MINISTRY OF AGRICULTURE AND RURAL DEVELOPMENT
National Agency for Fisheries and Aquaculture

Regulation (EU) 2017/1004 of the European Parliament and of the Council of 17 May 2017

on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008 (recast)

Commission Delegated Decision (EU) 2021/1167 of 27 April 2021

establishing the multiannual Union programme for the collection and management of biological, environmental, technical and socioeconomic data in the fisheries and aquaculture sectors from 2022

Commission Implementing Decision (EU) 2021/1168 of 27 April 2021

establishing the list of mandatory research surveys at sea and thresholds as part of the multiannual Union programme for the collection and management of data in the fisheries and aquaculture sectors from 2022

Commission Implementing Decision (EU) 2022/39 of 12 January 2022

laying down rules on the format and timetables for the submission of national work plans and annual reports for data collection in the fisheries and aquaculture sectors, and repealing Implementing Decisions (EU) 2016/1701 and (EU) 2018/1283

Romania Work Plan for data collection in the fisheries and aquaculture sectors

2025-2027

Version 9

Bucharest, Romania - 04 November 2024

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SECTION 1: GENERAL INFORMATION

Data collection framework at national level

General comment: Use this text box to describe how data collection is organised in your Member State (institutions involved, contact information) and in which regional coordination groups (RCG) your Member State participates.

The National Data Collection Program (NDCP), for the period 2025-2027, will present the data from the fisheries sector and the trends regarding the development of this sector in Romania, in accordance with the provisions of the applicable EU regulations and decisions, Commission Delegates Decision (EU) 2021/1167 of 27 April 2021 establishing the multiannual Union program for the collection and management of biological, environmental, technical and socioeconomic data in the fisheries and aquaculture sectors from 2022, (EU) 2021/1168 Commission Delegates Decision (EU) 2021/1168 of 27 April 2021 establishing the list of mandatory research surveys at sea and thresholds as part of the multiannual Union program for the collection and management of data in the fisheries and aquaculture sectors from 2022 and Regulations Regulation (EU) 2017/1004 Of the European Parliament and of the Council of 17 May 2017 on the establishment of a Union framework for the collection, management and use of data in the fisher is sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008.
The main objective of the program is to present the situation in the fishing sector and the trends in the development of this sector in Romania. The results of the program will contribute to the implementation of strategic objectives for the development of sectoral policies in accordance with Romania's National Strategy in the Fisheries Sector and the implementation of the new EU Common Fisheries Policy.
In accordance with the provisions of Council Regulation (EC) 199/2008 of 25.02.2008, the public institution of national interest designated to implement the National Fisheries Data Collection Program, is the National Agency for Fisheries and Aquaculture (NAFA) - Mr. Alexandru GHEORGHE being appointed National Correspondent: 29, Sf. Vineri Street, sector 3, Bucharest, Romania; tel: (40) 0374 466140, (40) 0374 466139; fax: (40) 0374 466138; e-mail: secretariat@anpa.ro; alexandru.gheorghe@anpa.ro.

On the realization and implementation of the National Program, are involved the **National Institute for Marine Research and Development "Grigore Antipa"** Constanța (NIMRD), **Research and Development Institute for Aquatic Ecology, Fisheries and Aquaculture Galati** (ICDEAPA) and **Research and Fisheries Development Station Nucet** (SCDP).

National Institute for Marine Research and Development "Grigore Antipa" (NIMRD) - Blvd. Mamaia no. 300, RO-900581, Constanţa 3, Romania; Phone**:**+40 241 543288; +40 241 540870; Fax: +40 241 831274; E-mail: office@alpha.rmri.ro; Web site: http://www.rmri.ro
The National Institute for Marine Research-Development "Grigore Antipa" Constanţa is an institution with specific responsibilities and experience in developing studies (national and international) in the field of Marine Living Resources in the Black Sea, as well as in reporting data to regional bodies (Black Sea Commission, GFCM-Black Sea Subgroup) and international (JRC/DG-MARE, GFCM, FAO, MEDIAS, MEDITS, ICES), in accordance with Romania's obligations under the Convention on the Protection of the Black Sea against Pollution and the environmental legislation of the European Union (Del. 2000/60 / EEC; Del. 2008/56 / EEC). The process of inventorying fish species of commercial and conservative importance in the Black Sea requires the existence of historical data accumulated from previous programs and projects, carried out in Romanian transitional, coastal and marine waters. NIMRD developed and implemented the PNCD program in the period 2008 - 2021. NIMRD will ensure the management and coordination of the implementation of the entire NDCP program. At the same time, it will implement all the objectives related to the fishing activity.
Research and Development Institute for Aquatic Ecology, Fisheries and Aquaculture Galati (RDIAEFA) - Portului Street, no. 54, cod 800211, Galați, Romania; Tel.: (40)0236-416914, Fax: (40)0236-414270; E-mail: icdeapa.galati@asas.ro**;** http://www.icdeapa.ro
The experience of the research staff of the institution has contributed to the development of knowledge in the field of living aquatic resources, fishing, aquaculture and processing by: developing systems for assessing and monitoring the state of the biomedical environment and aquatic biodiversity; promoting innovative techniques

for ecological rehabilitation and biodiversity consolidation; conservation of wild fish populations in natural river basins and especially sturgeons; creation of the data bank regarding the sturgeon populations from the Danube river; elaboration of techniques, methods, selective fishing gear and their implementation in the exploitation of aquatic bioresources; design, implementation and implementation of technological systems and technologies for the reproduction of various aquatic species; design and implementation of technological systems and technologies for intensive breeding of valuable fish species and other aquatic organisms; design and implementation of technologies for complex capitalization of aquatic bioresources through interspecific polyculture; selection, elaboration of methods of diagnosis, prophylaxis and treatment in fish diseases; development of organic aquaculture. RDIAEFA Galati will collect data from aquaculture and fish processing sector.

Fisheries Research and Development Station Nucet (**FRDS**) - Principală Street no. 549, Nucet, jud. Dâmbovița, Romania; tel/fax: 0245-267003, tel.0245-267009, E-mail: SCDP.Nucet@asas.ro
In its over 70 years, the institution has made an essential contribution to the development of the national fisheries sector, promoting fundamental research and application in the field of fish farming / aquaculture. The research station has qualified staff and the necessary equipment to carry out the proposed topics in good condition. The specialists who are going to carry out the study have knowledge and practical experience in the specific fields: aquaculture, processing, knowledge of the biology, ecology and ethology of the main fish species of commercial importance; assessment of the state and evolution trends of fish resources in inland freshwater; the ecosystem approach of the management of the Romanian continental fishery; scientific support for the implementation of national legislation in the field of fisheries and the protection of freshwater species and habitats, in accordance with European legislation. FRDS Nucet, will collect data from aquaculture and fish processing sector.
The data are stored in a database server of NIMRD Constanta. For data security reasons, accessing them is done only internally, through SQL commands. No web interface was provided / installed on the database server. National data collection website: https://www.rmri.ro/Home/Publications.Other.ANPA.html, and https://www.anpa.ro/?page_id=396 .

Romania is member of RCG Mediterranean and Black Sea (RCG MED&BS) and RCG ECON.

Text Box 1a: Test studies description

General comment: This text box fulfils Chapter II, section 1.2 of the EU MAP Delegated Decision annex.

Name of the national test study: Pilot study regarding the collection and analysis of discards data in commercial fishing from the Romanian coast

1. Aim of the test study
In the Black Sea area, studies on discards only cover a small portion of the total fishing activities, and discard rates are often poorly estimated or totally unknown, therefore represent a major source of uncertainty. Information about discards is very important for end-user needs (researchers, authorities, EU political bodies, GFCM) to properly estimate the fishing mortality rates, stock biomass and reference points for the main commercial Black Sea fish species.

2. Duration of the test study
The test study will cover the period 2025-2027. Annually, the obtained data will be presented, based on discard rates obtained in fishing gears like trap nets, pelagic trawl and turbot gillnets.

3. Methodology and expected outcomes of the test study
The methodology which will be used (FAO, 2019) is based on three approaches for the sampling of discards:
(i) monitoring at-sea of commercial catches (observers on board of commercial vessels for different types of gear);
(ii) direct discussions with fishers at landing points (questionnaires);

(iii) self-sampling (information provided by the fishers themselves in order to have data that is as representative as possible of the entire fleet segment, especially if resources or conditions cannot ensure a relatively high number of observations).
Minimum set of data to be collected
A. Vessel data
B. Fishing trip data
C. Fishing operation data
The discard rate, for the total catch of an observed fishing trip, can be determined by the sum of the total quantity (in kg or number) of the discarded fraction divided by the total quantity caught (i.e. landed/retained + discarded – FAO, 2019):

$$Discard\ rate\ (\%) = \frac{(\text{SUMMED DISCARDS})}{(\text{SUMMED DISCARDS+SUMMED LANDING})} \times 100$$

For the unobserved fishing trips, simple estimates can be then applied to the total landings of a fishery to raise or extrapolate the tonnage of discards to the level of the whole fishery.
The results of this pilot study will contribute the future data collection activities by improving the information (discards rates) used to evaluate fish stocks and establish annual quotas. Also, by collaborating with fishermen in estimating the level of discards, an adequate evaluation of fish stocks will be achieved.

Text Box 1b: Other data collection activities

Region: Mediterranean and Black Sea

Activity: RCG's Secretariat

General comment: Describe either activities that are funded by the DCF without a direct link to the EU MAP specific requirements or WP template tables, like marine knowledge, or activities funded by other financial instruments and/or programmes that relate to EU MAP requirements, like actions under the marine action plan. You can also include one-off specific studies for a particular end-user need that will not enter the regular data collection.

Name of the regional activity: RCG's Secretariat

RWP Med&BS 2025 - 2027
https://datacollection.jrc.ec.europa.eu/documents/d/dcf/medbs_rwp_2025-2027_text_2024-08-30
Romania is member of RCG Mediterranean and Black Sea and RCG ECON.

Activity: Med&BS Regional data base

General comment: Describe either activities that are funded by the DCF without a direct link to the EU MAP specific requirements or WP template tables, like marine knowledge, or activities funded by other financial instruments and/or programmes that relate to EU MAP requirements, like actions under the marine action plan. You can also include one-off specific studies for a particular end-user need that will not enter the regular data collection.

Name of the regional activity: Med&BS Regional data base (RDBFIS)

RWP Med&BS 2025 - 2027
https://datacollection.jrc.ec.europa.eu/documents/d/dcf/medbs_rwp_2025-2027_text_2024-08-30

Activity: Regional Coordination taking place in ISSGs and pan regional cooperation between RCGs

General comment: Describe either activities that are funded by the DCF without a direct link to the EU MAP specific requirements or WP template tables, like marine knowledge, or activities funded by other financial instruments and/or programmes that relate to EU MAP requirements, like actions under the marine action plan. You can also include one-off specific studies for a particular end-user need that will not enter the regular data collection.

Name of the regional activity: Regional Coordination taking place in ISSGs and pan regional cooperation between RCGs

RWP Med&BS 2025 - 2027
https://datacollection.jrc.ec.europa.eu/documents/d/dcf/medbs_rwp_2025-2027_text_2024-08-30

Activity: RCG ECON

General comment: Describe either activities that are funded by the DCF without a direct link to the EU MAP specific requirements or WP template tables, like marine knowledge, or activities funded by other financial instruments and/or programmes that relate to EU MAP requirements, like actions under the marine action plan. You can also include one-off specific studies for a particular end-user need that will not enter the regular data collection.

Name of the regional activity: Economic Issues Regional Work Plan for data collection in the fisheries, aquaculture and fish processing sectors

ECON_RWP 2025-2027
https://datacollection.jrc.ec.europa.eu/documents/d/dcf/econ_rwp_2025-2027

General comment: Describe either activities that are funded by the DCF without a direct link to the EU MAP specific requirements or WP template tables, like marine knowledge, or activities funded by other financial instruments and/or programmes that relate to EU MAP requirements, like actions under the marine action plan. You can also include one-off specific studies for a particular end-user need that will not enter the regular data collection.

Name of the national activity: Environmental data on aquaculture

1. Aim of the data collection activity
The aim of the study is to analyse the environmental data for aquaculture regarding the type and quantity of medicines or treatments administered for diseases prevention and control from Romanian aquaculture sector and, the mortalities registered in aquaculture units.

2. Duration of the data collection activity
The study will cover the period 2025 - 2027. Annually, Romania will transmit the obtained data during the analysed year. After three years in which environmental data were collected, the annual report for 2027 will include conclusions on environmental data for the aquaculture sector.

3. Methodology and expected outcomes of the data collection activity

The study was elaborated based on quantitative and qualitative methods. The qualitative method involves the interviews conducted in order to establish the form of questionnaire. The quantitative method is represented by sample determination, distribution and collection of the questionnaires. The last phase of the pilot study consists of the analysis and interpretation of collected data, testing the efficacy of research instruments and protocols and estimation of statistical parameters for later analysis. The main participants in the research are the aquaculture units, the Research and Development Institute for Aquatic Ecology, Fisheries and Aquaculture Galati (IRDAEFA), the Research and Development Station for Fisheries Nucet (RDSFC Nucet), the National Agency for Fisheries and Aquaculture (NAFA) and the National Sanitary Veterinary and Food Safety Authority (NSVFSA). The test study AED includes mainly data regarding administrated substances and treatments in Romanian aquaculture units and is performed as it follows:

a) Elaboration of the questionnaire structure, is to include mainly the data as adopted in multi-annual Union programme 2020-2021, treatments, medicines in relation with possible mortalities in some farms, and data on following a work group session with NAFA agents, in cooperation with researchers from IRDAEFA Galati and RDSFC Nucet.
b) Sample size and the number of aquaculture units taken into study, was established by considering specific criteria such as sector segmentation and development regions.
c)Data collection is conducted according to the general data protection regulation and by content writing the questionnaire, accompanied with punctual interviews, with the purpose of obtaining coherent and comparable information, regarding the environmental variables that are to be collected subsequent to the test study.
d)The analysis of the collected samples would reveal the evolution of production on carp (cyprinids) farms such as: medicines, other treatments, even fertilizers (in some ponds – for natural food); in case of trout farms, the administrated substances, with curative purposes. A special aspect is to be analysed for trout farms high storage densities of fish biomass, which generates a high risk of disease among the fish population. The estimation of mortality, the diseases where is the case.

SECTION 2: BIOLOGICAL DATA

Text Box 2.3: Diadromous species data collection in freshwater

General comment: This text box fulfils Article 5(2)(a), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter II point 2.1(b) and point 2.3 of the EU MAP Delegated Decision annex. Use this text box to give an overview of the methodology used to collect data from freshwater and inland commercial and recreational fisheries for salmon, sea trout and eel. Also include overview of data to be collected from research surveys on salmon, sea trout and eel in freshwater, and on eel in any relevant habitat including coastal waters.

Method selected for collecting data.
Diadromus species data collection in fresh water is not foreseen. The reasons are that eel (Anguilla anguilla), Atlantic salmon de (Salmo salar) and Brown trout (Salmo trutta) are not present in Romanian waters – marine or fresh waters.

Text Box 2.4: Recreational Fisheries

Region: Mediterranean and Black Sea

General comment: This text box fulfils Article 5(2)(a), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter II point 2.2 of the EU MAP Delegated Decision annex. Use this text box to give an overview of the methodology used to collect data on marine and freshwater recreational catches. For freshwater diadromous species, use Table and Text Box 2.3.

RWP Med&BS 2025 – 2027
https://datacollection.jrc.ec.europa.eu/documents/d/dcf/medbs_rwp_2025-2027_text_2024-08-30

Recreational fishing activities at the seaside are an integral part of the life and coastal communities of the Black Sea. It is of particular cultural importance in the region and represents an important economic component of coastal tourism, which is one of the main maritime sectors in terms of gross added value and employment. In the Black Sea region, in the Romanian coastal area, the species eel and bluefin tuna do not exist, only elasmobranchs species, such as picked dogfish (Squalus acanthias), thornback ray (Raya 9astina) and common stingray (Dasyatis 9astinaca). Picked dogfish inhabiting the Romanian marine waters is a migratory species, with long life cycle, whose stock is strongly influenced by the environmental conditions and fishing effort size. Thornback ray and common stingray, demersal fishes, are leading more sedentary lives and are found half buried in sand at depths of over 70 m. In Romanian fisheries, picked dogfish, thornback ray and common stingray occur mainly as by-catch in the trawler catches, and landings in recent years are only of the order of several tonnes for picked dogfish, and very often as isolated specimens for the other two species. The species eel is not present in Romanian fresh waters.

Recreational fishing on the Romanian Black Sea coast can be done from the shore and as bait used can be natural (shells, frames, fish or poultry) or artificial (metal fish shapes or artificial flies). The permits are issued free of charge, online, by NAFA and for sea fishing, being the border area, it is necessary to obtain the Coast Guard's approval based on the permit issued by NAFA. The main species of fish that are the object of recreational fisheries are: fam. Gobiidae, Carangidae, Mugilidae, Mullidae, Pomatomidae and sometimes Clupeidae, Belonidae and Dasyatidae. In Romania, most fishermen use recreational fishing for food purposes as subsistence fishing. The main target species in recreational fishing are: Neogobius melanostomus / round goby; Mesogobius batrachocephalus / knout goby; Trachurus mediterraneus ponticus / mediterranean horse mackerel; Pomatomus saltatrix / bluefish and Liza aurata / golden grey mullet, Dasyatis 10astinaca / common stingray, Alosa pontica / pontic shad, Alosa tanaica / Black Sea shad, Belone belone euxini / garfish, Mullus barbatus ponticus / red mullet.
The fishing gear used is the hand lines provided with hooks, such as: handlines with 2 hooks for fishing goby from the boat; handlines with 10 hooks for fishing horse mackerel, blue fish, pontic shad and Black Sea shad from boat or from the docks; pole lines with 2 hooks for golden grey mullet fishing on the shore/docks; handlines with 2 hooks for fishing gobies, mackerel and red mullet on the docks; pole lines with artificial fish for fishing blue fish on the docks and fly fishing for garfish on the docks.
National methodology
According to the legislation in force recreational fishing is carried out from sunrise to sunset and during recreational fishing it is allowed to use a maximum number of 2 gear. During the fishing day, only individuals with legal dimensions will be retained.
The recreational fishing has a seasonal character, practically the activity starts from the end of March when the water temperature reaches values higher than 7° C, the first fish that appear in the catches are the species of gobies, and ends towards the end of November with the decrease temperatures.
In order to obtain the information regarding the situation of RF capacities and effort, of the total catch, respectively retained and thrown, respectively the structure of the persons practicing recreational fishing, it is necessary to collect the following transversal variables: fishing area; fishing days; number of fishing gears; weight of total catch and species; weight of total catch retained by species; weight of total catches thrown by species and number of fishermen, by sex, professional status, educational level, etc.
Sampling scheme aimed at collecting information from anglers practicing recreational fishing:
- biological sampling resulting from recreational fishing (length, weight and sex) for: Neogobius melanostomus (round goby); Mesogobius batrachocephalus (knout goby); Trachurus mediterraneus ponticus (mediterranean horse mackerel); Pomatomus saltatrix (bluefish) and Mullus barbatus ponticus (red mullet);
- for the other species that appear in recreational fishing in the form of isolated specimens, respectively the species: Raja 10astina (10astinaca ray), Dasyatis 10astinaca (common stingray), Squalus acanthias (picked dogfish), Liza aurata (golden grey mullet), Belone belone (garfish), Scorpena porcus (black scorpionfish), Trachinus draco (greater weever) and Alosa pontica (pontic shad), no biological data is collected.

Text Box 2.5: Sampling plan description for biological data

Region: Mediterranean and Black Sea

General Comment: This text box fulfils Article 5(2)(a) and (b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter 2 point 2.1(a) of the EU MAP Delegated Decision annex. This text box complements Table 2.5.

Sampling scheme name (or identifier): Commercial fishing trip

RWP Med&BS 2025 – 2027
https://datacollection.jrc.ec.europa.eu/documents/d/dcf/medbs_rwp_2025-2027_text_2024-08-30
The sampling programme is realised in view to obtain the monthly distribution of length on species from catches of landings (number and weight). The data will be collected by metiers, species presented in Tables 1 of the multi-annual Union programmes and according to the relevant GFCM criteria, three different groups have been established, by which the species are listed at subregional level (GFCM subregions):
* The first group refers to the frequency of evaluations (i.e. the species that are evaluated regularly);
* The second refers to the importance of fishing (e.g. landings, catches and / or economic value);
* The third group is based on conservation criteria (i.e. endangered species) or the impact of their presence on the ecosystem (i.e. non-indigenous species).
For the period 2025-2027, biological studies included:

- group 1: sprat / Sprattus sprattus; European anchovy / Engraulis encrasicolus; turbot / Scophthalmus maximus; Mediterranean horse mackerel / Trachurus mediterraneus ponticus and picked dogfish / Squalus acanthias;
- group 2: whiting / Merlangius merlangus euxinus; rapa whelk / Rapana venosa;
- group 3: thornback ray / Raya clavata; common stingray / Dasyatis pastinaca; red mullet / Mullus barbatus ponticus, Pontic shad /Alosa immaculata.

The length composition of the catch is available by stock and metier from the metier sampling. Samples for biological parameters were derived from unsorted catch, retained catch and at-sea surveys. For this purpose, the staff of the research institute (NIRMD) they will be on board vessels, fishing points along the coast and in fishing ports and participated in sea surveys with demersal and pelagic trawling. The methodology used to define the numbers of individuals, that will be sampled is based on the consultation with the Romanian research institute and the Bulgarian research institutes. The total length is measured from the tip of the snout to the tip of the longer lobe of the caudal wing, with the lobes compressed along the midline. The measurement accuracy is one millimetre. Weighing is done when most of the liquid has leaked and the measurement accuracy was 0.1 grams. For small pelagic and demersal species, the representative sample for the age size structure will be collected and stratified by length groups. For small pelagic and demersal species, the representative sampling for size-at-age structure was collected and stratified by length groups. For a number of 3-5 samples for the frequency of length, a sample for the frequency of age will be extracted; calculated by the stratified method, which provides for each length class a constant number of age material (otoliths or scales) - about 10 individuals (if possible, 5 females and 5 males). The age compositions of the catch (unsorted catches, landings) will be derived by applying the "Age-Length Keys" to the length composition of the catch. Sex will be defined macroscopically during dissection, following three categories: male, female and indeterminate (impossible to determine). Age will be determined by reading the otolith at the macrostructural level (sagitta). The reading is performed with a stereomicroscope under reflected light. The counting of the strips or rings is always performed from the central area to the marginal area. Both otoliths of an individual will be read, and the readings are performed by at least two separate readers. The methodology is available in the following link:
http://www.rmri.ro/Home/Downloads/Publications.Other/NAFA_COLLECTION%20METHODOLOGIES.pdf.

Sampling scheme name: SciObsOnShore *Commercial fishing trip*Selected species/stocks

General Comment: This text box fulfils Article 5(2)(a) and (b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter 2 point 2.1(a) of the EU MAP Delegated Decision annex. This text box complements Table 2.5.

Additional information on sampling schemes

Following the procedure described in the guidelines for the implementation of the National Programme, Romania determines metiers to sample in table 2.5 (Sampling plan description for biological data). For the collection of the data will be used data sources as logbooks, declarations of first sale, Vessels Monitoring System data. All details for the selected metiers are described in the standard tables.

The metiers are the following:

- Pelagic trawls/Midwater otter trawl [OTM]
- Bottom trawls / Beam trawl [TBB]
- Traps/Stationary uncovered pound nets [FPN]
- Nets/Set gillnets [GNS]
- Rods and lines/Hand and pole lines [LHP] [LHM]
- Longlines / Drifting long¬ lines [LLD] and Set longlines [LLS]
- Small-scale inshore metiers / Diving [DIV] other types (various) / manual harvesting (by divers).

The target fish species in pelagic trawl fishery is sprat with by-catch of whiting, turbot, anchovy and horse mackerel. In the pound net fishery, the main species in the catches have a seasonal character, the sprat being the target species in spring period and the beginning of the summer and anchovy and horse mackerel in the summer and autumn period. The by-catch in the pound net fishery is composed of whiting, turbot, red mullet and others demersal species.

In set gillnet fishery, the bottom species with commercial importance is turbot with by-catch of thornback ray, common stingray, spiny dogfish and cetaceans.

Long lines and hand lines are representative for artisanal fishery. The main species in the catches are gobies and horse mackerel.

The sampling distribution is made depending on the seasonal character of the target species. The collection of the random samples from unsorted catches and landings will take place in fishing harbors, fishery points.

The samples are extracted from the catch of trawler fishery, pound net fishery, gillnet fishery and long lines and hand lines fishery. The sampling schemes will be organized in a way that sampling effort is distributed proportionally to the fishing effort. Relatively larger landings during the year imply higher sampling effort and vice versa. This will ensure that the biological data correspond directly to the national landing statistics.

Additional description of sampling frames
The sampling scheme, strategies and effort will be the following:
a. Pelagic trawls / Midwater otter trawl [OTM]:
– quarter, in landing fishing harbours (Cape Midia and Constanta);
b. Bottom trawls / Beam trawl [TBB]:
- quarters, in landing fishing harbours (Cape Midia and Constanta). A scientific observer will be present at the landing point.
c. Traps / Stationary uncovered pound nets [FPN]:
– quarter, in landing fishing points. A scientific observer will be present at the landing point.
The fish species object of the sampling will be: sprat in spring and early summer, anchovy and horse mackerel in summer and autumn. A scientific observer will be present at the landing points. The same sampling of unsorted and retained catches was included, sampling of discarded species for which stock variables are collected in Table 1 - species. The species of fish sampled were sprat, anchovy, red mullet and horse mackerel, and the secondary catches (by-catch) were: Pontic shad, Azov shad, red mullet, turbot, big-scale sand smelt, garfish, gobies, picked dogfish, common stingray, thornback ray, sea sole.
d. Nets/Set gillnets [GNS]:
– quarter, in landing fishing harbours and landing fishing points; A scientific observer will be present at the landing point;
The sampling scheme for fixed gillnet fisheries targeted demersal and pelagic species in a small-scale coastal fishery, including the similar sampling of captured catches and the collection of total catch data, effort (quantities, days at sea), catch composition, mesh size and fishing depth. A scientific observer will be present at the landing points or at sea on board of the vessels. Polyvalent activity is a common practice of small coastal craft, which means they are involved in different metiers, and, during daily exits at sea, they can fish on multiple metiers. The demersal species object of the sampling is turbot and also by-catches of thornback ray, common stingray, picked dogfish and red mullet. The pelagic species object of the sampling is Pontic shad and Caspian shad.
e. Rods and lines/Hand and pole lines [LHP] [LHM]:
– quarter, in landing fishing points:
Long-haul and hook-fishing is representative for artisanal fishing (vessels < 06 m), the collection of samples will be made from fishing points along the Romanian coast. A scientific observer will be present at the landing point. The collected biological data will be reported by fleet segments, gear type, mesh size and target species. Target species in catches were mainly gobies, picked dogfish and sometimes horse mackerel.
f. Longlines / Drifting long¬ lines [LLD] / Set longlines [LLS]
- quarter, in landing fishing points:
Longlines is representative for artisanal fishing, the collection of samples will be made from fishing points along the Romanian coast. A scientific observer will be present at the landing points. Target species in longlines are mainly gobies and picked dogfish. Romania considers the STECF evaluation very important and takes into account their comments with the intention of applying as many of the recommendations as possible. In the last six years, longlines fishing has not been used in Romanian waters. During 2022-2024 it is possible that this kind of fishing with longlines for picked dogfish could have an improvement, at this moment the catches of dogfish were less than 0.7 tonnes and were generally caught as a complementary species in turbot gillnets.
g. Small-scale inshore metiers / Diving [DIV] Manual harvesting of Rapa whelk (Rapa venosa).
- quarter, in landing fishing points:
Samples will be collected quarterly, by the presence of a scientific observer at the landing point. The target species will be rapa whelk.

This sampling scheme covers all fishing metiers and fleet segments used at the Romanian coast.
(One text box (max. 1 000 words) per region/RFMO/RFO/IO)

Sampling scheme name: SciObsAtSea *Commercial fishing trip* All species

General Comment: This text box fulfils Article 5(2)(a) and (b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter 2 point 2.1(a) of the EU MAP Delegated Decision annex. This text box complements Table 2.5.

Additional information on sampling schemes

Following the procedure described in the guidelines for the implementation of the National Programme, Romania determines metiers to sample in table 2.5 (Sampling plan description for biological data). For the collection of the data will be used data sources as logbooks, declarations of first sale, Vessels Monitoring System data. All details for the selected metiers are described in the standard tables.

The metiers are the following:

- Pelagic trawls/Midwater otter trawl [OTM]
- Bottom trawls / Beam trawl [TBB]
- Traps/Stationary uncovered pound nets [FPN]
- Nets/Set gillnets [GNS]
- Rods and lines/Hand and pole lines [LHP] [LHM]
- Longlines / Drifting long¬ lines [LLD] and Set longlines [LLS]
- Small-scale inshore metiers / Diving [DIV] other types (various) / manual harvesting (by divers).

The target fish species in pelagic trawl fishery is sprat with by-catch of whiting, turbot, anchovy and horse mackerel. In the pound net fishery, the main species in the catches have a seasonal character, the sprat being the target species in spring period and the beginning of the summer and anchovy and horse mackerel in the summer and autumn period. The by-catch in the pound net fishery is composed of whiting, turbot, red mullet and others demersal species.

In set gillnet fishery, the bottom species with commercial importance is turbot with by-catch of thornback ray, common stingray, spiny dogfish and cetaceans.

Long lines and hand lines are representative for artisanal fishery. The main species in the catches are gobies and horse mackerel.

The sampling distribution is made depending on the seasonal character of the target species. The collection of the random samples from unsorted catches and landings will take place at sea on vessel board.

The samples are extracted from the catch of trawler fishery, pound net fishery, gillnet fishery and long lines and hand lines fishery. The sampling schemes will be organized in a way that sampling effort is distributed proportionally to the fishing effort. Relatively larger landings during the year imply higher sampling effort and vice versa. This will ensure that the biological data correspond directly to the national landing statistics.

Additional description of sampling frames

he sampling scheme, strategies and effort will be the following:

a. Pelagic trawls / Midwater otter trawl [OTM]:

-annual, on board of vessels commercial fishing trip.

A scientific observer will be present on board of the vessel. The fish species target of the sampling will be mainly sprat and by-catches (whiting, turbot, anchovy and horse mackerel, picked dogfish).

b. Bottom trawls / Beam trawl [TBB]:

-annual, on board of vessels commercial fishing trip.

A scientific observer will be present on board of the vessel. The target species will be rapa whelk.

c. Traps / Stationary uncovered pound nets [FPN]:

– annual, on board of boats commercial fishing trip

The fish species object of the sampling will be: sprat in spring and early summer, anchovy and horse mackerel in summer and autumn. A scientific observer will be present on board of the vessels. The same sampling of unsorted and retained catches was included, sampling of discarded species for which stock variables are collected in Table 1 - species. The species of fish sampled were sprat, anchovy, red mullet and horse mackerel, and the secondary catches (by-catch) were: Pontic shad, Azov shad, red mullet, turbot, big-scale sand smelt, garfish, gobies, picked dogfish, common stingray, thornback ray, sea sole.

d. Nets/Set gillnets [GNS]:

-annual, on board of boats commercial fishing trip.

The sampling scheme for fixed gillnet fisheries targeted demersal and pelagic species in a small-scale coastal fishery, including the similar sampling of captured catches and the collection of total catch data, effort (quantities, days at sea), catch composition, mesh size and fishing depth. A scientific observer will be present on board of the vessels. Polyvalent activity is a common practice of small coastal craft, which means they are involved in different metiers, and, during daily exits at sea, they can fish on multiple metiers. The demersal species object of the sampling is turbot and also by-catches of thornback ray, common stingray, picked dogfish and red mullet. The pelagic species object of the sampling is Pontic shad and Caspian shad.

This sampling scheme covers all fishing metiers and fleet segments used at the Romanian coast.

For all kind of fishery will be used the appropriate methods covering the metiers as specified in Table 2.2, including the listed species, and as per sampling frame description mentioned in Table 2.5.

(One text box (max. 1 000 words) per region/RFMO/RFO/IO)

Text Box 2.6: Research surveys at sea

Region: Mediterranean and Black Sea

General Comment: This text box fulfils Article 5(1)(b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapters I and II of the EU MAP Implementing Decision annex. It is intended to specify which research surveys at sea, as set out in Table 2 of the EU MAP Implementing Decision annex will be carried out. Member States shall specify whether the research survey is included in Table 2 of the EU MAP Implementing Decision annex or whether it is an additional survey.

Research survey: Pelagic Trawl Survey in the Black Sea (PTSBS)

RWP Med&BS 2025 - 2027
https://datacollection.jrc.ec.europa.eu/documents/d/dcf/medbs_rwp_2025-2027_text_2024-08-30
The Romanian national program for 2025-2027, includes two pelagic surveys annually:

- Pelagic trawl survey in the Black Sea in spring season;
- Pelagic trawl survey in the Black Sea in autumn season (quarter IV / October – November)

The trawl surveys for sprat stock assessment are planned for June (spring season) and October - November (autumn season) applying the swept area method in the Romanian Black Sea area. To establish the abundance of the reference species in front of the Romanian coast a standard methodology for stratified sampling was used (Gulland, 1966;). To address the research objectives the region was divided into four strata according to depth – Stratum 1 (15 - 35 m) Stratum 2 (35 - 50 m), Stratum 3 (50 - 75 m). Each field is a rectangle with sides 10' Lat × 10' Long and area around 125.16 km2 (measured by application of GIS), large enough for a standard lug extent in a meridian direction to fit within the field boundaries.
Each survey includes 30 mid-water trawl hauls for 8 days.
The main aim of the survey is to obtain the abundance index for sprat, whiting and picked dogfish exploited stock. During the surveys the collected information will include length (TL), weight, sex composition and maturity. Otoliths for age determination will be collected and discards will be investigated. The methodology pelagic survey is available in the following link:
http://www.rmri.ro/Home/Downloads/Publications.Other/NAFA_Material%20and%20methods%20for%20survey%20in%20the%20Romanian%20Black%20Sea%20area.pdf

Research survey: Bottom trawl survey in the Black Sea (BTSBS)

RWP Med&BS 2025 – 2027
https://datacollection.jrc.ec.europa.eu/documents/d/dcf/medbs_rwp_2025-2027_text_2024-08-30

The Romanian national program for 2025-2027, includes two bottom (demersal) surveys annually:

- Bottom trawl survey in the Black Sea in spring season (quarter II / April - May);
- Bottom trawl survey in the Black Sea in autumn season (quarter IV / November - December)

Two surveys for turbot stock assessment by swept area method will be conducted, in April-May and November - December. The surveyed region will be divided into four strata, depending on the depth – Stratum 1 (15-35 m), Stratum 2 (35-50 m), Stratum 3 (50-75 m) and Stratum 4 (75-100 m). For assessment of turbot, whiting and piked dogfish abundance and biomass, the surveyed territory will be divided into 100 squares. The sampling will be carried out at 40 randomly chosen fields (rectangles) in the spring and 40 in autumn, situated at a depth between 15-100 m. Each rectangle is with sides 10’ Lat × 10’ Long, while the total area is 125.16 km2 (measured by GIS), large enough for a standard lug extent in a meridian direction to fit within the field boundaries.
The main goal is to define the stock biomass indices and the annual quota for turbot, whiting and picked dogfish fishery, respectively. Through this field research, biological data about the turbot size-at-age structure, distribution, sex ratio, and by-catch will be gained.
Each survey includes 40 bottom trawl hauls for 10 days. The methodology bottom survey is available in the following link:

http://www.rmri.ro/Home/Downloads/Publications.Other/ANPA/MaterialsAndMethods/ROU_Methodology_for_Bottom_trawl_survey_in_the_Romanian_Black_Sea_area.pdf (Ctrl + Click to indicated link)

SECTION 3: FISHING ACTIVITY DATA

Text Box 3.1: Fishing activity variables data collection strategy

General comment: This text box fulfils Article 5 (2)(c), Article 6 (3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter II point 3.1 of the EU MAP Delegated Decision annex. It is intended to describe the method used to derive estimates on representative samples where data are not to be recorded under the Control Regulation (EC) No 1224/2009 or where data collected under Regulation (EC) No 1224/2009 are not at the right aggregation level for the intended scientific use. Text Box 3.1 should be filled only in case complementary data collection is planned
All the variables are collected under the control regulation and no auxiliary data collection is planned.

Text Box 3.2: Fishing activity variables data collection strategy (for inland eel commercial fisheries)

General comment: This text box fulfils Article 5(2)(c), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter II point 3.2 of the EU MAP Delegated Decision annex. It is intended to describe the methods and data sources used to estimate fishing capacity, effort and landings data.
No data collection in planned because eel is not presented in Romanian inland and marine waters.

Text Box 4.2: Incidental catches of sensitive species

Region: Mediterranean and Black Sea

General Comment: This text box fulfils Article 5(2)(a) and (b), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004 and Chapter 2 point 4.1 of the EU-MAP Delegated Decision annex. This text box complements Table 2.5.

RWP Med&BS 2025 - 2027
https://datacollection.jrc.ec.europa.eu/documents/d/dcf/medbs_rwp_2025-2027_text_2024-08-30

The information on incidental catches of sensitive species (Protected, Endangered and Threatened Species - PETs) will be collected on an annual basis by scientific observers onboard the commercial fishing vessels. The research survey is focused on data collection for the incidental catches of sensitive species by following types of fishing activities:

* Pelagic species fishing with pelagic trawl;
* Rapa whelk fishing with beam trawl;
* Turbot fishing with gillnets;

The impact of commercial fishing on PETs will be assessed according to the bycatch rate, estimated for all observed fishing activities. For all types of fisheries, incidental by-catch of all birds, mammals and reptiles and fish protected under EU legislation and international agreements, including mainly the species listed, will be collected, such as:

* Bony fishes: sturgeons (Acipenser spp.); beluga (Huso huso); Pontic shad (Alosa immaculata); Black Sea shad (Alosa tanaica); big-scale sand smelt (Atherina pontica); garfish (Belone belone euxini) gobies (Gobiidae); golden grey mullet (Liza aurata); mullet spp. (Mugil spp.); whiting (Merlangius merlangus); crayfish (Astacus spp.); bluefish (Pomatomus saltatrix) and mackerel (Scomber colias Gmelin).

* Cartilaginous fishes: picked dogfish (Squalus acanthias); thornback ray (Raja clavata); stingray ‑ (Dasyatis pastinaca).

* Mammals: short-beaked common dolphin (Delphinus delphis); harbour porpoise (Phocoena phocoena) and bottlenose dolphins (Tursiops truncatus).

* Birds: common cormorant (Phalacrocorax pygmaeus); great cormorant (Phalacrocorax carbo); common pochard (Aythya farina) and dreat black (Larus spp.).

* Molluscs: striped venus (Chamelea gallina); banded wedge shell (Donacilla cornea); Mediterranean mussel (Mytilus galloprovincialis) and rapa whelk (Rapana venosa).

* Crustaceans: brown shrimp - Crangon crangon; rockpool prawn - Palaemon elegans, and rockpool prawn - Palaemon elegans.

Text Box 4.3: Fisheries impact on marine habitats

Region: Mediterranean and Black Sea

General comment: This text box fulfils Article 5 paragraph 2(a) and 2(b), Article 6 paragraph 3(a), 3(b) and 3(c) of Regulation (EU) 2017/1004 and Chapter 2, section 4.2 of the EU MAP Delegated Decision annex. It contains information on additional studies on the fisheries impact on marine habitats.

Name of the study: Regional coordination on fish stomach contents collection and analysis in the Med&BS

RWP Med&BS 2025 - 2027
https://datacollection.jrc.ec.europa.eu/documents/d/dcf/medbs_rwp_2025-2027_text_2024-08-30

In relation to fisheries impact on marine habitats in Romania for the period 2022 – 2024 we elaborate a study that can be useful to Marine Action Plan and with final result it is possible to build a comprehensive image of how Romanian marine habitats are affected by fisheries.

When referring to the impacts of fisheries on habitats, the focus is primarily on the seabed and associated structure-forming species (like mussels and seaweed, for instance). Fishing gear that makes contact with the seafloor has different levels of impact, depending on the gear type, the properties of the seafloor, the biodiversity living within or on the seabed, and the intensity and frequency of contact. These gears cause physical disruption of the seabed through contact of the gear components with the sediment and the resuspension of sediment into the water column in the turbulent wake of the gear (Depestele et al., 2015). They can reduce biodiversity and productivity of the habitats, particularly when used for the first time in a new area (Diesing et al., 2013). However, these gears can only be used on relatively soft seabeds, which means that only some suitable areas are exploited at the Romanian coast. Whereas bottom trawling is forbidden by Romanian legislation, only two highly-invasive gear types are used, namely the beam-trawl and the hydraulic dredge (Niță et al., 2021). In this context, the aim of the study was to collect the data necessary to assess the impact of the two gears on marine benthic habitats (according to the Natura 2000 classification, as per the Habitats Directive 92/43/EEC) (European Commission, 2007).

Also will be useful in relation to the MAP another study that will be finalized: The level of fishing and the impact of beam trawl fishing on by-catches of vulnerable species, with the scope that the obtained data will be presented, on the way in which the Romanian by-catches of vulnerable species are affected by the beam trawling.

Text Box 5.2: Economic and social variables for fisheries data collection

General comment: This Text box fulfils Article 5(2)(d), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004, and Chapter II point 5 of the EU MAP Delegated Decision annex. It is intended to specify data to be collected under Tables 7, 8 and 9 of the EU MAP Delegated Decision annex.

RWP ECON 2025 - 2027

1. Description of clustering

The data collection scheme used in Romania is Census and the data is collected from each vessel. Clusters are not used for data collection purposes, but for the reporting of economic and social data from segments with less than 10 vessels.
Clustered Segments:
* Vessels using active and passive gears 6-< 12 m*

This Cluster is composed of the segments Vessels using active and passive gears 18-< 24 m (one vessel), Vessels using active and passive gears 24-< 40 m (2 vessels) and Vessels using active and passive gears 6-< 12 m (5 vessels).

* Beam trawlers 12-< 18 m*

This Cluster is composed of the segments Beam trawlers 18-< 24 m (2 vessels), Beam trawlers 12-< 18 m (14 vessels) and Beam trawlers 6-< 12 m (7 vessels).

* Pelagic trawlers 12-< 18 m*

This Cluster is composed of the segments Pelagic trawlers 18-< 24 m (1 vessel), Pelagic trawlers 12-< 18 m (3 vessel), Pelagic trawlers 6-< 12 m (one vessel).

* Drift and/or fixed netters 06-< 12 m *

This Cluster is composed of the segments Drift and/or fixed netters 12-< 18 m (2 vessels), Drift and/or fixed netters 6-< 12 m (33 vessels) and Drift and/or fixed netters 0-< 6 m (2 vessels).

* Vessels using Polyvalent "passive" gears only 6-< 12 m*
This Cluster is composed of the segments Vessels using Polyvalent "passive" gears only 6-< 12 m (19 vessels) and Vessels using Polyvalent "passive" gears only 0-< 6 m (one vessel).

* Vessel using other active gears 6-< 12 m*
This Cluster is composed of the segments Vessel using other active gears 6-< 12 m (12 vessels) and the segment Vessel using other active gears 0-< 6 m (3 vessels).

* Vessels using hooks 06-< 12 m*

This Cluster is composed of the segments Vessels using hooks 0-< 6 m (one vessel) and Vessels using hooks 6-< 12 m (9 vessels).

* Vessels using Pots and/or traps 06-< 12 m*

This Cluster is composed of the segments Vessels using Pots and/or traps 0-< 6 m (5 vessels) and the segment Vessels using Pots and/or traps 6-< 12 m (24 vessels).

* Inactive vessels 06-< 12 m*

This Cluster is composed of the segment's Inactive vessels 24-< 40 m (one vessel), Inactive vessels 12-< 18 m (2 vessels), Inactive vessels 06-< 12 m (24 vessels) and the segment inactive vessels 0-< 6 m (4 vessels).

Description of clustering

The data collection scheme used in Romania is Census and the data is collected from each vessel. Clusters are not used for data collection purposes, but for the reporting of economic and social data from segments with less than 10 vessels.

The clustering is based on the aggregation of segments with a fishing technique similar to other segments.

2. Description of activity indicator

NA

The activity indicator to divide the fleet segment into different activity levels is not used in Romania.
3. Deviation from the RCG ECON (ex. PGECON) definitions

NA.

No deviation from RCG ECON definitions.

According to the GUIDANCE DOCUMENT FOR THE FISHING FLEET Living document, last updated by PGECON 2020. Alternative methods based on company surveys are allowed for the variables Consumption of physical capital and Value of physical capital. Both variables, Consumption of fixed capital and Value of physical capital are collected through the annual questionnaire as other economic variables, instead of estimating them by applying the perpetual inventory method (PIM). The reason is that the values derived from the application of PIM were not realistic for the Romanian fleet and since the data collection is covering all the vessels (Census) and each owner is providing the most accurate data regarding the specific vessel, decision of using the realistic values reported by the owners was taken at national level, instead of the estimated theoretical numbers.

SECTION 6: ECONOMIC AND SOCIAL DATA IN AQUACULTURE

Text Box 6.1: Economic and social variables for aquaculture data collection

General comment: This text box fulfils Article 5(2)(e), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004, and Chapter II point 6 of the EU MAP Delegated Decision annex. It is intended to specify data to be collected under Tables 10 and 11 of the EU MAP Delegated Decision annex.

RWP ECON 2025 – 2027

1. Description of the threshold application

Data collection of economic and social variables for the aquaculture sector will respect the provision of Commission Delegated Decision (EU) 2021/1167, Annex: - Table 9 – for social variables in aquaculture sector, common variables with fishing activities; - Table 10 – economic variables and Table 11 – segmentation to be applied for the collection of aquaculture data. The production of aquaculture sector of Romania in 2022, as per the last figures reported to Eurostat represents less than 1,15 % from total EU production. No thresholds are applicable due to the fact the method to be used is exhaustive one, type – census. No thresholds will be apply considering the tables listed on the Annex of EU Delegated Decision 2021/1167 for economic and social variables. The method used exhaustive, type - census will ensure a coverage rate of 100% of total population.
The methodology is documented and made public by accessing the link:
http://www.rmri.ro/Home/Downloads/Publications.Other/ANPA/MaterialsAndMethods/ROU_Description_of_the_socio-economic_data_collection_methodology_of_the_aquaculture.pdf.
and
https://asas-icdeapa.ro/proj/Procedura-Manual-EN.pdf
2. Deviation from the RCG ECON (ex. PGECON) definitions

No deviations from the RCG ECON (ex. PGECON) definitions

SECTION 7: ECONOMIC AND SOCIAL DATA IN FISH PROCESSING

Text Box 7.1: Economic and social variables for fish processing data collection

General comment: This text box fulfils Article 5(2)(f), Article 6(3)(a), (b) and (c) of Regulation (EU) 2017/1004, and Chapter II point 7 of the EU MAP Delegated Decision annex.

RWP ECON 2025 - 2027

1. The Member State should provide justification for complementary data collection for fish processing in addition to Eurostat data.

Socio-economic data will be collected annually, with the support of NAFA, from all economic operators identified as having their main and secondary activity - Processing and preserving of fish, crustaceans and molluscs, according to NACE 1020. The method of data collection is exhaustive, namely - census, the questionnaires being distributed to all companies active in the time period 2025-2027. The collection method ensures a 100% coverage of the population.
The source of the socio-economic data for the processing segment is the questionnaire.
The telephone or personal interview at the unit's headquarters has the role of verifying data correctness and their correlation.
Interviews are conducted at processing economic units assigned to the NAFA regional branches: Moldova, Muntenia, Oltenia, Transylvania, and the Maritime Directorate - Constanța Department, as well as the Danube Delta Inspection Service.
If the companies will not allow access to this information or if data is incomplete, figures registered and declared to the authorities of the fiscal body will be used, respectively the website of the Ministry of Public Finance (information from the balance report of economic agents)
The method of data collection is exhaustive, namely the census, the questionnaires being distributed to all companies active in the current monitored year. The collection method ensures a 100% coverage of the population.
If there are any ambiguities regarding economic or production indicators, the data providers (accountants or administrators of the economic agents) are contacted in order to make clarifications or corrections if necessary.
A potential error is the number of units carrying out processing activity in the assessed year. To eliminate this error, the fish processing units are identified and verified through the NAFA.
Data collection from the processing follows the established methodologies by a group of experts.
The methodology is documented and made public by accessing the link:
http://www.rmri.ro/Home/Downloads/Publications.Other/ANPA/MaterialsAndMethods/ROU_Description_of_the_socio-economic_data_collection_methodology_of_the_processing.pdf
and
https://asas-icdeapa.ro/proj/Procedura-Manual-EN.pdf
The working methodology is revised as often as necessary in accordance with the regulation requirements for the current year and for its improvement.

2. Deviation from the RCG ECON (ex. PGECON) definitions

No deviations from the RCG ECON (ex. PGECON) definitions
(max. 900 words)

ANNEX 1.1 - QUALITY REPORT FOR BIOLOGICAL DATA SAMPLING SCHEME

The quality report fulfils Article 6(3)(d) of Regulation (EU) 2017/1004. This document is intended to specify data to be collected under Chapter II, point 2 of the EU MAP Delegated Decision annex: Biological data on exploited biological resources caught by Union commercial and recreational fisheries

Related to Table 2.5 [and Text Box 2.5] (commercial fisheries data collection)

Sampling scheme identifier: SciObsOnShore *Commercial fishing trip*Selected species/stocks

MS : ROU
Region: Mediterranean and Black Sea
Sampling scheme identifier: SciObsOnShore *Commercial fishing trip*Selected species/stocks
Sampling scheme type: Commercial fishing trip
Observation type: SciObsOnShore
Time period of validity: from 2025 until 2027
Description of the population
Population targeted: The primary sampling units are commercial fishing trips. The samples for the analysis will be collected directly from the Romanian landing ports. The sampling will remain the same as in previous years - it will be done by purchasing samples at the time of landings at the ports. The target population consists of fishing trips of vessels using pelagic trawls, vessels using beam trawls, vessels using longlines, vessels with set gillnets for turbot and boats using pound nets [FPN] for sampled will be sprat, anchovy, red mullet and horse mackerel, and the secondary catches (by-catch) were: Pontic shad, Azov shad, red mullet, turbot, big-scale sand smelt, garfish, gobies, picked dogfish, common stingray, thornback ray, sea sole **Population sampled:** All parts of the target population have the same chance to be sampled and there are no parts of the target population, which are unreachable for sampling or excluded for some reason. The samples collection will be carried out monthly. The method of PSU selection will be simple random sampling without replacement (SRSWOR) **Stratification:** There is no specific geographical stratification since the PSU is a commercial fishing trip.
Sampling design and protocols
Sampling design description: To ensure that the data collected provides representative information, samples from the planned species are collected from landing ports of the Romanian Black Sea coast (Cape Midia and Constanta). Each fishing vessel, which is landing at the port during the day in which the data collector is there has an equal and independent probability of being observed. The sampling scheme applies for catch fraction based on Landings (all). The method of PSU selection is simple random sampling with replacement (SRSWR). The minimum number of full stomachs of turbot which is planned (according to numbers of specimens with full stomachs during the historical biological monitoring of turbot) is 20 in the 2nd quarter and 15 in the 4th quarter. If more full stomachs are available from the purchased samples, they will be analysed. The main reference documents are: Deliverable D4.1 from STREAM Methodologies for the biological sampling in the Romanian Black Sea areaBoth documents are available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection-methodologies **Is the sampling design compliant with the 4S principle?:** Y **Regional coordination:** The sampling design and protocols were not developed as part of a regional or multi-lateral agreement, but according to the agreement between Romania and Bulgaria, both countries will undertake annually biological monitoring in their territorial waters and EEZ under their jurisdiction, following common methodology and harmonization of biological data sampling. The agreement is available at the following link: *http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en* **Link to sampling design documentation:** The sampling design documentation is available on the following link:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection-methodologies .
Report of the Workshop on Sampling and Calculation Methodology for Fisheries Data" (WKSCMFD) (ICES 2004); https://www.ices.dk/sites/pub/CM%20Doccuments/2004/ACFM/ACFM1204.pdf;
Report SGPIDS (ICES, 2011a), https://www.ices.dk/community/Documents/PGCCDBS/SGPIDS%202011.pdf;
Report of the Study Group on Practical Implementation of Discard Samples (SGPIDS).2013, https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2013/SGPIDS/SGPIDS13.1.pdf

Design follows international recommendations:
Y

Link to sampling protocol documentation:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection-methodologies

Protocol follows international recommendations:
Y

Sampling implementation

Recording of refusal rate:
Y

Monitoring of sampling progress within the sampling year:
Annual plans for the collection of samples from the commercial fisheries are prepared by NIMRD Constanta. The sampling progress has not experienced major fluctuations in the past and we expect no problems in the next program.

Data capture

Means of data capture:
National Institute of Marine Research and Development Grigore Antipa Constanta (NIMRD) - is responsible for the implementation of the program. Is an institution with specific responsibilities and experience in developing studies in the field of Marine Living Resources in the Black Sea, as well as in reporting data to regional bodies (Black Sea Commission, GFCM-Black Sea Subgroup) and international (JRC/DG-MARE, GFCM, FAO, MEDIAS, MEDITS). It has qualified personnel and the necessary equipment to carry out the proposed topics in good condition and an experience in monitoring living marine resources. The institute has his own research vessel and equipment (pelagic and demersal trawls). Within the Black Sea Commission, NIMRD functions as the Regional Focal Point for Fisheries as well as a focal point for Pollution Monitoring and Assessment, Biodiversity, Integrated Coastal Zone Management and Control Pollution from Land Sources. At the same time, within the NIMRD, operates the Romanian Focal Point for Fisheries under General Fisheries Commission for the Mediterranean (GFCM). NIMRD is the most important public law organization in the field of marine research, having an activity of over 51 years in this field, especially in the Black Sea waters.
To ensure accurate measurements, the laboratories equipment is kept in good condition, scales are regularly calibrated and checked by a qualified technician. The laboratory protocols for each sample include a full description of all measurements. All biological data, collected at landing ports or in the laboratory is completely documented and should be traceable back to its origin. The documentation contains a description of sampling equipment and procedures, reference to standard operating procedures (SOP) for sample handling and analytical procedures involved.

Data capture documentation:
The data capture documentation is available on the following link:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology - in the files Methodologies for biological sampling in the Romanian Black Sea area, in the GFCM-DCRF manual and in the quality documents;

Estimation of sex of Rapana venosa is based on the following paper: Bondarev, 2015, Sexual differentiation and variations sexual characteristics Rapana venosa (Valenciennes, 1846), International Journal of Marine Science, Vol.5, No.19 1-10 (doi: 10.5376/ijms.2015.05.0019
https://www.researchgate.net/publication/277553129_Sexual_differentiation_and_variations_sexual_characteristics_Rapana_venosa_Valenciennes_1846

Quality checks documentation:

Y

NIMRD Constanta involved in the biological monitoring of Romanian landings followed internal rules adopted in the institute to meet the quality of the data processed and analysed. The following documents available at link: http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en-Collection Methodology

Methodologies for biological sampling in the Romanian Black Sea area;
Guidelines on Data Quality Assurance and Data Quality Control - (Example has been given with the anchovy with a remark that all measures proposed are valid for all small pelagic species in Romanian marine area);
GFCM-DCRF-manual;
Best practice guideline on scientific surveys and holistic methods in the Black Sea;
Manual of protocols on methods used for assessing fish stocks in the Black Sea by analytic methods.

Data storage

National database:

NA

National database-in updating process. Actually, until the project for up-dating National data base will be finished and integrated in NAFA consolidated data base (centralized), collected data are available in the server of NIMRD Constanta.

International database:

Med&BS RDBFIS

Quality checks and data validation documentation:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology

Sample storage

Storage description:

NIMRD Constanta is responsible for the storage of the samples of the different species and the samples are not stored under the auspices/responsibility of an international organisation. Part of samples (already processed) are frozen and kept for internal data quality checks. The collected samples from turbot are stored at the NIMRD. Samples for determining the fecundity of turbot, which are taken and examined in the 2nd quarter of each year, are stored in a 4% solution of formaldehyde in plastic containers for 4 years. Each sample is numbered and labelled. Samples from each pair of otoliths, immediately after removal from the fish are washed and stored in plastic ependorphs in 96% ethyl alcohol. The samples of the stomachs immediately after their removal are inserted in plastic containers in 4% solution of formaldehyde for further analysis. The soft tissue samples are stored in 40% formalin. All samples are labelled and numbered in the order in which the fish are dissected and are stored for 4 years.

Preservation fish samples and rapa whelk shells are stored for 2 years in the laboratories of NIMRD Constanta: cooling is one of the methods used to preserve fish samples and freezing samples - on board and subsequently placed in a freezer at institute laboratories.

Freezing and cooling led to different effects on morphological characters. In the case of freezing, a degradation in colour from goldish-brown to grey-blackish was visible in every case, while the body shape was unaffected overall, except for the belly being less elevated, soft and pliable after defrosting.

Otolith preparation and analysis - Sagittal otoliths were removed, as were the large pieces of remaining tissue, using tweezers, before being placed in water-filled Eppendorf's to soak overnight. If tissue remained after this, otoliths were either left to soak in Eppendorf's filled with a 1% solution of potassium hydroxide overnight or a 3% solution of potassium hydroxide for 5 h before being washed in water. Otoliths were then dried overnight before being photographed using the Olympus Trinocular Stereo microscope at 6.3× magnification with an attached Olympus DP25 camera equipped with the imaging system cell^a. An image was taken of the interior and exterior of both the left and right otoliths. Using the same imaging software, measurements (μm) on the exterior side were taken of otolith length – the longest distance between the most anterior and posterior points - (OL) and otolith width – the longest distance between the ventral and dorsal edges - (OW), with the measurements for OL and OW perpendicular to each other. Otoliths were then can be weighed to the nearest 0.001 g – otolith mass – (OM).

Hard parts as otoliths are preserved at the time of age reading by 3 independent readers.

Sample analysis:

Information about the sample analysis is available in the following documents available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology

Bondarev, 2015 - Sexual differentiation and variations sexual characteristics Rapana venosa (Valenciennes, 1846), International Journal of Marine Science, Vol.5, No.19 1-10 (doi: 10.5376/ijms.2015.05.0019
https://www.researchgate.net/publication/277553129_Sexual_differentiation_and_variations_sexual_characteristics_Rapana_venosa_Valenciennes_1846

Paolo Carpentieri, 2019 - Monitoring incidental catch of vulnerable species in the Mediterranean and the Black Sea: methodology for data collection;
Paolo Carpentieri, Angelo Bananno, Giuseppe Scarcella, 2019 - Technical guidelines for scientific surveys in the Mediterranean and the Black Sea Procedures and sampling for demersal (bottom and beam) trawl surveys and pelagic acoustic surveys;
Paolo Carpentieri, Aurora Nastasi, Margherita Sessa, Abdellah Srour, 2020 - Incidental catch of vulnerable species in Mediterranean and the Black Sea fisheries a review;
Jacques Sacchi - Overview of mitigation measures to reduce the incidental catch of vulnerable species in fisheries

Data processing

Evaluation of data accuracy (bias and precision):
Y
Information about the data accuracy is available in the following documents available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology;
The precision of the sampling program is based on the requirements of the following reports:
"Sampling Calculation and Methodology for Fisheries Data" (WKSCMFD) (ICES 2004) - https://www.ices.dk/sites/pub/CM%20Doccuments/2004/ACFM/ACFM1204.pdf and Report of the Study Group on Practical Implementation of Discard Sampling Plans (SGPIDS) (ICES, 2011a) - https://www.ices.dk/community/Documents/PGCCDBS/SGPIDS%202011.pdf
The morphometric relationships between the biological parameters - total weight (TW), shell length (SL), shell width (Wd), aperture length (AL) are analysed on the basis of classical allometric models. The least squares method will be used to estimate the linear - weight relationships (LWR), based on the following equation:
W=a×L^b, where, W – weight; L – length; a, b – constants.
The XLSTAT software is be used to display the linear-weight histograms of the samples from the Rapana landings. The statistical data about the different length and weight classes, presented in the histograms, include lower and upper limits, frequency, relative frequency, and density.
Summarized statistics (Mean values, Standard Error, Median, Mode, Standard Deviation, Sample Variance, Kurtosis, Skewness, Range, Minimum, Maximum, Confidence Level, 95.0%) about the measured biological parameters of Rapana by ports - Total weight (TW - weight with shell, TW, g), body weight (BW, g), % of BW from TW, shell length (shell length, SL, mm), shell width (Wd, mm) and aperture length (AL, mm) will be presented separately, where relevant.

Editing and imputation methods:
Internal rules for Data Quality Control (DQC) and Data Quality Assurance (DQA) are applied in NIMRD Constanta, including all steps from data collection and analysis to final reporting. All data, collected in the sea, are included in protocols and checked by a different number of scientists in institute for mistakes (scientist and expedition leader) and all samples are numbered and identified by given rules. If any corrections are needed, they are presented in separate protocols, controlled by two scientists in institut. Editing and imputation of the technical and scientific reports is being conducted by 3 members of the scientific team http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology

Quality document associated to a dataset:
Y

Information about the data accuracy is available in the following documents available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology
Methodologies for biological sampling in the Romanian Black Sea area;
GFCM-DCRF-manual;
Best practice guideline on scientific surveys and holistic methods in the Black Sea;
Manual of protocols on methods used for assessing fish stocks in the black sea by analytic methods;
Technical guidelines for scientific surveys in the Mediterranean and the Black Sea - Procedures and sampling for demersal (bottom and beam) trawl surveys and pelagic acoustic surveys;
Guidelines on Data Quality Assurance and Data Quality Control;
Sampling Calculation and Methodology for Fisheries Data (WKSCMFD) (ICES 2004) - https://www.ices.dk/sites/pub/CM%20Doccuments/2004/ACFM/ACFM1204.pdf
Report of the Study Group on Practical Implementation of Discard Sampling Plans (SGPIDS) (ICES, 2011a) - https://www.ices.dk/community/Documents/PGCCDBS/SGPIDS%202011.pdf

Validation of the final dataset:

Internal rules for Data Quality Control (DQC) and Data Quality Assurance (DQA) are applied in institute, including data labelling, checks on final protocols, reanalysis of samples at annual basis etc. The laboratory data and data analyses are finally cross-checked by different number of scientists according the institute and the exact monitoring program (project leader and lab leading scientists). The data accuracy, relevancy, completeness and timeliness are executed and checked by the researchers in institute.

Related to Table 2.5 [and Text Box 4.2] (commercial fisheries data collection)

Sampling scheme identifier: SciObsAtSea *Commercial fishing trip* All species

MS : ROU
Region: Mediterranean and Black Sea
Sampling scheme identifier: SciObsAtSea *Commercial fishing trip* All species
Sampling scheme type: Commercial fishing trip
Observation type: SciObsAtSea
Time period of validity: from 2025 until 2027
Description of the population
Population targeted: The scientific observations of the vessels of the Romanian fishing fleet will cover 75 fishing days (distributed according to the share of the types of fishing activity). The primary sampling units are commercial fishing trips. The samples for the analysis will be collected directly from fishing vessels. The target population consists of fishing trips of vessels using pelagic trawls, vessels using beam trawls, vessels using longlines and vessels with set gillnets for turbot. **Population sampled:** All parts of the target population have equal chances of being observed and there is no part of the population that is unreachable. **Stratification:** There is no specific geographical stratification since the PSU is a commercial fishing trip.
Sampling design and protocols
Sampling design description: Fishing days will be considered as the main unit, used in the observations. To ensure that data collected provide representative information and sampling for all planned fleet segments distribution of fishing days that will be observed is planned and described in the short description above. The primary sampling units commercial fishing days have an equal and independent probability of being observed. Simple random sampling without replacement (SRSWOR) is planned. http://home.iitk.ac.in/~shalab/sampling/chapter2-sampling-simple-random-sampling.pdf Methodologies for the biological sampling in the Romanian Black Sea area. Document are available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection-methodologies **Is the sampling design compliant with the 4S principle?** Y **Regional coordination:** The sampling design and protocols were not developed as part of a regional or multi-lateral agreement, but according to the agreement between Romania and Bulgaria, both countries will undertake annually biological monitoring in their territorial waters and EEZ under their jurisdiction, following common methodology and harmonization of biological data sampling. The agreement is available at the following link: *http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en* **Link to sampling design documentation:** The sampling design documentation is available on the following link: http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection-methodologies . Report of the Workshop on Sampling and Calculation Methodology for Fisheries Data" (WKSCMFD) (ICES 2004); https://www.ices.dk/sites/pub/CM%20Doccuments/2004/ACFM/ACFM1204.pdf; Report SGPIDS (ICES, 2011a), https://www.ices.dk/community/Documents/PGCCDBS/SGPIDS%202011.pdf;

Report of the Study Group on Practical Implementation of Discard Samples (SGPIDS).2013, https: //www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/acom/2013/SGPIDS/SGPIDS13.1.pdf

Design follows international recommendations:
Y

Link to sampling protocol documentation:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection-methodologies

Protocol follows international recommendations:
Y

Sampling implementation

Recording of refusal rate:
Y

Monitoring of sampling progress within the sampling year:
Annual plans for the collection of samples from the commercial fisheries are prepared by NIMRD Constanta. The sampling progress has not experienced major fluctuations in the past and we expect no problems in the next program.

Data capture

Means of data capture:
National Institute of Marine Research and Development Grigore Antipa Constanta (NIMRD) - is responsible for the implementation of the program. Is an institution with specific responsibilities and experience in developing studies in the field of Marine Living Resources in the Black Sea, as well as in reporting data to regional bodies (Black Sea Commission, GFCM-Black Sea Subgroup) and international (JRC/DG-MARE, GFCM, FAO, MEDIAS, MEDITS). It has qualified personnel and the necessary equipment to carry out the proposed topics in good condition and an experience in monitoring living marine resources. The institute has his own research vessel and equipment (pelagic and demersal trawls). Within the Black Sea Commission, NIMRD functions as the Regional Focal Point for Fisheries as well as a focal point for Pollution Monitoring and Assessment, Biodiversity, Integrated Coastal Zone Management and Control Pollution from Land Sources. At the same time, within the NIMRD, operates the Romanian Focal Point for Fisheries under General Fisheries Commission for the Mediterranean (GFCM). NIMRD is the most important public law organization in the field of marine research, having an activity of over 51 years in this field, especially in the Black Sea waters.
To ensure accurate measurements, the laboratories equipment is kept in good condition, scales are regularly calibrated and checked by a qualified technician. The laboratory protocols for each sample include a full description of all measurements. All biological data, collected at landing ports or in the laboratory is completely documented and should be traceable back to its origin. The documentation contains a description of sampling equipment and procedures, reference to standard operating procedures (SOP) for sample handling and analytical procedures involved.

Data capture documentation:
The data capture documentation is available on the following link:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology - in the files Methodologies for biological sampling in the Romanian Black Sea area, in the GFCM-DCRF manual and in the quality documents;

Estimation of sex of Rapana venosa is based on the following paper: Bondarev, 2015, Sexual differentiation and variations sexual characteristics Rapana venosa (Valenciennes, 1846), International Journal of Marine Science, Vol.5, No.19 1-10 (doi: 10.5376/ijms.2015.05.0019
https://www.researchgate.net/publication/277553129_Sexual_differentiation_and_variations_sexual_characteristics_Rapana_venosa_Valenciennes_1846

Quality checks documentation:

Y

NIMRD Constanta involved in the biological monitoring of Romanian landings followed internal rules adopted in the institute to meet the quality of the data processed and analysed. The following documents available at link: http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en-Collection Methodology

Methodologies for biological sampling in the Romanian Black Sea area;

Guidelines on Data Quality Assurance and Data Quality Control - (Example has been given with the anchovy with a remark that all measures proposed are valid for all small pelagic species in Romanian marine area);
GFCM-DCRF-manual;
Best practice guideline on scientific surveys and holistic methods in the Black Sea;
Manual of protocols on methods used for assessing fish stocks in the Black Sea by analytic methods.

Data storage

National database:

NA

National database-in updating process. Actually, until the project for up-dating National data base will be finished and integrated in NAFA consolidated data base (centralized), collected data are available in the server of NIMRD Constanta.

International database:

Med&BS RDBFIS

Quality checks and data validation documentation:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology

Sample storage

Storage description:

NIMRD Constanta is responsible for the storage of the samples of the different species and the samples are not stored under the auspices/responsibility of an international organisation. Part of samples (already processed) are frozen and kept for internal data quality checks. The collected samples from turbot are stored at the NIMRD. Samples for determining the fecundity of turbot, which are taken and examined in the 2nd quarter of each year, are stored in a 4% solution of formaldehyde in plastic containers for 4 years. Each sample is numbered and labelled. Samples from each pair of otoliths, immediately after removal from the fish are washed and stored in plastic ependorphs in 96% ethyl alcohol. The samples of the stomachs immediately after their removal are inserted in plastic containers in 4% solution of formaldehyde for further analysis. The soft tissue samples are stored in 40% formalin. All samples are labelled and numbered in the order in which the fish are dissected and are stored for 4 years.

Preservation fish samples and rapa whelk shells are stored for 2 years in the laboratories of NIMRD Constanta: cooling is one of the methods used to preserve fish samples and freezing samples - on board and subsequently placed in a freezer at institute laboratories.

Freezing and cooling led to different effects on morphological characters. In the case of freezing, a degradation in colour from goldish-brown to grey-blackish was visible in every case, while the body shape was unaffected overall, except for the belly being less elevated, soft and pliable after defrosting.

Otolith preparation and analysis - Sagittal otoliths were removed, as were the large pieces of remaining tissue, using tweezers, before being placed in water-filled Eppendorf's to soak overnight. If tissue remained after this, otoliths were either left to soak in Eppendorf's filled with a 1% solution of potassium hydroxide overnight or a 3% solution of potassium hydroxide for 5 h before being washed in water. Otoliths were then dried overnight before being photographed using the Olympus Trinocular Stereo microscope at 6.3× magnification with an attached Olympus DP25 camera equipped with the imaging system cell^a. An image was taken of the interior and exterior of both the left and right otoliths. Using the same imaging software, measurements (μm) on the exterior side were taken of otolith length – the longest distance between the most anterior and posterior points - (OL) and otolith width – the longest distance between the ventral and dorsal edges - (OW), with the measurements for OL and OW perpendicular to each other. Otoliths were then can be weighed to the nearest 0.001 g – otolith mass – (OM).

Hard parts as otoliths are preserved at the time of age reading by 3 independent readers.

Sample analysis:

Information about the sample analysis is available in the following documents available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology

Bondarev, 2015 - Sexual differentiation and variations sexual characteristics Rapana venosa (Valenciennes, 1846), International Journal of Marine Science, Vol.5, No.19 1-10 (doi: 10.5376/ijms.2015.05.0019

https://www.researchgate.net/publication/277553129_Sexual_differentiation_and_variations_sexual_characteristics_Rapana_venosa_Valenciennes_1846

Paolo Carpentieri, 2019 - Monitoring incidental catch of vulnerable species in the Mediterranean and the Black Sea: methodology for data collection;

Paolo Carpentieri, Angelo Bananno, Giuseppe Scarcella, 2019 - Technical guidelines for scientific surveys in the Mediterranean and the Black Sea Procedures and sampling for demersal (bottom and beam) trawl surveys and pelagic acoustic surveys;

Paolo Carpentieri, Aurora Nastasi, Margherita Sessa, Abdellah Srour, 2020 - Incidental catch of vulnerable species in Mediterranean and the Black Sea fisheries a review;
Jacques Sacchi - Overview of mitigation measures to reduce the incidental catch of vulnerable species in fisheries

Data processing

Evaluation of data accuracy (bias and precision):
Y
Information about the data accuracy is available in the following documents available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology;
The precision of the sampling program is based on the requirements of the following reports:
"Sampling Calculation and Methodology for Fisheries Data" (WKSCMFD) (ICES 2004) - https://www.ices.dk/sites/pub/CM%20Doccuments/2004/ACFM/ACFM1204.pdf and Report of the Study Group on Practical Implementation of Discard Sampling Plans (SGPIDS) (ICES, 2011a) - https://www.ices.dk/community/Documents/PGCCDBS/SGPIDS%202011.pdf
The morphometric relationships between the biological parameters - total weight (TW), shell length (SL), shell width (Wd), aperture length (AL) are analysed on the basis of classical allometric models. The least squares method will be used to estimate the linear - weight relationships (LWR), based on the following equation:
W=a×L^b, where, W – weight; L – length; a, b – constants.
The XLSTAT software is be used to display the linear-weight histograms of the samples from the Rapana landings. The statistical data about the different length and weight classes, presented in the histograms, include lower and upper limits, frequency, relative frequency, and density.
Summarized statistics (Mean values, Standard Error, Median, Mode, Standard Deviation, Sample Variance, Kurtosis, Skewness, Range, Minimum, Maximum, Confidence Level, 95.0%) about the measured biological parameters of Rapana by ports - Total weight (TW - weight with shell, TW, g), body weight (BW, g), % of BW from TW, shell length (shell length, SL, mm), shell width (Wd, mm) and aperture length (AL, mm) will be presented separately, where relevant.

Editing and imputation methods:
Internal rules for Data Quality Control (DQC) and Data Quality Assurance (DQA) are applied in NIMRD Constanta, including all steps from data collection and analysis to final reporting. All data, collected in the sea, are included in protocols and checked by a different number of scientists in institute for mistakes (scientist and expedition leader) and all samples are numbered and identified by given rules. If any corrections are needed, they are presented in separate protocols, controlled by two scientists in institut. Editing and imputation of the technical and scientific reports is being conducted by 3 members of the scientific team http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology

Quality document associated to a dataset:
Y

Information about the data accuracy is available in the following documents available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology
Methodologies for biological sampling in the Romanian Black Sea area;
GFCM-DCRF-manual;
Best practice guideline on scientific surveys and holistic methods in the Black Sea;
Manual of protocols on methods used for assessing fish stocks in the black sea by analytic methods;
Technical guidelines for scientific surveys in the Mediterranean and the Black Sea - Procedures and sampling for demersal (bottom and beam) trawl surveys and pelagic acoustic surveys;
Guidelines on Data Quality Assurance and Data Quality Control;
Sampling Calculation and Methodology for Fisheries Data (WKSCMFD) (ICES 2004) - https://www.ices.dk/sites/pub/CM%20Doccuments/2004/ACFM/ACFM1204.pdf
Report of the Study Group on Practical Implementation of Discard Sampling Plans (SGPIDS) (ICES, 2011a) - https://www.ices.dk/community/Documents/PGCCDBS/SGPIDS%202011.pdf

Validation of the final dataset:

Internal rules for Data Quality Control (DQC) and Data Quality Assurance (DQA) are applied in institute, including data labelling, checks on final protocols, reanalysis of samples at annual basis etc. The laboratory data and data analyses are finally cross-checked by different number of scientists according the institute and the exact monitoring program (project leader and lab leading scientists). The data accuracy, relevancy, completeness and timeliness are executed and checked by the researchers in institute.

Related to Table 2.6 [and Text Box 2.6] (biological specific data collection)

Sampling scheme identifier: PTSBS

MS : ROU
Region: Mediterranean and Black Sea
Sampling scheme identifier: PTSBS
Sampling scheme type: Research survey at sea
Observation type: SciObsAtSea
Time period of validity: from 2025 until 2027
Short description (max 100 words): Pelagic trawl survey will be accomplished in spring and autumn seasons each year. The research survey will be held in the area enclosed between Sulina and Vama Veche, with a total length of the coastline of 240 km. Romanian Black Sea waters will be partitioned into 45 equals in size, not overlying fields and during each survey (spring and autumn) 30 random mid-water hauls will be carried out in the Romanian area, 60 hauls in total per year. The survey covers the Romanian Black Sea waters. The main objectives of sea expeditions are: estimating the abundance indices of the main demersal and pelagic species of commercial interest; a description of the demographic structure of the species of fishing interest, together with the spatial distribution patterns; carrying out the size and biological sampling, including the extraction of the parts to determine the age of the main fishing species concerned and the assessment of the environmental impact of the fishing activity. The sampling scheme on board the vessel aims to collect the following information: - length, weight, sex, age, maturity and fecundity for Sprattus sprattus, Mullus barbatus, Trachurus mediterraneus, Engrauslis encrasicolus, Merlangus merlangius from vessels using OTM, targeting pelagic species; - sampling for the stomach, for the species sprat (Spratus spratus) and horse mackerel (Trachurus mediterraneus); - collection of data and information on the capture of vulnerable species (bone fish; cartilaginous fish, mammals; birds, molluscs and crustaceans). On-board observers will be used to collect the data. RWP MED & BS 2025 - 2027
Description of the population
Population targeted: The main targeted species is sprat (Sprattus sprattus). According to the list of species caught during the previous pelagic trawl surveys, an analysis of the abundance of red mullet, anchovy and Mediterranean horse mackerel will also be done, if they exist in the catch. The survey area is the Romanian Black Sea waters. **Population sampled:** The PTSBS is targeting sprat and other pelagic species in the Black Sea, but in general, all the species which exist in the catch are recorded and assessed. **Stratification:** To address the research objectives, the region was divided into the following strata according to depth - Stratum 1 (15-35 m), Stratum 2 (35-50 m), Stratum 3 (50-750 m). The stratification is based on scientific experience and historical pelagic trawl surveys.
Sampling design and protocols
Sampling design description: To establish the abundance of the reference species in front of the Romanian coast a standard methodology for stratified sampling was used (Gulland, 1966;). To address the research objectives the region was divided into four strata according to depth - Stratum 1 (15-35 m) Stratum 2 (35-50 m), Stratum 3 (50-75 m). Each field is a rectangle with sides 10' Lat × 10' Long and area around 125.16 km2 (measured by application of GIS), large enough for a standard lug extent in a meridian direction to fit within the field boundaries. At each of the fields, only one haul with a duration between 30 min at speed 2.4 - 2.7 knots will be carried out. The research survey includes all fractions of catch. The length classes regarding the stomach content analysis of sprat described in the STREAM deliverable 4.1 will be used (<8 cm and >8 cm). 100 full stomachs will the analysed from sprat <8 cm and 100 full stomachs of sprat

over 8 cm. The length classes of Mediterranean horse mackerel described in the STREAM deliverable 4.1 will be used (<10 cm and >10 cm). 50 full stomachs will the analysed from Mediterranean horse mackerel <10 cm and 50 full stomachs of Mediterranean horse mackerel >10 cm. The numbers are agreed between Romania and Bulgaria.
The main reference documents are:
Deliverable D4.1 from STREAM
Methodology for the pelagic trawl survey in the Romanian Black Sea area
Both documents are available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials a Methods
Is the sampling design compliant with the 4S principle?: NA

Regional coordination: The sampling design and protocols were not developed as part of a regional or multi-lateral agreement, but according to the agreement between Romania and Bulgaria, both countries will undertake annually biological monitoring in their territorial waters and EEZ under their jurisdiction, following common methodology and harmonization of biological data sampling. The agreement is available at the following link: *http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en*

Link to sampling design documentation:
The sampling design documentation is available on the following link:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods
Design follows international recommendations:
Y

Link to sampling protocol documentation:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods

Protocol follows international recommendations:
Y

Sampling implementation

Recording of refusal rate:
NA

Monitoring of sampling progress within the sampling year:
The number of stations could vary depending on the specific adjustments related to the increase of the number of hauls in specific areas depending on currents, hydrometeorological conditions at the local station etc.

Data capture

Means of data capture:
NIMRD Constanța - is responsible for the implementation of the program. Is an institution with specific responsibilities and experience in developing studies in the field of Marine Living Resources in the Black Sea, as well as in reporting data to regional bodies (Black Sea Commission, GFCM-Black Sea Subgroup) and international (JRC/DG-MARE, GFCM, FAO, MEDIAS, MEDITS). It has qualified personnel and the necessary equipment to carry out the proposed topics in good condition and an experience in monitoring living marine resources. The institute has his own research vessel and equipment (pelagic and demersal trawls). Within the Black Sea Commission, NIMRD functions as the Regional Focal Point for Fisheries as well as a focal point for Pollution Monitoring and Assessment, Biodiversity, Integrated Coastal Zone Management and Control Pollution from Land Sources. At the same time, within the NIMRD, operates the Romanian Focal Point for Fisheries under General Fisheries Commission for the Mediterranean (GFCM). NIMRD is the most important public law organization in the field of marine research, having an activity of over 51 years in this field, especially in the Black Sea waters

Detailed information for the means for collecting the data is available in the Methodology for biological sampling in the Romanian Black Sea area document, available at:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods (Ctrl + Click on indicated link)

The data recorded and samples collected at each haul include (Gulland,1966):
* Depth, measured by the vessel's echo sounder;
* GPS coordinates of start/end haul points;

* Haul duration;
* An abundance of sprat caught;
* Weight of total sprat catch;
* Abundance and weight of other large species;
* Species composition of by-catch.

Data capture documentation:

The data capture documentation is available on the following link:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods

Quality checks documentation:

Y

NIMRD Constanta involved in the biological monitoring of Romanian landings followed internal rules adopted in the institute to meet the quality of the data processed and analysed. The following documents available at link:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en-Collection Methodology
Methodologies for biological sampling in the Romanian Black Sea area;
Guidelines on Data Quality Assurance and Data Quality Control - (Example has been given with the anchovy with a remark that all measures proposed are valid for all small pelagic species in Romanian marine area);
GFCM-DCRF-manual;
Best practice guideline on scientific surveys and holistic methods in the Black Sea;
Manual of protocols on methods used for assessing fish stocks in the Black Sea by analytic methods.

Data storage

National database:

NA

National database-in updating process. Actually, until the project for up-dating National data base will be finished and integrated in NAFA consolidated data base (centralized), collected data are available in the server of NIMRD Constanta.

International database:

Med&BS RDBFIS

Quality checks and data validation documentation:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology

Sample storage

Storage description:

Hard parts as otoliths are preserved at the time of age reading by 3 independent readers. Stomach and zooplankton samples are stored in the zooplankton laboratory (4% Formaldehyde solution) at the NIMRD premises.
Sample analysis: Provide a brief description or references to documents, including links to webpages (e.g. age reading manuals, EGs reports and protocols) if appropriate, where information on the processing of the samples is provided.
The documentation is available at: http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods

Sample analysis:

Information about the sample analysis is available in the following documents available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology
Bondarev, 2015 - Sexual differentiation and variations sexual characteristics Rapana venosa (Valenciennes, 1846), International Journal of Marine Science, Vol.5, No.19 1-10 (doi: 10.5376/ijms.2015.05.0019
https://www.researchgate.net/publication/277553129_Sexual_differentiation_and_variations_sexual_characteristics_Rapana_venosa_Valenciennes_1846
Paolo Carpentieri, 2019 - Monitoring incidental catch of vulnerable species in the Mediterranean and the Black Sea: methodology for data collection;
Paolo Carpentieri, Angelo Bananno, Giuseppe Scarcella, 2019 - Technical guidelines for scientific surveys in the Mediterranean and the Black Sea Procedures and sampling for demersal (bottom and beam) trawl surveys and pelagic acoustic surveys;
Paolo Carpentieri, Aurora Nastasi, Margherita Sessa, Abdellah Srour, 2020 - Incidental catch of vulnerable species in Mediterranean and the Black Sea fisheries a review;

Jacques Sacchi - Overview of mitigation measures to reduce the incidental catch of vulnerable species in fisheries.

Data processing
Evaluation of data accuracy (bias and precision): Y The documentation is available at: http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods **Editing and imputation methods:** Y Editing and imputation documentation is available in the NIMRD Constanta, which is conducting the pelagic trawl survey. At NIMRD Constanta editing and imputation of the technical and scientific reports are performed by 3 members of the scientific team. **Quality document associated to a dataset:** Y The only document with DOI, which we are using as reference is the technical guidelines for scientific surveys in the Mediterranean and the Black Sea. - FAO Fisheries and Aquaculture Technical Papers No. 641. https://doi.org/10.4060/ca8870en. The rest of the documents do not have a digital object identifier. **Validation of the final dataset:** R software checks and BioIndex checks, so all stages of work are validated: Running and interpreting scripts developed in R on sampling optimization; Running quality checks on datasets and interpreting outputs in R; Running programme BioIndex with output result; Participation in GFCM and MEDIAS meetings for data preparation and analysis of data from pelagic trawl surveys in the Black Sea.

Related to Table 2.6 [and Text Box 2.6] (biological specific data collection)

Sampling scheme identifier: BTSBS

MS : ROU
Region: Mediterranean and Black Sea
Sampling scheme identifier: BTSBS
Sampling scheme type: Research survey at sea
Observation type: SciObsAtSea
Time period of validity: from 2025 until 2027
Short description (max 100 words): The bottom trawl survey will be conducted in May-June and November-December each year. To establish the abundance and biomass of turbot, piked dogfish and whiting a standard methodology for stratified sampling (Gulland, 1966; Sparre, Venema, 1998;) will be applied. Romanian waters will be partitioned into 100 equals in size, not overlying fields and during each survey (spring and autumn) 40 random mid-water hauls will be carried out in the Romanian area, 80 hauls in total per year. The research survey covers the Romanian Black Sea waters. The main objectives of sea expeditions are: estimating the abundance indices of the main demersal and pelagic species of commercial interest; a description of the demographic structure of the species of fishing interest, together with the spatial distribution patterns; carrying out the size and biological sampling, including the extraction of the parts to determine the age of the main fishing species concerned and the assessment of the environmental impact of the fishing activity. The sampling scheme on board the vessel aims to collect the following information:

- length, weight, sex, age, maturity and fecundity for the turbot (Scophthalmus maximus); whiting (Merlangius merlangus), Picked dogfish (Squalus acanthias) and red mullet (Mullus barbatus);
- sampling for the stomach, for the species turbot (Scophthalmus maximus),
- collection of data and information on the capture of vulnerable species (bone fish; cartilaginous fish, mammals; birds, molluscs and crustaceans). On-board observers will be used to collect the data.

RWP MED & BS 2025 - 2027

Description of the population

Population targeted:

The target species for the BTSBS are:

* Turbot (Scophthalmus maximus) – all available catch during the survey;
* Piked dogfish (Squalus acanthias) - all available catch (rare occurrence);
· Whiting (Merlangius merlangus) - ichthyological samples will be taken from random hauls

The bycatch species like the thornback ray (Raja clavata) and the Common stingray (Dasyatis pastinaca) will be measured and analysed. All the species which are caught during the BTSBS will also be analysed.

The research survey area is the Romanian Black Sea coast.

Population sampled:

The main target species from the BTSBS are the demersal species turbot (Scophthalmus maximus), whiting and piked dogfish, as well as information for all species, gathered as bycatch, during the survey.

Stratification:

To establish the abundance and biomass of the reference species of the Romanian Black Sea coast, a standard methodology for stratified sampling (Gulland, 1966; Sparre, Venema, 1998) will be applied.

The surveyed region will be divided into four strata, depending on the depth – Stratum 1 (15-35 m), Stratum 2 (35-50 m), Stratum 3 (50-75 m) and Stratum 4 (75-100 m). For assessment of turbot, whiting and piked dogfish abundance and biomass, the surveyed territory will be divided into 100 squares. The sampling will be carried out at 40 randomly chosen fields (rectangles) in the spring and 40 in autumn, situated at a depth between 15-100 m. Each rectangle is with sides 10’ Lat × 10’ Long, while the total area is 125.16 km2 (measured by GIS). Each field will be marked with letters and digits for better distinction.

The seabed area covered during a single haul represents a basic measurement unit, considered representative, as turbots do not aggregate in dense assemblages.

Sampling design and protocols

Sampling design description:

Full coverage of the information is envisaged for all collected specimens of the target species - absolute and standard length, the weight of specimens, otoliths for age determination, turbot stomachs for stomach content analysis, and by-catch species composition.

The stomach composition data will be analysed for as much as possible full stomachs, but we could not assure strict distribution of the collected samples by fish length classes. The minimum which is planned (according to numbers of specimens with full stomachs during the historical bottom trawl surveys) is 15 in the 2nd quarter and 15 in the 4th quarter. The number is agreed between Romania and Bulgaria. If more full stomachs are available during the research surveys, they will be analysed.

The main reference documents are:

Deliverable D4.1 from STREAM

Methodology for the Bottom trawl survey in the Romanian Black Sea area

Both documents are available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods.

Selected species/stocks were added in the Sampling scheme identifier to be consistent with Table 2.2, Table 2.5, Text box 2.5 and Annex 1.1.

For the other demersal species – weight and length measurements will be performed on all catches (if possible, the sex and age of the bycatch species will be estimated).

Is the sampling design compliant with the 4S principle?

NA

Regional coordination: The sampling design and protocols were not developed as part of a regional or multi-lateral agreement, but according to the agreement between Romania and Bulgaria, both countries will undertake annually biological monitoring in their territorial waters and EEZ under their jurisdiction, following common methodology and harmonization of biological data sampling. The agreement is available at the following link: *http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en*

Link to sampling design documentation:
The sampling design documentation is available on the following link:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods
Design follows international recommendations:
Y

Link to sampling protocol documentation:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods

Protocol follows international recommendations:
Y

Sampling implementation

Recording of refusal rate:
NA

Monitoring of sampling progress within the sampling year:
The number of stations could vary depending on the specific adjustments related to the increase of the number of hauls in specific areas depending on currents, hydrometeorological conditions at the local station etc.

Data capture

Means of data capture:
NIMRD Constanța - is responsible for the implementation of the program. Is an institution with specific responsibilities and experience in developing studies in the field of Marine Living Resources in the Black Sea, as well as in reporting data to regional bodies (Black Sea Commission, GFCM-Black Sea Subgroup) and international (JRC/DG-MARE, GFCM, FAO, MEDIAS, MEDITS). It has qualified personnel and the necessary equipment to carry out the proposed topics in good condition and an experience in monitoring living marine resources. The institute has his own research vessel and equipment (pelagic and demersal trawls). Within the Black Sea Commission, NIMRD functions as the Regional Focal Point for Fisheries as well as a focal point for Pollution Monitoring and Assessment, Biodiversity, Integrated Coastal Zone Management and Control Pollution from Land Sources. At the same time, within the NIMRD, operates the Romanian Focal Point for Fisheries under General Fisheries Commission for the Mediterranean (GFCM). NIMRD is the most important public law organization in the field of marine research, having an activity of over 51 years in this field, especially in the Black Sea waters
Detailed information for the means for collecting the data is available in the Methodology for biological sampling in the Romanian Black Sea area document, available at:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods (Ctrl + Click on indicated link)

Data capture documentation:

The data capture documentation is available on the following link:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods

Quality checks documentation:

Y

NIMRD Constanta involved in the biological monitoring of Romanian landings followed internal rules adopted in the institute to meet the quality of the data processed and analysed. The following documents available at link:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en-Collection Methodology
Methodologies for biological sampling in the Romanian Black Sea area;
Guidelines on Data Quality Assurance and Data Quality Control - (Example has been given with the anchovy with a remark that all measures proposed are valid for all small pelagic species in Romanian marine area);
GFCM-DCRF-manual;
Best practice guideline on scientific surveys and holistic methods in the Black Sea;
Manual of protocols on methods used for assessing fish stocks in the Black Sea by analytic methods.

Data storage

National database:

NA

National database-in updating process. Actually, until the project for up-dating National data base will be finished and integrated in NAFA consolidated data base (centralized), collected data are available in the server of NIMRD Constanta.

International database:

Med&BS RDBFIS

Quality checks and data validation documentation:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology

Sample storage

Storage description:

The hard structures - otoliths, for age readings, are stored for 2 years in the NIMRD Constanta.
In general, the internal protocols for age reading in NIMRD Constanta include standard procedures for:
- otoliths sampling (stratified by size range, season, sex, etc.);
- preparation for analysis (sections, clarifying mediums, etc.);
- otoliths reading (image-analysis systems, filters, lighting, magnification, etc.);
- establishing accuracy and precision.
-sample storage

Sample analysis:

Information about the sample analysis is available in the following documents available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology
Bondarev, 2015 - Sexual differentiation and variations sexual characteristics Rapana venosa (Valenciennes, 1846), International Journal of Marine Science, Vol.5, No.19 1-10 (doi: 10.5376/ijms.2015.05.0019
https://www.researchgate.net/publication/277553129_Sexual_differentiation_and_variations_sexual_characteristics_Rapana_venosa_Valenciennes_1846
Paolo Carpentieri, 2019 - Monitoring incidental catch of vulnerable species in the Mediterranean and the Black Sea: methodology for data collection;
Paolo Carpentieri, Angelo Bananno, Giuseppe Scarcella, 2019 - Technical guidelines for scientific surveys in the Mediterranean and the Black Sea Procedures and sampling for demersal (bottom and beam) trawl surveys and pelagic acoustic surveys;
Paolo Carpentieri, Aurora Nastasi, Margherita Sessa, Abdellah Srour, 2020 - Incidental catch of vulnerable species in Mediterranean and the Black Sea fisheries a review;
Jacques Sacchi - Overview of mitigation measures to reduce the incidental catch of vulnerable species in fisheries

Data processing

Evaluation of data accuracy (bias and precision):

Y
The documentation is available at: http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods

Editing and imputation methods:

Y
Editing and imputation documentation is available in the NIMRD Constanta, which is conducting the pelagic trawl survey. At NIMRD Constanta editing and imputation of the technical and scientific reports are performed by 3 members of the scientific team.

Quality document associated to a dataset:

Y
The only document with DOI, which we are using as reference is the technical guidelines for scientific surveys in the Mediterranean and the Black Sea. - FAO Fisheries and Aquaculture Technical Papers No. 641. https://doi.org/10.4060/ca8870en. The rest of the documents do not have a digital object identifier.

Validation of the final dataset:

For the Data quality checks of the research survey, NIMRD Constanta, uses MEDITS protocol. It includes common formats for data storage, which include the following standard files: TA (data on the technical specifications of the hauls), TB (aggregated data on the total number and weight by species), TC (aggregated data of the frequency distribution by length, sex and maturity stage by species). To perform automatically the data check procedure by means of a routine enabling errors to be detected and facilitating their correction, the RoME

routine, an R code for performing multiple and cross-checks on survey data in TA, TB, TC format. RoME was transformed into a package structured in 55 different functions: the run is performed by means of the function RoME. Each function is related to a specific check and is recalled in a specific order to avoid cascade errors.
Running programme BioIndex with output result: maps and tables that include data related to:
* the surface of the researched square (Km2, m2);
* the average mass per unit area (g/m2, t/Km2);
* the mass limits variation per unit area;
* the total biomass values (t);
* the abundance index (individuals/km2).
Participation in GFCM and MEDITS meetings for data preparation and analysis of data from demersal trawl surveys in the Black Sea.

Related to Table 2.4 [and Text Box 2.4] (recreational fisheries data collection)

Sampling scheme identifier: RecFish

MS : ROU

Region: Mediterranean and Black Sea

Sampling scheme identifier: RecFish

Sampling scheme type: recreational (off site surveys)

Observation type: SelfOnShore

Time period of validity: 2027

Short description (max 100 words):
In 2027, a telephone screening survey is planned to gather data on recreational fishing practices in the Black Sea. In addition to this survey, we are also planning to develop a mobile app for both iOS and Android. This app will be connected to the electronic record-keeping system of the agency. In the app the fishermen will record information for the caught species and their weight. Together, these initiatives aim to enhance data collection and improve the management of recreational fishing activities.
RWP Med&BS 2025-2027

Description of the population

Population targeted:
The Target Population are residents of the country, men and women aged 14 years and over. The Primary Sampling Unit (PSU) will be the households of recreational fishers. Computer Assisted Telephone Interviews (CATI) using a structured questionnaire will be implemented, depending on whether the respondent will be a recreational fisher or no.

Population sampled:
The method of selecting sample for the telephone statistical survey will be geographically stratified from RDD (Random Digit Dialling) telephone numbers.
Stratification:
The selection of the sample is based on stratified random sampling.

Sampling design and protocols

Sampling design description:
The target population will include individuals aged 14 and older, both men and women. The sample will be selected through stratified random sampling based on units as strata.

The aims of the survey include:

Monitoring sample distribution by gender, age, and education level;
Recording outcomes of telephone interviews, including successful contacts, refusals, and absences;
Making a second call to absentees at a different time or day; if unanswered, the household will be replaced;
Households agreeing to participate will be classified as "successful telephone interviews," and the questionnaire will be administered based on the respondent's status as a recreational fisher;
Successful interviews will identify households with recreational fishers and those without. If multiple members fish, this will be recorded.

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

Regional coordination:
Sampling design and protocols used in the implementation of recreational fishery sampling in Romania during 2027 will follow the provisions of RWP 2025-2027 that was prepared by RCG Med &BS to be implemented by the Mediterranean and Black Seas countries.
Link to sampling design documentation:
The documentation is available at:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en
Design follows international recommendations:
Y. The survey adheres to the overarching guidelines outlined in the most recent handbook for data collection on recreational fisheries in the Mediterranean and the Black Sea (Grati et al. 2021).
Link to sampling protocol documentation:
The documentation is available at:

Protocol follows international recommendations:
Y. The sampling design protocol follows the guidelines of the latest handbook for data collection on recreational fisheries in the Mediterranean and the Black Sea (Grati et al. 2021).

Sampling implementation

Recording of refusal rate:
Y
Monitoring of sampling progress within the sampling year:
The planned telephone survey will last no longer than one month, so specific adjustments to sampling allocations are not anticipated. At the end of the survey, 100% of completed questionnaires will be reviewed for any inconsistencies or errors in data entry. These measures will help identify and address any issues promptly during the sampling period.

Data capture

Means of data capture:
The telephone survey employs a quantitative research method, using the Computer Assisted Telephone Interviewing (CATI) approach and a structured questionnaire.
Data capture documentation:
The documentation is available at: *http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en*

Quality checks documentation:
The documentation is available at: *http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en*

Data storage

National database:
The information gathered from it will be stored in the EAFA`s statistical system.

International database:
NA
Quality checks and data validation documentation:
The documentation is available at: *http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en*

Sample storage

Storage description:
NA
Sample analysis:
NA

Data processing

Evaluation of data accuracy (bias and precision):
Y.
Editing and imputation methods:
Y.

Quality document associated to a dataset:
The documentation is available at: http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en
Validation of the final dataset:
The final datasets will undergo multiple quality checks aimed at identifying structural errors within the datasets and any potential mistakes made by the market research and opinion polling agency.

Related to Table 2.4 [and Text Box 2.4] (recreational fisheries data collection)

Sampling scheme identifier: Recreational fisheries

MS : ROU

Region: Mediterranean and Black Sea

Sampling scheme identifier: Recreational fisheries

Sampling scheme type: Recreational fisheries

Observation type: SciObsOnShore

Time period of validity: from 2025 until 2027

Short description (max 100 words):
Sampling scheme aimed at collecting information from anglers practicing recreational fishing:
- biological sampling resulting from recreational fishing (length, weight and sex), for: Mesogobius batrachocephalus / knout goby; Neogobius melanostomus / round goby; Trachurus mediterraneus ponticus / mediterranean horse mackerel; Pomatomus saltatrix / bluefish and Mullus barbatus ponticus / red mullet,
- for the other species that appear in recreational fishing in the form of isolated specimens, respectively the species: Raja clavata (thornbak ray), Dasyatis pastinaca (common stingray), Squalus acanthias (picked dogfish), Liza aurata (golden grey mullet), Belone belone (garfish), Scorpena porcus (black scorpionfish), Trachinus draco (greater weever) and Alosa pontica (pontic shad), no biological data is collected and an annual estimate of the total catch is not possible.
The scheme covers the recreational fishing carried out in the perimeter (Navodari and Vama Veche).
RWP MED & BS 2025 - 2027

Description of the population

Population targeted:
The target species for the BTSBS are:
* Turbot (Scophthalmus maximus) - all available catch during the survey;
* Piked dogfish (Squalus acanthias) - all available catch (rare occurrence);
· Whiting (Merlangius merlangus) - ichthyological samples will be taken from random hauls
The bycatch species like the thornback ray (Raja clavata) and the Common stingray (Dasyatis pastinaca) will be measured and analysed. All the species which are caught during the BTSBS will also be analysed.
The research survey area is the Romanian Black Sea coast.

Population sampled:
The primary sampling units are trips along the littoral where recreational fishing is practised. The samples for analysis will be collected directly from the fishermen practicing this type of fishing. The target population for sampling will be round goby, knout goby, mediterranean horse mackerel, bluefish and red mullet.

Stratification:
There is no specific geographical stratification.

Sampling design and protocols

Sampling design description:
To ensure that the collected data provide representative information, samples from the planned species are collected in the Navodari - Vama Veche sector. The sampling scheme applies to the fraction of catch taken from fishermen. The PSU selection method is simple random sampling with replacement (SRSWR).

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

Regional coordination: The sampling design and protocols were not developed as part of a regional or multi-lateral agreement, but according to the agreement between Romania and Bulgaria, both countries will undertake annually biological monitoring in their territorial waters and EEZ under their jurisdiction, following common methodology and harmonization of biological data sampling. The agreement is available at the following link:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en

Link to sampling design documentation:
The sampling design documentation is available on the following link:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods
Design follows international recommendations:
Y

Link to sampling protocol documentation:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods

Protocol follows international recommendations:
Y

Sampling implementation

Recording of refusal rate:
Y

Monitoring of sampling progress within the sampling year:
Annual plans for the collection of samples from the commercial fisheries are prepared by NIMRD Constanta. The sampling progress has not experienced major fluctuations in the past and we expect no problems in the next program.

Data capture

Means of data capture:
NIMRD Constanța - is responsible for the implementation of the program. Is an institution with specific responsibilities and experience in developing studies in the field of Marine Living Resources in the Black Sea, as well as in reporting data to regional bodies (Black Sea Commission, GFCM-Black Sea Subgroup) and international (JRC/DG-MARE, GFCM, FAO, MEDIAS, MEDITS). It has qualified personnel and the necessary equipment to carry out the proposed topics in good condition and an experience in monitoring living marine resources. The institute has his own research vessel and equipment (pelagic and demersal trawls). Within the Black Sea Commission, NIMRD functions as the Regional Focal Point for Fisheries as well as a focal point for Pollution Monitoring and Assessment, Biodiversity, Integrated Coastal Zone Management and Control Pollution from Land Sources. At the same time, within the NIMRD, operates the Romanian Focal Point for Fisheries under General Fisheries Commission for the Mediterranean (GFCM). NIMRD is the most important public law organization in the field of marine research, having an activity of over 51 years in this field, especially in the Black Sea waters
Detailed information for the means for collecting the data is available in the Methodology for biological sampling in the Romanian Black Sea area document, available at:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods (Ctrl + Click on indicated link)

Data capture documentation:

The data capture documentation is available on the following link:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods

Quality checks documentation:

Y

NIMRD Constanta involved in the biological monitoring of Romanian landings followed internal rules adopted in the institute to meet the quality of the data processed and analysed. The following documents available at link:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en-Collection Methodology
Methodologies for biological sampling in the Romanian Black Sea area;
Guidelines on Data Quality Assurance and Data Quality Control - (Example has been given with the anchovy with a remark that all measures proposed are valid for all small pelagic species in Romanian marine area);
GFCM-DCRF-manual;
Best practice guideline on scientific surveys and holistic methods in the Black Sea;
Manual of protocols on methods used for assessing fish stocks in the Black Sea by analytic methods.

Data storage

National database:

NA

National database-in updating process. Actually, until the project for up-dating National data base will be finished and integrated in NAFA consolidated data base (centralized), collected data are available in the server of NIMRD Constanta.

International database:

Med&BS RDBFIS

Quality checks and data validation documentation:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology

Related to Table 4.3 [and Text Box 4.1] (biological specific data collection)

Sampling scheme identifier: Stomach sampling

MS : ROU

Region: Mediterranean and Black Sea

Sampling scheme identifier: Stomach sampling

Sampling scheme type: Stomach sampling / Commercial fishing trip

Observation type: SciObsAtSea

Time period of validity: from 2025 until 2027

Description of the population

Population targeted:

The primary sampling units are commercial fishing trips. Samples for analysis will be collected on board the ship. Sampling will be done by purchasing samples directly on board the vessel.

Population sampled:

All parts of the target population have equal chances of being observed and there is no part of the population that is unreachable

Stratification:

There is no specific geographical stratification since the PSU is a commercial fishing trip in the Romanian Black Sea waters.

Sampling design and protocols

Sampling design description:

To ensure that data collected provide representative information and sampling for all planned fleet segments distribution of fishing days that will be observed is planned and described in the short description above. The primary sampling units commercial fishing days have an equal and independent probability of being observed. Simple random sampling without replacement (SRSWOR) is planned.
http://home.iitk.ac.in/~shalab/sampling/chapter2-sampling-simple-random-sampling.pdf

Methodologies for the biological sampling in the Romanian Black Sea area. Document are available at http://www.rmri.ro/Home/Downloads/Publications.Other/ANPA/MaterialsAndMethods/Methodology_for_fish_stomach_contents_analysis.pdf

Is the sampling design compliant with the 4S principle?

Y

Regional coordination:

The sampling design and protocols were not developed as part of a regional or multi-lateral agreement, but according to the agreement between Romania and Bulgaria, both countries will undertake annually biological monitoring in their territorial waters and EEZ under their jurisdiction, following common methodology and harmonization of biological data sampling. The agreement is available at the following link:
http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en

Link to sampling design documentation:

The sampling design documentation is available on the following link:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods

Design follows international recommendations:

Y

Link to sampling protocol documentation:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods

Protocol follows international recommendations:

Y

Sampling implementation

Recording of refusal rate:

Y

Monitoring of sampling progress within the sampling year:

The number of stations could vary depending on the specific adjustments related to the increase of the number of hauls in specific areas depending on currents, hydrometeorological conditions at the local station etc.

Data capture

Means of data capture:

NIMRD Constanța - is responsible for the implementation of the program. Is an institution with specific responsibilities and experience in developing studies in the field of Marine Living Resources in the Black Sea, as well as in reporting data to regional bodies (Black Sea Commission, GFCM-Black Sea Subgroup) and international (JRC/DG-MARE, GFCM, FAO, MEDIAS, MEDITS). It has qualified personnel and the necessary equipment to carry out the proposed topics in good condition and an experience in monitoring living marine resources. The institute has his own research vessel and equipment (pelagic and demersal trawls). Within the Black Sea Commission, NIMRD functions as the Regional Focal Point for Fisheries as well as a focal point for Pollution Monitoring and Assessment, Biodiversity, Integrated Coastal Zone Management and Control Pollution from Land Sources. At the same time, within the NIMRD, operates the Romanian Focal Point for Fisheries under General Fisheries Commission for the Mediterranean (GFCM). NIMRD is the most important public law organization in the field of marine research, having an activity of over 51 years in this field, especially in the Black Sea waters

Detailed information for the means for collecting the data is available in the Methodology for biological sampling in the Romanian Black Sea area document, available at:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods (Ctrl + Click on indicated link)

Data capture documentation:

The data capture documentation is available on the following link:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods

Quality checks documentation:

Y

NIMRD Constanta involved in the biological monitoring of Romanian landings followed internal rules adopted in the institute to meet the quality of the data processed and analysed. The following documents available at link:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en-Collection Methodology

Methodologies for biological sampling in the Romanian Black Sea area;

Guidelines on Data Quality Assurance and Data Quality Control - (Example has been given with the anchovy with a remark that all measures proposed are valid for all small pelagic species in Romanian marine area);

GFCM-DCRF-manual;

Best practice guideline on scientific surveys and holistic methods in the Black Sea;

Manual of protocols on methods used for assessing fish stocks in the Black Sea by analytic methods.

Data storage

National database:

NA

National database-in updating process. Actually, until the project for up-dating National data base will be finished and integrated in NAFA consolidated data base (centralized), collected data are available in the server of NIMRD Constanta.

International database:

Med&BS RDBFIS

Quality checks and data validation documentation:

http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology

Sample storage

Storage description:

The hard structures - otoliths, for age readings, are stored for 2 years in the NIMRD Constanta.

In general, the internal protocols for age reading in NIMRD Constanta include standard procedures for:

- otoliths sampling (stratified by size range, season, sex, etc.);
- preparation for analysis (sections, clarifying mediums, etc.);
- otoliths reading (image-analysis systems, filters, lighting, magnification, etc.);
- establishing accuracy and precision.

-sample storage

Sample analysis:

Information about the sample analysis is available in the following documents available at http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology

Bondarev, 2015 - Sexual differentiation and variations sexual characteristics Rapana venosa (Valenciennes, 1846), International Journal of Marine Science, Vol.5, No.19 1-10 (doi: 10.5376/ijms.2015.05.0019 https://www.researchgate.net/publication/277553129_Sexual_differentiation_and_variations_sexual_characteristics_Rapana_venosa_Valenciennes_1846

Paolo Carpentieri, 2019 - Monitoring incidental catch of vulnerable species in the Mediterranean and the Black Sea: methodology for data collection;

Paolo Carpentieri, Angelo Bananno, Giuseppe Scarcella, 2019 - Technical guidelines for scientific surveys in the Mediterranean and the Black Sea Procedures and sampling for demersal (bottom and beam) trawl surveys and pelagic acoustic surveys;

Paolo Carpentieri, Aurora Nastasi, Margherita Sessa, Abdellah Srour, 2020 - Incidental catch of vulnerable species in Mediterranean and the Black Sea fisheries a review;

Jacques Sacchi - Overview of mitigation measures to reduce the incidental catch of vulnerable species in fisheries

Data processing

Evaluation of data accuracy (bias and precision):

Y

The documentation is available at: http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Materials and Methods

Editing and imputation methods:

Y

Editing and imputation documentation is available in the NIMRD Constanta, which is conducting the pelagic trawl survey. At NIMRD Constanta editing and imputation of the technical and scientific reports are performed by 3 members of the scientific team.

Quality document associated to a dataset:

Y

The only document with DOI, which we are using as reference is the technical guidelines for scientific surveys in the Mediterranean and the Black Sea. - FAO Fisheries and Aquaculture Technical Papers No. 641. https://doi.org/10.4060/ca8870en. The rest of the documents do not have a digital object identifier.

Validation of the final dataset:

Internal rules for Data Quality Control (DQC) and Data Quality Assurance (DQA) are applied in NIMRD Constanta, including all steps from data collection and analysis to final reporting. All data, collected in the sea, are included in protocols and checked by a different number of scientists in institute for mistakes (scientist and expedition leader) and all samples are numbered and identified by given rules. Editing and imputation of the technical and scientific reports is being conducted by 3 members of the scientific team (http://www.rmri.ro/Home/Publications.Other.ANPA.html?lang=en - Collection Methodology

ANNEX 1.2 - QUALITY REPORT FOR SOCIOECONOMIC DATA SAMPLING SCHEME

The quality report fulfils Article 6 (3) (d) of the Regulation (EU) 2017/1004. This document is intended to specify data to be collected under chapter II, points 3, 5, 6, and 7 of the Delegated Decision annex: Socioeconomic data on fisheries, aquaculture and any complementary data collection of fishing activity and fish processing.

Use this document to describe quality aspects of the data collection process (design, sampling implementation, data capture, data storage and data processing etc.). The annex should be filled for each sampling scheme. Where applicable, use the handbook on sampling design (Deliverable 2.1 from MARE/2016/22 SECFISH study), available on the DCF website.

Provide information under each point in all sections.

Please indicate sampling scheme identifier (e.g combination of 'sector' and 'sampling scheme' or 'variables' from the annex table). Each identifier is unique and can be used only once; records with identical scheme identifiers are overwritten in the platform. Do not add any tables others than from the template.

Create a first survey specification record as a reference to the regional WP, add 'RWP ECON' in the 'sector name' field and leave the other fields empty.

Sampling scheme identifier: RWP_ECON

Survey Specifications
'Sector name' refers to socio economic data on fisheries, aquaculture and any complementary data collection of fishing activity and processing as given in the EU MAP Delegated Decision annex. *'Sampling scheme' refers to survey technique: by census, by sampling, random or non-random, other (with explanation). If sampling, then outline sampling design.* *'Variables' refer to Tables 7, 9 and 10 of the EU MAP Delegated Decision annex.* *'Supra region' refers to Table 2 of the EU MAP Implementing Decision annex. If the sampling scheme is the same in all supra regions put 'All supra regions'.*
Sector name(s): RWP ECON 2025 – 2027
Sampling scheme:
Variables:
Supra region(s):
Survey planning
Socio-economic data are collected annually, with the support of NAFA, from all economic operators identified as having their main and secondary activity - Processing and preserving of fish, crustaceans and molluscs, according to NACE 1020. The method of data collection is exhaustive, namely the census, the questionnaires being distributed to all companies active in the current monitored year. The collection method ensures a 100% coverage of the population.
Survey design and strategy

1. Data sources: *2.* Sample sizes: 3. Survey methods: 4. Additional information used in the survey strategy:
Estimation design
1. Calculation method for population estimate: *2.* Calculation method for derived data: *3.* Nonresponse handling:
Error checks
Data storage and documentation
Revision
Confidentiality

Sampling scheme identifier: Fisheries Census

Survey Specifications
'Sector name' refers to socio economic data on fisheries, aquaculture and any complementary data collection of fishing activity and processing as given in the EU MAP Delegated Decision annex. *'Sampling scheme' refers to survey technique: by census, by sampling, random or non-random, other (with explanation). If sampling, then outline sampling design.* *'Variables' refer to Tables 7, 9 and 10 of the EU MAP Delegated Decision annex.* *'Supra region' refers to Table 2 of the EU MAP Implementing Decision annex. If the sampling scheme is the same in all supra regions put 'All supra regions'.*
Sector name(s): Socio economic data on fisheries
Sampling scheme: Census
Variables: Economic and social
Supra region(s): Mediterranean and Black Sea
Survey planning
Socio-economic data are collected annually, with the support of NAFA, from all economic operators identified as having their main and secondary activity - Processing and preserving of fish, crustaceans and molluscs, according to NACE 1020. The method of data collection is exhaustive, namely the census, the questionnaires being distributed to all companies active in the current monitored year. The collection method ensures a 100% coverage of the population.
Survey design and strategy
1. Data sources: The variables that will be collected are listed in Table 7 (economic variables) and Table 9 (social variables) of the multiannual program of the EU. The main sources of economic and social data collection are the following documents: the questionnaire, fishing journal at the Black Sea and coastal areas, the fleet register, sale notes and transport notes.

2.	Sample sizes: The main holders of economic and social data are the economic operators engaged in fishing on the Romanian coast of the Black Sea. In the orders issued by the Ministry of Agriculture and Rural Development they have an obligation to complete these data in fishing journals of the Black Sea and the coastline.
3.	Survey methods: All these documents, except the questionnaire, are taken monthly from every economic operator by NAFA inspectors, after a preliminary verification and available to the research staff of the NIMRD "Grigore Antipa" to be centrally processed and transmitted to end-user format requested by them. Documents such as fishing logbooks, landing declarations in ports/landing sites should be handed-over/delivered to NAFA inspectors by the captains/deputy of the vessels.
4.	Additional information used in the survey strategy: The data collection in the landing sites, nominated by NAFA, among the Black Sea coast, will be done by NAFA staff. For the conformity of fishery data, inspectors confront fishing journals with the sale notes and transport notes. If these data are not in correlation, the necessary corrections are performed. Elaboration of the Questionnaire content is conducted by research staff of NIMRD, in collaboration with NAFA staff with strict compliance of the notice of all economic and social data requested in Decision (EU) 1251/2016, 910/2019 and 1167/2021. After completion of the final form of the questionnaire, it is distributed by NAFA inspectors to each economic agent that has the obligation to complete all available data depending on the complexity of the activities performed, after drawing up the balance. Finally, NAFA inspectors give these questionnaires to the research team of NIMRD, who verify the data and they contact the NAFA inspectors and the economic operators when there are certain ambiguities in order to correct them.
Estimation design	
1.	Calculation method for population estimate: The calculation of these variables, for the active vessels, will respect the instructions indicated in the Table 7 of the multiannual program of the Union [Decision (EU) 2021/1167] and will be based on the figures obtained through questionnaire and other sources, showed above mentioned, from the owners of the fishing units by the inspectors of NAFA and the provisions of the national fishing legislation. The data will be collected from all economic operators. In such a case, the data collection method is exhaustive and the resulting assessment will by a census. As per national legislation, the captain has the obligation to fulfil the coastal logbook for each fishing operation, including the no. of hours, no. and type of gears, the fishing area and the catches per species, live weight and prices of sales (sales notes). These obligations are similar to the requested legal obligations as for the vessels less than 12 m. These vessels are obliged to complete the Coastal Fishing Logbook, having the same obligations as above mentioned for the vessels bigger 12 information is obtained by NAFA local branch personnel, weekly/ monthly, by taking over from the authorized operators/ license owners the records regarding: species/ products accomplished quantity (kg live weight) and the average price for sale in order to inform the national authorities responsible in the field and international fora.
2.	Calculation method for derived data: According to RCG ECON recommendations
3.	Nonresponse handling: According to RCG ECON recommendations
Error checks	

Data reliability/control verification by comparing data with other sources, as a statistical rule, is made by cross-checking the documents requested at branch level by local inspector and the person specialized in centralizing data. The second stage takes place in NIMRD - the figures are verified by staff processing data (a cross-check of all data provided by economic operators, NAFA and the Ministry of Finance), who is responsible with submitting the information to the centralized database - NDCP Romania

Data storage and documentation

Revision

The working methodology is revised as often as necessary in accordance with the regulation requirements for the current year and for its improvement.

Confidentiality

1. Are procedures for confidential data handling in place and documented?

   All employees of the agency sign a confidentiality declaration.

2. Are protocols to enforce confidentiality between DCF partners in place and documented?

   NA. The Agency is the only institution that is collecting the data for DCF and we don't have partners now.

3. Are protocols to enforce confidentiality with external users in place and documented?

   No

4. Are there any issues with publication of data due to confidentiality reasons? Provide an explanation.

Management and use of data complies with Regulation 199/2008 (art. 17-20) regarding the sending and availability of data.

Sampling scheme identifier: Aquaculture Census

Survey Specifications

'Sector name' refers to socio economic data on fisheries, aquaculture and any complementary data collection of fishing activity and processing as given in the EU MAP Delegated Decision annex.
'Sampling scheme' refers to survey technique: by census, by sampling, random or non-random, other (with explanation). If sampling, then outline sampling design.
'Variables' refer to Tables 7, 9 and 10 of the EU MAP Delegated Decision annex.
'Supra region' refers to Table 2 of the EU MAP Implementing Decision annex. If the sampling scheme is the same in all supra regions put 'All supra regions'.

Sector name(s): Socio economic data on aquaculture

Sampling scheme: Census

Variables: Economic and social

Supra region(s): Mediterranean and Black Sea

Survey planning

Socio-economic data are collected annually, with the support of NAFA, from all agents identified as having their main and secondary activity – Aquaculture according to NACE 0322.
The data collected cover the economic variables indicated in Table 10, in accordance with the sectoral segmentation provided in Table 11.
The method of data collection is exhaustive, namely the census, the questionnaires being distributed to all companies active in the current monitored year. The collection method ensures a 90% coverage of the population.

Survey design and strategy

1. Data sources: The source of the socio-economic data for the aquaculture segment is the questionnaire.
2. Sample sizes: Active units register in the Aquaculture Registre.
3. Survey methods: The telephone or personal interview at the unit's headquarters has the role of verifying data correctness and their correlation. Interviews are conducted at aquaculture economic units assigned to the NAFA regional branches: Moldova, Muntenia, Oltenia, Transylvania, and the Maritime Directorate - Constanța Department, as well as the Danube Delta Inspection Service. If the companies will not allow access to this information or if data is incomplete, figures registered and declared to the authorities of the fiscal body will be used, respectively the website of the Ministry of Public Finance (information from the balance report of economic agents).
4. Additional information used in the survey strategy: NA.

Estimation design

1. Calculation method for population estimate: The method of data collection is exhaustive, namely the census, the questionnaires being distributed to all companies active in the current monitored year. The collection method ensures a 90% coverage of the population. If there are any ambiguities regarding economic or production indicators, the data providers (accountants or administrators of the economic agents) are contacted in order to make clarifications or corrections if necessary.
2. Calculation method for derived data: According to RCG ECON recommendations
3. Nonresponse handling: According to RCG ECON recommendations

Error checks

Data storage and documentation

Revision

The working methodology is revised as often as necessary in accordance with the regulation requirements for the current year and for its improvement.

Confidentiality

1. Are procedures for confidential data handling in place and documented?
   All employees of the agency sign a confidentiality declaration.
2. Are protocols to enforce confidentiality between DCF partners in place and documented?
   No
3. Are protocols to enforce confidentiality with external users in place and documented?
   NA. The Agency is the only institution that is collecting the data for DCF and we don't have partners now
4. Are there any issues with publication of data due to confidentiality reasons? Provide an explanation.

Management and use of data complies with Regulation 199/2008 (art. 17-20) regarding the sending and availability of data.

Sampling scheme identifier: Fish processing Census

Survey Specifications

'Sector name' refers to socio economic data on fisheries, aquaculture and any complementary data collection of fishing activity and processing as given in the EU MAP Delegated Decision annex.
'Sampling scheme' refers to survey technique: by census, by sampling, random or non-random, other (with explanation). If sampling, then outline sampling design.
'Variables' refer to Tables 7, 9 and 10 of the EU MAP Delegated Decision annex.
'Supra region' refers to Table 2 of the EU MAP Implementing Decision annex. If the sampling scheme is the same in all supra regions put 'All supra regions'.

Sector name(s): Socio economic data on processing

Sampling scheme: Census

Variables: Economic and social

Supra region(s): Mediterranean and Black Sea

Survey planning

Socio-economic data are collected annually, with the support of NAFA, from all economic operators identified as having their main and secondary activity - Processing and preserving of fish, crustaceans and molluscs, according to NACE 1020. The method of data collection is exhaustive, namely the census, the questionnaires being distributed to all companies active in the current monitored year. The collection method ensures a 100% coverage of the population.

Survey design and strategy

1. Data sources: The source of the socio-economic data for the processing segment is the questionnaire.

2. Sample sizes: Active units register.

3. Survey methods: The telephone or personal interview at the unit's headquarters has the role of verifying data correctness and their correlation. Interviews are conducted at aquaculture economic units assigned to the NAFA regional branches: Moldova, Muntenia, Oltenia, Transylvania, and the Maritime Directorate - Constanța Department, as well as the Danube Delta Inspection Service. If the companies will not allow access to this information or if data is incomplete, figures registered and declared to the authorities of the fiscal body will be used, respectively the website of the Ministry of Public Finance (information from the balance report of economic agents).

4. Additional information used in the survey strategy: NA.

Estimation design

1. Calculation method for population estimate: The method of data collection is exhaustive, namely the census, the questionnaires being distributed to all companies active in the current monitored year. The collection method ensures a 90% coverage of the population. If there are any ambiguities regarding economic or production indicators, the data providers (accountants or administrators of the economic agents) are contacted in order to make clarifications or corrections if necessary.

2. Calculation method for derived data: According to RCG ECON recommendations

3. Nonresponse handling: According to RCG ECON recommendations

Error checks

Data storage and documentation
Revision
The working methodology is revised as often as necessary in accordance with the regulation requirements for the current year and for its improvement.
Confidentiality
1. Are procedures for confidential data handling in place and documented? All employees of the agency sign a confidentiality declaration. 2. Are protocols to enforce confidentiality between DCF partners in place and documented? No 3. Are protocols to enforce confidentiality with external users in place and documented? NA. The Agency is the only institution that is collecting the data for DCF and we don't have partners now. 4. Are there any issues with publication of data due to confidentiality reasons? Provide an explanation. Management and use of data complies with Regulation 199/2008 (art. 17-20) regarding the sending and availability of data.