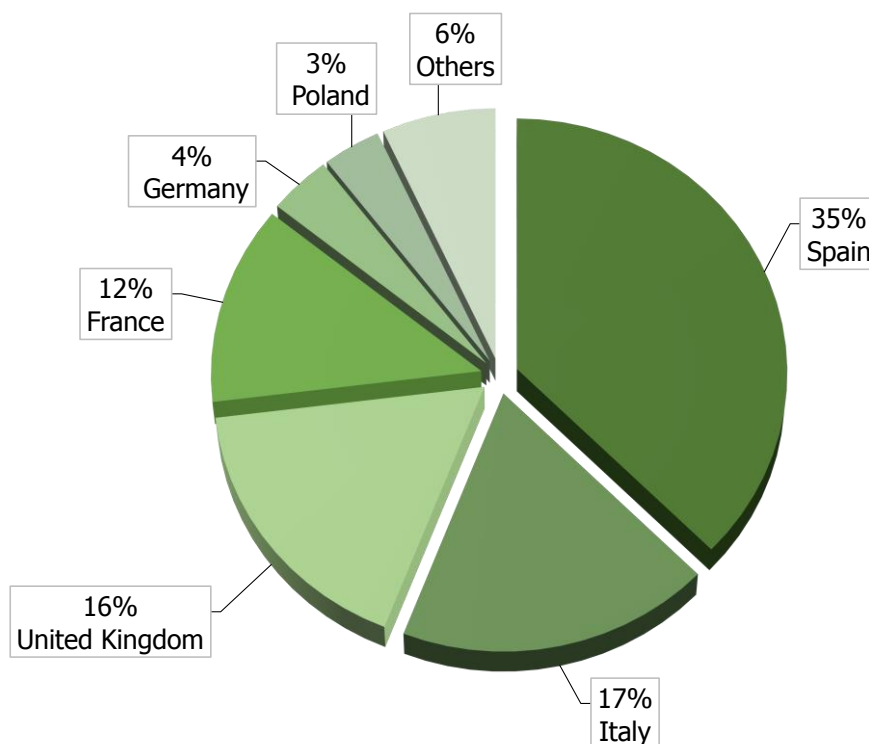
registered an increase of 7% in value and 5% in volume. Spain, the main market, was responsible for 90% of the total consumption with a value of EUR 819 million. France and Portugal followed at a distance, spending EUR 49 million and EUR 36 million, respectively.

GILT-HEAD SEABREAM – Fresh gilthead seabream consumption increased by 6% in 2016, in both value and volume terms over the previous year. Italy and Spain accounted together for 82% of total value of gilt-head seabream consumption in the EU.

Chart 25

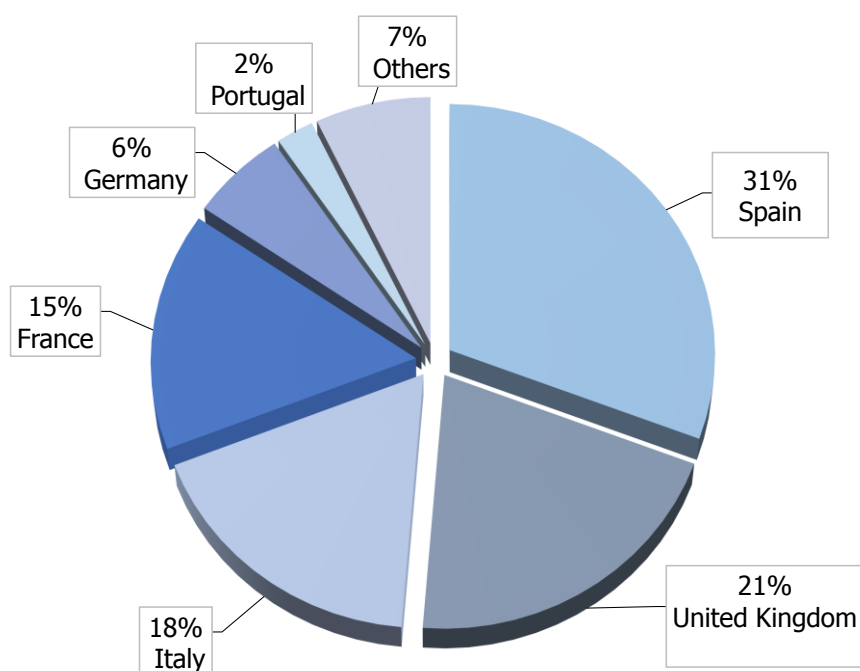
Household consumption of fresh fish products in 2016 for the 12 Member States covered, in volume

Source: EUMOFA elaboration of Europanel data

*Chart 26*

Household consumption of fresh fish products in 2016 for the 12 Member States covered, in value

Source: EUMOFA elaboration of Europanel data



Among the 12 Member States surveyed, Spain, Italy, the UK and France were the most important, covering 80% of the total EU fresh fish consumption in volume and 85% in value.

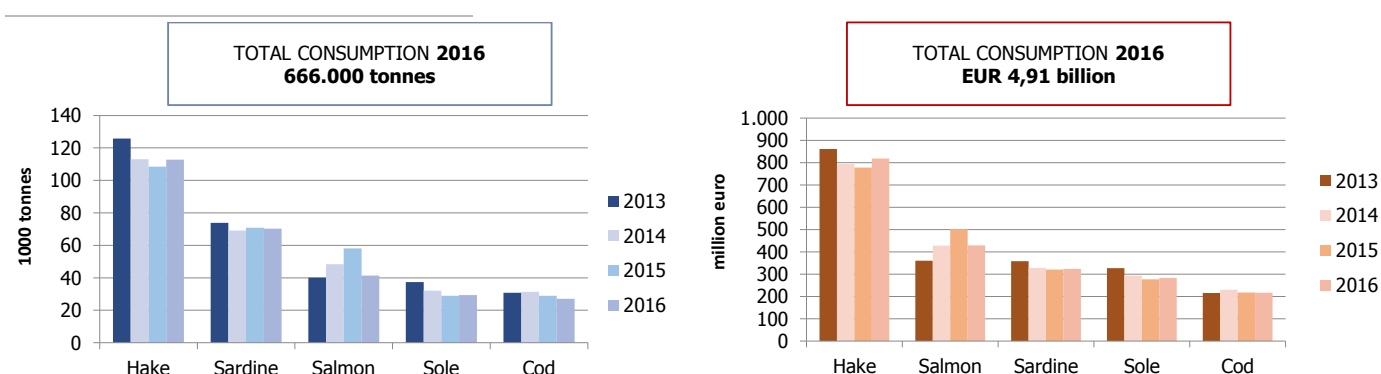
Spain

Spain is the largest consumer of fresh fish in the EU. In value, in 2016, its most consumed fresh species were hake, salmon, sardine, cod and sole, which accounted together for 42% of the total in the country, in both value and volume.

Chart 27

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

Source: EUMOFA elaboration of Europanel data



In Spain, total value of consumption remained stable in 2016 compared with 2015, posting a decrease of 0,8%, while volume decreased a slight 3% during the same period.

As in 2015, hake was the main species consumed in Spain in 2016, when its consumption recovered from the slight decrease registered in 2015. Salmon consumption decreased in volume and in value by 29% and 15%, respectively in 2016, and also registered the highest negative trend of all the species consumed, in terms of volume.

Sole showed a positive trend while sardine and cod registered downward trends for 2016, in value and in volume.

Italy

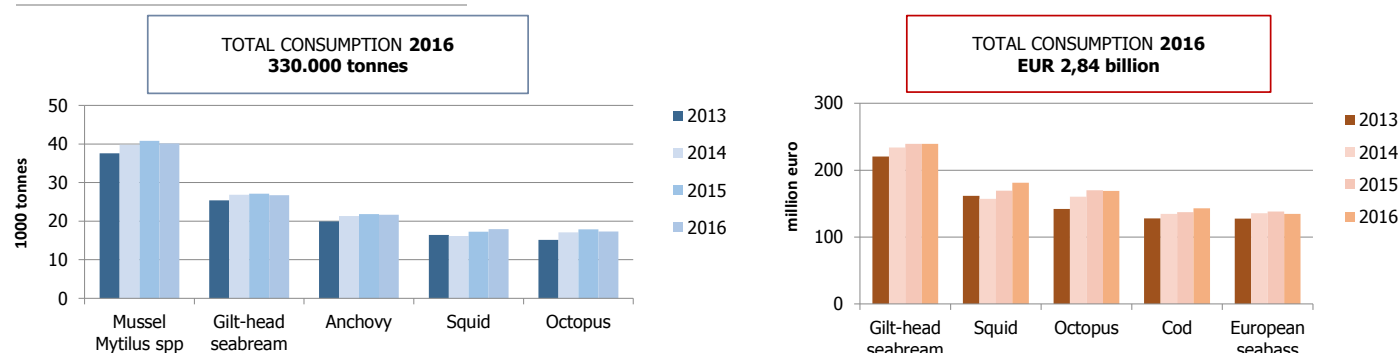
In 2016, Italy ranked second in volume of fresh fish consumed by EU households, with 330.000 tonnes. Its value of EUR 2,8 billion ranked third, after Spain and the UK.

In volume, mussel was the most important species consumed in Italy, while its most valued species consumed were gilt-head seabream, squid, octopus, cod and European seabass, which combined covered 30% of total consumption.

Chart 28

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

Source: EUMOFA elaboration of Europanel data



After registering a 2015 increase compared with 2014 in both volume and value, household consumption of main species in Italy was stable in 2016 with respect to 2015. Compared with 2013, in 2016 the country registered an increase of 13% in value and 8% in volume.

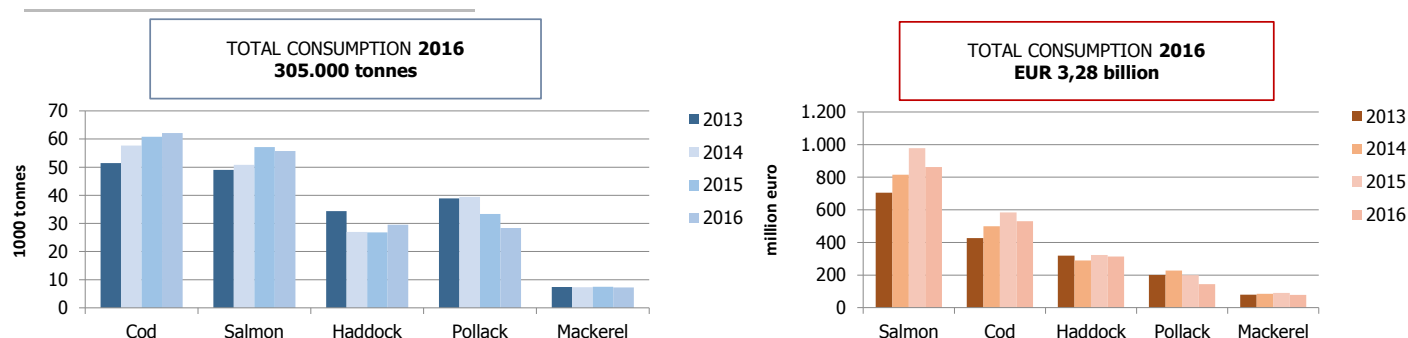
United Kingdom

In 2016, the most important species consumed in the United Kingdom were salmon, cod, haddock, pollack and mackerel, covering together around 60% of the total fresh species consumed by households in the UK, both in volume and value. Since 2013, cod and salmon have been the main fish species consumed.

Chart 29

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

Source: EUMOFA elaboration of Europanel data



After the increased consumption of fresh fish registered in 2015, the UK observed a decline of 10% in value in 2016 against stable volumes. These significant value drops were registered for all the most consumed species.

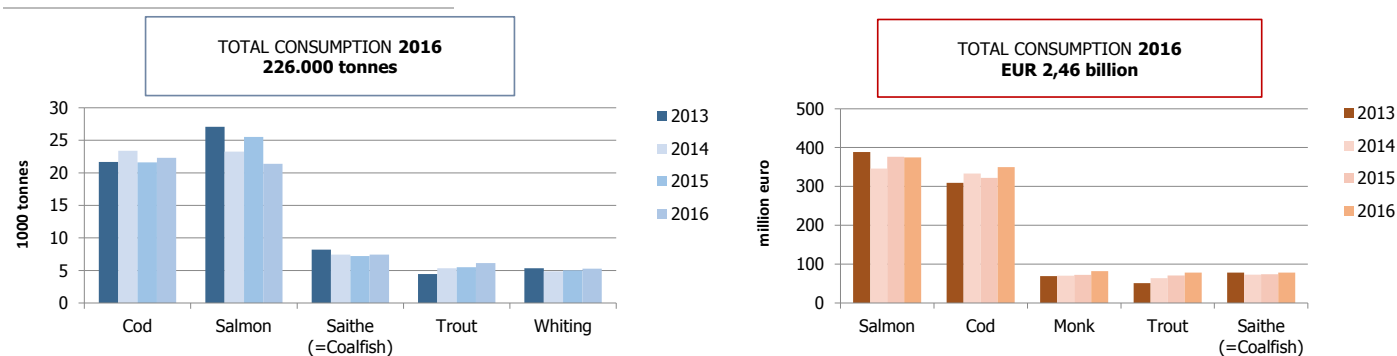
France

In 2016, France ranked fourth in the EU in terms of household consumption of fresh fish, reaching a value of EUR 2,46 billion for 226.000 tonnes. In 2016, the most consumed fresh species in volume were cod, salmon, saithe, trout and whiting. In value, monk is third behind salmon and cod.

Chart 30

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

Source: EUMOFA elaboration of Europanel data



In 2016, household consumption of fish species remained stable in volume but increased by 5% in value of total products consumed. Among the main species consumed fresh, salmon and cod were clearly predominant, in value and in volume. Salmon consumption, after the increase registered in 2015, recorded a slight decrease in 2016 both in volume and in value.

Germany and Poland occupy the fifth and sixth positions in the EU ranking of household consumption fresh fish, but with amounts well below those of France.

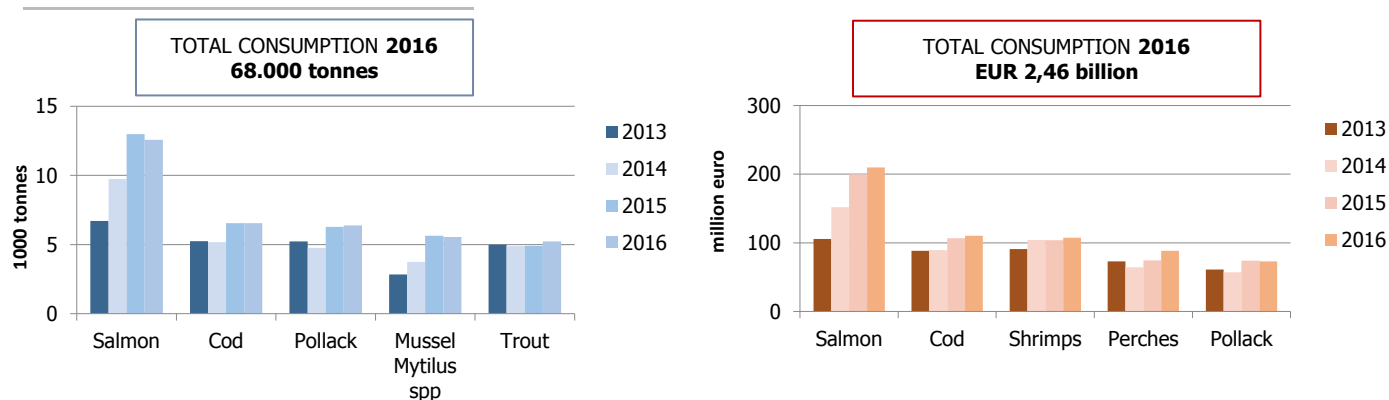
Germany

In value the most important species consumed in Germany in 2016 were salmon, cod, shrimps, perches and pollack, which together accounted for around 61% of the total fresh species consumed by households. Since 2013, cod and salmon have been the main fish species consumed. Germany ranked fifth in the EU in terms of fresh fish household consumption, amounting to a value of EUR 958 million for 68.000 tonnes.

Chart 31

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

Source: EUMOFA elaboration of Europanel data



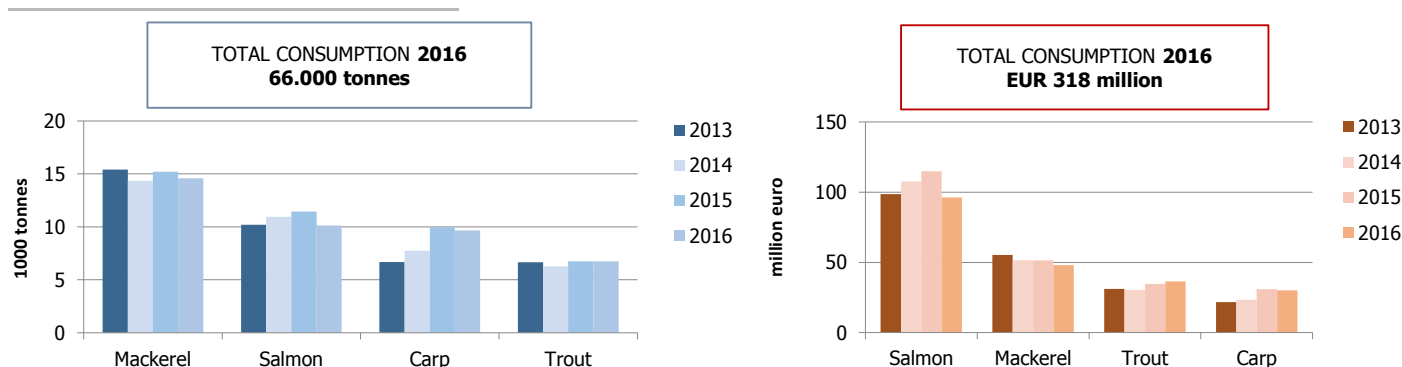
Household consumption of fish species registered positive trends in both volume and value of 4% and 8%, respectively. Except for pollack, all the main fish species consumed by household showed positive trends from 2013. Salmon, the fish most consumed by households in Germany, represented 22% and 18% in value and volume of total fish species consumed, respectively. The consumption of fresh products is usually not high in Germany where consumers prefer processed fish (frozen, smoked, marinated, canned).

Poland

Chart 32

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

Source: EUMOFA elaboration of Europanel data



The consumption of fresh fish decreased in value and volume by 5% in 2016 compared with 2015. Salmon is the most consumed fresh species, but the freshwater species, trout and carp, have also registered significant increases since 2012.

An ongoing propensity to consume a larger variety of fish species has emerged in the major southern countries – Spain, Italy and France – while the range of species has been more limited in the UK, Germany and Poland.²⁷

Other Countries

Denmark – The total fresh consumption continued to decrease in 2016, due to a lower consumption of salmon, the main species.

Hungary – The household consumption of fresh fish products decreased both in volume and value in 2016.

Ireland – The consumption of fresh products increased 5% in value and 1% in volume in 2016. The most consumed species, salmon and cod, together accounted for 56% of the total consumption of fresh fish products.

Netherlands – The consumption of fresh products augmented in value but remained stable in volume. Salmon, the main product consumed, accounted

²⁷ For more information about the composition of the EU consumption of fish products, please see the “EU consumer habits regarding fishery and aquaculture products” (Annex 2) - EUMOFA publication.

for 35% of the total species consumed. In 2016, the consumption of salmon increased by 6% in value.

Portugal – The household consumption of fresh products registered a 3% increase in value from 2015, mainly due to gilthead seabream, hake, European seabass, mackerel, clam and scabbardfish which, together, represented 38% of the total fresh fish consumed.

Sweden – The main species consumed are salmon and cod. The total consumption of fresh products decreased in value and volume by 7% and 16%, respectively.

3.5 Out-of-home consumption of fresh, chilled and frozen seafood

This section investigates consumer attitudes, identifying where purchases of fish and seafood products mainly occur. The fisheries and aquaculture industry supplies fish and seafood through different distribution channels, namely: retail, including fishmongers and large-scale retail (LSR); foodservice, which includes catering and commercial restaurants; and institutional, which includes schools, canteens, hospitals and prisons.

A study on EU consumer habits regarding fishery and aquaculture products found people aged 25 to 54 years old eat more frequently in restaurants or other foodservices than older or younger people. Furthermore, people with higher educational levels are more inclined to eat fishery and aquaculture products out of home compared with persons who left education earlier. Managers are more likely to eat fish in foodservices than other socio-demographic categories, e.g. retired and house persons.

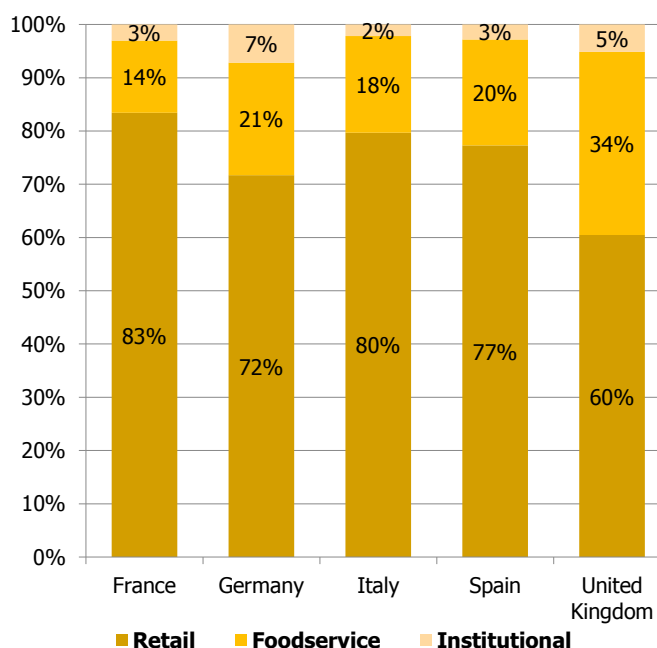
France, Germany, Italy, Spain and the UK accounted for 72% of the total EU expenditure for fish and seafood products in the EU in 2016. In these countries, retail was the main distribution channel for fish and seafood products. Among these EU Member States, the UK registered highest fish consumption through its foodservice segment, due to the specific importance of its “fish & chips” shops. The institutional segment remained the lowest outlet for supplying fish and seafood products.

Chart 33

Fish and seafood consumption by distribution channel (2016), in volume

Source: EUMOFA elaboration of Euromonitor data

In all countries, retail confirmed to be the most important segment

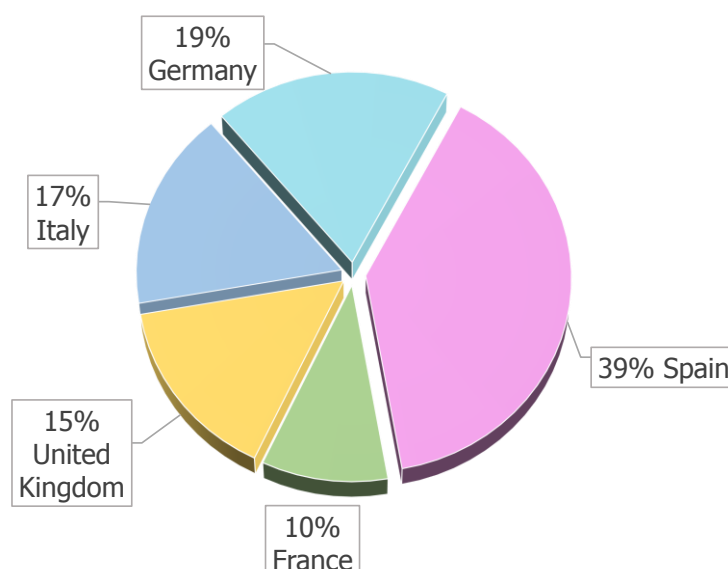


Retail distribution

Chart 34

Fish and seafood consumption through retail channel and by countries (2016), in volume

Source: EUMOFA elaboration of Euromonitor data



In absolute terms and through the retail segment, Spain registered the highest share with 905.000 tonnes in 2016, a 3% decrease from 2015, although at a lower level compared with the figure of 2011.

Finfish products are the most consumed in the five Member States, among the product categories of finfish, crustaceans, cephalopods and other molluscs. In Germany and the United Kingdom, finfish products accounted for 86% and 89%, respectively, of the total of fish and seafood products sold in 2016.

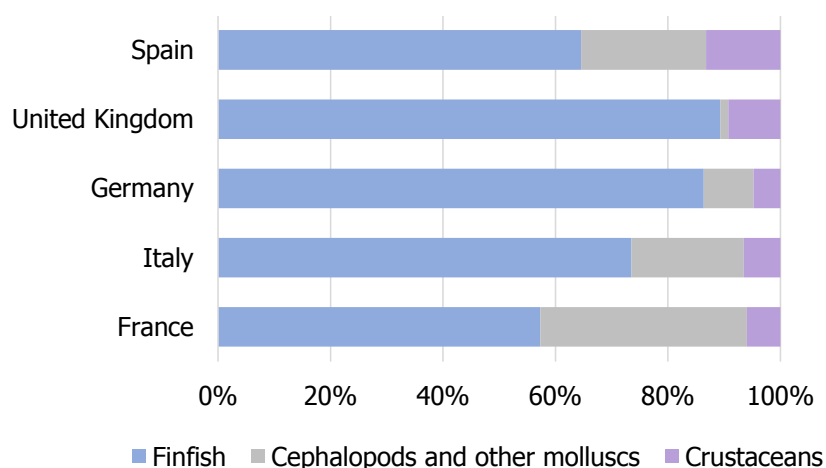
Spain has the highest consumption of crustaceans with 161.000 tonnes, which represented a 3% decrease from 2015, followed by the UK with 69.000 tonnes.

The consumption of molluscs (including cephalopods) decreased in all five countries.

Chart 35

Fish and seafood consumption through retail channel (2016), in volume

Source: EUMOFA elaboration of Euromonitor data



From 2011 to 2016, the supply of fish products sold through retail decreased in Italy, Germany and Spain, while it increased in the United Kingdom and France by 15% and 2% respectively. Germany and the United Kingdom recorded the highest amount of fish products sold through retail.

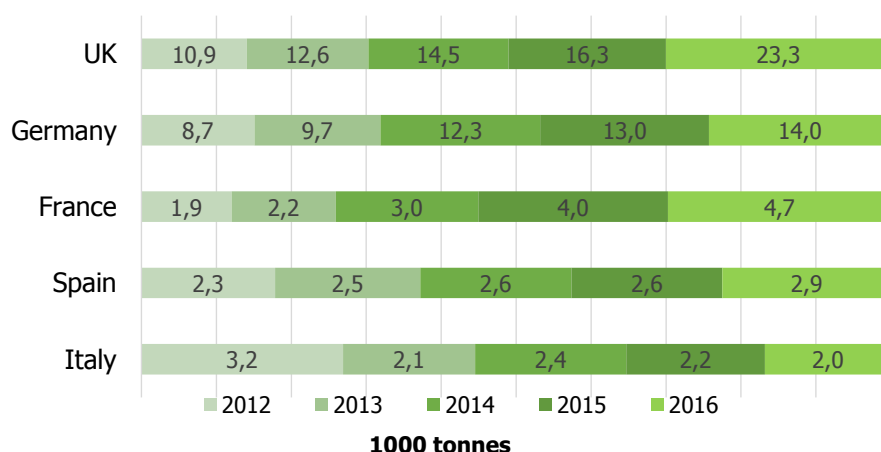
3.6 Consumption and production of organic fish and seafood

Chart 36

Organic fish consumption, 2012-2016

Source: EUMOFA elaboration of
Euromonitor data

Since 2012, the consumption of organic fish and seafood products has been constantly increasing, registering almost 50.000 tonnes in 2016, which was a 73% increase from 2012. In absolute terms, the UK led in the consumption of organic fish in 2016, consuming more than 23.300 tonnes of organically produced products, an increase of 43% over 2015. In absolute terms, the United Kingdom, Germany, France and Spain showed positive trends from 2012 to 2016, while Italy decreased its organic fish and seafood consumption – dropping from 3.200 tonnes in 2012 to 2.200 tonnes in 2016.



On average, in the main EU markets, 1,5% of fish and seafood consumption originates from organic production

Production and consumption of organic fish and seafood still represent a niche and new market in the EU despite growing demand for organic aquaculture products in the recent years.²⁸ The consumption of organic seafood products is constantly increasing in the EU, thanks to the increased awareness of consumers.²⁹ This trend has been taken into account by food retail companies and fish and seafood traders (brands), by adapting the offer of organic food and, at the same time, by promoting specific organic fish and seafood product lines.

The most important organic species consumed include salmon, trout and carp, as well as seabass, seabream and mussels. The EU demand for organic fish is higher than the production, which focuses mainly on salmon and, to a lesser extent, on trout, seabass/seabream, carp and mussel. Imports are a significant part of the EU supply, particularly for: shrimps imported from Ecuador, Madagascar, Bangladesh, Thailand, Indonesia and Vietnam; tilapia imported from Central America; and pangasius imported from Viet Nam.³⁰ Supply of farmed organic salmon to the EU market consists of both EU farmed organic salmon (mainly of Irish origin and some of Scottish origin) and imports. EU organic salmon import is solely from Norway. In 2016, Norway's exports of organic salmon to the EU were stopped because it was found that Norwegian legislation on organic agriculture was not in alignment with the EU organic regulations. This stop was removed in March 2017, when Norway aligned its national agriculture legislation to EU organic rules.

The aquaculture chapter of this report highlights the economic performance of the EU organic aquaculture sector that was identified in the 2017 study "Organic Aquaculture".

²⁸ <https://www.cbi.eu/market-information/fish-seafood/organic-seafood/>.

²⁹ www.cbi.eu

³⁰ CBI product factsheet: frozen organic seafood in Europe

3.7 Geographical indications and traditional specialities guaranteed

There are 50 EU quality schemes registered as geographical indications (GIs) including Protected Designations of Origin (PDO) and Protected Geographical Indications (PGI) and, in the seafood sector, the Traditional Specialities Guaranteed (TSG). The Member States with the highest number of products carrying such schemes are the United Kingdom (13 products), Germany (7 products), France, Italy and Spain (5 products each). Three geographical indications – one PDO and two PGIs – have been awarded to products from extra-EU countries, notably China, Norway and Viet Nam.

Four products have been registered since July 2016, all PGIs:

- “West Wales Coracle Caught Salmon” (February 2017, UK): Atlantic salmon that has been caught using the ancient Welsh traditional method of coracle fishing.
- “West Wales Coracle Caught Sewin” (March 2017, UK): sea trout (*Salmo trutta*), that has been caught using the ancient Welsh traditional method of coracle fishing.
- “Novac afumat din Țara Bârsei” (April 2017, Romania): smoked fish fillet obtained from the bighead carp (*Arystichthys nobilis*).
- “London Cured Smoked Salmon” (April 2017, UK): salmon cured and smoked using only a combination of rock salt and oak smoke.

More than two-thirds, or 34, of the products are PGIs, while one-quarter, or 13, are PDOs, and 6%, or 3, are TSGs.

Among the 50 products registered, 54% are fishery products and 46% are aquaculture products. Fishery products are mainly processed products, with 63% of the geographical indications for fishery products concerning totally or partially processed products. On the contrary, 65% of aquaculture products are sold unprocessed. Processed products cover a wide range of processing methods: smoked, cured, dried, cooked and canned, including fish roes and fish sauce.

Table 10
Types of products under protected names
in the seafood sector (July 2017)

Source:
DOOR, DG AGRI

	Unprocessed	Processed	Unprocessed / Processed	Total	% Total
Fishery	10	15	2	27	54%
Aquaculture	15	3	5	23	46%
Total	25	18	7	50	100%
% Total	50%	36%	14%	100%	N/A

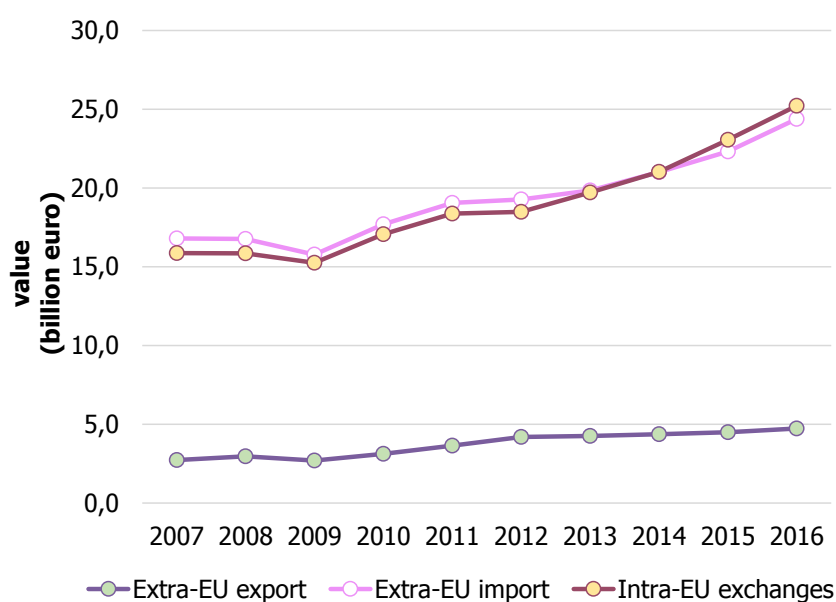
Main species covered by GIs and TSGs include 9 carp products, notably in Germany, Czech Republic and Poland, 5 mussel products in France, Italy, Spain and the UK, 5 salmon products, of which 4 are in the UK and 1 in Ireland, and 3 products each of anchovy, cod, oyster, tuna and vendace. Among the 50 denominations, 78%, or 39, cover finfish, 20%, or 10, cover molluscs and 2%, or 1, cover crustaceans.

EU trade, which encompasses trade flows with extra-EU countries and exchanges between Member States, has been increasing since 2010 with an average annual growth rate of 7%. In 2016, the total value of trade flows amounted to EUR 54,3 billion, registering an increase of EUR 4,5 billion from 2015. Volumes grew a slight 1%, reaching 14,1 million tonnes.

EU exports contributed to the overall growth, increasing by EUR 228 million – a 5% gain from EUR 4,50 billion in 2015 to EUR 4,73 billion in 2016. However, it was intra-EU trade and imports from non-EU countries that generated the major increases. Both grew by 9%, with intra-EU trade increasing by EUR 2,2 billion (from EUR 23,05 billion to EUR 25,22 billion) and extra-EU imports increasing by EUR 2,1 billion (from EUR 22,32 billion to EUR 24,38 billion)

Chart 37

EU trade flows
Source: EUROSTAT



³¹ 2013, 2014, 2015 and 2016 data are at EU-28 level, as they include Croatia among reporting countries.

Chart 38

**Most relevant extra-EU trade flows
(2016, in value)**

Source: EUROSTAT

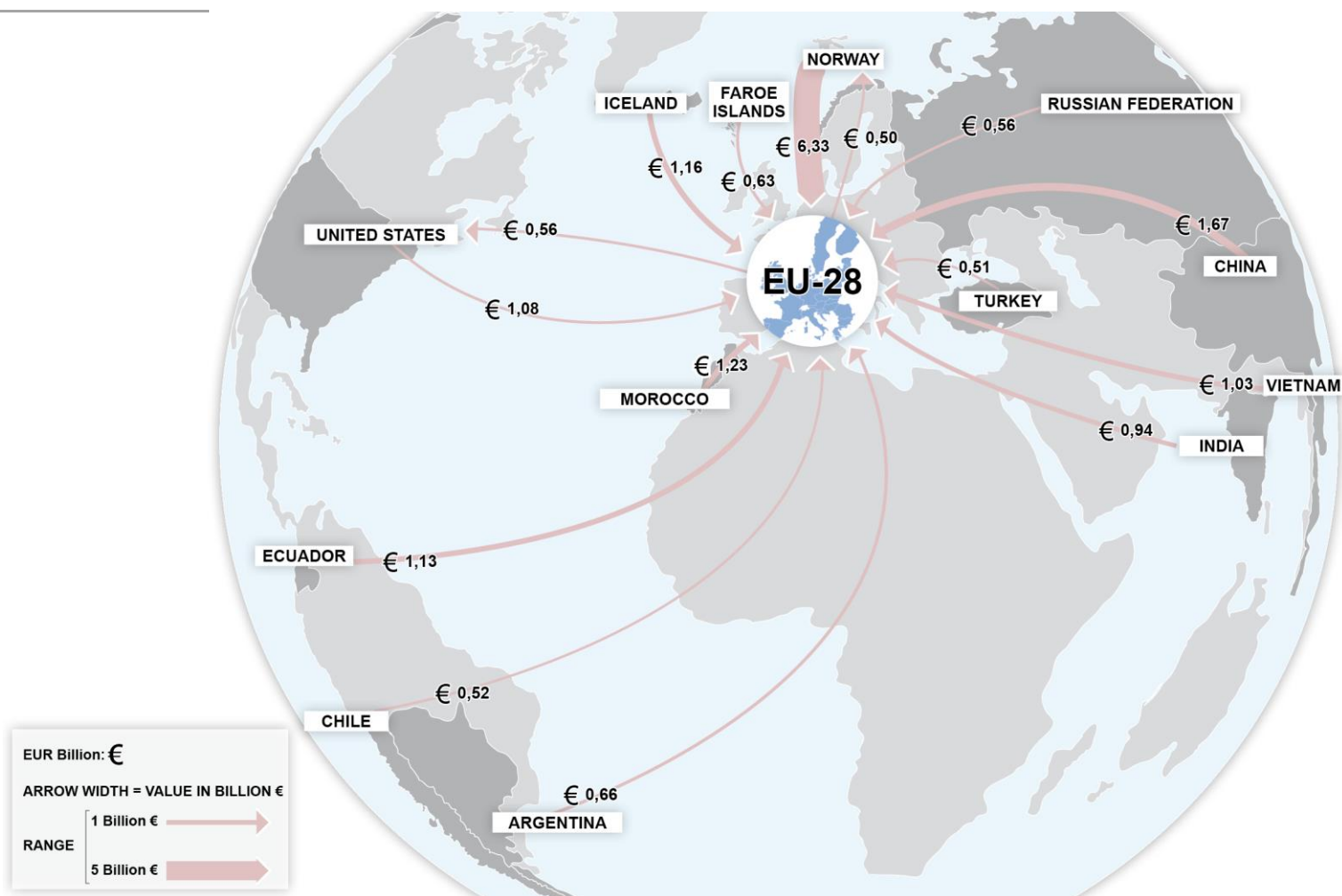
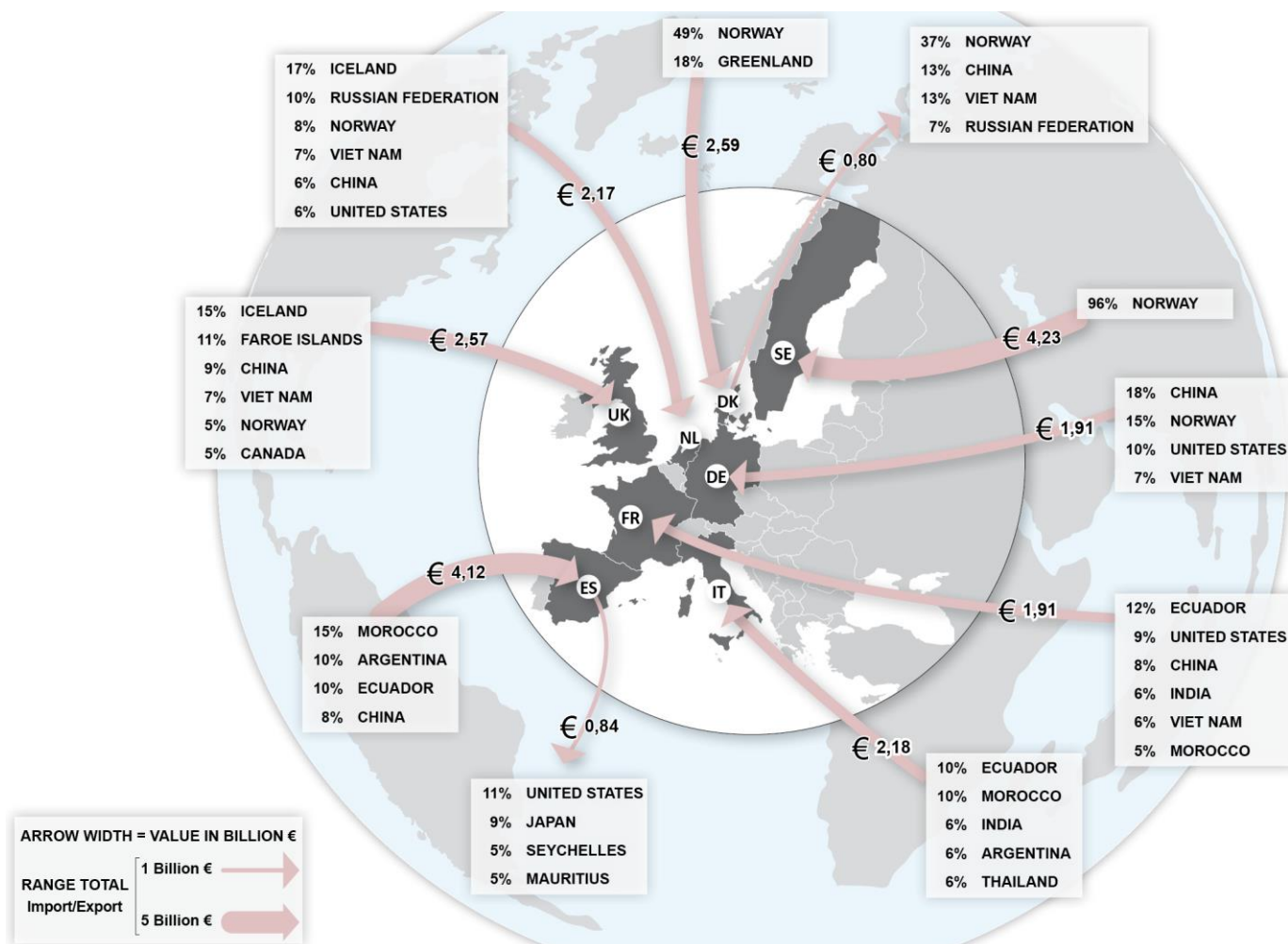


Chart 39

**Most relevant extra-EU trade flows
by Member States
(2016, in value)**

Source: EUROSTAT



4.1 Extra-EU balance trade

Table 11

Trade deficits of major net importers (EUR billion, 2016)

Source: EUROSTAT

In 2016, the EU trade deficit was the largest ever, at EUR 19,6 billion. It grew by 10% compared with 2015.

Country	Trade deficit
European Union	19,6
United States	12,4
Japan	10,7

The deficit increase was due to the growing import values of both fresh and frozen products in 2016 compared with 2015. Their respective deficits, which amounted to EUR 6,7 billion and EUR 11,8 billion, corresponded to increases of 21% and 10% each. All main EU importers recorded an increased trade deficit in 2016 compared with 2015. It is worth noting that Sweden ranks first, because it is the “port of entry” of Norwegian imports into the EU.

Table 12

Trade deficits of major EU importers in 2016 (EUR billion) and % variation 2016/2015

Source: EUROSTAT

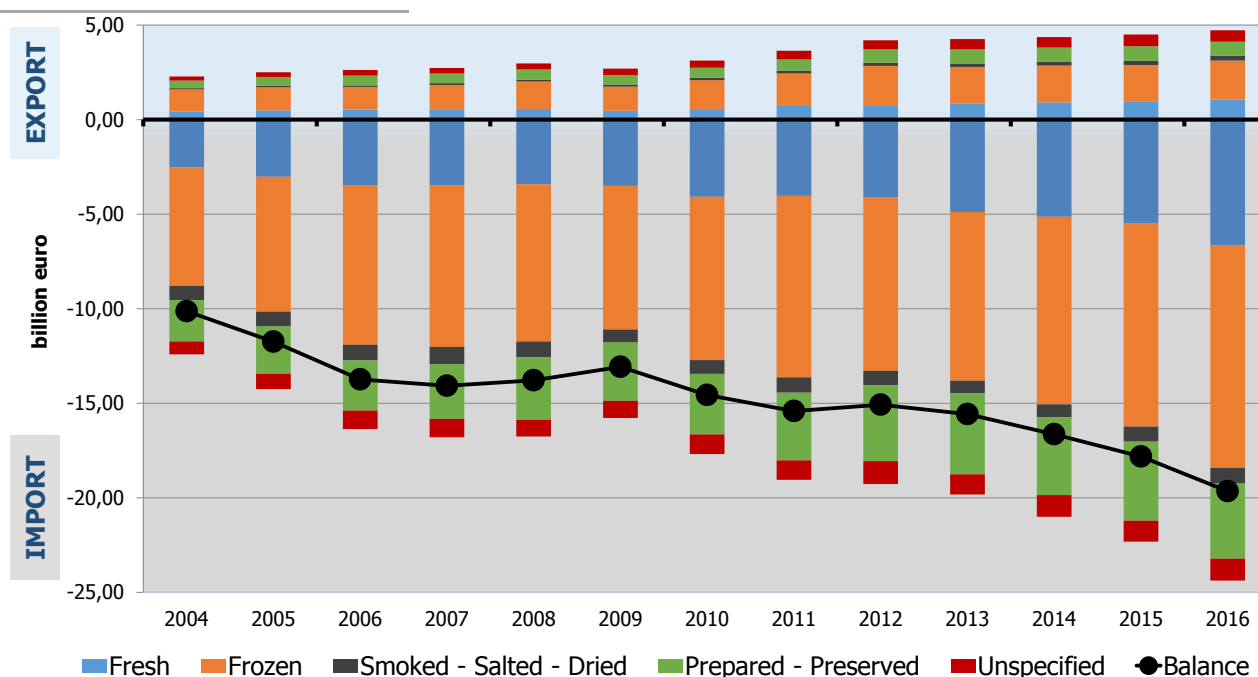
EU Member State	Trade deficit	% variation 2016/2015
Sweden	4,2	+20%
Spain	3,3	+12%
Italy	2,0	+12%
United Kingdom	1,9	+0,2%
Denmark	1,8	+22%
Netherlands	1,5	+3%

Chart 40

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

Source: EUMOFA elaboration of EUROSTAT data

The EU has shown growth in imported fresh products since 2012, and in imported frozen products since 2014. Frozen fish products account for half of the value of fish products imported in the EU, while fresh products account for 18%. A similar composition is observed for EU exports, where frozen and fresh products represent 44% and 23% of the total, respectively.



4.2 Comparison between imports of fish and meat

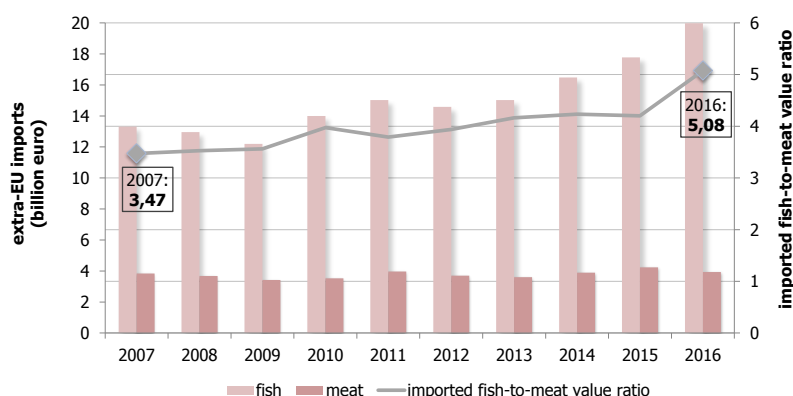
The EU imported EUR 137 billion worth of food products in 2016 and, of that, fish represented 18%³².

Chart 41 compares the values of imported fish and meat³³ in the EU, from 2007 to 2016. The grey line represents the evolution of the ratio between imported fish value and meat.

In 2016, mostly due to the growth of the value of imported fish products, this ratio experienced a remarkable 21% increase. In 2015 the ratio was at 4,20, meaning the fish the EU imported was valued more than 4 times higher than meat. In 2016, the ratio rose to 5,08, meaning that the imported fish had five times the value of imported meat.

Chart 41

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



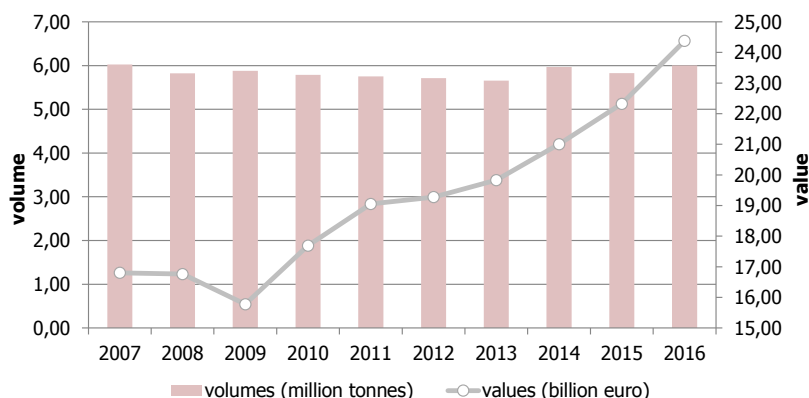
4.3 Extra-EU imports

Extra-EU imports of fisheries and aquaculture products reached a value peak of EUR 24,4 billion in 2016. Volumes reached 6 million tonnes, for the first time since 2007.

In 2016, the volume increase was only 3%, while the growth observed in value terms was 9%, meaning imports were worth almost EUR 2,1 billion more in 2016 than in 2015.

Chart 42

Total extra-EU imports
Source: EUROSTAT



³² 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

³³ 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"

This growth was mainly determined by imports of salmon, whose values reached EUR 5,5 billion, or EUR 1,1 billion more than in 2015. This value increase resulted from its price growing 27%, from 5,22 to 6,62 EUR/kg. Imports of cod and tropical shrimps also showed a significant value growth, together reporting an increase of over EUR 290 million.

The value increase for cod and tropical shrimps was mainly for frozen products. Salmon, however, is almost entirely sold fresh and its value, which rose by EUR 984 million, led the overall increase for these species.

Chart 43 illustrates the trend of average prices for the 5 top-valued import categories from 2011 to 2016.

Chart 43

Prices of top 5 values imported "main commercial species" and % variations 2016/2015

Source: EUMOFA elaboration of EUROSTAT data

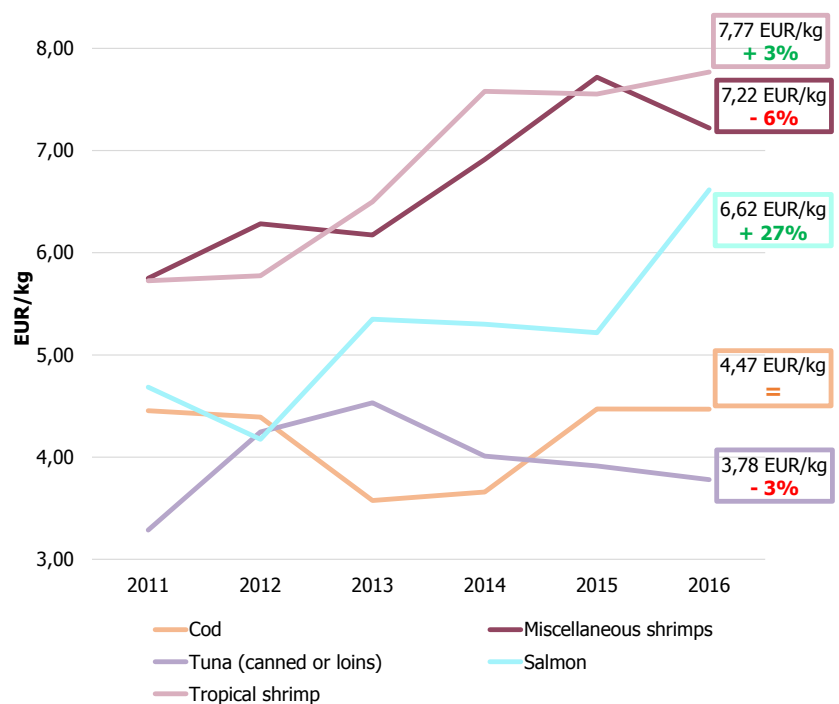


Chart 44

Values of extra-EU imports by Member State in 2016 and % variation 2016/2015

Source: EUROSTAT

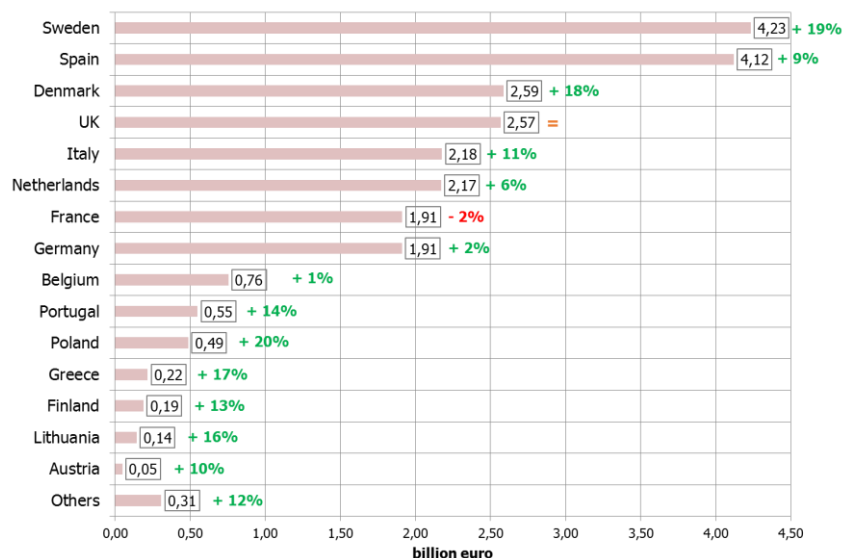
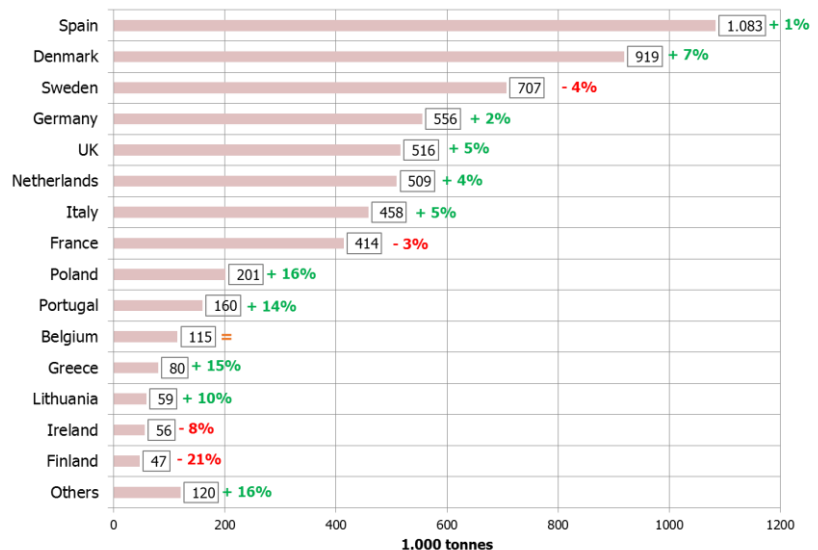


Chart 45

Volumes of extra-EU imports by Member State in 2016 and % variation 2016/2015

Source: EUROSTAT



In 2016, the value growth of fresh salmon originating from Norway compared with 2015, made Sweden the EU Member State reporting the highest values of extra-EU imports

In 2016, the increased value of fresh salmon entering from Norway made Sweden the EU Member State reporting the highest values of extra-EU imports, a position that had been held by Spain for the previous ten years. Fresh salmon sold by Norway also generated an overall growth for Denmark, which had extra-EU imports valued at EUR 400 million.

France was the only Member State reporting decreased value of extra-EU imports. The decrease was mainly caused by a contraction in yellowfin tuna imports, as those from Ghana, the main French supplier, more than halved in value and fell by 41% in volume terms.

Chart 46

Top extra-EU countries of origin by value (2016)

Source: EUROSTAT

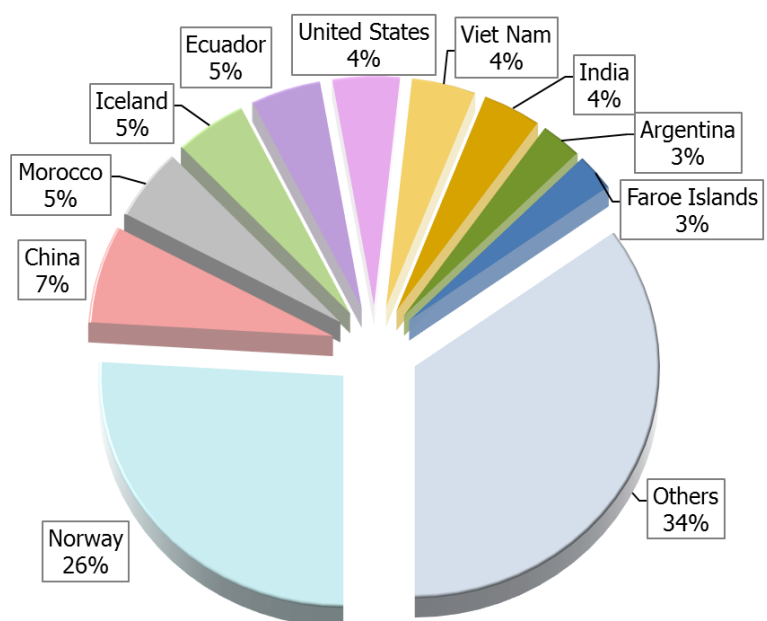
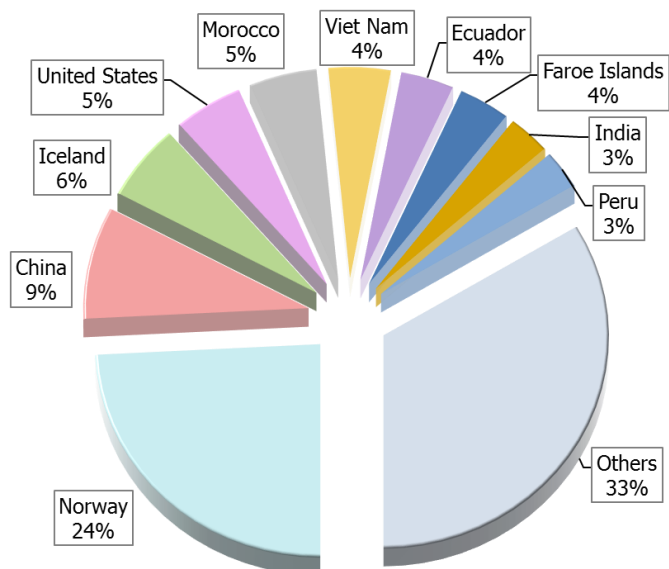


Chart 47

**Top extra-EU countries of origin
by volume (2016)**
Source: EUROSTAT



All top-10 EU suppliers touched their all-time peaks in the values of exports of fisheries and aquaculture products to EU countries. The most significant were Norway, with increased export values over 2015 by 20%, Morocco with 14 % and Ecuador with 10%.

Norway is the main source of EU fish-product imports. The extension of the Russian ban to December 2017 could have led to growth of Norwegian exports to EU countries. However, volumes of EU imports from Norway, hit by a high price rise, declined 5% in 2016 compared with 2015, reaching 1,5 million tonnes but, at the same time, their value totalled EUR 6,3 billion, the highest amount ever recorded.

China, the second major supplier, sold 515.074 tonnes of fisheries and aquaculture products to the EU in 2016, with a value of EUR 1,7 billion. This represented a 7% growth in volume terms and an 8% value increase over 2015, which were all-time peaks for both. Such growth was driven by the 56% increase in China's exports of frozen squid to Spain, which reached 35.000 tonnes, and reached a value of EUR 111 million, which was a 115% increase.

Chart 48

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

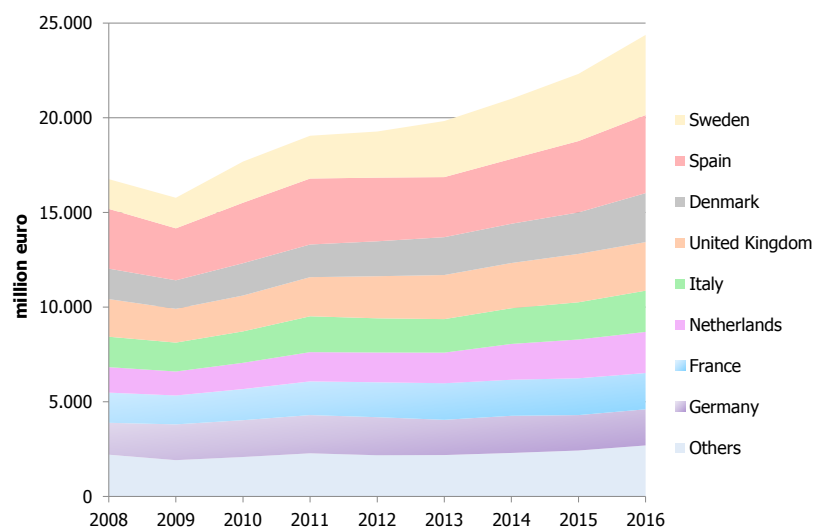


Chart 49

**EU imports by commodity group
by value (2016)**

Source: EUMOFA elaboration of EUROSTAT data

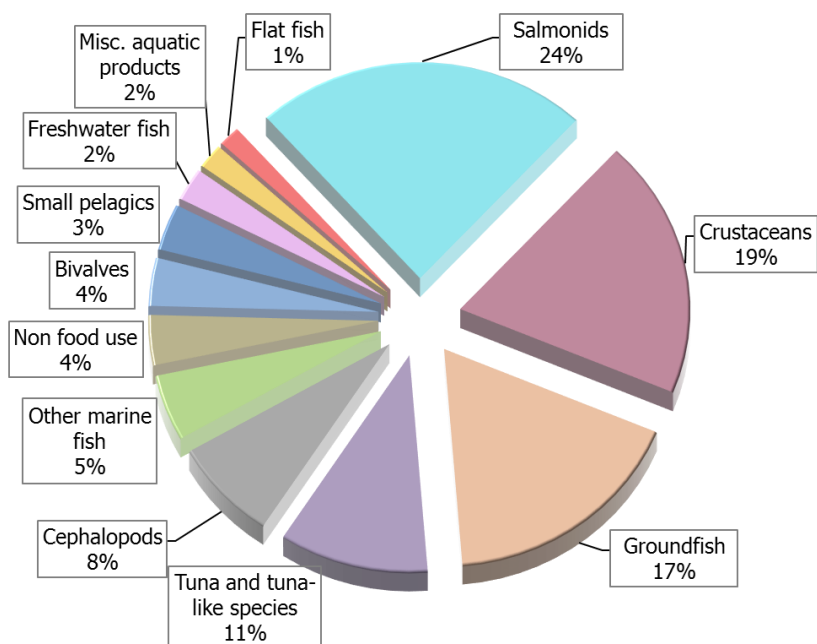


Chart 50

**EU imports by commodity group
by volume (2016)**

Source: EUMOFA elaboration of EUROSTAT data

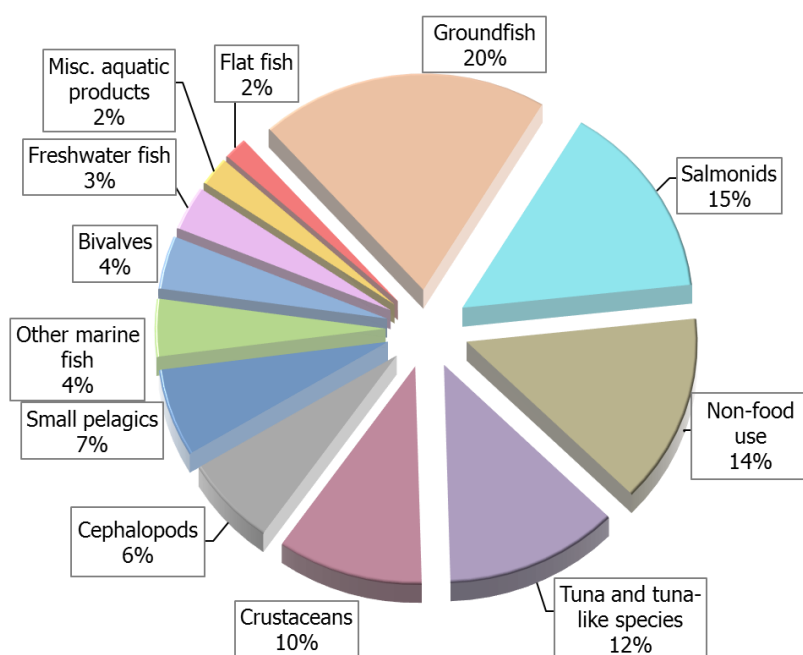


Table 13

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

Source: EUMOFA elaboration of EUROSTAT data

Commodity group	2011	2012	2013	2014	2015	2016	% variation 2016/2015	%variation 2016/2011
Salmonids	3.118	3.228	4.146	4.430	4.579	5.752	+26%	+85%
Crustaceans	3.851	3.667	3.763	4.488	4.644	4.713	+1%	+22%
Groundfish	3.517	3.577	3.418	3.616	4.146	4.257	+3%	+21%
Tuna and tuna-like species	2.127	2.561	2.860	2.562	2.579	2.560	-1%	+20%
Cephalopods	1.491	1.371	1.110	1.236	1.447	1.838	+27%	+23%
Other marine fish	1.245	1.016	981	987	1.091	1.203	+10%	-3%
Non-food use	757	995	874	914	877	912	+4%	+21%
Bivalves	810	651	629	763	846	876	+4%	+8%
Small pelagics	739	796	717	689	740	847	+14%	+15%
Freshwater fish	779	685	645	617	637	601	-6%	-23%
Misc. aquatic products	466	464	433	424	447	449	+0,4%	-4%
Flat fish	153	264	253	276	287	369	+29%	+141%
Total	19.052	19.276	19.830	21.003	22.320	24.378	+9%	+28%

Table 14

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

Source: EUMOFA elaboration of EUROSTAT data

Commodity group	2011	2012	2013	2014	2015	2016	% variation 2016/2015	% variation 2016/2011
Groundfish	1.095	1.103	1.153	1.188	1.162	1.218	+5%	+11%
Salmonids	663	763	776	837	877	880	+0,3%	+33%
Non-food use	736	884	766	937	837	844	+1%	+15%
Tuna and tuna-like species	698	666	701	719	723	732	+1%	+5%
Crustaceans	660	604	596	622	602	615	+2%	-7%
Cephalopods	392	379	370	363	375	396	+6%	+1%
Small pelagics	404	379	354	358	358	392	+9%	-3%
Other marine fish	316	236	235	235	229	258	+12%	-18%
Bivalves	235	189	206	252	252	238	-6%	+1%
Freshwater fish	305	256	256	230	209	199	-5%	-35%
Misc. aquatic products	207	183	169	150	129	129	=	-38%
Flat fish	44	70	72	79	75	100	+32%	+127%
Total	5.754	5.713	5.654	5.969	5.829	6.001	+3%	+4%

Salmonids

Salmon

Salmonids reached an all-time peak at 880.000 tonnes and EUR 5,7 billion. In value terms, this was linked to the major growth observed for salmon imports, which increased by EUR 1,1 billion, reaching a total value of EUR 5,5 billion. In volume terms, the increase is credited to trout imports, which grew by 5.299 tonnes, reaching a peak of 33.169 tonnes. They were mainly destined for Sweden, which imported the trout from Norway, and Germany, which imported it from Turkey.

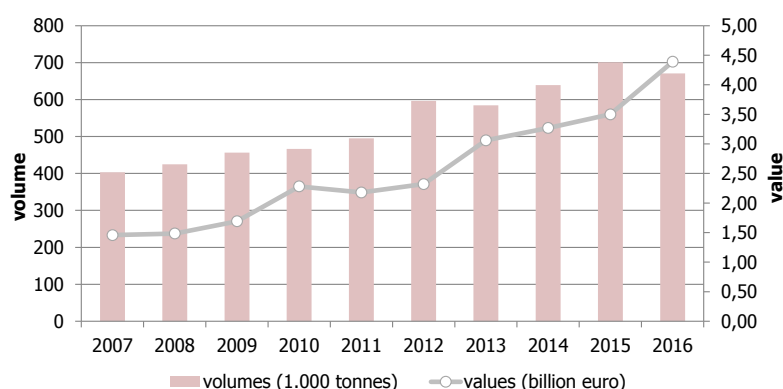
Salmon accounted for almost one-quarter of the total value of fisheries and aquaculture products imported in the EU in 2016. These imports mainly consist of fresh whole products originating from Norway, and entering into the EU through two Member States that act as “trade routes”, namely Sweden and Denmark, as recorded by EUROSTAT.

The evolution of fresh salmon imports in the EU Member States over the last ten years is shown in Chart 51. Their value grew remarkably in 2016 with respect to 2015, increasing 25% from EUR 3,5 billion to EUR 4,4 billion, against a 4% volume decrease from 701.000 to 671.000 tonnes. Over the 10-year, 2007 to 2016 period, the value tripled, while the volumes increased by 68%.

Chart 51

Fresh salmon imported in the EU from Norway

Source: EUMOFA elaboration of EUROSTAT data



The general growth of the unit value of salmon imported in the EU in 2016 compared with 2015 (+27%, from 5,22 to 6,62 EUR/kg) absorbed that registered by fresh salmon originating from Norway, whose price increased from 4,99 to 6,55 EUR/kg (+31%).

Crustaceans

Crustaceans were the most imported commodity group in value in the EU during the 2010 to 2015 period. In 2016, they dropped to second, below salmonids, due to growth in import of salmonids.

Significant growth was seen in crustaceans imports in 2016 compared with 2015, especially in value terms. They rose by 2%, or almost EUR 70 million, and reached EUR 4,7 billion, for 614.733 tonnes.

The value increase was due to an increase in import prices that affected almost all imported species of this group. The only exception registered was for the group “miscellaneous shrimps³⁴” which were

³⁴ “Miscellaneous shrimps” main commercial species is the result of the aggregation of seven CN-8 codes, namely 03061799, 03062710, 03061710, 03062799 (unspecified shrimps and prawns, frozen, not frozen and smoked), 16052110, 16052190 and 16052900 (unspecified shrimps, prepared or preserved, in different packaging).

imported at a slightly lower price of 7,22 EUR/kg, which was 6% less than 2015.

Spain absorbed one-quarter of the EU's crustaceans imports. The total import value of EUR 1 billion marked a 3% increase from 2015.

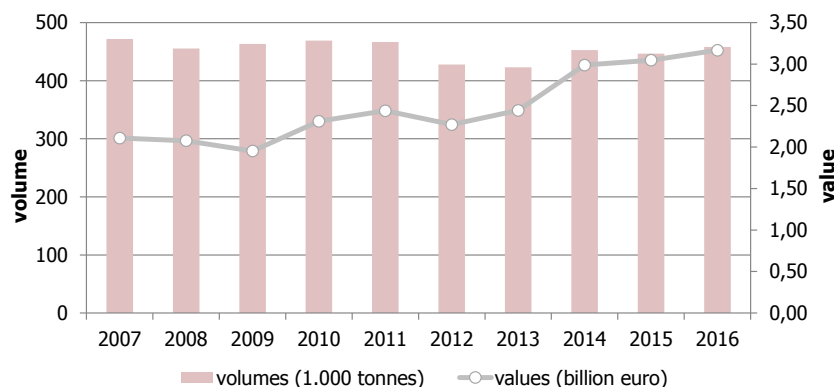
The main countries from which the EU imports crustaceans are Ecuador, representing 16% of the 2016 total, and India and Argentina, with each representing 13% of the total. In value terms, imports from Viet Nam were noteworthy as well, as this country of origin ranked third, providing 54.498 tonnes valued at EUR 488 million.

Frozen shrimps – mainly comprising tropical shrimps³⁵ – accounted for 69% of the total, and the “miscellaneous shrimps” group, accounted for 26% of the total – ranked second in value to salmon among products imported into the EU. In 2016, their value amounted to EUR 3,2 billion, which was EUR 121 million or 4% more than in 2015.

Chart 52

**Frozen shrimps imported in the EU
from extra-EU countries**

Source: EUMOFA elaboration of EUROSTAT data



Tropical shrimps

Imports of frozen tropical shrimps increased 4% from 2015, totalling 280.183 tonnes in 2016. In value terms, thanks to a 7% increase in 2016, they reached an all-time peak of EUR 2,2 billion. After holding steady in 2015 compared with 2014, the average import price increased by 3% in 2016 with respect to the previous year.

Spain and France are the major EU markets, covering 26% and 24% of the total, respectively. Spain imported 71.492 tonnes of frozen tropical shrimps with a value of EUR 492 million. While volumes were almost flat compared with 2015, values grew by 7%. The same trend was registered for France, where imports reached 67.774 tonnes and EUR 490 million. Both Spain and France imported most of these products from Ecuador, at 6,39 EUR/kg and 6,24 EUR/kg, respectively.

Miscellaneous shrimps

Imported miscellaneous shrimps (mostly frozen) declined in 2016, to 241.012 tonnes and EUR 1,7 billion. This represented a fall of 8% in value terms, corresponding to EUR 143 million, but a volume drop of only 1% or 3.053 tonnes.

Argentina supplied 32% of EU imports of frozen miscellaneous shrimps in 2016, providing 78.269 tonnes with a value of EUR 463

³⁵ “Tropical shrimps” main commercial species comprehend two CN-8 codes, namely 03061791 (Deepwater rose shrimps (*Parapenaeus longirostris*), frozen) and 03061792 (Shrimps of the genus *Penaeus*, frozen).

million.

The main importers were Spain with 73.428 tonnes, and the United Kingdom with 35.634 tonnes.

Groundfish

In 2016, groundfish accounted for 17% of EU imports from third countries in terms of value and 20% in terms of volume.

This amounted to a 5% volume increase of 1,2 million tonnes from 2015, and a 3% value increase of EUR 4,3 billion. Both represented all-time peaks.

Cod In 2016, 43% of groundfish imported was cod, with a volume of 518.250 tonnes. When accounting for value, which reached EUR 2,3 billion, its share rose to 54%.

Cod was also responsible for the growth of the whole commodity group, with a significant 7% increase in imported volume and 6% increase in value compared with 2015.

Norway was the EU's main supplier of cod, providing a total of 178.791 tonnes valued at EUR 820 million. Despite only a slight price increase from 4,54 to 4,58 EUR/kg, values grew substantially, by almost EUR 20 million. Russia also registered a rise of EUR 20 million. Its total exports of cod to the EU amounted to 98.352 tonnes worth EUR 369 million, in spite of its price decreasing from 3,79 to 3,75 EUR/kg.

Most of the cod originating from extra-EU countries enters the EU through the Netherlands, which in 2016, received 25% of the total. However, these products were then re-exported to other Member States. The Netherlands mainly imported frozen cod fillets from Iceland at 4,27 EUR/kg and whole frozen cod from Russia, at 3,76 EUR/kg.

Tuna and tuna-like species

Of the top imported commodities in the EU, only tuna and tuna-like species registered a value decrease in 2016 compared with 2015. This value decrease, which amounted to EUR 19 million, was against a parallel 1% increase in volume terms, meaning an import increase of 9.464 tonnes in 2016. However, in the longer term, this marked a substantial 20% value increase and a 5% volume increase when compared with six years before.

Processed tuna

The major part of this commodity consists of "processed tuna", of which 80% is canned tuna and 20% tuna loins for the canning industry. In 2016, its value of EUR 1,9 billion accounted for over 73% of total imported tuna, despite a EUR 136 million or 7% fall from 2015. Its volume of 495.681 tonnes also represented a decrease, that was 3% or 17.698 tonnes less than in 2015.

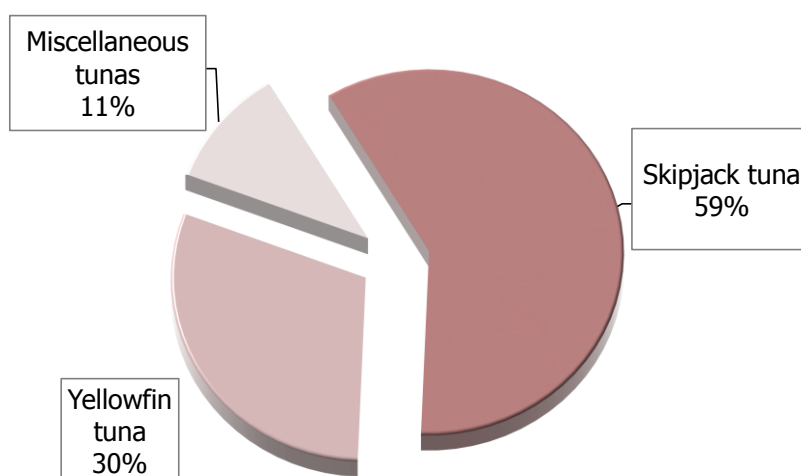
Looking at the composition by specific species, skipjack tuna covered 63% of the total in 2016, with 314.509 tonnes valued at over EUR 1 billion imported. Yellowfin tuna followed, with 120.075 tonnes valued

at EUR 563 million.

Extra-EU imports of processed tuna are mostly absorbed by the United Kingdom and Spain. In 2016, they each covered 20% of the EU total.

Chart 53

**Processed tuna imported
from extra-EU countries (by value, 2016)**
Source: EUMOFA elaboration of EUROSTAT data



Ecuador, the predominant EU supplier, sold these products at 3,73 EUR/kg in 2016, in line with the 2015 price.

A different price trend was observed for other relevant suppliers, namely Mauritius and Thailand. Mauritius sold processed tuna to EU countries for 3,84 EUR/kg or 2% less than 2015, while Thailand sold it at a 4% increase of 3,62 EUR/kg.

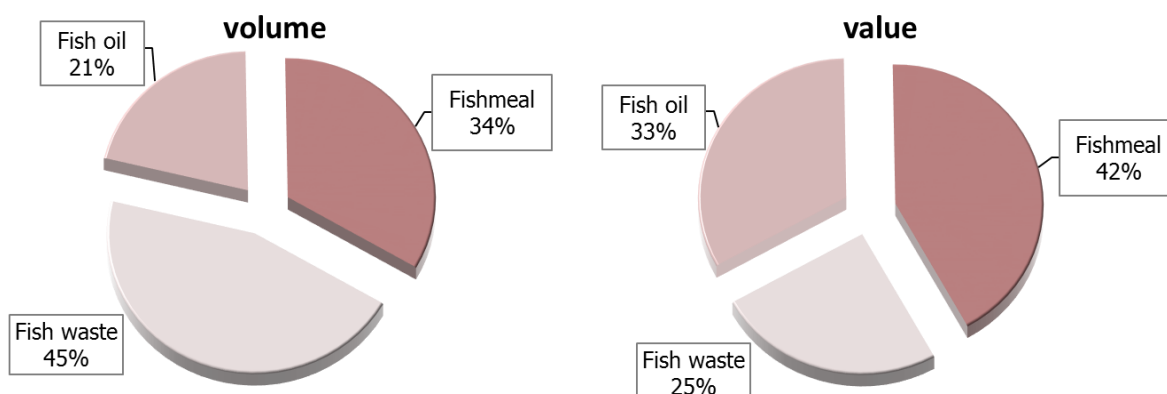
Non-food use products

Non-food use products represented 14% of the volume of fish imported by the EU, ranking third after groundfish and salmonids.

In 2016, this category totalled 843.532 tonnes worth EUR 912 million. While fish waste represents almost half of the total in volume terms, fishmeal is the most valued item, accounting for 42% of the total.

Chart 54

Non-food use products imported from extra-EU countries (2016)
Source: EUMOFA elaboration of EUROSTAT data



Fishmeal

In 2016, fishmeal imported in the EU amounted to 283.669 tonnes, marking a slight recovery after the all-time low of 2015. Values also increased, rising 3% and reaching EUR 385 million.

The recovery was due to that of imports from Peru, the main supplier. In 2016, Peru sold 63.687 tonnes of fishmeal to the EU at 1.361 EUR/tonne. This meant a total value of EUR 87 million, which was EUR 27 million more than in 2015.

In 2016, 47% of extra-EU imports of fishmeal were absorbed by Germany, while Denmark accounted for one-quarter of the total. Germany is mainly supplied by Peru, which provides flours, meals and pellets used as poultry feed and for pig farming, and by Morocco. Denmark mostly imports animal feed from Norway.

Overall, while Germany imported higher amounts of fishmeal in 2016 compared with 2015, Denmark registered a decline.

In Germany, the growth was 10% in volume and 8% in value, leading to 134.621 tonnes and EUR 178 million. The price slightly reduced from 1.351 to 1.324 EUR/tonne.

Denmark registered a 10% fall as volume decreased to 68.764 tonnes, while values stood stable at EUR 90 million, due to a price increase of 129 EUR/tonne that brought the price to 1.297 EUR/tonne.

Fish oil

Volumes of imported fish oil grew by only 1% in 2016, totalling 177.093 tonnes. On the other hand, values rose by a substantial 10%(+EUR 27 million).

Norway is the main supplier, with 57.070 tonnes sold to the EU in 2016, at 1.115 EUR/tonne. The United States followed, selling 39.929 tonnes at 1.669 EUR/tonne.

In 2016, imports from Peru plummeted by over 60% with respect to 2015, dropping from 58.112 to 21.996 tonnes. This, combined with the 201% growth registered for the U.S., meant Peru dropped to third among EU suppliers of fish oil for the first time.

Denmark is the main EU importer. In 2016, it purchased 85.755 tonnes of fish oil from non-EU countries. These included the U.S. which sold 39.751 tonnes at 1.569 EUR/tonne, Peru which sold 20.041 tonnes at 2.111 EUR/tonne, and Norway which sold 13.853 tonnes at 1.417 EUR/tonne.

4.4 Extra-EU exports

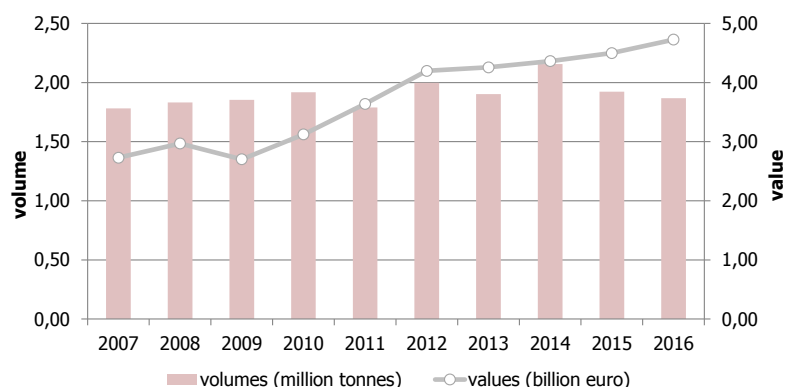
In 2016, the value of EU exports to non-EU countries continued an upward trend started six years before, reaching EUR 4,7 billion. This was the highest amount ever registered and a 5% increase over the EUR 4,5 billion value of 2015.

In volume terms, a 3% decline saw a drop from 1,92 million tonnes in 2015 to 1,87 million tonnes in 2016. Over the 10-year period, a stable trend can be observed.

Chart 55

Total extra-EU exports

Source: EUROSTAT



In 2016, the top 6 Member States exporting outside the EU reported growing values compared with 2015

Six Member States covered 77% of total EU exports in 2016. Spain, Denmark, the Netherlands, the United Kingdom, France and Germany all reported value growth with respect to 2015.

Of them, only Spain registered decreased volumes. However, although it dropped from 410.722 to 389.790 tonnes, its value of EUR 836 million was EUR 11 million more than 2015.

Danish extra-EU exports rose from 292.257 to 297.529 tonnes, reaching the highest amount ever recorded, at EUR 800 million. This was an increase of EUR 73 million from 2015, mostly due to the increased value of exports to Viet Nam (mainly of Greenland halibut for filleting purposes), and Norway (mainly of fish oil).

After experiencing a drop in 2015 compared with 2014, the Netherlands recorded a volume growth of almost 27.500 tonnes in 2016 with respect to 2015, reaching a 9-year peak of 440.574 tonnes. With a significant increase of over EUR 80 million, values grew to an all-time peak of EUR 681 million.

Chart 56

Values of extra-EU exports by Member State in 2016 and % variation 2016/2015

Source: EUROSTAT

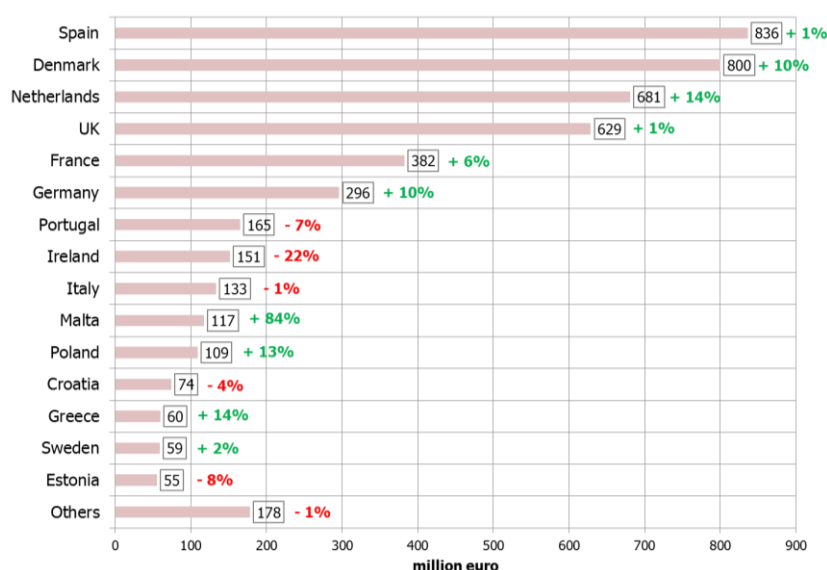
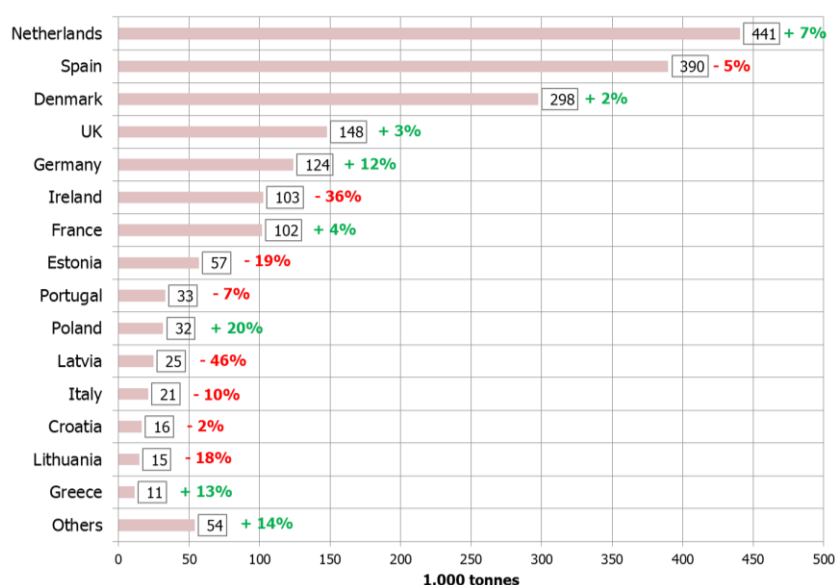


Chart 57

Volumes of extra-EU exports by Member State in 2016 and % variation 2016/2015

Source: EUROSTAT



EU exports are mainly destined to Norway and Nigeria. In 2016, those destined for Norway totalled 257.894 tonnes, an increase of 15% or 34.253 tonnes from 2015, while those destined for Nigeria reached 239.254 tonnes, an 11% or 28.230-tonne decrease from 2015.

In the case of Norway, the increase was due to rising exports of non-food use products, while for Nigeria, the decrease was due to lower exports of mackerel. In value terms, Norway ranked second among countries of destination, with EUR 496 million, an increase of 15% or EUR 64 million from 2015. Nigeria, which sells less valued products, ranked seventh, with a total of EUR 215 million, which was 22% or EUR 61 million less than in 2015.

Exports to the United States were the most valued, at EUR 559 million, a 7% increase from 2015 and the highest amount ever reached, with a volume increase of 4% to 83.841 tonnes – quite stable amounts if compared with the previous year.

Salmon, the most valued “main commercial species” exported by the EU to the US, represented almost half of the total with EUR 256 million. Trout experienced a 7% drop in volume from 2015, but the significant 191% growth of trout’s value from EUR 12 million to EUR 35 million established the 2016 peak.

Chart 58

**Top extra-EU countries of destination
by value (2016)**

Source: EUROSTAT

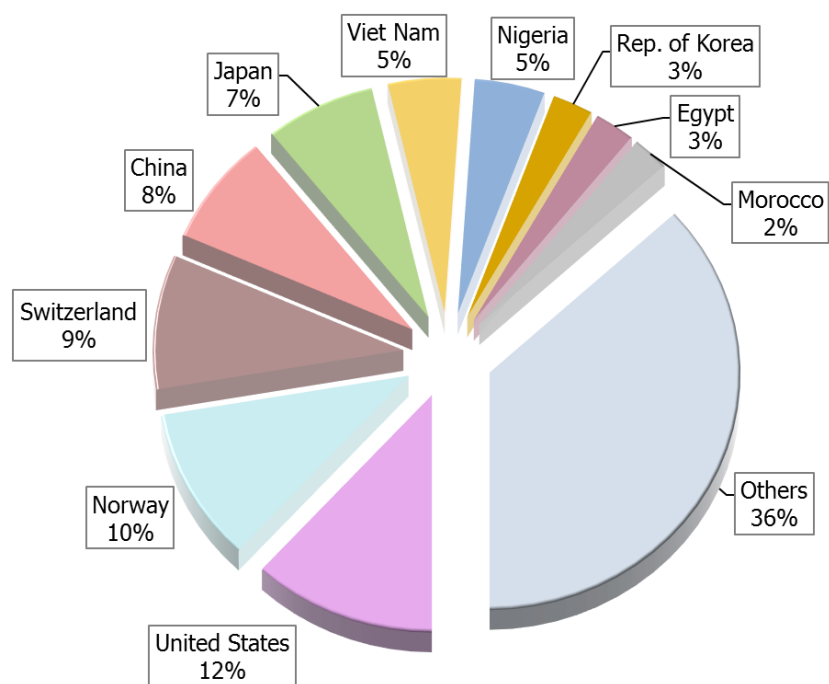


Chart 59

**Top extra-EU countries of destination
by volume (2016)**

Source: EUROSTAT

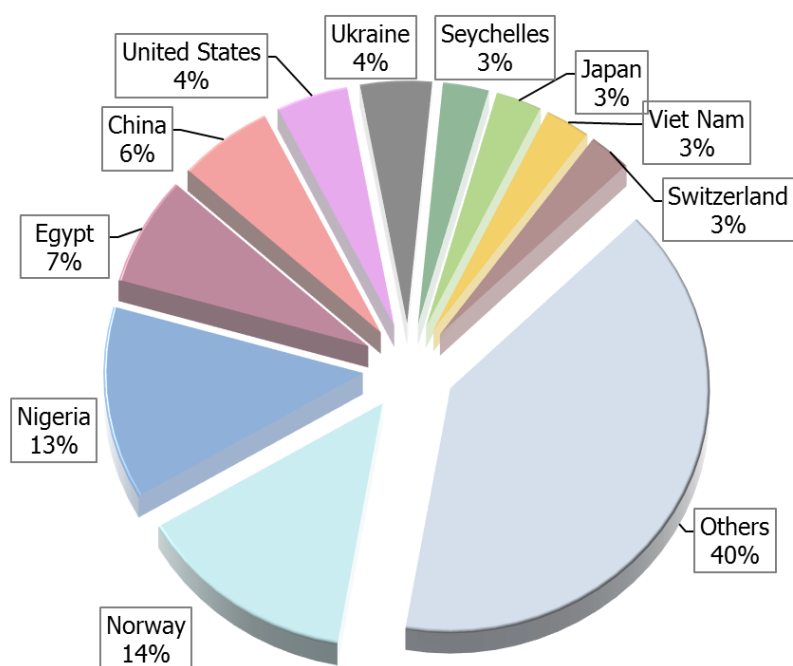


Table 15

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

Source: EUMOFA elaboration of EUROSTAT data

Commodity group	2011	2012	2013	2014	2015	2016	% variation 2016/ 2015	% variation 2016/ 2011
Salmonids	480	513	627	704	673	754	+12%	+57%
Small pelagics	651	812	747	867	785	690	-12%	+6%
Tuna and tuna-like species	475	639	673	529	561	628	+12%	+32%
Non-food use	413	453	505	518	562	552	-2%	+34%
Other marine fish	460	407	379	346	365	418	+14%	-9%
Crustaceans	285	307	291	316	346	407	+18%	+43%
Groundfish	263	341	313	292	309	345	+12%	+31%
Misc. aquatic products	236	265	287	299	321	304	-5%	+29%
Flat fish	161	194	204	216	251	276	+10%	+71%
Bivalves	100	99	110	126	156	175	+12%	+74%
Cephalopods	81	116	75	101	117	131	+12%	+62%
Freshwater fish	33	52	49	50	51	46	-11%	+40%
Total	3.639	4.197	4.258	4.362	4.498	4.726	+5%	+30%

Table 16

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

Source: EUMOFA elaboration of EUROSTAT data

Commodity group	2011	2012	2013	2014	2015	2016	% variation 2016/ 2015	% variation 2016/ 2011
Small pelagics	666	718	644	846	705	629	-11%	-5%
Non-food use	333	343	354	390	353	338	-4%	+1%
Tuna and tuna-like species	263	291	278	279	256	255	=	-3%
Groundfish	84	195	171	162	155	181	+17%	+114%
Salmonids	81	98	114	118	105	108	+3%	+33%
Other marine fish	121	117	102	101	89	96	+8%	-21%
Misc. aquatic products	81	66	76	86	93	85	-8%	+4%
Crustaceans	74	72	67	67	64	67	+4%	-10%
Flat fish	38	44	47	48	46	49	+6%	+31%
Bivalves	20	16	17	19	20	25	+25%	+26%
Cephalopods	21	28	22	28	25	23	-8%	+11%
Freshwater fish	7	11	12	12	11	12	+4%	+74%
Total	1.789	1.998	1.903	2.156	1.922	1.868	-3%	+4%

Small pelagics

Exports of small pelagics maintained a downward trend, reaching 629,344 tonnes in 2016, 11% less than in 2015 and 26% less than 2014. As a result, small pelagics accounted for 34% of the total EU exports of fisheries products in volume, compared with 37% in 2015. Nonetheless, it is still by far the most exported commodity group, as non-food use products, which ranked second, covered only 18% of the total.

Chart 60

EU exports by commodity group in volume (2016)

Source: EUMOFA elaboration of EUROSTAT data

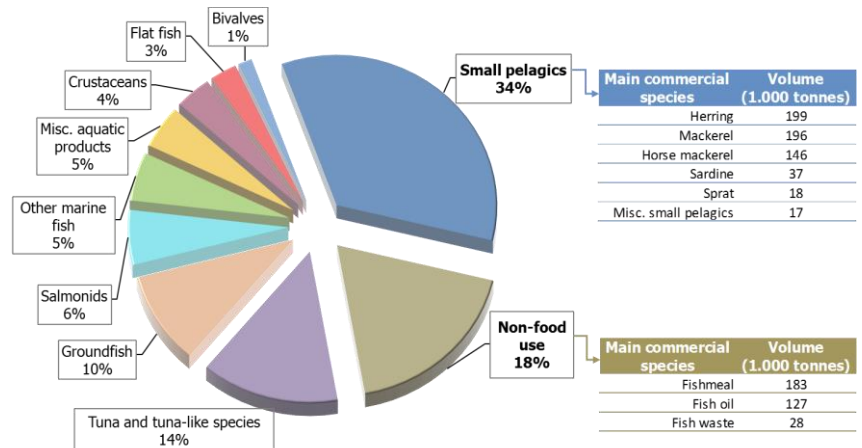
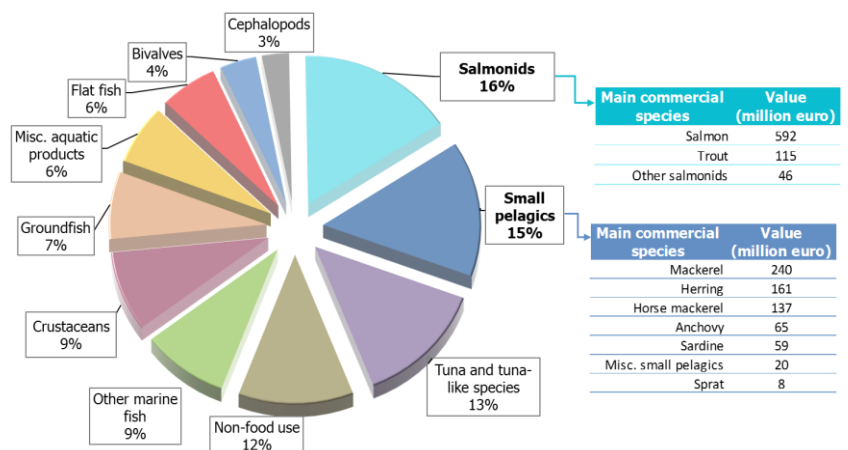


Chart 61

EU exports by commodity group in value (2016)

Source: EUMOFA elaboration of EUROSTAT data



Herring

Of all fisheries and aquaculture species, two main commercial species of the small pelagics commodity group, namely herring and mackerel, are the most exported by EU countries in volume. They respectively accounted for 11% and 10% of the volume total in 2016.

Herring exports continued a decreasing trend, falling by 8% to reach to 198,572 tonnes with a value of EUR 161 million. This also represented a more intense 10% value drop, despite the fact that the average export price was stable at 0,81 EUR/kg.

Almost 70% of herring supplied by the EU originates from the Netherlands, home of the largest EU freezer trawler company involved in pelagic fishing. In 2016, Dutch exports of frozen herring totalled 136,178 tonnes, up 5% from 2015, and sold at 0,77 EUR/kg. The main markets were Nigeria and Egypt.

Mackerel

EU exports of mackerel fell by 13% in 2016, to 196.113 tonnes. Nevertheless, this amount was 24% higher than its 10-year average. Total value was EUR 240 million, 9% less than 2015 but still 21% above the 10-year average.

The main EU suppliers of mackerel, the Netherlands, Ireland, Spain and the UK, mostly export it frozen to Nigeria and, to a lesser extent, Egypt. In 2016, on average, frozen mackerel was sold by EU countries at 1,17 EUR/kg, which was 4% higher than the 2015 price.

Horse mackerel

Horse mackerel ranks fourth among the main commercial species most exported by EU Member States. In 2016, it represented 8% of the total, amounting to 145.929 tonnes and EUR 137 million. While there was a slight 1% volume decrease, the value fall was a significant 18%, constituting a drop of EUR 30 million. This was due to a 17% shrinkage observed in the average export price, as it moved from 1,13 EUR/kg (2015) to 0,94 EUR/kg (2016).

The main EU exporters are the Netherlands, Spain and Ireland, with Egypt as principal market, followed by Nigeria and Japan.

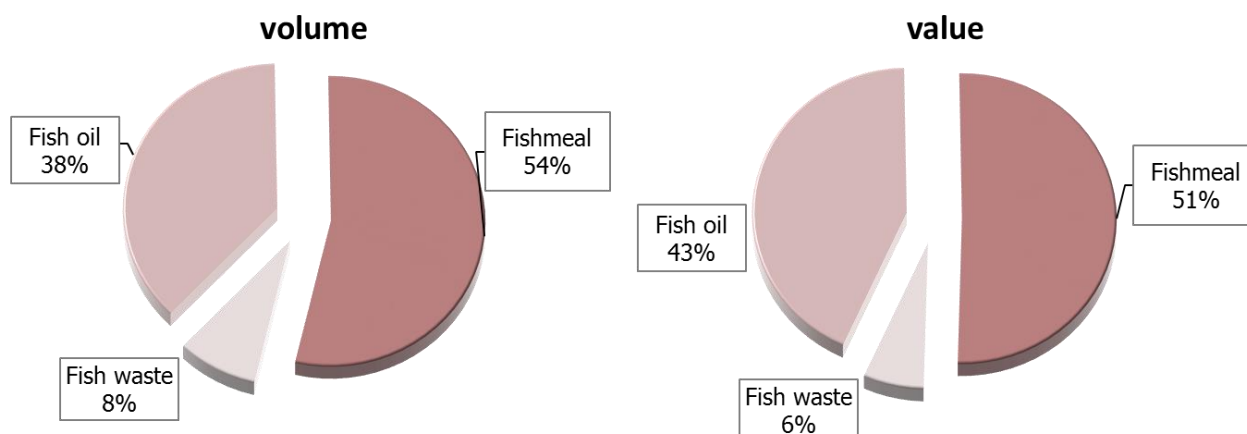
Non-food use products

EU exports of non-food use products amounted to 338.064 tonnes worth EUR 552 million in 2016, declining by 4% in volume and by 2% in value terms over 2015.

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. Looking at volumes, the latter is in fact less relevant within exports, as it covers 8% of total exported volumes against 45% of total imported volumes, which is to the benefit of fish oil.

*Chart 62***Non-food use products exported to extra-EU countries (2016)**

Source: EUMOFA elaboration of EUROSTAT data

**Fish oil**

In 2016, fish oil exported by the EU reached all time peaks in both volume and value, at 127.064 tonnes and EUR 237 million. These were increases of 20% and 12%, respectively, from 2015. Such growth was driven by Denmark, the main exporter, which reported similar increases, as its volumes rose by 19%, moving from 95.686 to 113.637 tonnes, with total values growing from EUR 171 million to EUR 188 million. The main non-EU market was Norway, where Denmark exported fish oil at 1.642 EUR/tonne.

Fishmeal

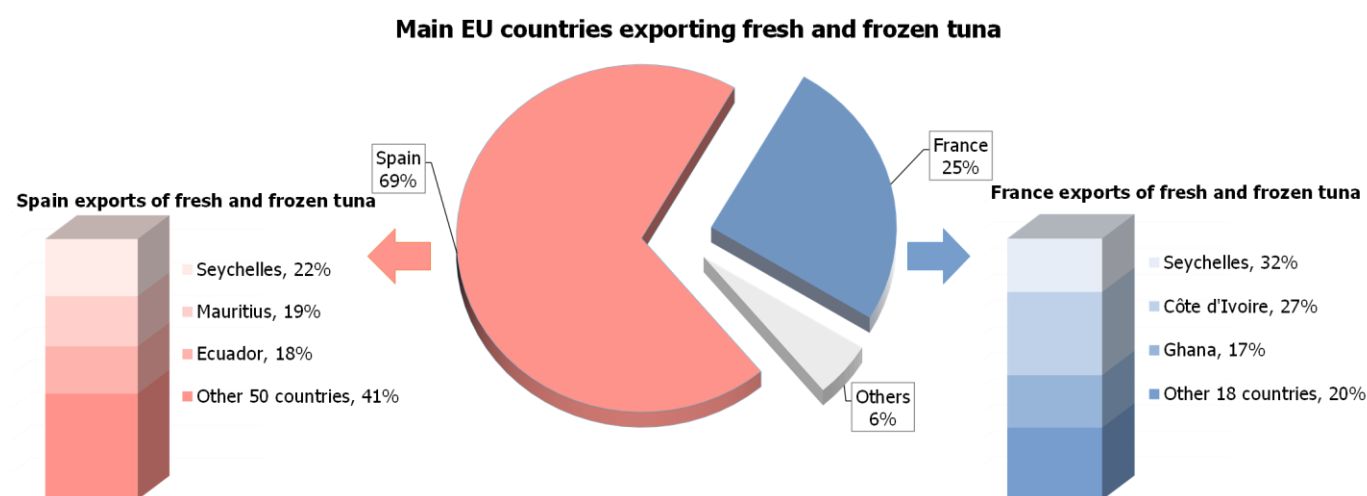
EU exports of fishmeal declined by 11% in volume and value in 2016, as they reached 182.539 tonnes worth EUR 280 million. The main exporter, Denmark, mostly sold its fishmeal to Norway, at 1.641 EUR/tonne, 17% higher than the 2015 price.

Tuna and tuna-like species

Chart 63

Export flows of frozen and fresh tuna (volume, 2016)

Source: EUMOFA elaboration of EUROSTAT data



Skipjack tuna

In 2016, exports of skipjack tuna totalled 131.550 tonnes worth EUR 197 million, representing an 11% rise in value terms over 2015 and a slight 2% decline in volume. It was sold almost entirely frozen. In 2016, Spain exported 86.134 tonnes of frozen skipjack tuna at 1,07 EUR/kg, almost 8.000 tonnes less than it exported in 2015. On the other hand, the 14% price increase made total value grow by 4% and reach EUR 92 million. France sold 32.499 tonnes of skipjack tuna at 1,10 EUR/kg, reporting growth both in terms of volumes and values.

Yellowfin tuna

Extra-EU exports of frozen yellowfin tuna continued a downward trend that began in 2013. In 2016, they fell to 73.379 tonnes and EUR 113 million, for decreases of 10% and 5%, respectively, in terms of volume and value. Such drops were driven by exports from Spain and France, which sold 49.774 and 23.464 tonnes of frozen yellowfin tuna, respectively, with values of EUR 73 million and EUR 40 million.

Salmonids

In 2016, salmonids exported by the EU comprised 77% salmon and 15% trout, with the rest being other salmonids species. Overall, they reached a value peak in 2016, amounting to EUR 754 million, thanks to a 12% increase over 2015. Volumes grew with less intensity at 3% and totalled 107.656 tonnes.

Salmon

In 2016, the value of salmon exports to non-EU countries recovered compared with 2015, driven by the Netherlands, Denmark and Germany, whose total exports however represent only 40% of exports of the main EU supplier, i.e. the UK

EU exports of salmon amounted to 82.543 tonnes worth EUR 592 million. This represented a 4% decrease in volume from 2015, while values grew by 5% or EUR 26 million. The latter represented a recovery after an analogous plummet registered in 2015 compared with 2014.

The growth in value can be attributed to the Netherlands, Denmark and Germany. Netherlands had a 47% increase from EUR 42 million to EUR 62 million for 4.333 tonnes sold, Denmark had a 77% increase, moving from EUR 15 million to EUR 27 million for 2.731 tonnes sold, and Germany had a 33% increase from EUR 34 million to EUR 45 million for 2.827 tonnes sold. On the other hand, the most important EU supplier, the UK, had an 8% decline, with value falling from EUR 364 million to EUR 334 million for the 50.219 tonnes sold.

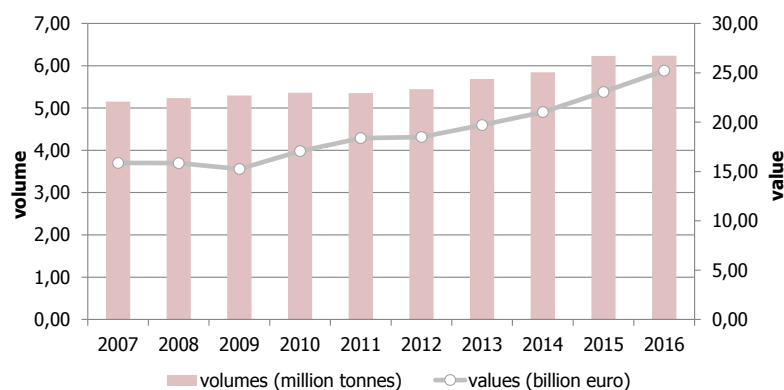
Salmon is mainly exported fresh or frozen, but most of its value comes from exports of smoked fillets destined for Switzerland and the US. On average, in 2016, they were sold at 18,39 EUR/kg to the Swiss market and at 19,80 EUR/kg to the US market.

4.5 Intra-EU trade

The 2016 value of exchanges between Member States grew to its peak of EUR 25,2 billion, increasing by over EUR 2 billion compared to 2015

Chart 64

Intra-EU trade
Source: EUROSTAT



In terms of value, the largest 15 flows, shown in Chart 65, accounted for 18% of the 2016 total and, combined, amounted to almost EUR 4,7 billion.

The main valued exports are those of salmon, especially products originating from Norway and entering in the EU market through Sweden.

Chart 65

15 top flows within the EU in value (2016)

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 miscellaneous shrimps exported by the Netherlands, Denmark and Spain.

Although cephalopods cover only 4% of the total intra-EU exchanges in terms of value, squid flows from Spain to Italy were among the top-15, and continued their upward trend that began in 2014.

Chart 66

Intra-EU trade by commodity group in value (2016)

Source: EUMOFA elaboration of EUROSTAT data

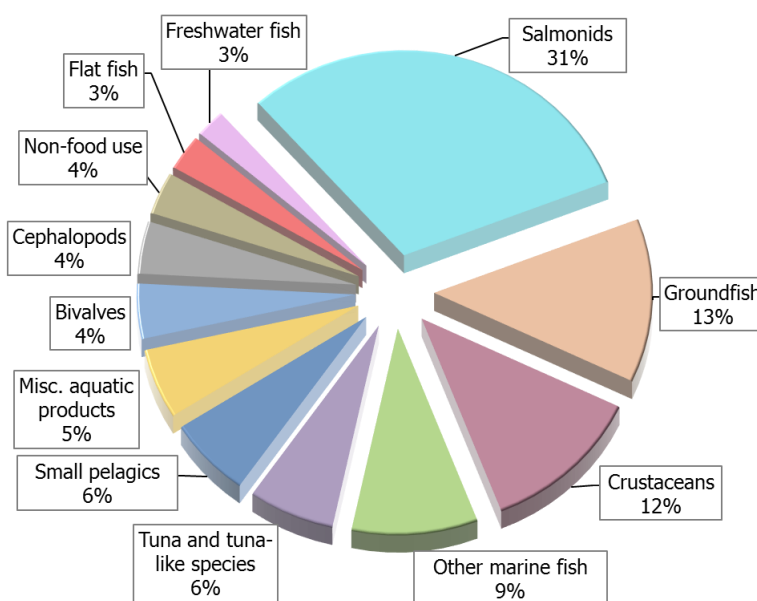
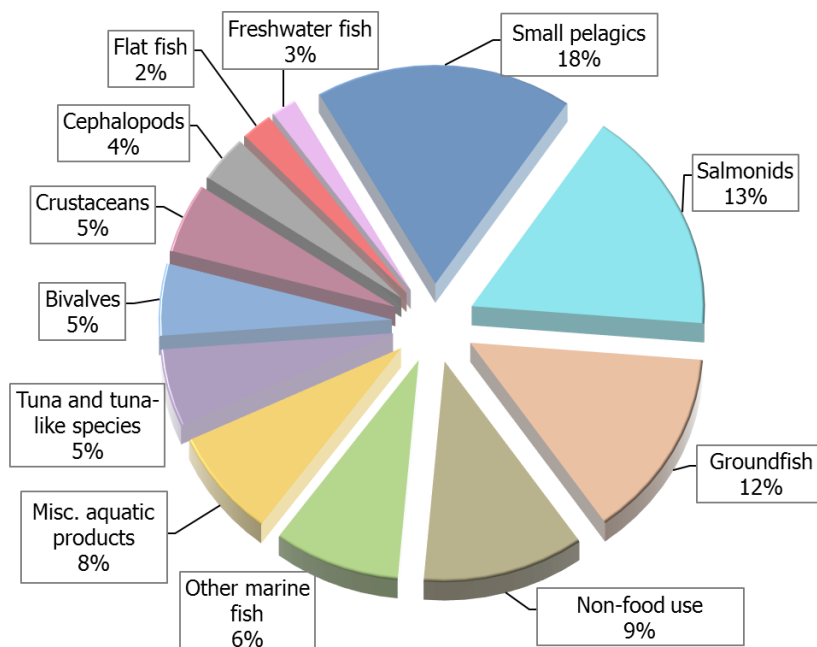


Chart 67

Intra-EU trade by commodity group in volume (2016)

Source: EUMOFA elaboration of EUROSTAT data



Salmonids

Salmon

Intra-EU exchanges of salmonids fell a slight 1% from the peak reached in 2015, and totalled 1 million tonnes. On the other hand, they presented a remarkable 20% value growth, moving from EUR 6,5 billion to EUR 7,8 billion.

Salmon alone represents 28% of total intra-EU trade in value terms and 15% in volume. In 2016, it accounted for 909.206 tonnes worth EUR 7 billion, a decrease of 24.851 tonnes from the previous year, but a value increase of more than EUR 1,2 billion. This was due to a 24% price increase, with salmon moving from an average price of 6,18 EUR/kg in 2015 to a 2016 price of 7,67 EUR/kg.

Of salmon traded within the EU during 2016, 79%, or 720.061 tonnes, was fresh. In value terms, it totalled EUR 5 billion, but the share drops to 71%, because of the market for smoked products, which totalled EUR 1,4 billion for 103.256 tonnes.

Sweden sold the majority of salmon, 118.105 tonnes, to Poland at 6,35 EUR/kg, recording a 30% price boost from 2015, despite steadiness in terms of volume. The same price increase was registered for Swedish exports to France, its second main EU market, which received 89.840 tonnes of salmon at 7,13 EUR/kg. While Poland sends the majority of the salmon it imports to the smoking industry, the majority of the fresh salmon imported by France goes to the fresh market.

Groundfish

Groundfish traded in the EU in 2016 reached peaks of 870.983 tonnes and EUR 3,2 billion. This represented an increase of 7% in volume and 6% in value terms over 2015.

Cod

Intra-EU exchanges of cod experienced substantial growth, making it the second most traded “main commercial species”. All main players, namely the Netherlands, Denmark, Sweden and Germany, contributed to the upward trend, that saw cod intra-EU exchanges increase by 16% in volume and 8% in value terms in 2016, reaching an all-time peak of 465.901 tonnes worth EUR 2,1 billion.

Half of cod traded within the EU was sold frozen, corresponding to 234.282 tonnes, at 3,28 EUR/kg, while one-quarter was sold fresh, corresponding to 118.247 tonnes worth 4,90 EUR/kg. In addition, 22%, or 102.800 tonnes, was sold dried/salted, at 6,37 EUR/kg, and 10.572 tonnes of prepared/preserved cod, or 2% of the total, was sold at 4,77 EUR/kg.

Small pelagics

In 2016, 18% of fish traded within the EU, that is the majority, was represented by small pelagics species. Their total amount declined, dropping from 1,19 million tonnes in 2015 to 1,12 million tonnes in 2016. However, their value grew by EUR 27 million and reached EUR 1,6 billion.

Herring

Herring ranks third among main commercial species traded in the EU. In 2016, it accounted for 457.369 tonnes which represented a decrease of 7% from 2015. However, a 13% increase in price – from 1,16 to 1,31 EUR/kg – led to an overall value increase of EUR 26 million.

Herring sales are 39% frozen and 35% fresh, with another 25% sold as prepared/preserved products and the rest as dried/salted/smoked.

Intra-EU exchanges of herring almost entirely originate from Denmark. In 2016, it sold 118.949 tonnes to other Member States at 1,35 EUR/kg, totalling EUR 161 million. Most Danish exports of herring are destined for the German market, where the price of 1,14 EUR/kg is 15% lower than the average.

While looking at the EU average herring is traded 35% fresh, Danish exports of herring are 60% fresh. Nonetheless, looking at values, this share is lower (36%), because of the relevance of Danish exports of prepared/preserved herring.

Non-food use products

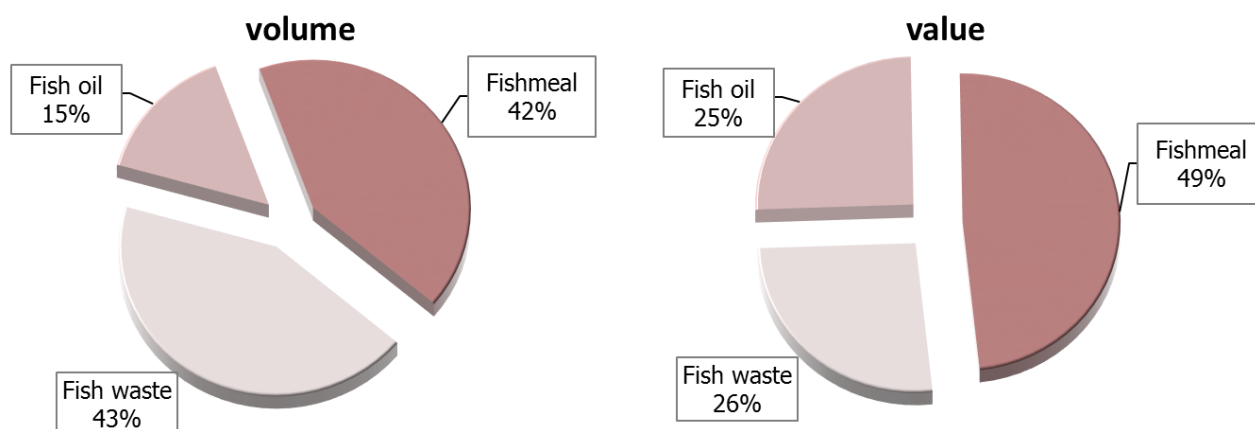
In 2016, non-food use products traded within the EU arrived at an all-time peak of 699.808 tonnes worth EUR 844 million. With respect to 2015, this was an increase of 3% in volume and 7% in value, corresponding to 23.653 tonnes and EUR 59 million.

Contrarily from exports destined to non-EU countries, non-food use products traded between Member States are less represented by fish oil, and more by fishmeal and fish waste.

Chart 68

Non-food use products traded within the EU (2016)

Source: EUMOFA elaboration of EUROSTAT data

**Fishmeal**

Germany and Denmark are the main dealers of fishmeal in the EU. In 2016, they together covered two-thirds of the total, with Greece as first destination.

Tables 17 and 18 show a breakdown of their most relevant exports of fishmeal to other Member States.

Table 17

Most relevant intra-EU exports of fishmeal from Denmark in 2016

Source: EUMOFA elaboration of EUROSTAT data

Importing Member State	Volume (tonnes)	Price (EUR/tonne)	% price variation 2016/2015
Greece	27.275	1.402	+5%
Spain	8.188	1.593	+12%
Italy	7.720	1.519	+7%
Sweden	7.195	1.511	+18%
Poland	6.521	1.450	+22%
Other Member States	24.080	1.566	+15%
Total	80.978	1.495	+11%

Table 18

Most relevant intra-EU exports of fishmeal from Germany in 2016

Source: EUMOFA elaboration of EUROSTAT data

Importing Member State	Volume (tonnes)	Price (EUR/tonne)	% price variation 2016/2015
Greece	24.388	1.301	-6%
Denmark	20.937	1.428	-6%
United Kingdom	17.042	1.510	-1%
France	13.827	1.465	=
Italy	10.503	1.385	-1%
Other Member States	23.519	1.258	+18%
Total	110.215	1.377	+3%

Crustaceans

Exchanges of crustaceans between EU Member States continued the declining trend started in 2012 and fell by 2% in 2016, reaching 320.963 tonnes. On the other hand, an all-time peak in value terms was reached, at EUR 3 billion, which was almost EUR 100 million more than in 2015.

Miscellaneous shrimps

Miscellaneous shrimps account for 37% of crustaceans traded within the EU, mostly comprising prepared/preserved and frozen products. Total exchanges rose by 2% in 2016, amounting to 119.482 tonnes worth EUR 1,2 billion.

The main traders are the Netherlands, Denmark, Spain and Belgium, while the main markets are in Germany and Italy.

Tropical shrimps

Almost one-quarter of intra-EU trade of crustaceans is represented by tropical shrimps. They experienced a 2% decline in 2016, both in volume and value terms, totalling 77.452 tonnes and EUR 685 million.

Spain and Belgium, the major players, sold 19.879 and 18.559 tonnes of tropical shrimps respectively to other EU Member States during 2016. While Belgium exported them at an average price of 9,14 EUR/kg, Spain exported at 7,62 EUR/kg. The difference is probably linked to the different market destination, as Belgium exported to France and Spain exported to Portugal.

Main findings

EU level

Data regarding landings comprise the initial unloading of any fisheries products from on board a fishing vessel to land in a given EU-28 Member State. Landings are made by both EU and foreign/non-EU vessels.

In 2015 – last available figures – the volume of EU landings³⁶ including species not destined for human consumption and seaweed, reached an 8-year peak at 4,68 million tonnes. This represented an increase of 5%, or 220.355 tonnes, above 2014 landings.

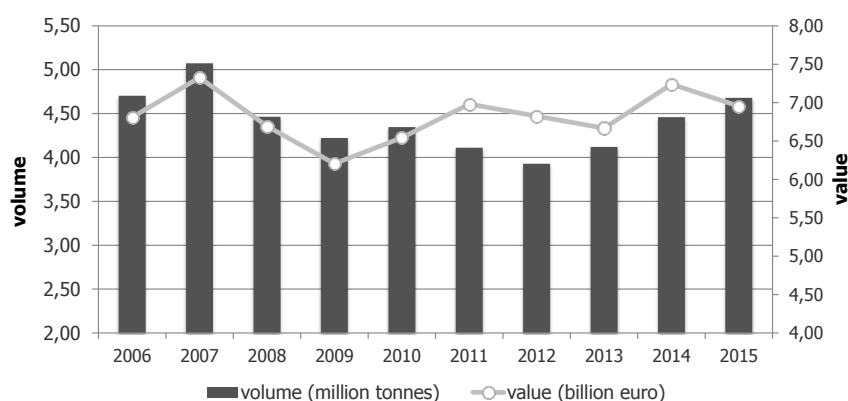
In value terms, conversely, a substantial 4% decrease was recorded, as values fell to EUR 6,95 billion in 2015, which was EUR 284 million less than the previous year. Nevertheless, the total of 2015 landings remained EUR 131 million above the 10-year average of EUR 6,82 billion.

Chart 69

Total landings in the EU

Source: EUMOFA elaboration of EUROSTAT and National sources' data

In 2015, the value of products landed in the EU was above its 10-year average, despite the fall registered with respect to 2014



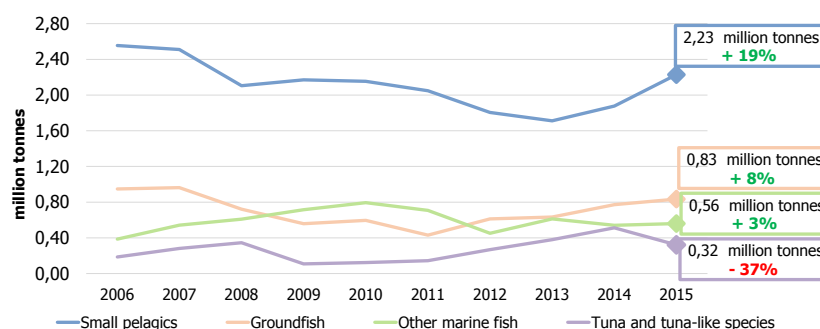
The most landed species in the EU belong to four commodity groups, namely small pelagics, groundfish, tuna and tuna-like species, and the grouping “Other marine fish³⁷”

The evolution of their volumes landed during the last ten years is shown in Chart 70.

Chart 70

Volumes of landings of most important commodity groups and % variations 2015/2014

Source: EUMOFA elaboration of EUROSTAT and National sources' data



³⁶ The main 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 2015.

³⁷ This group includes monk, seabream, red mullet, seabass, ray, john dory, scabbardfish, gurnard, picarel, smelt, dogfish and weever.

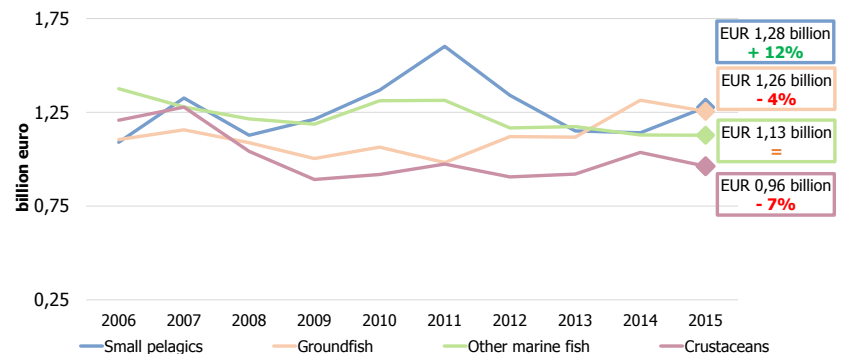
In terms of value, the commodity groups registering the highest landing value in the EU are small pelagics, groundfish, crustaceans and the grouping “Other marine fish”.

The evolution of the values they totalled during the last ten years is shown in Chart 71.

Chart 71

Values of landings of most important commodity groups and % variations 2015/2014

Source: EUMOFA elaboration of EUROSTAT and National sources' data



In terms of commodity groups, with respect to 2014, most relevant variations of the species composition of EU landings regarded small pelagics and tuna. In 2015, the share of small pelagics increased from 42% to 48% of total volume and from 16% to 18% of total value. On the other hand, the share of tuna fell from 11% to 7% of total volume and from 15% to 11% of total value.

Chart 72

Composition of landings in the EU by commodity group - volume, 2015

Source: EUMOFA elaboration of EUROSTAT and National sources' data

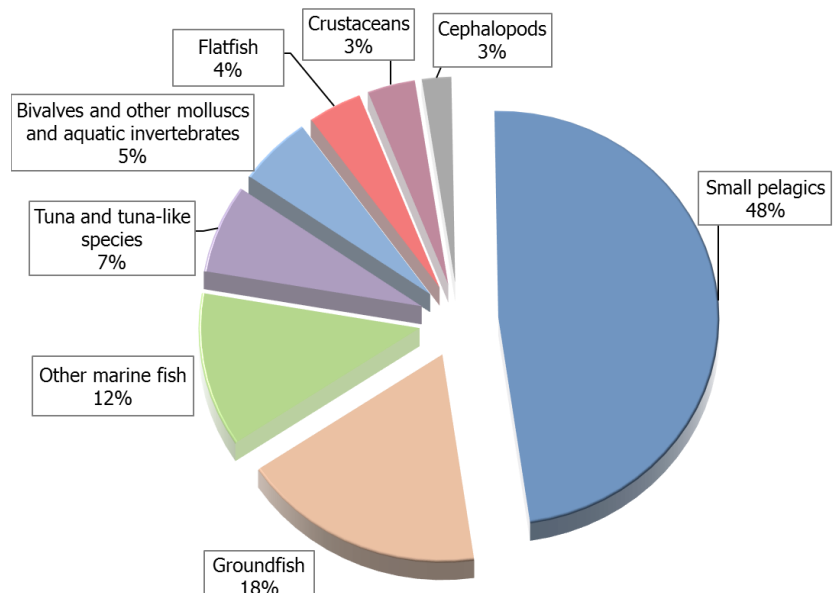


Chart 73

Composition of landings in the EU by commodity group - value, 2015

Source: EUMOFA elaboration of EUROSTAT and National sources' data

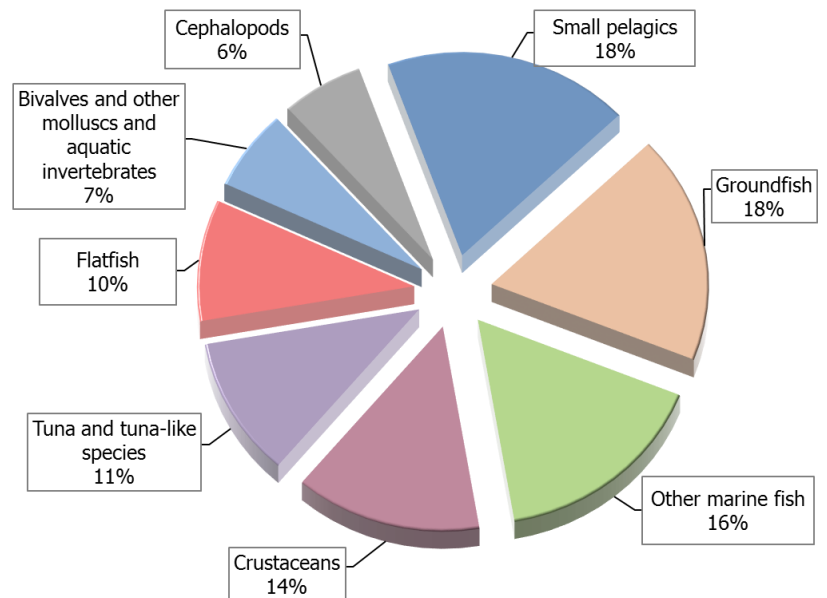


Chart 74

Most important "main commercial species" landed in the EU – volume in 2015, % of total and % variation 2015/2014

Source: EUMOFA elaboration of EUROSTAT and National sources' data

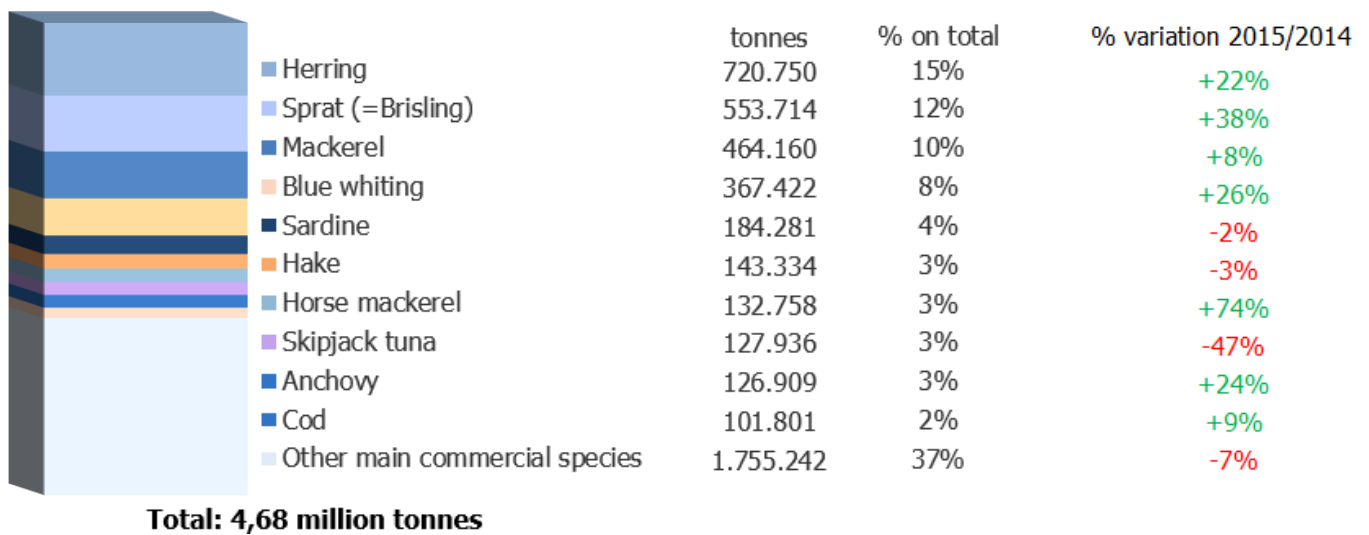


Chart 75

Most important "main commercial species" landed in the EU – value in 2015, % of total and % variation 2015/2014

Source: EUMOFA elaboration of EUROSTAT and National sources' data

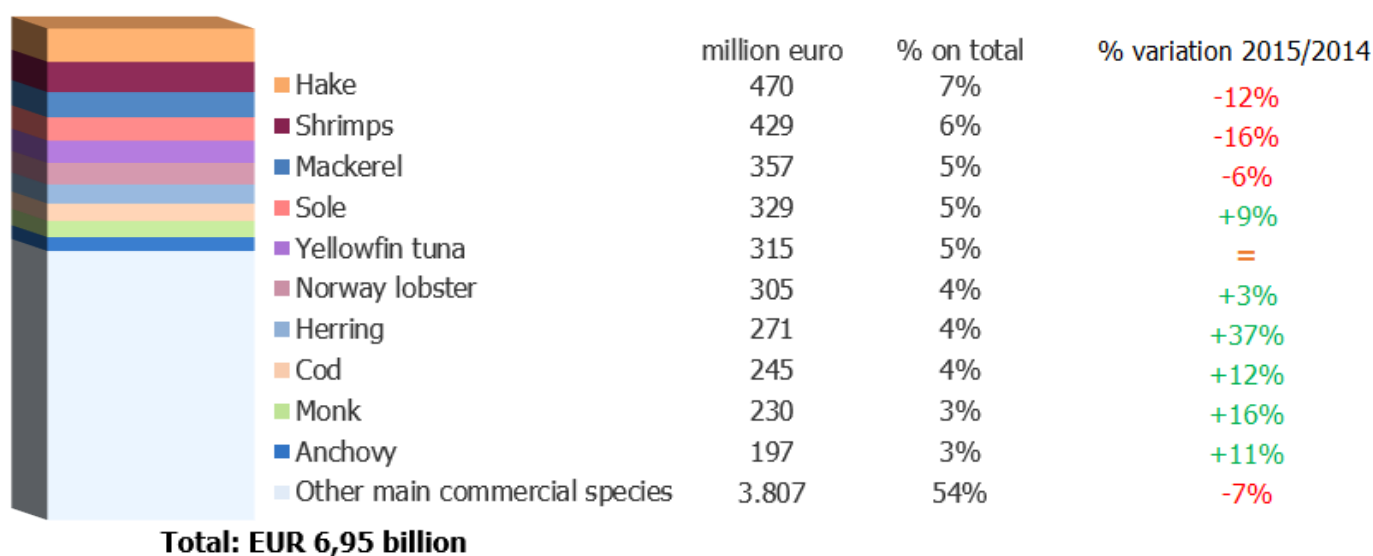


Table 19

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

Source: EUMOFA elaboration of EUROSTAT and National sources' data

Main commercial species	2006	2014	2015	variation 2015/2014	variation 2015/2006
Anchovy	2,12	1,74	1,55	↓	↓
Blue whiting	0,19	0,31	0,35	↑	↑
Cod	2,06	2,34	2,41	↑	↑
European seabass	8,17	11,10	12,60	↑	↑
Gilt-head seabream	6,67	9,17	9,01	↓	↑
Hake	4,31	3,61	3,28	↓	↓
Herring	0,20	0,33	0,38	↑	↑
Mackerel	0,78	0,88	0,77	↓	↓
Monk	5,54	5,08	5,07	↓	↓
Norway lobster	8,53	7,95	8,40	↑	↓
Red mullet	7,47	6,51	5,56	↓	↓
Sardine	0,61	1,00	0,94	↓	↑
Skipjack tuna	0,73	1,15	0,23	↓	↓
Sole	10,32	8,46	9,63	↑	↓
Sprat (=Brisling)	0,15	0,24	0,24	=	↑
Squid	4,47	5,44	3,60	↓	↓
Yellowfin tuna	1,34	2,19	3,26	↑	↑

Member State level

Chart 76

**Volumes of landed products
in the main EU countries in 2015
and % variation 2015/2014**

Source: EUMOFA elaboration of EUROSTAT and National sources' data

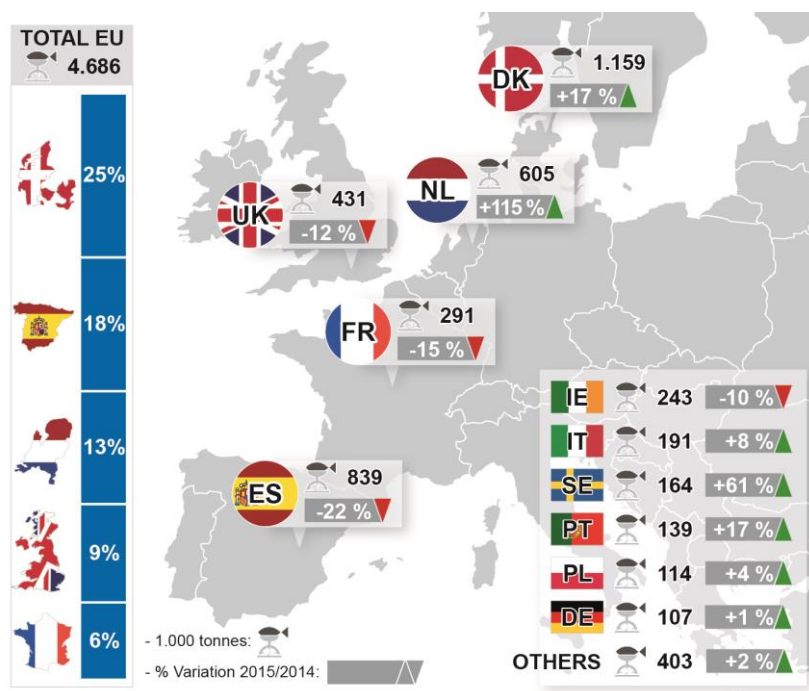
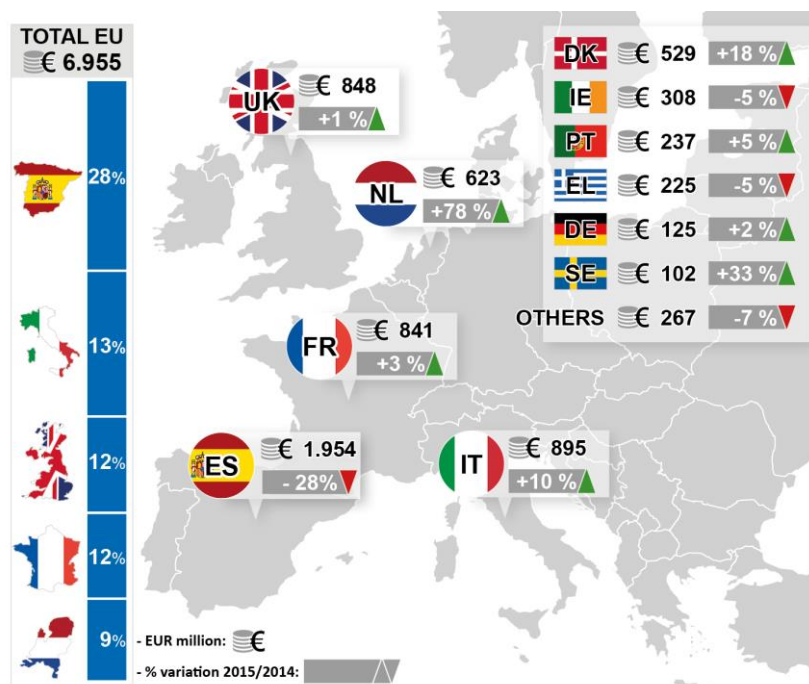


Chart 77

**Values of landed products
in the main EU countries in 2015
and % variation 2015/2014**

Source: EUMOFA elaboration of EUROSTAT and National sources' data



Analysis by species

Small pelagics

Driven by the growth registered in the Netherlands and Denmark, total landings of small pelagics at EU level touched their 8-year peak in 2015, at 2,23 million tonnes, which was a 28% increase from 2014. They also had a 12% increase in value in 2015, reaching EUR 1,28 billion.

Four main commercial species of small pelagics – namely herring, sprat, mackerel and sardine – accounted for 1,92 million tonnes or 41% of total EU landings. It is worth noting that anchovy which is entirely represented by European anchovy (*Engraulis encrasicolus*), is among the top-10 species landed both in volume and value terms.

Herring

Herring is the most landed “main commercial species” in the EU, accounting for 15% of the total. In 2015, its landings amounted to 720.750 tonnes, with a value of EUR 271 million. This was an 8-year volume peak determined by a 22% rise over 2014, accompanied by a remarkable 37% value growth, for an increase of EUR 73 million.

In 2015, almost 25% of herring was landed in the Netherlands, while 22% was landed in Denmark.

In the case of the Netherlands, more than half of herring’s landings were made by Dutch vessels. German vessels contributed another important share, with 23%, while UK and French vessels accounted for 12% each.

In Denmark, the majority of herring’s landings were made by Danish and Swedish vessels, accounting for 45% and 28% of the total, respectively; the Norwegian fleet covered a significant 15%.

Other relevant Member States where herrings were landed are Finland and Sweden, each accounting for 12% of total EU landings of herring.

All four of them registered an increase with respect to the previous year, the most remarkable being the Netherlands’ 103% increase, with volumes of landed herrings moving from 85.261 to 173.239 tonnes. Due to a price increase from 0,32 to 0,44 EUR/kg, its value growth was even more outstanding, rising 178%, from EUR 28 million to EUR 77 million. Of the top-4 producers, only Finland experienced a value drop.

Table 20

Prices at landing stage of herring in main Member States (EUR/kg)

Source: EUMOFA elaboration of EUROSTAT data

Member State	2006	2014	2015	variation 2015/2014	variation 2015/2006
Denmark	0,34	0,42	0,47	↑	↑
Finland	0,13	0,22	0,19	↓	↑
Germany	0,33	0,38	0,41	↑	↑
Ireland	0,21	0,30	0,35	↑	↑
Latvia	0,17	0,27	0,25	↓	↑
Poland	0,30	0,37	0,29	↓	↓
Sweden	0,26	0,33	0,34	↑	↑
Netherlands	n/a	0,32	0,44	↑	n/a

Mackerel

The majority of mackerel landings in the EU takes place in the Netherlands, where 118.890 tonnes were landed in 2015. Of this, 44% came from Dutch vessels, 27% from UK vessels, and 18% and 10%, respectively, from German and French vessels. The whole of mackerel

EU landings

landings was worth EUR 107 million. This marked a skyrocketing trend similar to that of herring, as landings of mackerel in the Netherlands grew in 2015 by 152% in volume and 82% in value terms, compared with 2014.

This generated an overall 8% increase in volume terms at EU level, with total landings of mackerel growing in 2015 compared with 2014, from 431.753 to 464.160 tonnes. However, in the same time period, values decreased by 6% from EUR 378 million to EUR 357 million.

This was due to substantial drops registered in the UK and Ireland. In fact, the UK reported significant drops of 33% in volume and 39% in value, totalling EUR 92 million for 103.937 tonnes. In Ireland, the fall amounted to a decrease of 28% in value and 9% in volume, with landings of mackerel totalling 75.682 tonnes with a value of EUR 44 million.

The Netherlands, the UK and Ireland also experienced declining prices, particularly in the case of the Netherlands, where a 28% decrease led to the lowest price of the past nine years at 0,90 EUR/kg. In the UK, the prices decreased by 9%, from 0,97 to 0,88 EUR/kg. Irish prices dropped 21%, from 0,74 to 0,58 EUR/kg.

Table 21

Prices at landing stage of mackerel in main Member States (EUR/kg)

Source: EUMOFA elaboration of EUROSTAT and National sources' data

Member State	2006	2014	2015	variation 2015/2014	variation 2015/2006
Netherlands	0,44	1,25	0,90	↓	↑
United Kingdom	1,15	0,97	0,88	↓	↓
Ireland	0,89	0,74	0,58	↓	↓
Spain	0,55	0,65	0,66	↑	↑
Portugal	0,30	0,28	0,28	↑	↓
Denmark	1,15	0,91	0,87	↓	↓
France	0,74	1,35	1,22	↓	↑

Sprat The EU landed a total of 553.714 tonnes of sprat in 2015, marking a 6-year peak. In 2015, also thanks to a 13% quota increase, sprat landings grew by 38% compared with 2014. Values also recorded a boost, increasing by 42% and reaching their highest amount of the last decade at EUR 134 million.

Denmark, the most important Member State for sprat landings and the main contributor to the overall upward trend, accounted for 70% of the EU total in 2015, mainly consisting of sprat not destined for human consumption. In fact, Denmark's share of the EU total was significantly higher than its 61% share in 2014. In volume, it totalled 384.841 tonnes, or 139.975 tonnes more than in 2014, in part due to the Danish quota increasing from 170.029 to 243.417 tonnes. These catches are mostly destined for the fish meal industry. In terms of price, a 9% increase to 0,24 EUR/kg led to a total value of EUR 91 million, marking a remarkable 71% increase.

EU landings

Table 22

Prices at landing stage of sprat in main Member States (EUR/kg)

Source: EUMOFA elaboration of EUROSTAT data

Member State	2006	2014	2015	variation 2015/2014	variation 2015/2006
Denmark	0,15	0,22	0,24	↑	↑
Poland	0,16	0,24	0,16	↓	↑
Sweden	0,14	0,25	0,35	↑	↑
Latvia	0,16	0,34	0,30	↓	↑
Estonia	0,12	0,21	0,19	↓	↑
Ireland	0,17	0,24	0,24	↓	↑
Finland	0,16	0,21	0,17	↓	↑

Sardine

EU landings of sardine continued the downward trend that began in 2012, decreasing a slight 2% in 2015 compared with the previous year, and reaching the lowest total of the last ten years at 184.281 tonnes. The most remarkable 5-year declines causing the decrease at EU level were the 74% drop registered in Spain and 75% drop in Portugal, due to the management measures and catch limits set by the Portuguese and Spanish administrations.

The EU average price was 0,94 EUR/kg, 5% lower than in 2014. As a result, total values fell to EUR 174 million, which was 7% less than the previous year and the lowest value since 2007.

Croatia is the main Member State landing sardine, covering 28% of the total. In 2015, it reported drops of 10% in volume and 34% in value, registering 51.104 tonnes worth EUR 19 million. Price fell by 26%, reaching 0,38 EUR/kg. Spain ranks second among EU Member States landing sardine, representing 20% of total volume in 2015 with 37.708 tonnes. However, its value is the highest in the EU and constituted 30% of the total, at EUR 52 million. Both volume and value decreased from 2014, with prices rising a slight 2% to 1,37 EUR/kg.

Table 23

Prices at landing stage of sardine in main Member States (EUR/kg)

Source: EUMOFA elaboration of EUROSTAT data

Member State	2006	2014	2015	variation 2015/2014	variation 2015/2006
Spain	0,55	1,35	1,37	↑	↑
Portugal	0,48	1,96	2,18	↑	↑
Italy	1,04	0,72	0,78	↑	↓
Croatia	n/a	0,51	0,38	↓	n/a
Greece	1,61	1,96	1,87	↓	↑
France	0,53	0,84	0,85	↑	↑

Groundfish

Total landings of groundfish in the EU increased 8% over 2014 and touched their 8-year peak in 2015, at 834.176 tonnes. In value terms, they experienced a slight decrease after the 9-year peak reached in 2014 and totalled EUR 1,26 billion.

The most landed groundfish species in the EU are blue whiting, hake and cod. In 2015, they represented 13% of total landings with 612.557 tonnes, increasing their share by 1% over the previous year.

Hake

Of all finfish landed, hake has the highest value, with European hake (*Merluccius merluccius*) representing 87% of the total. Following the 9-year peak reached in 2014, a slight decline was observed in 2015, with volumes decreasing by 3% to 143.334 tonnes. The 9% price reduction – from 3,61 to 3,28 EUR/kg – made total value drop by EUR 63 million and reach EUR 470 million. However, this amount

remained well above the decade's average.

Total value of hake landed in the EU during 2015 was covered by landings in Spain, which accounted for 41% of the total, Italy for 15%, and the United Kingdom for 11%. France is an important market as well, with 10% of the EU total. France and the UK both reached 10-year value peaks in 2015. For the UK, this was linked to a decade price peak, while hake price in France was in line with its 10-year average.

Of the four countries, Spain is the only one where hake landings are not constituted entirely by *Merluccius merluccius*, which represents almost half of total hake landed. However, Argentine hake (*Merluccius hubbsi*) covers around 35% of the total. Indeed, the price drop of 2015 was caused by the decrease registered for this species, whose value declined by 60% from 2014 against a fall of 11% in volume.

Chart 78

Price trend at landing stage of hake in Spain, Italy, the UK and France

Source: EUMOFA elaboration of EUROSTAT data

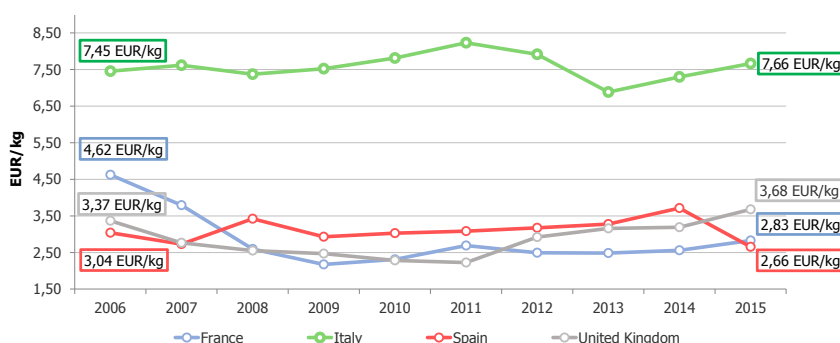


Table 24

Prices at landing stage of hake in other relevant Member States (EUR/kg)

Source: EUMOFA elaboration of EUROSTAT data

Member State	2006	2014	2015	variation 2015/2014	variation 2015/2006
Greece	7,42	7,92	7,08	↓	↓
Denmark	3,19	2,12	2,15	↑	↓
Portugal	3,53	2,84	2,99	↑	↓
Croatia	n/a	3,56	3,77	↑	n/a

Cod

In 2015, EU landings of cod reached their highest value of the last ten years, at EUR 245 million, recording a 12% increase over 2014. This was due to a 3% price growth from 2,34 to 2,41 EUR/kg, which occurred despite a 9% increase in landed volumes that reached 101.801 tonnes. One of the reasons cod prices remained firm in spite of a significant increase of landings could lie in the undersupply of salmon, due to Norway's high prices, which had led some consumers to move towards widely available products, such as cod. All top-3 EU players in the cod fishery, namely Spain, Denmark and the UK, contributed to the value growth.

While most of the cod landed in Spain is frozen, Danish and UK landings of cod are almost entirely constituted by fresh products. The price of frozen cod landed in Spain in 2015 was 3,02 EUR/kg, trended flat with respect to 2014 despite the volume peak reached at 20.042 tonnes.

Fresh cod landed in the UK also reached a peak at 14.332 tonnes. Nonetheless, a 10% price increase made the price grow to 3,07 EUR/kg and total value touch its decade peak.

EU landings

Landings of fresh cod in Denmark were worth 2,49 EUR/kg for 22.524 tonnes, recording a price steadiness in 2015 compared with 2014, despite a 9% volume increase.

Table 25

Prices at landing stage of cod in main Member States (EUR/kg)

Source: EUMOFA elaboration of EUROSTAT data

Member State	2006	2014	2015	variation 2015/2014	variation 2015/2006
Spain	1,21	2,98	3,02	↑	↑
Denmark	2,46	2,46	2,49	↑	↑
United Kingdom	2,67	2,78	3,07	↑	↑
Germany	1,64	2,07	2,84	↑	↑
France	3,58	2,83	3,25	↑	↓
Poland	1,45	1,29	1,11	↓	↓
Sweden	1,80	1,62	1,49	↓	↓

Blue whiting

An 8-year peak of blue whiting landed in the EU was reached in 2015, with total volumes at 367.422 tonnes which were worth EUR 127 million.

Landings of blue whiting only consist of fresh products. In 2015, half were landed in Denmark, with the Netherlands accounting for 28% of the total. The Netherlands experienced outstanding growth compared with 2014, as volumes rose by 163% surpassing 100.000 tonnes. The value boost was even more significant, as it amounted to 219% and totalled EUR 22 million.

Denmark recorded an increase as well, with volumes rising by 6% to 184.701 tonnes, and value rising 42% and reaching EUR 46 million. While other EU Member States use blue whiting for human consumption, Denmark uses it almost entirely for fishmeal production.

Table 26

Prices at landing stage of blue whiting in main Member States (EUR/kg)

Source: EUMOFA elaboration of EUROSTAT data

Member State	2006	2014	2015	variation 2015/2014	variation 2015/2006
Denmark	0,15	0,18	0,25	↑	↑
Spain	0,90	0,97	0,98	↑	↑
Netherlands	n/a	0,18	0,22	↑	n/a
France	0,20	1,34	1,55	↑	↑
Ireland	0,11	0,25	0,47	↑	↑
United Kingdom	0,11	0,16	0,23	↑	↑

Crustaceans

In 2015, crustacean landings decreased by 6% in volume and by 7% in value compared with 2014. With 162.626 tonnes landed, they occupied seventh position in volume among all commodity groups, but ranked fourth in values, with EUR 963 million.

Shrimps

Shrimps, which rank second after hake, are in the top-10 list of most valued products landed in EU. In 2015, 61.930 tonnes worth EUR 429 million were landed in the EU. The main EU countries where shrimps are landed vary, depending on the species.

“Tropical” shrimp is mostly deep-water rose shrimp. Mainly landed in Italy, it amounted to 10.167 tonnes worth EUR 75 million, which marked increases of 19% and 22%, respectively, over 2014. Spain, another relevant market, landed 3.707 tonnes valued at EUR 53 million, which registered decreases of 6% and 8%, respectively, in volume and value.

EU landings

Italy and Spain also land the majority of “miscellaneous shrimps” species. In Italy, they accounted for 3.235 tonnes and EUR 71 million, marking substantial increases of 14% and 25% over 2014, respectively in volume and value. They were mostly represented by giant red shrimp (*Aristaeomorpha foliacea*). In Spain, they totalled 3.173 tonnes and EUR 51 million, plummeting by 29% in volume and by 64% in value. They were striped red shrimps (*Aristeus varidens*) and blue and red shrimps (*Aristeus antennatus*), the first being responsible for the overall value drop of the miscellaneous shrimp grouping’s landings in Spain.

The Netherlands accounts for most of the "Crangon" shrimp landed in the EU. In 2015, it accounted for 16.693 tonnes with a value of EUR 60 million, which were decreases of 12% and 5%, respectively, in volume and value from 2014. Germany followed with 10.928 tonnes and EUR 38 million, registering a decreases as well, of 11% and 10%, respectively, in volume and value terms.

Cold-water shrimps other than shrimp Crangon spp. landed in the EU mainly include Northern prawn, almost entirely landed in Denmark which accounted for 2.081 tonnes worth EUR 8 million, and Sweden, with 2.070 tonnes worth EUR 21 million. In 2015, Sweden registered a growth of 12% in volume and 17% in value compared with 2014, while Denmark recorded a drop of 35% in volume and 18% in value.

Chart 79

EU landings of shrimps (2015)

Source: EUMOFA elaboration of EUROSTAT data

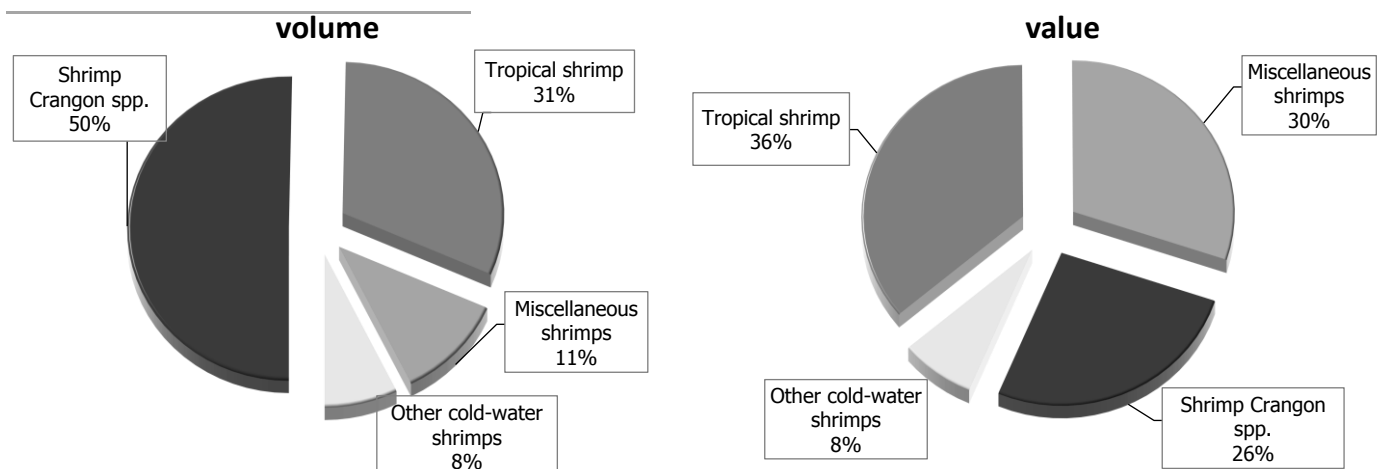


Table 27

Prices at landing stage of shrimps in main Member States (EUR/kg)

Source: EUMOFA elaboration of EUROSTAT data

Main commercial species	Member State	2006	2014	2015	variation 2015/2014	variation 2015/2006
Tropical shrimp	Italy	10,15	7,21	7,40	↑	↓
	Spain	17,60	14,47	14,31	↓	↓
	Greece	5,58	3,64	3,42	↓	↓
Shrimp Crangon spp.	Netherlands	2,84	3,34	3,62	↑	↑
	Germany	2,32	3,43	3,47	↑	↑
	Denmark	2,42	3,96	3,59	↓	↑
Other cold-water shrimps	Sweden	4,23	9,71	10,20	↑	↑
	Denmark	1,51	3,02	3,79	↑	↑
	Spain	6,97	6,89	7,02	↑	↑
Miscellaneous shrimps	Italy	22,21	20,10	22,02	↑	↓
	Spain	25,95	31,16	15,93	↓	↓
	France	n/a	15,92	18,33	↑	n/a

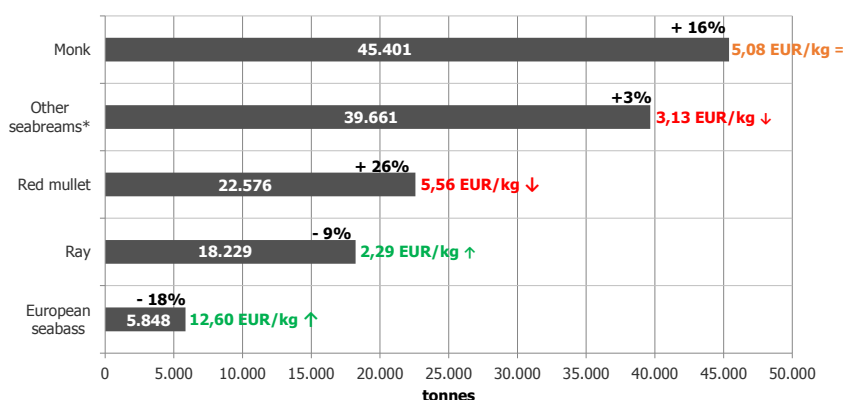
Other marine fish

In 2015, compared with 2014, EU landings of the commodity group “Other marine fish” increased by 3% to 559.864 tonnes but remained flat in value terms at EUR 1,13 billion. On the other hand, two of the main species of this group, namely monk and red mullet, registered both volume and value increases.

Chart 80

Main species of “Other marine fish” in 2015 volume, % variation 2015/2014 and prices at landing stage

Source: EUMOFA elaboration of EUROSTAT data



The grouping “Other seabreams” includes bogue (36% of the total), large-eye dentex (15%), black seabream (9%), common pandora (8%), axillary seabream (6%), white seabream (5%), blackspot seabream and red porgy (4% each), sand steenbras, saddled seabream and common two-banded seabream (2% each) and common dentex, annular seabream and red pandora (1% each).

Monk

Landings of monk increased 16% in both volume and value, totalling 45.401 tonnes and EUR 230 million. France, the Member State where most of monk is landed, accounted for 31% of the EU total in 2015. France’s share has declined since 2014 when it covered 35% of the total, due to increasing amounts of monk landed in the UK and Ireland, where upward trends drove the growth at EU level.

Monk landed in France and the UK was sold at 5,21 and 5,11 EUR/kg, respectively, nearly unchanged from 2014. On the other hand, price in Ireland registered an 11% drop, moving from 4,01 to 3,56 EUR/kg.

EU landings

Table 28

Prices at landing stage of monk in main Member States (EUR/kg)

Source: EUMOFA elaboration of EUROSTAT data

Member State	2006	2014	2015	variation 2015/2014	variation 2015/2006
France	5,38	5,09	5,21	↑	↓
United Kingdom	5,61	5,18	5,11	↓	↓
Spain	5,90	5,00	5,46	↑	↓
Ireland	4,38	4,01	3,56	↓	↓
Italy	7,80	7,60	8,15	↑	↑

Red mullet

In 2015, EU landings of the main commercial species “red mullet” totalled 22.576 tonnes for a value of EUR 126 million. Two species, *Mullus barbatus* and *Mullus surmuletus* (i.e. surmullet) accounted for 95% of the total.

The main market, Italy, where landings totalled 7.971 tonnes, covered 35% of EU landings of red mullet. In value terms, Italy accounted for 39% of the total, with an overall value of EUR 49 million, of which 64% was *Mullus barbatus* and 36% surmullets.

Greece ranked second to Italy in value terms, with EUR 26 million, despite a value decrease of 5% from 2014 against a volume steadiness that saw 2.801 tonnes of red mullet landed in 2015. The landings in Greece contained equal shares of *Mullus barbatus* and surmullet.

Prices in these two countries are very different and, showed a dissimilar trend in 2015 compared with 2014. In Italy, red mullet species were landed on average at 6,21 EUR/kg in 2015 and showed a 5% increase compared to 2014, while in Greece, a 3% decrease in landings led to 9,23 EUR/kg price, which was 66% higher than the EU average price.

It is also worth noting that the significant increase of landings of this main commercial species in the EU was due to the 79% growth registered for surmullet landed in France which accounted for 4.160 tonnes, and the skyrocketing trend in the Netherlands, where surmullet amounted to 2.171 tonnes after having averaged less than 230 tonnes for the previous nine years.

Table 29

Prices at landing stage of red mullet in main Member States (EUR/kg)

Source: EUMOFA elaboration of EUROSTAT data

Member State	2006	2014	2015	variation 2015/2014	variation 2015/2006
Italy	7,38	5,89	6,21	↑	↓
Greece	10,46	9,51	9,23	↓	↓
France	n/a	6,03	4,18	↓	n/a
Spain	5,55	7,47	5,86	↓	↑
Netherlands	n/a	4,81	3,67	↓	n/a

Tuna and tuna-like species

Volumes of tuna and tuna like species landed in the EU registered a significant 37% decline and totalled 322.348 tonnes in 2015. However, this amount was 21% higher than the 10-year average. Values also dropped, declining by 28% to EUR 766 million, which was 19% higher than their decade average.

Spain, the main EU fishing country, was responsible for the overall loss, as its landings plummeted by 40% in volume and 33% in value, corresponding to a fall worth 191.005 tonnes and almost EUR 300 million that mainly involved skipjack and yellowfin tuna.

Yellowfin tuna

Yellowfin tuna is among the top-5 species landed in the EU in value terms. In 2015, its value of EUR 315 million represented more than 40% of the total value of all tuna. In 2015, the average price increased a significant 49% compared with 2014 and reached 3,26 EUR/kg, with volumes falling by 33% to 96.488 tonnes. In 2015, 96% of yellowfin tuna landings occurred in Spain, amounting to 92.395 tonnes. The price increase registered in 2015 compared with 2014 was a substantial 50%, moving from 2,18 to 3,27 EUR/kg.

This corresponded to a 4% loss in terms of total value by EUR 11 million, which was not as intense as the volume drop of 36% or 51.078 tonnes.

*Table 30***Prices at landing stage of yellowfin tuna in main Member States (EUR/kg)**

Source: EUMOFA elaboration of EUROSTAT data

Member State	2006	2014	2015	variation 2015/2014	variation 2015/2006
Spain	1,36	2,18	3,27	↑	↑
France	n/a	3,93	3,93	=	n/a
Italy	1,13	n/a	1,85	n/a	↑

Skipjack tuna

Spain accounts for 97% of skipjack tuna landed in the EU.

The country experienced a remarkable loss both in volume and value terms, which respectively plummeted by 48% and 90%. In 2014, 241.022 tonnes of skipjack tuna were landed, with a total value of EUR 277 million. The following year, volumes were at 124.305 tonnes and values at EUR 26 million. Price moved from 1,15 EUR/kg to 0,21 EUR/kg, dropping by 82%.

*Table 31***Prices at landing stage of skipjack tuna in main Member States (EUR/kg)**

Source: EUMOFA elaboration of EUROSTAT data

Member State	2006	2014	2015	variation 2015/2014	variation 2015/2006
Spain	0,76	1,15	0,21	↓	↓
Portugal	0,62	1,24	1,23	↓	↑
France	3,27	0,43	0,58	↑	↓

Aquaculture production³⁸ 6

Main findings

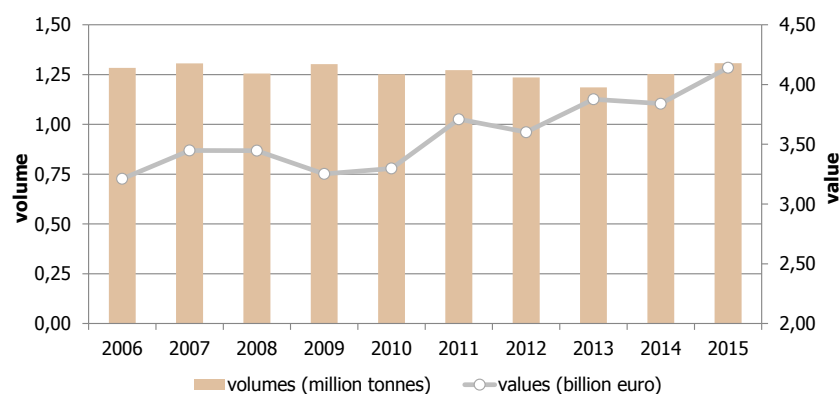
EU level

Chart 81

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



The value of EU aquaculture production rose by over EUR 300 million in 2015 compared with 2014

The four main groups of species farmed in the EU – salmonids⁴⁰, bivalves, freshwater fish⁴¹, and other marine fish – together amounted to 1,28 million tonnes worth EUR 3,84 billion. In volume terms, the commodities “tuna and tuna-like species” and “flat fish” followed at distance, each covering only 1% of the total. However, tuna and tuna-like species totalled EUR 221 million in 2015, representing 5% of total values. Flat fish played a minor role, representing 2% of the total. All the top-4 groups of species contributed to the overall growth of EU aquaculture production, both in volume and value terms. Together, they accounted for a growth of 51.107 tonnes and EUR 253 million, representing an increase of 4% and 7%, respectively, in volume and value terms.

Salmon value has more than doubled during the last ten years, with major growth rates registered during 2012–2015, thus determining the trend followed by the Commodity group “Salmonids” which it belongs to.

A similar pattern can be observed for the “other marine fish” commodity, mainly represented by gilt-head seabream and seabass. However, the average growth rate during the last four years was not as intense as that of salmonids.

Bivalves registered a decline in 2014 but recovered in 2015 with an increase of almost EUR 100 million, due to the increases registered for farmed oysters and mussels.

Freshwater species other than trout, the most relevant being carp, eel

³⁸ 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, Denmark, Estonia, France, Germany, Greece, Ireland, Italy, Latvia, Poland, Portugal, Romania, Slovenia and the United Kingdom. More details can be found in the Methodological Background

³⁹ 2013, 2014 and 2015 data are for EU-28

⁴⁰ Salmonids includes salmon and freshwater trout

⁴¹ Freshwater fish excludes trout

Aquaculture production

Chart 82

Values of most important groups of species and % variations 2015/2014

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

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

and freshwater catfish, maintained a stable trend in 2015.

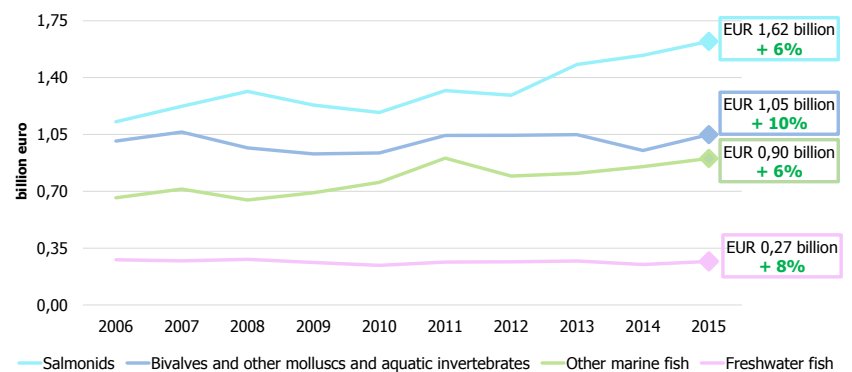


Chart 83

Volumes of most important groups of species and % variations 2015/2014

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

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

While other main groups of species showed a flat volume trend, bivalves experienced ups and downs. Overall, their production showed decreases from 2006 to 2013, but thanks to the 85.000 tonnes-growth of mussel production in 2015 compared with 2013, that trend has reversed.

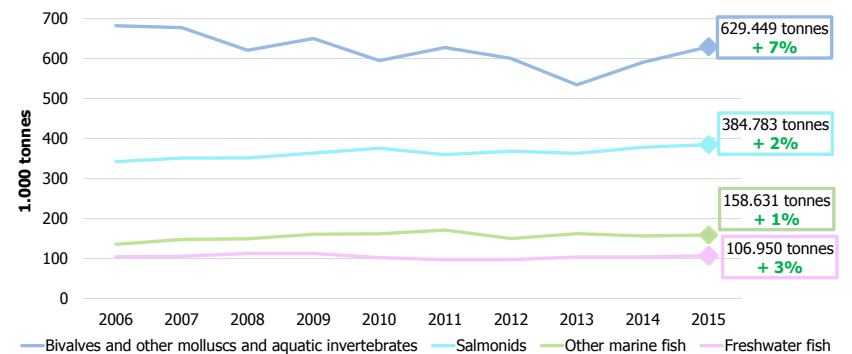


Chart 84

Composition of farmed species in the EU by volume

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

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

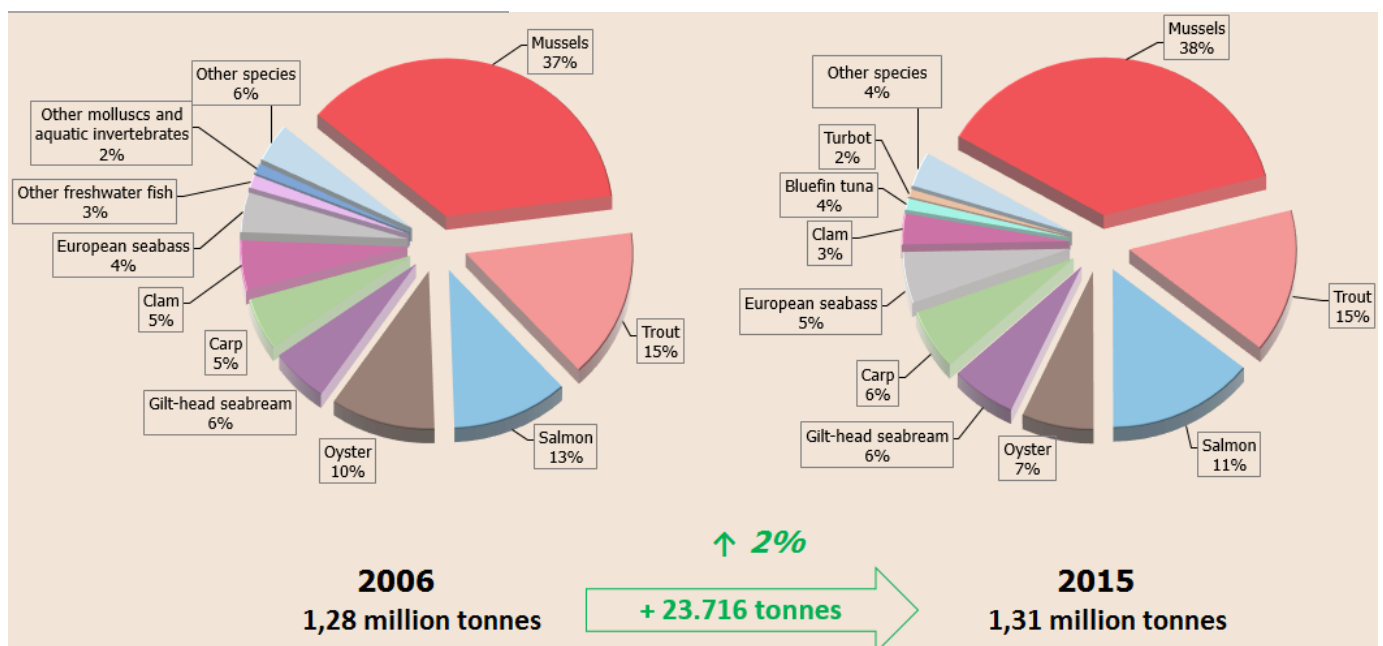
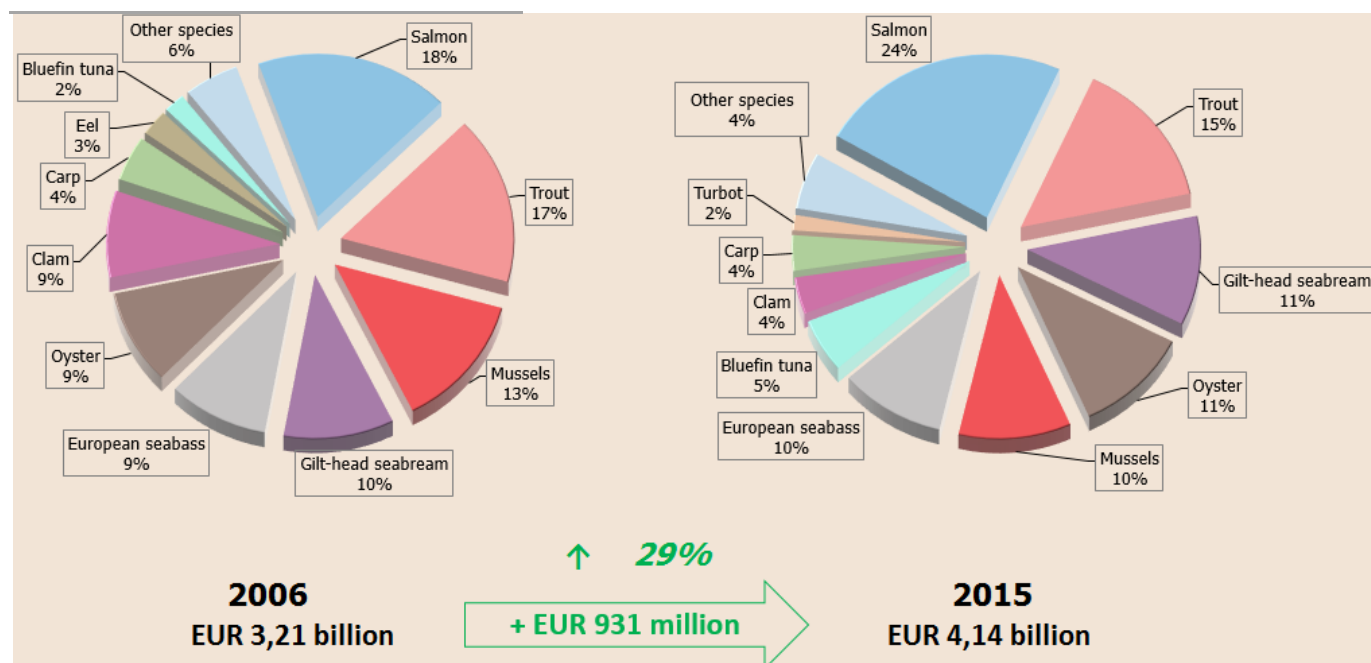


Chart 85

Composition of farmed species in the EU by value

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

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



Around 95% of total EU aquaculture production is represented by 10 species.

As regards the decade evolution of species' composition, it is worth noting that, apart from the increasing volumes of bluefin tuna and turbot, the most significant changes recorded in 2015 compared with 2006 were observed in value terms.

Salmon, the most valued species, now accounts for almost one-quarter of the total, thanks to the increased value registered by the UK. In 2015, compared with 2006, oyster value moved up from ranking sixth to ranking fourth in value, thanks to the EUR 129 million or 50% growth in the value of French oyster. Moreover, eel's value contracted over the last decade, mainly due to a EUR 25 million or 60% decrease reported by the Netherlands, its main producing country.

Almost all of the main species farmed in 2015 reported that values had increased from 2014. The most remarkable were those of bluefin tuna (+EUR 53 million), salmon (+EUR 52 million), oyster (+ EUR 44 million), European seabass (EUR 38 million) and trout (+ EUR 37 million).

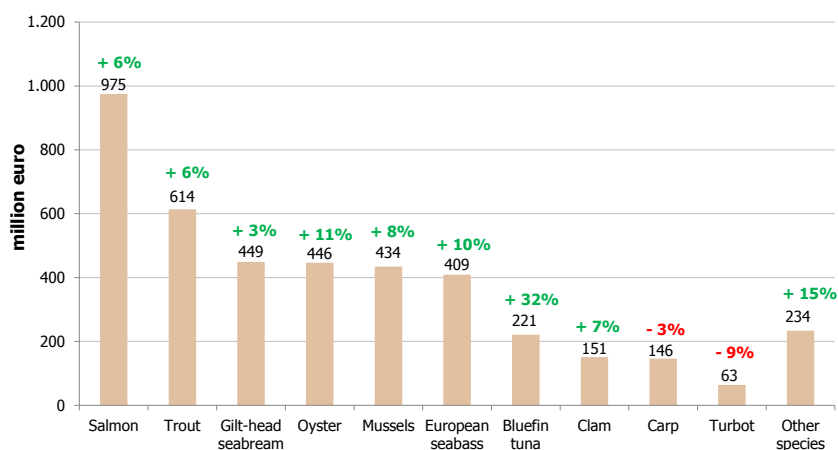
Carp and turbot's values fell by EUR 4 million and EUR 6 million, respectively.

Chart 86

Values of main farmed species in the EU in 2015 and % variation 2015/2014

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

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

**Member State level**

In 2015, all of the main EU producers reported an upward trend compared to 2014, with the exception of the UK, which had a decrease, and Italy, which remained stable.

The growth reported by Spain reached a 9-year peak, mainly attributable to increased mussel production. Mussel production was also mainly responsible for the overall increase reported by France.

In Greece, despite a drop in gilt-head seabream production, a general growth was observed due to increased volumes of European seabass and, to a lesser extent, of mussels.

The fall in the UK in 2015, resulted from a 7.251 tonnes decrease in the amount of farmed salmon compared with 2014. However, a corresponding 7% price increase in the UK led to an increased value.

It is also worth noting that, within the longer 10-year view, the UK was the only EU country registering an increase in aquaculture production in 2015 compared with 2006, amounting to almost 40.000 tonnes.

Table 32

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

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

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

Member State	2006	2014	2015	% variation 2015/2014	% variation 2015/2006
Spain	294	285	294	+3%	=
United Kingdom	172	215	212	-1%	+23%
France	238	181	207	+14%	-13%
Italy	174	149	149	=	-14%
Greece	113	105	106	+1%	-6%

In value terms, some of the major EU producers – UK, France, Greece, Ireland and Denmark – reached 10-year peaks in 2015.

Malta also reached a 10-year high in value of its aquaculture production, thanks to an increase in the value of its farmed bluefin tuna.

Aquaculture production

Chart 87

Values of farmed species in the main EU producer countries in 2015 and % variation 2015/2014

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

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

9 of the top-EU producers registered increasing values of farmed fish in 2015 compared with 2014

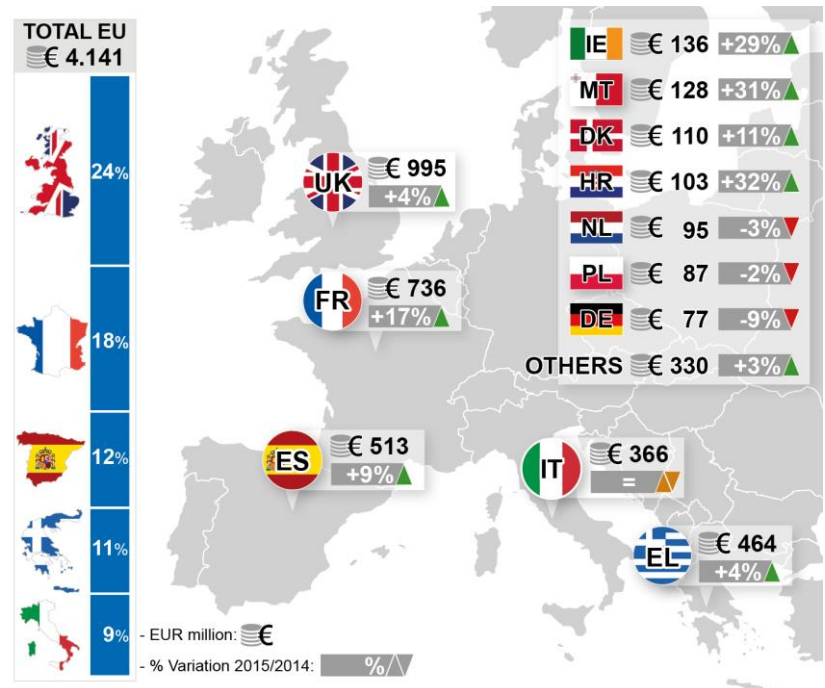
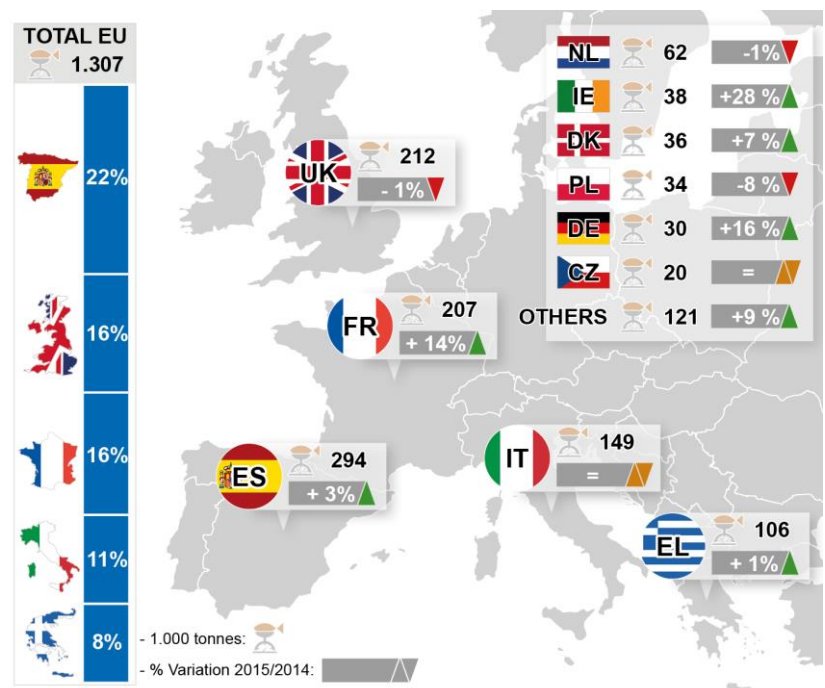


Chart 88

Volumes of farmed species in the main EU producer countries in 2015 and % variation 2015/2014

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

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



In the UK, the total value of aquaculture production increased from EUR 953 million in 2014 to EUR 995 million in 2015, driven by the EUR 20 million growth registered for salmon and EUR 15 million growth for trout in the same period. This was the highest value of total aquaculture production ever reached by any of the EU Member States.

The EUR 105 million increase observed in France, which came after a decline in 2014, was due to the increased value of farmed trout and mussel. Mussel value had been the main reason for France's 2014 production value drop.

As regards Spain, bluefin tuna and European seabass showed increased values of EUR 15 million and EUR 13 million, respectively, which drove the overall growth.

Malta's farmed species production had a value increase of over EUR 30 million in 2014–2015, reaching EUR 128 million. This intense upward trend was almost entirely linked to bluefin tuna production.

A sharp variation in European seabass value was registered in Greece as well, where it went from EUR 173 million to EUR 191 million.

In Italy, the increase of aquaculture production value was marginal, as it has been quite steady since 2011.

On the other hand, the rise in farmed fish values was significant in Ireland and Croatia, which showed increases of EUR 31 million and EUR 25 million, respectively. In Ireland, the growth was essentially connected to the increase registered for one species, namely salmon, while in Croatia, three species drove the value growth: European seabass almost doubled in value and totalled EUR 29 million, bluefin tuna value increased 28% reaching EUR 38 million, and gilt-head seabream value increased 32%, reaching EUR 26 million.

The Netherlands experienced a value drop caused by a decrease in mussel value, which went from EUR 66 million in 2014 to EUR 57 million in 2015. However, the mussel value drop did not offset the EUR 5 million increase of oyster's value.

Germany's 2015 aquaculture production reached its lowest value level in ten years, totalling EUR 77 million, which was a 9% or EUR 8 million decrease from 2014. The decline recorded for trout's production, which has halved over the last ten years, drove this trend.

Poland, where carp and trout are the most farmed species, also experienced a slight value loss in 2015 compared with 2014, decreasing by EUR 2 million. However, the total in 2015 was EUR 87 million, which was still 5% higher than its 10-year average.

Analysis by species

Bivalves and other molluscs and aquatic invertebrates

Mussel

Bivalves represent almost half of the volume of EU aquaculture production, with mussels covering 38% of it in 2015. In value terms, another species of this group, namely oyster, plays a pivotal role as it ranks fourth among main species, after salmon, trout and gilt-head seabream. Overall, bivalves totalled 629.449 tonnes and EUR 1,05 billion which represented increases of 7% in volume and 10% in value.

In 2015, mussels production reached a 6-year peak at 492.187 tonnes thanks to an 8% increase from 2014. Its value also rose by 8% and, at EUR 434 million, was the highest registered since 2008.

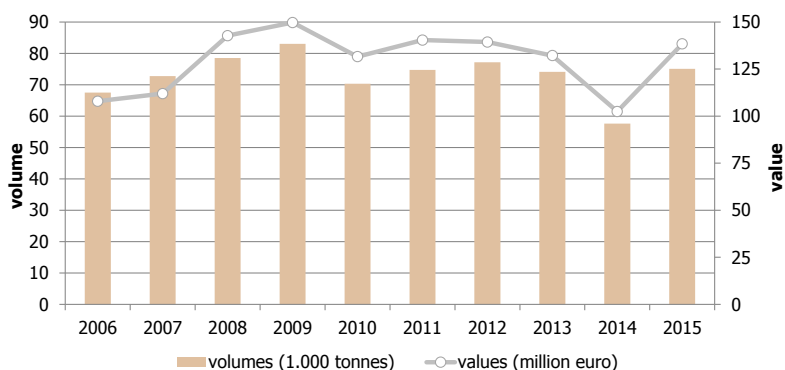
Spain, by far the main EU producer, accounted for 46% of total volume in 2015. However, in value terms, its share of 27% was smaller than France, which accounted for 32% of the total.

Chart 89

Production of mussels in France

Source: EUMOFA elaboration of EUROSTAT and FAO data

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



In Spain, farmed mussels production in 2015 reached a 9-year peak at 225.307 tonnes worth EUR 115 million. In volume and value terms, the increases over 2014 were a slight 2% and 4%, respectively. The price followed the same steady path of the previous 10 years, selling at 0,51 EUR/kg. Such price difference with France is due to the fact that a big part of mussel production in Spain goes to the processing industry, while in France, the whole production goes to the fresh market.

Italy registered a flat production of mussels in 2015 compared with 2014, farming the same volume of 63.700 tonnes and selling at the same average price of 0,78 EUR/kg.

Dutch mussels, despite registering no variation in volume terms, experienced a value loss: 54.211 tonnes were in fact sold at 1,06 EUR/kg, generating a 13% value loss which amounted to almost EUR 9 million less than in 2014.

By comparison, the flesh of *Mytilus chilensis* (without shell) was exported from Chile at a FOB price of 2,61 EUR/kg in 2015 and 2,38 EUR/kg in 2016.

Oyster

In 2015, the value of oyster production increased by 11% and reached EUR 446 million, thanks to a significant 10% price rise and a slight 1% volume increase. This volume increase ended a three-year period of steady decline, during which production fell from 98.601 tonnes in 2011 to 90.017 tonnes in 2014.

France, the main producer with 76.610 tonnes farmed in 2015, was responsible for the overall value increase observed at EU level, reporting a 12% growth over 2014 that led to a total value of EUR 388 million. The corresponding price of 5,06 EUR/kg was the highest ever registered. In volume, however, the increase was limited at 2%, and the production was still well below the levels (above 100.000 tonnes) reached before the herpes virus outbreak of 2012.

The growth registered in the Netherlands was the most significant. In 2015, 2.704 tonnes of Dutch oysters were sold at EUR 4,84 EUR/kg,

generating a growth of 70%, with value growing from EUR 8 million to EUR 13 million. Cupped oysters were the main contributor to the increase.

It is also worth noting that Ireland experienced a plummeting value trend. In addition to its slight 1% production decline to 7.478 tonnes, an 11% price fall made total values fall from EUR 35 million to EUR 31 million.

Table 33

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	2014	2015	% variation 2015/2014
France	4,59	5,06	+ 10%
Ireland	4,63	4,11	-11%
Netherlands	2,36	4,84	+105%
United Kingdom	3,21	3,24	+1%
Portugal	2,59	2,53	-2%
Spain	4,01	3,89	-3%

Clam

In 2015, 41.028 tonnes of clams were farmed in the EU, with a total value of EUR 151 million. While this meant a steadiness in volume compared with 2014, a 7% increase was registered for values. The EU average price was 7% higher than in 2014, as it moved from 3,44 to 3,67 EUR/kg.

Despite representing almost the entire EU production of clams, Italy experienced a different trend in 2015 compared with 2014, with both volume and values stable, totalling 36.500 tonnes and EUR 106 million and an average price of 2,91 EUR/kg.

The value growth at EU level was in fact driven by Portugal, the second largest producer, which reached a 4-year peak of EUR 26 million due to a 42% increase from 2014 to 2015. The corresponding price of 11,31 EUR/kg was the highest ever recorded, well above the EU average (7,64 EUR/kg more). This was due to the fact that Portuguese clam production consists almost exclusively of high-valued grooved carpet shell (*Ruditapes decussatus*) while other EU producers (Italy, Spain and France) mainly produce Japanese carpet shell (*Ruditapes philippinarum*).

Salmonids

In 2015, with respect to 2014, EU-farmed production of salmonids increased only a slight 2% in volume terms but a greater 6% in value terms. Such growth made salmonids reach the 10-years peaks of 384.783 tonnes and EUR 1,62 billion.

Salmon

Farmed salmon was sold at 5,24 EUR/kg, the highest price ever recorded, generating a value increase of EUR 52 million that led to the peak of EUR 975 million. However, this corresponded to a slight production decline, as volumes reduced by 2% to 186.026 tonnes. By comparison, the average ex-farm price of Norwegian salmon (round weight) was 33,72 NOK/kg (3,77 EUR/kg) and the average export price was 40,03 NOK/kg (4,47 EUR/kg) in 2015.

This trend was due to increases in the UK, the major EU producer, where values rose by a significant 24% in 2013 compared with 2012 and kept increasing, even if at a slower rate, up to 2015, when they reached the 10-year peak of EUR 881 million. Volumes decreased by 4% in 2015 compared with 2014, dropping from 179.397 to 172.146 tonnes.

Ireland, the second largest producing country, experienced a huge increase of salmon production in 2015. Its volumes increased 40%, reaching 13.116 tonnes while values skyrocketed by 56% reaching a 10-year peak of EUR 90 million.

Trout EU trout production has been rising since 2011. In 2015, it totalled 192.472 tonnes worth EUR 614 million, which represented a 6% increase compared to 2014 in both volume and value terms.

France, Italy and Denmark, the main producers, accounted for 37.450, 32.810 and 32.359 tonnes, respectively. They all registered an increase in farmed trout production in 2015 compared with 2014, with France and Denmark reaching a 10-year peak. The average prices trended differently in each of the three countries. In France the price of 3,29 EUR/kg was a 6% decrease from 2014, in Italy, the 2,84 EUR/kg price was unchanged from 2014, and the 2,97 EUR/kg registered in Denmark represented a 2% increase.

It is also worth noting that in 2015 the UK recorded a remarkable growth in value of farmed trout with respect to 2014. Driven by a 15% price increase from 3,54 to 4,06 EUR/kg, total production was worth EUR 62 million. This was a substantial 34% or EUR 16 million increase over the previous year, against a 17% volume increase that went from 13.024 to 15.188 tonnes.

Other marine fish

Two species of this group, namely gilt-head seabream and European seabass, account together for over 20% of the total value of EU aquaculture production. For both species, Greece is the major producer, followed by Spain.

Gilt-head seabream In 2015, value of gilt-head seabream reached a ten-year peak at EUR 449 million, which was a 3% increase from 2014. At the same time, volumes decreased a slight 4%, dropping to 82.527 tonnes.

The same trend was observed in Greece and Spain, where volumes fell by 7% and 5%, respectively, and values grew by 1% and 4%.

As specifically concerns Greece, despite registering such a slight increase, it is worth noting that its 2015 value of EUR 242 million was 10% above its 10-year average, thanks to a 9% price growth from 4,73 EUR/kg in 2014 to 5,14 EUR/kg in 2015, which was the highest ever registered.

Also in Spain, farmed gilt-head seabream reached its highest price of 5,33 EUR/kg – a 9% increase over 2014.

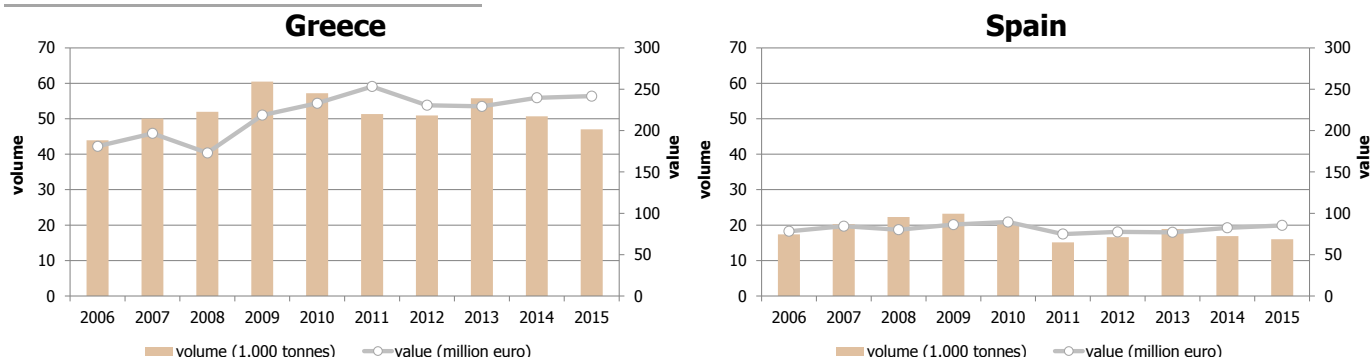
By comparison, the average import price of fresh seabream from Turkey into the EU reached 5,00 EUR/kg in 2015 before falling to 4,26 EUR/kg in 2016.

Chart 90

Gilt-head seabream production in the main EU producers

Source: EUMOFA elaboration of EUROSTAT and National sources data

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



Gilt-head seabream farmed in Croatia registered a significant value increase in 2015 compared with 2014. With an 18% price growth, from 5,35 to 6,32 EUR/kg, total values amounted to EUR 26 million, which were EUR 6 million more than in 2014. Volumes produced grew by 15%, reaching 4.075 tonnes.

European seabass

In 2015, EU production of European seabass reached its highest amount of the last ten years, totalling 68.780 tonnes worth EUR 409 million. This represented 10% increases in both value and volume over 2014. Value peaks were reached in Greece and Spain as well.

In Greece, the increase was sharp, as values grew by almost EUR 18 million, moving from EUR 173 million to EUR 191 million. Volumes grew at the same rate, increasing from 32.142 to 35.382 tonnes while the price remained stable at 5,40 EUR/kg.

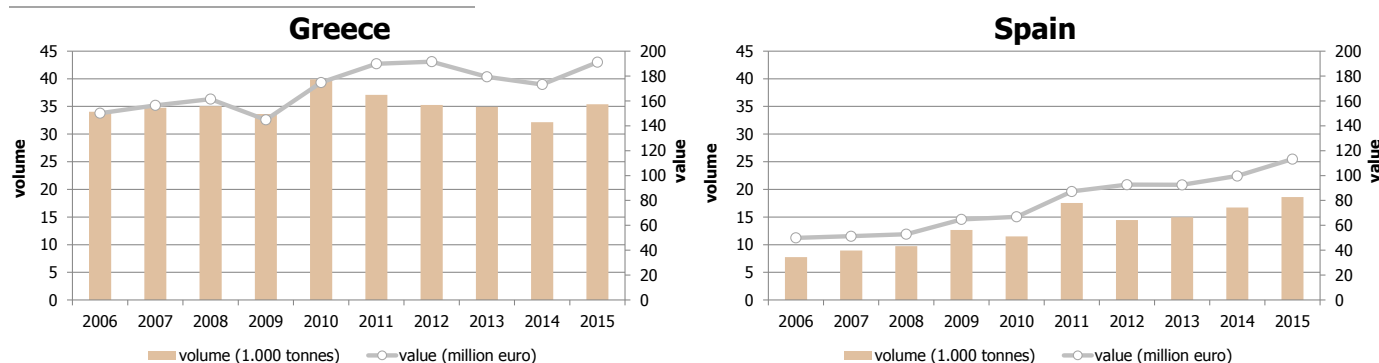
In 2015, seabass production in Spain rose by 11% in volume and 14% in value compared with 2014. It amounted to 18.600 tonnes and EUR 113 million, with seabass price increasing 2% to 6,09 EUR/kg.

Chart 91

European seabass production in the main EU producers

Source: EUMOFA elaboration of EUROSTAT and National sources data

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



As also occurred for seabream, Croatian aquaculture production recorded a significant growth in seabass as well as seabream. Total value in 2015 amounted to EUR 29 million, which were EUR 10 million more than in 2014, thanks to a price increase that rose 6% – from 6,06 to 6,41 EUR/kg. The volume increase was noteworthy, as tonnes farmed rose by 40% and reached 4.488 tonnes.

Tuna and tuna-like species

Bluefin tuna

Bluefin tuna is the only tuna species being farmed. In the EU, it is almost entirely produced in Malta, Spain and Croatia. Different from all other commodity groups, bluefin tuna production consists of fattening wild-caught adult species. It is among the top 10 species farmed in the EU, covering 1% and 5% of total volumes and values, respectively. In 2015, this corresponded to 15.415 tonnes and EUR 221 million.

Volumes, which had been decreasing up to 2011, started to recover in 2012. The value trend remained upward during 2006-2015, increasing at an average annual rate of 22%.

This was determined by the value increase experienced in Malta, the main producer. In 2015, Malta produced 8.051 tonnes of bluefin tuna – more than half of the EU production – for a total value of EUR 111 million. Volumes almost doubled compared with 2014, growing by around 2.600 tonnes, while values rose by 36% or EUR 30 million. The resulting price of 13,80 EUR/kg was 8% lower than that of 2014, when it was at 14,94 EUR/kg.

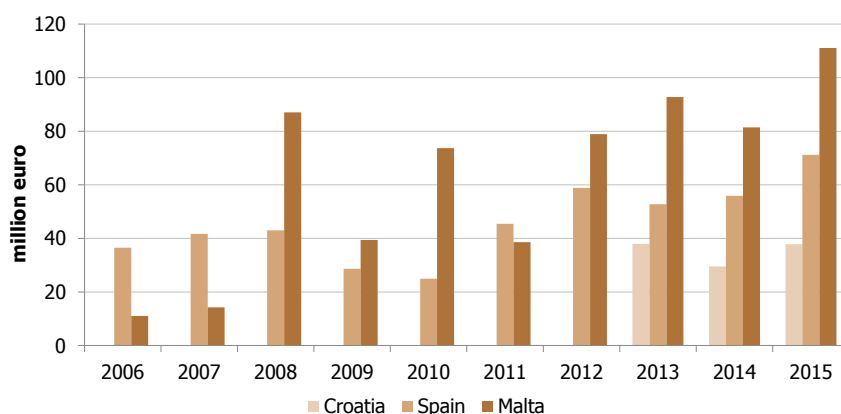
The price of bluefin tuna farmed in Spain shrank in a more remarkable way, from 18,09 to 15,18 EUR/kg, marking a 16% decrease that was due to volumes more than doubling to 4.691 tonnes. This generated a value growth of 27% and led to the 10-year peak of EUR 71 million.

Bluefin tuna is the most valued species farmed in Croatia, accounting for 37% of the total in 2015, when it reached 2.603 tonnes worth EUR 38 million. These represented increases of 17% and 28% in volume and value, respectively, with respect to 2014. Price also increased by 10%, reaching 14,54 EUR/kg.

Chart 92

Bluefin tuna production in the main producers

Source: EUMOFA elaboration of EUROSTAT data



Freshwater fish⁴²

Carp

In 2015, EU-farmed production of freshwater fish amounted to 106.950 tonnes and EUR 269 million, which represented increases of 8% and 3%, respectively, over the previous year.

Carp, the most valued species of this group, accounted for 54% of the total in 2015. It is mostly produced in Poland and Czech Republic, which had totals of 17.149 and 18.682 tonnes, respectively, in 2015. While carp production was flat in Czech Republic compared with 2014, Poland experienced a 10% decline corresponding to a production drop of almost 2.000 tonnes. As a result, the price rose 10%, from 1,99 to 2,19 EUR/kg. Carp's price in Czech Republic trended downward by 19%, as it moved from 2,01 to 1,64 EUR/kg.

Hungary, Germany and Romania also have relevant carp markets. In 2015, Hungary registered a 10% production increase to reach 13.495 tonnes, which corresponded to an overall 5% value loss, with farmed carp being sold at 1,60 EUR/kg. The 14% price drop brought the total value to EUR 22 million. On the other hand, production in Germany decreased by 7%, totalling 4.916 tonnes, and remained unchanged in Romania at 9.032 tonnes. However, the value of Romanian production rose 6% to EUR 15 million thanks to a parallel 6% growth in price from 1,59 to 1,69 EUR/kg. In Germany, a value decrease was observed, with total value of carp production reaching EUR 11 million, which was 7% less than in 2014.

6.1 Most relevant market trends in 2016 and 2017

Salmon

In this section, some updates are reported for the years 2016 and 2017.

Harvest of farmed Atlantic salmon in Europe fell slightly in 2016, in amounts varying between 3 and 5%. A similar fall in harvest volumes was also observed for the EU Member States⁴³.

While Irish production remained stable, the UK experienced a drop in production. Fall in European production, combined with growth in market demand, pushed market price up. From a record high in 2015, prices for fresh whole salmon rose by around 15% for UK salmon (valued in EUR) in 2016.

Prices for Irish salmon, which generally trend on a higher level as it is farmed according to organic standards, rose by 8% compared with 2015.

Despite a downward price trend seen in the first months of 2017, prices for fresh whole UK salmon were 10% higher than the 2016 average, and the price for Irish salmon was 29% higher.

A slight 2 to 4% growth in production of Atlantic salmon is expected in Europe in 2017. Nevertheless, even with this growth rate, European production will end below the production level seen in 2015.

⁴² Freshwater fish excludes trout. Trout is included with salmonids.

⁴³ Source: Kontali

Chart 93

Export price of fresh whole salmon from Ireland and the UK (EUR/kg)

Source: EUMOFA elaboration of EUROSTAT data

**Trout**

Prices and market demand for trout varies depending on fish size and the market to which the trout is sold. In general, there was an upward price trend for trout in 2016 – especially for large sized trout which benefited from the high prices of farmed Atlantic salmon. Export prices for fresh whole trout from the northern parts of the EU reached a record high price level in 2016. The upward price trend continued in the first quarter of 2017 for most of the EU Member States.

European seabass and gilt-head seabream

European seabass and gilt-head seabream are normally farmed together in the Mediterranean even though they are distinctly different species. Their consumption in the EU is increasing, and traded volumes have increased by an average of 6% in recent years. A similar average increase is expected for 2017, and can be taken as a surrogate measure for increase in demand.

The EU-based production has trended downwards or remained flat for some years, mainly due to a drop in production in Greece, the largest EU-based bass and bream producer. However, Greece has regained production levels and from 2015 to 2016, the total export from Greece increased by 22% and 13% for bass and bream, respectively. In total, exports from all EU countries have increased by 20% and 14%, respectively, for the same period.

Exports from Greece regained volume in 2016, with bass and bream reaching 3 and 7%, respectively, below the peak exports of 2010. Total 2016 bass and bream exports from EU countries were 29% and 15% above the 2010 level, respectively.

In comparison, Turkish exports increased by 134% and 498% for bass and bream, respectively, in the same period. In 2010, total Turkish exports were 33 and 14% of those of Greece for bass and bream, respectively, while in 2016 they represented 79% and 92%, and they continue to trend strongly upwards.

Compared with total EU exports, Turkish export increased from a share of 25 and 10% in 2010, up to 45 and 54% for bass and bream, respectively, in 2016.

When looking at Italy as a main market for bass and bream, Greek exports in 2016 were 7% above the 2010 level for bass, while 18% below for bream, meaning the average for the two species was down 10%.

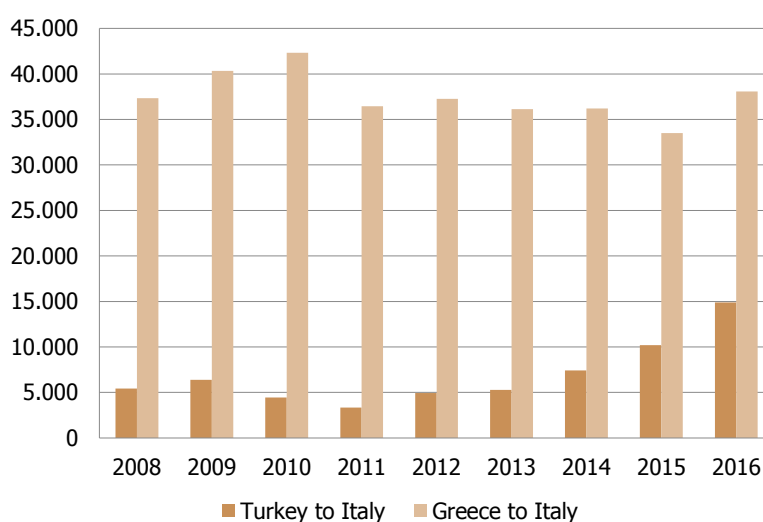
At the same time, Turkish export to Italy in 2016 was 144% and 350% above the 2010 level, for bass and bream, respectively, which averaged to an increase of 234%.

The import of bass and bream to Italy increased 30% from 2010 to 2016. Greece was the major supplier, accounting for 50% of the imported volumes in 2016, which was down from 75% in 2010. Turkey was the second largest supplier with 24% (up from 10% in 2010) and was followed by Spain with 9% (up from 3% in 2010) and Croatia with 7% (up from 4% in 2010).

Chart 94

**Exports of gilt-head seabream
and European seabass
from Turkey and Greece to Italy
(volume in tonnes)**

Source: EUMOFA elaboration of EUROSTAT data



Greek exports to northern European markets dropped from 2010 to 2016. For example, exports to the UK dropped 44% from 4.639 to 2.621 tonnes, and exports to Germany dropped 8% from 2.993 to 2.757 tonnes, respectively. At the same time, Turkish exports to the UK increased from 33 tonnes to 1.735 tonnes and from 61 tonnes to 4.553 tonnes for Germany, over the same period.

Netherlands is another developing market where Turkey has expanded, with exports increasing from 2.003 tonnes in 2010 to 7.619 tonnes in 2016. During the same period, Greek exports increased from 1.942 to 2.747 tonnes.

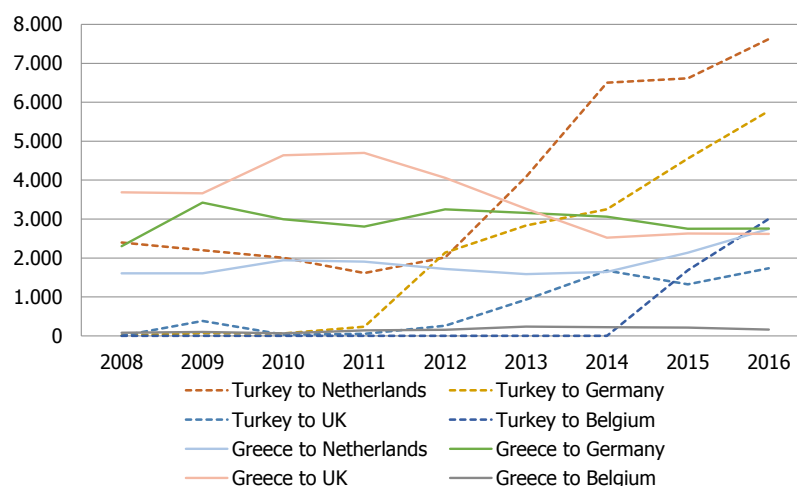
Hence, one can conclude that the growth of about 100% from 2010 to 2016 in northern European markets – Netherlands, Germany, UK and Belgium – was mainly supplied by Turkey which had an average 440% increase compared with Greece which had a 26% reduction.

Greece had 36% of the north European market in 2010 and 14% in 2016, while Turkey increased from a share of 20% in 2010 to 52% in 2016.

Chart 95

Exports of gilt-head seabream and European seabass from Turkey and Greece to main Northern European markets (volume in tonnes)

Source: EUMOFA elaboration of EUROSTAT data



As indicated initially, increased demand (market growth) for both bass and bream can be estimated at 5-6% per year.

The Mediterranean sector has a history of “boom and bust” and, with an increase in supplies of about 15% for bass in 2015 and 2016, and a 5 and 22% increase for bream in 2016 and 2016, respectively, the risk of a new cyclic bust cannot be ruled out. In addition, the sector has a negative price trend, especially for bream.

However, as the sector has matured, it has increased its focus on marketing in existing markets, development of new markets, and development of new products and market segments. Thus, it is reasonable to argue that it will create a higher demand.

Bluefin tuna

Bluefin tuna farming in the EU takes place in the Mediterranean and is based on fattening of wild stocks. From 2015 to 2017, quotas of bluefin tuna in the Atlantic increased by 60%. In addition, tuna caught with gear other than purse seine 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 EUR/kg, prices for bluefin tuna sold to Japan have shown a downward trend. Export prices of farmed bluefin tuna from Spain to Japan fell from 15,29 EUR/kg in 2015 to 13,50 EUR/kg in 2016, while prices from Malta fell from 12,77 EUR/kg to 12,13 EUR/kg.

With prospects of an increase in tuna farming in the EU as well as in Japan itself, higher supply volumes could be expected in the Japanese market in 2017. Rise in supply will continue to put pressure on Bluefin tuna prices.

6.2 Economic performance of the EU organic aquaculture sector

Organic aquaculture represents 4,7% of the total EU aquaculture production for six major species: salmon, trout, carp, seabass, seabream and mussels.

This sector has experienced a strong increase in recent years, at least for the major species. In 2015, compared with 2012, it grew by 24% for salmon, doubled for rainbow trout, and tripled for seabass and seabream. Positive developments have also been observed for shellfish (mussels, oysters). It has even acquired a dominant position in some Member States and for some specific products, such as salmon in Ireland and mussel in Denmark and Ireland. Yet, the economic performance of EU organic aquaculture is far from being satisfactory everywhere.

Organic salmon provides good sales price premiums, which on average cover the extra costs generated by organic farming, in a context of positive development of international demand. As for seabass and seabream, although organic producers reach premium prices of around 2,00 EUR/kg, they are still lower than the additional costs occurred, due to the limited market expansion. Organic trout farming brings significant price premiums and extra margins, compared with conventional aquaculture, and has good market demand, particularly from the smoking industry. Organic mussel farming, which developed more recently, is benefitting from a strong demand and can provide 20% price premiums. However, organic carp cannot cover its extra costs with equivalent sales price premiums and would suffer heavy losses without EMFF⁴⁴ subsidies.

Organic certification has proven to be a development driver. Strongly established organic labels speed up the development of the market, such as Naturland in Germany or Soil Association in the UK. The big competitor to “organic” is “sustainable”. Large-scale retailers sometimes adopt a more sustainable-driven fish purchasing policy than organic oriented, because consumers are sceptical and confused in front of a variety of ecolabels and organic logos. Some stakeholders in the organic fish farming supply chain think that “sustainable” has a brighter future than “organic”.

⁴⁴ European Maritime and Fisheries Fund

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