

Case Study: Flatfish

Working document



Flatfish is a general term for several marine fish species. In the North Sea and other European marine waters sole and plaice are the most important species. However, turbot, brill, dab, lemon sole, Greenland halibut, megrim and flounder are also of importance. Flatfish is mostly sold frozen, but also fresh (niche markets). Two lines of product presentation can be distinguished: whole fish (gutted) like sole and plaice and processed seafood products like ready to cook /fillets. In terms of volume and markets, most flatfish is consumed in southern Europe in countries like Italy, Spain and France. In northern Europe Germany is an important country for the consumption of flatfish. In the EU, most flatfish are caught by fleets from the Netherlands, the United Kingdom, Denmark, Germany, France and Belgium. In terms of product characteristics demand varies across Europe. Countries in southern Europe tend to prefer whole fish whereas north western European countries prefer convenience products like fillets. The culture of flatfish in aquaculture systems is not very common in Europe. Mainly turbot and some Sole are produced by fish farms, mainly in Spain. Average fish prices by flatfish species very widely, ranging from 1 euro per kg for plaice to 12 euro per kg for sole and turbot. Other important flatfish species in the world are yellow fin sole and rock sole.

Main topic

European flatfish species generally compete with non-European flatfish species. However, they also compete with white fish species on the same market. The species origin is quite different, both in terms of geographical origin¹ and production technology/system like capture fisheries or aquaculture. As a result depending on the

¹ The white fish sector is the most important import market both in quantity and in value, and it is the second most important export market between the EU and third countries (EC 2014).

Case Study Flatfish

The flatfish case study is part of SUCCESS funded by the EU. The following partners are involved in this case study:

- LEI Wageningen UR (Netherlands)
- Ifremer (France)
- Pêcheurs de Bretagne (France)
- Thunen Institute (Germany)
- Fishor consulting (UK)
- Universidad de Cantabria (Spain)
- Rodecon SL (Spain)



SUCCESS is a H2020 Research and Innovation Project (2015-2018)

origin and the production technology the cost structure of the produced fish can be quite different.

Challenges

The European flatfish sector faces several challenges influencing the competitiveness of the sector. The main challenges are stated below:

- I. High production costs: most flatfish are caught using active bottom trawls or passive gears. Especially the active bottom trawls (leading gear) and aquaculture systems have relatively high production costs (i.e. driven by fuel use).
- II. Price variability within species: the prices within species fluctuate considerably. There are many causes for these fluctuations. Seasonality and concentration of landings, but also competition between flatfish species and whitefish species on the same market play an important role.
- III. Landing obligation: flatfish fisheries is mostly a mixed fisheries. Bycatch rates can be quite high due to small mesh sizes and specific fishing areas (i.e. 12 mile fisheries for sole). The landing obligation will be implemented for sole and plaice in 2016 and for other EU quota flatfish fisheries in 2019. The produced bycatch will increase production and labour costs and choke species could limit the flatfish fisheries. The rationale behind this measure is to stimulate the fisheries sector to work towards innovations resulting in more selective fishing methods.
- IV. Lack of funding possibilities: For a fisherman it is difficult to get funding to invest in innovations and up to date fuel efficient fishing vessels. Especially the increased fuel prices during the last years caused a decreased solvency of many entrepreneurs in the flatfish fisheries.
- V. Quota availability: availability of quota for some flatfish species (like sole) are limited for some countries and fishing areas. In some cases it is a challenge to not overfish quota and trade quota between and within countries.
- VI. Demand of society: There is a growing demand of society for high quality, safe and more sustainably caught or cultured fish. Fishermen need to respond on these demands.
- VII. Increased spatial claims at the North Sea: Due to new spatial claims from offshore wind parks and marine protected areas (MPAs) fishing areas become smaller.
- VIII. Flatfish value chain: Beside the challenges for the flatfish production sector as a whole a number of challenges for the flatfish value chain have been identified:
 - o developing new markets for flatfish landings;
 - o adding value to landings (absence of labelling schemes);
 - o competing with the whitefish market;
 - o informing the consumer (e.g. sustainability, health, taste etc).

Initiatives

Each EU member state tries to respond to the above mentioned challenges. Different initiatives are started in member states to face these challenges. Most of these receive financial support from member state governments and/or EU. Some of these initiatives are given below:

1. Fishermen started a number of cooperation and innovation projects. In the Netherlands for example so called Knowledge Networks (cooperation between fishermen and scientists gathering and sharing (new) knowledge in many fields and ways) started to develop new fishing methods, new fishing techniques and gear. The cooperation and innovation projects resulted in substantial savings in fuel volumes (and thus an equally substantial cost and (GHG) emission reduction) and helped to meet the requirements from the society (Challenges I and VI).
2. Different initiatives of flatfish certification (MSC label) led by member states POs took place (Challenges VI and VIII).

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3. The main focus of all fishing fleets in the coming years is the landing obligation (Challenge III). In the different member states projects are started like:
 - a. (Socio-)economic projects to explore the extra costs and labour for fishermen by implementing the landing obligation;
 - b. Innovation projects to reduce unwanted bycatch;
 - c. Projects to explore potential choke species in different fisheries;
 - d. Projects that improve and demonstrate survival of different bycatch species to exclude them from landing using a de minimis agreement.
 4. Projects started to better understand the market, to experiment with innovative market models to reduce costs (by directly selling fish on the fish market/ consumer instead of only selling it by auctions) and adding value to landings (Challenge VIII).
 5. Multi-annual management plans are in force (i.e. EU regulation N°388/2006 about Bay of Biscay management plan) to improve flatfish stocks (Challenge V).
 6. Different aquaculture pilots are started to explore the potential for farming high value flatfish like turbot, halibut and sole.
 7. Public Private Projects to identify multi use solutions in the North Sea such as:
 - a. allowing fishing vessels to fish in offshore wind parks.
 - b. Allowing sustainable fisheries within MPAs (Challenge VII)

Case study objectives

Main objective

To bring the theoretical insights from WPs into practise by interacting with the flatfish sector to improve their competitiveness. As such the case study is the connection between the WPs on the one side and the flatfish sector on the other side.

Which potential does EU fisheries and aquaculture have to compete on the world flatfish market? How can competitiveness be further improved? What is the effect of the potential improvements on employment in the flatfish value chain? In how far can innovations from one part of Europe be of influence to other parts of Europe?

Sub-objective

To verify if the current initiatives (as mentioned above) are sufficient to tackle the challenges (from above). If these current initiatives are not sufficient we will identify new initiatives which could better deal with the challenges to improve the competitiveness of the flatfish sector.

Links between CS and WPs

WP 1: Effects of global drivers, policies and regulations on growth, jobs and innovation in European fisheries and aquaculture sectors.

- There's no direct link between the flatfish case study and WP1. This case study can be used as example to validate and control (global) drivers for the models in WP 1.
- Results from this WP into the CS

WP 2: Consumer preferences, market acceptance and social awareness towards seafood.

Which are the emerging consumer trends in some of the most important EU countries (i.e. Netherlands, France, Belgium, UK, Germany and Spain)? What are consumer perceptions concerning origin, social and environmental criteria, supply, marketing channel?

- The CS will give an overview of flatfish consumption and most important driving factors of flatfish consumption in European countries (2.1).
- The CS will prepare an inventory inside and outside the EU of initiatives implemented by flatfish sector for competitiveness improvement at the consumption stage.

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- Results from this WP into the CS

WP3: Competitiveness and sustainability of European fisheries and aquaculture sectors

- The CS will give an overview of governance and regulation systems influencing competitiveness and sustainability of the European flatfish sector (3.1).
- The CS will give an overview of the main production systems involved in European flatfish fisheries and aquaculture primary sectors, including:
 - o Quantity production flatfish in Europe (or main EU-countries)
 - o Cost and revenues production flatfish in Europe (or main EU-countries) (3.2)
- The CS will prepare an inventory inside and outside the EU of initiatives implemented by flatfish producers for competitiveness improvement at the production stage (3.3).
- Results from this WP into the CS

WP 4: Trade and Value Chain

- The CS will give a description of the value chain for flatfish in the most relevant seafood markets in the EU (4.1).
- The CS will give a description of the margins of processors-traders on flatfish fish and the effect on flatfish producers' incomes and margins (4.3).
- The CS will prepare an inventory inside and outside the EU of initiatives implemented by flatfish sector for competitiveness improvement at the trade and value chain stage.
- Results from this WP into the CS

Expectations

Below you can find what can be expected from the CS partners to achieve above mentioned objectives.

Netherlands (LEI Wageningen UR):

- Providing data on landings, trade and consumption of farmed and wild flatfish Netherlands/Belgium (task 2.1/3.2/4.1)
- Description of Dutch/Belgian flatfish aquaculture and fisheries (North Sea Area 4abc) : (fleet) structure and production systems (as well as management systems) and value chain (task 3.1, 3.2 and 4.1).
- Description of the Dutch flatfish market in the Netherlands (task 4.1/4.3).
- Look at the evolution of management system of Dutch/Belgian flatfish quota in order to achieve a sustainable exploitation (task 3.1/3.3).
- Look at recent initiatives from the Dutch/Belgian flatfish fisheries to become more economically and environmentally sustainable (task 3.3).

France (Ifremer, Pêcheurs de Bretagne):

- Providing data on landings, trade and consumption of flatfish in France, with a focus on sole as far as possible (task 2.1/3.2/4.1)
- Description of French flatfish fisheries (East Channel, and Bay of Biscay): fleet structure and production systems (as well as management systems) and value chain (task 3.1, 3.2 and 4.1).
- Look at the evolution of PO management system of flatfish VIIIabd quota in order to achieve a sustainable exploitation based on the Bay of Biscay experience where the French vessels catch almost 100% of the TAC for this stock (Task 3.1/3.3).
- Provide brief qualitative elements on the recent initiative of the PO (From Nord) to reach the MSC label for the Eastern Channel and North Sea Sole with the financial support of a large retailer (Carrefour) (Task 4.4 probably).

Spain (Universidad de Cantabria, Rodecon SL):

- Providing data on landings, trade and consumption of Turbot/Sole/Plaice Spain (task 2.1/3.2/4.1)
- Description of Spanish flatfish fisheries/aquaculture: fleet structure and production systems as well as management systems (task 3.1, 3.2 and 4.1).

Germany (Thunen institute):

- Providing data on landings/production, trade and consumption of flatfish in Germany (task 2.1/3.2/4.1)
- Description of German flatfish aquaculture and fisheries: structure and production systems (as well as management systems) (task 3.1, 3.2).
- Description of the German flatfish market (task 4.1/4.3).
- Look at the evolution of management system of German flatfish quota in order to achieve a sustainable exploitation (task 3.1/3.3).

UK (Fishor consulting):

- Provide data on landings of wild flatfish under EU quota management from the UK (task 2.1/3.2/4.1). Data on trade and consumption will be investigated for availability. There is an opportunity to link up with WP2 and the Thunen institute to understand consumer preferences and consumption choices in the UK for some flatfish species.
- Description of UK flatfish fisheries (North Sea Area 4abc and Western Approaches Area VIIb-k): fleet structure and production systems as well as management systems and value chain (task 3.1, 3.2 and 4.1).
- Description of the UK flatfish market (task 4.1/4.3).
- Look at the evolution of management system of UK flatfish quota in order to achieve a sustainable exploitation (task 3.1/3.3).