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Fisheries

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In 2017 the worldwide production of fishery products, including aquaculture, amounted to 205.6 million tonnes (marine mammals not included). Sea fishery products account for 73.1% (150.4 million tonnes), of which 55.2% (83.1 million tonnes) is wild catch. In contrary to Asia (41.1% wild catch, 42.8 million tonnes), the marine wild catch in Europe still amounts to 84.4% (14.8 million tonnes) of the landing of sea fishery products. Freshwater fishery products, yet considerably limited in landing (58.9 million tonnes), have a stronger representation of aquaculture products on a global scale (82.1%; 48.3 million tonnes) ([FAO Fisheries and Aquaculture Information and Statistics Service 2020](#)).

The total landing of sea fishery products (including aquaculture) from the European Union (EU) totalled 4.5% (6.8 million tonnes) of the global sea fishery production in 2017. France, Spain, the United Kingdom and Denmark provide almost half (45.6%) of the EU landings. The marine wild catch in the EU accounted for 6.7% (5.6 million tonnes) of the global marine wild catch. The Belgian landings in the same year represented 0.4% (24,472 tonnes) of the EU-total ([Devogel and Velghe 2017](#)). The number of Belgian fishing vessels in 2017 (71 vessels) accounts for less than 0.1% of the total European fleet with a tonnage and engine capacity of 0.9% and 0.7% of the European total, respectively ([Velghe and Scherrens 2019](#), <http://ec.europa.eu/fisheries/fleet/index.cfm>).

The global or European catch by marine recreational fisheries is unknown. The number of individual boat anglers in the EU is estimated at about 9 million. Together, they spend 77.6 million days at sea and the total economic activity related to this sector is estimated to be 10.5 billion euro annually, of which 5.1 billion euro direct expenditures ([Hyder et al. 2017a](#), [Hyder et al. 2017b](#)). Belgium is a small player in the European marine recreational fisheries context. Belgian recreational fishing vessels spend around 9,500 days at sea on a yearly basis. The landing of fishery products by the marine recreational fishing community is estimated at over 200 tonnes and the direct expenses (purchase of materials, boat maintenance, etc.) are estimated at 5.3 million euro annually ([Verleye and van Winsen 2018](#)).

7.1 Policy context

The management of the European fleet and the conservation of fish stocks are mainly regulated by the Common Fisheries Policy (CFP, Regulation (EU) No 1380/2013) as imposed in articles 38 to 44 of the Treaty on the Functioning of the European Union (TFEU). The EU fisheries policy is implemented by the Directorate-General Maritime Affairs and Fisheries (DG MARE) of the European Commission (EC) and by EU Member States (more information: [overview of European legislation concerning the CFP](#)). The CFP has been developed within a sustainable development context, as stated by the EU Strategy for Sustainable Development (COM (2001) 264) and [sustainable development goal 14 \(SDG 14\)](#) of the United Nations. Within this context, an ecosystem approach and a sustainable exploitation of living biological resources at sea will be pursued. The European fisheries policy is based on advice from the Advisory Councils (see articles 43 to 45 and appendix III of the CFP), as well as from a number of national and international organisations and instances such as the Scientific, Technical and Economic Committee for Fisheries (STECF) of the EC and the International Council for the Exploration of the Sea (ICES) ([Adriansens 2009](#), [manual for the CFP 2009](#)). The European fisheries management relies on scientific data, collected by the Member States based on the context of data collection (Regulation (EU) No 2017/1004 and Implementing Decision (EU) No 2016/1251) (see 7.5 Sustainable use).

At national level, Flanders has the exclusive authority with regard to sea fisheries (decree of 28 June 2013 on agricultural and fisheries policy), with the exception of the crew and examination conditions for which the federal Government is still the competent authority (FPS Mobility). The Flemish Ministry of Agriculture and Fisheries is responsible for the commercial fisheries policy ([Schauvliege 2014](#)). The [Department of Agriculture and Fisheries](#) is responsible for the preparation of a policy on European and Flemish level. Within this department, the [Division Knowledge, Quality and Fishery](#) (AKKV) is responsible for the implementation of the European policy, the formulation of policy proposals, the development of regulations and the implementation of the fisheries policy. The [Fisheries Service](#) is part of the latter division and is responsible for the coordination, implementation and enforcement of the fisheries policy. This also includes the legal tasks of collecting economic data, such as landing statistics.

The implementation of the European policy for investments and actions in favour of fisheries is regulated, *inter alia*, by the European Maritime and Fisheries Fund (EMFF, Regulation (EU) No 508/2014). The Belgian [Operational Programme \(EMFF\) 2014-2020 "Vooruitziend en voortvarend"](#) (see 7.5.4 Sustainable fisheries) creates a framework and a manual for the funds of the EMFF. The Flemish [Financieringsinstrument voor de Visserij- en Aquacultuursector](#) (Financial Instrument for the Fisheries and Aquaculture Sector, FIVA) provides the necessary co-financing (decision of the Government of Flanders of 5 February 2016 and MD of 19 May 2016). The implementation of the fisheries policy also includes the control of fishing activities and data collection, including the reporting of the data in [annual reports](#).

The policy is also supported scientifically by the Flemish Research Institute for Agriculture, Fisheries and Food ([ILVO](#)). The Strategic Advisory Council for Agriculture and Fisheries ([SALV](#)) advises the Government of Flanders and the

Flemish Parliament about agriculture and fisheries in a broad sense. The advises, as determined by stakeholders represented in the SALV, are part of a supported political decision-making process. The fisheries related advice is prepared by the Technical Commission Fisheries (TWW) of the SALV. In the past, the *Milieu- en Natuurraad van Vlaanderen (Minaraad)* provided advice in a number of fisheries related cases as well. The *Rederscentrale* is recognised as the producer organisation of fisheries products and as the professional association of specialists representing the employers. The Flanders' Agricultural Marketing Board (*VLAM*) coordinates the promotion campaigns of fish produced in Flanders (e.g. fish of the year, seasonal fish). The Belgian fisheries policy is discussed in more detail in *Vanderperren and Polet (2009)* (CLIMAR project *phase 1* and *phase 2* BELSPO), the Belgian Operational Programme (EMFF) 2014-2020 and *VIRA 2018*. An extensive overview of the legislation concerning fisheries is given in the *Codex Coastal Zone, theme Fisheries*.

The marine recreational fisheries are subject to both European, federal, Flemish and communal legislations. An overview of the relevant legislation is discussed on the website www.recreatievezevisserij.be.

7.2 Spatial use

The CFP is valid in the Belgian fisheries zone (law of 10 October 1978), the borders of which correspond to the Belgian exclusive economic zone (EEZ, law of 22 April 1999). In this zone, the practicing of fishing activities is subject to Belgian jurisdiction (although fisheries are a Flemish competence, see above), taking into account the rights of foreign vessels in the context of the CFP and the relevant international regulations (article 5 and appendix I).

In the territorial waters (the zone from the baseline to 12 nautical miles (nm) offshore), fisheries are regulated by the national legislation (law of 19 August 1891). This legislation defines that only fishing boats of <221 kW are allowed to fish in the territorial sea if they use a beam trawl, while in the 0-3 nm zone, only ships of <70 GT are allowed to fish (see also 7.3.2 Belgian fishing fleet). An extension of this zone towards 4.5 nm is included in the RD of 20 March 2014, but needs approval on European level. However, due to the veto of each impacted Member State in the formal negotiation procedure for Belgian fisheries measures (cf. CFP) this measure was not included in the final proposal of fisheries measures.

In the territorial sea, fisheries are exclusively reserved for Belgian fishermen, although French and Dutch fishermen are allowed under certain conditions as a result of multilateral conventions (*Douvere and Maes 2005*, *GAUFRE project BELSPO*) and the European legislation. The CFP (appendix I) gives the Netherlands unrestricted access to the Belgian 3-12 nm zone. The treaty revising the treaty establishing the Benelux Economic Union (2008), concluded on 3 February 1958, also gives the Netherlands the right to fish without restrictions in the 0-3 nm zone. The Belgian-French convention on *ijle haring* (herring caught between December and April) and European sprat fisheries in the French and Belgian territorial waters (1975) allows French fishing boats to catch sprat and herring in the Belgian territorial sea under certain conditions (see appendix I of the CFP).

Fishing is forbidden at the *Paardenmarkt* site, a munition dump site (*Maes et al. 2000*, RD of 20 March 2014) (see theme **Military use**). The MD of 4 October 2016 prohibits certain fishing activities around ship wrecks to protect the marine cultural heritage. Furthermore, the RD of 11 April 2012 prohibits shipping (and therefore also fisheries) in a safety zone of 500 m around wind farms (see also theme **Energy (including cables and pipes)**). The compatibility of offshore wind farms and passive gear fisheries and mariculture has been investigated extensively in the context of the MARIPAS project (*Verhaeghe et al. 2011*), the *Aquavalue project* and in the research project *EDULIS* (see theme **Marine aquaculture**).

In the marine spatial plan (RD of 20 March 2014, see also *Van de Velde et al. 2014*) measures have been proposed in four zones in the habitats directive area 'Vlaamse Banken' (Flemish Banks) to stimulate alternative sustainable fisheries on the one hand, and to protect the environment on the other hand (see theme **Nature and environment**) (figure 1). As directed in the CFP these measures were formally aligned with the impacted Member States and had to be converted into an EU Delegated Act (*C(2018) 1194 final*). However, on 14 June 2018 this document was revoked by a resolution of the European Parliament (*2018/2614(DEA)*) because the measures were considered as insufficient. Recreational fisheries are allowed in the Flemish Banks area as long as the activities have no impact on the seabed, with some exceptions for the existing recreational shrimp fisheries.

In the updated marine spatial plan (2020), which manages the use of space in the Belgian part of the North Sea (BNS) until 2026, new zones are reserved for renewable energy. Research is going on to investigate if and how aquaculture and passive gear fisheries can be allowed within the renewable energy zones without endangering safety. The pre-draft marine spatial plan 2020-2026 was approved by the Council of Ministers in April 2018 and in the summer months of 2018 a public consultation (*MSP 2020-2026, public consultation 2018*) followed.

A detailed overview of the fishing activities of the Belgian, Dutch and British vessels in the BNS, i.e. the spatial distribution of the fleet (VMS data) and information about the target species for the period 2010-2012 (log data), is given in [Pecceu et al. \(2014\)](#). The results of the analyses of fisheries intensity and the landings of target species in the BNS are shown for each flag state, for each fishing technique and for each quarter (3 months). In any case the BNS is of limited importance for the Belgian fisheries fleet because only 9% of the total landings in 2017 originate from ICES region IVc, where the BNS is part of ([Velghe and Scherrens 2019](#)). The Belgian coastal fishing vessels as well as the Dutch beam trawlers and pulse trawlers are quite active in the BNS.

Belgian fishermen are mainly active outside the BNS, such as in the Southern and Central North Sea, the Celtic Sea, the English Channel, the Irish Sea and the Bay of Gascogne. In the context of the CFP and through multilateral conventions, Belgian fishing boats have acquired access to the coastal waters of a few other EU Member States ([VIRA 2018](#)). Furthermore, Belgian fishermen have access to limited quota in Norwegian waters. A detailed list of these areas is given in [VIRA 2018](#).

A map with the historical fishing grounds (1929-1999) can be consulted on the website '[A century of sea fisheries in Belgium](#)' of Flanders Marine Institute ([VLIZ](#)). The historical spatial distributions of different West European marine fish species can be consulted through the Piscatorial Atlas (Olsen, 1883), which can be found on the portal [HisGISKust](#).

The recreational sea anglers and trawling fisheries (beam trawl, otter trawl) are mainly active within the 3 nm zone. The recreational fishing activities from the beach (beach angling or angling from piers or breakwaters, passive nets, wading using a small shrimp net and horseback shrimp fisheries) is characterised by a strong spatial variability along the Flemish coast ([www.recreatievezevisserij.be](#)).

7.3 Social interest

7.3.1 Employment

Employment in the fisheries sector has declined due to a crisis that has affected the fisheries sector (see 7.5 **Sustainable use**). In 2017, the fisheries sector in Belgium consisted of 382 accredited sea fishermen ([VIRA 2018](#)). In 2014, Belgium had 271 fish processing companies ([Blondeel et al. 2016](#), [Verlé et al. 2016](#)). In the 68 companies with fish processing as their main activity, approximately 1,490 people were employed ([Verlé et al. 2016](#)). One of the most important challenges within the sector is to promote the attractiveness of the sector and to find well trained young adults ([SALV 2015](#), [SALV 2016](#)). Efforts are made to improve the inflow of young people into the sector, for example by means of the [Fund for young ship crew members](#), in which Belgian ship owners annually deposit a mandatory contribution (for 2018: decision of the Government of Flanders of 15 December 2017). The number of young ship crew members decreased in the period between 1980 and 2017 from 222 to 55, despite the increases in the maximum age in 1988 and 2001. Furthermore, sea fishing is a dangerous profession with a relatively high amount of work related accidents (38 in 2017), even though there are many rules in place to improve working conditions on board and optimise safety ([VIRA 2018](#)). [Previs](#) is, among others, responsible to promote a preventive policy and awareness raising in the topics of safety and health on board of fishing vessels.

7.3.2 Belgian fishing fleet

Based on the decision of the Government of Flanders of 16 December 2005, the fishing fleet is divided into three segments:

- Large fleet segment: All fishing vessels with an engine power capacity between 221 kW and 1,200 kW;
- Small fleet segment: All fishing vessels with an engine power capacity of 221 kW or less, except for the coastal fleet segment;
- A coastal fleet segment: All fishing vessels with an engine power capacity of 221 kW or less, a tonnage of maximum 70 GT and undertaking fishing trips of maximum 48 hours with both the start and ending points in a Belgian port (MD of 16 March 2012). Joining the coastal fleet segment occurs on a voluntary basis and has to be agreed on by the Fisheries Service.

The bottlenecks which inhibit the flow from the recreational fishery sector to the commercial segment are discussed in [van Winsen et al. \(2016\)](#) (LIVIS, [GIFS](#)). Based on these bottlenecks it is studied if the establishment of a new small scale professional fisheries segment is possible and meaningful.

In 2018, the Belgian sea fishing fleet consisted of 68 vessels with a total engine power of 42,670 kW and a gross tonnage of 12,898GT ([Maertens 2019](#); [Velghe and Scherrens 2020](#)). The reported total engine power does not

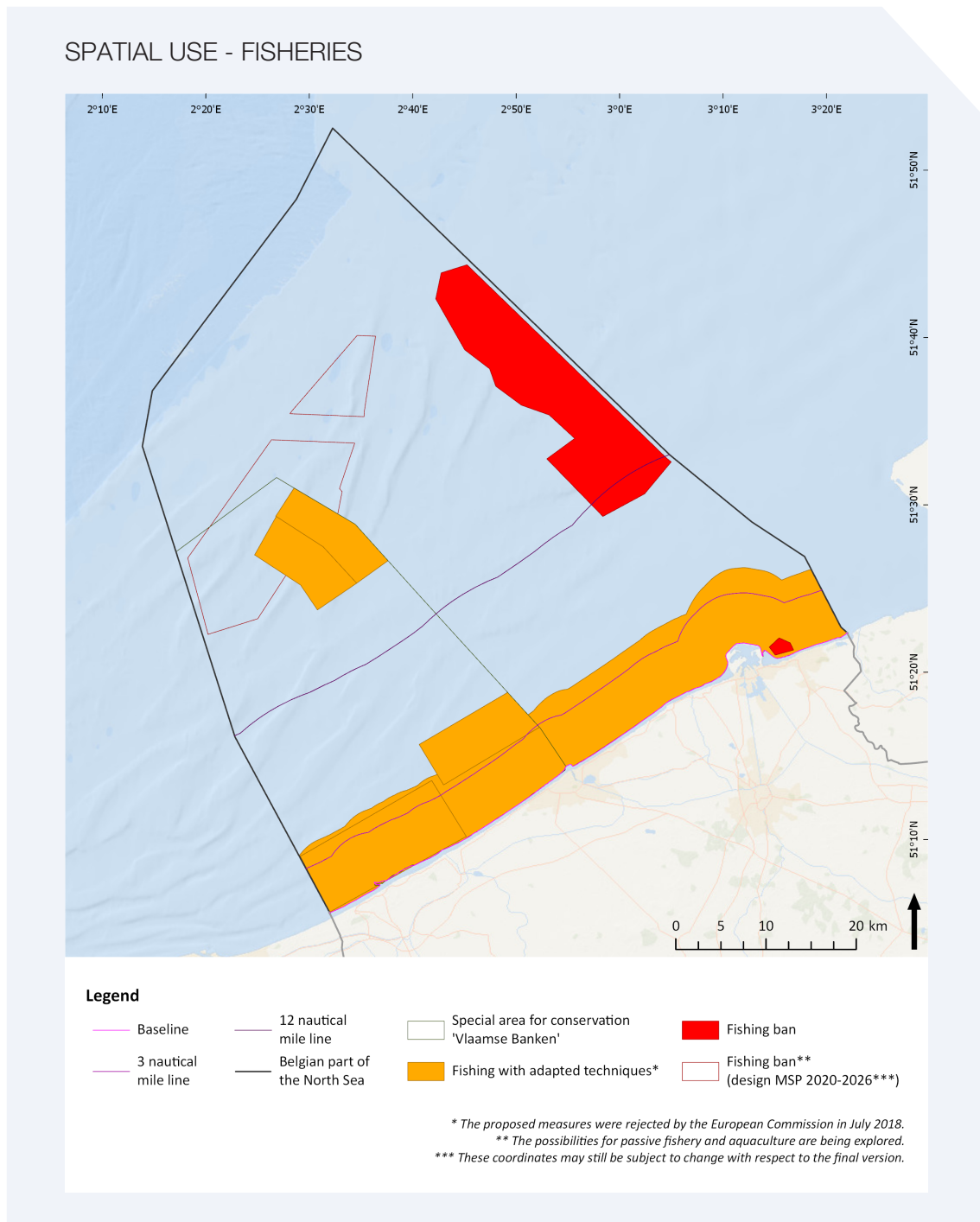


Figure 1. The delimitation of the fishery zones and locations forbidden for fishing activities in the BNS (Source: RBINS, marineatlas.be (based on the RD of 20 March 2014), [MSP 2020-2026, public consultation 2018](#)).

correspond to the reported engine power in the 'Official list of Belgian fishing vessels' of the FPS Mobility because the latter does not take into account additional fictive engine power. Between 1950 (457 vessels) and 2000 (127 vessels), there was a strong decrease in the number of active fishing vessels. The total engine power capacity, however, did not reveal a comparable decrease and remained relatively stable (figure 2). This is mainly due to a trend towards larger vessels within the beam trawling section ([Rijnsdorp et al. 2008](#)) which was made possible by the aggregation of engine powers ([Operationeel Programma in uitvoering van het Nationaal Strategisch Plan voor de Belgische visserijsector 2007-2013](#)). The dynamics of the Belgian fishing fleet with changing owners, immatriculation numbers, ports of registration and technological equipment can be consulted in a database on the website 'A century of sea fisheries in Belgium' of Flanders Marine institute (VLIZ) and in a review article [Lescrauwaet et al. \(2013\)](#). Recently,

a reference work on the core aspects of the broader fisheries sector during 500 years of Flemish sea fisheries was published ([Lescrauwaet et al. 2018](#)).

Another important challenge with regard to the development of the sector is the rejuvenation of the Belgian fishing fleet. In 2017, the average age of the hull of Belgian fishing vessels was 28 years. 77% of the vessels is 20 years or older, while 41% even exceeded 40 years of age ([VIRA 2018](#)). The average age of the engines is lower (15 years) since a number of vessels replaced their old engines by more efficient ones after the fuel crisis of 2008. However, the trend of engine renewal has come to a standstill. The demand for ship building (with financial support) to replace the existing vessels is increasing strongly since a couple of years ([VIRA 2018](#)), but the CFP does not provide financial support to build new vessels.

In the Flemish coastal marinas, 806 unique vessels were identified in 2016 which are visibly equipped to undertake recreational fishing activities at sea. The majority (88%) are angling vessels, 12% are trawling vessels (otter trawl (7%) and beam trawl (5%)). These are characterised by a strong variability in sailing frequency. The average engine power of the angling vessels is 118 kW (160 hp) while the average length is 7.36 meters (see www.recreatievezeeverij.be).

7.3.3 Landings and value

The historical landings of the Belgian fishing vessels between 1929 and 1999 have been collected for each species and for each fishing area on the website ‘*A century of sea fisheries in Belgium*’ of VLIZ. Landings peaked after the Second World War, when over 70,000 tonnes of fish were landed in the Belgian ports each year. The landings subsequently decreased gradually until 2009 (19,175 tonnes), while in 2018 the landings amounted 20,634 tonnes ([Velghe and Scherrens 2020](#)). The long-lasting decrease of the landings until 2009 can largely be explained by a change in the species composition of the catch ([VIRA 2014](#)), but the fuel crisis, the declining fish stocks, the declining fishing fleet, the limiting quota, the technological evolutions and the fishing effort limits all played a significant role (see 7.5 Sustainable use). In 2018, 14,859 tonnes were landed in Belgian ports against 5,775 tonnes in foreign ports. The port of Zeebrugge covered 57.0% of the landings in Belgian ports, Ostend 40.6% and Nieuwpoort 2.4%. Plaice, sole, shrimps, cuttlefish, rays and gurnards were the most important species in terms of landing volume ([Velghe and Scherrens 2020](#)).

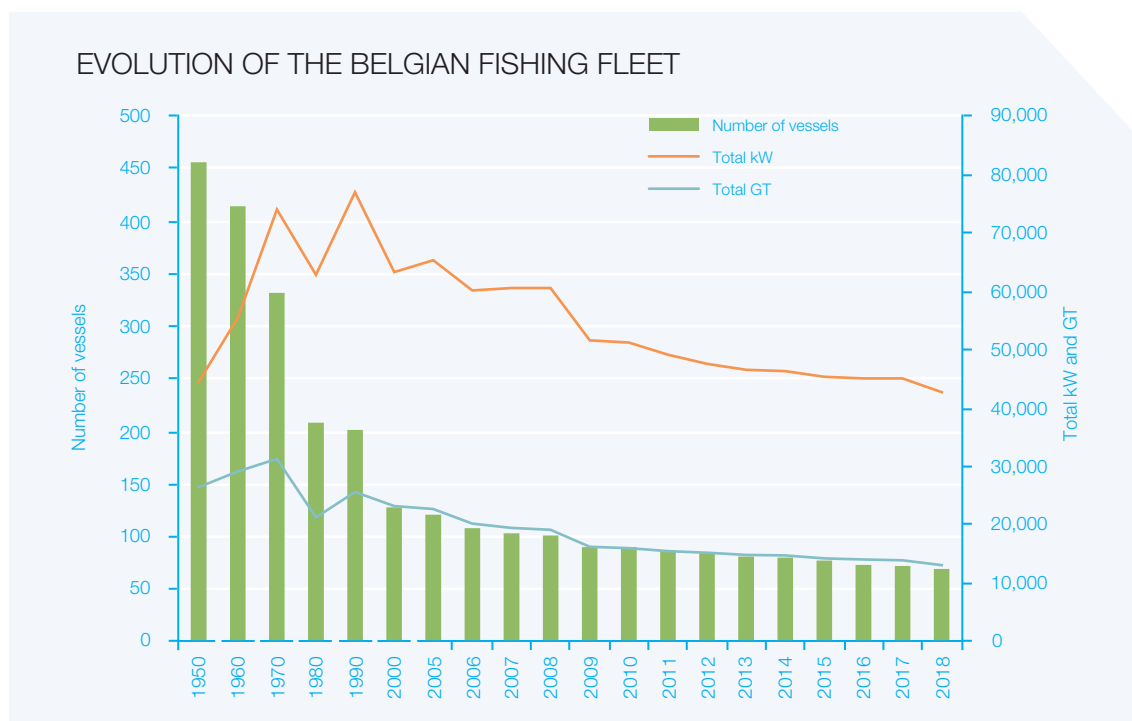


Figure 2. Evolution of the Belgian fishing fleet, number of vessels and capacity (GT and kW) on 31 December of the year, 1950-2017 ([Velghe and Scherrens 2020](#); [Maertens 2019](#)).

The value of landings or turnover is the value of landed fish and fish products sold by public auction (calculated on the total of both traded and non-traded products). The total value of landings of fish by Belgian fishing vessels increased almost constantly after the Second World War from approximately 80 million euro (indexed value with respect to the reference year 2007) to peaks of approximately 130 million euro at the end of the eighties and in the early nineties (website '[A century of sea fisheries in Belgium](#)', VLIZ). This was followed by a decrease to 68.367 million euro in 2009, followed by an increase to 84,539 million euro in 2018. Sole remains the most important fish species for Belgian fisheries with 29.5% of the value of landings in 2018 ([Velghe and Scherrens 2020](#)). The value of landings of each species between 1929 and 1999 is available on the website '[A century of sea fisheries in Belgium](#)' (VLIZ). The recent value of landings for each species can be found on the [website](#) of the Department of Agriculture and Fisheries.

Total landings (i.e. retained fish) from the marine recreational fisheries sector in 2018 amounted to 271 tonnes. Shrimp (38%), whiting (20%), dab (14%), sole (8%), cod (7%) and mackerel (4%) are the most important species in terms of landing volume. Boat anglers account for more than half of the landings (141 tonnes), followed by trawlers (67 tonnes), manual shrimp fishermen (36 tonnes), anglers from the beach/dam (24 tonnes) and passive gear fisheries (2 tonnes). Notwithstanding the ban on commercialisation of the catch, the marine recreational fisheries sector has an economic interest in terms of direct expenditure (8.6 million euros) and indirect value creation (e.g. tourism, job creation (no figures available)) ([Verleye and van Winsen 2019](#)).

7.3.4 Trade and consumption of fish products

In Belgium, there are three active fish auctions: Zeebrugge, Ostend and Nieuwpoort. Zeebrugge and Ostend together constitute the [Vlaamse visveiling](#) auction. The average prices of fish caught by Belgian fishing vessels have increased almost constantly after the Second World War with a peak of 4.48 euro per kilo in 2006. In 2017, the average price of fish in Belgian ports amounted 4.21 euro per kilo ([Velghe and Scherrens 2020](#)).

Figures from the *GfK Panel Services* Benelux for VLAM reveal that in 2017, Belgians bought on average 8.4 kg of fish, molluscs and crustaceans per capita, for a total amount of 106 euro. The degree of self-sufficiency for fish, molluscs and crustaceans in Belgium and Luxembourg from fisheries and aquaculture amounted to 14.6% in 2008 ([VLAM](#)). In 2017, the value of imported fish products amounted to 2 billion euro, of which 62% originated from EU Member States, with the Netherlands as the main EU-supplier (41%). The export value totalled 1.1 billion euro (97% within the EU) with France (33%), the Netherlands (27%) and Germany (15%) being the most important selling markets ([VIRA 2018](#)).

7.3.5 Fishing communities

The social dimension of the fisheries sector (training, employment, wellbeing, safety, etc.) is discussed in detail in [VIRA 2018](#). In the context of the SALV analysis about the socio-economic aspects of the fisheries sector ([SALV 2016](#)), the problems surrounding the absence of local fishing communities were raised. The impact of the CFP on the social and economic aspects of fishing communities was investigated in a European study: '[Regional social and economic impacts of change in fisheries-dependent communities 2011](#)' including a case study in Ostend ([Delaney et al. 2010](#)). The [GIFS project](#) investigated the socio-economic and cultural importance of inshore fisheries for coastal communities. Within ILVO, the [VISEO group](#) aims to gather knowledge about techniques, ecosystem and society by means of specific and integrated social scientific research, meeting the needs of the fisheries sector as well as the policy. The research topics include business economics research, supply chain research, international market research and research on the impact of the policy on the competitiveness of the sector and the environment.

Complementary to the [FAO Code of Conduct for Responsible Fisheries \(1995\)](#), the FAO published [Voluntary Guidelines for Securing Sustainable Small-Scale Fisheries in the Context of Food Security and Poverty Eradication \(2015\)](#). These guidelines aim to contribute to the visibility, recognition and strengthening of the already important role of the small-scale fisheries, to promote the international efforts concerning the fight against famine and poverty, but also to stimulate responsible fisheries and a sustainable socio-economic development. Furthermore, the possible role of small-scale fisheries in the context of 'Blue Growth', including the potential impact on coastal communities concerning economic growth, employment and innovation, is discussed in [Stobberup et al. \(2017\)](#). FAO also published technical guidelines concerning a sustainable and socially responsible management of the recreational fisheries in [FAO Technical Guidelines for Responsible Fisheries – Recreational Fisheries \(2012\)](#).

The size of the Belgian recreational fishing community is estimated at more than 2,000 individuals ([Verleye and van Winsen 2018](#)), of which 32% is a member of one of the many sea fisheries associations. The average age is 55

years, 98% of the sector are men and 70% is living in the province West Flanders (www.recreatievezevisserij.be). In the context of recreational sea fishing 16 horseback shrimp fishermen (licensed as UNESCO heritage) and three associations of = (in the intertidal zone with a shrimp net – in Dutch: *kruiers*) are active in Oostduinkerke. In the first place, they can be considered as a folklore tradition (see www.paardevissers.be and [provincie West-Vlaanderen 2008](http://provincie.West-Vlaanderen2008), see theme **Maritime and coastal heritage**).

7.4 Impact

Fishing activities have an effect on the (marine) ecosystem, but the precise impact is still being discussed. Besides killing, displacing, influencing and extracting organisms from the sea, some fishing techniques also have a certain impact on the seabed integrity ([Depestele et al. 2014](#), [Teal et al. 2014](#), [Depestele et al. 2016](#)). This causes changes in the natural equilibrium after fishing. Furthermore, other factors such as the energy use by ships, which consists almost exclusively out of fossil fuels, and waste production impact the environment (i.e. [VIRA 2014](#)). An overview of the impact of fishing activities is given in [Polet and Depestele \(2010\)](#) and [Strategische Milieubeoordeling \(SMB\) van het Nationaal Operationeel Programma voor de Belgische visserijsector 2014 - 2020](#). The latter Strategic Environmental Assessment (SEA) is required by the RD of 18 May 2008. A few of these effects will be further elaborated below.

7.4.1 Overfishing and illegal, unreported and unregulated fisheries

A structural lack of equilibrium between the capture capacity of a (mostly international) fishing fleet and the biological potential of the exploited fish stocks, will lead to the overfishing of these fish stocks. The [national fleet reports](#) in execution of article 22(2) of the CFP describe the equilibrium of the fishing capacity and the fishing opportunities and are delivered at the STECF. In the Belgian context ILVO will set up an action plan with measures to restore the equilibrium in case of a disequilibrium. Especially when overfishing causes a reduced reproductive capacity, this will often result in the collapse of the concerned fish stocks. Furthermore, fisheries may cause irreversible changes in the population structure and the food web ([Pauly et al. 1998](#), [Polet et al. 2008](#), [OSPAR QSR 2010](#), [OSPAR IA 2017](#)). Quota overviews and additional quota measures are published on the [website](#) of the Fisheries Service. Belgian quota overruns are rather exceptional. The legal basis for eventual measures in case of not respecting the imposed quota is formed by Regulation (EU) No 1224/2009 and article 16 of the decision of the Government of Flanders of 18 December 2005.

The effect on the marine biological communities is exacerbated by illegal, unreported and unregulated (IUU) fisheries ([handbook on IUU Regulation 2010](#), [website Sea Fisheries Service](#), [website DG MARE](#)) and by discarding non-target or low-valued species (called bycatch). Some other illegal practices will also negatively impact the environment, such as high-grading, i.e. maximising the value of the catch by discarding smaller individuals of a certain species in favour of the larger ones (more information: [Vandendriessche et al. 2008](#), [handleiding voor het GVB 2009](#)). In [Pauly and Zeller 2016](#) ('Global Atlas of Marine Fisheries') fishery data of 273 countries is reported based on independent reports and not based on the reports of Member States of the Food and Agriculture Organization (FAO). An estimation of the unreported catch and bycatch of the Belgian sea fisheries between 1929 and 2010 is given in [Lescrauwaet et al. \(2013\)](#). In 2010, [ICES](#) introduced the principle of maximum sustainable yield (MSY) as a basis for their advice. A healthy MSY status means biomass levels of the concerned stocks have to be high enough and the fishing mortality has to be low enough to ensure a permanent maximum sustainable yield ([VIRA 2018](#)). A review of the North Sea fish stocks of sole, plaice and cod to the MSY context by [Nimmegeers et al. \(2018\)](#) suggests an increase in the reproductive biomass of the three fish stocks since 2007 and only cod is still fluctuating around the MSY limit ([ICES 2017a](#), [ICES 2017b](#), [ICES 2017c](#)). The fishing mortality is characterised by a decrease since the last 20 years, in which sole and cod are still just above the MSY reference level, and plaice is more or less at the MSY level.

7.4.2 Impact of fishing gear

The impact of fisheries on the ecosystem and the biological communities strongly depends on the fishing gear used and the time and place of fishing, although some other factors such as the mesh width of the nets and the expertise of the fishermen also play an important role. The [BENTHIS project \(2012-2017\)](#) has assembled all knowledge about seabed disturbance. It gives a thorough insight into the issue of seabed disturbance and proposes a method to quantify seabed disturbance based on the fishing gear characteristics and the habitat. One case study focused on the North Sea. The results indicated a more nuanced view on seabed disturbance and associated benthic mortality, mainly because the scientific insight improved with the availability of high resolution data on the spatial and temporal distribution of fishing effort ([Teal et al. 2014](#), [Eigaard et al. 2016](#)). In table 1, an overview of the impact of the most abundant types of fishing gear in the Belgian fisheries is given. The current Belgian research to the impact of otter trawling is limited, but the technique has been studied by some international partners within the [BENTHIS project](#). Some alternative fishing techniques are being discussed in [Polet and Van Peteghem \(2010\)](#).

Table 1. An overview of the impact of the most abundant types of fishing gear in the Belgian fisheries.

Fishing gear	Impact on the ecosystem	Literature
Beam trawls	Seabed disturbance and associated effect on benthos and habitat	<i>Lindeboom and de Groot 1998, Houziaux et al. 2008 (Project BELSPO), Polet et al. 2008, Rabaut et al. 2008, Depestele et al. 2008, Polet et al. 2010, Polet and Depestele 2010, Depestele et al. 2012 (WAKO-II project BELSPO), Van Lancker et al. 2012 (QUEST-4D project BELSPO), Depestele et al. 2014 (WAKO-II project BELSPO), Depestele 2015, Operationeel Programma EFMZV 2014-2020, Eigaard et al. 2016 (see also corrigendum), Eigaard et al. 2016, Depestele et al. 2016, Rijnsdorp et al. 2016, Depestele et al. 2018</i>
	Bycatch and discards	<i>Depestele et al. 2008, Vandendriessche et al. 2008, Polet et al. 2010, Polet and Depestele 2010, Depestele et al. 2011, Depestele et al. 2012 (WAKO-II project BELSPO), Verschueren et al. 2012, Depestele et al. 2014, Depestele 2015, Theunynck and Verschueren 2015, Operationeel Programma EFMZV 2014-2020, Uhlmann et al. 2016, Verschueren and Lenoir 2016, van Marlen et al. 2016</i>
	Shifts in the food chain caused by discards	<i>Sotillo et al. 2012, Depestele et al. 2014 (BENTHIS), Sotillo et al. 2014, Depestele 2015, Depestele et al. 2016</i>
	Use of fuels and resources	<i>Depestele et al. 2007, Polet et al. 2008, Polet et al. 2010, Polet and Van Peteghem 2010, Polet and Depestele 2010, Operationeel Programma EFMZV 2014-2020</i>
	Litter	<i>Bekaert et al. 2015 (SPEKVIS)</i>
Otter trawl	Seabed disturbance and associated effect on benthos and habitat	<i>Buhl-Mortensen et al. 2016, Gislason et al. 2017</i>
	Sediment resuspension	<i>Mengual et al. 2016</i>
Entangling nets (a type of gill net)	Bycatch of seabirds and marine mammals	<i>Haelters and Kerckhof 2004, Depestele et al. 2006, Depestele et al. 2008, Haelters and Camphuysen 2009, Depestele et al. 2012 (WAKO-II project BELSPO), Depestele et al. 2014 (WAKO-II project BELSPO)</i>
	Ghost fishing	<i>Depestele et al. 2006, Depestele et al. 2008, Depestele et al. 2012 (WAKO-II project BELSPO), Depestele et al. 2014 (WAKO-II project BELSPO)</i>
	Bycatch and discards	<i>Depestele et al. 2012 (WAKO-II project BELSPO), Depestele et al. 2014 (WAKO-II project BELSPO)</i>

Sys et al. (2016) studied whether or not the variations in landings by Belgian fishing vessels in the Southern Bight of the North Sea are subject to competitive interaction with the Dutch beam trawl/electric pulse fishing. Further research is being done to investigate the possible negative ecosystem effects of electric pulse fishing (*VLIZ 2014, Soetaert et al. 2015, Soetaert et al. 2016a, Soetaert et al. 2016b, Soetaert et al. 2016c, Soetaert et al. 2016d, Desender et al. 2016, Verschueren and Lenoir 2016, Desender et al. 2017a, Desender et al. 2017b, Desender 2018, Depestele et al. 2018, WGELECTRA 2018, Verschueren et al. 2018*). An overview of the scientific findings can be found on the site www.pulsefishing.eu. This fishing technique is used frequently by Dutch vessels in the Belgian part of the North Sea. In Belgium this is only done in the context of research and the number of licenses is limited to two.

7.4.3 Impact on other users

The spatial impact of fishing activities on other users of the sea is discussed in the *GAUFFRE project (BELSPO)*. In *Maes et al. (2004) (MARE-DASM project BELSPO)* a bottleneck analysis of commercial fisheries was conducted. The compatibility with other users in the BNS is also addressed in the marine spatial plan (RD of 20 March 2014, see also *Van de Velde et al. 2014*). On the other hand, other human activities on the BNS also impact fisheries (spatial use, changes in fish stocks, etc.), these effects are discussed in the respective theme chapters.

7.4.4 Recreational fisheries

With the exception of passive gear fisheries using fixed nets, recreational fisheries do not need a license in the Belgian marine waters. It was therefore not easy to quantify fishing effort and landings by recreational fishermen. For the first time, the large-scale [Belgian monitoring programme](#) (VLIZ, ILVO, FPS Environment), which focuses on cooperation with the recreational fishing community, generates extensive insights into recreational fish catches, fishing effort, the number of fishermen and the economic impact of the sector ([Verleye and van Winsen 2018](#)). A historical framework is provided in [Lescrauwaet et al. \(2013\)](#) where an estimate is made of, *inter alia*, the size of the recreational sea fisheries from 1929 to 2010.

7.5 Sustainable use

7.5.1 Common Fisheries Policy (CFP)

The CFP (Regulation (EU) No 1380/2013) includes a set of rules for managing the European fishing fleets and aims for a sustainable exploitation of marine resources as well as the creation of jobs and growth in coastal areas (see also [Facts and figures on the Common Fisheries Policy 2016](#)). This policy has to ensure that both fisheries and aquaculture are ecologically, economically and socially sustainable and form a healthy food source for the European citizens. There is a focus on the improvement of the scientific knowledge of the fish stocks. An overview of all European legislation related to the CFP is given on this [website](#).

The EC strives towards long-term management, and will draft multiannual plans that will contribute to a sustainable exploitation of the concerned fish stocks and the protection of the marine ecosystems. The multiannual management plan for demersal fish stocks in the North Sea (Regulation (EU) No 2018/973) provides a further implementation of the principles (i.e. sustainability, regionalisation) of the CFP. The aim of this regulation is to strive for sustainable fisheries and achieve a stable arrangement that can serve as a guideline for future decisions about catch possibilities in the North Sea. The plan is to make a multiannual management plan for the Northern and South-Western waters as well. A proposal for this, made by the EC, has been transferred to the European Parliament and Council.

A few elements included in the CFP are the gradual implementation of a landing obligation (ban on discards), the achievement of MSY for the fish stocks by 2020 and the focus on regional management by new advisory councils ([website DG MARE](#)). The ecological, economic, social and governance impacts which are foreseen by this policy were investigated in [Agnew et al \(2010\)](#).

In order to achieve the goals of the CFP, the EU has introduced a number of conservation measures, which can be divided into four groups ([Adriansens 2009](#), [website DG MARE](#)):

- Europe defines the Total Allowable Catch (TAC) of specific fish stocks within a certain period. These TACs are divided among the Member States by means of quota. The Flemish quota are available on the [website of the Fisheries Service](#). An overview of the quota and its utilisation can be found on the [website](#) of the [Redercentrale](#). The quota can be swapped among the Member States. During the [World Summit on Sustainable Development Johannesburg \(2002\)](#), the international community committed itself to adopt a new management system for fish stocks based on the MSY concept at the latest by 2015, where possible ([Adriansens 2009](#), [manual for the CFP 2009](#)). At this moment, the MSY is determined for the important commercial species for which data is available. For certain species such as rays, the MSY cannot be determined yet. [ICES](#) gives quantitative TAC advice to Europe based on all available information for all fish stocks without a management plan or MSY value. The current Belgian fleet mainly focuses on typical mixed fisheries, catching species from sustainable fish stocks as well as non-target species. In order to face this challenge, fisheries management is evolving towards 'multi-species management'. This issue is discussed in the ICES Working Group on Mixed Fisheries Advice for the North Sea ([WGMIXFISH](#)). On the other hand, attention is paid to the effects of excessive selective fishing and balanced harvesting of fish stocks in accordance with their natural occurrence is advocated ([Garcia et al. 2012](#));
- Technical measures have been introduced, such as a minimum mesh size, selective fishing gear, closed areas, minimum landing sizes and a gradual introduction of a ban on discards;
- The fishing effort is limited by restricting the number of days on which fishing boats are allowed to fish at sea. In addition, the fishing effort is reoriented by closing certain zones (temporarily) for fishing activities;
- Fleet measures have been set with maximum capacities for every EU Member State in kilowatts (kW) and gross tonnage (GT). For fleet segments with overcapacity, the Member States can take measures. The efficiency of the EU measures dealing with the overcapacity of the fishing fleet was critically reviewed in the following study: [Study of the European Court of Auditors \(2011\)](#).

The European Maritime and Fisheries Fund (EMFF; Regulation (EU) No 508/2014) was established to support the implementation of the operational programmes of the EU Member States which include the measures mentioned above as well as further elaboration of the EU priorities as discussed in the EMFF regulation (see also **7.5.4 Sustainable fisheries**). The EMFF wants the fisheries and aquaculture sectors to become competitive, ecologically sustainable, economically viable and socially responsible (*VIRA 2014*). Over the period 2014-2020, 41.746 million euro will be reserved for Belgium, representing 0.73% of the total EMFF budget (5.749 billion euro) (see also [website](#)). To optimise the implementation of the EMFF an *ex post evaluation of the European fisheries fund (2007-2013)* (SWD (2017) 274) was executed with a focus on the degree of use of the financial measures and the effectivity and efficiency of the operational programme.

Since 1 January 2010, the control system for ensuring compliance with the CFP has been settled by Regulation (EC) No. 1224/2009, which refers to Regulation (EC) No. 1005/2008 (see also *Verleye et al. 2018*) in order to prevent and eliminate IUU-fisheries (see **7.4.1 Overfishing and illegal, unreported and unregulated fisheries**). As a result, fishing activities of all fishing vessels, with the exception of the small traditional vessels (< 12 m), can be monitored by means of a satellite tracking system (the so-called vessel monitoring system). Moreover, all ships have to be equipped with an electronic logbook, in which fishermen need to report the date, place, catch method and size of the catch for every species (*VIRA 2012*, [website DG MARE](#)). The European Fisheries Control Agency (EFCA) was established in Vigo in 2006 to organise the collaboration and coordination between the Member States with regard to the control and inspection of fisheries.

7.5.2 Marine Strategy Framework Directive

Besides the CFP, the Marine Strategy Framework Directive (MSFD, *2008/56/EC*) also offers a framework to limit or avoid the impact of fisheries on the marine environment. A number of descriptors have been developed to define a good environmental status, some of them directly or indirectly related to fisheries (see also theme **Nature and environment**). Examples are the descriptors 1 (biodiversity; *Cochrane et al. 2010*), 3 (populations of commercially exploited species; *Piet et al. 2010*), 4 (elements of the marine food chain; *Rogers et al. 2010*), 6 (integrity of the seabed; *Rice et al. 2010*), 9 (polluting substances in marine organisms for human consumption; *Swartenbroux et al. 2010*) and 10 (marine litter; *Galgani et al. 2010*).

The physical damage to the seabed due to fishing activities and the selective extraction of species, including the incidental catch of non-target species, has also been included in the indicative list of pressures and impacts. Furthermore, the need for a monitoring programme for the chemical pollution of commercial fish species has been highlighted. In the context of the *Programme of measures for the Belgian marine waters (2016)* there is also attention for marine recreational fisheries next to the commercial fisheries (measures 11, 24, 27 and 29D).

In 2018, a first version of the revision of the initial assessment of the Belgian marine waters (*Belgian State 2018*, [public consultation](#)) was published in which the specific environmental targets for fisheries were evaluated. Despite the fact that a positive evaluation was observed concerning descriptor 3, fisheries in Belgian waters still have a high negative impact on the benthic habitat quality (*IA2017 Condition of Benthic Habitat Communities: Subtidal Habitats of the Southern North Sea*) whereby the soft substrate was assessed as inadequate and the good environmental status (GES) was not achieved.

7.5.3 Data collection in Europe and Belgium

In-depth research and scientific information are essential to underpin the CFP. On an European level, the fisheries research is regulated by Implementing Decision (EU) 2016/1251 establishing a multiannual programme for the collection, management and use of data in the fisheries and aquaculture sector for the period 2017-2019. Since 2014, the financing of the data collection is covered by the EMFF. Advice to the CFP on the basis of scientific information is provided through different bodies (more information: [manual for the CFP 2009](#)):

- The International Council for the Exploration of the Sea (*ICES*) provides biological advice for EU fisheries management through international cooperation of fisheries biologists. The conclusions of the working groups within ICES dealing with stock assessment are taken into account in the deliberations of the ICES Advisory Committee (*ACOM*);
- STECF is the EC's regular fisheries advisory body. This body was set up in 1993 (Decision 93/619/EC), renewed in 2005 (Decision 2005/629/EC) and renewed in early 2016 under the new CFP (Decision EU 2016/C 74/05). The STECF consists of a group of independent scientists, established in order to advise the EC on all aspects of the fisheries policy.

In Belgium, the ILVO Fisheries Biology research group gives advice on the condition and management of Belgian and European fisheries. The group also conducts research on fisheries biology, stock assessment methods, the dynamics of marine ecosystems and the potential impact of fisheries management on fish stocks and fisheries in se. To achieve these general objectives, research activities mainly focus on data collection concerning the size of fish stocks and the exploitation patterns of commercially important species. This results in scientific advice supporting the development and implementation of the CFP.

Furthermore, socio-economic data from fisheries (including marine recreational fisheries), the fish processing industry and aquaculture are inventoried and studied by ILVO. This results in both scientific and (socio-)economic advice which supports the development and implementation of the CFP.

The few important challenges include: the evolution from a 'single-species' towards a 'multi-species' approach, a fisheries oriented perspective in the context of the ecosystem approach, encourage the cooperation of the fisheries sector and the scientists by means of fisheries-science partnerships (VWP), the Brexit, socio-economic impact of policy changes, the evolution towards an integrated chain policy and the landing obligation.

Implementing Decision (EU) 2016/1251 provides an obligation to collect biological data from recreational catches. For the North Sea, data (catch and discard) should be collected for the following species: cod, sea bass, pollack, *Elasmobranchii*, salmon and eel. The [monitoring programme](#) for marine recreational fishing (VLIZ, ILVO, FPS Environment), as included in the national programme of measures under the MSFD (FPS Environment), provides in the collection of catch data (all species) and an initial economic impact analysis ([Verleye and van Winsen 2018](#)).

7.5.4 Sustainable fisheries

The fisheries sector has gone through several years of crisis. The government has tried to respond to this crisis with specific measures. Hence, there is a movement towards a more sustainable Flemish fisheries sector, *inter alia* by means of investments in higher profitability, energy-saving techniques in a broad sense (engine, auxiliary engine, fishing gear, equipment, etc.), alternative, environmentally friendly or more selective fishing techniques, scrapping programmes to balance the catch capacity of the fleet and quota, emphasis on other target species, changes in landing volumes, improvement of the quality of fish products, improved working conditions and safety of the crew and the development of a sustainable aquaculture sector in Flanders (e.g. [VIRA 2012](#)). An overview of the current problems within the fisheries sector that may hinder the further existence of the sector under its current form on medium-term is discussed in [SALV \(2016\)](#).

In order to deal with the profitability problems of the fishing fleet the Flemish authorities drew up an [overall action and restructuring plan \(Fisheries Task Force 2006\)](#), aiming towards sustainable Flemish fisheries by means of structural measures. More specifically, the following restructuring operations were carried out:

- Adapted fleet policy: This plan is part of the European Regulation (EC) No. 744/2008, which provided public aid to vessel owners engaging in partial decommissioning and increased aid for modernisation for a certain period of time (until 31 December 2010 at the latest). In addition, the scrapping of vessels was temporarily supported by government intervention (MD of 2 June 2009, see [7.3.2 Belgian fishing fleet](#)). In addition, the maximum engine power was increased to 1,200 kW, creating more space for the pooling of engine power. A third fleet segment, the 'coastal fleet segment', was also established (see [7.3.2 Belgian fishing fleet](#));
- Adjusted quota policy: The adjusted Flemish quota policy (in force since 1 February 2006) should contribute to an optimal and efficient quota use (more information: [Adriansens 2009](#));
- Supporting policy: Alternative fishing techniques are being explored in order to convert the remaining vessels into a sustainable fleet.

Within the context of the EMFF, every Member State needs to develop an [Operational Programme \(EMFF\) 2014-2020](#) (see also [Department of Agriculture and Fisheries 2016](#)) and a Strategic Environmental Assessment (SEA) of the Operational Programme ([Strategische Milieubeoordeling van het Nationaal Operationeel Plan voor de Belgische Visserijsector 2014-2020](#)) (see RD of 18 May 2008). For the Belgian fisheries sector, a SWOT-analysis and an elaboration of the strategy have been carried out for five of the six priorities of the EMFF:

- Union priority 1: Promoting environmentally sustainable, resource-efficient, innovative, competitive and knowledge-based fisheries;
- Union priority 2: Fostering environmentally sustainable, resource-efficient, innovative, competitive and knowledge-based aquaculture;
- Union priority 3: Fostering the implementation of the CFP;
- Union priority 5: Fostering marketing and processing;
- Union priority 6: Fostering the implementation of the integrated maritime policy.

Union priority 4 (Territorial cohesion) will not be implemented in Belgium as Belgium has no fishing communities or outlying fishing grounds.

In 2012, the Government of Flanders already developed an [Action plan selective fishing \(2012\)](#) in order to react pro-actively on a few topics of the reformed CFP that came into effect in 2014. In this action plan, 10 priorities were proposed which must lead towards more sustainable fisheries. One of the actions points at the importance of the *societal covenant for sustainable fisheries* (2011) that has been developed by the fisheries sector. This covenant has resulted in the report *Vistraject* ([De Snijder et al. 2015](#)), which identifies seven main goals concerning the transition of the sector towards sustainable Flemish fisheries. The three main principles are profitability, environmental care and the social aspect of fisheries. In June 2015, a societal covenant for the implementation of the goals of the *Vistraject*-project was signed. The covenant consists of a task force, a guidance committee and four working groups, i.e. WG Fisheries, WG Policy, WG Innovation and WG Coast.

ILVO conducts research on sustainable fishing techniques. In this context, the design of the beam trawl has been modified to increase selectivity and to reduce seabed disturbance and towing resistance in order to increase fuel efficiency ([Depestele et al. 2007](#), [Stouten et al. 2007](#)). Experimental modifications of the fishing gear have been tested to decrease discards of undersized fish and non-commercial organisms. It is expected that research with regard to a better species and length selection will remain necessary due to the discard ban (e.g. [Depestele et al. 2011](#)). In addition, research is conducted on alternative fishing techniques such as handline fishing, gillnets, flyshooting and shrimp pulse trawls (Hovercran) (e.g. [Van Craeynest 2009](#), [Polet and Van Peteghem 2010](#), [Verhaeghe et al. 2011](#), [Verschuere et al. 2012](#), [Depestele et al. 2012](#) (WAKO-II project BELSPO), [Depestele et al. 2014](#) (WAKO-II project BELSPO), [Soetaert et al. 2015](#)).

Many research projects aim to make fishing more sustainable. One of the most striking projects with practical results is the [VALDUVIS project](#). The [VALDUVIS](#) method uses indicators under the three pillars of sustainability to determine the sustainability score at the level of each individual fish box landed. The [MaViTrans project](#) concerns the first application of the VALDUVIS tool on the market. The project aims to make the Belgian fishing fleet more sustainable by giving a market recognition to vessels that are formally committed to improve their sustainability score within a period of three years (started on 11 June 2018). The [Combituig project](#) aims to reduce the catch of bottleneck species and other bycatches in the beam trawl fishery and to improve their survival by means of innovative technical net developments. The [VALOREVIS project](#) (2014-2015) in turn aimed at identifying the waste streams in the fisheries sector that are on the one hand most interesting to valorise and on the other hand at facilitating and creating new industrial activities and cooperation in Flanders based on valorisation. The [SPEKVIS project](#) (2013-2014) aimed at identifying alternative materials for the polyethylene dolly ropes (loose ropes that protect the bottom trawling nets against wear and tear). The release of plastics into the sea and their fragmentation into so-called microplastics can lead to the uptake of these particles by marine organisms and therefore constitutes an important research topic with a focus on the quality of fish products ([De Witte et al. 2014](#), [Van Cauwenberghe and Janssen 2014](#), [Devriese et al. 2015](#), [Vandermeersch et al. 2015](#), [Devriese et al. 2017](#), [Devriese and Janssen 2017](#)). Subsequently, in the autumn of 2018, the FPS Environment and VLIZ started a test project on the use of lead alternative fishing weights and sinkers in collaboration with the marine recreational fishing community.

The [Geovis](#) project gathers the available information (both scientific and from the fishermen) about Belgian fishing grounds into an online platform, accessible to the sector and the policymakers. The aim is to help both the sector and the policymakers to take the necessary decisions in order to be able to carry out their activities, in a flexible way and with solid background information.

The legislative framework and the sustainability limits (economic, social and ecological) within which the future of Belgian fisheries will have to develop are determined by the CFP, as well as numerous other directives such as the Habitats Directive (HD), the MSFD, the European Framework Directive for Maritime Spatial Planning, etc. Within these frameworks, the actors within the fisheries sector will be decisive for the future of the sector in Flanders. A prospective study has already been carried out by the [SALV \(2017\)](#).

Legislation reference list

Overview of the relevant legislation at the international, European, federal and Flemish level. For the consolidated European legislation we refer to [Eurlax](#), the national legislation can be consulted in the [Belgisch staatsblad](#) and the [Justel-databanken](#).

European legislation		
Title	Year	Number
Commission Decision of 25 February 2016 setting up a Scientific, Technical and Economic Committee for Fisheries (2016/C 74/05)	2016	74/05
Communication from the Commission (COM): A Sustainable Europe for a Better World: A European Union Strategy for Sustainable Development	2001	264
Green Paper (COM): Reform of the Common Fisheries Policy	2009	163
Communication from the Commission (COM): Reform of the Common Fisheries Policy	2011	417
Directive on the conservation of natural habitats and of wild fauna and flora (Habitats Directive)	1992	43
Directive establishing a framework for Community action in the field of marine environmental policy (Marine Strategy Framework Directive)	2008	56
Directive (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017 concerning the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy and repealing Council Regulation (EC) No 199/2008	2017	1004
Council Regulation (EC) No 744/2008 of 24 July 2008 instituting a temporary specific action aiming to promote the restructuring of the European Community fishing fleets affected by the economic crisis	2008	744
Council Regulation (EC) No 1005/2008 of 29 September 2008 establishing a Community system to prevent, deter and eliminate illegal, unreported and unregulated fishing, amending Regulations (EEC) No 2847/93, (EC) No 1936/2001 and (EC) No 601/2004 and repealing Regulations (EC) No 1093/94 and (EC) No 1447/1999 (IUU Regulation)	2008	1005
Council Regulation (EC) No 1224/2009 of 20 November 2009 establishing a Community control system for ensuring compliance with the rules of the common fisheries policy, amending Regulations (EC) No 847/96, (EC) No 2371/2002, (EC) No .../.... Regulation (EC) No 811/2004, (EC) No 768/2005, (EC) No 2115/2005, (EC) No 2166/2005, (EC) No 388/2006, (EC) No 509/2007, (EC) No 676/2007, (EC) No 1098/2007, (EC) No 1300/2008, (EC) No 1342/2008 and repealing Regulations (EEC) No 2847/93, (EC) No 1627/94 and (EC) No 1966/2006 (Control regulation)	2009	1224
Regulation (EU) No 1380/2013 of the European Parliament and of the Council of 11 December 2013 on the common fisheries policy, amending Council Regulations (EC) No 1954/2003 and (EC) No 1224/2009 and repealing Council Regulations (EC) No 2371/2002 and (EC) No 639/2004 and Council Decision 2004/585/EC (Common Fisheries Policy)	2013	1380
Regulation (EU) No 508/2014 of the European Parliament and of the Council of 15 May 2014 on the European Maritime and Fisheries Fund and repealing Regulations (EC) No 2328/2003, (EC) No 861/2006, (EC) No 1198/2006 and (EC) No 791/2007 and Regulation (EU) No 1255/2011 of the European Parliament and of the Council (European Maritime and Fisheries Fund)	2014	508
Commission Implementing Decision (EU) 2016/1251 of 12 July 2016 establishing a multiannual Union programme for the collection, management and use of data in the fisheries and aquaculture sector for the period 2017-2019	2016	1251

Belgian and Flemish legislation		
Abbreviation	Title	File number
Decision of the Government of Flanders of 16 December 2005	Besluit van de Vlaamse regering tot de instelling van een visvergunning en houdende tijdelijke maatregelen voor de uitvoering van de communautaire regeling inzake de instandhouding en de duurzame exploitatie van de visbestanden	2005-12-16/48
Decision of the Government of Flanders of 13 March 2015	Besluit van de Vlaamse regering houdende een verbod op het gebruik van warrelnetten en kieuwnetten in de Vlaamse strandzone ter bescherming van zeezoogdieren	2015-03-13/02
Decision of the Government of Flanders of 5 Februari 2016	Besluit van de Vlaamse regering houdende vaststelling van de werking en het beheer van het Financieringsinstrument voor de Vlaamse visserij- en aquacultuursector (FIVA) en de verrichtingen die voor steun in aanmerking komen	2016-02-05/24
Decision of the Government of Flanders of 9 September 2016	Besluit van de Vlaamse regering tot vaststelling van aanvullende nationale maatregelen voor de instandhouding en het beheer van de visbestanden en voor controle op de visserijactiviteiten	2016-09-09/03

Decision of the Government of Flanders of 15 December 2017	Besluit van de Vlaamse regering houdende de vaststelling van de verplichte bijdrage van de reders van Belgische vissersvaartuigen voor het jaar 2018 aan het Fonds voor Scheepjongeren	2017-12-15/28
Decree of 13 May 1997	Decreet houdende oprichting van een Financieringsinstrument voor de Vlaamse visserij- en aquacultuursector	1997-05-13/31
Decree of 28 June 2013	Decreet betreffende het landbouw- en visserijbeleid	2013-06-28/15
RD of 21 December 2001	Koninklijk besluit betreffende de soortenbescherming in de zeegebieden onder de rechtsbevoegdheid van België	2001-12-21/72
RD of 18 May 2008	Koninklijk besluit tot vaststelling van het feit dat een beoordeling van de gevolgen op het milieu vereist is voor het nationaal operationeel programma voor de visserijsector en dat een beoordeling van de gevolgen op het milieu niet vereist is voor het nationaal strategisch plan voor de visserijsector	2008-05-18/32
RD of 23 June 2010	Koninklijk besluit betreffende de mariene strategie voor de Belgische zeegebieden	2010-06-23/05
RD of 20 March 2014	Koninklijk besluit tot vaststelling van het marien ruimtelijk plan	2014-03-20/03
MD of 2 June 2009	Ministerieel besluit tot toekenning van een beëindigingspremie voor de definitieve onttrekking van vissersvaartuigen aan de zeevisserijactiviteit in het kader van een vlootaanpassingsregeling	2009-06-02/01
MD of 16 March 2012	Ministerieel besluit tot uitvoering van het besluit van de Vlaamse regering van 16 december 2005 tot de instelling van een visvergunning en houdende tijdelijke maatregelen voor de uitvoering van de communautaire regeling inzake de instandhouding en de duurzame exploitatie van de visbestanden, wat betreft het kustvisserssegment en de opdeling van bestaande visvergunningen	2012-03-16/10
MD of 19 May 2016	Ministerieel besluit tot uitvoering van het besluit van de Vlaamse regering van 5 februari 2016 houdende vaststelling van de werking en het beheer van het FIVA en de verrichtingen die voor steun in aanmerking komen	2016-05-19/06
MD of 4 October 2016	Ministerieel besluit betreffende individuele maatregelen ter bescherming van het cultureel erfgoed onder water	2016-10-04/03
MD of 14 December 2017	Ministerieel besluit houdende tijdelijke aanvullende maatregelen voor het jaar 2018 tot het behoud van de visbestanden in zee	2017-12-14/04
Law of 19 August 1891	Wet betreffende de zeevisserij in de territoriale zee	1891-08-19/30
Law of 10 October 1978	Wet houdende vaststelling van een Belgische visserijzone	1978-10-10/30
Law of 22 April 1999	Wet betreffende de exclusieve zone van België in de Noordzee.	1999-04-22/47

