

## Description of the transversal and socio-economic data collection methodology of the fishing sector in Bulgaria

### Census

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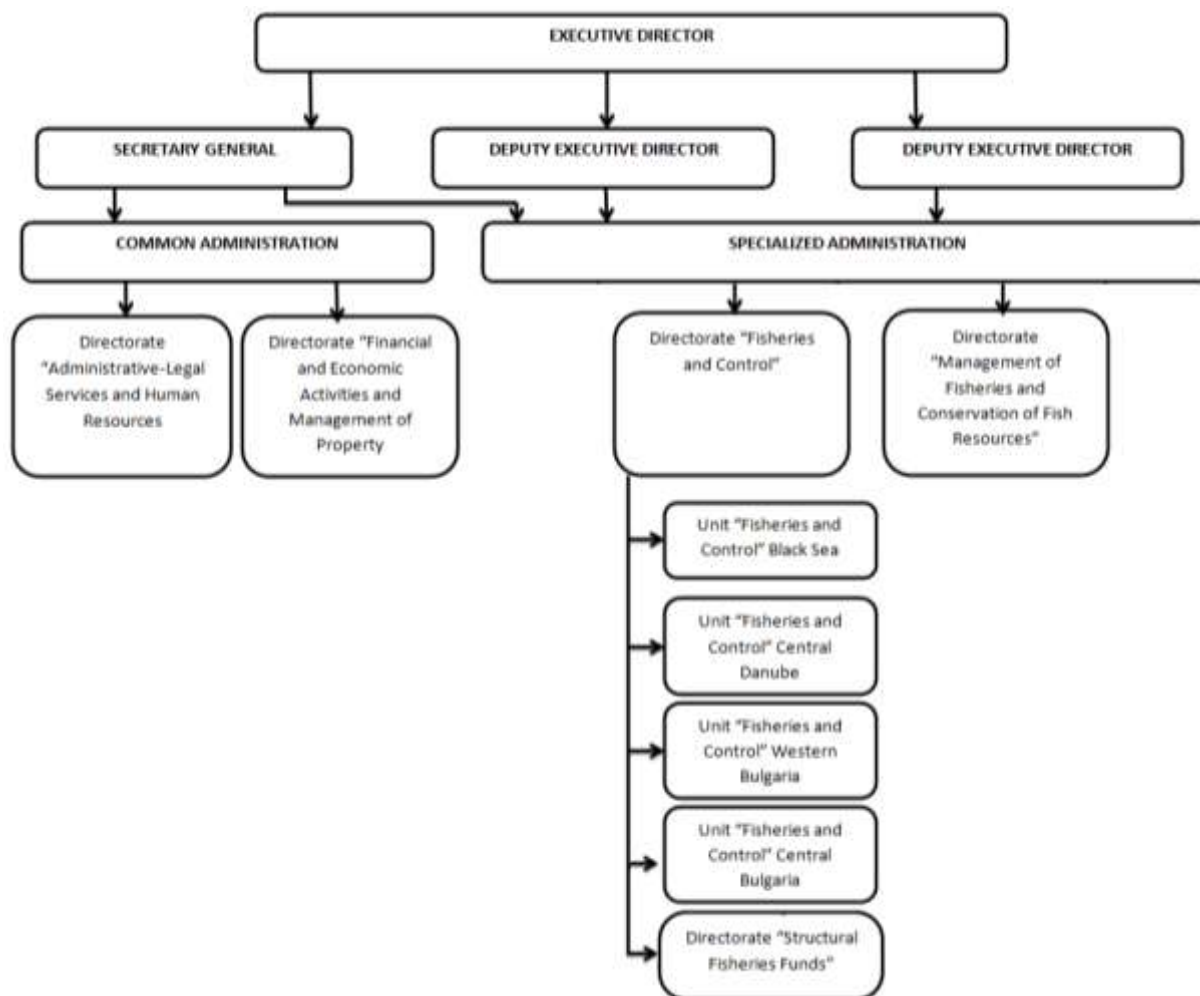
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## **1. General information about Executive agency for fisheries and aquaculture as responsible authority for fisheries control and data collection.**

The responsible authority for fisheries control in Bulgaria is the Executive Agency for Fisheries and Aquacultures (EAFA). The Agency is organized by General administration (Accounting office, Human resources and Legal Services) and Specialized administration (Fisheries control, Structural Fisheries Funds and Management and monitoring of fish resources. The activities related to the fisheries and aquaculture control are carried out by Directorate “Fisheries and Control” which is divided by several units on geographical basis as follows:

- Unit “Fisheries and control – Black Sea”. This unit is responsible for fisheries control in the Black Sea waters, inland fishing activities, aquaculture and market, collection, initial verification, registration of the questionnaires for socio-economic statistics for the fleet, aquaculture and processing enterprises and uploading of the scanned document in EAFA’s information system. - unit “Fisheries and control – Black Sea” it is composed by 3 sections:
  - o Sector “Fisheries and Control Burgas” – responsible for inspection and control activities in Black Sea, inland waters, aquaculture farms, marketing, transportation of fisheries products and collection of the questionnaires for socio-economic statistics in the area of Burgas region;
  - o Sector “Fisheries and Control Varna” – responsible for inspection and control activities in Black Sea, inland waters, aquaculture farms, marketing, transportation of fisheries products and collection of the questionnaires for socio-economic statistics in the area of Varna region;
  - o Sector “Fisheries and Control Dobrich” – responsible for inspection and control activities in Black Sea, inland waters, aquaculture farms, marketing and transportation of fisheries products transportation and collection of the questionnaires for socio-economic statistics in the area of Dobrich region;
- Unit “Fishing Monitoring Centre” – responsible for monitoring and surveillance of fishing vessels.
- Unit “Fisheries and Control – Western Bulgaria” – it is located in Sofia and it is responsible for inspection and control activities in Danube and inland waters, aquaculture farms, marketing and transportation of fisheries products and collection of the questionnaires for socio-economic statistics in the area of regions of Sofia, Pernik, Kyustendil, Blagoevgrad, Vratsa, Montana and Vidin.
- Unit “Fisheries and Control – South Bulgaria” – it is located in Plovdiv and it is responsible for inspection and control activities in inland waters, aquaculture farms, marketing and transportation of fisheries products and collection of the questionnaires for socio-economic statistics in the area of regions of Plovdiv, Pazardjik, Smolyan, Kardjali, Haskovo, Sara Zagora, Sliven and Yambol;
- Unit “Central Danube” – it is located in Ruse and it is responsible for inspection and control activities in Danube and inland waters, aquaculture farms, marketing and transportation of fisheries products and collection of the questionnaires for socio-economic statistics in the area of regions of Pleven, Lovech, Gabrovo, Veliko Tarnovo, Ruse, Silistra, Targovishte, Shumen and Razgrad.

The Agency’s organization chart is presented below.



## 2. Schematic overview of electronic and paper-based systems in place for recording logbook data, landing declarations, take-over declarations, transport documents and sales notes.

### 2.1. E-Logbook:

It is applicable for fishing vessels over 12 meters. The masters of fishing vessels are provided with hardware and software. Each of them has its own account with possibility to enter catch and landing data in the database. In 2020, new VMS equipment has been delivered and installed on board fishing vessels over 12 meters. Additional facility to this equipment is the application for e-logbook, which is in process of actualisation.

### 2.2. Paper logbook:

It is applicable for vessels with length less than 12 m. The format of logbook is the same as in the Commission Implementing Regulation (EU) 404/2011). Copy of landing declaration should be submitted to EAFA within 48 hours after the landing, except in the cases of turbot landing, where the landing declaration should be collected by the inspector. The data from landing declarations shall be recorded into EAFA informational-statistical system within next 24 hours (for turbot) and 48 h (for all other species) upon their reception.

### 2.3. Take-over declarations, transport documents and sales notes:

At the moment they are only in paper format. All these documents shall be presented to EAFA within 48 hours after the relevant activity is completed. The data from these documents are recorded into our informational-statistical system.

### 3. Weighing, storage, transport.

#### 3.1 Procedures for weighing landings.

In most of cases the weighing is taking place in the port of landing. Since there are no specific auctions and first sale occurs immediately after landing, the weighing procedure is carried out during the landing or during the first sale process. In case of an inspection, the weighing is carried out in the presence of the inspector. EAFA has electronic scales, which are subject to an early standardization by the National Institute of Metrology.

If the landing species is turbot all quantities shall be weighed. For other species we apply sampling plan which is approved by the Commission Implementing Decision (EU) 2013/78 EU from 8 February 2013.

- In case of landings less than 50 kg, all quantities shall be weighed;
- When the landings exceed 50 kg, a particular number of boxes shall be weighed. The sample depends of the risk of the port of landing and it is shown in table below.
- The choice of boxes to be weighed is on random basis;
- The difference between the weight of boxes should not be greater than 5% from the average weight of all boxes;
- In case of margin of tolerance greater than 5%, all boxes shall be weighed.

Number of boxes landed by species	Number of boxes to be weighed depending on the risk level of a particular port/landing place				
	Very low	Low	Average	High	Very high
0-25	1	1	1	1	2
25-50	1	2	3	4	5
50-100	1	3	4	5	6
100-200	2	4	5	6	7
Every additional 100	1	1	2	3	4

**In order to ensure the accuracy of the scales used for weighing landings (CR (EC) No. 1224/2009, art 60)** the EAFA scales used during inspections are calibrated on yearly basis. The certificates are provided by the National Institute of Metrology.

#### 3.2 Procedures in place if the landings are stored before the first sale take place.

In case the first sale occurs on later stage or the fisheries products are not subject to a first sale, a take-over declaration shall be filled and submitted to EAFA not later than 48 hours after the operation is completed.

Fisheries products up to 15 kg can be sold to retail market or to end customers without respecting the rules for first sale.

For fisheries products bought for personal consumption under conditions of first sale and that will not be offered to market afterwards, can be exempted from the rules for filling take-over declaration or transport document

#### 3.3 Procedures in place if the landings are transported before the first sale take place.

In case of transportation of fisheries products for which there is no landing declaration or take-over declaration filled, a transport document shall be filled and submitted to EAFA within next 48 hours. The document shall be filled when the products are transported to a place different from the place of landing. Products that are transported within port area or in distances less than 20 km could be exempted from these rules.

#### 4. First sale: auctions and registered buyers.

##### 4.1 Description of the systems used by the auctions/registered buyers to submit sales notes to EAFA

The system of filling and submission of first sale documents is applicable only in paper format. Each registered buyer is provided with logbook with sales notes. In each case of first sale, a sales note shall be filled and submitted to EAFA within next 48 hours. The staff from the relevant unit (where the first sale occurred) is responsible to record this sale into the informational-statistical system. The system carries out automatic cross-checks for any inconsistencies, lack of related document or mismatch between quantities in the related landing declaration.

##### 4.2 Procedures used by EAFA to ensure that the list of auctions and registered buyers is kept up to date.

There is designated staff in the Central administration of EAFA with task to monitor and keep up to date the register of first sale auction and registered buyers. Besides the activities related to the registration process, the officials monitor the documents, the expiration date and if no new documents are submitted, the registration shall be withdrawn.

#### 5. Cross-checking of data.

##### 5.1 Description of the cross-checking of paper-based documents and the cross-checking of data provided electronically of logbook data, landing declarations, transport documents, take-over declarations and sales notes.

The Informational-statistical system is carrying out the following automatic cross-checks, by comparing data from different sources (logbook, landing declarations, sales notes, transport documents, takeover declarations, late submission of documents, lack of referent document etc.).

Data source	Referent data source	Verifications	Description
Logbook: date	Landing declaration: date of submission in EAFA office	Late submission of landing declaration	The landing declaration shall be submitted to EAFA not later than 48 hours after the landing. For the aquacultures this period is 30 days.
Logbook: species and catches, kg	Take-over declaration: species and catches, kg	Discrepancy in the type and quantity of catches	
Logbook: species and catches	Landing declaration: species and catches	Difference for same species less than 10% of logbook weight	System error signal when the difference between the quantity taken and landed is $\geq 10\%$
Logbook: species and catches	First sale note: species and catches	Discrepancy in the type and quantity of catches	The system assumes that there may be several documents for the first sale, so the quantities are summing by comparing them with the logbook declaration

Logbook: species and catches	Transport document: species and catches	Discrepancy in the type and quantity of catches	The system assumes that there may be several transport documents, so the quantities are summing by comparing them with the logbook declaration
Take-over declaration: date	Take-over declaration: delivery date in the department of EAFA	Later delivered take- over declaration in the department of EAFA	Copy of the take-over declaration should be submitted in EAFA within 48 hours
Take-over declaration	Transport document	No reference document	No related documents for the entered document
Take-over declaration	First sale note	Discrepancy in the type and quantity of catches	
Take-over declaration	Landing declaration	No reference document	No related documents for the entered document
First sale note: date	First sale note: delivery date in the department of EAFA	Later delivered first sale note in the department of EAFA	Copy of the first sale note should be submitted in the department of EAFA within 48 hours
First sale note	Take-over declaration	No reference document	No related documents for the entered document
First sale note	Landing declaration	No reference document	No related documents for the entered document
First sale note	Transport document	No reference document	No related documents for the entered document
Transport document: date	Transport document: delivery date in the department of EAFA	Later delivered transport document in the department of EAFA	Copy of the transport document should be delivered in the department of EAFA within 48 hours

In the information-statistical system of the Executive Agency for Fisheries and Aquaculture data verification is done by cross-checks, which are organized in a separate module. This "cross-checking" module correlate input data, such as the basic rules for checking are given in the table above. After detecting the error, the system generates a message that identifies the regional office, which entered the document in the system. The message indicates the type of error and assigns a unique number to it. The system allows immediately open the document, which has led to the generation of error

The system checks the input data every 24 hours and generates error messages. In case the missing data is filled in, the system automatically removes the error. The system keeps information for all detected errors and allows checking by error type, by regional inspectorate and by period at any time.

In the application of e-logbook there is automatic control of the information regarding the margin of tolerance between catch and landing. When this difference is greater, the user is informed about this problem and is invited to correct or to check again the data. When the data from e-logbook are registered into informational-statistical system, the same validation and cross-checking procedures are applicable.

## **5.2 Usage of VMS data to assess the reliability of logbooks /landing declarations.**

Each inspector is in contact with the Fisheries monitoring centre (FMC). When prior notification is received, the inspector in the port of landing is fully informed. If needed, the staff from FMC can send a picture with the track data of fishing vessel to the inspector. Moreover, access to the system is granted to the Director of Fisheries and Control Directorate and in the regional offices. Each inspector could enter the system and see the data from fishing vessel object to an inspection.

## **5.3 Other types of cross-checking to assess the reliability of catch data recorded in the database.**

Other types of cross-checking can be done manually by the staff and in particular:

- If the position of fishing vessel corresponds to the fishing area recorded in the logbook;
- If logbook data correspond to the data from pre-notification;
- If there is some technical error (wrong FAO code, wrong place of landing etc.) when the information is recorded, the designated staff could make necessary corrections in the system.

## **5.4 Process for following up inconsistencies and errors identified by the cross-checking of data.**

When inconsistency is identified, the system shows information about the error, including unique ID, type of error, date of occurrence, regional office and reason. The errors are visible to the staff of the relevant office, which is in charge to fill the necessary information and the reason for this inconsistency (fish is for direct consumption, there is no first sale due to small catches etc.). After taking measures to eliminate the discrepancy and filling the explanations, the case can be closed

## **6. Recreational fisheries (non-commercial fishing).**

### **6.1 Measures in place to ensure that recreational fisheries are conducted in a manner compatible with the objectives and rules of the Common Fisheries Policy.**

The Bulgarian legislation is compatible in a certain extent with the objectives and rules of the common fisheries policy. We can highlight the following key items:

- The sale of the catches from recreational fisheries is prohibited and the measures in place to ensure that the catches from recreational fishers are not marketed are explained in the next point (6.2);
- The species under TAC and quota regime are forbidden for recreational fisheries. Turbot is the only species under the management plan and according to the national legislation turbot is not permitted for recreational fisheries;
- The Bulgarian legislation is regulating also the maximum quantity fished by the recreational fishers, which cannot exceed 3 kg per person;
- Recreational fishery is not permitted during the night time;
- The recreational fisheries are limited with up to 3 fishing rods per person and only one can be with long lines (tentacles).

### **6.2 Measures in place to ensure that catches from recreational fishers are not sold.**

The fisheries products offered in market shall be accompanied by sales note and copy of landing declaration. The landing declaration, as a part of the logbook has its unique number, so it is possible for the inspectors to detect the origin of the product. Both logbooks (for fishermen and for registered buyers) are stamped and validated by EAFSA and are provided only to persons with valid documents (commercial fishing license and authorization for fishermen and certificate for registration for buyers and auctions). Moreover, the unique number of each logbook is recorded into the system, so it is easy to cross-check this information.



### **6.3 Measures in place to ensure that recreational fishing boats are not used for commercial fishing.**

EAFa performs regular, scheduled and occasional inspections of the recreational fishing boats at sea and in the ports for the presence of fishing nets and quantities of the catches on board. The maximum quantity fished by the recreational fishers cannot exceed 3 kg per person.

### **6.4 Monitoring of the catches of stocks subject to recovery plans by recreational fisheries.**

Turbot is the only species under the management plan and according to the Bulgarian legislation turbot is not permitted for recreational fisheries.

## **7. Description of the data collection scheme and sampling method for transversal, economic and social variables for the fleet.**

The annual questionnaire for fleet consists of the following parts – in the first part the owner should fill his name, telephone number, name of the company if the vessels is owned by a company, detailed information about the vessel **/which is used for cross-check purposes ONLY/** – name, LOA segment, GT, days at sea, in the second part detailed information about the economic and social variables should be provided. The collection of all variables is compliant with relevant PGECON/RCG ECON recommendations.

### **7.1 Type of data collection scheme.**

The data collection scheme that is in place for the fleet in Bulgaria is **Census and the sampling unit is a vessel**. Based on our legislation (Art. 18e from the Fisheries and Aquaculture Act), each owner of a fishing vessel, which is operating under Bulgarian flag, or his representative, is required at the beginning of each year (before March 31) to submit economic and social information for the previous year.

### **7.2 Update the questionnaire to comply with the latest legislation and the needs of the data collection program in Bulgaria.**

Every year the Executive Director of EAFa affirms the content and the type of questionnaire, which is prepared by the relevant data collection experts. The questionnaire is completed manually by the owner of the vessel in the presence of an employee (someone from the administration or inspector) of the agency who is trained for this and is aware of the meaning of economic and social indicators. If necessary, the employee explains some of the variables. The filling of the questionnaire is completed after the vessel's owner and the employee of EAFa put their signatures and the questionnaire is entered in the electronic record-keeping system of the Agency.

### **7.3 Data validation procedure.**

The first quality checks of the questionnaire are made by the employee of EAFa who receives the questionnaire – this initial check is focused mainly on the amount of data filled in and existence of unrealistic numbers. The second check is done by the person who submits the data from the questionnaire in the database of EAFa. If at this stage of the processing of the questionnaire are detect any inconsistencies or value that is not logical, based on parameters of the vessel, number of employees, fishing techniques, days at sea or comparison between landings and income, an employee of the agency contacts the owner of the vessel and if he is not able to provide a logical explanation, he is obliged to come and edit the value.

#### **7.4 Estimation procedures.**

Estimation procedures were made only for the previous years (before 2014), in which the questionnaire was not mandatory and there was missing information. Since now the collection of questionnaires is from all vessels, no estimation is needed, because they are required to submit all the data. If for some reason after 31st of March some of the owners of the vessels had not reported data for the previous year, an employee of the agency contacts the owner and reminds him of this obligation and if necessary administrative sanction can be imposed

#### **7.5 Socio-economic variables which are included in the questionnaire.**

The variables for the fleet listed in table Table 7 and Table 9 from COMMISSION DELEGATED DECISION (EU) 2021/1167 are collected through the questionnaire: Gross value of landings, Income from leasing out quota or other fishing rights, Operating subsidies, Subsidies on investments, Other income, Personnel costs, Value of unpaid labour, Energy costs, Repair and maintenance costs, Other variable costs, Other non-variable costs, Lease/rental payments for quotas or other fishing rights, Consumption of fixed capital, Investments in tangible assets (net purchase of assets), Total assets, Value of physical capital, Value of quotas and other fishing rights, Gross debt, Paid labour, Unpaid labour, Full-time equivalent (FTE), Total hours worked per year, Energy consumption, Employment by gender, FTEs by gender, Unpaid labour by gender, Employment by age, Employment by level of education, Employment by nationality and Employment by employment status.

In order to improve the collection, quality and comparability of the different variables among MS the guidelines on socio-economic variables contain definitions and methodology for the variables requested under the EU MAP from 2022 are used. The guidelines are prepared by the experts from all MS in the regional coordination group on the economic issues (RCG ECON, former PGECON) and they are living documents. Moreover, the definitions for the variables agreed by all MS with the issuing of the Economic Issues Regional Work Plan for data collection in the fisheries, aquaculture and fish processing sectors 2025-2027 under RCG ECON is also implemented.

#### **7.6 Transversal variables.**

Number of vessels, Number of fishing enterprises/units, LOA of vessels, GT, kW, Vessel Age, Days at sea, Hours fished, Fishing days, kW \* Fishing Days, GT \* Fishing days, Number of trips, Number of fishing operations, Value of landings total and per commercial species, Live weight of landings total and per species and Prices by commercial species are obtained from the fleet register, logbook, sales notes, information system of EAFA - administrative source.

All variables indicated in Table 6 of the EU MAP Delegated Decision - Fishing Activity Data, are collected under the Control Regulation.

## 8. Methodology used for collection of the variables.

Following the Guidance Document for the Fishing Fleet (Page 95-109 of the RCG ECON 2023 Report) – [http://dcf-bulgaria.bg/wp-content/uploads/2024/10/2023\\_RCG-ECON\\_TM-report\\_final.pdf](http://dcf-bulgaria.bg/wp-content/uploads/2024/10/2023_RCG-ECON_TM-report_final.pdf), Social data – [http://dcf-bulgaria.bg/wp-content/uploads/2021/10/EUMAP\\_guidance\\_SOCIAL.pdf](http://dcf-bulgaria.bg/wp-content/uploads/2021/10/EUMAP_guidance_SOCIAL.pdf), and ECON\_RWP\_2025-2027 – [http://dcf-bulgaria.bg/wp-content/uploads/2024/10/ECON\\_RWP\\_2025-2027.pdf](http://dcf-bulgaria.bg/wp-content/uploads/2024/10/ECON_RWP_2025-2027.pdf), the variables are collected as follow:

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
INCOME	<b>Gross value of landings</b>	Value of landings sold during the year		<b>Derived from administrative source</b>  The data source is the official national statistics on landings. Control data (logbooks and sales notes) is used.
	<b>Income from leasing out quota or other fishing rights</b>	Totals invoiced during the reference period for leasing out quota or other fishing rights assigned to the related vessel and supplied to third parties		<b>Obtained directly from survey</b>
	<b>Operating subsidies</b>	Direct payments which general government or the institutions of the European Union make to resident producers. (ESA D.3). Refers to direct payments/transfers related to the vessel activity, except for:  - Fuel tax refunds  - Subsidies for permanent cessation of		<b>Obtained directly from survey</b>

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
		fishing activities - Investment subsidies (fleet modernization) - COVID subsidies, directly paid to persons		
	<b>Subsidies on investments</b>	Direct payments which general governments or the institutions of the European Union make to resident producers to finance all or part of the costs of their acquiring assets related to the vessel.		<b>Obtained directly from survey</b> <b>Obtained from administrative sources</b>  Investment subsidies refer to permanent cessation or to fleet modernization. They should not be included in income (PGECON 2013). In case of subsidies for permanent cessation of fishing activities of those vessels which have become inactive during the year, it has to be decided if they can be classified in the segment of inactive vessel.
	<b>Other income</b>	Totals invoiced during the reference period, corresponding to vessel activities other than fishing supplied to third parties. Insurance payment for damage/loss of gear/vessel should be included		<b>Obtained directly from survey</b>  Extraordinary and financial income should be excluded.

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
OPERATING COSTS	Personnel costs	<p>Total remuneration, in cash or in kind, payable by an employer to an employee (regular and temporary employees as well as home-workers) in return for work done by the latter during the reference period. Personnel costs also include taxes and employees' social security contributions retained by the unit as well as the employer's compulsory and voluntary social contributions.</p> <p>People working only onshore and paid from vessels should be included if their activity has a direct link with the fishing operations. Employment on shore should include those activities, which directly related to small-scale fisheries and mostly carried out by fishers and their family members, but not entirely related to other economic sectors and specialties.</p>		Obtained directly from survey
	Value of unpaid labour	<p>Imputed value of unpaid labour. Unpaid labour = Work that produces goods or services but is unremunerated (OECD Glossary of statistical terms). People working only on shore should be included only if their work is directly related to fishing activity.</p>		Obtained directly from survey

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
OPERATING COSTS	Energy costs	<p>Purchases of all energy products during the reference period should be included in this variable only if they are purchased to be used as fuel. Energy products purchased as a raw material or for resale without transformation should be excluded.</p> <p><b>Energy costs should be supplied as net costs, i.e. reduced by tax refunds</b></p>		<p><b>Obtained directly from survey</b></p> <p>Energy costs exclude lubrication oil.</p>
OPERATING COSTS	Repair and maintenance costs	<p>The regular maintenance and repair of fixed assets used in production (items not treated as gross capital formation). Should refer only to vessel incl. equipment</p>		<p><b>Obtained directly from survey</b></p>
OPERATING COSTS	Other variable costs	<p>All purchased inputs (goods and services) related to fishing effort and/or catch/landings excluding energy costs, personnel costs, repair and maintenance costs.</p>		<p><b>Obtained directly from survey</b></p>
	Other non-variable costs	<p>Includes purchased inputs not related to the level of effort and/or catch/landings (including leased equipment).</p>		<p><b>Obtained directly from survey</b></p>

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
	<b>Lease/rental payments for quota or other fishing rights</b>	Total purchases of "Lease/rental payments for quota or other fishing rights"		<b>Obtained directly from survey</b>
<b>CAPITAL COSTS</b>	<b>Consumption of fixed capital</b>	Decline in value of vessel and equipment, as a result of normal wear and tear and obsolescence.		<b>Obtained directly from survey</b>  This alternative method is used since the derived estimates reflect the actual definition of net capital stock (depreciated replacement value of the vessel including on-board equipment with a useful lifetime of more than one year).
<b>INVESTMENTS</b>	<b>Investments in tangible assets</b>	Gross investment in vessel and on-board equipment minus sales of (vessel and) on-board equipment.		<b>Obtained directly from survey</b> Investments in tangible assets = Purchases minus sales
<b>FINANCIAL POSITION</b>	<b>Total assets</b>	"Balance sheet total", fixed assets and financial assets. It is essential that the two item of the ratio (debts and total asset) should be consistent. For example, if debts refer only to physical capital, the denominator (total asset) should refer to the physical capital as well. If debts comes from balance sheets and refer to the overall fishing activity, the total assets should be derived from balance sheets as well.		<b>Obtained directly from survey</b> Balance sheets are considered the most reliable source of data for total assets (MSs that derived the value of debts from questionnaires experienced a very poor quality of responses). To split the total (company) value of assets in case the company owns more than one vessel, the capital value of each vessel estimated through the PIM could be used to "weight" the share on the total value.

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
				In case balance sheets are not available, estimation methodology of value of capital and value of debts have to be in line and derived from the PIM.
<b>FINANCIAL POSITION</b>	<b>Value of physical capital</b>	Depreciated replacement value of the vessel including on-board equipment with a useful lifetime of more than one year.		<b>Obtained directly from survey</b> This alternative method is used since the derived estimates reflect the actual definition of net capital stock (depreciated replacement value of the vessel including on-board equipment with a useful lifetime of more than one year).
<b>FINANCIAL POSITION</b>	<b>Value of quota and other fishing rights</b>	The current value of the right to exploit fishing grounds over more than one year. To be collected only when fishing rights are tradable and thus data on the value of fishing rights are available.	PGECON 2020 concluded that optimally the value of intangibles should include the value of all fishing rights, but that in the current situation this is not possible as valuation of all rights needs additional data collection and methodological development to be carried out.  Therefore, PGECON recommends a transition period in which MS explore the possibilities to apply the guidelines in their situation. During this transition period the obligation to gather information on the value of intangible assets should only include the transferable fishing rights.	<b>Obtained directly from survey</b>



VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
FINANCIAL POSITION	Gross Debt	Amount of money borrowed to be used to finance ongoing vessel activities including value of quota and other fishing rights. Excludes finance obtained for land-based business activities.		<p><b>Obtained directly from survey</b></p> <p>Balance sheets are considered the most reliable source of data for debts (MSs that derived the value of debts from questionnaires experienced a very poor quality of responses).</p> <p>When balance sheets are available, value of long/short debts have to be split by vessel, according to the capital value of each vessel estimated through the PIM which is used to “weigh” the share on the total value.</p> <p>On the other hand, to estimate this variable when balance sheets are not available, the methodology is:</p> <ol style="list-style-type: none"> <li>1. To estimate the financial position as the ratio total debt/total value of assets</li> <li>2. To use the value of capital (deriving from the PIM) as a proxy for total value of assets (it is important to bear in mind that the PIM value refers only to physical capital).</li> <li>3. To derive the value of long/short term debts (sum) multiplying the financial position ratio (estimated in 1) by the value of assets (estimated in 2).</li> </ol>

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
EMPLOYMENT	<b>Paid labour</b>	<p>Total number of persons who have received compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind:</p> <ul style="list-style-type: none"> <li>- people working onboard the vessel, irrespective of the total number of hours.</li> <li>- people working only onshore and paid from vessels should be included if their activity has a direct link with the fishing operations.</li> </ul> <p>Employment on shore should include those activities, which directly relate to small-scale fisheries and mostly carried out by fishers and their family members, but not entirely related to other economic sectors and specialties.</p>		<p><b>Obtained directly from survey</b></p> <p>The total number of persons is estimated as an annual average (consistent with the DCF).</p>
	<b>Unpaid labour</b>	<p>Number of engaged crew that have not received compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind.</p> <p>People working only onshore, not receiving any kind of compensation, should be included if their activity has a direct link with the fishing operations.</p>		<p><b>Obtained directly from survey</b></p>

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
	<b>FTE National</b>	<p>The number of crew converted into full time equivalent jobs (FTE). People working only onshore and paid from vessels should be included if their activity has a direct link with the fishing operations. Employment on shore should include those activities, which directly related to small-scale fisheries and mostly carried out by fishers and their family members, but not entirely related to other economic sectors and specialties.</p>		<p><b>Obtained directly from survey</b></p> <p>FTE definition: unit expressing the number of employees into full-time workers (usually defined in the national law). Appendix VI of the current regulation refers, in note 17 and 18 to the study “Calculation of labour including full-time equivalent (FTE) in fisheries” (FISH/2005/14, ‘LEI WAGENINGENUR Coordinator, 2006), financed by EU in order to harmonise the definition and the estimation of employment variables under the data collection system. According to that study, the estimation of the FTE should be done by using a threshold representing the total number of hours worked, on a standard and yearly basis, by a full-time worker in the fishery sector. The study was based on the estimation of the engaged crew and of the FTE at métier level in order to trace the reality of labour input in fishing as closely as possible. This approach was mainly because: - at the time of the study, there were discussions at the STECF, about the possibilities to collect, under the revised DCR, economic data at métiers level; - “different fisheries may be characterized by different labour</p>

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
				<p>intensities and consequently by different levels of labour productivity. This is an important aspect of economic analysis; using métiers in general improves the analytical understanding of the operation of the various fleets”. The concept of metier has been not introduced in the collection of economic data but the general approach on the definition of FTE, in particular on the definition of the yearly threshold (time- based approach), has been largely applied under the DCF. According to the study, a person working more than the threshold (holding one or more jobs) is still counted as one FTE only. A person working less than the threshold represents a certain percentage of a FTE. FTE national should be calculated using a threshold defined according to the features of the fishery sector in each MS. If the annual working hours per crewmember exceed the reference level, the FTE equals 1 per crewmember.</p> <p>- if annual working hours &gt; national threshold, then FTE national =1 If not, the FTE equals the ratio between the hours worked and the reference level. - if annual working hours &lt; national</p>

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
				threshold, then FTE national = annual working hours/(national threshold). In segments where this assumption (the annual working hours per crewmember exceed the reference level (the FTE equals 1 per crewmember) is not valid and an additional adjustment of the calculation may be required, if it can be expected that the result will be significantly affected (Study No FISH/2005/14).
	<b>Total hours worked per year (optional)</b>	The aggregate number of hours worked by the engaged crew during the reference period. People working only onshore and paid from vessels should be included if their activity has a direct link with the fishing operations. Employment on shore should include those activities, which directly related to small-scale fisheries and mostly carried out by fishers and their family members, but not entirely related to other economic sectors and specialties.		<b>Obtained directly from survey</b>
<b>FLEET</b>	<b>Number of vessels</b>	Number of vessels in the EU Fishing Fleet Register on December 31st plus the number of vessels, which have been involved in any fishing activity during the year and have left the Fleet Register prior		<b>Obtained from the Fleet register</b>

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
		to year-end.		
	<b>Mean LOA of vessels</b>	Average vessel length overall		<b>Obtained from the Fleet register</b>
	<b>Total vessel tonnage</b>	Sum of the tonnage of the vessels		<b>Obtained from the Fleet register</b>
	<b>Total vessel power</b>	Sum of the power of the main engines of the vessels		<b>Obtained from the Fleet register</b>
	<b>Mean age of vessels</b>	Average vessel age		<b>Obtained from the Fleet register</b>
<b>EFFORT</b>	<b>Days at sea</b>	Any continuous period of 24 hours (or part thereof) during which a vessel is present within a defined fishing area and absent from port. (as in the Commission Del. Dec.)		<b>Obtained from logbooks</b> For the small-scale fleet vessels less than 10 meters, it could be assumed that 1 Day at Sea is equivalent to 1 Fishing Day as far as no other data contradicts this hypothesis. Nevertheless, this assumption has to be assessed regionally by fishery, as significant differences can occur between them.
	<b>Energy consumption</b>	Volume of vessel fuel consumed in litres		<b>Obtained directly from survey</b>

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
<b>NUMBER OF FISHING ENTERPRISES /UNITS</b>	<b>Number of fishing enterprises/units</b>	<p>Number of fishing enterprises/units in ownership of the respective number of vessels. This refers to the fleet as a whole, not to fleet segments. By size category: - 1 owned vessel - 2-5 owned vessels - &gt; 5 owned vessels</p> <p>Number of enterprises shall be collected on the level of the total fleet not fleet segment.</p>		<b>Obtained from the Fleet register</b>
<b>PRODUCTION VALUE PER SPECIES</b>	<b>Value of landings per species</b>	Value of landings per species		<p><b>Derived from administrative source</b></p> <p>The data source is the official national statistics on landings – sales notes.</p>
	<b>Average price per species</b>	Gross value of landings per kilogram live weight		<p><b>Derived from administrative source</b></p> <p>The data source is the official national statistics on landings- sales notes.</p>

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
SOCIAL VARIABLES	Employment by gender	Total employment (paid labour and unpaid labour) as defined for the fleet, aquaculture and processing sector economic variables by gender	<p>1. Data should be raised to the total population.</p> <p>2. Employment data reported in the social data calls should be consistent with the data reported under the Fleet and Aquaculture data calls.</p>	<p><b>Obtained directly from survey</b> PGECON recommends to follow Eurostat practice and separate social variable "<u>Employment by gender</u>" in the following groups:</p> <ul style="list-style-type: none"> <li>- "Male";</li> <li>- "Female";</li> <li>- "Unknown" (only if needed).</li> </ul>
	FTE by gender	The number of employees converted into full time equivalent jobs (FTE). Fleet: People working only onshore and paid from vessels should be included if their activity has a direct link with the fishing operations. Employment on shore should include those activities, which directly related to small-scale fisheries and mostly carried out by fishers and their family members, but not entirely related to other economic sectors and specialties.	<p>3. PGECON recommends to stratify employment data for the social data call related to the EU fleet by supra region, geo-indicator, fishing activity (SCF, LSF and DWF) and main fleet segments, when possible. It is suggested to follow main AER group definitions as close as possible.</p> <p>For the employment data for the social data call related to the EU aquaculture sector, it is recommended to follow the same segmentation as for the aquaculture data call when possible, or at least to disaggregate by marine (finfish), freshwater (finfish)</p>	<p><b>Obtained directly from survey</b> PGECON recommends to follow Eurostat practice and separate social variable "<u>Employment by gender</u>" in the following groups:</p> <ul style="list-style-type: none"> <li>- "Male";</li> <li>- "Female";</li> <li>- "Unknown" (only if needed).</li> </ul> <p>Figures for the number of persons working less than the standard working time of a full-year full-time worker, should be converted into full time equivalents, with regard to the working time of a full-time full-year employee in the unit. It is the total hours worked divided by the average annual number of hours worked in full-time jobs within the economic territory. Since the length of a full-time job has changed through time and differs between industries, methods which establish the average proportion and average hours of less than full-time jobs in each job group have to be used. A normal full-time week must first be estimated in each job group. If possible, a job group can be defined, inside an industry, according to sex and</p>



VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
			and shellfish.  4. It needs to be further investigated the trade-offs of providing the data for a particular date in the year so that duplications are avoided (e.g. when fishers are moving from one vessel to another during the year) or cover the whole year to include seasonal patterns.	(or) kind of work of people. Hours contractually agreed upon can constitute for employee jobs, the appropriate criteria for determining those figures. Full-time equivalent is calculated separately in each job group, then summed. Included in this category are people working less than a standard working day, less than the standard number of working days in the week, or less than the standard number of weeks/months in the year. The conversion should be carried out on the basis of the number of hours, days, weeks or months worked.
	<b>Unpaid labour by gender</b>	Unpaid labour, as defined for the fleet, aquaculture and processing sector economic variables by gender.		<b>Obtained directly from survey</b> PGECON recommends to follow Eurostat practice and separate social variable " <u>Employment by gender</u> " in the following groups: - "Male"; - "Female"; - "Unknown" (only if needed).
	<b>Employment by age</b>	Total employment (paid labour and unpaid labour) as defined for the fleet, aquaculture and processing sector economic variables in the various age classes: <=14; 15-24; 25-39; 40-54; 55-64; >=65; Unknown		<b>Obtained directly from survey</b>

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
	<b>Employment by level of education</b>	<p>Total employment (paid labour and unpaid labour) as defined for the fleet, aquaculture and processing sector economic variables in the various education levels:</p> <ul style="list-style-type: none"> <li>- Low for education levels 0-2 (ISCED2011 and ISCED1997);</li> <li>- Medium for education levels 3-4 (ISCED2011 and ISCED1997);</li> <li>- High for education levels 5-8 (ISCED2011), levels 5-6 (ISCED1997);</li> <li>- “Unknown”</li> </ul>		<b>Obtained directly from survey</b>
	<b>Employment by nationality</b>	<p>Total employment (paid labour and unpaid labour) as defined for the fleet and aquaculture and processing sector economic variables in the various nationality categories:</p> <ul style="list-style-type: none"> <li>- “National”;</li> <li>- “EU”;</li> <li>- “EEA”;</li> <li>- “Non-EU/EEA”;</li> <li>- “Unknown”.</li> </ul>		<b>Obtained directly from survey</b>
	<b>Employment by employment status</b>	<p>Total employment (paid labour and unpaid labour) as defined for the fleet and aquaculture sector economic variables in the various employment status categories:</p> <ul style="list-style-type: none"> <li>- Owner (vessel owner involved in vessel activity/operation);</li> <li>- Employee (all engaged workers on- board, excluding owners).</li> <li>- Unknown.</li> </ul>		<p><b>Obtained directly from survey</b> Possible to disaggregate on a voluntary basis between full and part time employees.</p>

## **9. Data storage and Confidentiality**

All data from questionnaires is entered and stored in the electronic record-keeping system of the Agency.

The raw and disaggregated data is treated as confidential as well as all personal data according to REGULATION (EU) 2016/679 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

By Order, No RD-212/27.05.2020 of the executive director of EAFA an information security management system was approved. The security management system consists of 21 documents, which are not published online due to security reasons, but all the employees in the agency are obliged to follow them. Within the documentation, protocols to enforce confidentiality are available.