

## SECTION 1: BIOLOGICAL DATA

### Text Box 1G: List of research surveys at sea

*General Comment: This Box fulfills Chapter IV of the Delegated Decision on the multi-annual Union programme and Article 2 and Article 7 paragraph (3) of this Decision. It is intended to specify which research surveys at sea set out in Table 10 of the multi-annual Union programme will be carried out. Member States shall specify whether the research survey is included in Table 10 of the Delegated Decision on the multi-annual Union programme or whether it is an additional survey.*

#### 1. Objectives of the survey

*Demersal Young Fish Survey (DYFS , listed in Table 10)*

##### History:

As part of the international Demersal Young Fish and Brown Shrimp Survey, an annual autumn (quarter 3) DYFS survey is carried out in the Belgian coastal waters to collect data on the abundance of juvenile flatfish (primarily plaice and sole) and brown shrimp (*Crangon crangon*).

Since 1973, 33 fixed sampling stations are fished. The location of the sampling area matches the main flatfish nursery grounds along the Belgian coast.

Until 1982, the research vessel 'Hinders' was used. From 1983 onwards, the survey was carried out using the training and research vessel O.29 'Broodwinner'. From 2013 onwards, the new research vessel 'Simon Stevin' was used for the Belgian DYFS.

##### Objective:

- ✓ Collect data on the abundance and distribution of juvenile flatfish (primarily plaice and sole) and brown shrimp.

#### 2. Description of the methods used in the survey. For mandatory surveys, link to the manuals. Include a graphical representation (map).

*Demersal Young Fish Survey (DYFS)*

The methods for the mandatory Demersal Young Fish Survey (DYFS) are described below as a manual is not yet available. During the WGBEAM meeting in 2015, a draft manual of this inshore survey was initiated and discussed. The working group aims to finalise the manual during WGBEAM meetings in the period 2017-2019.

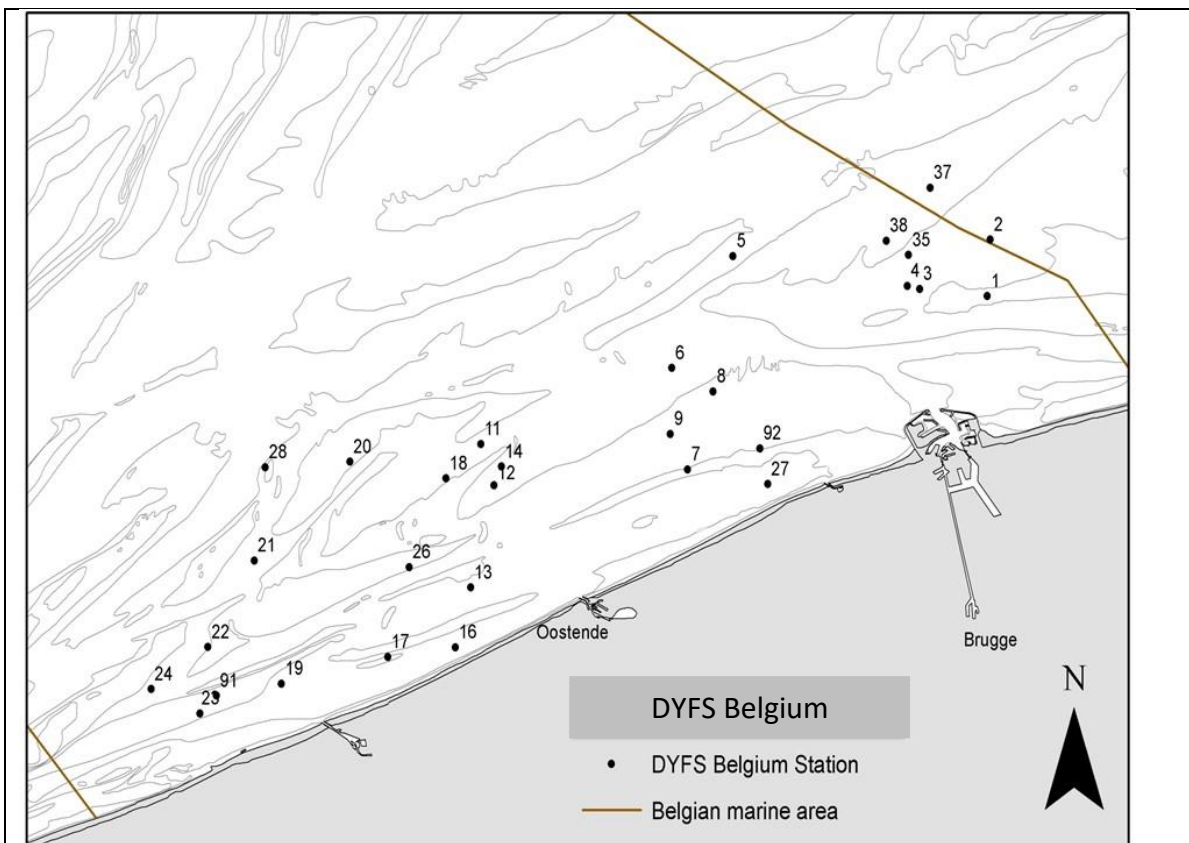
All DYFS sampling stations are fished for approximately 30 min, with a standard shrimp beam trawl (beam length 6 m; cod-end mesh size 22 mm, no tickler chains), at 3 knots against tide.

Several fish species (cod, whiting, plaice, flounder, dab, sole, brill and turbot) are hand-picked from the catches, sorted by species, weighed and measured in mm (the in-house developed SmartFish measuring board allows measuring length in mm). From 2009 onwards, the species list was extended to cover a larger range of commercial fish species (e.g. including lesser spotted dogfish, gurnards, lemon sole, horse mackerel, etc.). In this way, a total of 18 species are documented (Table 1G.1).

The brown shrimp (*Crangon crangon*) from the catches are first sorted into a 'small' and 'large' fraction by means of a rotating shrimp riddle (same type used on commercial shrimp trawlers). From each of these two fractions, 1-2 liter samples are taken (depending on the amount of shrimp and other organisms in the fractions). Samples are further sub-sampled in the lab to approximately 250 shrimps, which are then measured in mm using an in-house developed system for automated length measurements.

**Table 1G.1:** Commercial fish species sampled during DYFS

<b>Species</b>
Sole ( <i>Solea solea</i> )
Plaice ( <i>Pleuronectes platessa</i> )
Turbot ( <i>Scophthalmus maximus</i> )
Brill ( <i>Scophthalmus rhombus</i> )
Cod ( <i>Gadus morhua</i> )
Whiting ( <i>Merlangius merlangus</i> )
Dab ( <i>Limanda limanda</i> )
Flounder ( <i>Platichthys flesus</i> )
Lemon Sole ( <i>Microstomus kitt</i> )
Tub Gurnard ( <i>Chelidonichthys lucerna</i> )
Grey Gurnard ( <i>Eutrigla gurnardus</i> )
Red Gurnard ( <i>Chelidonichthys cuculus</i> )
Horse Mackerel ( <i>Trachurus trachurus</i> )
Mackerel ( <i>Scomber scombrus</i> )
Striped Red Mullet ( <i>Mullus surmuletus</i> )
Thornback Ray ( <i>Raja clavata</i> )
Lesser Spotted Dogfish ( <i>Scyliorhinus canicula</i> )
European Seabass ( <i>Dicentrarchus labrax</i> )



**Map 1G.2:** DYFS sampling stations in the Belgian coastal waters

**3. For internationally coordinated surveys, describe the participating Member States/vessels and the relevant international group in charge of planning the survey**

International agreements for both surveys (BTS and DYFS) are coordinated at the ICES WGBEAM working group, where Belgium is represented. Other MSs carrying out beam trawl surveys in the region are The Netherlands, Germany and the UK.

**4. Where applicable, describe the international task sharing (physical and/or financial) and the cost sharing agreement used**

Not applicable

**5. Explain where thresholds apply**

For all target species (*i.e.* Sole, Plaice and Brown shrimp) of the selected mandatory surveys (BTS and DYFS in area IV), the threshold is attained ( $\geq 3\%$  of the TAC or when no TAC is available  $\geq 3\%$  of the share in average EU landings).

Belgian average landings 2016-2018 of Sole in area IV are 716 tonnes, representing 27% of the TAC.

Belgian average landings 2016-2018 of Plaice in area IV are 2103 tonnes, representing 16% of the TAC.

Belgian average landings of Brown Shrimp in area IV are 1074 tonnes, representing 3% of the share in average EU landings.