



E U M O F A

European Market Observatory for
fisheries and aquaculture products

Case study

Price structure in the supply chain for plaice in the Netherlands

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Summary

- The Netherlands is the first producer of European plaice in the world with nearly 29.000 tonnes and the EU accounts for 86% of the world catches with more than 86.000 tonnes (2014).
- Total Allowable Catches (TACs) for plaice more than doubled between 2008 and 2015. However, TACs were not fully utilized by the EU fleet: 93% utilisation in 2010 and 68% in 2014 and 64% in 2015.
- Italy, the United Kingdom, and Germany are the main consumer markets. They represent 64% of the total EU market for plaice.
- The Netherlands are a major player in terms of production, trade and processing, importing mainly from UK (fresh whole plaice) and exporting to Italy and Germany (fresh and frozen fillets).
- From 2009 Dutch plaice fisheries began to be MSC certified. In 2013 certified plaice accounts for 65% of the national catches.
- Regarding price structure in the supply chain:
 - As the filleting yield is quite low, the filleting loss is a major cost item.
 - In the case of the fresh fillet marketed in the Dutch retail, the packaging cost and the distribution from platform to point of sale account for more than half of the retail price.
 - For the frozen fillet shipped to Italy, the filleting, freezing and packaging costs represent 26% of the price delivered at platform in Italy.
 - The net margin of the processor is higher in the case of fresh fillet (0,23 EUR/kg) than in the case of frozen fillet (0,15 EUR/kg).

0 TASK REMINDER – Scope and content

0.1 Case study scope

Reminder

The rationale for the choice of plaice to analyse price transmission and distribution of value in the Dutch supply chain is described in the table below.

Product	Origin	Characteristics	Market and price drivers
Plaice (fresh, frozen)	Fishery	<p>Growing quotas since 2008</p> <p>Growing demand from the market</p> <p>Low price in the early 2010s, price increase in 2015</p> <p>Large exports to Italy and Germany</p>	<p>Supply/demand balance (market stability)</p> <p>Size, presentation, MSC certification</p> <p>Price of other flatfish</p>

Key elements of the analyses will concern:

Species - Products	Main MS (focus)	Other MS (overview)
Plaice (fresh, frozen, whole and fillet)	The Netherlands	Italy, Germany

0.2 Content of the document

In conformity with the methodology developed within the EUMOFA, the document includes:

- A description of the product;
- Most relevant EU markets for plaice, with a special focus on the Dutch, Italian and German markets;
- An analysis of the price transmission along the supply chain in the Netherlands.

1 DESCRIPTION OF THE PRODUCT

1.1 Biological and commercial characteristics

The case study focuses on:

- Fresh plaice, filleted;
- Frozen plaice, filleted.

Case study product

Name: European plaice (*Pleuronectes platessa*)

ERS code: PLE

Presentation: Fresh fillets and frozen fillets

Commercial size:

In the Netherlands, there are four categories based on fish size:

- Category 1: length > 41 cm
- Category 2: length between 35 cm and 41 cm
- Category 3: length between 31 cm and 35 cm
- Category 4: length between 27 cm and 31 cm



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Biological parameters

Habitat:

- Lives on a sandy or mixed seabed.
- Lives from a few meters to about 100 m deep, most adult plaice occur at depths of 10-50m.
- Eats molluscs and worms.
- Temperature: 2-15°C.

Spawning:

- Spawns when the temperature is about 6° C.
- Peak spawning time from early January in the eastern Channel to mid-February in the German area.

Geographical distribution (see maps on following page):

- The European plaice is present from Mediterranean area to Northern European area.

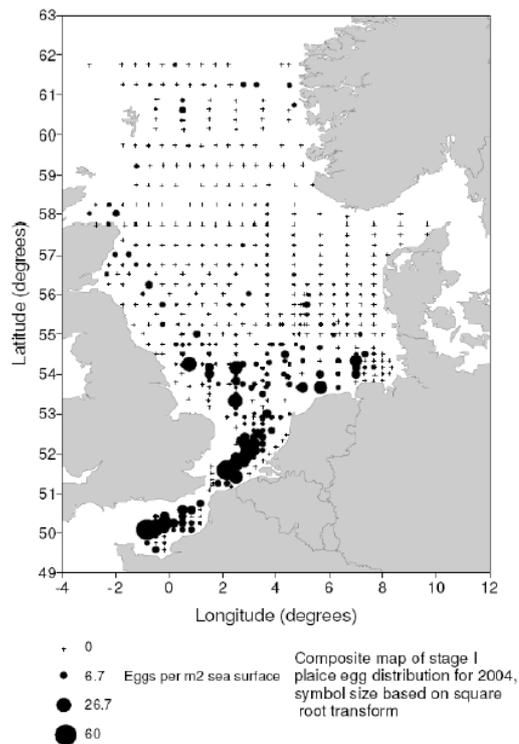
- There is a larger distribution in the North Sea and in the Channel, especially along the Dutch, Belgian and French coasts.

Figure 1 - Distribution of *Pleuronectes platessa* in European area



Source: FAO

Figure 2 - Map of spawning area for *Pleuronectes platessa* in North Sea



Source: ICES

Substitutes

The main substitute to plaice on the market is the “Pacific plaice”, also called “rock sole” (*Lepidopsetta bilineata*), fished in the Northern Pacific by the US fleet (61.000 t in 2013). Since 2007 rock sole imports benefit, together with other flatfish imports, from an Autonomous Tariff Quota (5.000 t free of custom duties).

Plaice is also in competition on the market with other flatfish such as dab, flounder, sole...

Related codes

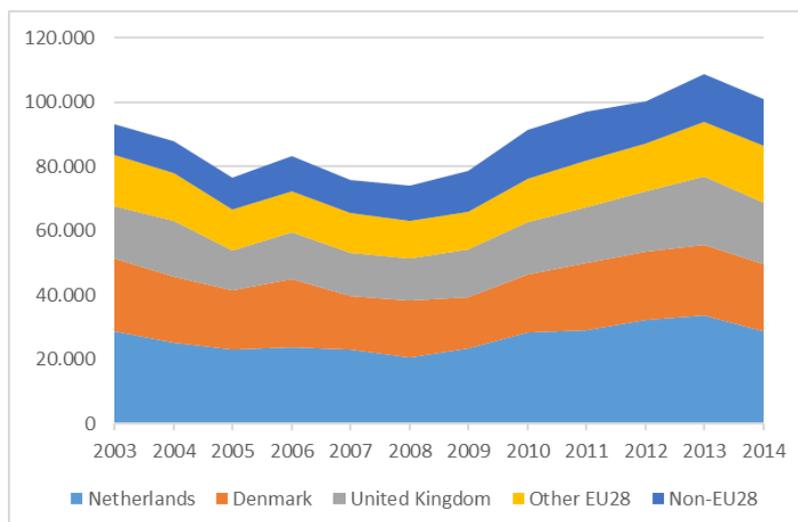
European plaice is distinguished in the Combined Nomenclature.

- Fresh plaice “Pleuronectes platessa”: CN code 03 02 22 00
- Frozen fillets of plaice “Pleuronectes platessa”:
 - CN code 03 04 83 10: since 2012
 - CN code 03 04 29 71: between 2007 and 2011
 - CN code 03 04 20 71: before 2007
- Frozen plaice “Pleuronectes platessa”: CN code 03 03 32 00
- For fresh fillets, there is no specific code for plaice which is included in a heading grouping all flatfish: “Pleuronectidae, Bothidae, Cynoglossidae, Soleidae, Scophthalmidae and Citharidae”: CN code 03 04 43 00. This code is only available since 2012. We consider that this code mainly covers plaice concerned by the Dutch trade.

1.2 Catches and availability of Plaice

Plaice supply exclusively comes from marine fishery. The Netherlands is the first world producer of European plaice (28.779 tonnes in 2014), followed by Denmark and the United Kingdom. The share of Netherlands in the world catch ranges between 28,0% and 32,2% over the period 2003-2014 (32,2% to 37,2% of EU catches). EU accounts for the largest share of European plaice catches: 85,6% in 2014. Main non-EU fishing countries are Russia and Iceland.

Figure 3 - World catch of European plaice (tonnes)



Source: FAO

Table 1 - World catch of European plaice (tonnes)

	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Netherlands	28.867	25.123	23.101	23.947	23.099	20.757	23.476	28.291	29.305	32.258	33.748	28.779
Denmark	22.379	20.705	18.377	21.185	16.780	17.580	16.056	18.095	20.826	21.366	21.893	20.851
United Kingdom	16.502	17.407	12.277	14.525	13.244	12.968	14.798	16.420	17.168	18.746	21.229	19.136
Belgium	6.487	6.053	5.063	5.139	5.732	5.220	5.008	5.200	6.344	6.687	8.228	8.868
Germany	3.944	3.850	3.560	3.863	2.915	3.412	3.263	4.103	4.255	4.339	5.295	4.634
France	3.856	3.615	3.185	2.741	2.809	2.267	2.694	3.214	3.052	2.878	2.939	3.205
Other EU-28	1.455	1.189	1.003	961	1.078	941	761	738	704	723	673	846
Total EU-28	83.490	77.942	66.566	72.361	65.657	63.145	66.056	76.061	81.654	86.997	94.005	86.316
Russian Fed.	593	976	1.160	1.445	1.938	2.233	4.245	7.514	8.455	5.539	7.221	7.380
Total Non-EU-28	9.542	10.037	10.059	10.843	10.201	11.033	12.459	15.422	15.459	13.335	14.768	14.473
World	93.032	87.979	76.625	83.204	75.858	74.178	78.515	91.483	97.113	100.332	108.773	100.789
% EU 28	90%	89%	87%	87%	87%	85%	84%	83%	84%	87%	86%	86%

Source: FAO

We can observe two periods in the evolution of plaice catches since 2003, a decrease between 2003 and 2008 (-24,4% at EU-28 level) and an increase between 2008 and 2014 (+36,7% at EU28 level), in relation with the evolutions of quotas. In this last period, we observe a decrease of the catches at EU level (-8,2%) which concern the main Member States: the Netherlands (-14,7%), Denmark (-4,8%) and the United Kingdom (-9,9%).

Table 2 - Evolution of European plaice catches between 2003-2008 and 2008-2014

	Evolution 2003-2008	Evolution 2008-2014	Volume 2014 (tonnes)
Netherlands	-28,1%	+38,6%	28.779
Denmark	-21,4%	+18,6%	20.851
United Kingdom	-21,4%	+47,6%	19.136
Other EU	-24,8%	+48,2%	17.550
Total EU-28	-24,4%	+36,7%	86.316
Non-EU	+15,6%	+31,2%	14.473
World	-20,3%	+35,9%	100.789

Source: FAO

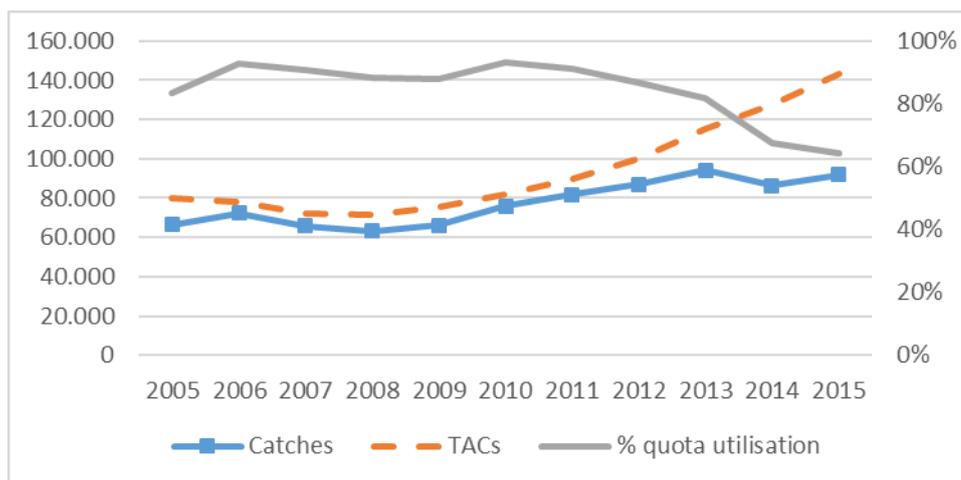
Total Allowable Catches (TACs) for plaice decreased in the EU by 10% between 2005 and 2008 and more than doubled between 2008 and 2015 (143.188 tonnes).

The TACs increased substantially since 2011, some 10% to 15% a year. However, TACs were not fully utilised by the EU fleet (93% in 2010, 82% in 2013 and 68% in 2014). This can be explained by three main factors:

- the fleet decreased in the last 10 years due to a reduction of fishing opportunities before 2008 (evolution of TACs) and economic difficulties in the early 2010s due to low prices;
- competition with other more attractive fisheries (especially sole);
- the decrease of TACs until 2008 led to substitution on the market with other flatfish imported from third countries. Regaining and extending market shares remain challenging for plaice producers.

According to processors interviewed, there is a growing demand for European plaice on the market. In case of low availability on the market, the substitution product is the Pacific plaice, fished in the northern part of the Pacific Ocean. This species increased its position on the EU market in the 2000s, due to its price positioning vis-a-vis the European plaice and lower TACs quotas for European plaice.

Figure 4 - Evolution of TACs, catches and quota utilisation between 2005 and 2015 at EU level



Source: EU – DG MARE

In 2016, the quota for plaice in the Netherlands is 48.917 tonnes, accounting for 31% of EU quota. Most of this quota (47.112 tonnes in 2016) is concentrated in areas IIa, IIIa (exc. Skagerrak and Kattegat) and IV.

Table 3 - TACs and quotas for plaice (2005 – 2016)

	All areas			IIa, IIIa (exc. Skagerrak and Kattegat), IV		
	EU	NL	% NL	EU	NL	% NL
2005	79.775	23.334	29,25%	56.870	21.872	38,46%
2006	78.041	22.732	29,13%	55.420	21.315	38,46%
2007	72.372	20.272	28,01%	49.143	18.901	38,46%
2008	71.614	19.904	27,79%	47.875	18.414	38,46%
2009	75.239	21.680	28,81%	52.615	20.237	38,46%
2010	81.812	24.347	29,76%	59.557	22.907	38,46%
2011	89.735	27.734	30,91%	68.862	26.485	38,46%
2012	100.269	31.709	31,62%	79.201	30.462	38,46%
2013	115.057	36.503	31,73%	91.225	35.086	38,46%
2014	127.806	41.594	32,54%	104.117	40.045	38,46%
2015	143.188	47.584	33,23%	119.690	46.035	38,46%
2016	155.632	48.917	31,43%	122.494	47.112	38,46%

Source: DG MARE - TACs and quotas

2 THE EU MARKETS FOR PLAICE

2.1 Structure of the EU market

2.1.1 Apparent market by Member State

The EU apparent market for plaice is 97.678 tonnes in 2014. The two first markets, Italy and the United Kingdom, account for 51,6% of the EU apparent consumption. Italian supply is mainly based on imports while the one in the United Kingdom is based on catches by the national fleet.

The following main markets are Germany, the Netherlands, France, Denmark, Belgium and Poland.

Extra-EU trade remains limited: 6.578 tonnes imported from third countries in 2014 and 3.417 tonnes exported.

Frozen fillets account for 40,7% of international trade, followed by fresh whole fish (35,3%), fresh fillets (20,2%) and frozen whole fish (3,8%).

Table 4 - Apparent market for European Plaice by Member State in 2014 (tonnes of whole fish equivalent)

(tonnes whole equivalent)	Catches	Imports	Exports	Apparent market
IT	0	28.002	130	27.873
UK	19.136	6.630	3.197	22.569
DE	4.634	13.887	6.195	12.326
NL ¹	28.779	25.772	45.790	8.760
FR	3.205	6.363	1.860	7.708
DK	20.851	3.679	18.011	6.519
BE	8.868	6.058	12.928	1.997
PL	88	3.947	2.402	1.632
EU 28	86.316	103.318	91.956	97.678

Source: EUMOFA, FAO

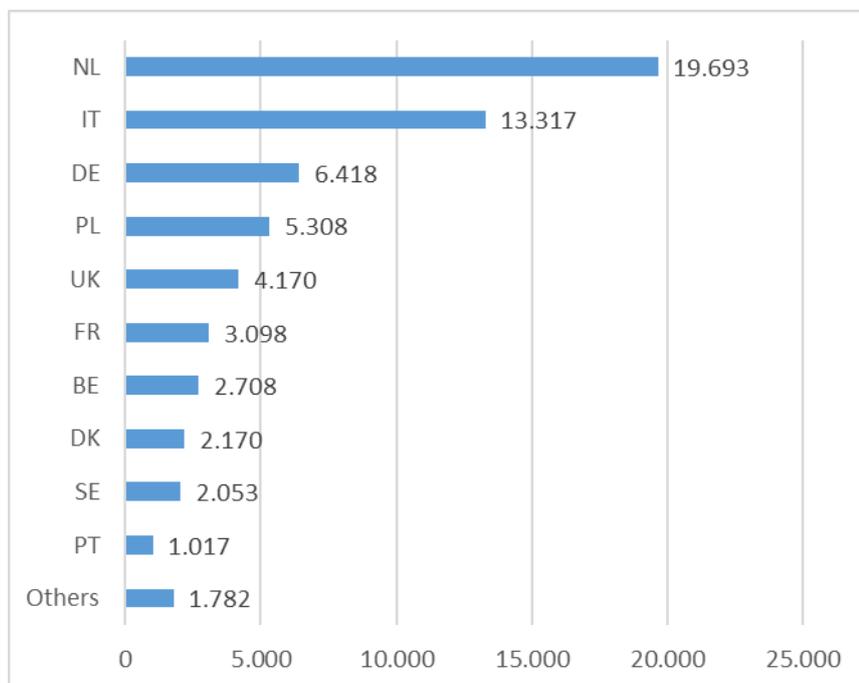
¹ According to expert estimate, the present calculation overestimates the apparent market in the Netherlands. This is detailed in section 2.3.1. Supply balance.

2.1.2 Imports

The main importers of European plaice in the EU-28 are the Netherlands, Italy, Germany, Poland and the United Kingdom:

- The Netherlands imported 19.693 tonnes of plaice products in 2015, 99% of the volume imported are fresh whole plaice. Final products are intended for the national market and exports (18.117 tonnes exported in 2015, mainly frozen fillets).
- Italy imported 13.317 tonnes in 2015, 95% of the volumes are fillets (mainly frozen) intended for consumption on the national market (only 67 tonnes exported).
- Germany imported 6.418 tonnes, 61% are fillets, fresh and frozen.
- Poland imported 5.308 tonnes, 88% are fresh whole plaice.
- The United Kingdom imported 4.170 tonnes, the share of fillets is lower than for Italy and Germany with 43% (fresh and frozen).

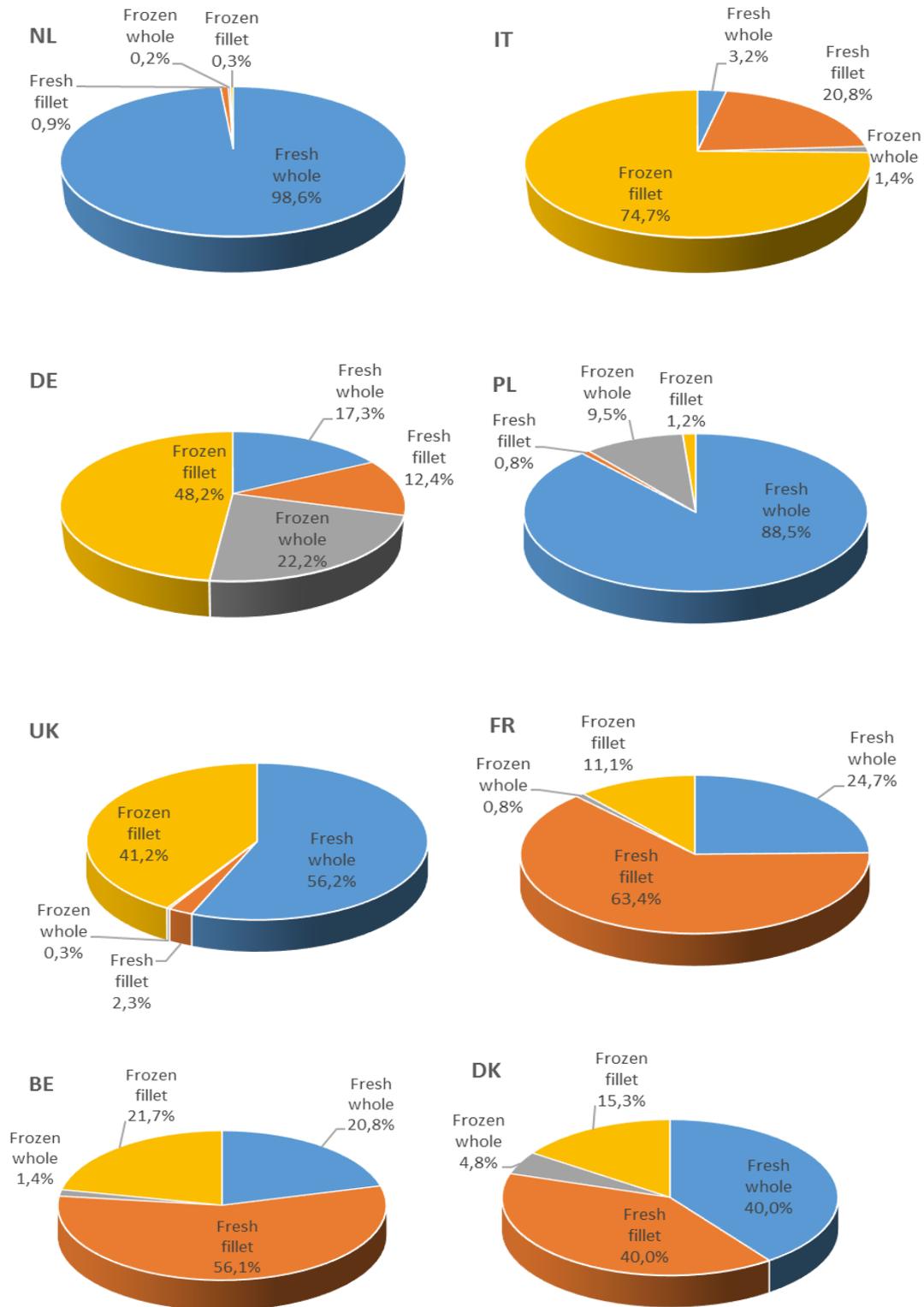
Figure 5 - Volume of imports by Member State of the EU-28 in 2015 (tonnes of products)



Source: EUMOFA

The breakdown between the different types of products in the imports of the main Member States is displayed in the figures on the following page.

Figure 6 - Breakdown of imports by types of products (2015)



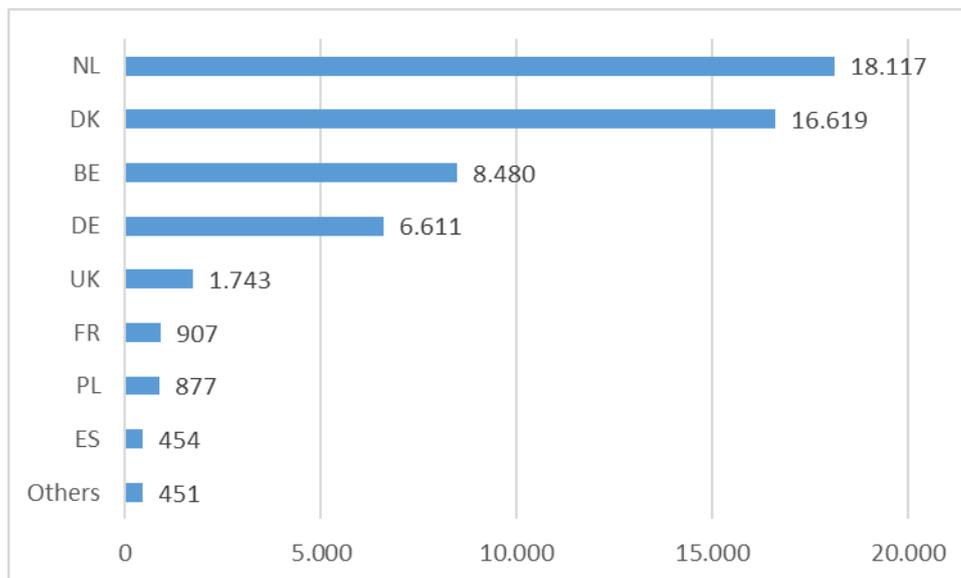
Source: EUMOFA

2.1.3 Exports

The main exporters of European plaice in the EU-28 are the Netherlands, Denmark, Germany and the United Kingdom:

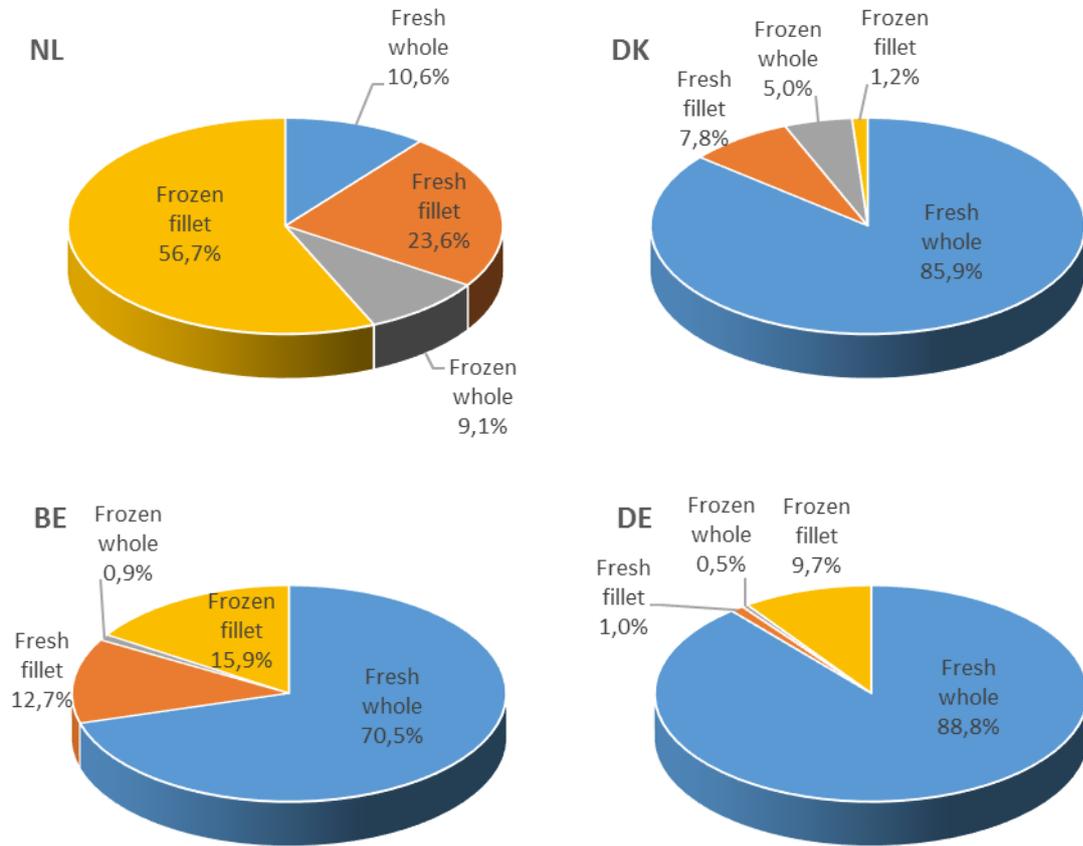
- The Netherlands exported 18.117 tonnes in 2015, out of which 57% were frozen fillets and 24% fresh fillets.
- The exports from Denmark, Belgium and Germany ranged between 16.619 and 6.611 tonnes, fresh whole plaice accounted for more than 70% of the total volume in each Member State.

Figure 7 - Volume of exports by Member State of the EU 28 in 2015 (tonnes of products)



Source: EUMOFA

Figure 8 - Breakdown of the exports by types of products (2015)



Source: EUMOFA

2.2 Market segmentation

There are different types of segment on the plaice markets, based on:

- size of fish,
- presentation and preservation,
- certification,
- possible use of additives.

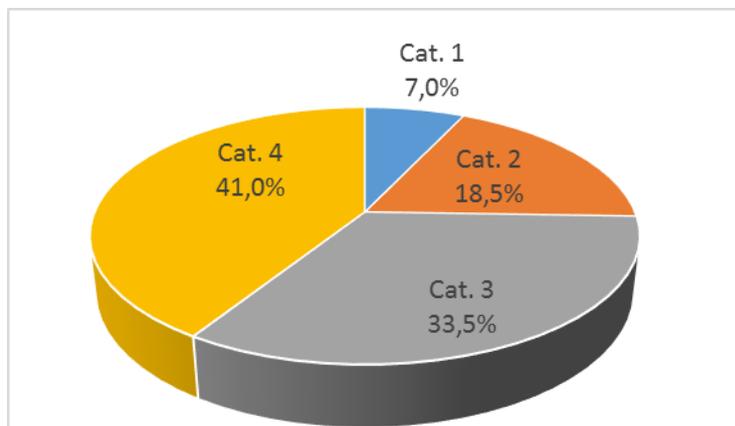
2.2.1 Segmentation by size

There are four size categories at first sale level:

- Category 1: length >41 cm
- Category 2: length between 35 cm and 41 cm
- Category 3: length between 31 cm and 35 cm
- Category 4: length between 27 cm and 31 cm

Most of catches are under categories 4 and 3 (smallest fish), which accounted for 74,5% of the total volume sold in Dutch auctions in 2014.

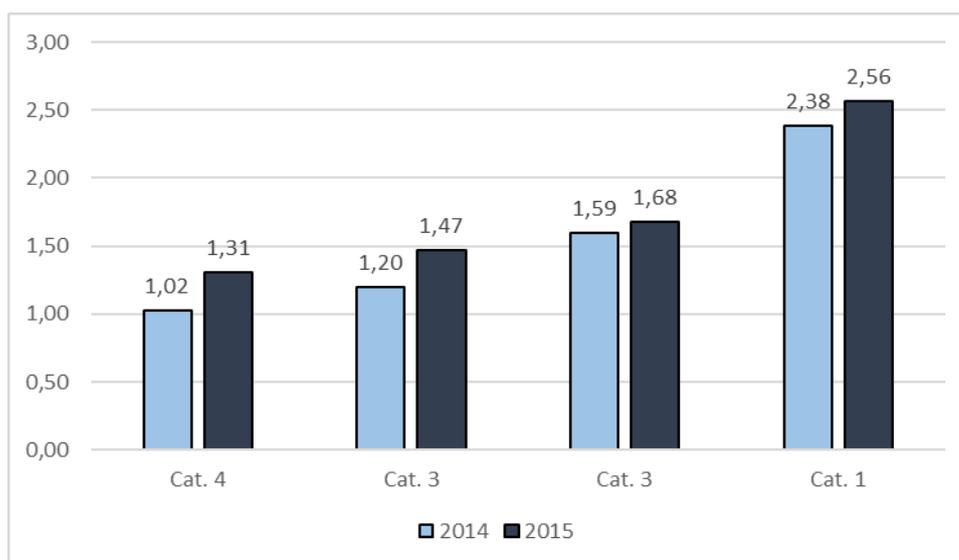
Figure 9 - Breakdown of volume sold in auction in the Netherlands by size category (2014)



Source: based on data from Dutch Ministry of Economic Affairs (Ministerie van Economische Zaken)

The price per kg increases for larger fishes (twice higher for cat. 1 fish compared to cat. 4 fish in 2015). The markets are different for each category. For instance, according to processors interviewed, most of category 1 fish are channeled to foodservices on the UK market. The category 4 is mainly filleted and sold frozen.

Figure 10 - Price in auction for Plaice in the Netherlands for the different size categories (2014 and 2015)



Source: based on data from Ministry of Economic Affairs

2.2.2 Segmentation by presentation /preservation

The market is segmented according to presentation and preservation

- Fresh / frozen;
- Whole / filleted;
- Skin on/off for filleted products: top skin (black) and/or the bottom skin (white):
 - both skin on (black and white): mainly marketed in the UK,
 - white skin on: this is the most common product, sold on the major markets: the Netherlands, Germany, Italy and France;
 - skinless: marketed in particular in Switzerland.

The presence of skins has a great impact on costs and margins. The following table indicates the yields reached in filleting operations in function of the skins off/on.

Table 5 - Yield filleting depending of the skin on/off

Skin on/off	Yield for filleting
Both skin on	50%
White skin on, black skin off	43%
Skinless	38%

Source: EUMOFA, interviews with processors

In addition, we shall mention that filleted products may be marketed as “twin fillets”. These are two fillets gathered to compose one larger item. This is mainly sold on the UK market.

2.2.3 Segmentation according to certification

The first MSC certification for plaice took place in 2009 with the company Ekofish Group. The fishing gear used is a demersal twin-rigged otter trawl. The mesh sizes of the nets vary from 120 – 140 mm, this allows a low rate of by-catch. The fishing area is Central North Sea (ICES: area IVb).

Table 6 - Companies involved in MSC fishery for plaice in the Netherlands

	Volume (tonnes)	Number of vessels	Year of certification
Ekofish Group	5.000	10	2009
Osprey company	2.000	5	2010
Cooperative Fishery Organisation (CVO)	15.000	250	2012
Total	22.000	265	/

Source: MSC factsheets on certified fisheries

MSC accounts for about two thirds of Dutch catches of plaice (65% of 2013 catches).

The demand for MSC products is increasing, especially in the Netherlands, Germany and the United Kingdom, which are important markets for plaice. Several large-scale retailers committed to supply with MSC products, such as Ahold, EDEKA, Sainsbury’s... However, this certification is not required by retailers in Italy, which is the first market for Dutch plaice. Thus, depending on the market, all fish caught in a certified fishery are not sold with MSC label to the consumers.

Plaice under MSC allows a price premium for fishermen (about 0,10 EUR/kg). Based on interviews, this covers the costs for the management and controls for MSC certification. On the Dutch and German markets MSC tends to be a tool necessary to access the market and not a way of differentiation.

The use of MSC logo at retail stage leads to the payment of a royalty fee to MSC organisation by the retailer, the amount of this royalty fee ranges between 0,3 and 0,5% of the sales.

2.2.4 Possible use of additives

Processors are authorised to use additives to the filleted plaice with a maximum of 10% of the total weight. The additives used are notably E301 (sodium ascorbate) and E331 (sodium citrate). The use of additives is done on request of the client and allows to reduce the price and extend the expiry date. This technology is implemented on the low-range market on which competition is intense.

According to interviews, this is in particular requested by Italian clients but not used on the German market. No data is available on the share of the production concerned by the use of additives.

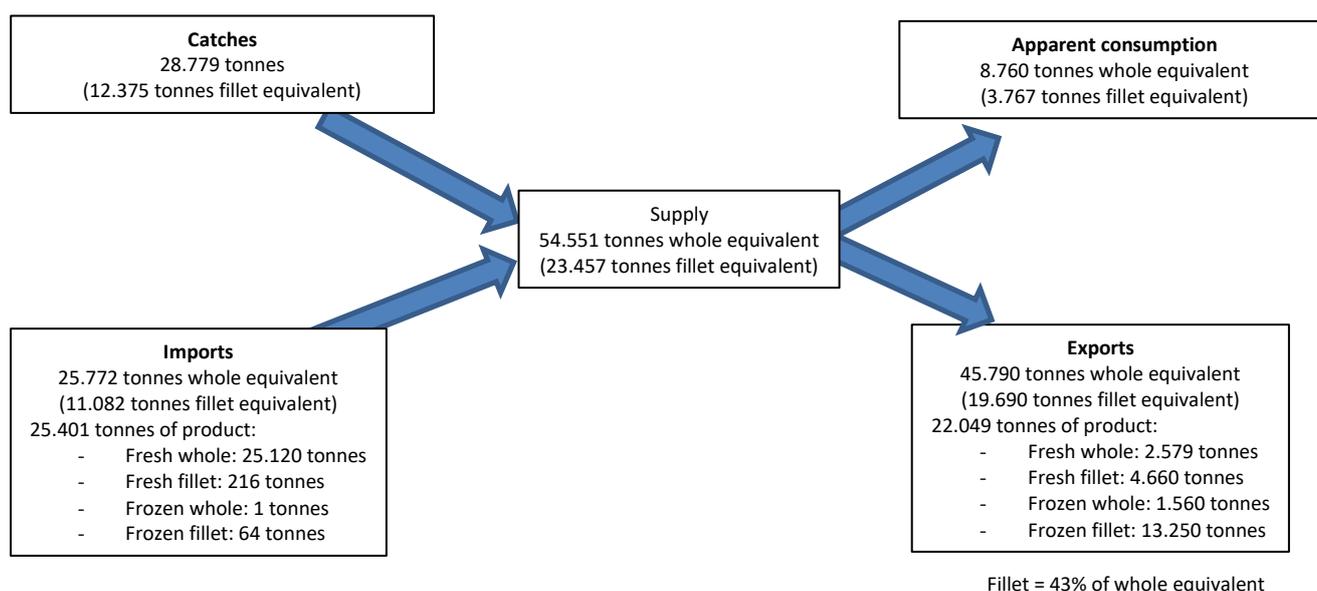
2.3 The Dutch market

2.3.1 Supply balance

Apparent consumption of plaice in the Netherlands is 8.760 tonnes whole fish equivalent (3.767 tonnes fillet equivalent) in 2014.

This national consumption may be overestimated. According to expert estimate, the consumption of plaice in the Netherlands is around 2.500 tonnes whole equivalent. This overestimate may be due to double counting between imports and catches due to UK and German vessels landing plaice directly in the Netherlands. Furthermore, some UK vessels directly sell to processors and do not sell through auction. This increases the difficulties to precisely track the flows of plaice. Based on EUMOFA, in 2014, imports of fresh whole plaice to the Netherlands reached 11.843 tonnes from the UK and 3.834 tonnes from Germany.

Figure 11 - Balance supply of plaice in the Netherlands (2014)

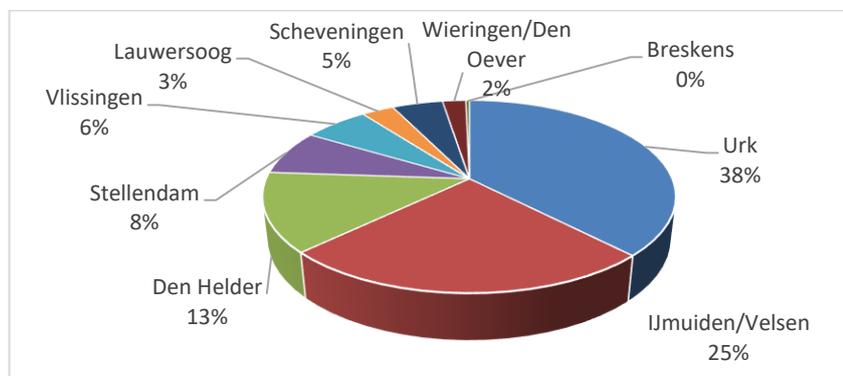


Source: EUMOFA, FAO

Plaice landed in the Netherlands (by Dutch or UK vessels) is sold through auctions or directly to processors. The direct sales from UK vessels to processors significantly increased in the last years. Urk is the first auction in the Netherlands with 38% of the volume of plaice sold in 2014, Ijmuiden/Velsen is the second site (25%) and Den Helmer the third (13%) (see figures next page).

The Dutch Fish Marketing Board (www.dutchfish.nl) lists 51 companies involved in export of plaice, many are also involved in plaice processing and are located in Urk.

Figure 12 - Breakdown of the volume of plaice sold in the different auctions in the Netherlands (2014)



Source: EUMOFA

CN8 code for fresh plaice fillet is only available since 2012. For this reason it is not possible to calculate precisely the supply balance (including fresh fillet) on a long period.

Table 7 - Supply balance of plaice in the Netherlands in 2012 and 2014 (fresh fillets included)

Tonnes	2012	2013	2014
Catches	32.258	33.748	28.779
Import	27.585	27.454	25.772
Supply	59.843	61.202	54.551
Export	44.302	46.769	45.790
Apparent consumption	15.541	14.432	8.760

Sources: EUMOFA, FAO

If we do not take into account fresh fillet, national apparent consumption largely increased between 2003 and 2014 (7.247 tonnes in 2003 and 19.095 tonnes in 2014). This evolution may be related to a statistical bias with UK landings in the Netherlands (see above).

Table 8 - Supply balance of plaice in the Netherlands between 2003 and 2014 (fresh fillets not included)

Tonnes	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Catches	28.867	25.123	23.101	23.947	23.099	20.757	23.476	28.291	29.305	32.258	33.748	28.779
Import	29.928	27.819	26.129	27.653	24.599	22.516	20.874	22.740	23.587	26.679	26.826	25.270
Supply	58.795	52.942	49.230	51.600	47.698	43.273	44.350	51.031	52.892	58.937	60.574	54.049
Export	51.547	47.857	47.257	46.097	38.228	35.906	34.590	32.421	39.610	32.833	38.454	34.954
Apparent consumption	7.247	5.085	1.973	5.503	9.470	7.367	9.760	18.610	13.283	26.104	22.120	19.095

Sources: EUMOFA, FAO

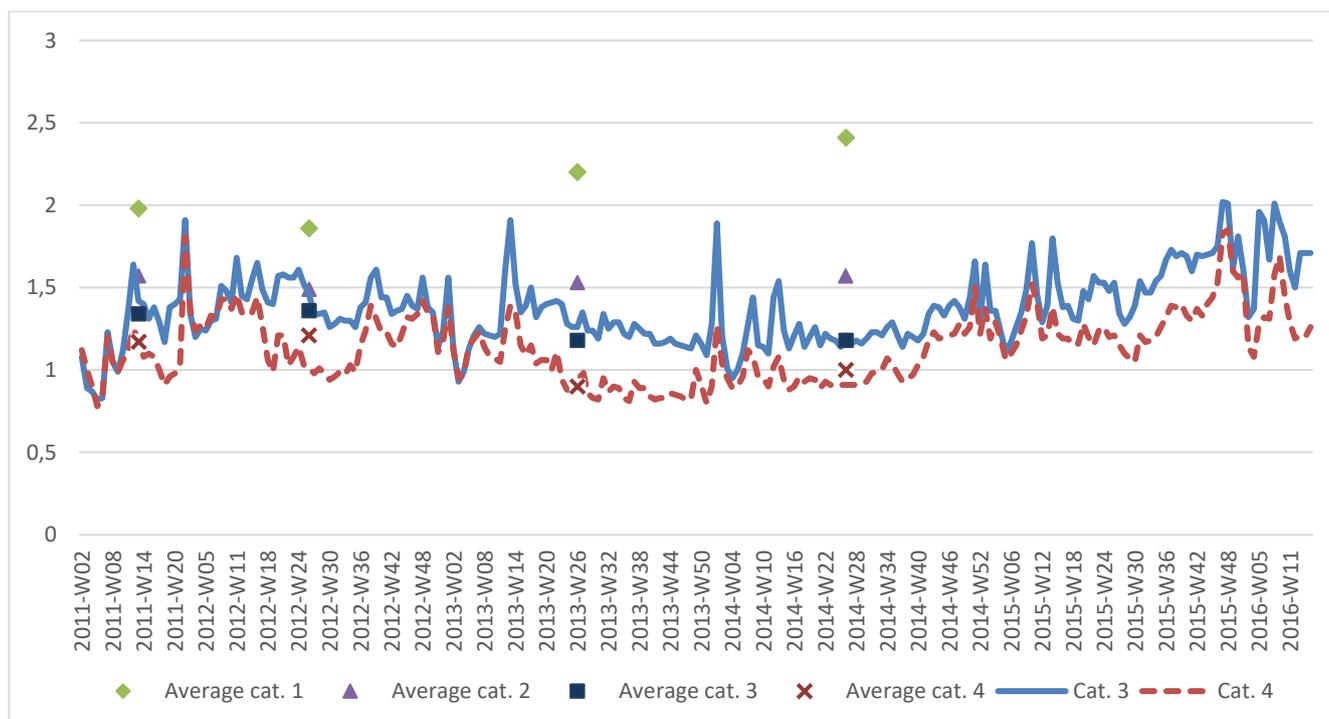
2.3.2 Prices at first sale

As mentioned at section 2.2.1, the offer is segmented by size. Between 2011 and 2014, the price of category 1 plaice (largest size) increased by 21,5% to reach 2,41 EUR/kg. This category accounts for a limited share of the catches (7% in 2014). The price of the category 2 fish remained stable (-0,4%) at 1,57 EUR/kg.

The prices of the two categories which gather the largest share of the catches decreased between 2011 and 2014, notably the category 4 (smallest size) with -14,7% to reach 1.0 EUR/kg (-11,9% for category 3) (source: based on PEFA). These prices were low for fishermen who could target other species more attractive in terms of price, such as sole.

The price of plaice strongly increased since the end of 2014 and notably during summer and autumn 2015: the price of category 4 reached 1,85 EUR /kg at Ijmuiden auction in November 2015 and 1,69 EUR/kg in February 2016. This increase had not been anticipated by the different stakeholders. This allows fishermen to increase the profitability of their companies. However, some processors face difficulties if they sell their plaice to retailers with a long-term contract (this kind of contract may last a few months or one year). In this case, they committed to supply retailers with a fixed price with the hypothesis of a first sale price between 1,00 and 1,50 EUR/kg (hypothesis of prices at the beginning of the year, based on interviews). The situation can evolve at the end of the contract, when the price is re-negotiated.

Figure 13 – Yearly average price of plaice by category between 2011 and 2014 and weekly price of plaice for categories 3 and 4 between 2011 and 2016 at Ijmuiden auction (EUR/kg)



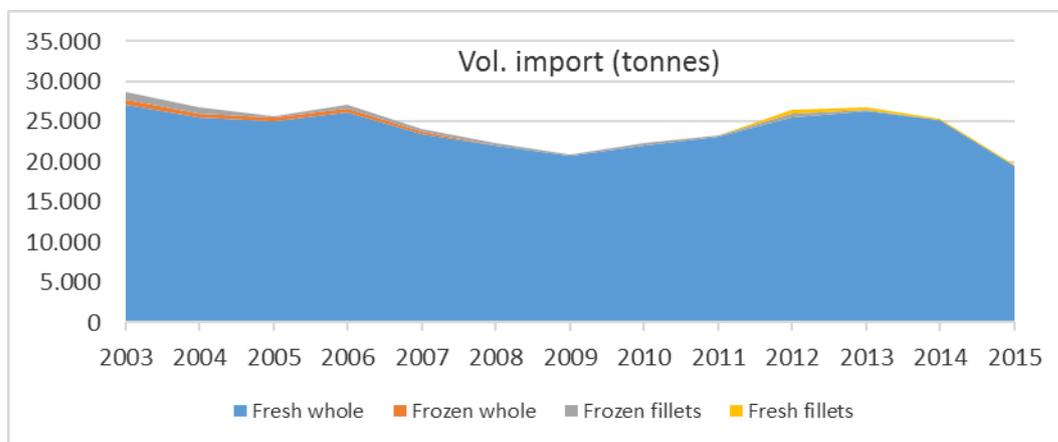
Source: PEFA (yearly average price) and EUMOFA (weekly price)

2.3.3 Imports

Dutch imports reached 19.693 tonnes and EUR 32,2 million in 2015. More than 90% of volume and value are fresh whole plaice (respectively 98,6% and 93,1%).

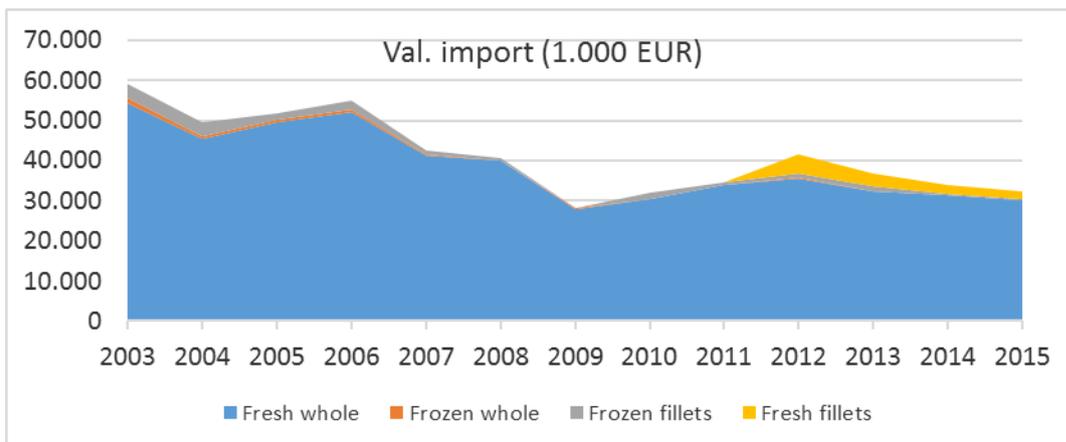
Imports in the Netherlands are linked to the availability of plaice in the EU (EU accounts for 85,6% of plaice catches in the world in 2014), and thus to the evolutions of TACs and quotas. Imports were on a decreasing trend between 2003 and 2009 (-27,4% in volume) and increased between 2009 and 2014 (+20,9% in volume, excluding fresh fillet). However, imports registered a large decrease in 2015: -22,5% in volume and -5,4% in value.

Figure 14 - Volume of plaice imported in the Netherlands between 2003 and 2015 (fresh fillet only since 2012)



Source: EUMOFA

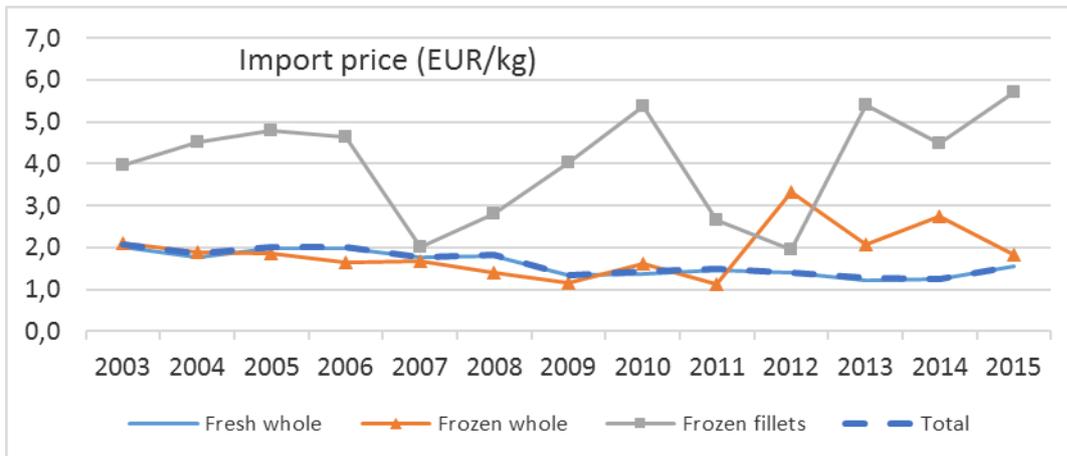
Figure 15 - Value of plaice imported in the Netherlands between 2003 and 2015 (fresh fillet only since 2012)



Source: EUMOFA

Price of plaice and plaice products imported in the Netherlands decreased between 2003 and 2015: 2,07 EUR/kg in 2003, 1,82 EUR/kg in 2006 and 1,56 EUR/kg in 2015.

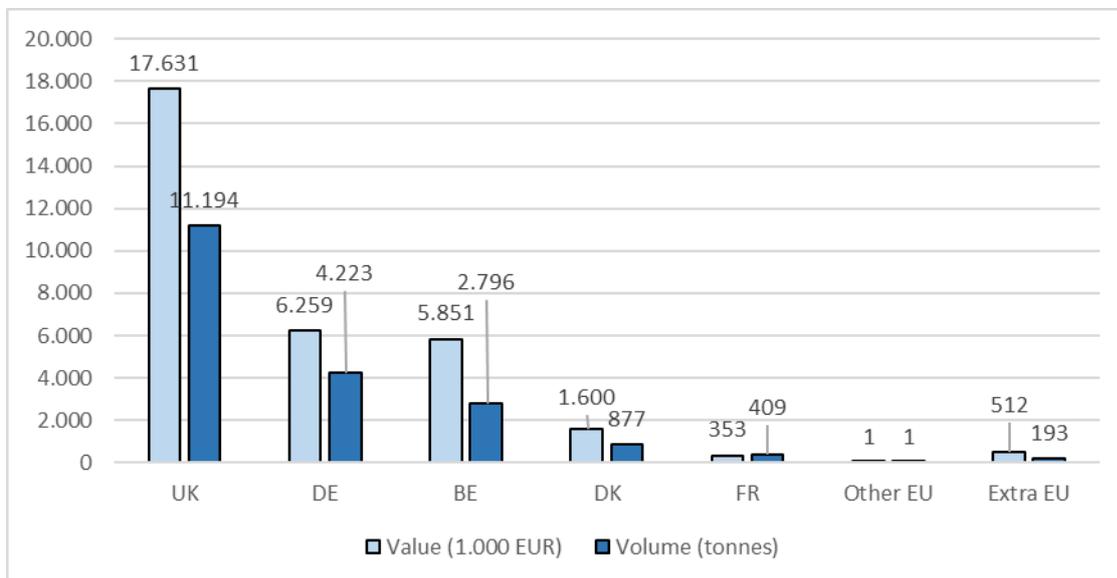
Figure 16 - Price of plaice imported in the Netherlands between 2003 and 2015



Source: EUMOFA

The United Kingdom accounts for 56,8% of the volume imported in 2015, it reaches 92,5% with Germany and Belgium. As previously mentioned, some of the imports from the United Kingdom are fish landed in the Netherlands by UK fleet.

Figure 17 - Imports of plaice in the Netherlands by origin (2015)



Source: EUMOFA

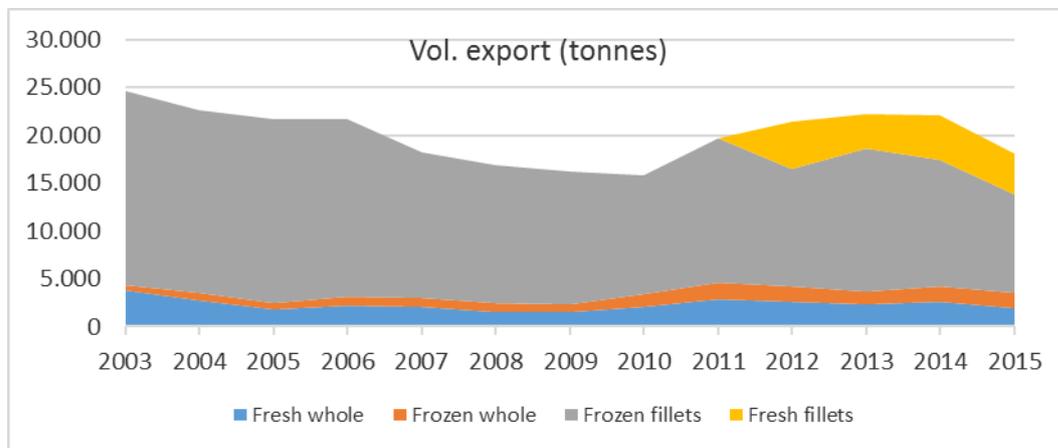
2.3.4 Exports

Exports of plaice by the Netherlands reached 18.117 tonnes of products and EUR 106 million in 2015:

- Frozen fillets accounted for 56,7% of volume and 54,6% of value;
- Fresh fillets accounted for 23,6% of volume and 30,1% of value;
- Whole plaice (frozen and fresh) accounts for 19,7% of volume and 15,3% of value.

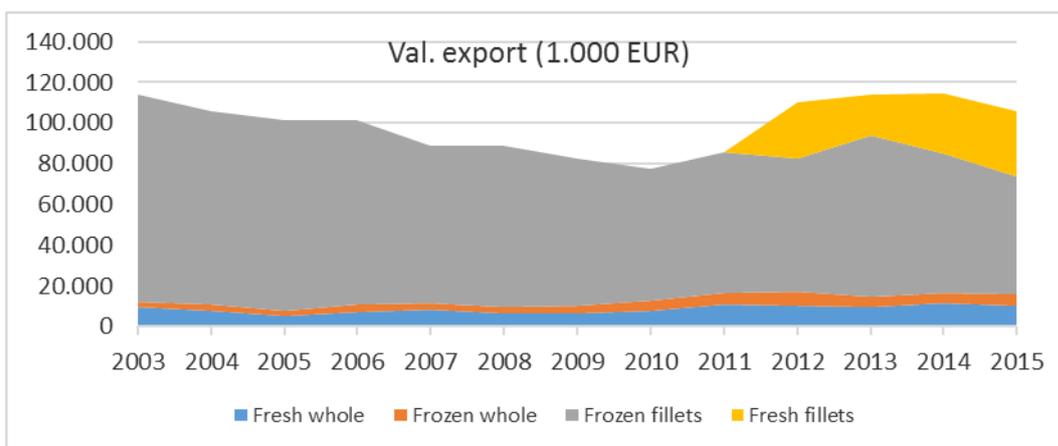
Exports were on a decreasing trend between 2003 and 2010 (-35,7% in volume and -31,8% in value) and increased between 2010 and 2014 (+9,8% in volume and +9,2% in value, excluding fresh fillet). In 2015, exports decreased by 17,8% in volume and 7,4% in value.

Figure 18 - Volume of plaice exported by the Netherlands between 2003 and 2015 (fresh fillets only since 2012)



Source: EUMOFA

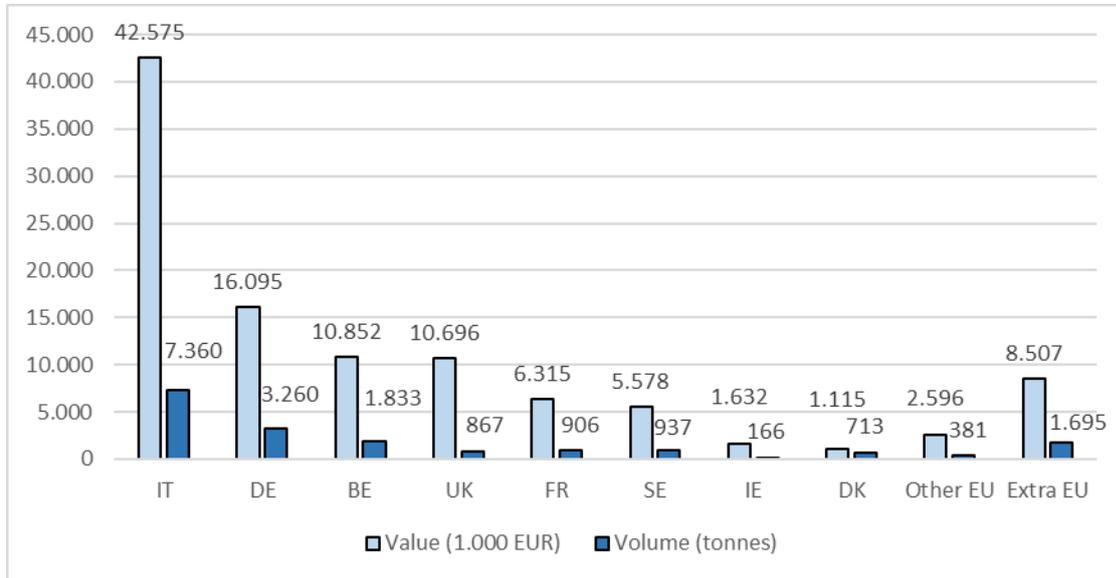
Figure 19 - Value of plaice exported by the Netherlands between 2003 and 2015 (fresh fillet only since 2012)



Source: EUMOFA

In 2015, the main market for Dutch exports was Italy with 40,2% of the sales in value. The second was Germany with 15,2%. Belgium and the United Kingdom accounted for 10% each.

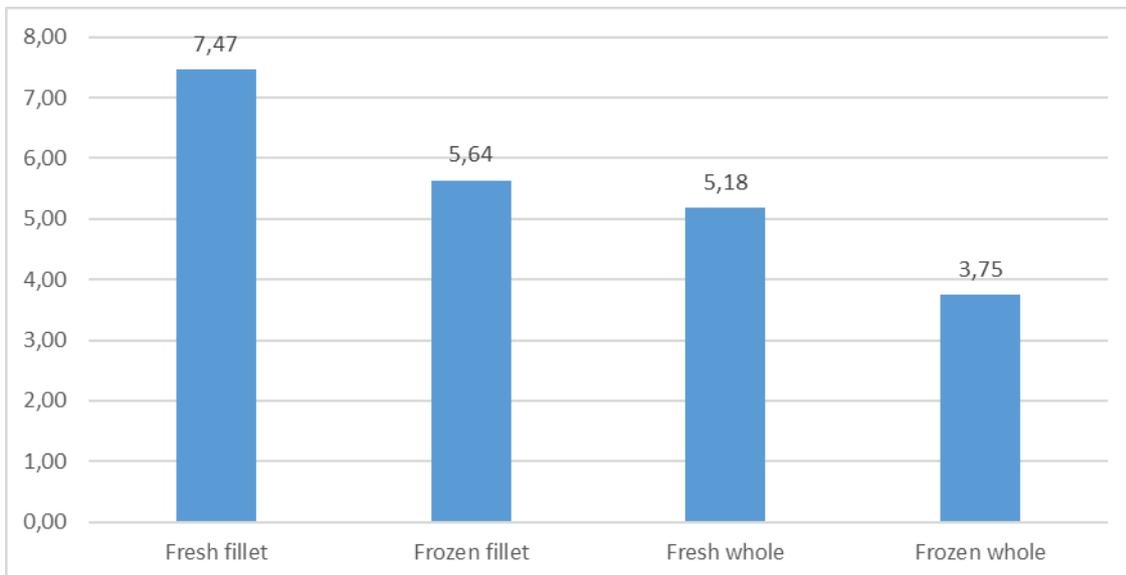
Figure 20 - Exports of plaice from the Netherlands by destination (2015)



Source: EUMOFA

The following figure displays the price of plaice products exported from Netherlands in 2015. Price of fresh fillets is 24% higher than frozen fillet price.

Figure 21 - Price of the plaice products exported from the Netherlands (EUR/kg, 2015)

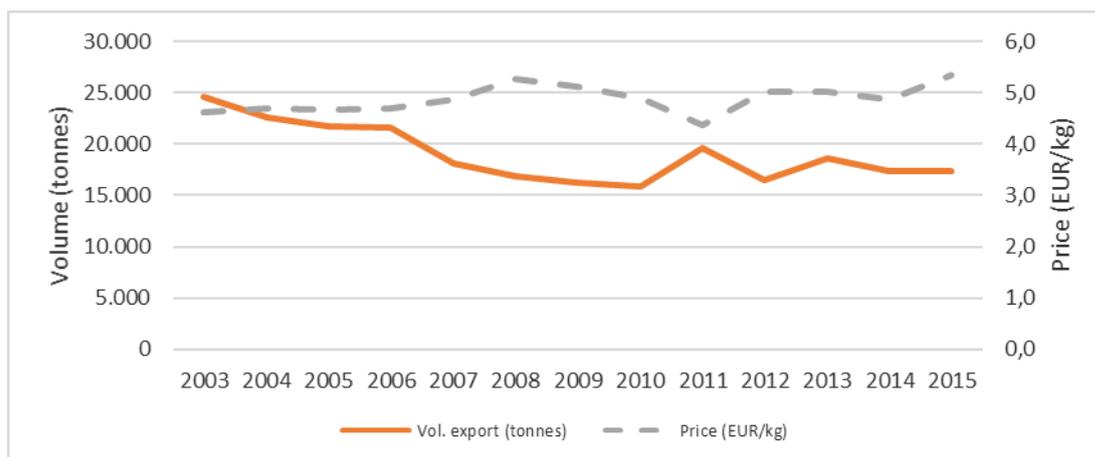


Source: EUMOFA

The price of plaice products exported from the Netherlands increased by 15,8% between 2003 and 2015. However, we can note a decrease of price between 2009 and 2011 (-17,1%) and an increase of the volume exported in 2011 (+24,1%).

Over the period 2003-2015, volume decreased by 29,4% (fresh fillets not taken into account).

Figure 22 - Volume and price of plaice products exported from the Netherlands between 2003 and 2015 (fresh fillets excluded)



Source: EUMOFA

The figures next page show the evolution of price and volume exported from the Netherlands by plaice product between 2003 and 2015 (2012 to 2015 for fresh fillet).

- Frozen fillets

This is the main plaice product exported. While exports decreased by 49,4% between 2003 and 2015 (even if we can note an increasing trend since 2010), the price of frozen fillets increased by 12,7% over the period.

- Fresh fillets

Data are available only for the 2012-2015 period.

Price increased by 33,7% in three years, while volume decreased by 13,3%: -27,5% in 2013, +30,3% in 2014 and -8,3% in 2015.

- Fresh whole plaice

Export of fresh whole plaice decreased 48,6% in volume between 2003 and 2015. It follows the trends of landings: -59,8% from 2003 until 2009, increasing trend afterwards (+71,1% between 2009 and 2014) and decrease in 2015 (-25,2%).

Export price increased each year, except in 2009 and 2010. Between 2003 and 2014, it went from 2,61 EUR/kg to 5,18 EUR/kg (+98,4%).

- Frozen whole plaice

The volumes exported remain limited but are on an increasing trend (+175,2% between 2003 and 2015) with a price decrease: -8,0%. Unlike other plaice products, the exports of frozen whole plaice increased over the last 10 years.

- 2003-2009: +30,8%
- 2009-2014: +30,9%

Figure 23 - Volume and price of plaice products exported from the Netherlands between 2003 and 2015



Source: EUMOFA

2.4 Overview of the main EU markets of destination of Dutch plaice

2.4.1 Italy

Italy is the first export market for the Netherlands. 100% of Italian supply is based on imports as there are no catches of plaice in Italy. The Netherlands accounts for 57% of the volume of plaice products imported in Italy in 2015.

Table 9 - Balance supply of plaice in Italy in 2014

Tonnes	Whole equivalent	Fillet equivalent
Catches	0	0
Import	28.002	12.041
Supply	28.002	12.041
Export	130	32
Consumption	27.873	12.009

Fillet = 43% of whole equivalent

Source: EUMOFA, FAO

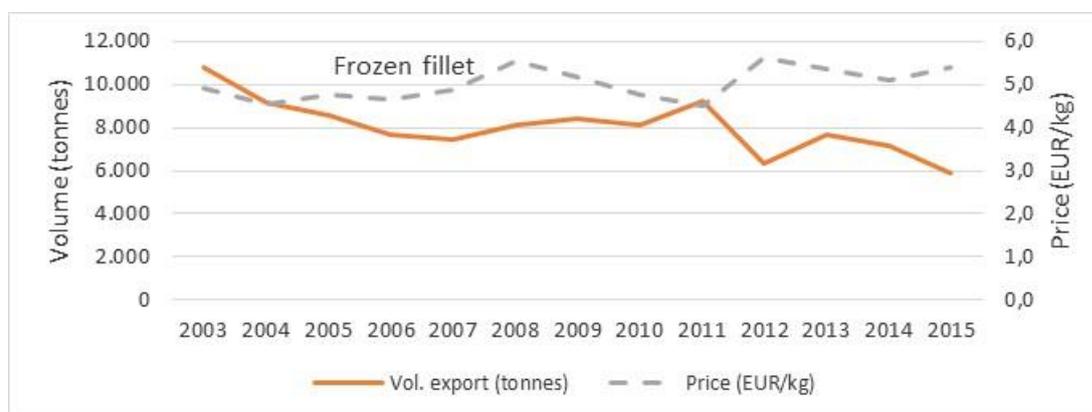
Between 2003 and 2015, the exports from the Netherlands to Italy decreased by 35,2% in volume and 31,7% in value.

Imports in Italy are mainly frozen fillets (75% of volume in 2015) and 78% of this volume come from the Netherlands.

We observe the same trend for export of frozen fillets from the Netherlands to Italy as for total exports of frozen fillets from the Netherlands:

- Large decrease of volume: -33,5%;
- Low increase of price: +3,9%.

Figure 24 - Volume and price of frozen fillets of plaice exported from the Netherlands to Italy between 2003 and 2015



Source: EUMOFA

2.4.2 Germany

Germany is the second market for Dutch plaice. National supply is 75% based on imports and the Netherlands accounted for 43% of German imports in 2015.

Germany is also active on the export market with 6.195 tonnes in 2014 (whole equivalent), which accounted for 33% of the supply, 45% of the imports and 134% of the catches.

The imports are mainly fillets (frozen and fresh) and the exports are mainly whole fresh plaice.

Table 10 - Balance supply of plaice in Germany in 2014

Tonnes	Whole equivalent	Fillet equivalent
Catches	4.634	1.993
Import	13.887	5.972
Supply	18.521	7.964
Export	6.195	2.664
Consumption	12.326	5.300

Fillet = 43% of whole equivalent

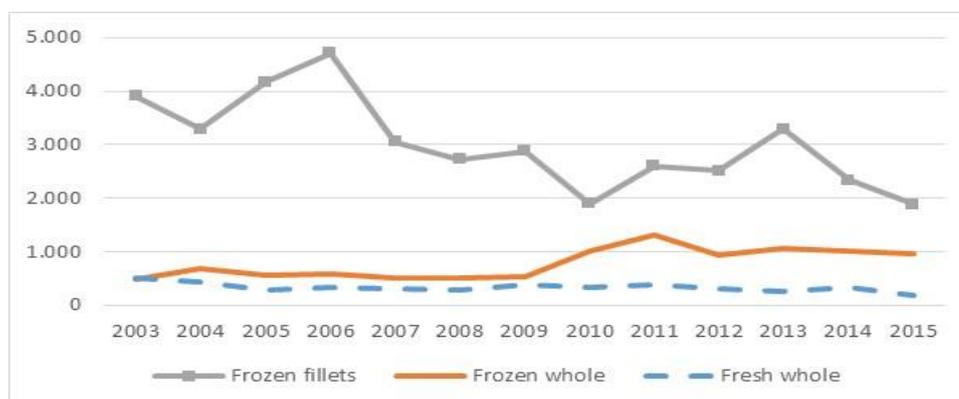
Source: FAO, EUMOFA

Plaice catches largely increased between 2007 and 2014 in Germany (+59%), and total catches reached 4.634 tonnes in 2014.

Exports from the Netherlands strongly decreased between 2003 and 2015:

- Frozen fillets, which account for 57,9% of total exports in 2015, decreased by -51,7% in volume between 2003 and 2015. We can observe three periods:
 - Decreasing trend between 2003 and 2010: -51,3%;
 - Increasing trend between 2010 and 2013: +73,0%;
 - Large decrease in 2014 and 2015: -42,7%.
- Frozen whole: it accounts for 29,7% of volume exported and decreased by 51,7% between 2003 and 2015.
- Fresh fillets account for 6,3% of the volume exported in 2015.
- Fresh whole: it only accounts for 6,0% of volume exported in 2015, it decreased by 62,5% over the period.

Figure 25 - Volume of plaice products exported from the Netherlands to Germany



Source: EUMOFA

2.4.1 Belgium

Belgium is the third market for Dutch plaice. In 2014, national supply is 59% based on national catches and 41% based on imports. Belgium has a strong export orientation, 87% of the Belgium supply is exported (12.928 tonnes whole equivalent in 2015). In 2015, 39,1% of the volume imported in Belgium (whole equivalent) come from the Netherlands.

Table 11 - Balance supply of plaice in Belgium in 2014

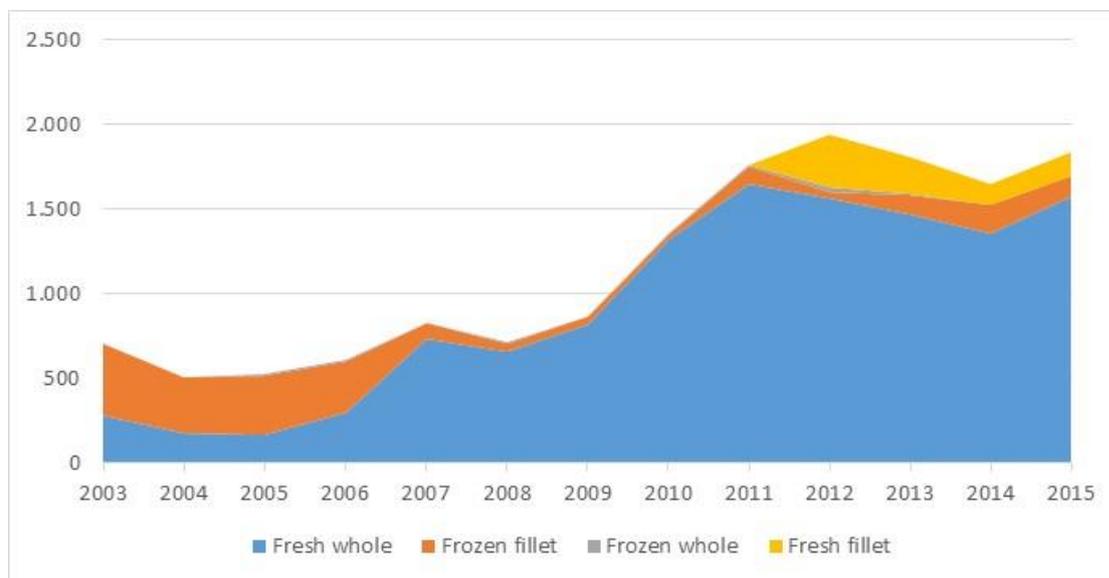
Tonnes	Whole equivalent	Fillet equivalent
Catches	8.868	3.813
Import	6.058	2.605
Supply	14.926	6.418
Export	12.928	5.559
Consumption	1.997	859

Fillet = 43% of whole equivalent

Source: FAO, EUMOFA

The exports from Netherlands to Belgium grew by 140% between 2003 and 2015 (excluding fresh fillet). This is due to a large increase of fresh whole fish, which accounted for 276 tonnes in 2003 and 1.569 tonnes in 2015 (+469%).

Figure 26 - Volume of plaice products exported from the Netherlands to Belgium



Source: FAO, EUMOFA

3 PRICES DOWNSTREAM THE SUPPLY CHAIN

This chapter proposes to analyse prices and trends at the various stages of the plaice supply chain in the Netherlands, with the objective to set the framework for price transmission analysis (chapter 4).

3.1 Price information sources

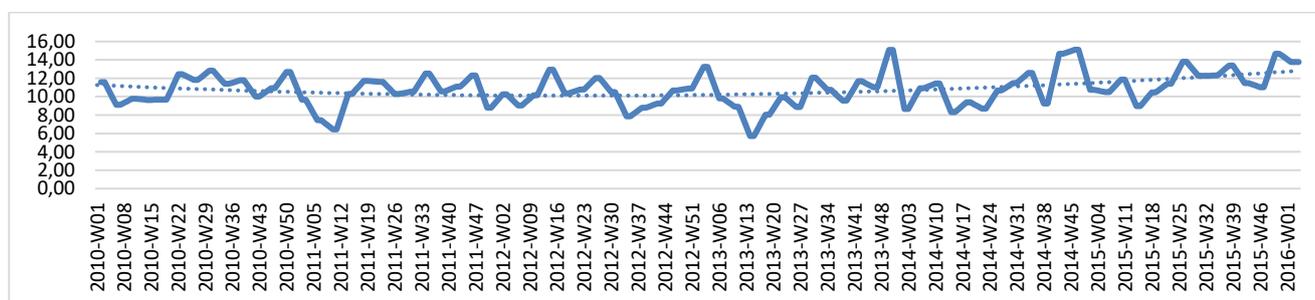
While chapter 4 relies on data gathered through direct interviews with stakeholders, chapter 3 lists the consistent sources regularly accessible and the content of the information provided by each of them.

Table 12 - Sources on prices

Supply chain stage	Type of price	Frequency	Source
First sale	Auction price by size category	Daily, weekly, monthly, yearly	PEFA EUMOFA
First sale	Auction price	Monthly, yearly	EUMOFA
Import / export	Import / export prices	Monthly, yearly	EUMOFA
Retail	Retail price, for whole plaice	Weekly	EUMOFA

The following figure displays the price (EUR/kg) of whole plaice at retail stage in the Netherlands.

Figure 27 - Retail price of whole plaice in the Netherlands between 2010 and 2016 (EUR/kg)



Source: EUMOFA

In addition to statistical sources on prices, we provide below the results of a store check at the first Dutch retailer, Ahold. The features of the three consumer sales units for plaice are presented in the table below.

Table 13 - Retail prices (November 2015)

	Number of fillets	Weight (g)	Weight (g) /fillet	Price (EUR / consumer sales unit)	Price (EUR/kg)	Comment
Consumer sales unit 1	3	210	70	3,57	17,00	MSC
Consumer sales unit 3	2	300	150	6,00	20,00	MSC
Consumer sales unit 2	2	360	180	4,32	12,00	MSC, black skin on

Source: survey by EUMOFA

4 PRICE STRUCTURE IN THE SUPPLY CHAIN

We propose the analysis of the price transmission for two supply chains:

- Fresh MSC fillet sold on the Dutch market by a large-scale retailer;
- Frozen fillet exported to Italy.

4.1 Fresh fillet on the Dutch market

The following table provides the range of the various costs for fresh plaice fillet marketed on the Dutch market.

Table 14 - Costs and margins for the fresh plaice fillet in the large-scale retail in Netherlands (November 2015)

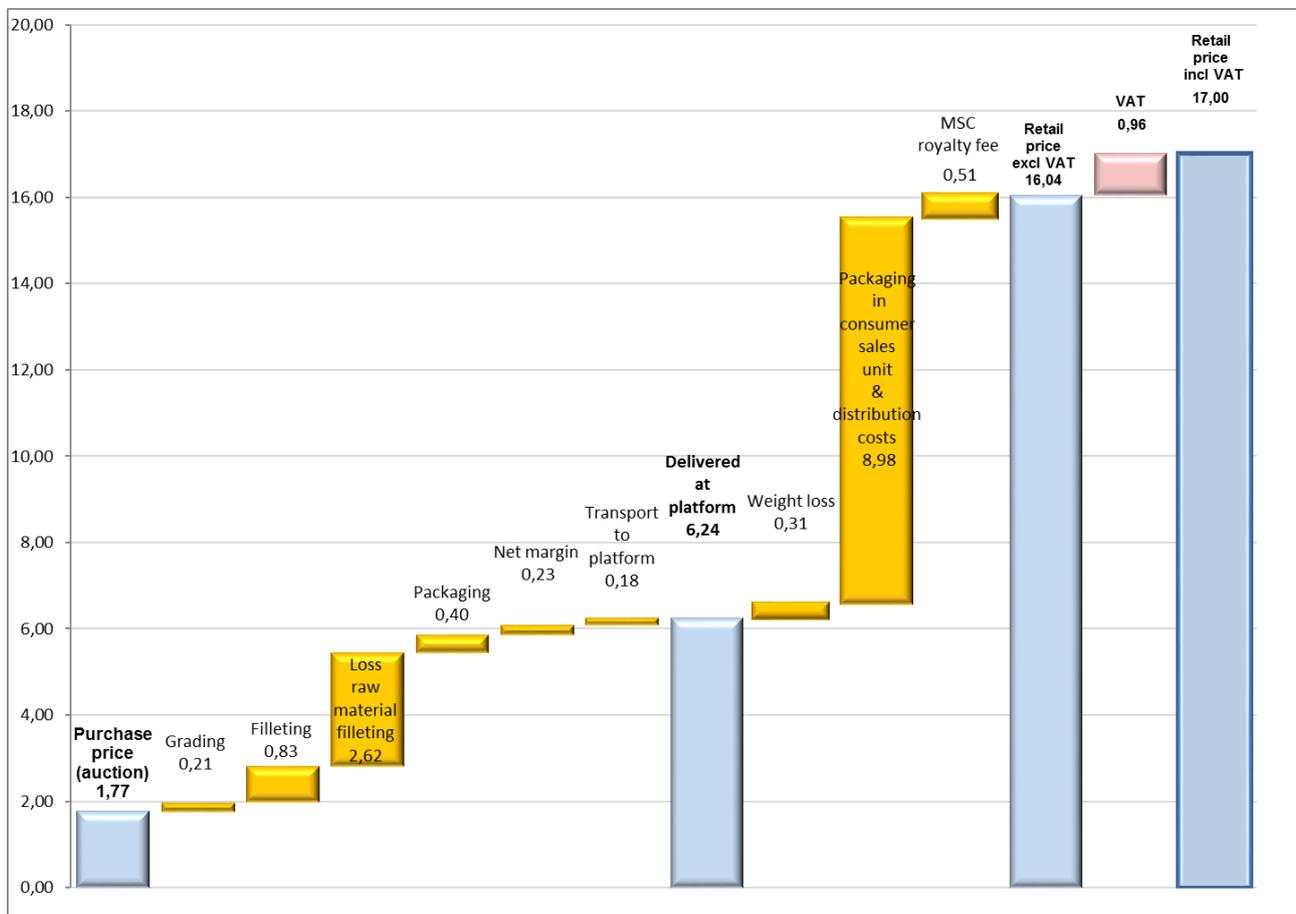
	Costs and margins
Grading	0,12 – 0,30 EUR / kg
Filleting	0,75 -0,98 EUR / kg
Loss raw material filleting	Yield: 38-50%
Packaging	0,31 – 0,40 EUR / kg
Net margin processor	0 - 5%
Transport to platform	0,18 EUR / kg
Weight loss	10%
Packaging in consumer sales unit / distribution costs	8,98 EUR / kg
MSC royalty fee	3% - 5%
VAT	6%
Retail price (incl. VAT)	17 – 20 EUR / kg

The following figure illustrates the price transmission in the supply chain for fresh plaice fillet on the Dutch market. This figure has been drawn up from interviews with fish processors and a purchase manager of a large scale retailer in November 2015.

The price reference for the fish at first sale stage is from Urk auction on the 9th November 2015:

- gutted fish;
- size category 3;
- MSC certified.

Figure 28 - Price transmission for fresh fillet MSC on the Dutch market (in EUR/kg)



4.2 Frozen fillet exported to Italy

The following table provides the range of the different costs for frozen fillet of plaice marketed on the Italian market.

Table 15 - Costs and margins for the plaice fillet frozen exported to Italy (November 2015)

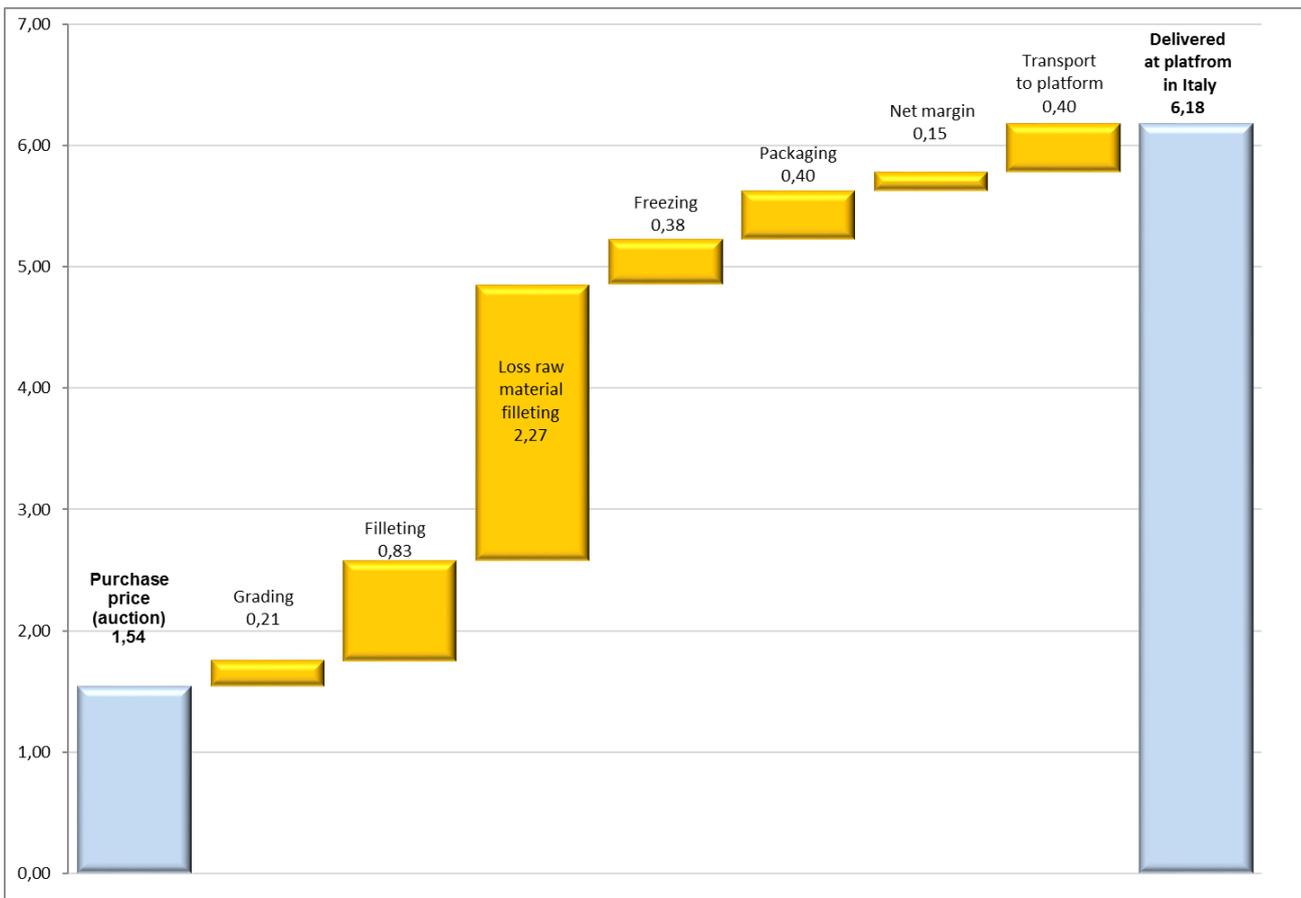
	Costs and margins
Grading	0,12 – 0,30 EUR/kg
Filleting	0,75 – 0,98 EUR/kg
Loss raw material filleting	Yield: 38-50%
Freezing	0,35 – 0,40 EUR/kg
Packaging	0,31 – 0,40 EUR/kg
Net margin	0 - 5%
Transport to platform	0,50 EUR/kg

The following figure illustrates the price transmission in the supply chain for frozen fillet of plaice on the Italian market. This figure has been drawn up from interviews with fish processors in November 2015.

The price reference for the fish at first sale stage is from Urk auction on the 9th of November 2015:

- gutted fish;
- size category 4;

Figure 29 - Price transmission of Dutch exports of frozen fillet to Italy (in EUR/kg)



4.3 ANNEXES

4.3.1 Sources used

- Dutch Ministry of Economic Affairs
- EUMOFA
- FAO
- ICES
- PEFA
- MSC
- Visveiling URK BV

4.3.2 Interviews

- Ahold
- Ekofish Group
- MSC Netherlands
- Neerlandia - Urk
- North Seafood
- Osprey Fish
- Van Der Lee
- VisNed



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