

Ministry of the Flemish Community
Sea Fisheries Service (Oostende, Belgium)
Sea Fisheries Department (Oostende, Belgium)



National Data Gathering Program

under EC Regulation 1639/2001

Belgium

2005 - Program proposal

Oostende - May 2004

Table of contents

| | | |
|-----|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|----|
| 1. | The Belgian sea fisheries | 2 |
| 2. | General comments on the NDGP proposal for 2005 | 6 |
| 3. | Module C - Data concerning fishing capacities | 9 |
| 4. | Module D - Data related to fishing effort | 10 |
| 5. | Module E - Data related to catches and landings | 11 |
| 6. | Module F - Data concerning the catches per unit of effort | 16 |
| 7. | Module G - Scientific evaluation surveys of stocks | 17 |
| 8. | Module H - Length and age sampling of landings and discards | 21 |
| 9. | Module I - Other biological sampling | 35 |
| 10. | Module J - Economic data by group of vessels | 39 |
| 11. | Module K - Data concerning the processing industry | 40 |
| 12. | Module X - Data storage and management (Articles 9-11 of the Regulation) | 41 |
| 13. | Module Y - Co-ordination (Article 6 of the Regulation) | 43 |
| 14. | Acronyms and abbreviations | 45 |
| | Bilateral Agreement between the UK (CEFAS) and Belgium (CLO-DvZ) for the Collection of Length and Age Samples under the Minimum Programme of Regulation 1639/2001 | 46 |

Provided as separate documents

Appendices 1-15 Cost estimates for Modules C to Y separately (Commission only)

Appendix 16 Cost estimates for all Modules combined (Commission only)

Appendix 17 Cost projections for 2006 to 2010 (Commission only)

Copy of self-sampling contract for the discard studies in the *Nephrops* fishery (in Dutch)

File: NDGP-Belgium_2005_Proposal_Nephrops-agreement.doc

Copy of self-sampling contract for the landings of plaice and sole (in Dutch)

File: NDGP-Belgium_2005_Proposal_Flatfish-agreement.doc

Copy of framework contract for the development of the Belsamp database (in Dutch)

File: NDGP-Belgium_2003_Contract-Database-01.doc

Copy of the report of the 'Lisbon Group'

File: Lisbon-Group_2004_Report.doc

1. The Belgian sea fisheries

This section gives a brief description of the Belgian sea fisheries and its most important features. The intention of this description is not to be comprehensive, but to provide a number of essential elements that might help the (external) evaluators in their appreciation and assessment of the NDGP proposal.

1.1. Fleet size and fleet segments

In 2003, the Belgian sea-going fishing fleet comprised 124 registered vessels (see text table below).

| Composition of the Belgian sea-going fishing fleet in 2003 | | | | | | | |
|------------------------------------------------------------|----------|-----------|----------|-----------|-----------|-----------|------------|
| Vessel type | Hp class | | | | | | Total |
| | < 250 | 250-300 | 301-600 | 601-900 | 901-1200 | > 1200 | |
| Beamers | 5 | 39 | 1 | 7 | 24 | 26 | 102 |
| Whitefish and Nephrops trawlers | | 4 | | 2 | | | 6 |
| Shrimpers | 3 | 10 | | | | | 13 |
| Catamarans | | | 2 | 1 | | | 3 |
| Total | 8 | 53 | 3 | 10 | 24 | 26 | 124 |

Roughly speaking, these vessels can be sub-divided into the following fleet segments:

- Mid-class (301-900 Hp) and large (> 900 Hp) beam trawlers. 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,e), the Irish Sea (VIIa), the Celtic Sea (VIIf,g) and the inner part of the Bay of Biscay (VIIIa,b).
- Small beamers with engine powers ≤ 300 Hp. Part of these primarily target flatfish, mostly in the southern North Sea and the eastern English Channel. Others shift between flatfish, brown shrimp (*Crangon*) (in the coastal waters) and Norway lobster (*Nephrops*) (in the Botney Gut - Silver Pit area, southern North Sea), depending on catch opportunities and market prices.
- A small number of *Nephrops* directed and mixed whitefish-*Nephrops* trawlers. Most of these vessels use multi-rig otter trawls. The *Nephrops* specialist trawlers fish year-round in the Botney Gut - Silver Pit area (southern North Sea). The mixed whitefish-*Nephrops* trawlers target roundfish (primarily cod, haddock, whiting and saithe) during part of the year, and *Nephrops* during the main *Nephrops* season (3rd and 4th quarter).

- Approx. 10 shrimpers, targeting brown shrimp (*Crangon*) in the Belgian coastal waters and the southernmost part of the Dutch coastal waters. Some of these vessels land their catches directly into the Netherlands.
- A small number of catamarans, using different types of passive gear.

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 is strongly weather dependent and is usually restricted to the summer months.

1.2. Areas fished

Landings by the Belgian sea-going fishing fleet are mostly from the North Sea (45 % of the total landings in 2003), followed by the English Channel (26 %), the Celtic Sea (18 %), the Irish Sea (8 %) and the Bay of Biscay (almost 2 %). Landings from other areas (Western Approaches, West of Scotland, etc.) are small to negligible (Table 1.1.).

1.3. Species landed

Belgium has no industrial and virtually no pelagic fisheries. All fish and shellfish landed by Belgian vessels is for human consumption. The consequence being, that the quantities landed are relatively small (23.7 10³ t in 2003 – a decrease of about 2100 t or 8.3 % over the 2002 figure) compared to the size of the fleet, but also that their value per kg is relatively high (approx. 3.5 Euro/kg).

In 2003, the top 10 of the most important species landed (by weight) consisted of plaice (25.9 % of the total landings), sole (20.6 %), rays (7.4 %), cod (6.6 %), lemon sole (4.1 %), brown shrimp, dab, cuttlefish, tub gurnard and scallop (Table 1.1.). Compared to 2002, there has been a major drop in the share of gadoids (cod, haddock, whiting and saithe) in the landings.

1.4. 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 are often auctioned mixed. Mixed sales are also the rule for most species of ray, for megrim, anglerfish, squid, octopus, and, depending on the quantities landed, for gurnard.

1.5. Landings by Belgian vessels in foreign harbours

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 voyages 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).

Table 1.1. - Belgian landings by species and area in 2003

All data in t landed weight, rounded to the nearest 5 t

| Species | ICES Sub-area or Division | | | | | | | Total |
|-----------------------------------|---------------------------|-------------|-------------|-------------|-----------|------------|-----------|--------------|
| | IV | VII d,e | VII a | VII f,g | VII h,j,k | VIII | Other | |
| <i>Anarhichas lupus</i> | 60 | <10 | 0 | 0 | 0 | 0 | 0 | 60 |
| <i>Aspitrigla cuculus</i> | 40 | 185 | 25 | 25 | <10 | <10 | 0 | 275 |
| <i>Conger conger</i> | <10 | 30 | <10 | 25 | <10 | <10 | 0 | 70 |
| <i>Dicentrarchus Labrax</i> | 30 | 15 | <10 | <10 | <10 | <10 | 0 | 50 |
| <i>Eutrigla gurnardus</i> | 15 | 20 | <10 | <10 | 0 | <10 | 0 | 35 |
| <i>Gadus morhua</i> | 1175 | 115 | 115 | 160 | <10 | <10 | <10 | 1565 |
| <i>Hippoglossus hippoglossus</i> | <10 | <10 | <10 | <10 | 0 | <10 | 0 | <10 |
| <i>Lepidorhombus whiffiagonis</i> | <10 | <10 | <10 | 140 | <10 | <10 | <10 | 160 |
| <i>Limanda limanda</i> | 365 | 200 | 35 | 45 | <10 | <10 | <10 | 650 |
| <i>Lophius spp.</i> | 65 | 25 | 50 | 240 | <10 | 40 | <10 | 415 |
| <i>Melanogrammus aeglefinus</i> | 310 | <10 | 20 | 100 | <10 | <10 | <10 | 435 |
| <i>Merlangius merlangus</i> | 195 | 75 | 15 | 100 | <10 | <10 | <10 | 385 |
| <i>Merluccius merluccius</i> | 40 | <10 | <10 | <10 | <10 | 10 | 0 | 60 |
| <i>Microstomus kitt</i> | 480 | 150 | 35 | 315 | <10 | <10 | <10 | 980 |
| <i>Molva molva</i> | 25 | <10 | <10 | 20 | <10 | <10 | 0 | 55 |
| <i>Mullus surmuletus</i> | <10 | <10 | <10 | <10 | <10 | <10 | 0 | 20 |
| <i>Mustelus mustelus</i> | <10 | <10 | <10 | <10 | 0 | <10 | 0 | 10 |
| <i>Platichthys flesus</i> | 190 | 45 | <10 | <10 | 0 | 0 | 0 | 250 |
| <i>Pleuronectes platessa</i> | 3770 | 1470 | 375 | 515 | <10 | <10 | <10 | 6145 |
| <i>Pollachius pollachius</i> | 10 | 35 | 10 | 50 | <10 | <10 | <10 | 105 |
| <i>Pollachius virens</i> | 40 | <10 | <10 | <10 | <10 | <10 | 0 | 40 |
| <i>Psetta maxima</i> | 180 | 95 | 35 | 110 | <10 | <10 | <10 | 430 |
| <i>Rajidae</i> | 325 | 160 | 555 | 705 | <10 | 10 | <10 | 1755 |
| <i>Scophthalmus rhombus</i> | 135 | 205 | 20 | 85 | <10 | <10 | <10 | 455 |
| <i>Scyliorhinus canicula</i> | 75 | 180 | 75 | 105 | <10 | <10 | <10 | 440 |
| <i>Sebastes spp.</i> | <10 | <10 | 0 | <10 | 0 | 0 | 0 | <10 |
| <i>Solea solea</i> | 1445 | 1540 | 450 | 1140 | <10 | 290 | <10 | 4875 |
| <i>Squalus acanthias</i> | <10 | <10 | <10 | <10 | 0 | <10 | 0 | 10 |
| <i>Trigla lucerna</i> | 105 | 320 | 40 | 50 | <10 | <10 | <10 | 520 |
| <i>Trisopterus spp.</i> | 30 | 320 | 10 | 55 | <10 | <10 | 0 | 425 |
| Other Demersal | 55 | 120 | 25 | 100 | <10 | 10 | <10 | 315 |
| <i>Clupea harengus</i> | <10 | 0 | 0 | 0 | 0 | 0 | 0 | <10 |
| <i>Scomber scombrus</i> | <10 | <10 | 0 | 0 | 0 | 0 | 0 | <10 |
| <i>Sprattus sprattus</i> | <10 | 0 | 0 | 0 | 0 | 0 | 0 | <10 |
| <i>Trachurus trachurus</i> | <10 | <10 | 0 | 0 | 0 | 0 | 0 | <10 |
| Other Pelagic | <10 | 10 | <10 | <10 | <10 | <10 | 0 | 20 |
| <i>Cancer pagurus</i> | 55 | 25 | <10 | 10 | 0 | <10 | 0 | 90 |
| <i>Cancer pagurus (claws)</i> | 20 | 15 | <10 | 15 | 0 | <10 | <10 | 50 |
| <i>Crangon crangon</i> | 910 | 0 | 0 | 0 | 0 | 0 | 0 | 910 |
| <i>Homarus gammarus</i> | <10 | <10 | 0 | <10 | 0 | 0 | 0 | <10 |
| <i>Nephrops norvegicus</i> | 230 | <10 | <10 | <10 | 0 | <10 | 0 | 235 |
| <i>Buccinum undatum</i> | 60 | 35 | <10 | <10 | 0 | <10 | 0 | 110 |
| <i>Loligo spp.</i> | 40 | 65 | <10 | 20 | <10 | <10 | <10 | 130 |
| <i>Octopus spp.</i> | <10 | <10 | 15 | 30 | <10 | <10 | <10 | 50 |
| <i>Pecten maximus</i> | 25 | 370 | 30 | 90 | <10 | <10 | 0 | 515 |
| <i>Sepia officinalis</i> | 95 | 425 | <10 | 35 | <10 | <10 | 0 | 565 |
| Other Shellfish | <10 | <10 | <10 | <10 | 0 | 0 | 0 | <10 |
| Total | 10650 | 6275 | 1985 | 4315 | 25 | 410 | 25 | 23690 |
| % of Grand Total | 45 | 26 | 8 | 18 | 0 | 2 | 0 | 100 |

2. General comments on the NDGP proposal for 2005

2.1. Structure of the proposal

The present document contains the National Data Gathering Program (NDGP) proposal for Belgium for the year 2005.

Details on the data that will be collected, and on the methodology that will be used, are given by Module of the NDGP, as defined in EC Regulation 1639/2001:

- Module C Data concerning fishing capacities
- Module D Data related to fishing effort
- Module E Data related to catches and landings
- Module F Data concerning the catches per unit of effort
- Module G Scientific evaluation surveys of stocks
- Module H Length and age sampling of landings and discards
- Module I Other biological sampling (i.e. studies of biological parameters)
- Module J Economic data by group of vessels
- Module K Data concerning the processing industry
- Module X Data storage and management (Articles 9-11 of the Regulation)
- Module Y Co-ordination (Article 6 of the Regulation)

Each Module section has a budget appendix (Appendices 1-15) with details on the time allocation (in man-months) for scientists and technicians separately, and the estimated costs for travel, durable equipment, consumables, sea allowances and vessel costs (where relevant), computing and sub-contracting. Synoptical tables with the time allocation and cost estimates for all Modules combined are given in Appendix 16.

Costs projections for the years 2006 to 2010 are given in Appendix 17. As the content of the NDGP is likely to change over time (e.g. with the inclusion of additional three- or six-yearly studies of biological parameters), no attempt was made to split the cost projections by Module.

2.2. Main differences between NDGP 2004 and NDGP 2005 proposals

Overall, the Belgian NDGP proposal for 2004 scored relatively well in the Evaluators' Report, and the proposed budget was accepted by the Commission with minor adjustments. As such, there was no reason to change the general approach of the NDGP, actually meaning that the core of the present proposal is very much similar to the one submitted last year.

In an attempt to further improve the NDGP, special attention was paid to the comments and suggestions made last year by the Evaluators and by SGRN. Wherever practical and feasible, these suggestions were taken into account when writing this year's proposal. This resulted in a number of modifications to the contents of several Module sections, the most important of which are:

- Module C Further extension of the list of species for which landings and discard data will be collected.
- Module H Inclusion of stocks that are under a Commission's Recovery Plan (particularly cod in ICES Sub-areas IV and VIIa, and the northern stock of hake) in the routine sampling programs for landings and discards (in as much as these fish are taken by Belgian fishers).
- Module H Further elaboration of and clarification on sampling strategies for the landings by Belgian vessels abroad and the landings by foreign flag vessels into Belgium.
- Module H Further extension of the discard sampling programs on the flatfish directed beam trawler fleets.

2.3. Minimum and Extended Program

Except for Module F (Data concerning the catches per unit of effort), no attempts were made to submit Extended Program (EP) proposals for the year 2005.

2.4. Statistical aspects of data collection programs

So far, the statistical aspects of sea surveys, market and discard sampling programs, updates of biological parameters, etc., have hardly been given any in-depth consideration. In June 2004 however, the Sea Fisheries Department has employed a full-time statistician, whose major task it will be to:

- Investigate the precision levels of the current sea surveys and sampling programs.
- Ensure the quality control of all existing and future data collection programs.
- Give guidance on how the sampling programs can be improved, in order to make them more efficient and cost-effective (better quality for the same price or same quality for a lower price).
- Analyse the existing data sets on catches and landings with the aim of defining appropriate metiers and hierarchical groupings thereof, which can then be used to set up fishery-based data collection programs (in replacement of the current stock-based programs).

It will take some time before these analyses are completed and before the statistical routines are fully operational, but it is hoped that by next year's program proposal, we will be in a position to provide all the necessary statistical background information.

2.5. Cost of the NDGP

In the Evaluators' comments on the previous program proposals, it was hinted that the Belgian NDGP is relatively 'expensive' when compared to the total volume of the landings, but not (or at least much less) when compared to their gross value.

Although we understand that comparisons of the program costs between MS do have some value, we have fundamental problems with the way this is done:

- Firstly, the comparisons completely disregard the fact that salaries and social security rules strongly differ between MS, and that exactly the same program might turn out to be a lot cheaper (or a lot more expensive) if it were executed in another MS.
- Secondly, it also disregards the fact that small MS have roughly the same obligations as the large ones. Databases e.g. are costly in all MS, but the cost for their development and maintenance is not proportional to the size of the fleet or the volume of the landings. Similarly, small MS have to send representatives to the same co-ordination meetings and the same planning groups as the large ones. All this adds up to the price tag of data gathering, but relatively speaking, the impact of it on the total cost of the programs is bigger for a small MS than for a large one.

Besides, there is a couple of good fishery-related and economic reasons why the Belgian NDGP turns out to be relatively costly when plotted against the volume of the landings, but not when plotted against their value. Belgium has no industrial and virtually no pelagic fisheries (it does have some quota for pelagic species, but each year, these are swapped for demersals), but mostly fisheries for human consumption, with over 50 % of the gross revenues being accounted for by two species, viz. plaice and sole. This means that the quantities landed are relatively small (there are no bulk landings of e.g. herring, sprat, horse mackerel, Norway pout or sandeel), but also that their value per unit weight is high compared to most other northern European countries.

2.6. Regionalisation of the Ministry

For almost two years now, the political responsibilities over agriculture and fisheries have been transferred to the regions (Flanders and Wallony). This involves major structural changes in the institutes that have committed themselves to execute the Belgian NDGP (viz. the Sea Fisheries Service and the Sea Fisheries Department) – changes which apparently, have not come to an end yet. At present, this does not seem to affect the correct execution of the NDGP. Should this be the case, then the Commission will be informed without delay on the changes, and on their possible impact on the NDGP.

3. Module C - Data concerning fishing capacities

Institute in charge: Sea Fisheries Service

3.1. Program proposal under the requirements of the MP

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:

| | |
|----------------------------------|-----------------------------------------------|
| Beam trawlers | 12 - 24 m LOA ^(a) 24 - 40 m LOA |
| Demersal trawlers ^(b) | 24 - 40 m LOA |

^(a) Inclusive of vessels using passive gear

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

With respect to this, it is worth emphasising that Belgium has no registered fishing vessels of < 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 Annex III of the Regulation ⁽¹⁾.

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

3.2. Budget

Details on the budget for this Module are given in Appendix 1.

⁽¹⁾ Unless stated otherwise, 'Regulation' refers to EC Regulation 1639/2001.

4. Module D - Data related to fishing effort

Institute in charge: Sea Fisheries Service

4.1. Program proposal under the requirements of the MP

The NDGP covers all Belgian vessels in the EU Fleet Register.

The parameters that will be recorded are:

- 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. Average fuel consumption per vessel will be calculated for all fleet segments defined under Module C of the Regulation.
- Fishing effort by technique: kW and GT data are routinely being recorded per day at sea for all vessels using active gears.
- Specific fishing effort data will be collected for *Gadus morhua*, *Melanogrammus aeglefinus*, *Merlangius merlangus*, *Pleuronectes platessa*, *Solea solea* and *Nephrops norvegicus*. The threshold levels, as defined in Annex VI of the Regulation, will be calculated from the relative proportions (by weight) of the key species in the total landings per fishing trip. 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 provided by ICES Sub-area, for the following vessel types:

| | | |
|----------------|-------------------|----------|
| Beam trawl | North Sea | ≤ 221 kW |
| | North Sea | > 221 kW |
| | Outside North Sea | |
| Demersal trawl | Bottom trawl | |

For kW, gross tonnage and days at sea, the required precision levels will be reached, since data collection is based on all voyages by the entire fleet. For fuel consumption, the sample exceeds 50 % of the total population (also see Section 10.1.).

4.2. Budget

Details on the budget for this Module are given in Appendix 2.

5. Module E - Data related to catches and landings

Institutes in charge: Sea Fisheries Service (landings and recreational fisheries) and Sea Fisheries Department (discards)

5.1. Program proposal under the requirements of the MP

❖ Landings

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

| Species for which landings data will be collected | |
|------------------------------------------------------------------------------------------------------------|--------------------------------|
| <i>Anarhichas lupus</i> | <i>Mustelus spp.</i> |
| <i>Aspitrigla cuculus</i> | <i>Nephrops norvegicus</i> |
| <i>Buccinum undatum</i> | <i>Octopus spp.</i> |
| <i>Cancer pagurus</i> | <i>Pecten maximus</i> |
| <i>Clupea harengus</i> | <i>Platichthys flesus</i> |
| <i>Conger conger</i> | <i>Pleuronectes platessa</i> |
| <i>Crangon crangon</i> | <i>Pollachius pollachius</i> |
| <i>Dicentrarchus labrax</i> | <i>Pollachius virens</i> |
| <i>Eutrigla gurnardus</i> | <i>Psetta maxima</i> |
| <i>Gadus morhua</i> | <i>Rajidae (*)</i> |
| <i>Hippoglossus hippoglossus</i> | <i>Scomber scombrus</i> |
| <i>Homarus gammarus</i> | <i>Scophthalmus rhombus</i> |
| <i>Lepidorhombus spp.</i> | <i>Scylliorhinus caniculus</i> |
| <i>Limanda limanda</i> | <i>Sebastes marinus</i> |
| <i>Loligo spp.</i> | <i>Sepia officinalis</i> |
| <i>Lophius spp. (*)</i> | <i>Solea solea</i> |
| <i>Melanogrammus aeglefinus</i> | <i>Sprattus sprattus</i> |
| <i>Merlangius merlangus</i> | <i>Squalus acanthias</i> |
| <i>Merluccius merluccius</i> | <i>Trachurus trachurus</i> |
| <i>Microstomus kitt</i> | <i>Trigla lucerna</i> |
| <i>Molva molva</i> | <i>Trisopterus luscus</i> |
| <i>Mullus surmuletus</i> | |
| (*) For details on species segregation, see Section 8.1., paragraph on Length and age sampling of landings | |

In 2002 and 2003, the idea of having a 'restricted' list of species for which landings data are recorded, has been labelled as a 'non conformity' by the Evaluators. To a certain extent this was rightful, since several species which are actually being landed in noticeable quantities by the Belgian fleet, were not covered by the data recording system (e.g. *Mullus spp.* and *Dicentrarchus labrax*). Since 2003, this shortfall has been remedied.

Nevertheless, the Evaluators again made the same comment in 2004, as there kept to be discrepancies between the 'restricted' list and the list of species in Annex XII of the Regulation. However, as already explained in last year's program proposal, there is some 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*. And if they are, it is in very small quantities only. 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 (see Section 1. for details):

- 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 northern and southern 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 2004 program proposals, SGRN stated that it saw "*no contradiction between the requirements of the Regulation and the use of a restricted list of species for which landings data are recorded, as long as the restricted list is a correct reflection of the species composition of the landings (which seems to be the case).*"

Belgium takes 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 large quantities of fish pertaining to the same group of species, such as *Raja spp.*, *Trigla spp.* and *Lophius spp.*

For the *Rajidae* and the *Lophiidae*, disaggregation of the landings figures by species is done as part of the relevant market sampling programs (see Section 8.1., paragraph on Length and age sampling of landings). For the *Triglidae*, no such system is envisaged, since they are not subject to the Regulation.

- Mixed landings and sales of fish 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 kg 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, this category of mixed landings is recorded as 'Other demersal', 'Other pelagic', etc., together with the landings of species that are not in the 'restricted' list. It is worth noticing that the 'Other' categories represent less than 1.5 % of the total Belgian landings (see Table 1.1.). In view of this, the omission of the quantities of fish or shellfish 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 Regulation.

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 5.1.

The existing technical resources for data collection, management and retrieval allow for the necessary manipulation and aggregation of the raw data. Grouping of the data can be done at any desired level of aggregation (temporal, spatial, by species, by vessel or gear class, etc.).

International co-operation is realised through the exchange of data for Belgian flag vessels landing and selling their catches abroad and for other flag vessels landing and selling their catches into Belgium. There are no Belgian landings outside the EU.

❖ Discards

In 2002, several pilot studies were initiated by the Sea Fisheries Department, aiming at (a) the estimation of the overall quantities of Annex XII species discarded in a number of fisheries (viz. the flatfish directed beam trawl fishery in the Irish Sea, ICES Sub-area VIIa, and the *Nephrops* directed fishery in the southern North Sea), and (b) the length and age sampling of the discards.

In 2003 and 2004, these studies were extended and intensified, (a) to also include the flatfish directed beam trawl fisheries in the Eastern English Channel (ICES Sub-area VIId), the Celtic Sea (VIIf,g), and the Inner Bay of Biscay (VIIIa,b), (b) with increased sampling intensities for the flatfish directed fisheries in all areas mentioned (i.e. VIIa, VIId, VIIf,g and VIIIa,b), and (c) to cover all species in Annex XII and Annex XV of the Regulation. In 2005, the discard sampling programs on all fisheries presently covered will be maintained at least at the 2004 level.

The Belgian discard sampling programs are used to estimate both the quantities discarded (as required under Module E of the Regulation) and their length and age composition (as required under Module H). Details on the set-up and the methodology of these programs are given under Module H (see Section 8.1., paragraph on Length and age sampling of discards).

The only major fishery for which Belgium is not routinely collecting discard information, is the flatfish directed beam trawl fishery in the North Sea. This fleet however, will be sampled as opportunities arise, e.g. when an observer trip in the Eastern English Channel (one of the areas for which a regular discard sampling program is foreseen – see above) is extended into the North Sea by an *ad hoc* decision of the skipper (the same also applies to the Western English Channel, ICES Sub-area VIIe). Besides, the Netherlands do have a discard sampling program on their beam trawler fleet in the North Sea, and since both fleets have roughly similar characteristics, it is proposed that – for the time being – the Dutch data will also be used to estimate the discards by the Belgian North Sea beam trawler fleet. The possible future extension of the Belgian discard sampling program to the North Sea is under investigation, with particular emphasis on its logistic and financial implications.

❖ **Recreational fisheries**

Belgium has no recreational fisheries for salmon and bluefin tuna, and therefore requests a derogation for this part of the Regulation.

5.2. Budget

Details on the budget for this Module are given in Appendices 3 (Data related to catches and landings), 4 (Data related to discards) and 5 (Recreational fisheries).

With respect to Appendix 4, however, it should be noticed that all costs for the collection of discard data (related to both the estimation of the quantities discarded, and their length and age sampling) have been included in Appendix 10 (Length and age composition of discards). Any attempt to partition labour time and working costs between the two would have been very arbitrary, and therefore it was decided to budget all discard related costs under the Module where most of the expenses are to be expected, i.e. under Module H (see Section 8. and Appendix 10).

Appendix 5 (Recreational fisheries) has zero entries, for the simple reason that Belgium has no recreational fisheries for salmon and bluefin tuna, and therefore has no costs for this part of the Regulation.

| Table 5.1. - Conversion factors | |
|----------------------------------------|--------------------------|
| Species | Conversion factor |
| <i>Anarhichas lupus</i> | 1.18 |
| <i>Conger conger</i> | 1.00 |
| <i>Gadus morhua</i> | 1.18 |
| <i>Hippoglossus hippoglossus</i> | 1.05 |
| <i>Lepidorhombus spp.</i> | 1.05 |
| <i>Limanda limanda</i> | 1.05 |
| <i>Lophiidae (whole)</i> | 1.18 |
| <i>Lophiidae (without head)</i> | 3.00 |
| <i>Melanogrammus aeglefinus</i> | 1.18 |
| <i>Merlangius merlangus</i> | 1.18 |
| <i>Merluccius merluccius</i> | 1.18 |
| <i>Microstomus kitt</i> | 1.05 |
| <i>Molva molva</i> | 1.18 |
| <i>Plathichthys flesus</i> | 1.05 |
| <i>Pollachius pollachius</i> | 1.18 |
| <i>Pollachius virens</i> | 1.18 |
| <i>Psetta maxima</i> | 1.05 |
| <i>Raja spp.</i> | 1.05 |
| <i>Scophthalmus rhombus</i> | 1.05 |
| <i>Sebastes spp.</i> | 1.00 |
| <i>Selachimorpha</i> | 1.00 |
| <i>Solea solea</i> | 1.05 |
| <i>Squalus acanthias</i> | 1.00 |
| <i>Squalus spp.</i> | 1.00 |
| <i>Triglidae</i> | 1.00 |
| <i>Trisopterus luscus</i> | 1.18 |
| Other Demersal | 1.11 |
| <i>Clupea harengus</i> | 1.00 |
| <i>Scomber scrombus</i> | 1.00 |
| <i>Sprattus sprattus</i> | 1.00 |
| <i>Trachurus spp.</i> | 1.00 |
| Other Pelagic | 1.00 |
| <i>Cancer pagurus</i> | 1.00 |
| <i>Crangon spp.</i> | 1.25 |
| <i>Homarus gammarus</i> | 1.00 |
| <i>Nephrops norvegicus (whole)</i> | 1.00 |
| <i>Nephrops norvegicus (tails)</i> | 3.33 |
| <i>Buccinum undatum</i> | 1.00 |
| <i>Loligo spp.</i> | 1.00 |
| <i>Octopus spp.</i> | 1.00 |
| <i>Pecten maximus</i> | 1.00 |
| Other Shellfish | 1.00 |

6. Module F - Data concerning the catches per unit of effort

Institutes in charge: Sea Fisheries Service and Sea Fisheries Department

6.1. Program proposal under the requirements of the MP

In December 2002, a retrospective report on the use of the Belgian CPUE data series was submitted to the Commission. Together with the information provided by the other MS, these data series were analysed by a specific Sub-group of STECF. To our understanding of the recommendations that followed, CPUE series that are used in analytical assessments will from now on be part of the MP, while series that are used to give general background information on the state of a stock are to be included under the EP.

The stocks for which CPUE data will be collected under the MP are:

- Plaice (*Pleuronectes platessa*) in ICES Sub-area VIIId.
- Sole (*Solea solea*) in ICES Sub-areas VIIa, VIIId and VIIf,g.
- *Nephrops* in FU 5 (ICES Sub-area IVb,c).

6.2. Program proposal under the requirements of the EP

The stocks for which CPUE data will be collected under the EP are:

- Plaice (*Pleuronectes platessa*) in Sub-areas IV, VIIa and VIIf,g.
- Sole (*Solea solea*) in Sub-areas IV and VIIa,b.
- Brown shrimp (*Crangon crangon*) in the Belgian coastal waters.

Note that at its 2003 meeting, the ICES Working Group on the Assessment of Southern Shelf Demersal Stocks (WGSSDS) did start the construction of a CPUE data series for sole in VIIa,b for tuning purposes. This will be further investigated at the 2004 meeting of the Working Group. If this attempt is successful, then this CPUE data series will be included under the Belgian MP in the years to come.

Regardless of what the final decision of the Commission may be, it is worth mentioning that the basic data to calculate CPUEs are and will continue to be routinely collected in Belgium, as part of the existing effort and landings recording system.

6.3. Budget

Details on the budget for this Module are given in Appendix 6.

7. Module G - Scientific evaluation surveys of stocks

Institute in charge: Sea Fisheries Department

7.1. Program proposal under the requirements of the MP

All surveys with Priority 1 in Annex XIV of the Regulation in which Belgium participates are included in the NDGP proposal. Belgium guarantees the continuity of the previous survey designs within its NDGP for 2005.

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

As part of the international DYFS, an annual autumn sampling survey will be carried out in the Belgian coastal waters, to gather data on the abundance of juvenile flatfish (primarily plaice, dab and sole) 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 (Figure 7.1.). The location of the sampling area corresponds to the main flatfish nursery grounds along the Belgian coast.

All stations are fished for approx. 15 min, with a standard shrimp beam trawl (beam length 6 m; codend mesh size 18 mm). Commercial fish are hand-picked from the catches, sorted by species and measured to the cm below. These data are then converted into 'age' classes with fixed size boundaries set at 22 and 35 cm for cod and whiting, 13, 19 and 24 cm for plaice, and 13, 19 and 23 cm for sole. Eventually, station-wise densities by species and by age class are calculated in numbers of fish per 1000 m².

Brown shrimp (*Crangon crangon*) 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, either to the nearest mm or in 5 mm size classes. Shrimp densities are calculated by station and size class, as numbers of shrimps per 1000 m².

❖ Beam Trawl Survey (BTS)

In August, the adult flatfish stocks (primarily plaice and sole) in the south-western part of the North Sea will be sampled with the oceanographic RV 'Belgica' (LOA 50 m). Samples will be taken on about 60 fixed stations in BTS Areas 2, 3 and 4 (Figure 7.2.).

Essentially, the position of the sampling stations and the methodology used to collect and to analyse the samples is the same as in previous surveys. Each station is fished for 20-30 min (depending on quantities to be expected and the likely presence of potentially

damaging obstructions, such as rocks, boulders, etc.), by means of 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 5 fish per cm class per area (BTS Areas 2, 3 and 4), to establish species- and area-specific age-length-keys. These are used to convert the length-frequency-distributions into age-distributions. Abundance estimates are then calculated by ICES rectangle, in numbers of fish per hour trawling. For roundfish, no otoliths are taken, as the roundfish catches are usually insufficient to yield reliable age-length-keys.

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. The latter are transmitted to CEFAS (Lowestoft, UK) for inclusion in their assessments of the *Cancer* stock(s) in the south-western North Sea.

7.2. Budget

Details on the budget for this Module are given in Appendices 7 (DYFS) and 8 (BTS).

With respect to these budgets, it is worth stressing that no costs have been included for shipping time. So far, vessel costs have never been charged to the Sea Fisheries Department by the owners of the vessels that are used for the surveys (viz. RV '*Broodwinner*' for the DYFS, and RV '*Belgica*' for the BTS). This however, may change in the future, if the ship owners would decide to change their financial policy.

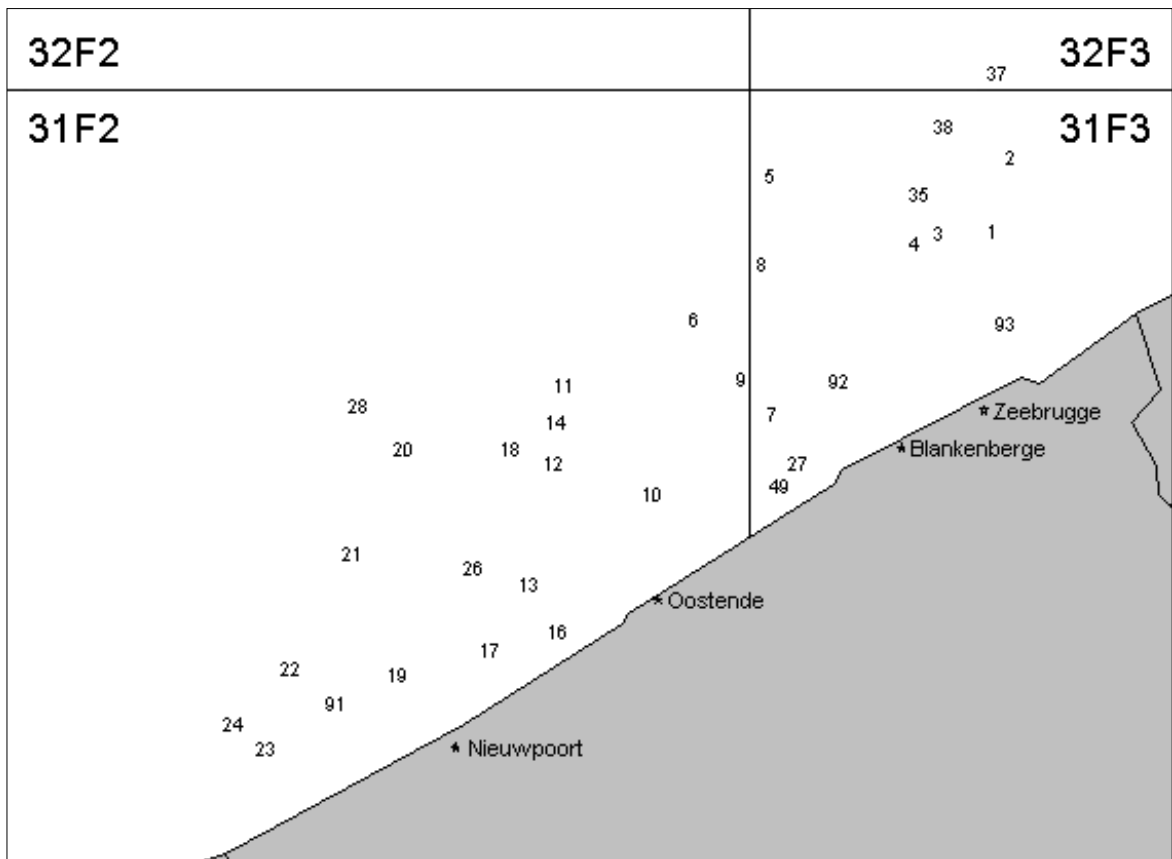


Figure 7.1. - DYFS sampling stations in the Belgian coastal waters.

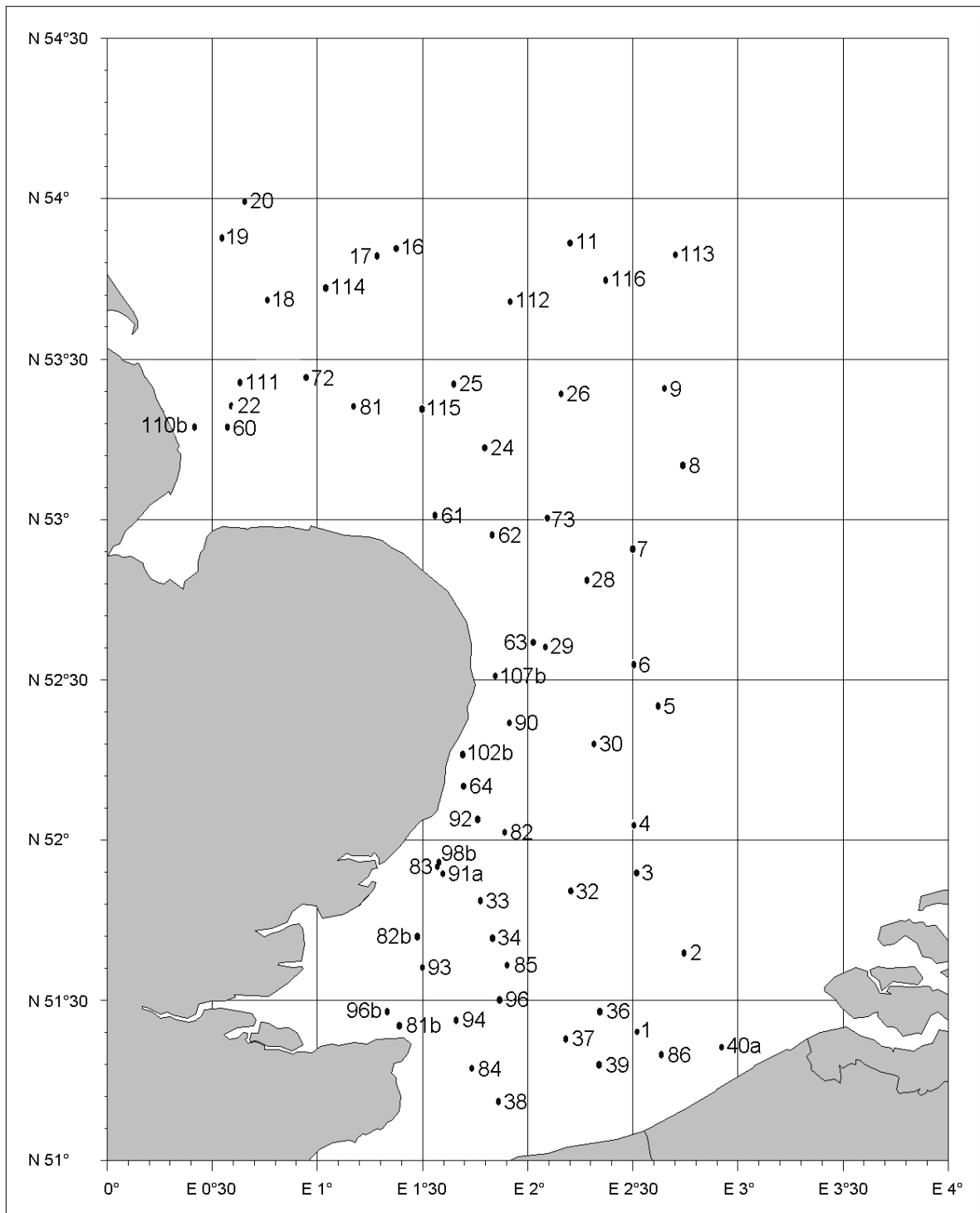


Figure 7.2. - BTS sampling stations fished by the RV 'Belgica' in the south-western part of the North Sea.

8. Module H - Length and age sampling of landings and discards

Institute in charge: Sea Fisheries Department

8.1. Program proposal under the requirements of the MP

❖ Length and age sampling of landings : Quota species

An overview of Belgian quota species is given in Table 8.1. The table also gives the species and stocks for which derogation is requested, together with the exemption criteria that were applied.

The quota species that will be sampled for length and age (where applicable) in 2005, and their respective sampling regimes (in terms of numbers of samples taken and numbers of animals measured/aged per sample) are listed in the text table on page 22. For the sake of comparison, the table also gives the proposed total numbers to be measured/aged, and the number of length and age measurements required under the MP of the Regulation (rounded to the nearest 'whole' sample per unit weight landed, as defined in the introductory tables to Annex XV of the Regulation). Additional information is also given on (a) whether the corresponding CPUE data series are used for tuning the stock assessments (MP CPUE data series) or for assessing the overall state of the stock (EP CPUE data series), and (b) whether the stock is in a critical state or under a Commission's Recovery Plan (in which case derogation is no longer applicable).

For some species and stocks, the proposed numbers for length and age exceed the numbers required under the MP of the Regulation. In the past, this has repeatedly been labelled as 'over-sampling' ⁽²⁾ in the evaluation of the NDGP proposals. However, at its December 2002 meeting, SGRN considered that:

- Apparent over-sampling should remain eligible for funding where it is justified to maintain the quality of CPUE series under Module F.
- Additional sampling should be eligible for funding where it is required to satisfy the data needs for the assessment of stocks deemed to be in a critical state.

For stocks other than those to which the bullet points apply and that will be sampled in excess of the MP, the 'excess sampling' will be at national expense. This more particularly applies to the sampling programs for monkfish (*Lophius spp.*), lemon sole (*Microstomus kitt*), turbot (*Psetta maxima*), ray (*Raja spp.*) and brill (*Scophthalmus rhombus*) (see table on page 22).

⁽²⁾ Note that we prefer the expression 'sampling in excess of the MP requirements' rather than 'over-sampling'. The latter gives the impression that the same quality of data can be achieved with less sampling, which is not true for most cases.

| Proposed sampling regimes for length and age : Quota species | | | | | | | | | | | | |
|--------------------------------------------------------------|----------------|----------------------|----------------------|------------------|---------------------|----------------------|----------------------|--------------|---------------------|----------------------------|------------------------------------------------|-------------------------------------|
| Species | Area or Stock | Length sampling | | | | Age sampling | | | | CPUE series under Module F | Stock in critical state or under Recovery Plan | Excess sampling at national expense |
| | | N samples | Average N per sample | Total N measured | N Required under MP | N samples | Average N per sample | Total N aged | N Required under MP | | | |
| <i>Gadus morhua</i> | IV | 4-6 | 250 | 1500 | 450 | Exempt | | | -- | | Yes | |
| <i>Gadus morhua</i> | VIIa | See discard sampling | | | 50 | See discard sampling | | | 0 | | Yes | |
| <i>Lophiidae</i> | VII | See discard sampling | | | 350 | Exempt | | | -- | | | X |
| <i>Merluccius merluccius</i> | Northern stock | See discard sampling | | | 100 | See discard sampling | | | 0 | | Yes | |
| <i>Microstomus kitt</i> | IV | 4-6 | 200 | 1200 | 75 | Exempt | | | -- | | | X |
| <i>Nephrops norvegicus</i> | FU 5 | 18-20 | 700 | 14000 | 2000 | Not applicable | | | -- | Yes (MP) | | |
| <i>Pleuronectes platessa</i> | IV | 2-4 | 200 | 800 | 450 | 4-6 | 50 | 300 | 225 | Yes (EP) | Yes | |
| <i>Pleuronectes platessa</i> | VIIa | 8-10 | 200 | 2000 | 2000 | 8-10 | 50 | 500 | 500 | Yes (EP) | | |
| <i>Pleuronectes platessa</i> | VIIId | 12-14 | 200 | 2800 | 2800 | 12-14 | 50 | 700 | 700 | Yes (MP) | | |
| <i>Pleuronectes platessa</i> | VIIIf.g | 5-7 | 200 | 1400 | 1400 | 6-8 | 50 | 400 | 350 | Yes (EP) | | |
| <i>Psetta maxima</i> | IV | 4-6 | 100 | 600 | 50 | 4-6 | 50 | 300 | 50 | | | X |
| <i>Rajidae</i> | IV | 4-6 | 200 | 1200 | 25 | Not applicable | | | -- | | | X |
| <i>Solea solea</i> | IV | 4-6 | 200 | 1200 | 400 | 4-6 | 50 | 300 | 200 | Yes (MP) | | |
| <i>Solea solea</i> | VIIa | 10-12 | 200 | 2400 | 2400 | 10-12 | 50 | 600 | 600 | Yes (MP) | | |
| <i>Solea solea</i> | VIIId | 10-13 | 200 | 2600 | 2600 | 10-13 | 50 | 650 | 650 | Yes (MP) | | |
| <i>Solea solea</i> | VIIIf.g | 10-12 | 300 | 3600 | 3600 | 14-18 | 50 | 900 | 900 | Yes (MP) | | |
| <i>Solea solea</i> | VIII (*) | 6-8 | 200 | 1600 | 1200 | 4-6 | 50 | 300 | 150 | Yes (EP) | Yes | |
| <i>Scophthalmus rhombus</i> | IV | 4-6 | 100 | 600 | 50 | 4-6 | 50 | 300 | 50 | | | X |

(*) Since Belgium is only fishing in ICES Sub-areas VIIa and VIIIb, sampling will be restricted to these areas

Details on the length and age sampling programs for all species in the table above are given under the bullet points that follow.

- ***Gadus morhua* in ICES Sub-areas IV and VIIa**

The cod stocks in ICES Sub-areas IV and VIIa are both in a critical state and therefore the Sea Fisheries Department will sample these stocks in 2005.

Cod landed by the flatfish directed beam trawlers and the *Nephrops* trawlers operating in ICES Sub-area IV will be sampled at the auctions of Zeebrugge and Oostende. Sampling will be restricted to length measurements and will be done from boxes randomly chosen per market category. The fish will be measured to the cm below. For the beam trawler fleet, a total of 4 to 6 samples of 250 fish each is planned. Sampling of the cod landings by the *Nephrops* fleet will be done concurrently with the discard sampling in this fishery (see further down in this Section, paragraph on Length and age sampling of discards).

In ICES Sub-area VIIa, length and age sampling of the retained catches of cod will be done as part of the discard sampling program in the area (see this Section, paragraph on Length and age sampling of discards).

- ***Lophiidae* in ICES Sub-area VII**

From the 2002 pilot study, set up for *Lophiidae* in ICES Sub-area VII, it appeared that this species is best sampled on-board (during discard trips). At-sea sampling was initiated in 2003 and will continue in 2005, as part of the discard sampling program in the area (also see this Section, paragraph on Length and age sampling of discards).

- ***Merluccius merluccius* Northern Stock**

Belgium will monitor the northern hake stock, which is currently subject to a Recovery Plan. Retained and discarded catches will be sampled for length and age on all discard trips in ICES areas VIIa, VIId, VIIf,g and VIIa,b (also see the paragraph on Length and age sampling of discards in this section).

- ***Microstomus kitt* in ICES Sub-area IV**

Length samples will be taken on a quarterly basis in the auctions of Zeebrugge and Oostende. Length measurements will be to the cm below. The minimum sampling intensities required by the Regulation are considered to be insufficient for stock assessment purposes and therefore sampling intensities will be increased. The proposed sampling regime is set at 4-6 samples of 200 fish each (costs incurred from sampling in excess of the MP requirements will be at national expense).

- ***Nephrops norvegicus* in Functional Unit 5 (ICES Sub-area IVb,c)**

Nephrops sampling will be focused on the Botney Gut - Silver Pit stock (Functional Unit 5, southern North Sea) – the only stock from which Belgium is landing substantial quantities of *Nephrops*. Smaller quantities (< 50 t per year) are also taken from the Functional Units 'Off Horn Reef' (FU 33, southern North Sea) and 'Fladen Ground' (FU 7, northern North Sea), but these are too small to justify a regular sampling program.

Sampling of the *Nephrops* landings will be done once a month in January-April (the low season for *Nephrops*) and twice a month in May-December in the auctions of Zeebrugge and Oostende, by means of a system of stratified sampling. From each market category (small, medium and large whole *Nephrops*, and *Nephrops* tails), a full box is picked *ad random*, and from each box 200-300 animals are taken (from top to bottom, to avoid biases due to the 'presentation' of the boxes) for measurement. Whole *Nephrops* are measured in the auction (carapace length, CL, to the nearest 1 mm), whereas the tails are purchased from the fishermen and measured in the lab (width of the 5th abdominal segment, Ab5, to the nearest 0.5 mm). Ab5 measurements are converted to CL by means of two Ab5-CL-keys (one for males and one for females), and a so-called re-distribution technique (to avoid over- or under-estimation of the numbers-at-length in individual 1 mm CL size classes owing to rounding of the converted figures).

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

In previous years, plaice and sole were routinely 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 age-length-keys (ALKs), the length distributions of the two species were then converted into age compositions, by quarter and by TAC area. As far as possible, this strategy will also be followed in 2005.

Over the past years however, Belgium has experienced increasing difficulties to keep this sampling scheme (with ship owners refusing to have their landings sampled, vessels fishing in different ICES Sub-areas and landing 'blended' catches, etc.). Therefore, the Sea Fisheries Department has been looking for alternative sampling strategies.

To overcome the problem of the 'blended' landings, special sampling agreements will be made with co-operative ship owners. The basic idea is that the crew tags unsorted boxes of their plaice and sole catches on-board, so that they can be traced back to the ICES Sub-area from which they originate. The fish in these boxes can then be sampled for length and/or age upon arrival in port and before they get 'blended' in the grading machines in the auction. A copy of such an agreement, in Dutch, is attached as a separate document (see file NDGP-Belgium_2005_Proposal_Flatfish-agreement.doc).

Since such a system of 'self-sampling' bears the risk of being subjective (even though in this case, the fishermen do not perform the length and age measurements by themselves), a 'verification mechanism' is being elaborated, which is based on the comparison of the length compositions of the samples provided by the contracted vessels, with the length compositions measured by sea-going observers, on vessels operating in the same area in the same period of the year.

▪ ***Psetta maxima* and *Scophthalmus rhombus* in ICES Sub-area IV**

Length and age samples for both species will be taken on a quarterly basis in the auctions of Zeebrugge and Oostende. Samples will be taken from boxes randomly chosen per market category. The sampling intensities required under the MP of the Regulation are considered to be insufficient for stock assessment purposes, and therefore will be increased to the levels given in the text table on page 22 (costs incurred from sampling in excess of the MP requirements will be at national expense).

▪ ***Rajidae* in ICES Sub-area IV**

The outcome of the 2002 pilot study on *Rajidae* in ICES Sub-area IV showed that *Raja clavata* and *R. montagui*, and to a lesser extent *R. brachyura*, are the commonest in the Belgian ray landings from this area. All three species will be sampled for total length in 2005. The sampling intensities required under the MP of the Regulation (25 measurements annually for the three species combined) are considered to be insufficient. Therefore, sampling intensities will be increased at national expense. The proposed sampling levels are shown in the text table on page 22.

❖ **Length and age sampling of landings : Non-quota species**

The non-quota species included in Annex XV of the Regulation are listed in Table 8.2., with the omission however of all areas and stocks that are not fished by the Belgian sea-going fishing fleet (see Section 1.2. for details). The table also reviews the species and stocks for which derogation is requested, together with the exemption rules that were applied.

The non-quota species that will be sampled for length and age (where applicable) in 2005, and their sampling regimes are listed in the text table on next page.

| Proposed sampling regimes for length and age : Non-quota species | | | | | | | | | |
|------------------------------------------------------------------|-----------------|-----------------|----------------------|--------------------|---------------------|----------------|----------------------|--------------------|---------------------|
| Species | Area or Stock | Length sampling | | | | Age sampling | | | |
| | | N samples | Average N per sample | Maximum N measured | N Required under MP | N samples | Average N per sample | Maximum N measured | N Required under MP |
| <i>Rajidae</i> | VII except VIId | 4-6 | 200 | 1200 | 50 | Not applicable | | | |

▪ ***Rajidae* in ICES Sub-area VII (except VIId)**

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 2005, all species will be sampled (for length only) in the auctions of Zeebrugge and Oostende. Sampling intensities required under the MP (50 measurements annually for the five species combined) are considered to be far too low to produce workable length frequencies. Therefore, sampling intensities will be increased at national expense.

❖ **Sampling of landings abroad and of landings by foreign vessels**

With respect to the landings by Belgian vessels into other MS, a distinction must be made between (a) 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 (b) vessels actually landing and selling their catches abroad (mostly in the Netherlands, occasionally in the UK).

Landings by foreign flag vessels for first sale in a Belgian auction are negligible, except for *Nephrops*. Landings of this species, particularly by Dutch vessels, went up from virtually nothing in 2002 to about 50 t in 2003, and are expected to increase even further in 2004.

▪ **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 the Sea Fisheries Department on the Belgian side and CEFAS (Lowestoft) on the UK side. A copy of this agreement is attached to the program proposal (see page 46).

▪ **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 RIVO (IJmuiden). Landings by Belgian vessels into the Netherlands for transportation to and first sale in a Belgian auction, will be sampled by the Sea Fisheries Department upon arrival of the landings in Belgium. Sampling of these landings was taken into account when calculating the sampling levels in the table on page 22.

The *Nephrops* landings by Dutch vessels into Belgium for first sale in a Belgian auction will be sampled by the Sea Fisheries Department, *pro rata* of one sample per month, in all months when such landings take place. Sampling protocols will be the same as for the Belgian *Nephrops* landings (see page 23 for details). The exact number of samples that will eventually be taken is difficult to foresee, since the frequency and duration of the Dutch *Nephrops* landings into Belgium are strongly driven by local market conditions (at the moment, there is no indication whether these landings will continue in 2005 at the same pace as in 2003 or 2004, nor on the volume of landings that can be expected).

- **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 the Sea Fisheries Department upon arrival of the landings in Belgium. Sampling of these landings was taken into account when calculating the sampling levels in the table on page 22. Landings by French vessels into Belgium for first sale in a Belgian auction are negligible.

- **Other**

Belgian landings (either for first sale or for transportation to a Belgian auction) in other countries than the UK, the Netherlands or France are negligible. The same applies to the landings by other flag vessels (i.e. other than from the UK, the Netherlands or France) for first sale into Belgium.

- ❖ **Length and age sampling of discards**

Length and age sampling of the discards will be focused on those fisheries where the Belgian fleet can be expected to substantially contribute to discarding (in relative terms), in view of its share in the TACs or the international landings: the flatfish directed beam trawl fisheries in ICES Sub-areas VIIa, VIId, VIIf,g and VIIIa,b, and the *Nephrops* directed fishery in the southern North Sea (Functional Unit 5, Botney Gut - Silver Pit area).

- **Flatfish directed beam trawl fisheries in ICES Sub-areas VII and VIII**

In 2005, sea-going observers will monitor the discards in the Belgian beam trawl fisheries in ICES Sub-areas VIIa (Irish Sea), VIId (Eastern English Channel), VIIf,g (Celtic Sea) and VIIIa,b (Inner Bay of Biscay). These areas were selected in view of the Belgian share in the local flatfish landings (see text table on next page).

In ICES areas VIIa, VIId and VIIf,g, the Belgian share in the international plaice and sole landings is considerable (from ~ 20 % to ~ 75 %), and it is even more important when only the landings by beam trawlers are taken into account. In Sub-area VIIIa,b, Belgium is the only major player in the sole fishery next to France, with > 25 % of the total trawl landings of sole. Conversely, the Belgian share in the flatfish landings from the North Sea is very small (~ 10 % at the most).

Sending observers on-board is very expensive, and therefore it was decided to give priority to those areas where Belgium takes a major part of the flatfish landings. Consequently, the

North Sea beam trawler fleet is not subject to a regular discard sampling program. The North Sea fleet will however be sampled on an 'opportunistic' basis, each time an observer trip in an adjacent area is extended into the (southern) North Sea by an *ad hoc* decision of the skipper. The same strategy will also be applied to the Western English Channel (ICES Sub-area VIIe).

| Share of Belgian beam trawlers landings in total international landings of plaice and sole | | | | |
|-------------------------------------------------------------------------------------------------------|----------------------------------------------------|--------------------------------------------------|----------------------------------------------------|--------------------------------------------------|
| ICES Sub-area | Plaice | | Sole | |
| | vs. Landings all gears combined | vs. Landings by beam trawlers | vs. Landings all gears combined | vs. Landings by beam trawlers |
| IV | ~ 6 | ~ 8 | ~ 9 | ~ 10 |
| VIIa | ~ 40 | ~ 75 | ~ 75 | ~ 80 |
| VIIId | ~ 20 | >> 20 | ~ 30 | >> 30 |
| VIIIf,g | ~ 65 | > 65 | ~ 70 | > 70 |
| VIIIa,b | Landings almost negligible | | ~8 | >> 25 |

The time periods during which observers will be sent at sea, and the numbers of observer voyages planned, are given in the text table below. In most areas, fishing by the Belgian beam trawler fleet is limited to certain quarters of the year (depending on catch rates and quota availability), and the observer trips are scheduled accordingly. The default frequency is set at two observer trips per quarter, in those quarters when fishing is expected to be most intense. This can be adjusted, depending on the circumstances (changes in fleet behaviour, temporal closures of TAC areas, etc.).

| Time-schedule for observer trips in the flatfish directed beam trawl fisheries | | | | |
|-------------------------------------------------------------------------------------------|-------------------|-------------------|-------------------|-------------------|
| Area | Quarter 1 | Quarter 2 | Quarter 3 | Quarter 4 |
| IV | Opportunistic (a) | Opportunistic (a) | Opportunistic (a) | Opportunistic (a) |
| VIIa | XX | XX | X | X |
| VIIId | XX | X | X | XX |
| VIIe | Opportunistic (a) | Opportunistic (a) | Opportunistic (a) | Opportunistic (a) |
| VIIIf,g | XX | XX | X | X |
| VIIIa,b | None | X | XX | None |

(a) Not planned as such, but sampled as opportunities arise when observer trips extend into these areas
None = No sampling, as landings in this quarter are marginal
X = None, 1 or 2, depending on quota remaining and/or uptake
XX = 2 observer trips

For all Annex XII and Annex XV species, annual estimates will be made of their total weight in the discards. This is in excess of the requirements of the Regulation, but the time needed to collect these data is marginal compared to the core of the discard sampling program, which is primarily focused on the most abundant commercial species.

The text table below gives an overview of the species for which also length and age (where applicable) will be measured in the discards.

| Type of measurements that are part of the discard studies | | | | | | | |
|-----------------------------------------------------------|--------------------------------------------|-------|-------|-------|---------|---------|--------------------|
| Species | Flatfish directed beam trawl fisheries (a) | | | | | | Nephrops fisheries |
| | IVb,c | VIIa | VIIId | VIIe | VIIIf,g | VIIIa,b | FU 5 |
| <i>Gadus morhua</i> | L & A | L & A | L & A | L & A | L & A | W | L |
| <i>Limanda limanda</i> | W | W | W | W | W | W | L |
| <i>Lophius budegassa</i> | NA | NA | NA | NA | NA | L | NA |
| <i>Lophius piscatorius</i> | L | L | L | L | L | L | L |
| <i>Melanogrammus aeglefinus</i> | L & A | L & A | L & A | L & A | L & A | W | L |
| <i>Merlangius merlangus</i> | L & A | L & A | L & A | L & A | L & A | W | L |
| <i>Merluccius merluccius</i> | L & A | L & A | L & A | L & A | L & A | L & A | L |
| <i>Microstomus kitt</i> | W | W | W | W | W | W | L |
| <i>Nephrops norvegicus</i> | W | W | NA | NA | W | W | L |
| <i>Pleuronectes platessa</i> | L & A | L & A | L & A | L & A | L & A | W | L |
| <i>Solea solea</i> | L & A | L & A | L & A | L & A | L & A | L & A | L |
| Triglidae | NA | NA | NA | NA | NA | NA | L |
| All other Annex XII & Annex XV species | W | W | W | W | W | W | L |

(a) Measurements in IVb,c and VIIe depending on sampling opportunities (see text for details)
L = Length and weight measurements
A = Age readings
W = Weight measurements only
NA = Not applicable (not required by Regulation or species does not occur in that area)

In addition to the length and age measurements on the discards, length measurements will also be made on the *retained* catches of plaice, sole and monkfish, and both length and age measurements on the *retained* catches of cod, haddock, whiting and hake (depending on the area).

▪ ***Nephrops* directed fishery in Functional Unit 5 (ICES Sub-area IVb,c)**

The pilot study that was initiated in April 2002 and continued in 2003, provided the basis for the discard sampling program for 2004. This program will be continued without major changes in 2005. Its main aim is to gather information on (a) the quantities, and (b) the size distributions of both the *Nephrops* and the finfish discards in the *Nephrops* directed fishery in the Botney Gut - Silver Pit area (southern North Sea). As far as finfish is concerned, the focus will be on the species in Annex XII and Annex XV of the Regulation. An overview of the species that will be sampled for length (in addition to the estimates of their weight) is given in the text table above.

Discard sampling will be done through a system of 'self-sampling', by which discard samples are collected on a regular basis (i.e. once every month) by fishermen, and supplied to the Sea Fisheries Department for further analysis. To that aim, an agreement will be made with the skipper/owner of a full-time *Nephrops* trawler (fishing for *Nephrops* year-round). A copy of such an agreement, in Dutch, is attached as a separate document (see file NDGP-Belgium_2005_Proposal_Nephrops-agreement.doc). So far, this system has proven

to work satisfactorily and to provide an acceptable alternative to the much more expensive sea-going observers. In 2003, several unsuccessful attempts were made to establish similar arrangements with the skippers/owners of part-time *Nephrops* trawlers (fishing for *Nephrops* during the peak season only, typically between June and October), in view of obtaining a more comprehensive picture of the discarding practices in this fishery. Meanwhile however, the Belgian *Nephrops* fleet has shrunk to such a small number of vessels (basically one full-time and about 10 occasional *Nephrops* trawlers only) that this idea has been dropped.

The analysis of the discard samples consists of replicate sub-sampling of their *Nephrops* and finfish contents, and of length measurements by species (on all Annex XII and Annex XV species). The purpose of taking replicate sub-samples instead of treating the samples as one, is to get an idea of the precision levels of the length measurements.

As in 2003 and 2004, the program will also include length measurements on the *landings* of the species listed in the text table on page 28, so that the discards can directly be related to the landings, and that estimates of the size compositions of the catches as a whole can be made. Sampling of the landings will be done concurrently with the delivery of the discard samples, i.e. once a month.

In its December 2003 report, SGRN addressed the issue of self-sampling and made the following comments: "*In general, SGRN prefers sea-going observers over self-sampling as a means to collect discard information (be it on quantities discarded or on their length and/or age composition), particularly since for the latter, data quality is often difficult to check and to guarantee. However, SGRN also recognises that in some particular cases, self-sampling might be the only workable way to collect discard information. SGRN insists that all MS currently applying or planning self-sampling programmes, operate some form of verification on a regular basis.*"

Following this recommendation, Belgium has decided to set up such a 'verification exercise', concurrently with the 2004 updates of *Nephrops* sexual maturity (which will be conducted by sea-going observers and which is scheduled to take place in August-September 2004) (also see section 9.1.).

8.2. Budget

Details on the budget for this Module are given in Appendices 9 (Length and age sampling of landings) and 10 (Length and age sampling of discards).

With respect to Appendix 10, it should be stressed that the proposed budget also includes the costs for the estimation of the overall quantities of Annex XII fish and shellfish species discarded by the Belgian fleet (see also Section 5.2.). These costs however, were estimated to be small compared to the costs for length and age sampling.

Table 8.1. - Overview of Belgian quota species, and of exemption criteria applied (if any)
Species and stocks that will be sampled for length or for length and age are shown in red

| Species | Area or Stock | Belgian quotum 2004 | Average landings 2001-2003 (1) (2) | Share of EC TAC (2) | Sum of quota < 5 % | Sum of quota < 10 % | NDGP Module H | | NDGP Module I |
|--------------------------------------------------------|-----------------------------------|---------------------------|------------------------------------------|---------------------------|-----------------------|------------------------|---------------|------------|------------------------------|
| | | | | | | | Length (3) | Age (3) | Biological parameters (3) |
| <i>Clupea harengus</i> | I, II | 25 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Clupea harengus</i> | IVc, VIId | 9159 | < 100 | > 10 % | < 15 % | < 25 % | E | E | E |
| <i>Gadus morhua</i> | Ila, IV | 807 | 1815 | < 5 % | < 15 % | < 25 % | S | E | E |
| <i>Gadus morhua</i> | IIla, Skagerrak and Kattegat | 10 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Gadus morhua</i> | Vb, VI, XII, XIV | 1 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Gadus morhua</i> | VIIa | 29 | 205 | < 5 % | < 15 % | < 25 % | S | E | E |
| <i>Gadus morhua</i> | VIIb-k, VIII, IX, X, CECAF 34.1.1 | 242 | 305 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Lepidorhombus spp.</i> | IIa, IV | 6 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Lepidorhombus spp.</i> | VII | 489 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Limanda limanda and Platichthys flesus</i> | IIa, IV | 533 | 670 | < 5 % | < 15 % | < 25 % | E | E | E |
| Lophiidae | IIa, IV | 247 | 425 | < 5 % | < 15 % | < 25 % | E | E | E |
| Lophiidae | Vb, VI, XII, XIV | 114 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| Lophiidae | VII | 1931 | 725 | 5 % < x < 10 % | < 15 % | < 25 % | S | E | E |
| <i>Melanogrammus aeglefinus</i> | IIa, IV | 625 | 435 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Melanogrammus aeglefinus</i> | IIla-d | 11 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Melanogrammus aeglefinus</i> | Vb, VI, XII, XIV | 12 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Melanogrammus aeglefinus</i> | VII, VIII, IX, X, CECAF 34.1.1 | 107 | 160 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Merlangius merlangus</i> | IIa, IV | 376 | 265 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Merlangius merlangus</i> | VIIa | 1 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Merlangius merlangus</i> | VIIb-k | 263 | 185 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Merluccius merluccius</i> | IIa, IV | 20 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Merluccius merluccius</i> | Vb, VI, VII, XII, XIV | 202 | < 100 | < 5 % | < 15 % | < 25 % | S | E | E |
| <i>Merluccius merluccius</i> | VIIla,b,d,e | 7 | < 100 | < 5 % | < 15 % | < 25 % | S | E | E |
| <i>Microstomus kitt and Glyptocephalus cynoglossus</i> | IIa, IV | 380 | 575 | 5 % < x < 10 % | < 15 % | < 25 % | S | E | E |
| <i>Nephrops norvegicus</i> | IIa, IV, by Functional Unit | 993 | 265 | 5 % < x < 10 % | < 15 % | < 25 % | S | NA | S |
| <i>Pleuronectes platessa</i> | IIa, IV | 3624 | 4740 | 5 % < x < 10 % | < 15 % | < 25 % | S | S | E |
| <i>Pleuronectes platessa</i> | IIla, Skagerrak and Kattegat | 57 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Pleuronectes platessa</i> | VIIa | 34 | 485 | < 5 % | < 15 % | < 25 % | S | S | E |
| <i>Pleuronectes platessa</i> | VIIId,e | 992 | 1445 | > 10 % | < 15 % | < 25 % | S | S | S |
| <i>Pleuronectes platessa</i> | VIIIf,g | 139 | 340 | > 10 % | < 15 % | < 25 % | S | S | S |
| <i>Pleuronectes platessa</i> | VIIh,j,k | 29 | < 100 | 5 % < x < 10 % | < 15 % | < 25 % | E | E | E |
| <i>Pollachius pollachius</i> | VII | 529 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Pollachius virens</i> | IIa, IIla-d, IV | 66 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Pollachius virens</i> | Vb (Faroër) | 50 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Pollachius virens</i> | VII, VIII, IX, X, CECAF 34.1.1 | 18 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Psetta maxima and Scopthalmus rhombus</i> | IIa, IV | 358 | 405 | 5 % < x < 10 % | < 15 % | < 25 % | S | E | E |
| Rajidae | IIa, IV | 590 | 345 | > 10 % | < 15 % | < 25 % | S | NA | S |

Table 8.1. (continued) - Overview of Belgian quota species, and of exemption criteria applied (if any)
 Species and stocks that will be sampled for length or for length and age are shown in red

| Species | Area or Stock | Belgian quotum 2003 | Average landings 2001-2003 (1) (2) | Share of EC TAC (2) | Sum of quota < 5 % | Sum of quota < 10 % | NDGP Module H | | NDGP Module I |
|--------------------------|-----------------|---------------------------|------------------------------------------|---------------------------|-----------------------|------------------------|---------------|------------|------------------------------|
| | | | | | | | Length (3) | Age (3) | Biological parameters (3) |
| <i>Scomber scombrus</i> | Ila, IIIa-d, IV | 453 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Sebastes spp.</i> | Va | 100 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Sebastes spp.</i> | Vb (Faroër) | 45 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Solea solea</i> | II, IV | 1417 | 1640 | 5 % < x < 10 % | < 15 % | < 25 % | S | S | E |
| <i>Solea solea</i> | VIIa | 394 | 620 | > 10 % | < 15 % | < 25 % | S | S | S |
| <i>Solea solea</i> | VIIId | 1588 | 1300 | > 10 % | < 15 % | < 25 % | S | S | S |
| <i>Solea solea</i> | VIIe | 11 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Solea solea</i> | VIIIf,g | 656 | 900 | > 10 % | < 15 % | < 25 % | S | S | S |
| <i>Solea solea</i> | VIIh,j,k | 32 | < 100 | 5 % < x < 10 % | < 15 % | < 25 % | E | E | E |
| <i>Solea solea</i> | VIIIa,b | 45 | 310 | < 5 % | < 15 % | < 25 % | S | S | E |
| <i>Sprattus sprattus</i> | Ila, IV | 2738 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Sprattus sprattus</i> | VIIId,e | 50 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Squalus acanthias</i> | Ila, IV | 76 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |
| <i>Trachurus spp.</i> | Ila, IV | 74 | < 100 | < 5 % | < 15 % | < 25 % | E | E | E |

(1) Landings after quota swapping ; Figures rounded to the nearest 5 t

(2) Exemption criteria applied are shown in bold

(3) S = Sampling will be carried out in 2005 ; E = Exemption requested ; NA = Not applicable

Table 8.2.a. - Overview of non-quota species, and of exemption criteria applied (if any)
Species and stocks that will be sampled for length or for length and age are shown in red

| Species | Area or Stock : ICES Sub-areas III, IV and VIIId | Comment | Average landings 2001-2003 (1) (2) | Sum of shares < 5 % | Sum of shares < 10 % | NDGP Module H | | NDGP Module I |
|-------------------------------------|-----------------------------------------------------|-----------|------------------------------------------|------------------------|-------------------------|---------------|------------|------------------------------|
| | | | | | | Length (3) | Age (3) | Biological parameters (3) |
| <i>Ammodythiidae</i> | IVc, VIIId | | None | | | E | E | E |
| <i>Anarhichas spp</i> | IIIa, Skagerrak and Kattegat | Not in MP | | | | E | E | E |
| <i>Argentina spp</i> | IV | Not in MP | | | | E | E | E |
| <i>Brosme brosme</i> | IV | Not in MP | | | | E | E | E |
| <i>Dicentrarchus labrax</i> | IV, VIIId | | < 100 | ? | ? | E | E | E |
| <i>Glyptocephalus cynoglossus</i> | IV | Not in MP | | | | E | E | E |
| <i>Helicolenus dactylopterus</i> | IIIa-d | Not in MP | | | | E | E | E |
| <i>Lepidorhombus boscii</i> | VIIId | | < 100 | < 15 % | < 25 % | E | E | E |
| <i>Lepidorhombus wiffiagonis</i> | VIIId | | < 100 | < 15 % | < 25 % | E | E | E |
| <i>Limanda limanda</i> | VIIId | Not in MP | | | | E | E | E |
| <i>Lophius budegassa</i> | VIIId | | < 100 | < 15 % | < 25 % | E | E | E |
| <i>Lophius piscatorius</i> | VIIId | | < 100 | < 15 % | < 25 % | E | E | E |
| <i>Macrouris berglax</i> | IIIa, Skagerrak and Kattegat | Not in MP | | | | E | E | E |
| <i>Micromesistius poutassou</i> | IV | | NRS | | | E | E | E |
| <i>Microstomus kitt</i> | IIa, IIIa-d, IV | | < 100 | < 15 % | < 25 % | E | E | E |
| <i>Molva dypterygia</i> | IV | Not in MP | | | | E | E | E |
| <i>Molva molva</i> | IV | Not in MP | | | | E | E | E |
| <i>Mullus barbatus</i> | IV, VIIId | | NRS | | | E | E | E |
| <i>Mullus surmuletus</i> | IV, VIIId | | < 100 | ? | ? | E | E | E |
| <i>Pandalus borealis</i> | IV | | None | | | E | E | E |
| <i>Pecten spp.</i> | VIIId | | < 5 % of EU share | < 15 % | < 25 % | E | E | E |
| <i>Phycis phycis</i> | I, II | Not in MP | | | | E | E | E |
| <i>Psetta maxima</i> | VIIId | | < 100 | < 15 % | < 25 % | E | E | E |
| <i>Rajidae</i> | VIIId | | < 100 | < 15 % | < 25 % | E | E | E |
| <i>Reinhardtius hippoglossoides</i> | IV | Not in MP | | | | E | E | E |
| <i>Salmo salar</i> | IV | Not in MP | | | | E | E | E |
| <i>Scomber scombrus</i> | VIIId | | None | | | E | E | E |
| <i>Scophthalmus rhombus</i> | VIIId | | < 5 % of EU share | < 15 % | < 25 % | E | E | E |
| <i>Sebastes spp.</i> | IV | Not in MP | | | | E | E | E |
| <i>Selachii</i> | IV | Not in MP | | | | E | E | E |
| <i>Selachii</i> | IV, VIIId | Not in MP | | | | E | E | E |
| <i>Squalus acanthias</i> | IV, VIIId | Not in MP | | | | E | E | E |
| <i>Trachurus spp.</i> | VIIId | | None | < 15 % | < 25 % | E | E | E |

(1) Landings figures rounded to the nearest 5 t ; NRS = Not recorded separately but assumed to be less than 100 t

(2) Exemption rules applied are shown in bold

(3) S = Sampling will be carried out in 2005 ; E = Exemption requested ; NA = Not applicable

Table 8.2.b. - Overview of non-quota species, and of exemption criteria applied (if any)

Species and stocks that will be sampled for length or for length and age are shown in red

| Species | Area or Stock : ICES Sub-areas II, V, VI, VII (excl. VIId), VIII, IX, X, XII and XIV | Comment | Average landings 2001-2003 (2) | Sum of quota < 5 % | Sum of quota < 10 % | NDGP Module H | | NDGP Module I |
|-----------------------------------|--------------------------------------------------------------------------------------------|-----------|--------------------------------------|-----------------------|------------------------|---------------|------------|------------------------------|
| | | | | | | Length (3) | Age (3) | Biological parameters (3) |
| <i>Aphanopus spp.</i> | All areas (excl. IXa, X) | Not in MP | | | | E | E | E |
| <i>Aphanopus spp.</i> | VIId,e | | None | | | E | E | E |
| <i>Argentina spp.</i> | VII f,g | Not in MP | | | | E | E | E |
| <i>Argyrosoma regium</i> | VII h,j,k | Not in MP | | | | E | E | E |
| <i>Beryx spp.</i> | X | | None | | | E | E | E |
| <i>Beryx spp.</i> | All areas (excl. X) | Not in MP | | | | E | E | E |
| <i>Busycon spp.</i> | IIa, IIIa-d, IV | Not in MP | | | | E | E | E |
| <i>Cancer pagurus</i> | All areas | | < 100 | < 15 % | < 25 % | E | E | E |
| <i>Clupea harengus</i> | VIId | | None | | | E | E | E |
| <i>Conger conger</i> | All areas, excl. IX, X | Not in MP | | | | E | E | E |
| <i>Conger conger</i> | VII f,g | | < 100 | | | E | E | E |
| <i>Coryphaenoides rupestris</i> | VII h,j,k | | None | | | E | E | E |
| <i>Dicentrarchus labrax</i> | VIII a,b | | NRS | | | E | E | E |
| <i>Dicentrarchus labrax</i> | VIId,e | Not in MP | | | | E | E | E |
| <i>Engraulis encrasicolus</i> | IXa, only Cadiz | | None | | | E | E | E |
| <i>Engraulis encrasicolus</i> | VIII | | None | | | E | E | E |
| <i>Gadus morhua</i> | VIa, VIb, VIIa, VIIb-k, VIII, XII, XIV | | < 5 % of EU share | < 15 % | < 25 % | E | E | E |
| <i>Glyptocephalus cynoglossus</i> | VI, VII | Not in MP | | | | E | E | E |
| <i>Helicolenus dactylopterus</i> | IXa, X | | None | | | E | E | E |
| <i>Helicolenus dactylopterus</i> | All areas (excl. IXa, X) | Not in MP | | | | E | E | E |
| <i>Homarus gammarus</i> | All areas | | < 100 | | | E | E | E |
| <i>Hoplostethus atlanticus</i> | All areas | | None | | | E | E | E |
| <i>Lepidorhombus boscii</i> | Vb, VI, XII, XIV, VII, VIIIa-e | | < 100 | < 15 % | < 25 % | E | E | E |
| <i>Lepidorhombus whiffiagonis</i> | Vb, VI, XII, XIV, VII, VIIIa-e | | < 100 | < 15 % | < 25 % | E | E | E |
| <i>Loligo vulgaris</i> | All areas (excl. VIIIc, IXa) | Not in MP | | | | E | E | E |
| <i>Loligo vulgaris</i> | VIIIc, IXa | | None | | | E | E | E |
| <i>Mallotus villosus</i> | XIV | | None | | | E | E | E |
| <i>Microchirus variegatus</i> | All areas | Not in MP | | | | E | E | E |
| <i>Microstomus kitt</i> | All areas | Not in MP | | | | E | E | E |
| <i>Molva dypterygia</i> | All areas (excl. X) | Not in MP | | | | E | E | E |
| <i>Molva dypterygia</i> | X | | None | | | E | E | E |
| <i>Molva molva</i> | All areas | | < 100 | < 15 % | < 25 % | E | E | E |
| <i>Mullus surmuletus</i> | All areas | | NRS | | | E | E | E |
| <i>Octopus vulgaris</i> | All areas (excl. VIIIc, IXa) | | < 100 | < 15 % | < 25 % | E | E | E |
| <i>Octopus vulgaris</i> | VIIIc, IXa | | None | | | E | E | E |
| <i>Pandalus spp.</i> | All areas (excl. VIIIc, IXa) | | None | | | E | E | E |
| <i>Pandalus spp.</i> | VIIIc, IXa | | None | | | E | E | E |
| <i>Phycis phycis</i> | X | | None | | | E | E | E |
| <i>Phycis phycis</i> | All areas (excl. X) | | None | | | E | E | E |
| <i>Polyprion americanus</i> | X | | None | | | E | E | E |

Table 8.2.b. (continued) - Overview of non-quota species, and of exemption criteria applied (if any)

Species and stocks that will be sampled for length or for length and age are shown in red

| Species | Area or Stock : ICES Sub-areas II, V, VI, VII (excl. VIII), VIII, IX, X, XII and XIV | Comment | Average landings 2001-2003 (2) | Sum of quota < 5 % | Sum of quota < 10 % | NDGP Module H | | NDGP Module I |
|-------------------------------------|--------------------------------------------------------------------------------------------|-----------|--------------------------------------|-----------------------|------------------------|---------------|------------|------------------------------|
| | | | | | | Length (3) | Age (3) | Biological parameters (3) |
| <i>Raja brachyura</i> | All areas | | 245 (4) | | | S | NA | S |
| <i>Raja clavata</i> | All areas | | 460 (4) | | | S | NA | S |
| <i>Raja montagui</i> | All areas | | 210 (4) | | | S | NA | S |
| <i>Raja naevus</i> | All areas | | 155 (4) | | | S | NA | S |
| <i>Rajidae</i> | All areas | | 1165 | | | S | NA | S |
| <i>Reinhardtius hippoglossoides</i> | Va, XII, XIV | | None | | | E | E | E |
| <i>Salmo salar</i> | All areas | Not in MP | | | | E | E | E |
| <i>Sardina pilchardus</i> | VIII, IX | | None | | | E | E | E |
| <i>Scomber japonicus</i> | VIII, IX | | None | | | E | E | E |
| <i>Sepia officinalis</i> | All areas (excl. VIIIc, IXa) | Not in MP | | | | E | E | E |
| <i>Sepia officinalis</i> | VIIIc, IXa | | None | | | E | E | E |
| <i>Solen spp.</i> | All areas | Not in MP | | | | E | E | E |
| <i>Sparidae</i> | All areas (ex VIIIc, IXa, X) | Not in MP | | | | E | E | E |
| <i>Sparidae</i> | VIIIc, IXa, X | | None | | | E | E | E |
| <i>Squalus achantias</i> | All areas | Not in MP | | | | E | E | E |
| <i>Trachurus mediterraneus</i> | VIII, IX | Not in MP | | | | E | E | E |
| <i>Trisopterus esmarkii</i> | All areas (excl. VIIIc, IXa) | Not in MP | | | | E | E | E |
| <i>Trisopterus esmarkii</i> | VIIIc, IXa | | None | | | E | E | E |
| <i>Other Deepwater species</i> | All areas | Not in MP | | | | E | E | E |

(1) Landings figures rounded to the nearest 5 t ; NRS = Not recorded separately but assumed to be less than 100 t
(2) Exemption rules applied are shown in bold
(3) S = Sampling will be carried out in 2005 ; E = Exemption requested ; NA = Not applicable
(4) Estimates for 2002

9. Module I - Other biological sampling

Institute in charge: Sea Fisheries Department

9.1. Program proposal under the requirements of the MP

A multi-annual sampling scheme for biological parameters (2002-2005 and beyond) is given in Table 9.1. This table should allow the Evaluators to get an overview of the updates that were already performed or that will be performed in the years to come. Species and stocks listed in Annex XVI of the Regulation but not in Table 9.1., will *not* be investigated (see Tables 8.1. and 8.2. for details on the exemption rules applied).

No roundfish species are included in the proposal, because (a) in Belgium, all roundfish are landed gutted, which makes it impossible to determine sex, maturity or fecundity, and (b) the roundfish samples obtained during the scientific surveys (see Section 7.1.) are limited, as these surveys are primarily directed towards plaice and sole.

▪ *Nephrops norvegicus* in Functional Unit 5 (ICES Sub-area IVb,c)

Sex ratio data are routinely collected during all market and discard sampling programs for *Nephrops* (see Section 8.1., paragraphs on Length and age sampling of landings and discards). Data by sex are a prerequisite to the *Nephrops* stock assessments, since these are usually done for males and females separately. Data by sex (for females complemented with records of the ovigerous condition) are also essential to the understanding of the state of the stock in general, since they provide vital information on the year-to-year differences in (a) the proportions of males and females in the catches, and (b) reproductive success.

Initially, the updates of *sexual maturity* were planned for 2005 (see last year's program proposal). Following the recommendations of the 'Lisbon Group' ⁽³⁾ however, it was decided to move the updates one year forward, and to perform them in 2004, concurrently with the sexual maturity updates on most other *Nephrops* stocks in the ICES area. This creates a unique opportunity to compare the maturity data between stocks. The methods that will be used to examine sexual maturity are:

- For females: Visual examination of the maturity stages of the ovaries (for details, see report of the 'Lisbon Group', pages 2-3).
- For males: Morphometric analysis of the appendix masculina (for details, see report of the 'Lisbon Group', page 4).

⁽³⁾ The 'Lisbon Group' is a group of *Nephrops* experts who met in conjunction with the 2004 meeting of the ICES Working Group on *Nephrops* Stocks in Lisbon, Portugal, to discuss international co-operation on the updates of sexual maturity and growth in *Nephrops*. A copy of the report of the 'Lisbon Group' is attached as a separate document (see file Lisbon-Group_2004_Report.doc).

The sexual maturity studies will be carried out by sea-going observers in August/September 2004, and will be combined with a 'verification exercise' on the discard sampling program (also see Section 8.1., paragraph on Length and age sampling of discards in the *Nephrops* fishery).

Also following the recommendations of the 'Lisbon Group', Belgium intends to take part in an international **growth** study on North Sea *Nephrops* in 2006 and/or 2007 (for details, see report of the 'Lisbon Group', pages 5-10). Belgium however, does not intend to take part in the preparatory experiments (which are foreseen to take place in 2005) to such a study.

▪ ***Pleuronectes platessa* and *Solea solea* in ICES Sub-areas VIIa, VIId and VIIf,g**

At present, **sex ratios** 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 programs (see Section 8.1., paragraphs on Length and age sampling of landings and discards).

In 2005, **sexual maturity** for both males and females will be investigated for all plaice and sole stocks listed in Table 9.1.

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

Sex ratios will be calculated on a yearly basis, as part of the routine market sampling programs for rays (see Section 8.1., paragraph on Length and age sampling of landings).

Sexual maturity data for rays in Sub-area IV will be collected during the BTS survey in August. Typically, between 100 and 200 rays (mostly *Raya clavata* and *R. montagui*) are caught during these surveys. The Sea Fisheries Department 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.

9.2. Budget

Details on the budget for this Module are given in Appendix 11.

Generally speaking, the budget for biological studies can be split into two parts: (a) the costs for obtaining and analysing the samples, and (b) the costs for working up the data resulting from the analyses. The biological studies that will be undertaken in 2005 under Module I (see above), do not require additional sampling on top of what is already done under Module H (Length and age sampling of landings and discards). This is why Appendix 11 only has cost estimates for Personnel and for the purchase of Durable

equipment. The costs for obtaining and analysing the samples are included in Appendices 9 (Length and age sampling of landings) and 10 (Length and age sampling of discards).

This 'no additional cost situation' however, will change in the years to come, with the inclusion of biological studies that do require extra shipping time and/or the purchase of extra samples or specific equipment. Particularly the growth studies on *Nephrops* can be expected to cause substantial additional costs. The 'Lisbon Group' however, has come up with a number of sensible proposals to reduce these costs, and to maximise the output, by performing the *Nephrops* growth studies through international co-operation. Therefore, we hope that the report of the 'Lisbon Group' will be taken seriously by the Evaluators and by the Commission, and that the Group's proposals will not be rejected without due consideration of their scientific merits.

| Table 9.1. - Multi-annual sampling scheme for biological parameters | | | | | | | |
|------------------------------------------------------------------------------------------------------------------------------------------------|---------------|----------|------|---------|------|-------------------------------------|-----|
| Sex ratio | | | | | | | |
| Species | Area or Stock | Achieved | | Planned | | If not yet performed, scheduled for | |
| | | 2002 | 2003 | 2004 | 2005 | | |
| <i>Nephrops norvegicus</i> | FU 5 | Yes | Yes | Yes | Yes | | |
| <i>Pleuronectes platessa</i> | VIIa | Yes | Yes | Yes | Yes | | |
| <i>Pleuronectes platessa</i> | VIIId | Yes | Yes | Yes | Yes | | |
| <i>Pleuronectes platessa</i> | VIIIf,g | Yes | Yes | Yes | Yes | | |
| <i>Rajidae</i> | IV | Yes | Yes | Yes | Yes | | |
| | VII | | | | | | |
| <i>Rajidae</i> | except VIIId | Yes | Yes | Yes | Yes | | |
| <i>Solea solea</i> | VIIa | Yes | Yes | Yes | Yes | | |
| <i>Solea solea</i> | VIIId | Yes | Yes | Yes | Yes | | |
| <i>Solea solea</i> | VIIIf,g | Yes | Yes | Yes | Yes | | |
| Sexual maturity | | | | | | | |
| Species | Area or Stock | Achieved | | Planned | | If not yet performed, scheduled for | |
| | | 2002 | 2003 | 2004 | 2005 | | |
| <i>Nephrops norvegicus</i> | FU 5 | No | No | Yes | No | No samples available from surveys | |
| <i>Pleuronectes platessa</i> | VIIa | Yes | Yes | Yes | Yes | | |
| <i>Pleuronectes platessa</i> | VIIId | Yes | Yes | Yes | Yes | | |
| <i>Pleuronectes platessa</i> | VIIIf,g | Yes | Yes | Yes | Yes | | |
| <i>Rajidae</i> | IV | Yes | Yes | Yes | Yes | | |
| | VII | | | | | | |
| <i>Rajidae</i> | except VIIId | No | No | No | No | | |
| <i>Solea solea</i> | VIIa | Yes | Yes | Yes | Yes | | |
| <i>Solea solea</i> | VIIId | Yes | Yes | Yes | Yes | | |
| <i>Solea solea</i> | VIIIf,g | Yes | Yes | Yes | Yes | | |
| Growth | | | | | | | |
| Species | Area or Stock | Achieved | | Planned | | If not yet performed, scheduled for | |
| | | 2002 | 2003 | 2004 | 2005 | | |
| <i>Nephrops norvegicus</i> | FU 5 | No | No | No | No | 2006-2007 (a) | |
| <i>Pleuronectes platessa</i> | VIIa | Yes | Yes | Yes | Yes | | |
| <i>Pleuronectes platessa</i> | VIIId | Yes | Yes | Yes | Yes | | |
| <i>Pleuronectes platessa</i> | VIIIf,g | Yes | Yes | Yes | Yes | | |
| <i>Rajidae</i> | IV | No | No | No | No | | (b) |
| | VII | | | | | | |
| <i>Rajidae</i> | except VIIId | No | No | No | No | | (b) |
| <i>Solea solea</i> | VIIa | Yes | Yes | Yes | Yes | | |
| <i>Solea solea</i> | VIIId | Yes | Yes | Yes | Yes | | |
| <i>Solea solea</i> | VIIIf,g | Yes | Yes | Yes | Yes | | |
| (a) Following the recommendations made by the Lisbon Group (2004) - See text for details | | | | | | | |
| (b) The time schedule for the growth estimates of rays will depend on the development of techniques for the age determination of these species | | | | | | | |

10. Module J - Economic data by group of vessels

Institute in charge: Sea Fisheries Service

10.1. Program proposal under the requirements of the MP

Economic data by group of vessels are collected through questionnaires that are filled in by the ship owners on a voluntary basis, 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 2002, the response rates were as follows:

- 52 % (i.e. 30 vessels out of 58) for the beamers of 12-24 m;
- 65 % (i.e. 40 vessels out of 62) for the beamers of 24-40 m; and
- 20 % (i.e. 1 vessel out of 5) for the demersal trawlers.

In 2003, the missing parameters from Annex XVII of the Regulation were included in the questionnaire, which now fully complies with the requirements of the Regulation.

The data are stored in a database, and can be retrieved according to any level of segmentation or aggregation that might be required.

Precision level 1 can be attained.

10.2. Budget

Details on the budget for this Module are given in Appendix 12.

11. Module K - Data concerning the processing industry

Institute in charge: Sea Fisheries Service

11.1. Program proposal under the requirements of the MP

According to the provisions of the Regulation, the collection of economic data on the fish processing industry becomes obligatory from 2006 onwards. So far, Belgium has not been particularly successful in meeting its obligations on this part of the Regulation (it failed e.g. to produce a pilot study report on its fish processing industry). There are several reasons to this:

- The institutes that committed themselves to execute the Belgian NDGP have very little experience with the fish processing industry.
- The contacts with the processing industry are generally poor.
- The information held by the processors is most often of a confidential economic nature, which makes it difficult to 'extract'.
- In Belgium, the links between fishing and processing industry are very weak, since most fish processing plants rely on imported primary products rather than on the landings by the own national fishing fleet.

However, in an attempt to remedy this shortfall in the Belgian NDGP, contacts will be established in the course of 2004 with the Centre for Agricultural Economy (CLE). This Centre is bound to merge in the near future with the Centre for Agricultural Research (CLO, the parent organisation of the Sea Fisheries Department) into a new Institute for Agriculture and Fisheries Research (ILVO), under the umbrella of the Ministry of the Flemish Community, Administration for Agriculture and Fisheries. Throughout its existence, CLE has been responsible for economic and socio-economic studies in the broader fields of agriculture and the agro-industry, and they may have the necessary expertise to also ensure the data collection on the fish processing industry.

11.2. Budget

Details on the budget for this Module are given in Appendix 13.

12. Module X - Data storage and management (Articles 9-11)

Institutes in charge: Sea Fisheries Service (landings, effort and economic data) and Sea Fisheries Department (data from market and discard sampling programs, data from sea surveys, etc.)

12.1. Existing databases

❖ Sea Fisheries Service

The Sea Fisheries Service has extensive databases with landings, effort and economic data on the Belgian sea-going fishing fleet, that will be complemented with the information gathered during the 2004 and 2005 NDGPs.

❖ Sea Fisheries Department

The results from the Beam Trawl Survey (see Section 7.1., paragraph on BTS) are currently stored in a central database managed by ICES.

12.2. Development of new databases

❖ Sea Fisheries Department

In April 2003, the Sea Fisheries Department started with the development of a relational database (the so-called Belsamp Database), in co-operation with a sub-contracted software developer.

The Belsamp Database has a modular structure, with (a) separate modules for the quality control, storage, partial treatment and retrieval of fishstats, data from market and discard samplings, survey data, etc., and (b) 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 (once these standards will be known).

A copy of the framework contract with the software developer, in Dutch, is attached as a separate document (see file NDGP-Belgium_2003_Contract-Database-01.doc).

The development of the Belsamp database has suffered from some delay, mostly because the scientists in charge were tied up with other commitments. According to the current expectations, roughly half of the modules will be ready for use by the end of 2004 and the remainder by the end of 2005. This means that the developer's work will have to be continued in 2005, and hence that the associated budget will have to be re-arranged. The proposed extension of the developer's activities into 2005 however, will have no impact on the *overall* cost of this task. After re-allocation, the initial budget of 62 500 Euro will now be partitioned over the years 2003, 2004 and 2005 in the following way:

| | |
|--------------------------------------|----------------------------|
| Incurred expenditure in 2003 | 16 500 Euro (VAT excluded) |
| Expected expenditure in 2004 | 24 000 Euro |
| Proposed transfer to budget for 2005 | <u>22 000 Euro</u> |
| Overall cost | 62 500 Euro |

12.3. Budget

Details on the budget for this Module are given in Appendix 14.

13. Module Y - Co-ordination (Article 6)

Institutes in charge: Sea Fisheries Service and Sea Fisheries Department

13.1. National co-ordination

Since April 2004, national co-ordination of the Belgian NDGP is ensured by the Head of the Biology and Aquaculture Section of the Sea Fisheries Department, who will also act as *ad interim* National Correspondent, pending the appointment of a new National Correspondent in succession of Dr. ir. Herwig Keymeulen. Co-ordinates of *ad interim* National Correspondent:

Dr. Frank Redant

Head of the Biology and Aquaculture Section
Centre for Agricultural Research - Sea Fisheries Department (CLO-DvZ)
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Fax: + 32 (0)59 33.06.29
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Additional technical information on the program proposal and on its budgeting can be obtained from the Department Head of the Sea Fisheries Service (for Modules C, D, E-landings, F, J and K), and from the Head of the Biology and Aquaculture Section of the Sea Fisheries Department (for Modules E-discards, F, G, H, I, X and Y):

Ir. Luc Maertens

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13.2. International co-ordination

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 programs and biological updates that are also part of the Belgian NDGP.
- Through the activities of the Regional Planning Group for the North Sea (RPG-NS) and the Regional Planning Group for the North-East Atlantic (RPG-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. The 2005 plenary meeting of PGCCDBS is scheduled to take place in Oostende, Belgium.
- 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), etc.

13.3. Budget

Details on the budget for this Module are given in Appendix 15.

To correctly appreciate the cost estimates given in Appendix 15, it should be borne in mind that the costs for the purely scientific supervision of the different Modules have been included under each Module separately. The only costs that were included in Appendix 15 are the ones related to the activities of international Working, Study and Planning Groups that are considered eligible by the Commission.

14. Acronyms and abbreviations

| | |
|-----------|-------------------------------------------------------------------------------------------------------------------------|
| Ab or Ab5 | 5 th Abdominal segment (standard measure for <i>Nephrops</i> tails) |
| 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>) |
| CLE | Centre for Agricultural Economy (Belgium) |
| CLO | Centre for Agricultural Research (Belgium) |
| CLO-DvZ | Centre for Agricultural Research - Sea Fisheries Department (Belgium) |
| CPUE | Catch per unit effort |
| DYFS | Demersal Young Fish and Brown Shrimp Survey |
| EC | European Commission |
| EP | Extended Program under the requirements of EC Regulation 1639/2001 |
| FU | Functional Unit (geographical definition of <i>Nephrops</i> stocks) |
| GT | Gross tonnage |
| ICES | International Council for the Exploration of the Sea (Denmark) |
| ILVO | Institute for Agriculture and Fisheries Research (Belgium). Merger of CLO and CLE, to be established in the near future |
| LOA | Length over all |
| LPUE | Landings per unit effort |
| MAGP | Multi-annual Guidance Program |
| MP | Minimum Program under the requirements of EC Regulation 1639/2001 |
| MS | EU Member State(s) |
| NDGP | National Data Gathering Program |
| PGCCDBS | ICES Planning Group on Commercial Catch, Discards and Biological Sampling |
| RIVO | Netherlands Institute for Fisheries Research (Netherlands) |
| RPG-NEA | Regional Planning Group for the North-East Atlantic |
| RPG-NS | Regional Planning Group for the North Sea |
| SGRN | STECF Sub-group on Research Needs |
| TAC | Total allowable catch |
| WGBEAM | ICES Working Group on Beam Trawl Surveys |



**Bilateral Agreement between the UK (CEFAS) and
Belgium (CLO-DvZ) for the Collection of Length and Age Samples
under the Minimum Programme of Regulation 1639/2001**

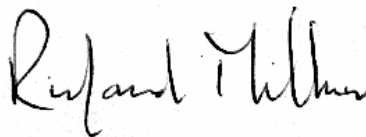
In its report from December 2003, SGRN noted that length and age sampling of landings by foreign vessels could be improved by better task sharing between the countries involved.

In compliance with this, 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 CLO-DvZ as part of the Belgian National Data Gathering Programme under the requirements of the EC Data Collection Regulation (1639/2001). CLO-DvZ will ensure that the estimated additional landings are included in their target when calculating sampling levels and when applying for funds to cover this additional sampling requirement.

At the same time, the UK agrees to carry out additional sampling of UK vessels landing into the UK in order to compensate for the small landings by UK vessels into Belgium which are not sampled by CLO-DvZ.

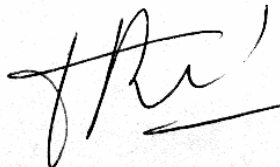
This agreement confirms the arrangements in place for 2004, and agrees that it should be continued in 2005 and 2006.

Signed for CEFAS:



Date: 29.04.2004

Signed for CLO-DvZ:



Date: 10.05.2004