

Ministry of the Flemish Community



ILVO - Fisheries (Oostende, Belgium)

Sea Fisheries Service (Oostende, Belgium)

ILVO- Social Sciences Unit (Merelbeke, Belgium)

BMM-MUMM- Research Institute (Brussels, Belgium)

Agency for Nature and Forests (Brussels, Belgium)

Research Institute for Nature and Forest (Hoeilaart-Groenendaal, Belgium)

National Data Gathering Programme
under EC Regulation 199/2008

Belgium

2011 - 2013 - Programme proposal

Oostende – March – April 2010

- NDGP - Belgium –2011-2013 - Program proposal - page 1

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[List of acronyms and abbreviations](#).....

APPENDIX 1

Description of partners

APPENDIX 2

Bilateral Agreement between the UK (Cefas) and Belgium (ILVO)

Bilateral Agreement between Denmark (DTU-Aqua) and Belgium (ILVO)

APPENDIX 3

Pre-eliminary description of the Belgian Recreational Fisheries

APPENDIX 4:

Enquete reeatieve visserij

APPENDIX 5

Questionnaire Processing Industry

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Table FinForms Part 1

Provided in separate documents:

Belgium_NP-Proposal_2011-2013_Tables_31-March-2010

Belgium_ indicative cost NP_2011-2013__31-March-2010 (Commission only)

I. General framework

The present document contains the Belgian National Programme proposal for the years 2011-2013, in fulfilment of the requirements of the Council Regulation (EC) No. 199/2008.

❖ Structure of the proposal

The National Programme Proposal 2011-2013 (NP 2011-2013), is structured following the DCF_guidelines and contains the Text called Belgium_NP-Proposal_2011-2013_Text_31-March-2010 and Standard Tables, called Belgium_NP-Proposal_2011-2013_Tables_31-March-2010 in separate documents. Annexes, which are referred to, are added to the Text.

The Budget Proposal are the Financial Forms provided the Commission and are delivered in a separate document.

❖ Description of the transmission to the new DCF

As the requirements for the new DCF are extended towards the fields of f.i. aquaculture, eel etc., the partnership has been extended with the two institutes, being:

- The *ILVO-Social Science Unit* for data concerning the Fish processing industry and aquaculture; and
- the *Research Institute for Nature and Forest* dealing with the Eel related topics.

For the new Partners within the NDGP, a brief description of their fields of expertise and their contributions to the NDGP are provided in Annex 1

The implications by the new DCF are that drastic that no overall and short description can be given. .

II. ORGANISATION OF THE NATIONAL PROGRAMME

II.A National organisation and co-ordination

In Belgium, the Ministry of Agriculture and Fisheries, Department Fisheries, is the administrative authority responsible for fisheries and fisheries issues.

The work regarding the Belgium National Data Gathering program is carried out by the following partners:

Ministry of the Flemish Community - Policy Domain Agriculture & Fisheries

Dienst Zeevisserij - Sea Fisheries Departement

Administratief Centrum

Vrijhavenstraat 5, B-8400 Oostende, Belgium

Contact: Eddy Tessens

Phone: + 32 (0)59 43.19.20

Fax: + 32 (0)59 80.76.93

URL: www2.vlaanderen.be/ned/sites/landbouw/visserij/index.html

Instituut voor Landbouw en Visserij Onderzoek (ILVO) - Institute for Agriculture and Fisheries Research

ILVO-Fisheries

Ankerstraat 1, B-8400 Oostende, Belgium

Contact: Els Torreele

Phone: + 32 (0)59 34 22 50

Fax: + 32 (0)59 33 06 29

URL: www.ilvo.vlaanderen.be/Animal/Fisheries.htm

Instituut voor Landbouw en Visserij Onderzoek (ILVO) - Institute for Agriculture and Fisheries Research

ILVO-Social Science Unit

Burg. van Gansberghelaan 115 box 2, 9820 Merelbeke, Belgium

Contact:LudwigLauwers

Phone: +32 (0)9 272 23 40,

Fax: +32 (0)9 272 23 41

URL:www.ilvo.vlaanderen.be/Social_sciences/

Federal Research Institute - Management Unit of the North Sea Mathematical Models and the Scheldt Estuary.

Since January 2008 onwards, the Management Unit of the North Sea Mathematical Models and the Scheldt Estuary (acronym MUMM) joins the Belgian National Data Gathering Programme (NDGP). MUMM is a federal research institute with extensive responsibilities in the fields of marine modelling, monitoring and management. MUMM also runs the 'Belgica', the research vessel that is used in the North Sea Beam Trawl Survey. It is in this capacity that MUMM is joining the NDGP. MUMM's contact details are:

BMM-MUMM

Gulledelle 100, B-1200 Brussel (St Lambrechts-Woluwe)

Contact: Dr. Georges Pichot

Phone: + 32 (0)2 773 21 22

Fax: + 32 (0)2 770 69 72

URL: www.mumm.ac.be/EN/index.php

The collection of information on fishing capacity, fishing effort, economics and landing statistics is done by the Sea Fisheries Department (DVZ) while the biological data are gathered by the Institute of Agriculture and Fisheries (ILVO) – Research group Fisheries biology (ILVO-FB).

Belgium has assigned Kris Cooreman, Scientific Director of ILVO-Fisheries as the National Correspondent for Belgium.

Kris Cooreman

Scientific Director

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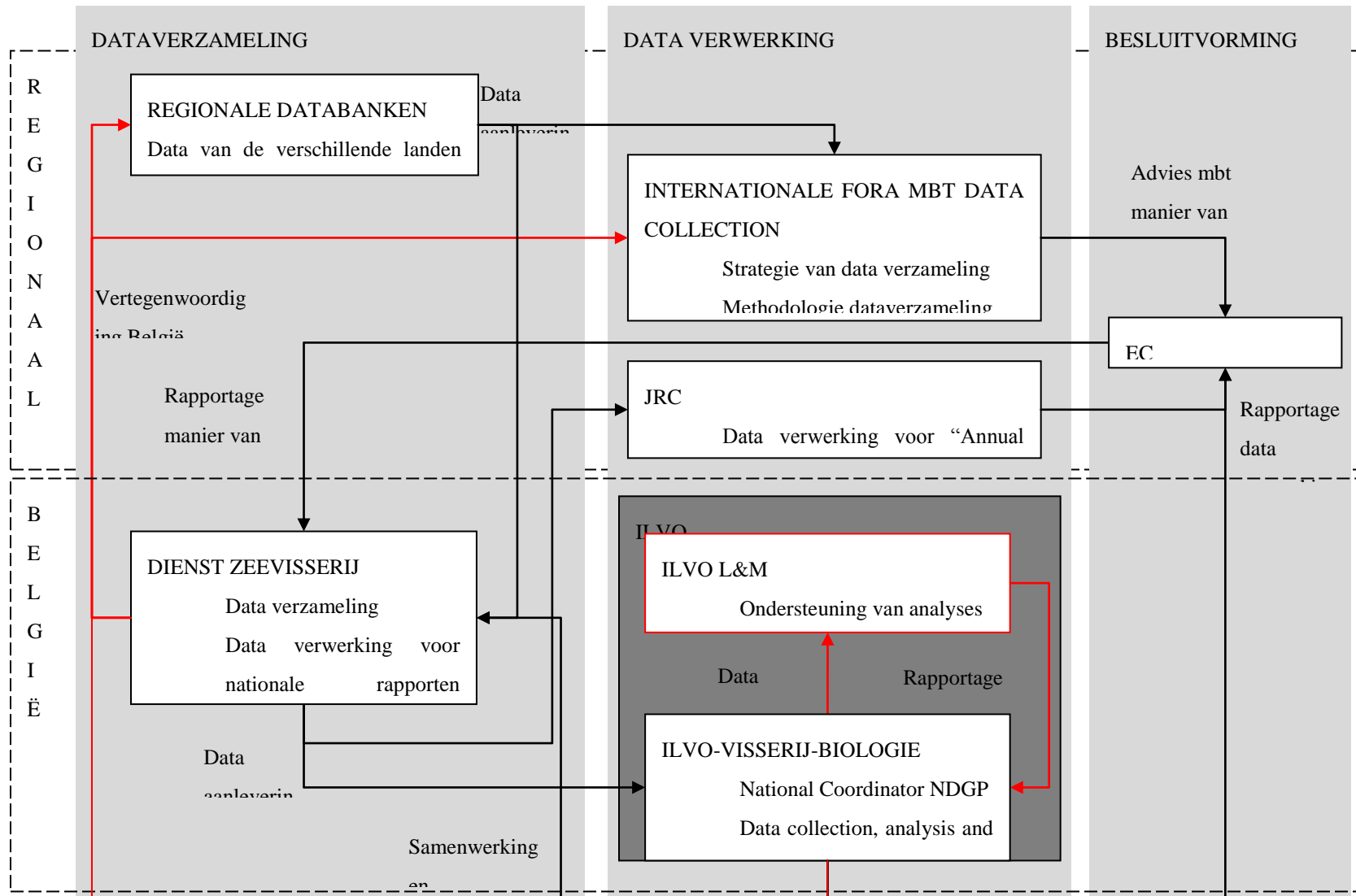
E-mail: kris.cooreman@ilvo.vlaanderen.be

All national coordination is coordinated by ILVO-Fisheries in Ostend. However, since all parts of the program fall within the responsibility of the Ministry of Agriculture and Fisheries, the national coordination is quite straightforward and participating institutes and units are frequently connected through electronic communication techniques. For issues needing more thorough discussions, meetings are arranged and there is also a yearly presentations of the programme and the results to the responsible authority, Ministry of Agriculture and Fisheries.

More specifically the meetings are:

Two official co-ordination meetings, one prior to the NP and one prior to the TR; and

Informal contacts between the section heads of the participating institutes, one after the final completion of the NP (including modifications after RCMs, expert evaluations and Communications with the EC) and one after the final completion of the TR (like NP). Furthermore quarterly contacts will be maintained to ensure that the targets defined are being met.



II.B International co-ordination

Table II.B.1 illustrates the Belgium participation in international meetings and workshops. These tables are by no means complete and will be updated as the list of eligible meetings will be published by the Commission (aprox 15th December)

International co-ordination and co-operation will be achieved at different levels:

Through direct contacts with colleagues from other institutes (particularly around the North Sea, the Irish Sea and the Celtic Sea), who are responsible for sea surveys, stock sampling programmes and biological updates that are also part of the Belgian NDGP.

Through the activities of the Regional Co-ordination Meetings for the North Sea and East Arctic (RCM-NS&EA) and the North-East Atlantic (RCM-NEA).

Through the activities of ICES Working, Study and Planning Groups on data gathering and sea surveys, such as the Working Group on Beam Trawl Surveys (WGBEAM), the Planning Group on Commercial Catch, Discards and Biological Sampling (PGCCDBS), and the Workshops organised by PGCCDBS.

Through the activities of other ICES Working and Study Groups, in as much as these activities cover issues that are directly related to data gathering, biological sampling or sea surveys. Following the Commission's guidelines on the eligibility of costs for meetings however, the costs for attending these Working and Study Groups are not included in the budget proposal.

Through the activities of the STECF Sub-Groups on data gathering, precision levels, databases, etc., such as the Sub-Group on Research Needs (SGRN), and the workshops organised under the umbrella of the Commission, STECF or JRC.

II.C. Regional co-ordination

Belgium will attend the relevant RCM being NS&EA and NEA. The National correspondent participates in the RCM NS&EA.

For Belgium, over the past years, the RCMs have resulted, next to the more general decisions, in:

Bilateral agreements with the UK and The Netherlands for sampling of their foreign flag vessels,

Bilateral agreements with Danmark for sampling and reading turbot and brill due to common interests in the fisheries in Skagerrak, the North Sea and the Baltic.

Co-ordination of age sampling of *Solea solea* in VIId, started in 2007 and executed in NDGP 2008 and onwards, between Belgium, UK and France.

Co-ordination of age sampling of *Solea solea* in VIIa, started in 2008 to be executed in NDGP 2009 and onwards, between Belgium, UK and Ireland.

Co-ordination of beam trawlers in IV, started in 2008, between Belgium, UK and The Netherlands.

Co-ordination towards the use of the regional database for the North Sea.

With the former and the new DCF, Belgium has stated and has been approved to resolve several issues under the umbrella of the RCMs. These action plans are listed below but will be discussed in detail in the relevant sections of the NP.

Crangon fishery

Concerning the Crangon fishery, it will be necessary that MS involved in the Crangon fishery in the North Sea (BE, DK, GE, ND and UK) elaborate together a data collection framework based on previous studies. This can be undertaken in the framework of the RCM North Sea and East Artic.

Rajidae

The Belgian sampling strategy when sampling Rajidae for maturity has always been approved and appreciated. The strategy is also a reflection of what is feasible within Belgium, being sampling on surveys. In light of the increased international co-operation, improving the sampling for maturity of Rajidae should indeed be elaborated at the regional level rather than changing the national strategy on its one. This comment should be reflected in the TORs of the upcoming RCM NEA.

III. Module of Evaluation of the fishing sector

III.1 General description of the fisheries

This section contains a brief description of the Belgian sea fisheries and its most important features. The intention of this summary is not to be comprehensive, but to provide the (external) evaluators with the essential elements that might help them in their appreciation and assessment of the Belgian programme proposal. A synoptic overview of the Belgian sea fisheries by area is given in Table 1.1.

❖ Fleet size and fleet segments

At the 1st of January 2009, the Belgian sea-going fishing fleet comprised 100 registered units with a total of 19007 GT and 60620 kW.(see text table below). The average age of the Belgian vessels is 22,5 yrs. At the end of the reference year 2008 there were NO inactive vessels.

Table 1.1: Overview Belgian sea fisheries fleet

Composition of the Belgian sea-going fishing fleet on January 1st, 2008			
Fleet segment	Mid class & large	Small	Total
kW	>221	<=221	20120
2008	52	43	100

Broadly speaking, the Belgian sea-going fishing fleet can be sub-divided into the following fleet segments:

Small Fleet Segment

Part of these primarily target flatfish, mostly in the southern North Sea and the eastern English Channel. Others shift between flatfish, brown shrimp (*Crangon crangon*) (in the coastal waters) and Norway lobster (*Nephrops norvegicus*), depending on catch opportunities and market *prices*.

- Coastal fleet segments:
Vessels with a maximum power of 221 kW (300 HP), which are usually less than 24 hours per trip at sea. In 2008 there were 23 coastal vessels,
- Eurokotters
Vessels built since 1981, equipped with outriggers and specifically designed to fish within the 12-mile fishing zones. The current criteria are a max. of 221 kW (300 hp) and maximum AOL of 24m length, This group included. 20 vessels in 2008 belonged to this group.

Large Fleet Segment

-

This includes all vessels with a capacity of more than 221 kW. End of 2008 were 52 vessels to this group, These vessels are mostly flatfish directed (particularly towards plaice and sole, together with the associated by-catch species such as turbot, brill, dab, lemon sole, anglerfish and some roundfish), and usually operate in the central and southern North Sea (ICES Sub-areas IVb and IVc), the English Channel (VIId and VIIe), the Irish Sea (VIIa), the Celtic Sea (VIIfg) and the inner part of the Bay of Biscay (VIIIab).

This group can be subdivided in:

- Beam Trawlers
They have a capacity of ≥ 662 kW, 46 vessels in 2008 belonged to this category, This is the most active part of the Belgian fleet.

- Other GVS (Large Fleet Segment, > 221 kW)
Vessels equipped with outriggers and passive gears with a capacity between 221kW and 662kW, 6 vessels in 2008 belonged to this category.

Table 1.2 Overview of the Belgian sea fisheries fleet according to App.III of Decision(949/2008)Situation on 1/1/2009 ; at the end of the reference year 2008 there were NO inactive vessels.

		Length classes (LOA)			
active vessels		10-12m	12-18m	18-24m	24-40m
active gears	beam trawlers	0	5	27	50
	demersal trawlers	01	0	1	4
passive gears	drift and/or fixed netters	0	2	1	0

In the course of 2006 and 2007, 2008, and as well in 2009, there have been several, major structural changes in the Belgian fishing fleet, all of which were driven by the worsening economic situation of the fishing sector. High fuel prices on the one hand, and tightening quota on the other, pushed many ship owners to the verge of bankruptcy. The gravity of the situation inspired the Flemish Government (who is responsible over fisheries management in Belgium) to organise a major decommissioning round, aiming at the removal of around 10 % of the fleet's overall capacity in terms of engine power and gross tonnage, without however losing any of their quota opportunities ⁽¹⁾. The undertaking was very successful and resulted in the decommissioning of three smaller and six larger vessels, equivalent to ≈ 2200 GRT on a total of ≈ 22600 . A second decommissioning scheme was organised during the second half of 2009 and the larger vessels can still subscribe to this until June 2010 (see EC 744/2008). The objectives of the Flemish government is to achieve a decrease of total kW from 60 620 in 2007, to 50 000 kW by the end of 2010 and reach 47 000 kW by the end of 2015. In GT, the

⁽¹⁾ As a result, total landings by the Belgian fishing fleet are not expected to decrease at the same pace as the overall decrease in fishing capacity.

objective is to achieve a decrease from 19 292 in 2007, towards 17 500 for 2010 and up to 15 000GT by the end of 2015.

The economic situation also forced fishermen to look for less energy consuming fishing techniques, and several of the beam trawlers are now using outrigger gear (one or more otter trawls that are fished from the outrigger booms) and other energy saving devices during at least part of the year.

Apart from the registered vessels, there is a relatively small number (allegedly < 50) of *non-registered recreational fishing boats*. Most of these target brown shrimp in the shallow near-shore waters, close to their homeports. Recreational fishing for brown shrimp is strongly weather dependent and is usually restricted to the summer months.

❖ **Areas fished**

Landings by the Belgian sea-going fishing fleet are primarily from the North Sea (33 % of the total landings in 2007) and the English Channel (37 %), the Celtic Sea (18 %), the Irish Sea (7 %) and the Bay of Biscay (3 %). Landings from other areas (South of Ireland, West of Scotland, etc.) are small to negligible (see table on page 11).

❖ **Species landed**

Belgium has no industrial and no pelagic fisheries. All fish and shellfish landed by Belgian vessels are for human consumption. The consequence being, that the quantities landed are relatively small being 20 012 ton in 2008 compared to the size of the fleet, which is a historic low total of landings for the Belgian fisheries sector. The average price for landed fish decreased in 2008 from 4.19 euro/kg to 3.85 euro/kg (-8%), which is a threat in the present economic situation of increasing costs and inflation.

In 2008, the top 10 of the most important species landed (by weight) consisted of plaice (25 % of the total landings), sole (17 %), rays (8 %), sepia (11 %), cod (5 %), lemonsole, shrimp, St Jacobs scallops, gurnard and bib.

❖ **Landing and auctioning practices**

Fish and shellfish landed into Belgium are landed fresh and chilled (kept on ice but not frozen). At sea, fish and shellfish are commonly sorted by species or species groupings (e.g. cod, haddock, whiting, sole, plaice, rays, small sharks, *Nephrops*, mixed other flatfish and mixed other roundfish), but not by size. Size grading is done in the auction, either by hand or by automated grading machines.

If the quantities are sufficiently large, then individual species are auctioned separately (and for most species also by market category). Marginal by-catches of whatever species are often auctioned as 'mixed assortments'. Mixed sales are also the rule for most species of ray, for megrim, anglerfish, squid and octopus, and, depending on the quantities landed, for gurnard

Landings by Belgian vessels in foreign harbours

Roughly 10% of all fish and shellfish taken by Belgian vessels in the southern and central North Sea are auctioned in foreign harbours, mostly in the Netherlands.

Vessels fishing in the northern North Sea, the Irish Sea, the Celtic Sea or the Bay of Biscay often make several consecutive fishing trips in the same or in neighbouring areas before returning to their homeport. Between voyages, these vessels make stop-overs in the UK or France, where they transfer their landings to refrigerated lorries for transportation to and first sale in a Belgian auction. On these occasions, the vessels may sell part of their catches abroad (depending on quantities landed and market situation).

Belgian landings by species and area in 2008 - All landing ports combined
Figures in t landed weight, rounded to the nearest 5 t

Species or species group	ICES Sub-area or Division							Total
	IV	VIIa	VIIde	VIIfg	VIIhjk	VIIIab	other	
<i>Anarhichas lupus</i>	65	--	--	--	--	--	<5	65
<i>Aspitrigla cuculus</i>	5	5	250	30	--	<5	--	290
<i>Buccinum undatum</i>	45	<5	40	5	--	--	--	90
<i>Cancer pagurus</i>	40	5	30	25	--	<5	--	100
<i>Clupea harengus</i>	<5	--	--	--	--	--	--	0
<i>Conger conger</i>	<5	10	45	25	--	<5	--	80
<i>Crangon crangon</i>	255	--	--	--	--	--	--	255
<i>Dicentrarchus labrax</i>	20	<5	25	15	--	--	--	60
<i>Eutrigla gurnardus</i>	10	--	--	<5	--	<5	--	10
<i>Gadus morhua</i>	810	65	85	100	<5	--	45	1105
<i>Hippoglossus hippoglossus</i>	<5	--	--	--	--	--	--	0
<i>Homarus gammarus</i>	<5	--	<5	--	--	--	--	0
<i>Lepidorhombus whiffiagonis</i>	--	<5	<5	190	<5	<5	--	190
<i>Limanda limanda</i>	235	5	135	30	--	--	10	415
<i>Loligo spp.</i>	20	<5	105	10	--	<5	<5	135
<i>Lophius spp.</i>	145	75	285	670	<5	130	10	1315
<i>Melanogrammus aeglefinus</i>	145	30	<5	115	--	--	10	300
<i>Merlangius merlangus</i>	35	<5	75	120	--	<5	--	230
<i>Merluccius merluccius</i>	45	<5	<5	10	--	<5	5	60
<i>Microstomus kitt</i>	375	10	75	250	--	--	30	740
<i>Molva molva</i>	25	<5	15	25	--	--	<5	65
<i>Mullus surmeletus</i>	<5	--	40	15	--	<5	--	55
<i>Mustelus spp.</i>	<5	<5	<5	<5	--	--	--	0
<i>Nephrops norvegicus</i>	75	<5	--	5	--	<5	--	80
<i>Octopus vulgaris</i>	<5	--	5	25	<5	15	--	45
<i>Pecten maximus</i>	10	5	470	120	--	--	--	605
<i>Platichthys flesus</i>	145	10	30	<5	--	--	--	185
<i>Pleuronectes platessa</i>	2840	195	1405	195	5	<5	125	4765
<i>Pollachius pollachius</i>	15	5	45	35	--	--	<5	100
<i>Pollachius virens</i>	15	--	--	<5	--	--	--	15
<i>Psetta maxima</i>	115	30	115	70	--	<5	<5	330
<i>Rajidae</i>	250	650	175	725	<5	10	<5	1810
<i>Scomber scombrus</i>	<5	--	--	--	--	--	--	0
<i>Scophthalmus rhombus</i>	85	30	195	65	--	<5	<5	375
<i>Scyliorhinus canicula</i>	100	65	185	110	--	15	--	475
<i>Sebastes marinus</i>	--	--	--	--	--	--	--	0
<i>Sepia officinalis</i>	35	--	1335	10	<5	15	--	1395
<i>Solea solea</i>	775	305	1495	565	25	345	--	3510
<i>Sprattus sprattus</i>	--	--	--	--	--	--	--	0
<i>Squalus acanthias</i>	<5	<5	--	5	--	--	--	5
<i>Trachurus trachurus</i>	<5	--	--	--	--	--	--	0
<i>Trigla lucerna</i>	65	20	540	35	--	5	--	665
<i>Trisopterus luscus</i>	25	<5	465	50	--	10	--	550
Other bivalves	--	--	--	--	--	--	--	0
Other crustaceans	--	--	--	<5	<5	--	--	0

Other demersal	25	--	15	180	90	--	15	325
Other pelagic	--	--	--	--	--	--	--	0
Total	6850	1520	7680	3830	120	545	250	20795
% of Total	33	7	37	18	1	3	1	100

III.B Economic variables

❖ Baltic Sea, North Sea and Eastern Arctic and North Atlantic

III.B.1 Data acquisition

The DCF requires that detailed economic information is collected from a representative sample of the fleet as registered in the official vessel register. This is the case for the data acquisition for the Belgian fishing sector.

From the 1st of September 2010 onwards, a new Decision is agreed by the Flemish Government, regarding the obligation to supply economic data, and is used on a strict national level to introduce national legislation to impose the obligation to provide the data requested under Appendix VI of the DCF.

Because of this new legislation, the target and the frame population will be the same. The coverage of the population is 100% but as 2010 is still ongoing, the number for the target and the frame population, will only be known by the end of 2011 or beginning of 2011.

Until 2010, Belgium had neither the resources neither the economic/socio-economic expert available in order to set up a full and more in depth examination of the economic Module of the DCF. However, the methods used have always been in accordance with the DCF Appendix VI.

From 2011 onwards Belgium is setting up an “economic/socio-economic cell” in corporation with the ILVO Social Sciences Unit and the Sea Fisheries Department, hosted at the ILVO Fisheries Department.

The objectives and tasks of this “economic/socio-economic cell” is to:

- Ensure the quality of the data
- to provide better information on estimation techniques of economic and transversal variables,
- to align the type of data collection scheme and variability indicators with DCF provisions for the economic analysis of aquaculture sector.
- properly describe the Belgian aquaculture sector. In particular, the revision of table VA.2 according to DCF provisions which take prejudice over STECF SGECA 06-01 conclusions.
- clarification on the definition of financial cost in the aquaculture sector. In particular, the clarification how the number of hours is collected and how the FTE (national) is calculated.
- to provide a methodology how to calculate imputed value of unpaid labor.
- to collect also economic data from enterprises belonging to NACE group 10.2.

(a) Definition of Variables

The economic variables recorded are as described by the DCF.

Parameters that will be recorded include:

- **Fuel consumption:** Data will be collected through partial sampling of the fleet, by means of financial questionnaires that are filled out by the ship owners on a voluntary basis and returned to the Sea Fisheries Service for analysis. Average fuel consumption per vessel will be calculated for all fleet segments defined under the DCF Regulation.
- **Fishing effort by technique:** Effort data expressed in hours fishing, kW and GT, are collected by fishing voyage, as part of the routine effort, landings and revenue data collection system (for details, see III.F.1 and II.F.2)
- **Specific fishing effort** is derived from the voyage-wise landings and effort data. The threshold levels, as defined in new the DCF Regulation, are calculated from the relative proportions (by weight) of the key species in the total landings of all individual fishing trips. Species-specific effort is readily available for all species relevant for the Belgian landings. If required, the existing database of landings and effort data allows for the retrieval of specific fishing efforts for other species as well.

The data are stored in a database, and can be retrieved according to any level.

(b) Type of data collection

There are two sampling strategies for the data being:

1. Pseudo-random through questionnaires, where the information is present for XX % of the population. Fleet coverage varies only slightly from year to year. As the questionnaires, which are sent to all within the population, are returned on a voluntary basis, the strategy is described as Pseudo-random as there is no absolute certainty that it is fully random.
2. Exhaustive which means that the information is present for all within the population.

(c) Target and frame population

The NDGP will cover all Belgian vessels in the EU Fleet Register, the population of which is fully known and well documented. Fleet segments that will be distinguished are:

Type of fishing technique	Vessel LOA
Beam trawlers	12-24 m
	24-40 m
Demersal trawlers (a)	12-40 m
Static gear (b)	12-24 m
(a) There are less than 10 vessels for the two LOA segments (12-24 and 24-40 m) combined	

(b) There are less than 10 vessels in this fleet segment

With respect to this, it is worth emphasising that Belgium has no registered fishing vessels of smaller than 10 m LOA .

Parameters recorded will include: gross and net tonnage, maximum continuous power (kW) of the main engine, and vessel age based on the hull (years). Fleet segmentation will be as required by Appendix III of the DCF.

(d) Data sources

The following data sources are used:

1. Fishstats Database DVZ: this is the official database of the Department of Sea Fisheries containing information based on the sales notes and logbooks.
2. Company account: official data based on the actual accountancy (and bookkeeping) of the vessels. Data are delivered through an accredited accountancy office (i.e. Accountancy office Morbee & Ballegeer).
3. Social Security of the Belgian fishery sector: the Belgian fishery sector has a unique system of social security where all data regarding the social costs are available. The data are delivered via the accredited accountancy office of Morbee & Ballegeer directly to the Department of Fisheries.
4. Vessel Register: this the official Belgian vessel register, containing all data regarding vessel characteristics

(e) Sampling stratification and allocation scheme

Economic data by group of vessels are collected through questionnaires that are filled in by the ship owners on a voluntary basis (see Table III.B.1 for details on fleet segments covered and numbers of vessels involved), and then returned to the Sea Fisheries Service. In the past, fleet coverage has varied slightly from year to year, depending on the number of questionnaires returned.

In 2009 the response rates were as follows:

- 24 out of 43 beamers of 12-24m (56%)
- 35 out of 51 beamers of 24-40m (69%)
- Two responses from demersal trawlers or fixed gears.

As the response from the group of vessels is rather high, simple aggregation should do. As such, there will be no need for more complicated estimations.

III.B.2 Estimation

- **Value of landings:** data collected are based on sales information obtained directly from fish auctions.
- **Fuel consumption:** Data will be collected through partial sampling of the fleet, by means of financial questionnaires that are filled out by the ship owners on a voluntary basis and returned to the Sea Fisheries Service for analysis. Average fuel consumption per vessel will be calculated for all fleet segments defined under the DCF Regulation.
- **Fishing effort by technique:** Effort data expressed in hours fishing, kW and GT, are collected by fishing voyage, as part of the routine effort, landings and revenue data collection system (for details, see section III.F.1 and II.F.2)
- **Specific fishing effort** is derived from the voyage-wise landings and effort data. The threshold levels, as defined in new the DCF Regulation, are calculated from the relative proportions (by weight) of the key species in the total landings of all individual fishing trips. Species-specific effort is readily available for all species relevant for the Belgian landings. If required, the existing database of landings and effort data allows for the retrieval of specific fishing efforts for other species as well.
- Imputed value of unpaid labor is calculated on a trip by trip basis. For each trip the owner joins the vessel, the same share as a crew member is allocated to this person. Whether the owner has joined the trip is deduced from the total share of paid wages in the net income (gross value of landing – landing costs and fuel costs). When the share is lower than normal it means that the owner has also joined the trip.
- Leasing of equipment is uncommon in the Belgian fishing fleet. Over the last years no equipment was leased. Therefore, the invested capital of leased equipment is not applicable to this fleet.
- Annual depreciation is calculated as the total of the depreciation of the hull, engine and other assets and the investments collected as described under investments. The engine and the hull of the vessel are written down exponentially, whereas all other assets are written down linearly. This methodology is consistent with the PIM.
- Investments are valued, based on the actual purchase price whenever possible. In case this is not possible insurance value is used as a proxy of the replacement value, or the value of the investment is estimated based on the technical characteristics and standards costs per unit of capacity. This methodology is consistent with the PIM.

- The debt-asset ratio is calculated based on information from the balance sheet on debts and the estimated capital value.
- The number of full time employees is estimated per vessel based detailed information on the time on board of each individual crewmember. Per crew member the total number of hours at sea is registered. Using a constant this amount is corrected for the hours rest on board and the amount of labour on shore. The constants will be fleet specific. The resulting hours worked will be used to estimate total FTE.
- All other costs items are calculated directly from the financial accounts.

Technical information on vessel size, engine power etc. is retrieved from the official Belgian vessel register.

Value of landings: data collected are based on sales information obtained directly from fish auctions. Information on catches and effort are retrieved from the official landings database. For the vessel in the panel, this information is cross-checked against available accounting information and information from the fish auction databases

III.B.3 Data quality evaluation

All data required by the DCF are available from the official vessel register. The precision of these data is assumed to be 100 %.

From 2010 onwards a new Decision agreed by the Flemish Government, regarding the obligation to supply economic data, will be used on a strict national level to (try to) introduce national legislation to impose the obligation to provide the data requested under Appendix VI. Although this involves mainly a political decision and it is difficult to predict the outcome nor the timing, the Flemish Government has recently approved this Decision. During the coming months, the administrative procedure to implement the Decision will be handled .

In meantime however, Belgium will collect all parameters according to Appendix VI of the Decision 949/2008. As data are collected within each population, there is no clustering of fleet segments done before data gathering (exhaustive or 100%). (see Table II.B.2 and Table III.B.3)

From the 1st of September 2010 onwards, a new Decision is agreed by the Flemish Government, regarding the obligation to supply economic data, and is used on a strict national level to introduce national legislation to impose the obligation to provide the data requested under Appendix VI of the DCF. If a non-response is received, legal action can be taken by the government as the supply of a response has become obligatory.

Because of this new legislation, the response rate will be 100%.

The data collection scheme for the years 2012 and 2013 will be accordingly to the data collection scheme of 2011.

All footnotes where relevant are explained and where not relevant, removed accordingly.

III.B.4 Data presentation

The economic data that are being collected by Belgium are described as in Appendix VI of the DCF. The year to which the data refer is always year-1, being here 2009-2010-2011. The final data should be available in the year n+1, from the months September/October onwards.

III.B.5 Regional coordination

The regional coordination and cooperation between Member States within the same marine region have been developed during former period of DCF and is now fully integrated in the general framework (Art. 5, EC 199/2008). As part of this objective, the Regional Co-ordination Meetings (RCM's) are established to improve the overall quality of the data collected in support of the CFP. Belgium participates in the following Regional Co-ordination Meetings:

- North Sea & East Arctic
- North Atlantic

As agreed by the RCM's, the following bilateral agreements are added (see Appendix 2)

1. With the UK :

The UK and Belgium have agreed that samples of fish landed by Belgian vessels into the UK and transported for first sale into Belgium will be sampled upon arrival in the Belgian auctions by ILVO - Fisheries as part of the Belgian National Programme under the requirements of the EC Data Collection Framework (199/2008). The eventual additional sampling costs will be covered within the Belgian National Sampling Programme from 2011- 2013. This agreement builds on the practice which has been already adopted and carried out since 2004.

In addition Belgium has agreed to provide age determination for all turbot (*Psetta maxima*) and brill (*Scophthalmus rhombus*) otoliths collected by the UK as part of the UK National Programme. In return the UK (Cefas) will undertake the age determination of VIIa cod (*Gadus morhua*) otoliths collected as part of the Belgian National Programme.

2. *With Denmark:*

In accordance with the Data Collection Regulation (DCR) (Commission Regulation 199/2008, Commission Regulation 665/2008 and Commission Decision (2008/949/EC)) Denmark and Belgium have agreed entering co-operation on collection of fisheries data. This agreement has been established due to common interests in the fisheries in the Skagerrak (Division IIIa North), the North Sea (Division II) and the Baltic for brill and turbot.

It has been agreed that Belgium will conduct the age reading of all brill and turbot sampled by Denmark in the Skagerrak and North Sea from the IBTS survey and the commercial harbour and at sea sampling. In return Denmark will sample genetic samples from 50-70 individuals of brill and turbot from the IBTS survey and commercial sampling.

III.B.4 Derogations and non-conformities

None

III.C BIOLOGICAL-METIER RELATED VARIABLES

❖ Baltic Sea, North Sea and Eastern Arctic and North Atlantic

III.C.1 Data acquisition,

All primary data that are collected under the Belgium NP are stored in different databases being: vessel register (fishing capacity), logbook(fishing ground and effort), sales notes (quantities landed and value), biological database (all biological data on landings and discards and biological parameters).

(a) Codification and naming convention

All codes and naming of the Belgium metiers is done as agreed by the different RCM's. The Belgian metiers are all identified at level six, as is described in the EC Decision 2008/949/EC. In defining the metiers for the Belgian fisheries sector, the official sales notes and logbooks are used (these data are stored in a database of the Fisheries Service Department and are on a tri-monthly sent through in the correct format to be uploaded in the Belgian national database (Belsamp)).

Overall, the gear type and mesh size are known per trip. However, the information on selection devices is seldom available, resulting in the code '0' in the coding of the metier.

(b) Selection of metier to sample

Belgium used its national database to provide the percentages of total landing, effort and value for all its metiers based on the years 2007-2008. Weights and sales values of the landings and the associated effort are routinely collected from both logbook data and sales notes. The data cover all landings by Belgian vessels in both Belgian and foreign harbours, and are exhaustive (100%). To provide an entire view of the Belgian fishing activities, the complete list of metiers is provided in the Table II.C.1.

All metiers that are comprised by the three different 90 % cut-off level are to be found in the Table III.C.2.

Because the Belgian vessels operate in different areas, stocks and also different regions during the same fishing trip, merging of the metiers is logical and essential, see Table III.C.2. When taken into account the practical and necessary merging of the metiers, defined at the lowest scale, the final metiers for the different region , are discussed below. These metiers are listed in Table III.C.3.

❖ North Sea and Eastern Arctic region:

The metiers within the NS & EA area, that are confined by the 90 % cut-off level and after necessary merging, are:

1. TBB_MCD_70-99_0_0, the flatfish directed beam trawl fishery in VIId, mesh size 70-99.
2. TBB_MCD_70-99_0_0, the flatfish directed beam trawl fishery in IVc, mesh size 80-89.
3. TBB_MCD_>=120_0_0, the flatfish directed beam trawl fishery in IVb, mesh size >=120.
4. TBB_MCD_70-99_0_0, the flatfish directed beam trawl fisheries in IVb with mesh size 70-99.
5. TBB_CRU_16-31_00, the brown shrimp fishery in IVc. Belgium does not envisage to set up a discard sampling programme for its brown shrimp (Crangon crangon) fishery. This is conform previous NDGPs. The rationale was and still holds today, being:

In the past, this fishery used to be concentrated in the Belgian and the southernmost part of the Dutch coastal waters, but in recent years, it has spread into more northern waters, such as the German Bight and off the Danish North Sea coast. First sale landings from the latter are mostly made into the Netherlands.

Extensive studies on the discards in the European brown shrimp fisheries, carried out in the mid-1990s as part of the EU projects RESCUE and ECODISC, have shown that:

- Discards levels vary widely between areas, seasons, voyages and hauls.
- The finfish discards in the Belgian shrimp fishery primarily consist of 0 and 1 year old whiting, plaice, dab and sole. The discards of 2 year old fish and of juvenile cod (all ages) are marginal.
- Overall, the discards by the Belgian shrimper fleet represent less than 1.0 % of the total discards of 0 year old fish and less than 2.5 % of the total discards of 1 year old fish by the European brown shrimp fisheries (i.e. for all relevant North Sea countries combined).

In view of the above, it can be argued that setting up a discard sampling programme for the Belgian brown shrimp fishery would:

- Be very laborious and time-consuming, since it would require very large numbers of observer trips in order to adequately cope with the different sources of variability.
- Add little to the improvement of the stock assessments of the fish species concerned (primarily plaice and sole), since most fish discarded by the shrimp trawlers belong to age classes that are below the age at first recruitment.
- Give a highly incomplete picture of the impact of the shrimp fisheries on the round and flatfish stocks in the North Sea, unless the Belgian data are complemented by similar data sets on the discards in the Danish, Dutch, German and UK shrimp fisheries.

The usefulness of discard sampling programmes on the brown shrimp fisheries was also discussed during the RCM North Sea in Bergen (September 2005). At this meeting, it was suggested that the UK (the only MS proposing a discard sampling programme on its brown shrimp fishery for 2006) should be allowed to re-allocate its discard sampling effort from its brown shrimp fishery to fisheries with a higher priority in terms of data needs, until agreement is reached on a comprehensive discard sampling programme for all brown shrimp fisheries around the North Sea. Unfortunately however, this recommendation was omitted from the RCM report. A similar standpoint was taken by the RCM a year later (October 2006) with regards to the German plans to unilaterally set up discard sampling on their brown shrimp fishery in the south-eastern North Sea.

In light of the above, and stressing the fact that a discard sampling programme on the Belgian brown shrimp fishery would have very little added value when performed in isolation, **Belgium requests derogation for discard sampling on its brown shrimp fishery.**

Concerning the Crangon fishery, in 2009-2010 the the derogation was not granted, therefore it will be necessary that MS involved in the Crangon fishery in the North Sea (BE, DK, GE, ND and UK) elaborate together a data collection framework based on previous studies. This could be undertaken in the framework of the RCM North Sea and East Artic. This point of discussion will be taken to the WGCRAN as well by Belgium.

❖ **North East Atlantic region:**

1. TBB_MCD_70-99_0_0, the flatfish directed beam trawl fishery in VIIf, with mesh size 70-99.

2. TBB_MCD_70-99_0_0, the flatfish directed beam trawl fishery in VIIg.
3. TBB_MCD_>=70_0_0, the flatfish directed beam trawl fishery in VIIIa,b. Sampling this metiers stopped in 2007 and the rational then was: in view of (i) the relatively minor importance of this fishery (the Bay of Biscay beam trawl fishery accounts for only 2-3 % of the total Belgian fish and shellfish landings, and for < 10 % of the total international flatfish landings from the area), and (ii) the relatively low discard levels in this fishery (see 2007 NP proposal, Annex 1), it was decided to discontinue the discard sampling programme in question. Therefore Belgium requested in the past derogation for sampling this fishery.

At the RCM NA 2008, the point was raised that the Belgian TBB_MCD_>=70_0_0 was responsible for 8% of the total sole landings from VIIIa,b in 2006-2007, and it was recommended that Belgium should start monitoring this métier at sea again from 2009 onwards (p 19, comment 13 in report RCM NA 2008).

Formerly, it was argued that the total Belgian flatfish landings from VIIIa,b only account for <10% of the total international flatfish landings from that area. However a species-based analysis revealed the particular importance of sole in these flatfish landings.. Annex 1 of the Belgian National Programme 2007 shows as well significant amounts (Table A4) and percentages (Table A3) of discards for some commercially important species (e.g. 91% discarded hake, 23% discarded monkfish spp.).In accordance with the recommendation made by RCM NA 2008 and the EC's comment regarding discards, Belgium is monitoring at sea in ICES divisions VIIIa,b from 2009 onwards again and will be continued in the period 2011-2013. Additionally, it should be noted that there are no Belgian fisheries in VIII d,e. Therefore the Belgian sampling of TBB_MCD_>=70_0_0 in the Bay of Biscay starting in 2009, will be continued for the periode 2011-2013 but will only be carried out in ICES divisions VIIIa and VIIIb.

4. TBB_MCD_70-99_0_0, the flatfish directed beam trawl fishery in VIIa
5. TBB_MCD_70-99_0_0, flatfish directed beam trawl fisheries in VIIe. The allocation of trips cannot be done by trip but as opportunities arise, i.e. every time a sea-going observer trip in a neighbouring area extends into ICES subarea VIIe by an ad hoc decision of the skipper.
6. OTB_MCD_70-99_0_0, the demersal trawl fishery in region VIIe with mesh size 70-99.

(c) Type of data collection

Details on the numbers of observer trips planned in each fishery and the seasonal distribution of sampling effort are given in Table C.III.3. In most areas, fishing by the Belgian beam trawler fleet is concentrated in certain quarters of the year (depending on catch rates and quota availability), and the observer trips are scheduled accordingly. The proposed sampling scheme may however be adjusted in the course of the year, depending on changes in fleet behaviour, temporal closures of TAC areas, etc. As the Belgian fishing sector is changing more and more (use of other gears than the beam trawl), for the period 2011-2013, an evaluation of the sampling scheme will be done on a quarterly basis.

Port sampling:

Belgium has three harbours where fish is landed.

Based on the list of the harbors, harbors are picked to be sampled for samplings.

One harbour is not sampled, as the landings are here substantially small and are sold as 'daily fresh'.

The two other harbours are sampled, based on their accessibility one port is sampled more than the other one.

Concurrent sampling is not applied for sampling landings at the fish auctions. Between landing the fish and the sale, there is only a short time window available (in average 1-2 hrs), therefore, either a large team of people sampling would be required either all fish need to be bought. Neither of both is an option as it would make the sampling extremely expensive.

On board sampling :

Based on the list of the national vessel register, vessels are picked out at random of vessels for sampling, taking into account the fishing ground and the season. On a yearly basis, this list is updated (begin of the year). Per on board going observer, at least one trip per month is done.

Remark: due to a limited cooperation between the fishermen and the scientist, and due to logistic restrictions e.g. limited space on board, the observers do not have access to all vessels.

On board observers have a degree of freedom to choose their vessels.

The proposed sampling intensity per métier is given in Table III.C.3

Self Sampling

The idea of initiating self sampling, has emerged as the increasing demand for information on discards, within the DCF came up. If with the same observers, the increasing demand of information would be collected, the cost would increase as well.

Therefore, it was decided by Belgium in corporation with the fisheries sector, to initiate self sampling involving the industry.

Since March 2010 a pilot self sampling project on discards is conducted in the Celtic Sea.

Hereunder a short description is given of the pilot project:

Framework

Since 2005 the Celtic Sea-Trevoise box (rectangles 32 E3, 30 E4 and 31 E4) is closed for all fisheries during the months of February and March for all fisheries, with the objective to minimize the fishing mortality of mature cod during the spawning season. The Celtic Sea and particularly the rectangles of the Trevoise box are of great importance for the Belgian beam trawlers (see Figure 1).

Objective

On request and initiative of the Belgian fisheries sector, the fisheries sector in cooperation with the ILVO, started a self-survey program to get a better picture of the Belgian total catch of cod (landing and discards) in the Celtic Sea (subareas VIIIf and VIIg).

Protocol

The crew of the participating vessels is asked to:

- in each of the studied area , record the weights of landings and discards .
- Every second haul, the lengths of (part of) the landed and discarded cod is noted.
- Meta data: engine power, length of the vessel, mesh size, ...
- Specific to the trip (leaving date,) and specific to the haul (eg total landings (all species)) ..

On a regular basis, the seagoing observers ILVO go on board with the participating ships to cross-check with respect to implement this in the context of validation of the collected data. An existing protocol on board going observers is used

Additional, market sampling of landed cod is done (weight, length measurements and otoliths). (Check landing). For this sampling, an existing ILVO protocol is used.

All vessels involved in the self-sampling scheme are registered with the Sea Fisheries Department and are given the derogation to keep for a short time discards on board. As such, the fishermen are able to sort, to measure and to weigh the discarded cod.

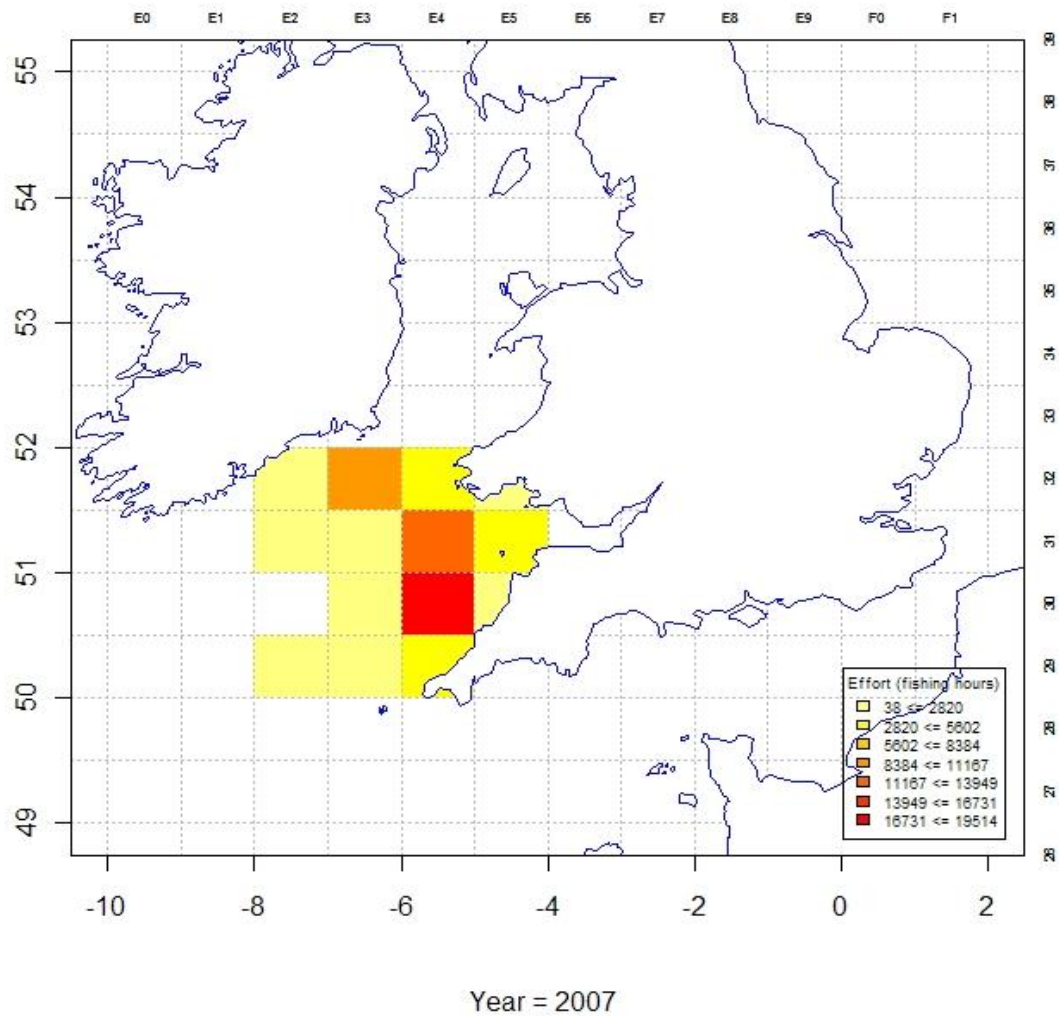


Fig.1: Belgian effort (in fishing hours) in areas of 2007 and VIIf ,VIIg (a rectangle).

(d)

Validation Process

√ Training owners / crew vessels involved:

Given the importance of correct and consistent implementation of the sampling protocol, a comprehensive training is provided for interested fishermen and crew. Besides a presentation of the Self sampling protocol, there was enough attention paid to the filling of documents / specifications. Furthermore, a contact person for fishermen and crew is available if questions regarding the Self-survey program and practical implementation are arising. A manual with clear instructions is written and can be continuously consulted by the fishermen during the trip.

√ Communication between the industry and ILVO:

Interim meetings and regular inquiry (by phone and by meetings) is organized with all stakeholders in the project,, combined with report on a two month basis. Feedback from the fishermen is inventoried (document experiences) and shortly after a trip report forwarded to the owner.

√ Validation of the data itself: As part of the validation of the data collected from the Self sampling program, during the entire duration of the Self-survey project cross-checks are performed. These cross-checks will locate at multiple levels:

o Sampling in the auction:

In the auction, the cod landed by a number of trips, vessels involved in the Self sampling program are sampled. This task will be performed by the ILVO observers. The length distribution of cod landed from a trip, measured in fish, will be compared with the length distribution of the cod, monitored by the fishermen during that particular trip. This type of validation is only focused on the raised part of the cod in the landings. The sampling at the market will be done with an existing protocol (including otoliths - not immediately relevant). Note: cod landings are sampled before they are sorted in the various categories.

o On board going observers:

On a regular basis at seagoing observers join a vessel involved in the Self sampling program. From every second haul (not the haul measured by the crew for the Self sampling program), the seagoing observers record weight and length distributions of landings and discard cod . This cross-check is not only at the landing level (as in the validation by sampling in fish), but also at the level of

Available resources have their influence as well on the sampling intensity (limited number of on-going board observers). Some individual vessels refuse to have on board sampling by scientists, for divers reasons: ‘control’, no space on board, data collection is not important/relevant. This results in quite some difficulties to design and implement statistically sound catch sampling programmes and shows at the other hand the need of thorough analysis and a good coordination between memberstates in order to be successful

During 2008-2010 ICES was hosting three workshops WKACCU, WKPRECISE and WKMERGE, which were all dealing with sampling design in relation to the métier based approach. The métier based approach in the EU data collection framework as well as the aim to move towards regional task sharing have high-lightened the need for a more proper, robust and transparent sampling design for member states involved in catch sampling. The three workshops have provided valuable general knowledge in how such catch sampling programs can be designed and the reports are beneficial for member states aiming to improve the current situation.

However, the conclusions of the three workshops hold in the timeframe from 2008-2010, documented and highlighted as well a clear and distinct need to increase and improve the implementation of existing and relevant knowledge on survey sampling in catch sampling schemes in fisheries

In the end, data quality depends also on the implementation process of the sampling survey, e.g. the practical applications.

The ICES PGCCDBS 2010 suggests to set up work shops (taskforces) to guide and monitor this process carefully, in order to encourage and facilitate cooperation on different key issues.

From 2011 onwards, Belgium will start to try to design the catch sampling schemes, more towards a more design based approach, by applying more at random sampling of the primary sampling units (being the trips). This implicates that the sampling frames as they are described now in Table III.C.4 may be seen as temporal and dynamic: during the programme they may be revised. Meanwhile, the sampling frame is as in the previous years.

e) Sampling Stratification and allocation scheme

Stratification employed:

Geographical stratification is s done according to the fishing grounds e.g.IVa, VIId, VIIf,

Temporal stratification is done by month or quarter

Fleet/Vessel: all LOA classes are covered, there must be noted with this that Belgium

has no vessels < 10m, the fleetsegmentation is according to the fishing method and gear type. The number of trips by metier expected to be sampled is given in Table III.C.3.

Details on the required and planned sampling for length (where applicable), are given in Table III.C.5), for those species that are not subject to derogation (see Table III.E.1).

Details on the length and age sampling programmes for all species in and Table III.C.4, are given in the sections below. For the detailed description of the sampling strategies, see section III.E.1.

Gadus morhua - ICES Sub-areas IV + VIId and VIIa

Sampling strategy: Market sampling, at-sea sampling.

The cod stocks in ICES Sub-areas IIIa+IV+VIId (Skagerrak, North Sea and eastern Channel) and VIIa (Irish Sea) are currently under a Recovery Plan and therefore, ILVO-Fisheries will sample these stocks for both length and age in 2011-2013.

Cod landed by the flatfish directed beam trawlers operating in ICES Sub-areas IV+VIId will be sampled for length ⁽²⁾. At the market, length sampling will be by market category, from randomly chosen boxes of fish. In addition, length sampling of the retained portions of the cod catches is foreseen during all sea-going observer trips in the North Sea and the Eastern English Channel (for details, see SectionIII.E.1).

In ICES Sub-area VIIa, length sampling of the retained catches of cod will be done as part of the at-sea sampling programme in the area (for details, see SectionIII.E.1).

In the ICES subareas VIIf,g, a pilot project of self-sampling on cod is started from March 2010 onwards (see further – Self Sampling -)

Lophiidae - ICES Sub-area VII

Sampling strategy: At-sea sampling.

From the 2002 pilot study set up for *Lophiidae* in ICES Sub-area VII, it appeared that this species group is best sampled on-board during sea-going observer trips. At-sea sampling of anglerfish was initiated in 2003 and will be carried on in 2011-2013 as part of the sea-going observer programmes in the area (for details, see Section III.E.1).

Merluccius merluccius - Northern stock

Sampling strategy: At-sea sampling.

Belgium will help monitor the northern hake stock, which is currently subject to a Recovery Plan. To that aim, retained and discarded portions of the catch will be sampled

⁽²⁾ Unless stated otherwise, all length measurements of fish are by total length, to the cm below.

for length and age during all sea-going observer trips in all relevant sea areas (for details, see Section III.E.1).

Microstomus kitt - ICES Sub-area IV

Sampling strategy: Market sampling.

Length sampling of lemon sole will be done at the market, on a quarterly basis.

***Pleuronectes platessa - ICES Sub-areas IV and VII, and
Solea solea - ICES Sub-areas IV, VII and VIII***

Sampling strategy: Market sampling, at-sea sampling.

In the 1990s and early 2000s, plaice and sole were primarily sampled at the market, on a quarterly basis. From each market category, one box was randomly chosen for length measurements (stratified sampling, to the cm below). This allowed the calculation of the overall length distribution of the landings by Belgian fishing vessels for each species and TAC area. In addition, length-stratified samples were taken for age determination. By applying the appropriate ALKs, the length distributions of the two species were then converted into age compositions by quarter and by TAC area.

Over the past years however, Belgium has experienced increasing difficulties to maintain its market sampling schemes for plaice and sole, with ship owners refusing to have their landings sampled, with vessels fishing in several ICES Sub-areas during the same trip and landing 'blended' catches, etc. Therefore, ILVO-Fisheries has been looking for alternative sampling strategies.

At-sea sampling for length and age of the retained fractions of the plaice and sole catches (amongst several other species) was introduced in 2003 as part of the sea-going observer programmes, and since then, it has become an increasingly important and valuable source of information. It is the intention to put even more emphasis on the sea-going observer trips in the years to come, and to use this system as the main data source for length and age. At-sea sampling for length and age comprises two complementary approaches:

- On-board length measurements on the retained (and discarded) catch fractions by the sea-going observers.
- The collection of samples for subsequent length and age measurement by the technical staff of ILVO-Fisheries. To that aim, the observers tag several boxes with fish of known origin, which are then bought from the vessel owner by ILVO-Fisheries. This approach has proven to be very efficient and has successfully been applied in 2006 – 2008, was continued during 2009-2010 and will be continued as well during 2011-2013..

Over the past years, sampling effort for plaice and sole has increasingly been shifted from market sampling to at-sea sampling. In 2011-2013, at-sea sampling will be the major

source for obtaining plaice and sole samples, while market sampling will mainly be used as a fallback option when sampling levels risk falling short of the targets.

***Psetta maxima - ICES Sub-area IV, and
Scophthalmus rhombus - ICES Sub-area IV***

Sampling strategy: Market sampling, at sea sampling.

Sampling for length for both species will be done at the market, on a quarterly basis, with samples taken from randomly chosen boxes per market category. In addition, lengths of turbot and brill will also be measured during the observer trips. During surveys, turbot and brill are measured and otoliths are taken for age determination.

Rajidae - ICES Sub-areas IV and VII (except VIId)

Sampling strategy: At sea sampling and market sampling.

The outcome of the 2002 pilot study on the Belgian ray landings from ICES Sub-area IV showed that *Raja clavata* and *R. montagui* (and to a lesser extent *R. brachyura*) are the commonest species taken in the area. All three species will continue to be sampled in 2011-2013

Five species of ray are regularly landed by Belgian trawlers from Sub-area VII (except VIId), viz. *Leucoraja circularis*, *L. naevus*, *Raja brachyura*, *R. clavata* and *R. montagui*. In 2011-2013, all species will be sampled throughout sea sampling for length and sex-ratio..

Sampling of landings abroad and of landings by foreign vessels

With respect to the landings by Belgian flag vessels into other MS, a distinction must be made between (i) vessels transiting their catches in a foreign harbour (mostly in the UK, occasionally in the Netherlands and France) for transportation to and first sale in a Belgian auction, and (ii) vessels actually landing and selling their catches abroad (mostly in the Netherlands, occasionally in other countries).

In general, landings by foreign flag vessels for first sale in a Belgian auction are marginal compared to the landings into these vessels' home countries.

Belgian landings into the UK, and UK landings into Belgium

Sampling of the landings by Belgian vessels into the UK (mostly for transportation to a Belgian auction, rarely for first sale in the UK) and by UK vessels into Belgium, is subject to a bilateral agreement between ILVO-Fisheries on the Belgian side and CEFAS (Lowestoft) on the UK side. This agreement has been in place since several years and both parties agreed to continue the bi-lateral agreement until further notice (see Annex 1).

Belgian landings into the Netherlands, and Dutch landings into Belgium

Landings by Belgian vessels into the Netherlands for first sale in a Dutch auction will be sampled by IMARES (IJmuiden). Landings by Belgian vessels into the Netherlands for transportation to and first sale in a Belgian auction will be sampled by ILVO-Fisheries upon arrival of the landings in Belgium. Sampling of these landings was taken into account when calculating the sampling levels in Table III.C.4.

Landings by Dutch vessels into Belgium for first sale in a Belgian auction are negligible (293.5 t landed weight in 2006, of which 27 t horse mackerel, 36 t whiting, 27 t bib, 32 t gurnard and 27 t of 'mixed' demersals) compared to the total landings by the Dutch fishing fleet and do not justify a dedicated sampling programme.

Belgian landings into France, and French landings into Belgium

Landings by Belgian vessels into France for transportation to and first sale in a Belgian auction will be sampled by ILVO-Fisheries upon arrival of the landings in the auction. Sampling of these landings was taken into account when calculating the sampling levels in Table.III.C.4.

Landings by French vessels into Belgium for first sale in a Belgian auction are negligible (75 t landed weight in 2008, of which 50 t sole) compared to the total landings by the French fishing fleet and do not justify a dedicated sampling programme.

Other

Belgian landings for first sale (and for transshipment, for the matter) into other countries than the UK, the Netherlands and France are negligible: 44.5 t (landed weight) into Denmark (mostly plaice, brown shrimp and cod) and 1.5 t into Ireland (figures for 2008).

Landings by 'other' foreign flag vessels (that is, other than UK, Dutch and French vessels) into Belgium are marginal: 18.5 t landed weight in 2008 by German vessels and 2.5 t by Danish vessels.

In view of their minor importance, it was decided not to set up special arrangements for the length and age sampling of these landings.

With respect to the coverage of small scale vessels, it is worth emphasising that Belgium has no registered fishing vessels of smaller than 10 m LOA .

All stocks described to be sampled are caught within the selected métiers in the mentioned fishing ground. Thus, the sampling strategy described by stock is applicable to all Belgian selected métiers

III.C.2. Estimation procedures

In Table III.C.3, the sampling strategy is indicated for the sampled metiers. Mainly through the observers schemes (at sea sampling) , the volume of discards are

available. Length and age structure of the discards are as well available through collecting data by observers at sea. The raising of the Belgian discard data will be tested during the hands on workshop of COST.

III.C.3 Data quality evaluation.

As in the coming months, the COST project and the hands-on-workshops will be finalized, Belgium will prioritise to calculate the precision levels and gradually incorporate the required numbers of fish needed to achieve the precision based on precision estimates.

Based on the precision calculation during 2009-2010, the numbers of the individuals for all biological variables will be modified accordingly. However, in the present Tables, the numbers have not been changed yet as for example the WKCOST workshops were not finalized yet.

Furthermore, in the national database, standard data quality checks are implemented in different stages: one before the data are accepted in the database, one once the data are submitted to the national database.

All stocks sampling will be based on **quarterly** estimates.

Potential sources of bias are listed here below:

Sampling allocation scheme:

Estimation of the randomness of the sampling. Is the sampling pure randomly, according to well described and followed sampling protocol or is sampling allocation made on a ad hoc base or as the opportunities arises non random sampling is clearly a source of bias which needs to be reported.

Size of the catch effect:

When catches are big and only an estimated fraction has been sampled, the bias is more likely than when a significant fraction of the catch (say more than 10%) is taken for sampling. In general this information is absent even from the raw samples.

Non response rate:

The percentage of refusal is one of the most important sources of bias for on board observers.

Temporal and spatial coverage:

Belgium will try to spread out the sampling effort of the métier in as well time and space for the “at market” sampling programmes. As sampling frames are not yet been fully implemented, it is therefore difficult to evaluate if certain parts of the trips have been excluded from selection and thereby could introduce bias

Management measures leading to discard behaviour:

The specification of the management measure and the date of entry into force or implementation of the management measure, are potential sources of bias, if not monitored through a well-designed sampling program.

Working conditions:

Evaluating the sampled weight with a scale needs proper conditions, which are not always possible. Sampling needs also good conditions for taking the sample and enough time and space for carrying out the scientific work on board or at the market. Any constraint on working conditions can be a potential source of bias in the final estimates.

III.C.4 Data Presentation

The data from the official landings statistics, being data on effort, landings and value for year n will be available during year n from the second quarter onwards and will be in full available at the end of the first quarter of year n+1. This is because the data are sent through on a quarterly basis. The end-users thus of the data regarding the Belgian metier based data, will be provided with this data within the requested deadlines and can as such be used to support scientific analysis. .

Data needed for stock assessment and related scientific advice, will be available within the same time frames and can as such be used by the relevant working groups.

III.C5 Regional co-ordination

The text and where relevant the Tables, will be updated and adjusted after the RCM’s have taken place, as the international coordination is here discussed and decided. Bilateral agreements are listed in Appendix 2.

Belgium has started to seek bilateral agreement with other MS for which sampling effort is present at regionally ranked level, e.g. the Netherlands, Germany and Denmark regarding the sampling of métier TBB_CRU_16-31_0-0 (Crangon crangon fisheries

Source	Recommendation	Action
RCM NS&EA 2009	RCM NS&EA recommends the development of an evaluation tool to provide information on sampling coverage and sampling needs for required precision, based on data provided in regional databases.	Belgium will welcome such a tool.
RCM NS&EA 2009	RCM NS&EA recommends France and Belgium to submit discard data of North Sea cod and whiting to WGNSSK.	Belgium will follow this recommendation.
RCM NS&EA 2009	For the purposes of ranking metiers to sample, national data on effort, landings and value by metier and fishing ground should be compiled regionally in advance of the next meeting. To enable this, participants from MS should strictly respect the agreed naming conventions of fishing ground, metiers and units of the variables as well as the deadline for submission of the national data. The Chair is responsible for requesting the data and compiling it on a regional level	Belgium will follow the recommendation and provide data in advance of the next RCM. This information has been provided before the RCMNS&EA2010.
RCM NS&EA 2009	For the purposes of understanding the heterogeneity of metiers and the consequences for task sharing and discard sampling, national descriptions of the regionally ranked metiers should be compiled using the format in Annex 9. To enable this, participants from the MS should strictly respect the agreed naming conventions of fishing ground and metiers as well as the deadline for submission of the information. Appointed persons are responsible for requesting the data and compiling it on a regional level	Belgium will follow the recommendation and has provided data in advance of the RCM2010.
RCM NS&EA 2009	RCM NS&EA recommends that SGRN clarifies if metiers only catching G3 species need to be sampled.	Belgium will await the outcome of the next RCM meeting.
RCM NS&EA 2009	As non-EU countries (mainly Norway, Russia) are the major players in this area, the catches taken by vessels of EU MS do only constitute a minor part of the total catches. Consequently, all catches and sampling effort in this area should be considered	Not relevant for Belgium .

		when evaluating the MS fishing activities and sampling coverage.	
RCM 2009	NS&EA	UK and The Netherlands to formalize bilateral agreement, specifically in relation to sampling of flatfish for the relevant metiers in IV & VIId.	Not relevant for Belgium.
RCM 2009	NS&EA	UK and Germany to formalize a bilateral agreement to ensure adequate sampling coverage for the UK landings from the relevant metiers in areas I & II	Not relevant for Belgium.
RCM 2009	NS&EA	In order to use the time of the RCM more efficient and for the harmonization of the NPs, including the quality checks, the exchange data tables from all NPs, namely planned number of individuals to be sampled for age, length, weight, sex and maturity should be compiled before the next RCM.	Belgium will provide the relevant data before the next RCM.
RCM 2009	NS&EA	The RCM NS&EA recommends that landings of the most recent three years reported by MS for non-TAC stocks, listed in Appendix VII of the Commission Decision 2010/93/EC, should be made available to MS. This information is required to evaluate if sampling is an obligation or not.	Belgium supports this recommendation. No actions to be taken by Belgium.
RCM 2009	NS&EA	The RCM NS&EA recommends MS to refer to the table in Annex 5 of this report for elaborating maturity sampling programmes, when drafting their National Programme proposals 2011-2013	Belgium will follow this recommendation. The suggested sampling is not yet in place.
RCM 2009	NS&EA	RCM NS&EA recommends MS to provide an overview of their inland sampling of the recreational fishery on eel.	Belgium will provide the requested information.
RCM 2009	NS&EA	RCM NS&EA recommends MS to use the average landing figures over the years 2007-2008 as the basis for ranking métiers within the NP 2011-2013	Belgium has used landing figures for 2007-2008 for the NP for 2010 and will use the same reference period for the 2011-2013 programme.
RCM 2009	NS&EA	The RCM NS&EA recommends to carry out two case studies for deriving regional estimation of stock-based variables for cod in IIIa and sole in VIId.	Belgium will provide the information.
RCM 2009	NS&EA	The RCM NS &EA recommends that Sweden puts	Not relevant for Belgium.

2009		together proposals for the study and a case for its funding under the DCF.	
RCM 2009	NS&EA	The RCM NS&EA recommends that JRC establishes a web based Share-Point in order to facilitate intersessional work, the exchange of working documents, and the production of the meetings report.	Belgium supports this recommendation.
RCM 2009	NS&EA	The RCM NS &EA recommends ICES to include the following in the ToRs for WGCRAN 2010: "To analyse the spatial, temporal and technical overlap in national fishing activities in order to be able to derive regional sampling strategies"	Belgium supports this recommendation.

III.C.6 Derogations and non-conformities

The typical/dominant Belgian Fishing métiers are beam trawling for flatfish (sole and plaice) where eel is caught very rarely. Consequently, this results in zero catches for eel. Also no valid marine sampling strategy for length or age can be set up by Belgium.

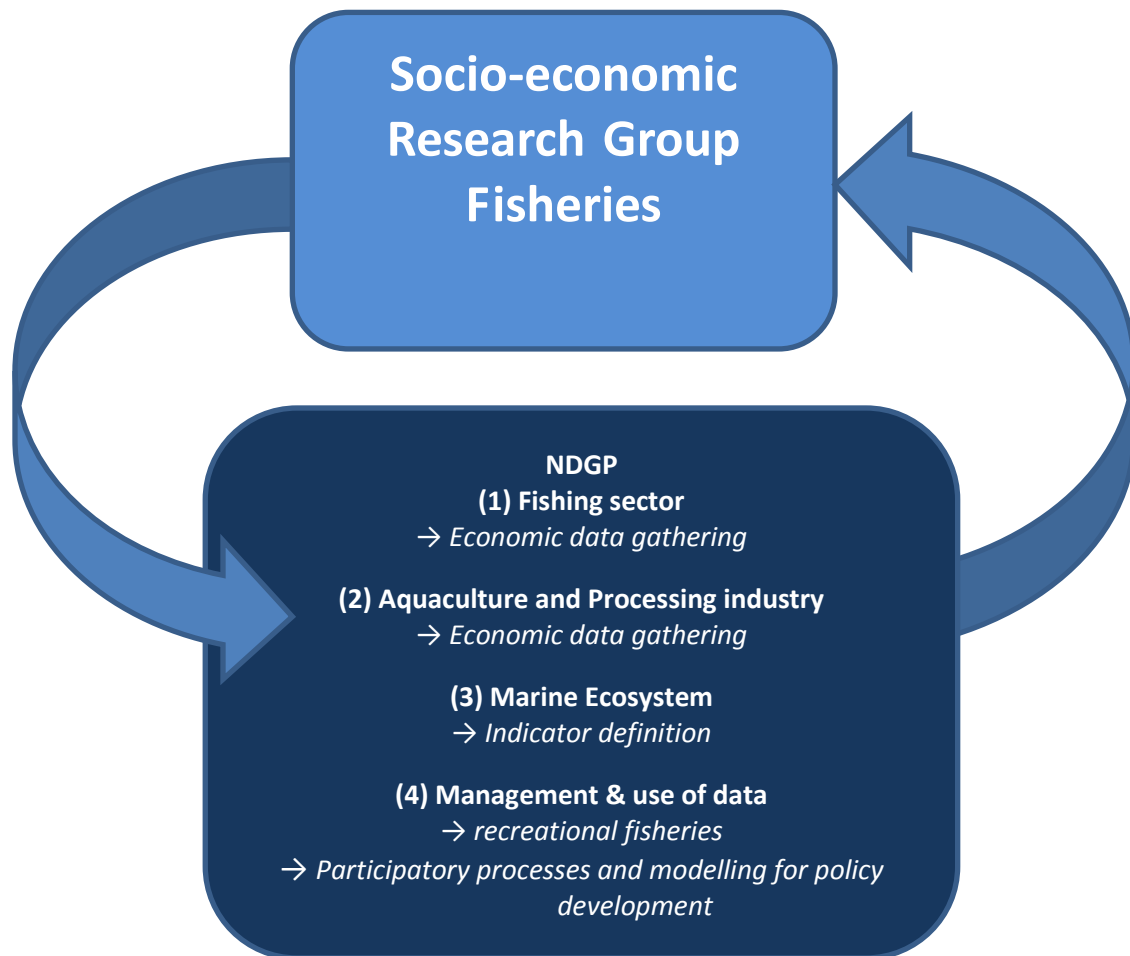
III.D BIOLOGICAL RECREATIONAL FISHERIES

❖ Baltic Sea, North Sea and Eastern Arctic, and North Atlantic

III.D.1 Data acquisition

From 2011 onwards Belgium is setting up an “economic/socio-economic cell” where the expertise of three units is combined: ILVO Fisheries, ILVO Social Science Unit and the Sea Fisheries Department. This new research unit is hosted at the ILVO Fisheries Department.

One of the objectives and tasks of this “economic/socio-economic cell” is to improve and fine-tune the questionnaires for recreational fisheries in order to achieve a higher response rate from the questionnaire and to improve the quality of the data as well.



❖ **Recreational fisheries for cod, *Gadus morhua***

In 2006, a pilot study was performed on the recreational fisheries for cod in the Belgian coastal waters. The pilot study report (*Resultaten van een pilootstudie over de recreatieve visserij op kabeljauw in de Belgische wateren - Results of a pilot study on the recreational cod fisheries in the waters under Belgian jurisdiction*) was transmitted to the Commission in February 2007.

In the light of providing a sampling scheme for the recreational fisheries of cod, Belgium has attended the WKSMRF in Nantes, April 2009. In preparation and on request of the WKSMRF, Belgium has set up a *draft working document* which is attached in APPENDIX 2. After the WKSMRF, Belgium agrees to set up a pilot study in order to develop a sampling scheme for recreational fisheries on cod. As an outcome of the WKSMRF, an overview of the pilot studies performed in the past is given hereunder.

WKSMRF pilot and other studies: Belgium

ToR (b) Review the findings of existing studies on recreational fisheries including DCF Pilot Studies and their relevance for sampling schemes in other areas

- Results of a pilot study on the recreational cod fisheries in the waters under Belgian jurisdiction. Oostende, February 2007. Ministry of the Flemish Community, Sea fisheries Service (Oostende Belgium), ILVO-Fisheries (Oostende, Belgium)

This pilot study was a mail survey done in 2006. The questionnaires were sent to angler's associations and individual sea-anglers. The fishery targeted was thus angling for cod on vessels in Belgian territorial waters. The pilot study only covered Flanders, the Brussels and Walloon area were not considered in this study. This questionnaire had responses from 15 out of 50 questionnaires sent and there the Flemish Sea-angling population is estimated to be about 2000 people, this study is not sufficiently representative to base a full scale recreational survey on. Belgium plans to start a program on researching recreational fisheries as soon as possible. The WKSMRF in April in Nantes has given a lot of information that needs to be considered in further studies, it also seemed best that any studies on recreational fisheries in Belgium be conducted in accordance to those in the neighbouring countries also fishing on cod and sea bass in the North-Atlantic sea. (The conclusion from the Pilot study: cod catches by recreational fishers in the Belgian coastal waters amount to 100-200 tons annually. However, considering

the annual nature of the questions in the survey, the population size and the response rate in this study, high grading is likely.)

Other studies

- A local angler's association, VVHV, has done some questionnaires which were distributed among their members and other visitors of the Angling Expo 2003 (www.vvhv.be/dossiers/hengelsportenquete03.pdf, in Dutch) and 2007 (www.vvhv.be/dossiers/Hengelsportenquete%202007.doc, in Dutch), these questionnaires were also put online.

This angler's association does these surveys once every 2 years, but only the results from 2003 and 2007 are found on the internet. Under the target population are all visitors of the exposition, which thus includes Walloon and foreign fishermen. These surveys target anglers both on freshwater as on the sea and are therefore difficult to use specifically for sea recreational fisheries research. In 2007, 1842 questionnaires were obtained and the total Flemish angling population is estimated to be at least 165000, this means about 1.1% of Flemish anglers participated in the survey.

- Other recreational fisher's associations also undertake surveys (frequency unknown), results from these were however not (yet) obtained.

The studies by these recreational fisher's associations don't seem to be representative as a basis for designing a full-scale recreational fishing survey and associated sampling, but the experience these organisations have built up over the years and their direct link with the recreational sea fishermen is very valuable and should be kept in mind while designing surveys and sampling schemes.

In all studies for which the results are available, the occasional recreational fishermen which only make up to 10 fishing trips a year are under sampled.

During 2010, a pilot project is set up with anew enquete, aiming at inventarizing the recreational fisheries on marine fisheries, i.e. cod, For the period 2011-2013 a follow up of the questionnaire is planned in order to collect up to date, data for the recreational fisheries on cod.

❖ **Recreational fisheries for eel or sea bass or salmon**

Belgium has no recreational fisheries for eel, sea bass and salmon.

Belgium has recreational fisheries only in the North Sea, national estuaries and inland waters. Chapter III.B.B1.3.(3) of the Decision requires a quarterly evaluation of the weight of the recreational catches listed in Appendix IV. These are cod (*Gadus morhua*), eel (*Anguilla anguilla*) and all shark species. Belgium has limited recreational fishery for cod in the North Sea, but do not have recreational fishery on eel neither on shark in these region.

In Belgium a license system is implemented for recreational fisheries. The permits are issued by local governments. However, based on the outcome of the pilot studies 2006 and 2009-2010, it is clear that part of the recreational fisheries is as well performed without permits and thus illegal.

This complicates the estimation of the activity of the population in recreational fisheries. The outcomes of both pilot studies (2006 & 2009-2010), are used to develop further the data collection of recreational fisheries.

Belgium has participated in the Planning Group on Recreational Fisheries Surveys held in Bergen, 7-11 June 2010. The outcome of the work in the planning group could result in revision the national data collection program 2011 – 2013

(a) Type of data collection

In the pilot study 2010, a new questionnaire is developed by ILVO Fisheries and ILVO Social Sciences; The questionnaire is tested on a subgroup of sea-anglers with permit and member of the recreational fisher's association. The objective was to test the robustness of the questionnaire and to optimize the process and where relevant change questions (i.e. those that could possibly lead to bias). The sub-group was chosen randomly: 110 questionnaires were sent to the recreational fishermen's association office where fishermen could pick up voluntarily a questionnaire and sent the reply anonymously back. A copy of the enquete is attached in Appendix 3.

Probability Sample Survey

The type of data collection is a Probability Sample Survey, in which data are collected from a sample of population members randomly selected

(b) Target and frame population.

.The target population for which inferences are made are all Belgians with a license for recreational fisheries. The frame population is a subsample of the target population. Importantly, the demographics of the frame population does not deviate from the demographics of the whole Belgian population as determined by the Central Bureau of Statistics. The frame population of a number of permit holders, randomly selected, will be set up in 2011 and questioned on their participation in recreational fishery as part of the screening survey. In a second step, a subset of the frame population which are active in recreational fisheries will be selected for a 12 month logbook survey

The target population in the pilot study were all persons with a valid permit or license at the time of the pilot study. As the pilot study was not finalized yet, no results can be given yet. However, after one week, already 35 out of 110 questionnaires were sent back.

(c) Data sources

The pilot study will be evaluated and further carried out during 2011-2013 in order to have a more complete estimation of the recreational fisheries in Belgium.

There will be also looked at telephonic interviews with part of the Belgian population with the objective to identify the people fishing on cod without a license.

Data on the participation of the Belgian population in recreational fishing will be obtained through an online screening survey of the Belgian permit holders. The first screening survey will be carried out by the end of 2011. Future screening surveys are planned for December 2012 and 2013. The survey will allow to estimate the participation in the various recreational fisheries..

It is possible to contact persons holding a license directly as names and details are available. This questionnaire will provide detailed information on the fishing carried out and the catches taken.

(d) Sampling stratification and allocation scheme

During the period 2011-2013 the screening surveys are planned and priority will be given to the estimation of recreational catches of North Sea cod. However, the survey will cover some other species as well.

In principle the program will cover all types of recreational fishery in Belgium and the information describe above will become available for all species caught in recreational fisheries in fresh and marine waters.

Screening surveys (2011, 2013, etc) In 2011, priority will be given to the estimation of recreational catches of North Sea cod. In principle, new estimates of cod catches will be available in 2012, 2013 and so on.

Tasks will be carried out 2011 and 2013.

III.D.2 Estimation procedures.

Based on the data coming from the surveys, the total catch of North Sea cod could be calculated. The information gathered could be raised to the entire population of recreational fishermen

In principle, the effort and species specific CPUE data, obtained from the frame population can be raised to the total population by type of fishery and provides estimates of the total catch by Belgium by species

III.D.3 Data quality evaluation.

Once the results of the pilot study are available, more information about data quality should become available. However, the population which was sampled did not include tourists, which are assumed to play an important role in the recreational fisheries.

General approach

The sampled population is an unbiased sample of the total population. Since the introduction of a ban on all other recreational fisheries in marine coastal waters, apart from angling, the number of 'métiers' in the population is limited.

Biases Screening Survey

Biases in the screening survey are negligible due to careful design of the survey. The demographics of the frame population is selected and maintained by ILVO Social Science Unit, to ensure its frame population does not deviate from the demographics of the whole Belgian population as determined by the Central Bureau of Statistics. The recreational fishing participation survey will be offered 'blind' to the selected households.

Logbook Survey

During the screening survey, people will not only asked if they have participated in freshwater and/or marine recreational fisheries and if they want to participate in a 12 month logbook survey but also to indicate roughly how often they will have fished in the past 12 months to determine the level of fishing 'avidity' (1-5, 5-10, 10-25, 25-50, >50 annual fishing trips). As expected the level of avidity was higher among the people that indicated to be willing to participate in the 12 month logbook program compared to the avidity of all the people in the screening survey. To avoid this type of bias (overestimation of the catch because the participants of the logbook survey are more fanatic than the average recreational fisher), the demographics (including avidity) of the people selected for the logbook program is similar to the demographics on the recreational fishers in the screening survey.

Eel is mostly exploited in fresh waters and recreational landings are presently forbidden.

Therefore, in principle, estimates will apply to catches only. Additional information (yet to be defined) may need to be collected to estimate the compliance with the ban on eel landings.

Presently, no procedures have been developed to estimate the precision of the estimates provided by the proposed sampling framework. These will be developed in the period covered by this NP. Tasks will be carried out 2011 and 2013.

III.D.4 Data presentation

The data on the recreational fisheries in Belgium will be presented in a yearly report, and will be based on the data collected through the questionnaire.

III.D.5 Regional co-ordination

At present, there is no regional coordination regarding recreational fisheries. The pilot study is however a continuation of the study in 2007, but with taking guidance from the WKSMRF into account. Furthermore, Belgium will attend the PGRFS planned by ICES.

III.D.5 Derogations and non-conformities

Not applicable

III.E BIOLOGICAL – STOCK RELATED VARIABLES

❖ Baltic Sea, North Sea and Eastern Arctic, and North Atlantic

III.E.1 Data acquisition.

(a) Selection of stocks to sample

An overview of all species for which biological parameters sampling in the areas actually fished by the Belgian fleet (see Table 1.2 for a synoptic overview), together with the exemption rules applied (if any), is given in Table III.E.1.

The tables on the long term strategy are given Table III.E.2.

The overview of the planned sampling for age, weight, sex ratio, maturity and fecundity in order to determine the variables length@age, weight@age and sex-ratio@age, is given in Table III.E.3.

Sex ratio information is only collected for *Pleuronectes platessa*, *Solea solea*, and Rajiidae., not for *Psetta maxima*.

The Belgian sampling strategy for the collection of information on the sex ratio, is a reflection of what is feasible within Belgium, being sampling on surveys and on the markets. There is also a rationale behind the idea of the Belgian sampling strategy.

Species that are not sampled for weight and/or sex ratio, are not deliberately omitted from the data recording system – they are simply not landed by the Belgian fleet in quantities of any importance. As such, the sampling strategy should not be seen as “to get away with the minimum”, but rather as a reflection of the actual composition of the Belgian fish and shellfish landings. In previous evaluations, as well by externals as by SGRN, SGRN stated that it saw no contradiction between the requirements of the DCR/DCF and the use of the sampling strategy, “as long as the used sampling list is a correct reflection of the species composition of the landings” (see 2008 NP & TR Belgium). Belgium has repeatedly confirmed that this is the case (see e.SEC(2004) 179, page 16 and SEC (2005) 255, page 26).

(b) Type of data collection

A multi-annual sampling scheme for biological parameters (2008 - 2013) is given in Table III.E.2.

Pleuronectes platessa - ICES Sub-areas VIIa, VIIId and VIIIfg, and

Solea solea - ICES Sub-areas VIIa, VIId and VIIfg

Prime data source: Market sampling, at-sea sampling.

At present, ***sex ratio*** and ***growth data*** (age-length and age-weight data) for both plaice and sole are gathered on a yearly basis. This will continue to be the case, since all necessary data are collected as part of the ongoing market and discard sampling programmes

As in previous years, ***sexual maturity*** will routinely be investigated for all plaice and sole stocks listed in Table III.E.2, as part of the routine market sampling programmes on these species and stocks .

Rajidae - ICES Sub-areas IV and VII (except VIId)

Prime data source: Market sampling, scientific evaluation surveys.

Sex ratios will be calculated on a yearly basis, as part of the routine market sampling programmes for rays (for details, see Table III.E.2).

Sexual maturity data for rays in Sub-area IV will be collected during the BTS survey in August (see Section 7.1 for details on this survey). Typically, between 100 and 200 rays (mostly *Raja clavata* and *R. montagui*) are caught during this survey. ILVO-Fisheries has no surveys in Sub-area VII and therefore, is not in a position to undertake maturity studies in this area.

Growth of rays can be investigated through ageing or tagging. At present however, there is no generally approved and workable method to determine age for most ray species, and tagging is expensive. Therefore, the time schedule of any future growth studies on rays will depend on the progress that is made in developing a generally accepted technique for age determination. Since 2009, ILVO fisheries started with research on developing a technique for the age determination on rays.

Gadus morhua, Psetta maxima, Scophthalmus rhombus –Ices sub-areas IIa, IV, VIId

Prime data source: Market sampling, at-sea sampling

Length and age are mainly sampled during at-sea sampling and supplemented for weight at the market.

Merluccius merluccius - Ices sub-areas IIa, IV and Vb, VI, VII, XII, XIV

Prime data source: at-sea sampling

Length and age are sampled during at-sea sampling.

Lophius budegassa and Lophius piscatorius - Ices sub-areas VII

Prime data source: at-sea sampling

Length and age are sampled during at-sea sampling.

(c) Target and frame population.

As described in section III.C.1.d Belgium has the intention to re-design the port-sampling frame based on the outcomes of the three workshops WKACCU, WKPRECISE and WKMERGE.

(d) Sampling stratification and allocation scheme.

An overview of the long-term sampling strategy regarding the “stock related variables” is given in Table III.E.2.

Table III.E.3 gives the overview of the planned sampling for age, weight, sex ratio, maturity and fecundity for the years 2011-2013.

III.E.2 Estimation procedures

The biological measurements are collected routinely during the surveys at sea and market- and discard sampling programmes, as has always been done in the previous NP-years.. From 2011 onwards, from some selected stocks, Belgium will collect information on maturity as well.

All of biological measurements, made by the individual MS, are only representative for part of the stock and represent only measurements of biological characteristics of individual fish. Stock representative variables can only be calculated when sampling covers the whole stock in a representative way. This is often not the case and stock representative estimates of biological parameters can only be obtained in combination with measurements from other countries. Also additional information from other sources may be required to estimate the stock related variables. In practice the estimation of the biological stock-related variables is carried out by international planning or expert groups.

III.E.3. Data quality evaluation

Belgium will consider to use COST as tool for re-evaluating the present sampling setup. At present, the sampled targets are based on the previous NP-years. Before the data are stored in a database, the actual data, such as age, length,.. are screened before being stored in the national database.

No a priori analysis has been carried out in order to estimate the number of measurements needed to achieve the required precision for the stock related parameters. Such an analyses is stock and parameter specific and will require access to other information which is not available or can be made available by MS to an international expert group. The sampled targets are based on historical guidelines applied in previous NP.

The actual measurements are being screened by standard procedures (range checks) before they are stored in a computerized database

III.E.4 Data presentation

This data will be in available between end of the first and second quarter of year n+1.. The end-users of the data, will be provided with the aggregated data within the requested deadlines and can as such be used to support scientific analysis. The data will be stored in an national database.

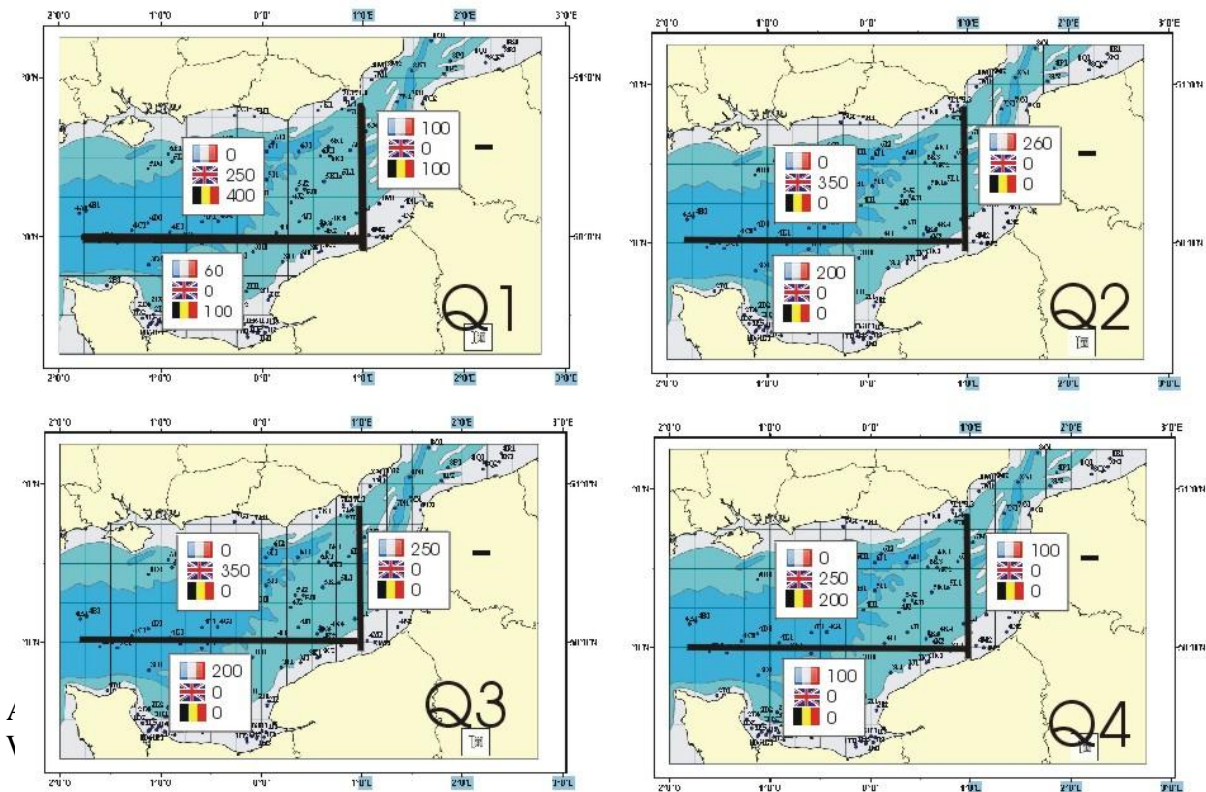
III.E.5 Regional co-ordination

For international co-operation, the sampling intensities are listed for all stocks where Belgium plans sampling in 2011-2013, see Table III.E.3.

Stocks for which international co-ordination is already started are grey shaded (2 stocks of solea solea) are discussed below, being:

Age sampling of Solea solea in VIId. Belgium, the UK and France started co-operating in 2008, based on the Working Document concerning age sampling for VIId sole, presented at the 2007 RCM NS&EA. Accordingly, Belgium needs to sample 600 individuals in Q1 and 200 individuals in Q4. Sub-areas and numbers can be found below.

Furthermore, this section will be updated after the RCM's 2010 took place.



Document for age sampling of solea solea in VIIa at the 2008 RCM NEA is attached in Appendix 2. Belgium still maintain the national numbers for 2009 but will adopt the newly agreed scheme for 2011-2013.

Furthermore, for this specific section, there was one relevant recommendation from the RCM NS&EA 2010 for Belgium.

Stock variables: sampling for stocks where the sum of MS having a share of quotas/landings less than 10%, altogether exceeds 25%	
RCM NS&EA 2010 Recommendations	The RCM NS&EA recommends that relevant countries investigate the distribution of their landings from the named stocks in Error! Reference source not found. in relation to the overall distribution across the stock area. Where they have no sampling plans for catches, they should consider if their component of the stock is adequately sampled, spatially and temporally by other MS.
Follow-up actions needed	Check if MS has catches in this RCM area and if MS has no sampling plans for catches, ensure that its component of the catch is adequately covered elsewhere. MS to report back to RCM NS&EA 2011.
Responsible persons for follow-up actions	Belgium, Denmark, Germany, France, The Netherlands, Sweden, Portugal and Spain.
Time frame (Deadline)	10 June 2010 for NP Revision

III.E.5 Derogations and non-conformities

The typical/dominant Belgian Fishing métiers are beam trawling for flatfish (sole and plaice) where eel is caught very rarely. Consequently, this results in zero catches for eel. Also no valid marine sampling strategy for length or age can be set up by Belgium..

III.F TRANSVERSAL VARIABLES

III.F.1 Capacity

III.F.1.1 Data acquisition

The NDGP covers all Belgian vessels in the EU Fleet Register. Parameters that will be recorded are (see Table III.F.1):

- Number of vessels: these parameters are collected as part of the routine collecting of data by the Fisheries Departement (Fishstat database).
- The capacity as GT, kW and vessel age: these parameters are collected for all vessels as part of the routine data collection doen by the Fisheries Departement (Fishstat Database)

III.F.1.2 Data quality evaluation

There is only one source of information for retrieving the data on capacity, being the Vessel Register. All vessels are registered and all vessels are sampled.

III.F.2 Effort

III.F.2.1 Data acquisition

From 2011 onwards Belgium is setting up an “economic/socio-economic cell” where the expertise of three units is combined: ILVO Fisheries, ILVO Social Science Unit and the Sea Fisheries Department. This new research unit is hosted at the ILVO Fisheries Department.

Some of the objectives and tasks of this “economic/socio-economic cell” are:

- Ensure the quality of the collected economic and transversal data according to the DCF,
- to provide better information on estimation techniques of economic and transversal variables,
- to provide a methodology how to calculate imputed value of unpaid labor.
- To provide methodologies to calculate the transversal variables that cannot be colleted directly.

The NDGP covers all Belgian vessels in the EU Fleet Register. Parameters that will be recorded include:

- ***Fishing effort by technique***: Effort data (hours fishing, kW and GT) are collected by fishing voyage, as part of the routine effort, landings and revenue data collection system
- ***Specific fishing effort*** is derived from the voyage-wise landings and effort data. Species-specific effort is readily available for all species. If required, the existing database of landings and effort data allows for the retrieval of specific fishing efforts for other species as well.

Aggregated data on fishing effort and specific fishing effort will be reported by fleet segment, gear type and ICES Sub-area, as requested by the DCF (see text table below), but can equally be provided by any other type of spatial or temporal aggregation – using the Belsamp database.

III.F.2.2 Data quality evaluation

Methods used to assure quality

In Belgium, effort and landings data are collected in two ways: from logbooks and from sales notes. The logbooks contain extensive information on the retained catches and their species composition by haul (albeit with certain restrictions – see bullet point 2 underneath), but they do not contain information on the size composition (in terms of market categories) of the retained catches. The sales notes on the other hand, contain information on the quantities auctioned by market category for all species landed (and not just for the species recorded in the logbooks – again see bullet point 2), but they do not provide information on the exact origin (in terms of statistical rectangles) of the landings. The two systems are equally important to the Belgian data collection system, they are complementary, and the combination of the two has clear advantages:

- (1) The two approaches yield independent estimates of the retained and landed portions of the catches, and can thus be used for quality control and validation purposes. This helps improving the reliability of the landings figures.
- (2) In the Logbook Regulation, it is stipulated that "*only catches of an amount greater than 50 kg of live-weight equivalent of any species retained on board must be recorded in the logbook*" (Article 2.4.2. of Annex V of Commission Regulation (EEC) No. 2807/83), the consequence being that small by-catches of fish and shellfish often remain unrecorded in the logbooks. These quantities however, are picked up in the sales notes, which helps improving the species coverage and hence the comprehensiveness of the landings statistics.
- (3) As already mentioned in Section III.C. (see para. Landings by Belgian vessels in foreign harbours), roughly one fifth of all fish and shellfish taken by Belgian vessels in the southern and central North Sea are auctioned abroad, mostly in the Netherlands. Also, vessels making consecutive fishing trips in distant waters before returning to their homeport in Belgium, may sell part of their catches during their stop-overs in a foreign harbour. Data on the sales abroad are collected by local authorities from sales notes and submitted to the Sea Fisheries Service for incorporation in the Belgian national fishstats database. This requires additional quality checks and codification, to ensure that the imported data are compatible with the recipient database.
- (4) Last but not least, the landings data by market category are of critical importance to the biological data collection programme on the landings which heavily relies on stratified sampling by market category

The dual approach (logbooks and sales notes) is advocated by the ICES Planning Group on Commercial Catch, Discards and Biological Sampling (PGCCDBS) as a means to validate the different sources of information on catches and landings. In its 2007 report ⁽³⁾, the PGCCDBS states that "*In order to establish quality indicators that can be used to*

evaluate / estimate the accuracy of the fishery statistics and biological information about the catches, it is necessary to make use of different sources of information and analyse the consistency between them with regards to the relevant parameters. Such a quality control thus needs to check different sources for the same information, e.g. logbooks compared with sale slips from the same vessel and/or trip". This is exactly what has been done for several years now in Belgium.

III.F.2.3 Data presentation.

The data on effort are available in the year n+1. This implicates that the data of 2010-2012 will be used accordingly.

III.F.2.4 Regional Co-ordination

RCM NS&EA 2009 recommends that consideration be given to making submission of the following Transversal Variables optional:

- number of trips
- number of rigs
- number of fishing operations
- number of nets/length
- number of hooks/number of lines
- number of pots, traps
- soaking time

At present, there are no initiatives taken yet.

III.F.2.5 Derogations and non-conformities

Not applicable

⁽³⁾ ICES (2007): Report of the Planning Group on Commercial Catch, Discards and Biological Sampling, ICES Advisory Committee on Fisheries Management, ICES CM 2007/ACFM:09, page 68.

III.F.3 Landings

III.F.3.1 Data acquisition

❖ Data collected

Weights (and sales values) of the landings are routinely collected for all species listed in the text table below, from both logbook data and sales notes. The data cover all landings by Belgian vessels in both Belgian and foreign harbours, and are exhaustive.

Species for which species-wise landings and revenue data will be collected in 2011-2013	
Demersal fish species	<i>Rajidae</i> (a)
<i>Anarhichas lupus</i>	<i>Scophthalmus rhombus</i>
<i>Anguilla anguilla</i>	<i>Scylliorhinus canicula</i>
<i>Aspitrigla cuculus</i>	<i>Sebastes spp.</i>
<i>Conger conger</i>	<i>Solea solea</i>
<i>Dicentrarchus labrax</i>	<i>Squalus acanthias</i>
<i>Eutrigla gurnardus</i>	<i>Trigla lucerna</i>
<i>Gadus morhua</i>	<i>Trisopterus luscus</i>
<i>Hippoglossus hippoglossus</i>	Pelagic fish species
<i>Lepidorhombus spp.</i>	<i>Clupea harengus</i>
<i>Limanda limanda</i>	<i>Scomber scombrus</i>
<i>Lophius spp.</i> (a)	<i>Sprattus sprattus</i>
<i>Melanogrammus aeglefinus</i>	<i>Trachurus trachurus</i>
<i>Merlangius merlangus</i>	Crustaceans
<i>Merluccius merluccius</i>	<i>Cancer pagurus</i>
<i>Microstomus kitt</i>	<i>Crangon crangon</i>
<i>Molva molva</i>	<i>Homarus gammarus</i>
<i>Mullus surmuletus</i>	<i>Nephrops norvegicus</i>
<i>Mustelus mustelus</i>	Molluscs
<i>Platichthys flesus</i>	<i>Buccinum undatum</i>
<i>Pleuronectes platessa</i>	<i>Loligo spp.</i>
<i>Pollachius pollachius</i>	<i>Octopus spp.</i>
<i>Pollachius virens</i>	<i>Pecten maximus</i>
<i>Psetta maxima</i>	<i>Sepia officinalis</i>
(a) Species segregation performed as part of the market sampling programmes	

❖ Conversion factors

The conversion factors used to convert landed weights (gutted for most round- and flatfish species, gutted and without head for anglerfish, tails only for *Nephrops*, etc.) to live weights are given in Table III.F.3.

III.F.3.2 Data quality evaluation

In all previous Programme proposals (until 2008), under the previous DCF Regulations, costs for transversal variables, such as landings, are claimed under Mod D - Fishing Effort and Mod E - Catches and Landings. For the Commission's information, we repeat the justifications given the years before (transcript 2006), amended with recent and relevant information. It is clear that the justifications which worked for the Modules - Mod D - Fishing Effort and Mod E - Catches and Landings, work for the Module Transversal variables under the new DCF, as the two Modules Mod D - Fishing Effort and Mod E - Catches and Landings are closely connected and have always been argued as one entity, as they are now looked at under the new DCF.

In Belgium, as explained in the proposal, as well in the proposals of the past years, there is as well the problem of 'mixed' landings. However, the landings and the sale of fish and shellfish of 'non-mixed' landings (= landings by species) must still be in order to comply with the DCF. In Belgium, all landings data, inclusive these of mixed landings, are collected in two ways: from logbooks and from sales notes. The same applies for the collection of effort data. The logbooks contain extensive information on the retained catches and their species composition by haul, but they do not contain information on the size composition (in terms of market categories) of the retained catches. The sales notes on the other hand, contain information on the quantities auctioned by market category for all species landed (and not just for the species recorded in the logbooks), but they do not provide information on the exact origin (in terms of statistical rectangles) of the landings, inclusive the mixed landings.

The two systems are equally important to the Belgian data collection system, they are complementary, and the combination of the two has clear advantages:

- (a) The two approaches yield independent estimates of the retained and landed portions of the catches, which can easily be compared and cross-checked for quality control and validation purposes. This helps improving the quality of the landings statistics – one of the major aims of the DCF.
- (b) In the Logbook Regulation, it is stipulated that "only catches of an amount greater than 50 kg of live-weight equivalent of any species retained on board must be recorded in the logbook" (Article 2.4.2. of Annex V of Commission Regulation (EEC) No

2807/83), the consequence being that small by-catches of fish and shellfish often remain unrecorded in the logbooks. These quantities however, are picked up in the sales notes, which helps improving the species coverage and hence the quality of the landings statistics. This argument may sound academic, but the figures show that the issue is not without importance. In the smaller fleet segments (in terms of vessel size), such as the beam trawler fleet ≤ 221 kW, the Nephrops fleet and the brown shrimp fleet, landings of less than 50 kg per species account for 15-100 % of the single species sales (i.e. the total number of sales per species for all fishing trips combined) and for 5.5 % of the total fish and shellfish landings in weight. The problem is worst (i) for the rarer by-catch species in the aforementioned fisheries, such as haddock, pollack, ling, megrim, halibut, conger eel, red mullet, sea bass, most elasmobranchs, most pelagics and most large crustaceans, and (ii) in the shrimp fleet, where sales of less than 50 kg often account for > 60 % of the landings. It should be clear that without the information from the sales notes, Belgium would never be able to meet the precision requirements of the DCF with regards to landings.

- (c) Roughly one third of all fish and shellfish taken by Belgian vessels in the southern and central North Sea is auctioned in foreign harbours, mostly in the Netherlands. Vessels fishing in the northern North Sea, the Irish Sea, the Celtic Sea or the Bay of Biscay often make several consecutive fishing trips in the same area before returning to their homeport. Between voyages, the vessels make stop-overs in the UK or France. On these occasions, they may sell part of their catches abroad, depending on quantities landed and market situation. Data on the sales in foreign harbours are collected by local authorities from sales notes, and submitted to the Sea Fisheries Service for incorporation in the Belgian national database. This requires additional quality checks and codification to ensure that the imported data are compatible with the recipient database.
- (d) Last but far from least, the landings data by market category are of critical importance to the biological data collection programme on the landings, which heavily relies on stratified sampling by market category. Raising of the length measurements in the auction is first done by market category, before the data are pooled across categories to derive an estimate of the length (and age) composition of the landings by the fleet as a whole. Without the information on the quantities landed by market category, the raising procedure would need to be completely revised, and the continuity of the existing data series (amongst which several are used for tuning purposes in analytical stock assessments) would no longer be guaranteed.

It is also worth mentioning that, within the framework of the Belsamp database (the national database with biological data), ILVO - Sea Fisheries (the former Sea Fisheries Department) is developing protocols to link the logbook information to that of the sales

notes, in an attempt to derive estimates of the quantities landed by market category and statistical rectangle for the most important species.

With respect to the costs claimed under the Programme Proposal, it is worth stressing that no costs are being claimed for the collection and the pre-processing of the logbook data (nor for control and inspection, for that matter) and that all budgeted costs, reflected by the scientific analysis up to 152 days, relate to (i) the collection, quality control and pre-processing of the sales notes, (ii) the incorporation of foreign landings data in the national database, and (iii) the cross-checks between the logbook and the sales notes data, for quality assurance and validation purposes. This is a laborious process, which explains the relatively high estimated amount of days needed for scientific analysis.

In light of the above, Belgium is of the opinion that there is a direct link between the costs/number of scientific analysis day claimed and the requirements of the DCF, and that the claimed costs should be eligible under the DCF. Also, the Commission should realise that cuts in the proposed budgets for the Transversal Variables Module, will be to the detriment of the data collection process with regards to effort and landings, and of the quality of the data collected. Which, in turn, will negatively affect the quality of all "end products" that rely on the effort and landings statistics (length and age distributions of the landings by fleet or fleet segment, tuning data series, etc.) and by cascade, the stock assessments.

In its 2007 report (4), the PGCCDBS states that "In order to establish quality indicators that can be used to evaluate / estimate the accuracy of the fishery statistics and biological information about the catches, it is necessary to make use of different sources of information and analyse the consistency between them with regards to the relevant parameters. Such a quality control thus needs to check different sources for the same information, e.g. logbooks compared with sale slips from the same vessel and/or trip". This is exactly what has been done for several years now in Belgium and has been done in a continuous way in 2008 and 2009.

III.F.3.3 Data presentation

The data on effort are available in the year n+1. This implicates that the data of 2010-2012 will be used accordingly.

(⁴) ICES (2007): Report of the Planning Group on Commercial Catch, Discards and Biological Sampling, ICES Advisory Committee on Fisheries Management, ICES CM 2007/ACFM:09, page 68.

III.F.3.4 Regional Co-ordination

Not applicable

III.F.3.5 Derogations and non-conformities

❖ The problem of the 'restricted' list

In the past, the idea of having a 'restricted' list of species for which landings data are recorded (see text table on page 11), has been labelled as a 'non-conformity' by the External Evaluators. There is, however, a rationale behind the idea of the restricted list. Species that do not figure in the restricted list are not deliberately omitted from the data recording system – *they are simply not landed by the Belgian fleet in quantities of any importance*. As such, the list should not be seen as an attempt 'to get away with the minimum', but rather as a reflection of the actual composition of the Belgian fish and shellfish landings. There is a historical background to the restricted list, which is based on the peculiarities of the Belgian sea fisheries

- The geographical distribution of Belgian fishing effort is limited to the North Sea, the English Channel, the Irish Sea, the Celtic Sea, South of Ireland and the inner part of the Bay of Biscay. The consequence being, that all typically boreal and Lusitanian species are absent from the landings.
- Belgium has no industrial, no distant and no deep-water fisheries. Again, this implies that all species which are typical to such fisheries are absent from the landings.

In its evaluation of the former NP proposals (the issue was not raised by the External Evaluators in relation to the 2006, 2007 and 2008 NP proposals), SGRN stated that it saw no contradiction between the requirements of the DCF and the use of a restricted list, "*as long as the 'restricted list' is a correct reflection of the species composition of the landings*". Belgium has repeatedly confirmed that this is the case.

❖ The problem of 'mixed' landings

Belgium has taken notice of SGRN's recommendation that "*pilot studies shall be implemented, where relevant, to obtain a better understanding of the composition of mixed species categories*".

In the Belgian fish and shellfish landings, a distinction must be made between two categories of mixed landings:

- Mixed landings of (relatively) large quantities of fish *pertaining to the same group of species*, such as *Lepidorhombus spp.*, *Lophius spp.* and *Raja spp.*

For *Lophius* and the *Rajidae*, partitioning of the landings by species is done as part of the routine length and age sampling programmes

The landings of *Lepidorhombus spp.* are too small (≈ 160 t live weight annually for all areas combined) to justify dedicated sampling for species segregation purposes.

- Mixed landings and sales of fish and shellfish in ***quantities that are too small to be auctioned separately.***

These mixed sales are of an extremely variegated and variable nature, and they never represent more than a few kilograms per voyage. The cost for setting up a system to disaggregate such mixed landings would be disproportionate compared to the increase in precision that might be achieved.

In the current data system collection, this category of mixed landings is recorded as 'Other demersals', 'Other pelagics', etc., together with the landings of species that are not in the restricted list. It is worth noticing that the 'Other' categories are marginal compared to the total Belgian landings (see table on page 11). In view of this, the omission of the quantities that end up in the 'Other' categories from the species-wise totals, hardly affects the reliability of the latter, and the final figures remain well within the margins of the precision levels required by the DCF.

III.G SURVEYS AT SEA

1. III.G.1 Planned surveys at sea

Belgium is expected to take part in two Priority 1 surveys, viz. the Demersal Young Fish Survey (DYFS) and the North Sea Beam Trawl Survey (BTS)..

❖ **Demersal Young Fish (and Brown Shrimp) Survey (DYFS)**

As part of the international Demersal Young Fish (and Brown Shrimp) Survey, an annual autumn sampling survey will be carried out in the Belgian coastal waters, to collect data on the abundance of juvenile flatfish (primarily plaice, *Pleuronectes platessa*, dab, *Limanda limanda*, and sole, *Solea solea*) and brown shrimp (*Crangon crangon*). The vessel used is the RV O.29 'Broodwinner' (LOA 27.2 m; engine power 221 kW). Overall, about 35 fixed sampling stations will be fished (see Table III.G.1). The location of the sampling area corresponds to the main flatfish nursery grounds along the Belgian coast (see Figure III.G.a).

Following the DCF Regulation, the DYFS is also an ecosystem survey. Belgium will incorporate the ecosystem approach for this survey from 2009-2010 onwards, but details are not available yet. In the course of 2009-2010, a detailed sampling strategy will be set up in order to collect the data for calculating the ecosystem indicators.

Previous followed methodology

All DYFS sampling stations are fished for approx. 15 min, with a standard shrimp beam trawl (beam length 6 m; codend mesh size 22 mm). Commercial fish are hand-picked from the catches, sorted by species and measured to the cm below.

Brown shrimp are first graded into 'small' and 'large' by means of a rotating shrimp riddle of the type that is also used on commercial shrimpers. From these two fractions, samples are taken of 1-2 litre each (depending on the proportions of shrimp and other organisms in the catch fractions). Samples are further sub-sampled in the lab (by weight) to an equivalent of approx. 250 shrimps, which are then measured in 5 mm size classes.

All data are stored in Excel spreadsheets at ILVO-Fisheries, and are to be entered in the sea surveys module of the Belsamp database (the main national depository for NDGP data).

Data is upload to the WGBEAM database and trial upload in DATRAS database was succesfull.

From 2009-2010 onwards, the data will be uploaded in DATRAS, also for the previous years.

❖ **North Sea Beam Trawl Survey (BTS)**

In August 2011-2013, the adult flatfish stocks (primarily plaice and sole) in the south-western part of the North Sea will be sampled with the RV '*Belgica*' (LOA 50 m), as part of the annual international North Sea Beam Trawl Survey. Samples will be taken on about 60 fixed stations in BTS Areas 2, 3 and 4 (Table III.G.1, Figure III.G.b) The position of the sampling stations and the methodology used to collect and analyse the samples are the same as in previous surveys.

Methodology

All BTS stations are fished for 20-30 min (depending on quantities to be expected and the likely presence of potentially damaging obstructions such as rocks, boulders, etc.) with a 4 m beam trawl. All commercial fish are hand-picked from the catches, sorted by species and measured to the cm below. For plaice and sole, otoliths are taken from 10 fish per cm class per BTS sub-area, to establish species- and area-specific age-length keys (ALKs).

In addition, semi-quantitative data are collected on the abundance of the most important by-catch species (both invertebrates and fish), and on the size composition of the *Cancer pagurus* by-catches.

Since 2009, CTD data are collected during each haul. This data will contribute in the calculation and estimation of some of the ecosystem indicators.

All data are stored in Excel spreadsheets at ILVO-Fisheries, but will soon be entered in the sea surveys module of the Belsamp Database. Data is uploaded to the WGBEAM database and trial upload in DATRAS database was succesfull. From 2009 onwards, the data will be uploaded in DATRAS, also for the previous years.

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2. III.G.2. Modifications in the surveys

There are no modifications in the surveys..

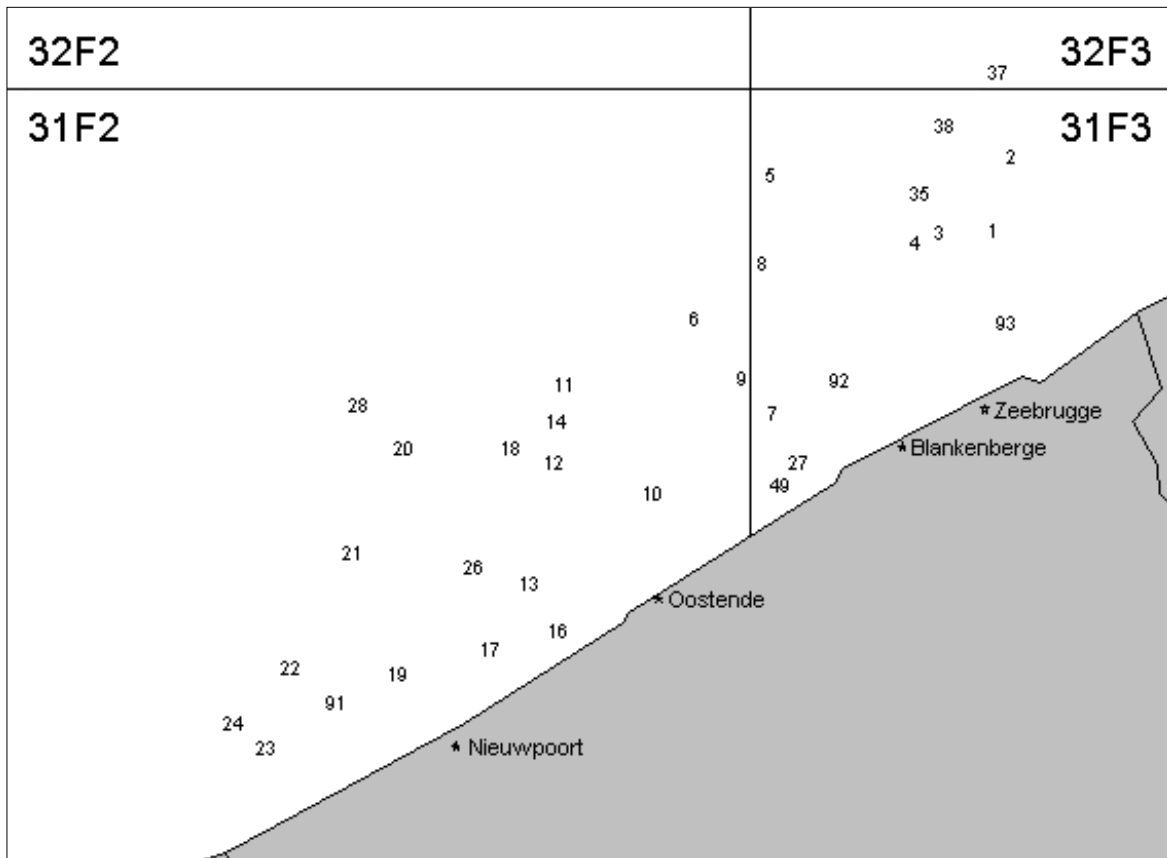


Figure G.1.a - DYFS sampling stations in the Belgian coastal waters and location of the GERS monitoring station (near the city of Nieuwpoort).

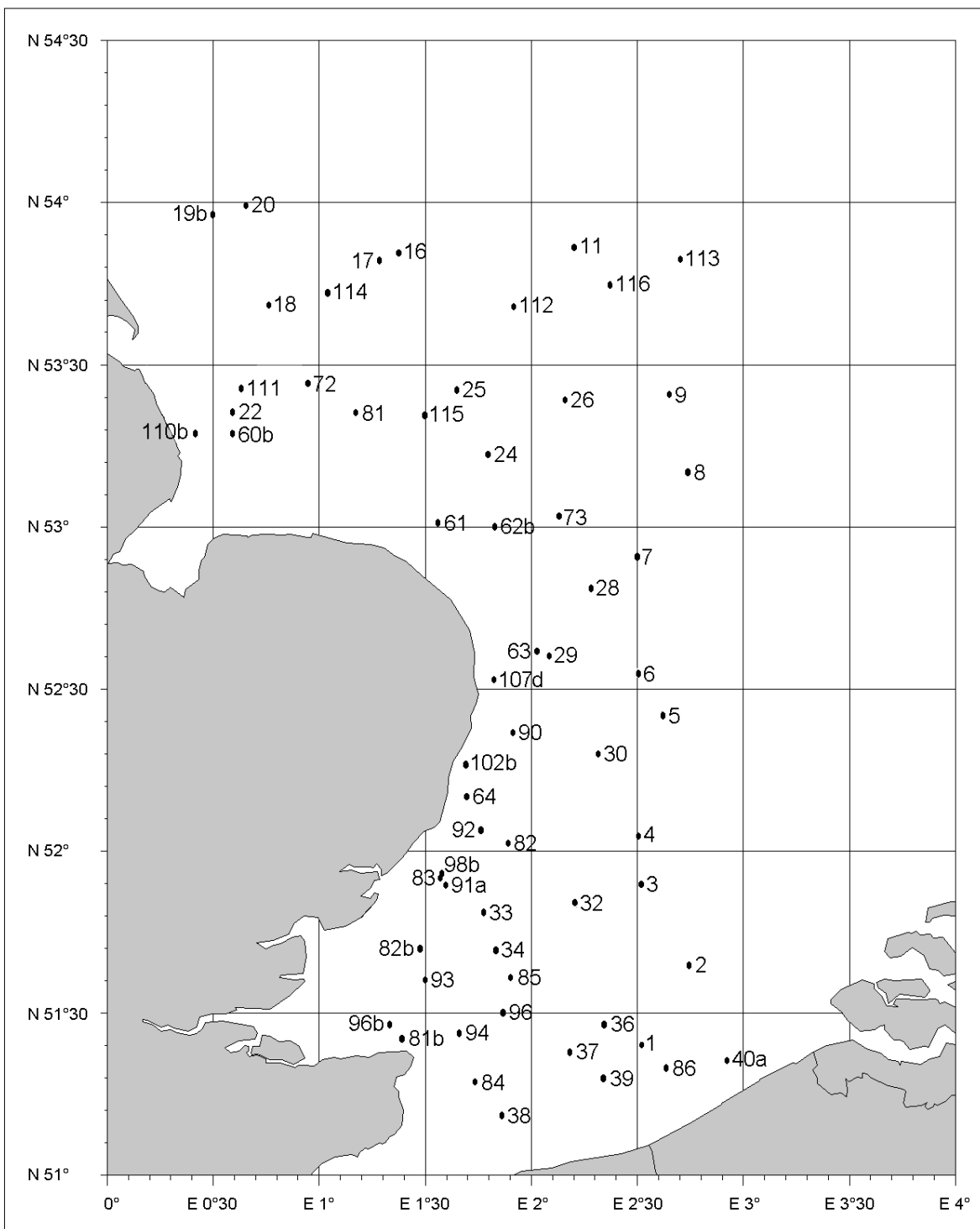


Figure G.1.b - BTS sampling stations in the south-western part of the North Sea.

III.G.3 Data presentations

The data from the BTS and DYFS will be provided to the DATRAS database and to the relevant ICES expert groups.

III.G.4 Regional coordination

The BTS and the DYFS survey are both coordinated by ICES such as WGBEAM. During the period 2011-2013 there will be looked at the possibility to exchange between member states as well scientists as technicians boarding the vessels.

III.G.5 Derogations and non-conformities.

Not Applicable

IV MODULE OF THE EVALUATION OF THE ECONOMIC SITUATION OF THE AQUACULTURE AND PROCESSING INDUSTRY

IV.A Collection of data concerning the aquaculture

IV.A.1. General description of the sector

A new regulation on aquaculture (EC) No 762/2008 of the European Parliament and of the Council has come into force, since 9th of July 2008. In respect of this regulation, the Federal Department of Economics has carried out research that demonstrates that the aquaculture sector is in a difficult position in Belgium.

The sector never really gained in importance and many enterprises have ceased their activities for financial reasons over the last years. Strong dependency on environment, disease sensitivity and important competition from imported products rapidly discourage starting enterprises. Experts expect this downward trend to continue in the coming years. A more detailed survey as prescribed by the new regulation doesn't seem to commensurate with the small scale of aquaculture in Belgium. In 2007, the total annual production amounted to 128 tons .

The 128 ton mentioned above, reflects only oyster and mussel production in the Belgian waters, no fresh water aquaculture is included in this production data, thus the given number of tons production does not reflect the total aquaculture situation in Belgium

However, compared to the total European production of aquaculture products, Belgium is still relatively small,

The aquaculture sector in Belgium is very fragmented for example the trout production in Wallonia, the French part of Belgium, used to be organized by one large feeding mill; since a few years, the scenario has changed completely: most of the trout production is owned by small family business, which in good economic situations stay on the market, but during less positive economic situations, get out of the market. However, these business re-start very easily as well when the market situation improves again

In this context, Belgium initiated during 2009-2010 the investigation of the description and the evaluation of the economic situation of the aquaculture.

Until 2010, Belgium had neither the resources neither the economic/socio-economic expert available in order to set up a full and more in depth examination of the Module of Economic Analysis of the Aquaculture sector and the Processing Industry. From 2011 onwards Belgium is

setting up an “economic/socio-economic cell” where the expertise of three units is combined: ILVO Fisheries, ILVO Social Science Unit and the Sea Fisheries Department. This new research unit is hosted at the ILVO Fisheries Department.

Some of the objectives and tasks of this “economic/socio-economic cell” are:

- trying to achieve the quality of the collected economic data for the aquaculture and the processing industry according to the DCF,
- to align the type of data collection scheme and variability indicators with DCF provisions for the economic analysis of aquaculture sector and processing industry.
- properly describe the Belgian aquaculture and processing industry. In particular, for the Aquaculture, the revision of table VA.2 according to DCF provisions which take prejudice over STECF SGECA 06-01 conclusions.
- clarify the definitions of financial cost in the aquaculture sector. In particular, the clarification how the number of hours is collected and how the FTE (national) is calculated.
- to collect also economic data from enterprises belonging to NACE group 10.2.

In the text of the present Belgium National Programme, the provisions of Council Regulation (EC) 199/2008 of 25 February 2008 are followed as well as the Regulation (EC) 762/2008 of the European Parliament and of the Council.

IV.A.2. Data acquisition

Due to the very fragmented situation of the sector, it will take time to develop a proper strategy for setting up proper statistics. Initially, Belgium will start with making an inventory of the aquaculture production sector with the respective data on production, systems used, value, etc.

The data regarding the evaluation of the economic situation of the aquaculture production in Belgium, will be available when submitting the Technical Report 2009. This data will subsequently be used to fill in the table IVA1, IVA2, IVA3 for the period 2011-2013. Thus, by the start of 2011, a description and the questionnaire to be sent to the aquaculture sector will be available.

During 2011, a proper description and analysis of the actual situation of the aquaculture in Belgium will be done. The methodologies used to collect the data from the aquaculture industry, will be set up more clearly as well during 2011. In the period 2012, 2012,2013, the variables for

the respective years 20XX-1 will be collected through the methodologies defined and will be orientated to the relevant aquaculture enterprises in Belgium.

(a) Definition of Variables.

All variables as defined in the Regulation will be collected.

(b) Type of data collection

Data will be collected by using a questionnaire (survey).
The collection of the data are purely on a voluntary basis.

(c) Target and frame population

The planned survey should include all segments.

(d) Data sources

The data collection is intended to include all segments. Based on the on-going study, segmentation will be given.

(e) Sampling stratification and allocation scheme

The National Office of Statistics will provide a complete list of the whole aquaculture population officially registered. For this segment, a 50% coverage should be achievable. However, in Belgium the aquaculture sector is very fragmented for example the trout production in Wallonia, the French part of Belgium, used to be organized by one large feeding mill; since a few years, the scenario has changed completely: most of the trout production is owned by small family business, which in good economic situations stay on the market, but during less positive economic situations, get out of the market. However, these business re-start very easily as well when the market situation improves again. For this segment it is unclear what the coverage will be, but is expected to be low. The participation in the questionnaire will be voluntary. During a pilot phase, there will be looked at enterprises which at forehand agree to participate. This in order to test the questionnaire.

IV.A.3 Estimation

Based on the outcome of the survey, the total values will be estimated per segment in the aquaculture sector.

IV.A.4. Data quality evaluation

The economic data of the aquaculture sector companies will be collected based on the official accountant information and based on the data obtained from the Nation Office of Statistics..

IV.A.5 Data presentation

The data on effort are available in the year n+1. This implicates that the data of 2010-2012 will be used accordingly.

IV.A.6 Regional co-ordination

At present not applicable as no regional co-ordination has been discussed yet regarding.

IV.A.7. Derogations and non-conformities

At present not applicable

IV.B. Collection of data concerning the processing industry

Until 2010, Belgium had neither the resources neither the economic/socio-economic expert available in order to set up a full and more in depth examination of the Module of Economic Analysis of the Aquaculture sector and the Processing Industry.

From 2011 onwards Belgium is setting up an “economic/socio-economic cell” in corporation with the ILVO Social Sciences Unit and the Sea Fisheries Department, hosted at the ILVO Fisheries Department.

The objectives and tasks of this “economic/socio-economic cell” is to:

- Ensure the quality of the collected economic data according to the DCF,
- to provide better information on estimation techniques of economic and transversal variables,
- to align the type of data collection scheme and variability indicators with DCF provisions for the economic analysis of aquaculture sector and processing industry.
- properly describe the Belgian aquaculture and processing industry. In particular, for the Aquaculture, the revision of table VA.2 according to DCF provisions which take prejudice over STECF SGECA 06-01 conclusions.
- clarify the definitions of financial cost in the aquaculture sector. In particular, the clarification how the number of hours is collected and how the FTE (national) is calculated.
- to provide a methodology how to calculate imputed value of unpaid labor.
- to collect also economic data from enterprises belonging to NACE group 10.2.

Tasks will be carried out in 2011, 2012 and 2013

IV.B.1. Data acquisition

Belgium has in the National Program of 2008, collected its data on the processing industry in the same way at it has done in 2006-2007. This approach has been approved and appreciated although some remarks have been issued during that time period. In response to the latter, Belgium has improved and altered its strategy to comply with the remarks issued before, after which the collection of data on the processing industry, has been found adequate and solid. The information collected, is based on the guidelines of the STECF SGECA 06-01, which are considered to be more solid than the rather vague parameter definitions of the DCF.

The population where the questionnaire is sent to, is the entire sector although a official reference list of fish processing companies in the strict sense of the word does not exist. Therefore Belgium compiled an extensive list to which it sends its questionnaires. Depending on the replies, Belgium continuously refines its reference list and tries to optimise the response rate and to what extend the questionnaires are completed satisfactorily. Small companies are not excluded from the extended list but most of the responses by the smaller companies indicate 'Resale without processing' or are small fish shops. This is not a drawback but means that the limit of the list of the fish processing companies has been reached. Belgium will continue to increase the effectiveness of its sampling strategy based on the final company list.

Although in the past, the response rate was rather low, the response rate to the questionnaire sent out to the processing industry for 2008 (sent out in September/October) was for the first time much higher. The main reason why the response rate is higher, is assumed because of a different way in approaching the different companies. In stead of only sending a letter through to the different companies, the receiving of the questionnaire was followed up as well. For 2008, this was done by a technical person of the ILVO institute. However, as this can not be done in subsequent years by this person (as this person is only working 50% of a FTE and the main tasks are data processing), the ILVO Social Sciences Unit puts in their expertise since 2010 in order to follow up a good response rate of the questionnaire.

Although the response rate to the current questionnaire is higher, the interaction between the Programme Proposals and the fish processing industry is a growing process and care should be taken not to head into strategies and objectives that seem feasible but fail to comply adequately. The ILVO Social Sciences Unit is hence in full progress of establishing and describing the best strategy to comply with the requirements of the DCF, incorporating the comments made by the different expert groups and bodies over the past years regarding its encountered difficulties. This will be available by mid 2010 and will be used from 2010 onwards and during 2011-2013.

Due to a too limited time available, it was not possible yet to finalize the re-vised questionnaire. However, as the questionnaire is sent out in September/October, the re-vised questionnaire will be used from 2010 onwards.

Additionally, based on the experiences from 2010, further refinement will be done during 2011-2013.

(a) Definitions of variables

- **General comment**

Please enter your answers in the coloured cells of the tables. All quantities to be given in

metric tons; all costs and values to be given in thousand Euros (kEuro). If needed, with one digit after the comma.

▪

▪ **Income**

Income from sales and services: Total of invoices, VAT included, for sales of goods and services supplied to third parties. Inclusive of costs for transport, packaging, etc., even if these are mentioned under a different category in the invoices. Price reductions, rebates and discounts to be deducted from the total.

Other income: All types of income, VAT included, other than from sales of goods or services provided to third parties.

▪ **Production costs**

Wages and salaries: Total gross (!) remuneration, in cash or in kind, payable to all persons on the enterprise's payroll, including gratuities and bonuses, 13th month payments, payments for overtime and night work, indemnities for travel and lodging, cost-of-living and family allowances, severance payments, tips, commissions, attendance fees, etc., as well as extra-legal social security contributions (e.g. extra-legal hospitalisation insurance).

Social security costs: Employer's social security contributions to schemes for retirement, pensions, sickness, maternity, disability, unemployment, occupational accidents and diseases, as well as other schemes in order to secure for their employees the entitlement to social benefits.

Energy costs: All purchases of gas, electricity, oil and fuel, as long as they are used as an energy source, and not for resale or as primary material in the transformation process. Inclusive of VAT.

Purchase of raw materials: All purchases of primary or partly processed materials of animal or plant origin, for use in the transformation process. Inclusive of VAT.

Packaging: All costs related to packaging. Inclusive of VAT.

Other production costs: All other running costs not included in staff costs, energy costs, purchase of raw materials and packaging, except for investments that are depreciated. Other production costs hence includes: consumables, water, maintenance and repair of equipment and machinery, office supplies, sub-contracting, costs for accounting and legal assistance, banking costs, insurance premiums, meeting costs, contributions to professional organisations, postage, telecommunication (phone, fax and internet), publicity, rents, etc.

▪ **Fixed costs**

Depreciation: Consumption of fixed assets as a result of normal wear and tear and foreseeable obsolescence, including provisions for losses of fixed assets as a result of accidental damage, according to

the standard depreciation rules.

Financial costs, net: Interests, commissions and costs connected to debts and the depreciation of costs connected to loans. Inclusive of VAT (when applicable).

Exceptional costs: Costs not resulting from the normal activities of the enterprise. Inclusive of VAT (when applicable).

- **Taxes**

Taxes, other than VAT: Taxes on profit or loss on ordinary activities, taxes on extraordinary profit or loss, as well as all other taxes, except VAT.

- **Profits**

Profit for the financial year: Profit of the reference period after tax deduction (profit transferred to the liabilities of the balance sheet of the next year) (= accounting column 140).

- **Investments**

Gross investments in tangible goods: Value of all tangible goods like terrains and buildings, installations, machinery and equipment, furniture, car park, leasing, other tangible fixed assets, assets under construction, payments on account, etc. (= accounting columns 22/27).

- **Financial position**

Net capital: Sum of capital and reserves *plus* capital borrowed in the long term *minus* extended fixed assets (= accounting columns 10 + 11 + 12 + 13 + 140 + 141 + 15 + 16 + 17 – 20 – 21 – 22/27 – 28 – 29).

Debts: Debts payable within one year, debts payable after more than one year and deferred accounts (= accounting columns 17/49).

Balance sheet total - Assets: Accounting columns 20/58.

Balance sheet total (liabilities): Accounting columns 10/49.

- **Volume and value of the end products according to the PRODCOM classification**

Please fill in at least the *shaded cells* in this table. The table is about the volume and the sales value of the end products when leaving your enterprise.

Reference year	
Year to which the data refer	2005

Typology of company's activities		
Resale without processing		Tick where appropriate Multiple answers are allowed
Processing for sale to the national market		
Processing for export		

Income		
Income from products and services		kEuro
Other income		kEuro

Production costs		
Staff costs	Wages and salaries	kEuro
Staff costs	Social security costs	kEuro
Energy costs		kEuro
Purchase of raw materials		kEuro
Packaging		kEuro
Other production costs		kEuro

For ILVO use only	
Invoer gegevens	
Datum	
Uitvoerder	
Controle op invoer	
Datum	
Uitvoerder	

Details on purchase of raw material				
Fisheries products of Belgian origin		ton		kEuro
Fisheries products of foreign origin, EU		ton		kEuro
Fisheries products of foreign origin, non-EU		ton		kEuro
Aquaculture products of Belgian origin		ton		kEuro
Aquaculture products of foreign origin, EU		ton		kEuro
Aquaculture products of foreign origin, non-EU		ton		kEuro

Fixed costs		
Depreciation		kEuro
Financial costs, net		kEuro
Exceptional costs		kEuro

Taxes		
VAT		kEuro
Taxes, other than VAT		kEuro

Profits		
Profit for the financial year		kEuro

Investments		
Gross investments in tangible goods		kEuro

Financial position		
Net capital		kEuro
Debts		kEuro
Balance sheet total - Assets		kEuro
Balance sheet total - Liabilities		kEuro

Employment	
Number of employees (average over the year)	
Number of full-time equivalents (average over the year)	
** of which labourers and technicians	
** of which administrative personnel	
** of which management	
** of which other personnel categories	

Under “scientific analysis” for the processing industry, it includes as well the evaluation of the current used questionnaire, setting up the methodology for communicating with the sector and follow up the results. The questionnaires are received in the institute, the data are looked at, categorized in different categories, based on the number of employees (0-10 ; > 10-50; . As Belgium wants to increase the quality of the questionnaire and its results from it on a long term base, the ILVO Social Sciences Unit will put in their expertise in the communication to the sector around this questionnaire as well.

(b) Type of data collection

The type of data collection is Census. The data collected are coming from the official account books of the companies.

(c) Target and frame population

The population where the questionnaire is sent to, is the entire sector although a official reference list of fish processing companies in the strict sense of the word does not exist. Therefore Belgium compiled an extensive list to which it sends its questionnaires. Depending on the replies, Belgium continuously refines its reference list and tries to optimise the response rate and to what extend the questionnaires are completed satisfactorily. Small companies are not excluded from the extended list but most of the responses by the smaller companies indicate 'Resale without processing' or are small fish shops. This is not a drawback but means that the limit of the list of the fish processing companies has been reached. Belgium will continue to increase the effectiveness of its sampling strategy based on the final company list.

(d) Data sources

The data are coming from the official accountants of the companies.

(e) Sampling stratification and allocation scheme

The list where the questionnaire is sent to, is assumed to be representing the whole population as the list is based on the official Business Register.

A stratification strategy is proposed, being:

- < 10 employees
- >10 employees.

IV.B.2. Estimation

The data collected are based on the type Census, thus no estimation procedure is needed.

IV.B.3. Data quality evaluation

The data received are checked with the official data published through the Department of Economic Affairs.

IV.B.4. Data presentation

The data that can be used in 2011, will be the data for the year 200-2010. The Belgian companies often have their accounting year from 1st of April 2009 up to the 31st of March 2010. Thus these data are mostly available by September-October 2010 and will subsequently be used in the year 2011.

IV.B.5. Regional Coordination

Not applicable.

IV.B.6. Derogations and non-conformities

Belgium has experienced several difficulties over the past years (2006-2008) regarding Module K (old DCF) - Data concerning fish processing industry (see NPs, TRs and Reply-to-the-Commission's 2006-2007). Albeit its strategy was clear and found correct, the data and its results were not up to standard, mainly due to the low overall response rate and the impossibility of the companies to answer to the questionnaire in full detail. This hampered seriously the quality of the collected and aggregated data, which has been the major comment by SGRN's evaluations regarding this Module. Therefore the straightforward continuation of the used strategy is no longer desirable.

As already stated in its Reply-to-the-Commission-on-TR-2007, and in the revised Program 2009-2010, Belgium has extended the partnership for the execution of the NDGP with the ILVO-Social Sciences Unit (ILVO-Landbouw & Maatschappij). The Social Sciences Unit studies the social and economic aspects of production and processing of (sub)sectors of the agro-industrial complex. As such it holds experience, among others, in the study of vegetable marketing, energy and material flows, and the green house sector. The development of monitoring instruments and the analysis of actor-network interactions, are key elements of the activities of the Social Sciences Unit (see Annex for a detailed description of the new partner)

The partnership with the Social Sciences Unit has only been finalised shortly prior to the compilation of the NP 2011-2013. The Unit is hence in full progress of establishing and describing the best strategy to comply with the requirements of the DCF, incorporating the comments made by the different expert groups and bodies over the past years regarding its encountered difficulties. For obvious reasons, the proposed data collection system will show a time-lag of at least one

year, since the data collected in 2011 at the best will refer to the financial situation of the processing companies in 2010.

With respect to this Module of the DCF, it should be emphasised that Belgium has very few processing companies that are entirely committed to fishery products. Most companies do have different types of processing activities, of which fish and shellfish may be one, but not necessarily the most important one.

V. MODULE OF THE EFFECTS OF THE FISHING SECTOR ON THE MARINE ECOSYSTEM

Data for calculating ecosystem indicators are collected through surveys (see Table III.G.1), During the BTS data for the ecosystem indicators 1,2 and 3 are collected from 2009 onwards.

As stipulated under section III.G.1, following the DCF Regulation, the DYFS is also an ecosystem survey. Belgium will incorporate the ecosystem approach for this survey from 2009 – 2010 onwards, but details are not available yet. During the program 2009-2010, a detailed sampling strategy will be set up in order to collect the data for calculating the ecosystem indicators. During the previous NP year, it was not possible to incorporate the data regarding ecosystem indicators, as the vessel used, ‘De Broodwinner’ is a training vessel for young fishermen as well. As a result, there is not enough space available on the vessel to extensively collect all needed data for the relevant ecosystem indicators.

In addition, through the sampling by métier of biological variables, the ecosystem indicators 4, 5, 6, 7 and 8 will be collected. From 2009-2010 onwards, Belgium will incorporate the collecting of this data and a detailed sampling strategy will be set up (See Table III.C.3).

Through collecting of data for economic variables (see Section III.B.1, Table III.B.3), the ecosystem indicator 9 will be calculated. In addition, VMS data collected by the Sea Fisheries Department will be used from 2009 onwards. These data are already available, but the procedure for data aggregation is not established yet. Based on the current VMS data collection, the VMS data are registered every two hrs during the trip of the vessel.

The Fuel efficiency indicator will be calculated based on the value of landings calculated as the product of landings by species and the cost of fuel. The indicator would be calculated for each métier according to level 6 métiers.

The source data of the cost of fuel , are the company account where actual cost paid is available.

The source of data for collecting the value of landings and the price of the species are the Fishstats database, which is the official database of DvZ and contains the information from sales notes and log books.

In the section and Table III_B_3, a detailed overview is given of data sources and methodologies used for collecting economic data.

VI. MODULE FOR MANAGEMENT AND USE OF THE DATA

VI.A Management of the data

❖ Sea Fisheries Service

The Sea Fisheries Service has extensive databases (FishStats) with landings, effort and economic data on the Belgian sea-going fishing fleet that will be complemented with the information gathered during the 2007, 2008 and 2009-2010 NDGPs. These data are delivered to the ILVO-Fisheries and uploaded in the national database Belsamp

❖ ILVO-Fisheries

The results from the North Sea Beam Trawl Survey are currently stored in a central WGBEAM database, held by IMARES on behalf of ICES.

Development of new databases

❖ ILVO-Fisheries

In April 2003, ILVO-Fisheries started with the development of a central depository for NDGP-data (the so-called Belsamp database), in co-operation with a sub-contracted software developer. The Belsamp database has a modular structure, with (i) separate modules for the quality control, storage, partial treatment and retrieval of fisheries statistics, data from market and discard samplings, survey data, etc., and (ii) peripheral modules with vessel registers, taxonomic information on the most important fish and shellfish species, area and stock descriptions (in terms of statistical rectangles), etc.

The database is developed in such a way that it is:

- Error-proof, in the sense that it has all the necessary internal validation routines and redundancy checks to make sure that the quality of the data is guaranteed.
- Flexible, so that it can easily be appended with user-defined new modules (e.g. for new surveys).
- Transferable to portable computers, so that it can be taken to meetings outside the institute.
- Compatible with other applications, in the sense that is able to produce outputs that can easily be imported into other applications in a Windows environment.
- Easy to maintain, so that it can easily be maintained by the institute's staff, without costly, long-lasting support contracts with third parties.
- Compatible with the Commission's requirements on data communication and data exchange formats.

A copy of the framework contract with the software developer, in Dutch, was provided as an Annex to the 2005 NP proposal.

However, the national database cannot extract data up to metier level and the discard database is still a simple excel file. The national database is developed in Access 2003, and with upgrading the computers in the ILVO to 2007, problems were encountered in using the database. Additionally, by implementing the métier approach in the current National database, being Belsamp, too many problems and limitations were encountered. Further limitations are expected to be encountered in uploading the data from self sampling and from concurrent sampling.

Therefore, Belgium need additional expertise in order to solve the present limitations of the national database in order to comply with the requirements in the DCF EC no. 199/2008 (Art. 13 en 16), EC Regulation no. 665/2008 (art.8), and the Regulation EC no. 1224/2009.

All data are continuously backed up by the server of ILVO and the data in the present databases can only be accessed by a limited number of users, each with their username and password. All PC's where the databases are run on, are protected with a username and password as well.

Regional database for the North Sea

In 2006, the North Sea countries have started exploring the potential of a regional database for the North Sea, with a view to its future use as a regional depository for fisheries statistics (primarily landings and effort data) and biological data.

Such a move implies that large amounts of data will need to be uploaded from the national database to this regional database. This can best be done by means of automated exchange protocols, to make sure that data transmission is flawless and in the proper format. In the budget proposals for 2007 , 2008 and 2009, a *pro memore* cost was/is foreseen for the development of such protocols.

In 2010, Belgium is looking at effectively being able to upload national data to a regional database. In order to do so, queries need to be developed to load data from the national database to the regional database. As this expertise, neither the time, is available at the ILVO, external expertise will be needed. This expertise is available at the Marine Data Centre (located in VLIZ).

Management of Belgian fishery data can be split up in three basic activities:

- Management of the database management,
- management of the data,
- maintenance and development of software around the database.

The management of the data base includes the operational aspects of the data base including

upgrading database software, back ups, protection of the data, managing the access to the database and providing meta information on the contents of the data base. This task is delegated to a data base manager from ILVO IT and from the Database Centre of VLIZ.

Management of the data includes validating and quality check of the data, before they are entered in the data base. The data to be managed may originate from different sources. They are either collected by one of the partners in the DCF or provided from elsewhere. Each data domain has a specific data manager responsible for the input and quality of the data. For example, a research vessel survey is considered as a separate data domain.

The software development includes the production of applications to enter 'primary data' offline and produce exchange files. Wherever possible, first quality checks are built in these applications to prevent entering obvious mistakes. Other applications are developed to check the exchange format and cross check data before they are submitted to the database. Also application have been developed to extract data from the database and to produce aggregations and views on the contents of the data base.

Data protection.

The servers at ILVO Fisheries running the Belsamp, the VMS database and the future new biological database, and the server at the Departement of Fisheries, running the fisheries database are located in a climate controlled room where only "need to be there" employees can enter. The room has a dedicated fire detection and fire extinguishing system. An entrance control system is in place.

Every working day a backup of the data is made on a central server. The backup method gives the possibility to recover older versions of data sets that might have been corrupted or were lost. The versions to choose from are the ones 1, 2, 4 days old, 1, 2, 4 weeks old, 1, 2, 3 months old and 1 or more years old.

Only users from ILVO fisheries and Department of Fisheries, for whom this is necessary, can log on to the servers after having been provided with a secure username&password combination.

The data in Belsamp and at the Department of Fisheries can only be accessed, modified or deleted on a 'need to be able' basis for a select group of trusted users. To monitor this, an administration is kept up to date with information about which persons had what permissions during what period.

The ILVO Fisheries researchers can only obtain read access to the data after approval and after signing a document in which the user states that he/she will not use the data in any way that might interfere with the Netherlands privacy regulations.

Primary data.

Belsamp contains information from the fishery. These are basically all primary data ***subject to access restrictions for most users. Most data in this database are exhaustive:***

- Landing data: reported landings in Belgium and of Belgian vessels landing abroad;
- Trip information such as dates, geographical fishing position, effort data, gear and mesh size for the same trips where landing data is available;
- Vessel data: a historical list of fishing vessels with their characteristics such as length and power;
- Sales slip data from the fish auctions with information on size grades and prices;
- VMS data: these are the number of geographical positions where fishing vessels were located at a specified time in history.

The biological database is at present stored as Excel and Acces and contains biological data from research vessels surveys, biological sampling from discard trips and market sampling. In recent years the collection of these data was carried out in the DCF framework. The data in this data base are stored in a detailed data format. The following data are maintained:

- Trawl survey data for all trawl survey carried out by Belgium. Data are recorded at the lowest level of aggregation and consists of trip information, haul information and individual measurements on all species recorded. Hydrographical measurements are stored at the haul level.
- Discard data contain individual measurements of discards and landings from observer trips (including those carried out in the past). The lowest level of aggregation is haul-based.
- Biological measurements on landings consisting of measurements of length frequencies of the landings and biological parameters age, length, weight and sex measured on individual fish.

Aggregated data

No aggregated data are stored in the data bases. When needed, data are extracted ad hoc from the databases and then processed by some peer reviewed computer programs using SQL queries.

Additional remark from Belgium

The Belsamp database developed over the past years is now completed for the Fishstat Module, but still has to be further developed for the module of discard, survey and market sampling. The biological data are at present stored in Excel and Acces files.

The designer of Belsamp was developing these latter further during 2009, in order to finalise the Belsamp database, and as such to be used as a full depository for all historical and new data collected under the DCF. However, during this further development process, the analyse showed that for the growing amount of data and the growing need for flexibility and quality under the DCF, the present database will to the future, not completely comply with the requirements anymore. As more data over the coming period 2011-2013 and further, will need to be inserted into the

database, Access is not the correct structure to build the database further out. In order to store all data (inclusive VMS data), two databases need to be further designed and developed: one for the biological data, one for extending the Belsamp database. Therefore, the VLIZ Data Centre (www.vliz.be) has been contacted to draft an assignment, based on the requirements:

Requested Sub contract assignment

Establish a SQL Server database with corresponding user interface for storing and managing biological data as requested under the DCF EC 199/2008 .

Mission statement:

1. Analyze existing data formats and data streams within the ILVO Fisheries Department of through meetings and interviews with relevant persons.
2. Listing of user needs and establish functional analysis
3. Prepare a data model for
 - a. Discards / landing
 - b. Surveys
 - c. Market sampling
4. Implement the data model in a SQL Server database
5. Designing a user interface in Access to information consulting and introduce
6. Import of existing data (Discards / landing, Surveys, Market) from 2002
7. Automate the import of data from an electronic measuring board in the database
8. Automate the import of data from existing excel forms
9. Preparation of export formats and queries in terms of reporting and analysis
10. Installing and configuring SQL Server
11. Testing the database
12. Support (management and maintenance of existing functionality) after installation
13. During the assignment is regularly consulted with the persons concerned

Forecasted Budget: € 37,000.

Expected duration: 18maand.

This amount is added in the Financial Tables, sheet A2 and in the overviews.

VI.B. Use of data -

ICES and STECF are the main users of the data collected under the DCF Data from Belgium and other Member states are used in the different working groups to provide advice to fisheries management conducted through the Common Fisheries Policy.

VII. Follow up of STECF-recommendations

For the previous NP-proposals, SGRN gave their recommendations to the MS. An overview of the follow-up of SGRN recommendations for Belgium is given below:

❖ SGRN - July 2004

There were no recommendations that affected the 2008 NP proposal.

❖ SGRN - December 2004

SGRN: General comment on Precision levels for discard estimates

SGRN notes that several countries have reported difficulties in reaching the precision levels established in the DCF for discard sampling, and for this reason they have requested for derogation. SGRN acknowledges the fact that due to the variable nature of discards, as shown by several studies [...], the precision levels required by the DCF are in many fisheries excessive and thus only achievable at great economic expense.

[...]

SGRN has reservations about obtaining derogation purely on the grounds of the inability to reach the required precision level, since this might be seen as a permission to stop discard sampling. SGRN concluded that the problem of excessive precision under the MP cannot be resolved in a simple way. It suggests that MS attempt to achieve the highest precision possible within the constraints of excessive cost, and that this problem will need to be considered again in the revision of the DCF.

Responsive action taken: Over the past four years, Belgium has made serious efforts to extend its discard sampling programme and to direct sampling effort primarily to those fisheries where the Belgian fleet is assumed to contribute most to discarding. These efforts have resulted in the hiring of three sea-going observers (on a total NP-staff of 12) and in the number of planned observer trips having gone up from six in one fishery (flatfish directed beam trawl fishery in the Irish Sea) in 2002, to around 30 in five fisheries (flatfish directed beam trawl fisheries in the North Sea, the Eastern and Western Channel, the Irish Sea and the Celtic Sea) in 2008 (for details, see Section 5.5 and Table 5.3). For the moment, however, ILVO-Fisheries is on the limit of its carrying capacity with regards to at-sea sampling, and any further improvement of the quality of discard data will have to be realised through international co-operation.

SGRN: General comment on CPUE series for tuning purposes and associated length and age sampling

SGRN noted that in many cases, fleet CPUE series which are used for tuning assessments under the MP also include length and age compositions associated with the fleets. In cases where a fleet has declined over time and no longer supports sufficient landings to

justify the collection of length and age data, SGRN accepts that these fleets are eligible for derogation and should be moved out of the MP. However, if the changes appear to be only a temporary switch in activity of the fleet such as might occur following quota restrictions, then MS should be encouraged to maintain the time series by including the length and age samples under the EP.

Responsive action taken: There is one Belgian CPUE data series that falls into this category, viz. the one for FU 5 *Nephrops*. Over the past years, the Belgian *Nephrops* directed fishery in FU 5 has constantly been on the decline, and the number of specialised *Nephrops* trawlers has fallen to such a low number that the CPUE data are no longer fit for tuning purposes. Nevertheless, Belgium will continue collecting CPUEs on this fishery, as the basic data to the series (landings and effort by fishing trip) are collected anyhow as part of the routine landings and effort data recording system (also see Section 6.5).

❖ **SGRN - June-July 2005**

There were no recommendations that affected the 2008 NP proposal.

❖ **SGRN - December 2005**

SGRN: General comment on Reporting of landings abroad

The Evaluators commented that several MS did not provide text on the landings of fish either in other MS or in countries outside the EU. SGRN reminds MS of the following articles in Council Regulation (EC) 2847/1993:

Article 9.1

Auction centres or other bodies or persons authorised by Member States, which are responsible for the first marketing of fishery products landed in a Member State shall submit, upon the first sale, a sales note to the competent authorities of the Member State in whose territory the first marketing takes place.

Article 11.1

Without prejudice to Articles 7, 8 and 9, the master of a Community fishing vessel who:

- *tranships to another vessel, hereinafter referred to as "the receiving vessel", any quantities of catches of a stock or a group of stocks subject to a TAC or quota irrespective of the place of transshipment, or*
- *directly lands such quantities outside Community territory,*

shall at the time of the transshipment or of the landing, inform the Member State whose flag is flying, or in which his vessel is registered, of the species and quantities involved and of the date of transshipment or of landing and of the location of catches by reference to the smallest zone for which a TAC or quota has been fixed.

Article 15.1

Before the 15th of each month, each Member State shall notify the Commission by computer transmission of the quantities of each stock or group of stocks subject to TACs or quotas.

Article 15.2

The Commission shall keep available to Member States on computer the notifications received pursuant to this Article.

SGRN regards these articles as fully covering the requirement to report landings abroad and expects that MS comply to this requirement, regardless as to whether this is explicitly mentioned in their NP Proposals or not.

Responsive action taken: Belgium has a well-established data recording and exchange system for landings by foreign vessels for either first sale in a Belgian auction or transshipment to the flag country of the vessels concerned. Conversely, Belgium is receiving full information from the relevant MS (there are no Belgian landings outside the EU) on the landings by its flag vessels into other countries. We therefore can conclude that the Belgian data collection system for landings and effort is in full compliance with the above recommendation (also see Section, 5.1, para. International data exchange).

SGRN: General comment on the Interpretation of biological sampling requirements

2006 is the first year when NP Proposals should reflect the amended version of the DCF (EC Regulation 1581/2004). In the new version of the DCF, it is stipulated that MS must apply a sampling strategy targeting the precision levels specified in para. 3,a,i,b for the biological sampling (length and age) of their catches. The sampling intensities defined in Appendix XV of the revised version of the DCF and calculated from the quantities landed, have since then become a "fallback option", in case the target precision level cannot be achieved.

According to the provisions of the new DCF, sampling intensities of the mandatory stocks must be set at least at the sampling levels of the "fallback option" and preferably at levels that allow reaching precision level 1, which is the lowest precision level defined in the DCF. SGRN is of the opinion that, for each sampled mandatory stock, MS should ensure a sampling design – either on their own or in co-operation with other MS – that covers the main fishing activities and the seasonality of the fisheries. Moreover, if the stock is under a Commission Recovery Plan, the sampling design should target precision level 2 instead of level 1.

In the light of the revised approach, a mandatory stock for which the exemption rules do not apply, must be sampled for length and, where appropriate age, according to the general principles set out in the previous paragraphs, and the low levels of sampling of the "fallback option" can never be used as an argument not to sample the stock.

Responsive action taken: Belgium has never used the low sampling levels of the "fallback option" as an argument for not sampling a particular species or stock. Instead, target sampling levels have always been adjusted upwards (in a number of cases at

national expense) to guarantee at least some degree of spatial and temporal coverage (for details on planned and achieved sampling levels, see Table 8.1 in this or in previous years' NP proposals, and Table 10.1 in the 2005 or 2006 Technical Reports).

SGRN: General comment on Accessibility and compensation of commercial fishing vessels

SGRN reminds MS that they have the obligation to provide access for sea-going observers to any fishing vessel. SGRN recommends, however, that this should, if possible, be done through co-operation with the fishing industry, which has proven its effectiveness in many MS.

In relation to payments, SGRN distinguishes two situations in which ship owners and/or skippers may be paid by MS under the DCF:

- Ship owners and/or skippers receive a payment for assistance put into the sampling operations, and/or costs induced by the observers (safety equipment, food, etc.) or the sampling process (loss of value of landed fish owing to removal of otoliths, etc.) (= compensation); and
- A payment for having the observers on board (= reward).

SGRN recommends that the DCF should provide the opportunity for paying skippers compensations, because these can be considered as normal sampling costs. SGRN further recommends that the DCF should provide the opportunity for paying rewards by individual MS only if paying rewards serves the purpose of increasing the quality of the data collection through increasing the pool from which vessels can be randomly selected. SGRN recognizes, however, that this does not relieve MS from their tasks of providing access to any fishing vessel as is laid down in the DCF.

Responsive action taken: In Belgium, observer access to fishing vessels is on a voluntary basis. So far, the system has worked satisfactorily, although it must be admitted that the number of accessible vessels is relatively small. The problem has recently (April 2007) been discussed with the (new) director of the Belgian fishermen's organisation, and it was agreed that a joint initiative (ILVO-Fisheries - PO) would be taken to increase the pool of accessible vessels.

In Belgium, vessels are **not** being paid rewards for taking observers and it is the intention to hold on to this approach.

SGRN: General comment on Sampling information and precision levels for economic data (under Module J)

SGRN recognises the difficulty of achieving standard precision levels for fleet economic data. SGRN also notes that the calculation of precision levels requires that samples are random or at least, reflect some degree of randomisation. SGRN urges MS to provide full and clear information in their NP Proposals concerning sampling and survey procedures in order that the likely quality and reliability of the data can be assessed.

Responsive action taken: Details on the sampling methodology under Module J are given in Section 10.1 of the present document. Belgium recognises that a data collection system based on voluntary responses does not necessarily yield a random(ised) picture. There are, however, administrative and political constraints that prevent the introduction of other approaches (see document *Reply to the request by the European Commission for further information on the 2005 Technical Report*, September 2006).

❖ **SGRN - July 2006**

SGRN: General comment on Derogation rules regarding low level of landings

In the case of decreasing landings of a species, for instance from stocks under recovery plans or stocks below standard biological limits, the strict application of DCF rules can result in a decrease in the number of samples carried out and in the quality of the estimates. Even in the case of achieving a specific precision target, the market length and age sampling could be less accurate and the fishing mortality estimates could be unreliable, e.g. such as in the case of a species not being landed but catches continue to be discarded.

SGRN proposes that MS should undertake to sample to precision levels rather than on the basis of historical landings so that the mortality estimates derived from catch age and length sampling are accurate and achieve a high precision for the individual species and stocks affected.

Responsive action taken: In as much as possible, Belgium has always tried to sample at levels that guarantee sufficient spatial and temporal coverage, also for species where the formal sampling requirements are very low in view of the small quantities landed from a particular species or stock (see Table 8.1 in this or in previous years' NP proposals for details on national sampling targets compared to the MP-requirements).

❖ **SGRN - December 2006**

SGRN: General comment on Parameter definitions for the processing industry

Firstly, SGRN recommends that MS should comply with the provisions of the DCF. Nevertheless, SGRN recognises the difficulty of collecting economic data for the processing industry, also considering that the definition of several parameters in Appendix XIX of the DCF is not clear. SGRN is aware that a Workshop on the Processing Industry was held early in 2006 to propose precise definitions of the economic parameters to be adopted for the fish processing industry in the new DCF. In the meantime, SGRN suggests that MS consider the outcomes of the WS, particularly concerning the definition of the parameters and recommends that the MS provide clear information in their NP Proposals and Technical Reports concerning the measurements of the parameters listed in Appendix XIX of the DCF.

Responsive action taken: The recommendations of the Workshop on the Processing Industry, mentioned in SGRN's comment, were taken into account when putting together the questionnaires that were sent to (fish) processing companies as part of the 2006 NP

and that will be used again as part of the 2007 and 2008 NPs (for details, see 2006 Technical Report, Section 13.1).

VIII LIST OF DEROGATIONS

List of request of derogations:

Short title of derogation	NP Proposal section	Derogation approved or rejected¹	Year of approval or rejection of past requests for derogations
Discard sampling on brown shrimp fishery	II.C.1	Requested	Not approved
OTB_DEF_>=100_0_0, the demersal trawl fishery in IV and VIId.	II.C.1	Requested	Approved 2009-2010

IX. COMMENTS, SUGGESTIONS AND REFLECTIONS

- 1) A significant amount of work has and still is to be carried out to adjust the national database to the new sampling elements and the implementation of the métier approach. There is as well still time and financial support needed to develop the associated and correct software for managing the data, performing quality checks and the production of aggregates. The implementation of the concurrent sampling, as well the self-sampling has a significant impact on the logistics as well.
- 2) Regarding the collection of biological data, in order to calculate the ecosystem indicators, only minimal changes needed to be done i.e. during the surveys DYFS and BTS.
- 3) The financial form for 2011-2013 is preliminary. The labor rates are based on those of 2009-2010 + 10%.
- 4) The list of coordination meetings and support for scientific advice are preliminary. The Program needed to be finalized by 31st of March and this is too early to have the finalized agenda for 2011.
- 5) As the report of the SGRN-04 (Hamburg 2009) was not released yet, Belgium could not take into account the recommendations of this report.
- 6) Regarding the Regional Database, Belgium is in favor of a regional database that has the potential to be used as a tool for regional coordination of sampling schemes. Belgium will follow the recommendations and decisions taken by the RCM's.

List of acronyms and abbreviations

ALK	Age-length key
BTS	North Sea Beam Trawl Survey
CEFAS	Centre for Environment, Fisheries and Aquaculture Science (England)
CL	Carapace length (standard measure for whole <i>Nephrops</i>)
CPUE	Catch per unit effort
DCF	Data Collection Regulation
DYFS	Demersal Young Fish (and Brown Shrimp) Survey
EC	European Commission
EIFAC	European Inland Fisheries Advisory Commission
EP	Extended Programme under the requirements of the DCF
FU	Functional Unit (geographical definition of <i>Nephrops</i> stocks)
GERS	Glass Eel Recruitment Survey
GT	Gross tonnage
ICES	International Council for the Exploration of the Sea (Denmark)
ILVO	Institute for Agriculture and Fisheries Research (Belgium) (formerly Centre for Agricultural Research, CLO)
INBO	Research Institute for Nature and Forest (Belgium)
IMARES	Institute for Marine Resources & Ecosystem Studies (Netherlands)
JRC	Joint Research Center (Italy)
LOA	Length over all
LPUE	Landings per unit effort
MP	Minimum Programme under the requirements of the DCF
MS	EU Member State(s)
NDGP	(Belgian) National Data Gathering Programme
NP	National Programme
PGCCDBS	ICES Planning Group on Commercial Catch, Discards and Biological Sampling
RAC	Regional Advisory Council
RCM	Regional Co-ordination Meeting
RCM NEA	Regional Co-ordination Meeting for the North-East Atlantic
RCM NS&EA	Regional Co-ordination Meeting for the North Sea & the East Arctic
RFO	Regional Fisheries Organisation
SGRN	STECF Sub-group on Research Needs
STECF	Scientific, Technical and Economic Committee on Fisheries
TAC	Total allowable catch
VIS	Vis Informatie Systeem (regional database with all information related to fresh water fish in Flanders)

VLIZ Vlaams Instituut voor de Zee
WGBEAM ICES Working Group on Beam Trawl Surveys
WGMG ICES Working Group on Methods for Fish Stock Assessment
WGNSSK ICES Workgroup on Demersal Fish in Northern Sea and Skaggerak
WGQAF ICES Working Group on quantifying all fishing mortality
WGSAM ICES Working Group on Multi Species Assessment Methods
WKBENCH Flatfish ICES Workshop on Benchmark Assesments Flatfish
WKBENCH Roundfish ICES Workshop on Benchmark Assesments Roundfish
WKFLAT ICES Workshop on Flatfish
WKSMRF ICES Workshop on Sampling Methods for Recreational Fisheries

APPENDIX 1

Description of partners

- I. ILVO-Social Science Unit
Burg. van Gansberghelaan 115 box 2, 9820 Merelbeke, Belgium

The Social Sciences Unit arose from the scientific part of the former Centre for Agricultural Economics (CAE) and is since January 1st, 2007 reinforced by the resources of the Flemish Policy Research Centre for Sustainable Agriculture (Stedula is the Dutch acronym). The mission of this unit is to present and clarify, on a scientific basis, the social choices concerning a sustainable and competitive Flemish agriculture and fisheries.

The Social science unit starts from the idea that the Flemish agricultural, fishery and horticultural sector can permanently contribute to the Flemish economy and well-being, but needs to develop under pressure of social, ecological and economic boundary conditions towards a sustainable and competitive system. Their activities are to support policy makers, research of other ILVO-units and the agricultural sector in general.

The research activities of the Social Sciences Unit are clustered around the following research domains:

❖ Integration

Within the current agricultural sector one of the most important goals is to reach more sustainable agricultural systems. As well economic, ecological as social factors of sustainability need to be taken into account.

The research scope of the sustainability issue is rather broad. Different viewpoints can consequently be applied to contribute to a sustainable development of agriculture. The Social Sciences Unit carries out research regarding:

- Methods for sustainability monitoring of systems on different levels (farm, sector, regional, national or international). Similar methods can be based on indicators but can also be developed as models.
- Practical applicability and implementation of developed methods for sustainability monitoring
- Sub-aspects of sustainability (economic, ecological, social)

Services provided by the Social Sciences Unit include:

- Spin-off towards monitoring
- Advice concerning policy issues
- Coordination of the Network Organic Farming and Food Research
- Participation in diverse stakeholder and feedback groups
- Referee work for policy preparatory documents

- Organization of activities to stimulate knowledge exchange

❖ **Transition**

Transitions are structural social changes resulting from interacting developments within different areas such as economy, culture, technology, institutions and ecology.

Transitions are changes that demand hard (such as technologies) as well as soft transformations (such as policy). A transition consists of one or more system innovations on their part evolved from product-, process-, or organizational innovations. Three different levels can be distinguished: micro, meso, and macro level. Transitions can only be successful if trends and developments on these three levels come together and reinforce each other. Transitions play an important role in the search to solutions for complex problems.

Transition management encloses the induction, the guidance and the management of transitions. For transitions no well defined plan exists but instead a range of possible development paths that define and influence the direction and the pass of transitions. Full control is never possible. It involves especially the creation of a favorable climate in which innovations can come about and flourish (the right initiatives on the right moment). The resulting transformation process is the result of a large number of individual and collective decisions of different actors reacting on new circumstances in their environment. Transition management is still a relatively new research area.

The Social Sciences Unit urges to play a pioneering role in the area of the transition research within the Flemish (agricultural&fishery) research landscape. The Flemish agriculture and fishery sector will face in the medium long or long term important changes in which the necessity of increasing sustainability is at the centre. How the agricultural and fishery sector will be in the future is at the moment unsure. Departing from this point both concepts ‘transitions’ and ‘transition management’ offer an inspiring new approach. Transition thinking starts from the idea that not one but several solutions exist, in which each sector, subsector or region gives its own meaning to the concept of sustainability and has its own way of reaching it.

In 2007 the Social Sciences Unit started with the first project about transitions in (sub)sectors of the Flemish agriculture, horticulture and fisheries.

Ongoing projects:

- Flemish vegetables and fruit in the future
- Transition to a sustainable Belgian fishery sector
- Study of a transition process: applied on the azalea sector
- MUSICAL: Multifunctionality and local identity as paradigms for sustainable and competitive agriculture
- Collaboration in agriculture and horticulture in Flanders
- Role of agriculture in the development of more sustainable energy and material flows in Flanders

- Farming for Health

APPENDIX 2

- 1. Bilateral agreement between UK and Belgium**

Bilateral Agreement between the UK (Cefas) and Belgium (ILVO-Fisheries) for the collection of length and age samples in accordance with EC Regulation 665/2008, laying down detailed rules for the application of Council Regulation (EC) 199/2008, and its Commission Decision 2010/93/EU.

Agreement:

The UK and Belgium have agreed that samples of fish landed by Belgian vessels into the UK and transported for first sale into Belgium will be sampled upon arrival in the Belgian auctions by ILVO - Fisheries as part of the Belgian National Programme under the requirements of the EC Data Collection Framework (199/2008). The eventual additional sampling costs will be covered within the Belgian National Sampling Programme from 2011-2013. This agreement builds on the practice which has been already adopted and carried out since 2004.

In addition Belgium has agreed to provide age determination for all turbot (*Psetta maxima*) and brill (*Scophthalmus rhombus*) otoliths collected by the UK as part of the UK National Programme. In return the UK (Cefas) will undertake the age determination of Vlla cod (*Gadus morhua*) otoliths collected as part of the Belgian National Programme.

Description of sampling:

Landings: - Sampling will be for length and age of landings, sampling will be carried out in accordance with the Belgian National Sampling Programme.

Age determination: - Sampling will be carried out at the levels required within the National Sampling Programmes of UK and Belgium.

Sampling Intensity:

Levels and coverage at the metier level will be as agreed at the annual co-ordination meetings of RCMs NS&EA and NA.

Data responsibility:

Both countries will be responsible for submitting the data to the relevant ICES Expert Groups, and to the EC under the requirements of its Data Collection Framework. The aged samples are to be made available for the deadlines required by the relevant ICES Expert groups, and the EC.

Contact persons:

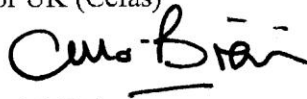
In the UK (Cefas) S Warnes: - steve.warnes@cefass.co.uk

In Belgium (ILVO-Fisheries) : els.torrele@ilvo.vlaanderen.be

CMB
31.3.14

Signatures:

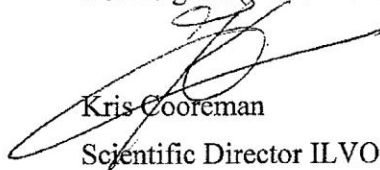
For UK (Cefas)



Carl O'Brien

Fisheries Division Director

For Belgium (ILVO-Fisheries)



Kris Cooreman

Scientific Director ILVO-
Fisheries/National
Correspondent

Date: 31.3.14

Date:

X

2. Bilateral Agreement between Denmark and Belgium

Agreement between the Danish Institute for Marine Research and the Institute for Agricultural and Fisheries Research (ILVO-Fisheries), Belgium concerning collection of fisheries data in 2009 and 2010

In accordance with the Data Collection Regulation (DCR) (Commission Regulation 199/2008, Commission Regulation 665/2008 and Commission Decision (2008/949/EC)) Denmark and Belgium have agreed entering co-operation on collection of fisheries data. This agreement has been established due to common interests in the fisheries in the Skagerrak (Division IIIa North), the North Sea (Division II) and the Baltic for brill and turbot.

Agreement:

It has been agreed that Belgium will conduct the age reading of all brill and turbot sampled by Denmark in the Skagerrak and North Sea from the IBTS survey and the commercial harbour and at sea sampling. In return Denmark will sample genetic samples from 50-70 individuals of brill and turbot from the IBTS survey and commercial sampling.

ANNEX 1

Species: Turbot

In area: **North Sea, Skagerrak, Kattegat and Baltic**

In accordance with (Commission Regulation 199/2008, Commission Regulation 665/2008 and Commission Decision (2008/949/EC)) countries that receive foreign landings are responsible to sample those.

In year: **2009 and 2010**

Flag country: **Denmark**

Landings (2009):760 (tons)

Sampling country: Denmark

The sampling intensity should be in accordance with the stated programme level and sampling will be carried out in accordance with sampling alternative **3** as stated below.

Based on last year's landings the sampling effort for this species/stock would be:

No of age readings in total: **100**

No of length measurements: **300**

No of individual weight per sample: **0**

If landings decrease or increase the amount of samples will be adjusted accordingly.

Sampling alternatives:

Receiving country will perform sampling in one of the two following alternatives:

1. Receiving country will perform sampling in accordance with the sampling scheme (attached to this agreement) defined by flag country. Receiving country will then deliver raw-data (length, weight and information about the landing) and material for ageing, to the flag country.
2. Receiving country will perform sampling in accordance with their national sampling procedure. Receiving country will then deliver data as raised No/age within each strata.
3. The sampling method is described as follows:

Denmark obtains the samples by market sampling from landings. Belgium is responsible for submitting the data to relevant ICES WG and to the EC.

Measurement: cm class

Data will be delivered to Belgium regularly and at latest 1 February 2010

Name of contact person in:
Receiving country:

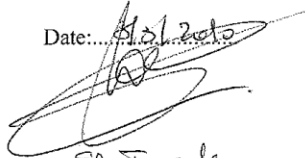
Annemie Zenner
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Ankerstraat 1, B-8400 Oostende, Belgium
Tel. + 32 59 34 22 50 (operator)
Fax. + 32 59 33 06 29
annemie.zenner@ilvo.vlaanderen.be
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Flag country:
Stina Bjørk Stenersen Hansen
DTU Aqua
Danmarks Tekniske Universitet
Institut for Akvatiske Ressourcer
Charlottenlund Slot
Jægersborg Allé 12920 Charlottenlund
Tel. + 33963385
sb@aqu.dtu.dk
www.aqua.dtu.dk

Signatures:


For the:
Institute for Agricultural and Fisheries Research

Date: 11.2.2010


Eli Touzel
i/o. National Correspondent
ILVO - Fisheries

For DTU Aqua

Date: 9/2-10


Jørgen Dalskov
National Correspondent
National Institute of Aquatic
Resources

ANNEX 2

Species: Brill

In area: **North Sea, Skagerrak, Kattegat and Baltic**

In accordance with (Commission Regulation 199/2008, Commission Regulation 665/2008 and Commission Decision (2008/949/EC)) countries that receive foreign landings are responsible to sample those.

In year: **2009 and 2010**

Flag country: **Denmark**

Landings (2009):260 (tons)

Sampling country: Denmark

The sampling intensity should be in accordance with the stated programme level and sampling will be carried out in accordance with sampling alternative **3** as stated below.

Based on last year's landings the sampling effort for this species/stock would be:

No of age readings in total: **100**

No of length measurements: **200**

No of individual weight per sample: **0**

If landings decrease or increase the amount of samples will be adjusted accordingly.

Sampling alternatives:

Receiving country will perform sampling in one of the two following alternatives:

4. Receiving country will perform sampling in accordance with the sampling scheme (attached to this agreement) defined by flag country. Receiving country will then deliver raw-data (length, weight and information about the landing) and material for ageing, to the flag country.
5. Receiving country will perform sampling in accordance with their national sampling procedure. Receiving country will then deliver data as raised No/age within each strata.
6. The sampling method is described as follows:

Denmark obtains the samples by market sampling from landings. Belgium is responsible for submitting the data to relevant ICES WG and to the EC.

Measurement: cm class

Sample size: XX individuals per sample

Data will be delivered to Belgium regularly and at latest 1 February 2010

Name of contact person in:
Receiving country:

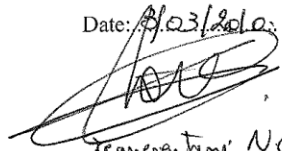
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Signatures:

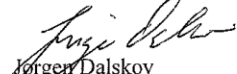
For the:
Institute for Agricultural and Fisheries Research

Date: 2/23/2010


Representing NC
ILVO Fisheries

For DTU Aqua

Date: 2/3-10


Jørgen Dalskov
National Correspondent
National Institute of Aquatic
Resources

APPENDIX 3

Belgium Preliminary Description of national marine recreational fisheries

1. General overview of national recreational fisheries

In Belgium recreational fishery is split up in Inland and marine recreational fisheries, where inland recreational fisheries are under the control of the section “Bos en Groen” (“Forest and Green”) of the department of Leefmilieu (Environnement). Any research/implementation of regulation/control on freshwater fisheries is done thus done by the section “Bos en Groen”.

Because of time constraints and specifications by the European Commission on recreational fisheries (Belgium needs to sample recreational fisheries for cod), this document will only consider marine recreational fisheries.

The marine recreational fishery in Belgium is regulated by European Regulations and National legislation. The regulation depends on the type of fishery. Municipal authorities can have specific regulations for certain metiers, these are applicable to the shore of the municipality and is controlled upon by the local police. These regulations are not dealt with in this general overview.

In Belgium, marine recreational fishing mainly comprises the following types of activities:

- Recreational fishing for brown shrimp (Cragon crangon) with small towed fishing gear in the Belgian territorial waters.
- Sea-angling from vessels (privately owned or chartered).
- Beach-fishing with static gears.
- Wade-fishing for brown shrimp with small towed nets in the surf zone.

Cod (*Gadus morhua*) is the only species in Annex XI of the Data Collection Regulation (Commission Regulation No. 1581-2004) requiring investigation in the Belgian context.

There is no mandatory requirement in Belgium to collect data regarding recreational fisheries. A Pilot study on the recreational fisheries in the waters under Belgian jurisdiction was carried out in 2006.

The participation in recreational fishing on the sea is rather small, it’s believed to be below 750 people.

A few questionnaires on recreational fisheries in general (both inland and offshore fisheries) have been carried out in the past but they have not yet been standardized and were mainly conducted by Angler organisations.

2. Detailed description of national recreational fisheries

2.1. Categories of recreational fishing

a) Angling at sea

Non-automated

i. On the beach or from permanent structures on the shore:

According to §11, section 2, Chapter II “Politie- en scheepvaartreglement voor de Belgische territoriale zee, de havens en de stranden van de Belgische kust” (Regulation of the Police and navigation for the Belgian territorial Sea, harbours and beaches on the Belgian Coast), Royal Warrant of August 4th 1981, Sea angling at sea and from permanent structures on the shore is allowed as long as it doesn't impede (commercial) navigation.

ii. On a vessel:

The vessels cannot carry any other type of fishing gear than that applicable to the non-automated sea angling (Article 5 of the Royal Warrant of August 14th 1989). These fishing activities are prohibited between 22:00-05:00.

Chartered vessels need to have a “zeebrief” (certificate of registry). This is a permit issued by the Flemish/Belgian authorities only when certain measures (c.f. need to have the capacity for at least 12 passengers and crew) are met on a yearly basis. In Ostend (the section that issues certificates of registry for the Belgian coastal harbours is located in this town, vessels from harbours like Antwerp, would need to apply for one in Antwerp, etc) only 4 ships have this permit: Marcella II, Bounty I, Bounty II and Albatros. However, the regulation among these certificates is slightly vague so that quite a lot of vessels apply for another permit although they should apply for a certificate of registry according to the activities carried out on the chartered vessel, and are thus able to evade stricter regulations.

b) Midwater trawling (mainly for shrimps)

No technical limitations, only MLS and the obligation to stay within 3 miles of the coast.

c) Passive on the beach

Minimum mesh size, mesh size measurement, MLS

In some municipalities: Nets need to be tagged so that they can be identified

i. “Flat” nets that get dug in.

ii. Pots, fykes

iii. Gill nets

d) Recreational vessels equipped with trawling

Only within 3 miles off the coast for those that have no certificate of registry, for the owners or users of these vessels, it is not allowed to fish on and to carry on the vessel, species for which, according to EU regulation, TAC or quota are applicable. The net

types allowed are specified only for shrimps. Use of zee flap from Dec to May. By catch needs to be thrown overboard immediately. It is forbidden to use tweelingnetten and/or kelen.

i. Vessels smaller than 8m

Bottom trawlers, but only on 1 side and with restrictions in size of the nets.

ii. Vessels larger than 8m

Bordennet, but only on 1 side.

e) sport-diving

Do occasionally fish with spear, mainly on flatfish. Most likely to be divers with their own boat, are not restricted by anything.

f) on-shore shellfish picking

Second to none according to conversations I had with some recreational seafishers.

2.2. Geographic delineations

Will it be necessary to produce statistics for separate geographic regions? If this takes different ICES areas into account, then yes, otherwise, the Belgian coast is only small and does not comprise very differing geographic regions.

Some sea-anglers would go on trips for a couple of days, this would mainly be to the English coast, to fish on Rays and catfish/dogshark.

2.3. Water bodies

Main species of interest in regards to the DCF in Belgian waters are marine fishes. We focus on these for the moment being. Fishing in freshwater or lakes is controlled by the section “Bos en Groen” of the department of Leefmilieu. Eels would thus be a species that should be discussed in cooperation with them or might even completely fall into their jurisdiction.

Water body type	Ranking
Freshwater rivers or lakes	Bos en Groen
River estuaries	3
Enclosed bays, sea loughs, lagoons, fiords, sounds	2
Open sea: inshore (e.g. shore out to <20m depth)	1
Open sea: Offshore demersal (e.g. > 20m depth)	1
Open sea: Offshore pelagic and Oceanic	3
Other (specify)	-

2.4. Platforms for fishing

Platform	Ranking
----------	---------

Man-made structures (piers, jetties, docks, bridges etc.)	3
Beaches	4
Rocky shorelines	NA.
Private boats	1
Rental boats	2
Charter or Guide boats (for-hire boats where passengers pay as a group to hire the vessel and the services of the captain and crew in advance of the trip)	2
Head, Party, or Open boats (for-hire boats where passengers pay as individuals for space on the boat and can “walk on” just prior to the trip)	2
Other boats	-
Other (specify)	-

Is it important to distinguish between shore fishing from man-made structures and shore fishing from natural shorelines when establishing sampling strata or estimation domains? We have very little natural shoreline that is suitable for angling, so most angling would be performed from man-made structures. Fishing on the beach with nets would be on the normal natural shoreline. Apparently, there this type of fishery is static, arguments of “ownership” of parts of beach are common.

Is it important to distinguish between different types of boat angling defined by size/capacity of boat, experience of crew, and capability of passengers? Off course, the more experience the crew or the fishermen have, the better their knowledge of location of shipwrecks and/or other places with a high concentration of the targeted fish. The bigger size/capacity of the boat, the larger the allowed catch. And the more capable the passengers, the more fish they will be able to catch in a shorter amount of time. The pilot study that was conducted on sea-angling for cod revealed quite big differences in the amounts of cod caught by different boat sizes/capacity, experience of crew and capability of passengers. Vessels with many people on board reported the highest numbers of cod catches varying in weight from 0 to 110 kg per vessel. Those vessels that reported having fished on shipwrecks were semi-professional charter vessels with paying passengers. However, by personal communication, I have heard from several people that a lot of recreational fishermen fish on shipwrecks.

How important is it to distinguish between different types of access points for boat fishing (marinas, launch ramps, private docks, etc.)? I would personally think that there are not a lot of private docks along the Belgian coast, so for Belgium the access points for

boats would be harbours.

Are some locations more accessible than others for sampling? Differences for sampling between locations will mostly depend on the level of cooperation from the fishermen.

2.5. Target species or species groups

The target species on the shore depends of the season. Sole for example, is one of the flatfish that spawn along the shore whereas they spend the rest of the year in deeper water. Therefore, in the months that soles are spawning along the shore, there will be more good-sized, adult soles caught from the shore.

- a) A single species is targeted and consistently forms the majority of the catch: Crangon crangon fishing, mainly on the beach and shore-<20m of depth.
- b) A small number of species is targeted and consistently form the majority of the catch (e.g. boat angling for large sharks): cod, plaice and sole (Typical flatfish in Belgian waters)
- c) The fishermen may adapt fishing gear, bait, area, time of day etc. in an unpredictable way, and could land a variety of co-occurring species (e.g. boat fishing for mixed demersal species such as cod, pollack, conger, flatfish, skates, small sharks) Not applicable, fishermen on boats are not allowed to have different types of fishing gear with them, both angling and non-angling.

2.6. Fishing gears used

Which fishing gears are used by different categories of recreational fishermen in your country? Use the following list to rank from most important (largest participation = 1) to least important (smallest participation). Enter "N/A" if no information is available. Two or more rows may have equal ranking.

Gear type	Ranking
Rod and line, or hand-lines	1
Long-lines	NA
Dip net or A-frame (push net?)	?
Cast net	?
Gill net	?
Seine	?
Trawl	?
Pot	?
Trap	?

Spear	low
Hand	-
Others (specify)	

To what extent should these be distinguished when designing sampling and estimation approaches? Quite important when the differences between fishing gear target different species.

No data available on how many fishermen comprise these different methods in Belgium.

2.7. Seasonality

Seasonality would be the same over the different types of fishing/water body/platform and would mainly be dependent of holidays.

2.8. Tournament fishing

The “Vlaamse Vereniging voor Hengelsport Verbonden” (VVHV, a consortium of Flemish angler’s associations) had about 2000 sea-anglers amongst its members in 2006. This organisation has World and European championships on its calendar. No more information at the minute.

2.9. Management regulations and other schemes affecting recreational fisheries

The nature reserve in Knokke-Heist is a closed area for all types of fishing. There are no different regulations for residents and non-residents.

As long as the quota on regulated species is not yet met, fishing in the areas specified for Belgium is allowed.

MLS

Beneden de laagwaterlijn verbod op gebruik van passief tuig (warrelnetten, schakels, geankerde kieuwnetten en drijfnetten)

Fishing during night (22:00-05:00) is prohibited

There is no limit on the amount of fishing days for Recreational fishers.

The catches are not allowed to be sold or commercialised in any other way (Article 5 of the Royal Warrant

of August 14th 1989).

Types of fishing not allowed:

- Use of explosives
- Use of tranquilisers or poisons
- Electric fishing

Recreational fishing for cod is prohibited with both towed and static gear.

Use this section to summarize management regulations or other schemes that are expected to have an effect on fishermen's behaviour and what they retain or release. Use Tables 1 & 2 to indicate which regulations or schemes are important for designing sampling and estimation approaches for the different fisheries, or need to be taken into account in data analysis. Because such regulations are likely to be species-specific, please specify the important regulations for different key management species in table format. Also, please clarify if there are differences in regulations for residents and non-residents (tourists) that restrict participation in different types of fishing activities.

- Regulations of season lengths or closed areas:* closure of the cod fisheries (and others) also apply to the Recreational fishers. No limit in season length.
- Regulations of bag limits:* total catches are limited to 20kg of cod plus sea bass per day per angler per seatrip, of this max 15kg can be cod. The fish can be gutted, but needs to be landed in whole.
- Regulations of size limits:* have to respect the minimum landing sizes for commercial landings, for a few species the minimum landing sizes are more strict for the recreational fisheries
- Regulations of fishing effort (e.g., numbers of traps, gill nets, etc.)* The vessels may not carry other types of fishing gear than those meant for non-automated angling. There is no limit on the amount of fishing days for Recreational fishers.
- Fishing license requirements:* No requirements! Chartered boats are subject to certain requirements/regular control.
- Protected species regulations:* Cod (*Gadus morhua*), seabass, sole, whiting and mackerel
- Voluntary catch-and-release schemes:* none.

3. Possible sampling frames

Use this section to describe the availability and utility of different area frames or list frames that could be used to direct survey access to populations of anglers, fishing vessels, or fishing sites. These cover telephonic surveys, mail-shot surveys and on-site surveys. Potential sampling frames are given in the following sections. Is there quantitative or qualitative information on the relative amount of fishing activity associated with different frame units?

3.1. Area frames

Which area frames are the most appropriate for allocating sampling of recreational fishing activities in your country? Areas could be defined in a number of ways such as the following:

- a) *Geographic areas defined by country and state or province boundaries*
- b) *Geographic areas defined by other easily identified management boundaries*

Not very applicable to Belgium in regards to the Marine recreational fisheries, we only have a small bit of coastline. In case recreational fishers would depart from non-coastal yet marine harbours like Antwerp, this could be a basis of different area frames, however, the distances in Belgium are so small, it would not represent the geographical origin of the fishermen.

3.2. List frames

Table 3 summarizes potential list frames that could be used within each area frame. Use this to indicate which list frames could be used for recreational fishing surveys in your country and if they provide potentially exhaustive access or only partial access to fishermen or to sites where fishermen could be interviewed directly.

4. Available statistics

Use the following table to summarize any existing statistical results or data sets.

Statistic	Data sets available, and where/how archived
Number of resident anglers	
Number of visiting anglers	
Number of resident vessels	
Number of visiting vessels	
Fishing effort: Angler days	
Fishing effort: Vessel days	
Quantity of catch by species or species group, retained for consumption	
Quantity of catch by species or species group, used for bait	
Quantity of catch by species or species group, that is released	
Other statistics (specify)	

4.1. Previous survey methods

Briefly describe any survey designs currently or previously used to monitor recreational fishing activities in your country. Explain if each design involved utilized an off-site survey method (mail or telephone), an on-site survey method (access point or roving creel sampling), or some combination of methods in a complemented surveys approach. Add references to any reports or publications describing the schemes used.

4.1.1. Current methods

None

4.1.2. Previous methods

The previous methods used were questionnaires.

5. Primary Customers for the data, and intended uses

Use the table below to indicate the types of data required by the primary customers to whom statistics must be provided, and the intended uses.

		Customers for data					
		European Commission	National government	Stock assessment scientists	Academic researchers	Fishing industry	General public
Type of data	1 Participation						
	2 Fishing effort						
	3 Total catch (retained/released) by species						
	4 Catch per unit effort by species						
	5 Size/age distribution of catch						
	6 Socio-economic data						
	Key species (give list)						

For each relevant cell in rows 1 – 6, enter one or more of the following codes to indicate how the statistics are, or would be, used to support the needs of the primary customers:

A: General monitoring of trends

B: Stock assessment

C: Monitoring of annual statistics relative to annual management targets for specific species

D: In-season monitoring of cumulative statistics relative to annual management targets for specific species

E: Other (specify)

Table 1: Summary of national recreational fisheries: **angling**

Water body	Platform	Main species targeted	Gear / methods used	Seasonal patterns ¹	Management regulations affecting fishery ²	Index of relative number of participants ³	Accessibility for biological sampling ⁴	Robustness of Available Data/Statistics ⁵
Estuaries and enclosed bays; Open sea: Inshore (e.g. shore to <20m depth); Open sea: Inshore / Offshore demersal	Beaches	Mainly plaice, sole (<i>Bass, cod, rays, whiting, sea trout, mackerel, flounders, grey mullet, bream (black & gilthead) ?</i>)	Rod and line (bait or artificial lure)	S (more during holidays)	MLS	C	Partial	None
	Man-made structures	Mainly plaice, sole (Bass, flatfish, rays, cod, whiting, mackerel, conger)	Rod and line (bait or artificial lure)	S (more during holidays)	MLS A (Naturereserve in Knokke-Heist, Havendam van Zeebrugge and some municipalities).	B	Partial	None
	Private / Charter/ for-hire boats	Plaice, sole, cod, sea bass, rays, whiting	Rod and line; handlines (bait or artificial lure; trolling???)	S (more during holidays)	MLS	A	Partial	Low

^{1,2,3,4,5}: See below Table 2 for codes to enter

Table 2: Example summary of national recreational fisheries: **non-angling**

Water body	Platform	Main species targeted	Gear used	Seasonal patterns ¹	Management regulations affecting fishery ²	Index of relative number of participants ³	Accessibility for sampling ⁴	Robustness of Available Data/Statistics ⁵
Estuaries and semi-enclosed bays or sea loughs	Beaches	Bass, cod, sea trout, salmon, grey mullet, sand eels, eels	Seine nets	S	MLS, S (salmonids)	C	<Partial	None
		Cockles, mussels,	Hand picking	S	MLS, S (salmonids)	B	Partial	Low
	Beaches and rocky shores	Shrimps	Push or dip nets	S		C	<Partial	None
	Private boats	Bass, cod, sea trout, salmon, flatfish, grey mullet, eels	Various nets & traps	S	MLS	C	<Partial	None
Open sea: Inshore (e.g. shore to <20m depth):	Beaches	Bass, flatfish, grey mullet, sand eels	Seine nets	S	MLS	C	<Partial	None
	Rocky shores	Prawns	Dip netting	S		C	<Partial	None
	Private boats	Crabs, lobsters	Pots and traps	S	MLS, BL	B	<Partial	Low
		Bass, grey mullet, flatfish, rays, cod, gurnards, red mullet	Enmeshing nets	S	MLS	C	<Partial	None
		Cod, flatfish, rays, (bass)	Long lines	S	MLS	D	<Partial	None
		Shrimps	Shrimp trawl	S		D	<Partial	None
		Herring	Drift net	S	?MLS	D	<Partial	None
		Flatfish	Trawl	S	MLS	D	<Partial	None

Footnotes:

¹ **Y** =Year-round fishery, **S** =Seasonal fishery (provide separate information on active months and peak periods); **P** = Pulse fishery (provide separate information to specify months when fishery is most likely to be present)

² **MLS** (=minimum landing size); **BL** (=bag limits); **S** (=closed seasons); **A** (= closed areas); **P** (=protected species regulations); **VCR** (= voluntary catch and release)

³ **A**: relatively large numbers; **B**: Intermediate; **C**: Relatively small numbers; **D**: very small numbers **N/A**: No information available .

⁴ **Full** (= fully accessible); **Partial** (= only partly accessible); **<Partial** (= less accessible than “Partial”); **None** (not accessible); **N/A**: no information

⁵ **High** (high level of statistical precision); **Medium** (medium level of statistical precision); **Low** (low level of statistical precision); **None** (no data or statistics available)

Table 3: National availability of lists and sampling frames for carrying out surveys of the general public to collect information on participation in different forms of recreational fishing.

Site	Type of lists	Sampling frames	Availability		
Off-site	Mailing-address directories	Postal household frame			
		Registry-based angler frames	Angler licences	none	
			Angler permits	none	
			Other angler registries	partial	
		Registry based vessel operator frames	Vessel licenses	partial	
			Vessel permits	none	
			Other vessel registries	partial	
		Telephone directories	Random-digit-dialing household frame		partial
			Phonebook household frame		partial
	Registry-based angler frames		Angler licences	none	
			Angler permits	none	
			Other angler registries	partial	
	Registry based vessel operator frames		Vessel licenses	partial	
Vessel permits		none			
Other vessel registries		partial			
On-site	Site or access point lists (points of departure or return for fishing trips)	Public access sites	partial		
		Private access sites	partial		

In “Availability” column enter “**exhaustive**” if the following conditions are true:

- i) effectively all recreational fishermen are potentially contactable through mail-shots;
- ii) effectively all recreational are required to have a license or permit or otherwise register their activities on a database;

- iii) effectively all recreational fishermen are potentially contactable by telephone (either through random-digit-dialing, phonebooks, or telephone numbers given when buying licenses or permits);
- iv) effectively complete lists are available of all points of departure or return for fishing trips where fishermen could be interviewed

If the fraction of fishermen potentially not contactable is sufficiently high, or the lists of departure/return sites sufficiently incomplete, so that potentially large biases could be present in surveys, enter "partial". If no lists are available, enter "none". If no information is available on sampling frames, enter "N/A"

APPENDIX 4

Enquête recreatieve zeevisserij

1. Vul in :

Geslacht	M / V
Geboortejaar	
Postcode	

2. Beroep (zet een kruisje)

Bediende	
Arbeider	
Student	
Werkloos	
Zelfstandig	
Gepensioneerd	

3. Hoe lang vist u al **op zee** ?

4. Op welke soorten vist u ? Vul onderstaande tabel in

Soort	Ja /nee	Waar (*)	Kg per vistrip (**)	Methode (***)
Kabeljauw				
Tong				
Schol				
Wijting				
Schar				
Zeebaars				
Andere:.....				

(*) 1= pier
2= strand
3= boot

(**) A 0-5 kg
B 5-10kg
C 10-15 kg
D Meer dan 15 kilogram

(***) A Zeehengelen
B Met vaste netten
C Met sleepnet

5. H D Meer dan 15 kilogram
oeveel dagen per jaar gaat u vissen?

	1-10
	10-15
	20-25
	25-30
	Meer dan 30

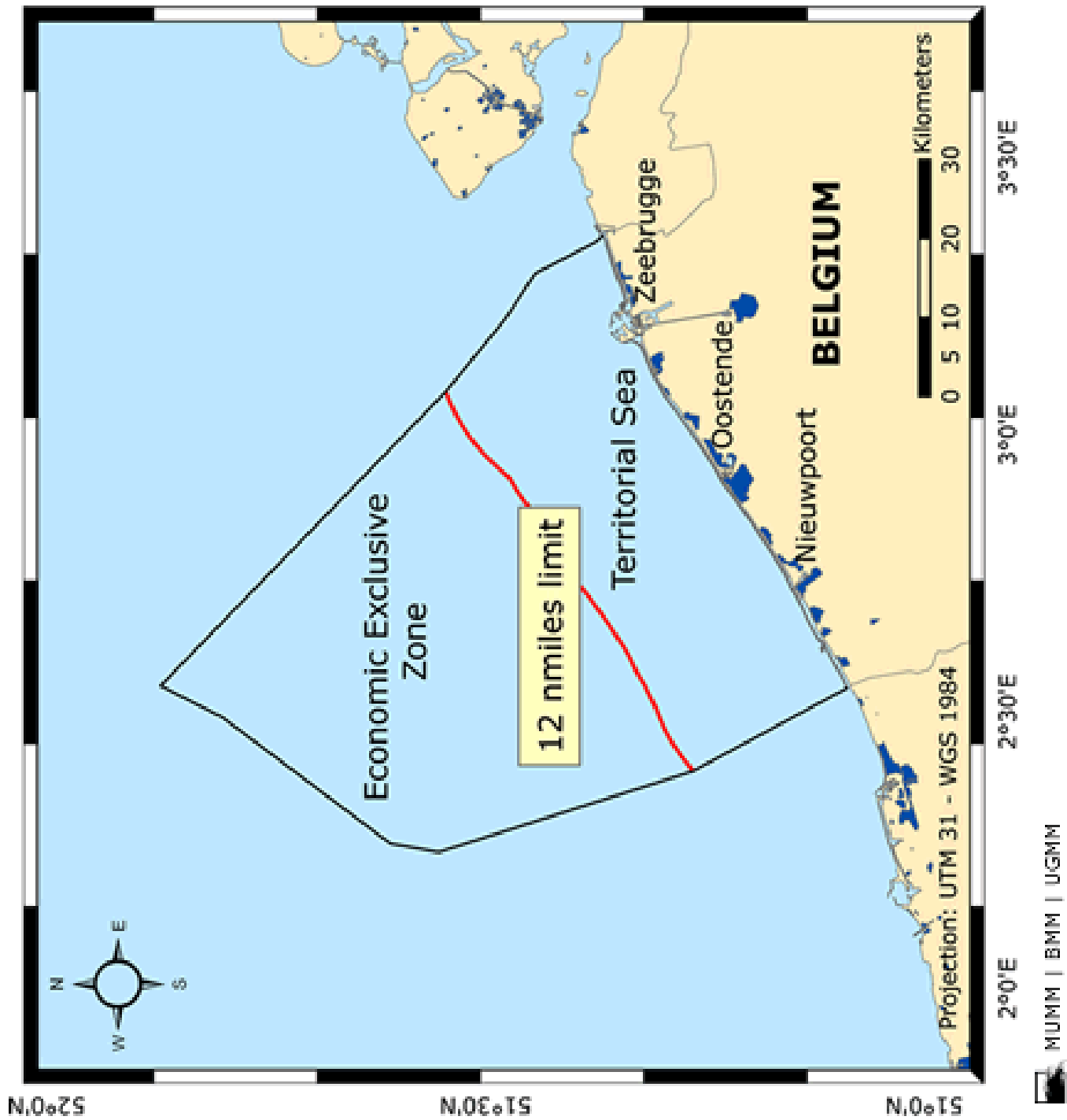
6. Hoelang duurt zo'n vistrip?

	1-4 uur
	4-8 uur

	8-12 uur			
	12-16 uur			
	16-20 uur			
	Meer dan 1 dag:	2-3dagen	3-5 dagen	5+ dagen

7. Duid op het kaartje uw visplekken aan met indicatie van bezoek:

1: Vaak 2: soms 3: weinig



Opmerkingen bij dit kaartje

.....

.....

.....

.....

8. Wanneer gaat u het vaakst vissen?

	Jan	Feb	Maart	April	Mei	Juni	Juli	Aug	Sep	Okt	Nov	Dec
In de week												
In het weekend												

9. Wat doet u met de vangst?

	Terugzetten
	Opeten
	Weggeven aan vrienden & familie
	Andere:.....

10. Gaat u soms mee met een boot?

	Nee	(ga door naar vraag 17)
	Zo ja, hoeveel keer per jaar?	(ga door naar vraag 17)
	Ik ben zelf eigenaar van een boot :	(vul vraag 11 tot 16 in)

□

11. Hoelang vaart u al?

12. Wat is het vermogen van u boot in kw?

13. Hoeveel mensen kunnen mee aan boord?

14. Waar ligt deze aangemeerd?

15. Neemt u soms visvrienden mee aan boord, hoeveel gemiddeld per trip?

	Nee
	1-2 visvrienden
	2-4 visvrienden
	Meer dan 4 visvrienden

16. Gebruikt u een visvinder? Ja/nee

17. Vist u soms in het buitenland? Ja /nee

18. Welke soorten brengt u uit het buitenland mee naar huis?

-
-
-
-

19. Waarom gaat u naar het buitenland?

	Meer vis
	Minder concurrentie
	Minder controle
	Mooier
	Andere:.....

20. Hoelang duurt een dergelijk buitenlandse vistrip?

	0-1 dag
	1-2 dagen
	2-3 dagen
	Meer dan 3 dagen

21. Hoeveel euro spendeert u gemiddeld aan het zeevissen per jaar?

	1-250 euro
	250-500 euro
	500-1000 euro
	Meer dan 1000 euro

22. Hoe is deze enquête bij u geraakt?

	VVHV – via de post
	VVHV – via de website
	Hengelsportwinkel
	Andere:.....

23. Opmerkingen over de enquête

.....

.....

.....

.....

.....

uw bericht van	uw kenmerk	ons kenmerk	Bijlagen
		ET/08/83	1
vragen naar / e-mail	telefoonnummer	datum	
Els Torreele Els.torreele@ilvo.vlaanderen.be	059/569833	12 april 2010	
Betreft : Enquête Recreatieve Zeevisserij			

Mevrouw, Mijnheer,

In navolging van een Europese richtlijn (Verordening van de Commissie 1639-2001 en de Verordening DCF EC 199/2008) zijn de Europese lidstaten verplicht sedert 2009 elk jaar een enquête uit te voeren met betrekking tot de activiteiten van de recreatieve zeevisserij.

In ons land is het Instituut voor Landbouw- en Visserijonderzoek (ILVO) met deze taak belast.

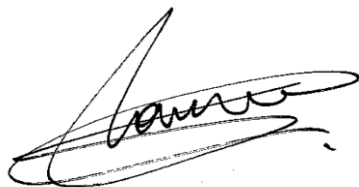
De resultaten van de enquêtes moeten het begin zijn van de inventarisatie van de recreatieve zeevisserij om aldus de lidstaten en de Europese Commissie in staat te stellen om de recreatieve visserij in Europa in kaart te brengen. Op termijn moeten ze tevens bijdragen tot een beter inzicht van deze sector. De resultaten zullen verwerkt worden in een thesis die deze enquête in het Nederlands proefloopt en onderzoekt.

Gelieve de ingevulde formulieren terug te zenden, met de bijgevoegde gefrankeerde omslag. Indien u opmerkingen heeft over deze enquête of bepaalde aspecten ervan, gelieve deze dan te noteren bij vraag 23 pg 4. U kunt ook een elektronische versie van de documenten bekomen.

De door u verstrekte gegevens zullen met het nodige respect voor vertrouwelijkheid behandeld worden. Dit houdt o.m. in dat de gegevens in een beveiligde en gecodeerde database opgeslagen worden en dat ze enkel in geaggregeerde vorm zullen verspreid worden, zodat het onmogelijk is om de informatie naar individuele personen terug te traceren. Ten allen tijde wordt de anonimiteit ten volle gewaarborgd.

Tot mijn spijt moet ik u mededelen dat wij niet in staat zijn om een vergoeding te betalen voor uw bijdrage. Wij rekenen er echter op dat dit geen belemmering zal vormen voor uw deelname aan deze enquête.

Met dank voor uw medewerking,



Els Torreele

Appendix 5

2008 Survey of the fish processing industry

Company		
Address		
Legal person		Ltd., CLR (company with limited responsibility), CA (co-operative association), other
Contact person		
E-mail		

Volume and value of the end products according to the PRODCOM classification Only end products derived from fisheries and aquaculture products !		Volume		Market value	
15.20.11	Fish, fish fillets, other fish meat, fish livers and roes, fresh or chilled		tonnes		kEuro
15.20.11.30	Fresh or chilled fish livers and roes		tonnes		kEuro
15.20.11.90	Fresh or chilled fish fillets and other fish meat without bones		tonnes		kEuro
15.20.12	Fish, fish fillets, other fish meat, fish livers and roes, frozen		tonnes		kEuro
15.20.12.10	Frozen whole salt water fish		tonnes		kEuro
15.20.12.30	Frozen whole fresh water fish		tonnes		kEuro
15.20.12.50	Frozen fish livers and roes		tonnes		kEuro
15.20.12.70	Frozen fish fillets		tonnes		kEuro
15.20.12.90	Frozen fish meat without bones (excluding fillets)		tonnes		kEuro
15.20.13	Fish, dried, salted or in brine; smoked fish; meal, powder or pellets of fish fit for human consumption		tonnes		kEuro
15.20.13.10	Flours, meals and pellets of fish, fit for human consumption; fish livers and roes, dried, smoked, salted or in brine		tonnes		kEuro
15.20.13.30	Fish fillets, dried, salted or in brine, but not smoked		tonnes		kEuro
15.20.13.53	Smoked salmon (including fillets)		tonnes		kEuro
15.20.13.55	Smoked herring (including fillets)		tonnes		kEuro
15.20.13.59	Other smoked fish (including fillets)		tonnes		kEuro
15.20.13.70	Dried fish, salted fish, fish in brine, but excluding fillets		tonnes		kEuro
15.20.14	Fish, otherwise prepared or preserved; caviar and caviar substitutes from fish eggs		tonnes		kEuro
15.20.14.11	Prepared or preserved salmon, whole or in pieces but not minced		tonnes		kEuro
15.20.14.12	Prepared or preserved herring, whole or in pieces but not minced		tonnes		kEuro
15.20.14.13	Prepared or preserved sardines, sardinella, brisling and sprat, whole or in pieces but not minced		tonnes		kEuro
15.20.14.14	Prepared or preserved tuna, skipjack and bonito, whole or in pieces but not minced		tonnes		kEuro
15.20.14.15	Prepared or preserved mackerel, whole or in pieces but not minced		tonnes		kEuro
15.20.14.16	Prepared or preserved anchovies, whole or in pieces but not minced		tonnes		kEuro
15.20.14.17	Fish fillets in batter or breadcrumbs, including fish fingers		tonnes		kEuro
15.20.14.19	Other prepared or preserved fish, but excluding fish fingers		tonnes		kEuro
15.20.14.30	Other preparations of fish		tonnes		kEuro
15.20.14.51	Caviar (sturgeon roe)		tonnes		kEuro
15.20.14.59	Caviar substitutes		tonnes		kEuro
15.20.15	Crustaceans, frozen; molluscs and other aquatic invertebrates, frozen, dried, salted or in brine		tonnes		kEuro
15.20.15.30	Frozen crustaceans		tonnes		kEuro
15.20.15.53	Scallops and mussels, frozen, dried, salted or in brine		tonnes		kEuro
15.20.15.59	Other aquatic invertebrates, frozen, dried, salted or in brine		tonnes		kEuro
15.20.16	Other prepared and preserved products of crustaceans, molluscs and other aquatic invertebrates		tonnes		kEuro
15.20.17	Flours, meals and pellets of fish, crustaceans, molluscs and other aquatic invertebrates, unfit for human consumption		tonnes		kEuro
15.20.18	Other inedible products of fish, crustaceans, molluscs and other aquatic invertebrates		tonnes		kEuro

APPENDIX 6

Financial Forms for the data collection programmes
in the framework of Council Regulation (EC) No 199/2008

PART I

Total planned eligible cost for the implementation of the NP

National programme for the collection, management and use of data in the fisheries sector for the period N - (N+2)

INDICATIVE COST OF MULTI-ANNUAL NATIONAL PROGRAMME N - (N+2) *

- EURO -

Year	Planned eligible expenditure	Maximum Community contribution
N	1.941.476,06	970.738,03
N+1	1.989.251,89	994.625,95
N+2	2.176.669,43	1.088.334,71
TOTAL	6.107.397,38	3.053.698,69

* - to be inserted into the National Programme