

Sampling scheme identifier: **Mainland Biological parameters specific ICES**

MS: PRT
Region: North-East Atlantic
Sampling scheme identifier: Mainland Biological parameters specific ICES
Sampling scheme type: Biological parameters specific
Observation type: SciObsOnShore
Time period of validity: 2025-2027
Short description (max 100 words): Sampling scheme (Work Plan - Table 2.2) aiming at sampling biological variables (age, weight, sex, maturity of selected species in Work Plan – Table 2.2) landed at mainland ports by Portuguese vessels operating in ICES 27.9.a. Selected species are included in the species listed in Table 1 of the EU MAP Delegated Decision annex.
Description of the population
Population targeted: Population targeted and studied: biological variables (age, weight, sex, maturity of selected species in Work Plan - Table 2.2) landed at port by Portuguese vessels operating in ICES 27.9.a. Primary Sampling Unit (PSU): port*day
Population sampled: Main national ports: VIANA DO CASTELO, POVOA DO VARZIM, MATOSINHOS, AVEIRO, FIGUEIRA DA FOZ, NAZARE, PENICHE, COSTA DA CAPARICA, SESIMBRA, SETUBAL, SINES, SAGRES, LAGOS, PORTIMAO, QUARTEIRA, OLHAO, VRSA Population not sampled: Minor national ports.
Stratification: Stratification is used to improve sampling coverage through the year (by quarter) and along the Portuguese coast (by port).
Sampling design and protocols
Sampling design description: On shore sampling schemes sample Landings (All fractions). a) Annual sampling effort (number of planned PSUs = port*days = onshore events) is fixed per selected species (of the Work Plan - Table 2.2). b) Sampling effort (number of port*day = onshore events = PSUs) is allocated to ports and quarters based on landings from previous reference years. Each onshore event (port*day = PSU) is selected by UPSWOR. c) In every port*day, for every selected species the observers attempt to sample every commercial size category, by randomly selecting 1 box from each commercial size category, from a list of all landings awaiting auction. This list includes the name of each vessel and the commercial species, commercial size category and weight of each of its boxes.

d) Within each box, the observers randomly select a predefined number of individuals which are sampled (in situ or in laboratory) for biological variables (length, weight, age, sex ratio and/or sexual maturity).

Is the sampling design compliant with the 4S principle?:

Y.

Regional coordination:

N..

Link to sampling design documentation:

Documentation will be developed in 2025-2027.

Design follows international recommendations:

Y.

Sampling design in line with international recommendations, e.g. from ICES WGCATCH (Working Group on Commercial Catches) and ICES WGBIOP (Working Group on Biological Parameters).

Link to sampling protocol documentation:

Documentation will be developed in 2025-2027.

Protocol follows international recommendations:

Y.

Sampling design in line with international recommendations, e.g. from ICES WGCATCH (Working Group on Commercial Catches) and ICES WGBIOP (Working Group on Biological Parameters).

Sampling implementation

Recording of refusal rate:

N.

Recording of refusal rates will be developed in 2025-2027.

Monitoring of sampling progress within the sampling year:

The number of PSU per trimester per sampling scheme executed versus planned is monitored monthly. When necessary and possible, the number of PSU planned but not executed (due to operational/logistical constraints) is rescheduled.

Data capture

Means of data capture:

Biological data is collected with measuring board/tape/calliper (variable length) and scale (variable weight).

Data capture documentation:

Documentation on data capture is disclosed to all scientific observers and under constant improvement (e.g. species identification guides, age reading protocols, maturity stage guides, biological sampling protocols).

Quality checks documentation:

Quality of data capture is checked yearly before response to data calls (e.g. unexpected species in a given metier/area, unexpected age for a given species length, unexpected maturity stage for a given species length, unexpected biological variable for a given species). This includes automatic and semi-automatic data quality checks procedures, at different stages (during and after data entry in the national database).

Data storage

National database:

<http://nautilus.ipma.pt/>

International database: RDBES.
Quality checks and data validation documentation: Quality of data storage is checked yearly before response to data calls (e.g. if all data captured is stored in the national database, including different levels of data such as level of fishing trip, haul, sample, individual, etc.). This includes automatic and semi-automatic data quality checks procedures, at different stages (during and after data entry in the national database).
Sample storage
Storage description: Biological samples are stored at IPMA and a record of samples per species/stock by geographic sub-area is kept. Hard tissues (otoliths and hard tissues for age reading) are stored until and after processing/analysis. Soft tissues (stomachs, gonads) are stored until processing/analysis.
Sample analysis: Sample analysis follows national and international protocols (e.g. from WG and benchmark reports) for age reading, maturity stage, histology.
Data processing
Evaluation of data accuracy (bias and precision): Data accuracy is evaluated by experts / stock assessors during preparation and analysis of data for expert / assessment working groups.
Editing and imputation methods: Editing and imputation methods are developed by experts / stock assessors during preparation and analysis of data for expert / assessment working groups.
Quality document associated to a dataset: Quality of datasets is documented in upload logs of data submitted to data calls and in expert / assessment working groups / regional coordination groups reports.
Validation of the final dataset: Final datasets are validated by experts / stock assessors during expert / assessment working groups / regional coordination groups.