FACTSHEET: Auction sampling shrimp (AUCTION_SHRIMP)

Version: [v1, 01/03/2023]

Sampling protocol: AUCTION_SHRIMP

Sampling objective(s): data collection of commercial catches of shrimp

Start of sampling: <2000

Sampling ongoing: yes

Data use

Data collected, i.e length frequency and biological data, from commercial catches of brown shrimp (*Crangon crangon*) is on request available for relevant end-users such as ICES and STECF. In general, the data is provided to the end-user as data raised to fleet level.

Sampling design and method

On-shore sampling, i.e. collection of length and biological information, in the major Dutch auctions specialised in processing shrimp (>80% of annual landings) of landed by demersal fleet vessels (>12 m, fishing with 16-32mm) shrimp trawl.

The sampling scheme follows a quarterly stratification by auction*days. In each stratum (quarter) a predetermined number of auction days is selected. During an auction day, samples are collected after the shrimp have been sieved. Samples can be directly processed in the auction, but samples are generally returned to the laboratory for processing. Sometimes, it is not logistically feasible for the observer to visit the auction (distance from the research institute, time constraints). An external person is contracted and instructed based on the sampling protocol to collect samples for the selected auction day and vessel for the research institute. These samples are then sent to the laboratory and processed there.

Sampling protocol and data capture

In the field

Samples are collected in the auction according to a predefined annual sampling scheme which follows a quarterly stratification by auction*days. For shrimp, three market categories are defined. A sample consists of a sub-sample from each market category. A sub-sample consists of >100 individuals (approx. 500 grammes).

During an auction day, a scientific observer visits the auction and selects a fraction of the vessels containing the species' landings in the sampling scheme for that particular auction day. The selected vessels are requested to cooperate in sampling. If positive, standard information (i.e. vessel, catch date, gear) is registered, and sampling is conducted. If negative, the vessel non-response is recorded. In few cases, when it is not logistically feasible for the observer to visit the auction (distance from the research institute, time constraints) an external person is contracted and instructed based on the sampling protocol to collect samples for the research institute for the selected auction day and vessel. These samples are then sent to the laboratory and processed there.

In the lab/In the field

100 individuals randomly are taken from each sub-sample and measured ‘to the mm below’, i.e. tip of the rostrum to the point of the tail, using an analogue measuring board dedicated for shrimp measuring. Sex and maturity (females only) are determined. All measurements are written down on specific measurement lists, which are entered into Billie Turf at a later stage.

In the lab

Measuring at the lab is similar to auction sampling, though all collected data is directly inserted in Billie Turf, the standard in-house data management software. The standard collected meta information (i.e. vessel, catch date, gear) is also entered in Billie Turf.

Data quality

Quality assurance procedure

Collected data are stored as plain text files following a dedicated, database-ready format at a centralised location for which daily version control routines are in place. Once all samples have been completed during the year, checks for outliers take place. These checks are conducted before uploading the data to the database, using standardised scripts (R, SAS) and involve outlier checks for numerical values, consistency checks for text variables, relational checks such as length-weight, length-age relationships, and maps with the sampling positions. Once uploaded to the database, files undergo a second round of data validation to ensure data integrity and completeness.

Data storage

National database: After file corrections, the data are stored in one of the centralised databases, FRISBE. The relevant aspects of this database are described in Proc_databases.

International database: ICES RDB(ES) https://www.ices.dk/data/data-portals/Pages/RDB-FishFrame.aspx

Data availability

Institutional availability: data is available to people with access rights to the shared location. Read and write rights can be assigned separately. In general, once granted access to the managed database, scientists extract the data from the database Frisbe for further analysis and provision of the data to end users.

Public availability: data is available anonymously on aggregated levels upon request.

Reference to full documentation:

National manual: Verver, S., 2022. CVO Handboek Marktbemonstering zeevisserij. Versie 2. CVO rapport 22.013 (in Dutch)

Review frequency full documentation: national manual is annually reviewed. This process is embedded in the institute's certified ISO Quality manual.

Factsheet author(s): Verver, S.

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