

Sampling protocol: Stomach
Sampling objective(s): data collection for fishery-independent timeseries by trawling
Start of sampling: 2022
Sampling ongoing: yes
Data use Primary data use: data from diet of commercial fish species is used in multispecies assessments. The foreseen data users are ecosystem modellers. The main target species for stomach sampling vary per year, and follow a rolling scheme per five years (RCG NANSEA ISSG 2022 report chapter 14)
Sampling design and method The stomach samples are collected during the IBTS_Q1 (Survey dem). Two stomachs per species per haul are collected for each 5 cm class ≥ 15 cm.
Sampling protocol and data capture <i>In the field</i> Individual length measurements for fish used for biological data collection are done using an analogue measuring board, of which the set-off is checked before the start of the survey. Individual wet weights are taken using electronic scales, to the gram. Scales are maintained annually and calibrated at least daily. Data is noted down on paper and entered in the computer directly after processing the fish (Survey dem). After the fish selected for biological sampling has been treated following national animal welfare conditions, the stomachs are collected from the body cavity, and stomach fullness and gall bladder stage is registered. Each stomach is stored in a plastic ziplock bag and frozen. Information on the sampling date and location is added to the bag. If otoliths be collected from the same fish (Survey dem), first the otoliths are removed before the stomach sampling takes place. <i>In the lab</i> The stomachs are thawed in batches. Each stomach is cut open and the content is identified to the lowest taxonomic level possible given the digestion stage of the prey. Preys are counted by species, digestion stage per prey item is recorded. The information on the prey items is added to an Excel template for fish stomach sampling. <i>Post-processing data</i> The Excel files with prey information are transposed to the database exchange format and added to the institute's database FRISBE.
Data quality <i>Quality assurance procedure</i> There is currently no standardised quality assurance procedure in place. Data is checked visually before entry into the database. <i>Quality checked parameters</i> There is currently no standardised quality assurance procedure in place.
Data storage National database: stomach information is submitted to the national database FRISBE. The relevant aspects of this database are described in Proc databases .

International database: stomach data from historic sampling has been stored to the ICES Fish stomach database (<https://www.ices.dk/data/data-portals/Pages/Fish-stomach.aspx>). This database will be further developed and when ready, the stomach information will be added to that database as well.

Data availability

Institutional availability: accessibility of the national database FRISBE is described in [Proc databases](#), data is made available as soon as possible after the survey, mostly within 2 months after the stomach processing has finished.

Public availability: there is currently no data submission deadline set for the stomach information, but in general stomach content information could be made available approx. 1 year after field data collection.

Reference to full documentation:

National manual: National manual: CVO_h_003: Damme, C. van, U. Beier, I. de Boois, D. Burggraaf, B. Couperus, R. van Hal, T. Pasterkamp, 2023. Handboek bestandsopnamen en routinematige bemonsteringen op het water. Versie 17, maart 2023. CVO rapport 23.002 (link to detailed protocol in Annex III of the manual)

International manual: in progress

Review frequency full documentation: national manual is annually reviewed; the international manuals approx. every three years

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