



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

***Description of the socio-economic data collection methodology  
of the aquaculture sector in Romania***  
***Census***

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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 Romania is the *National Agency for Fisheries and Aquaculture* (NAFA). 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:

## 2. Schematic overview of systems in place for recording logbook for sale from aquaculture farms data, transport documents and sales notes.

### 2.1. Paper logbook for sale from aquaculture farms:

It is applicable for all aquaculture farms. A copy of all declarations should be submitted to NAFA until the end of the month of the declarations. The data from declarations shall be recorded into EFAA informational-statistical system no later than the 10<sup>th</sup> of the month after receiving of declaration.

### 2.2. Transport documents and sales notes:

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

## 3. Cross-checking of data.

### 3.1 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 NAFA office	Late submission of landing declaration	The landing declaration shall be submitted to EFAA 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 NAFA	Later delivered take-over declaration in the department of NAFA	Copy of the take-over declaration should be submitted in NAFA 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 NAFA	Copy of the first sale note should be submitted in the department of NAFA 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 NAFA	Later delivered transport document in the department of NAFA	Copy of the transport document should be delivered in the department of NAFA 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 NAFA	Later delivered transport document in the department of NAFA	Copy of the transport document should be delivered in the department of NAFA within 48 hours

In the information-statistical system of the *National 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.

### **3.2 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 (the purpose of the fish is confused etc.). After taking measures to eliminate the discrepancy and filling the explanations, the case can be closed

#### **4. Description of the data collection scheme and sampling method for economic and social variables for the aquaculture farms.**

The annual questionnaire for aquaculture enterprises consists of 2 parts – in the first page the owner should fill his name, phone number, name of the enterprise, unique number of the enterprise, detailed information about the production, sales from the enterprise and the fish that was not sold at the end of the year and the environmental data on aquaculture. In this page there is also special place for explanation notes, if the owner would like to explain something about the production of the fish. On the second page of the questionnaire the owner should fill the economic and social variables indicated in Table 10 and Table 9 from COMMISSION DELEGATED DECISION (EU) 2021/1167. The collection of all variables is compliant with relevant PGECON/RCG ECON recommendations.

##### **4.1 Type of data collection scheme**

The data collection scheme for the aquaculture sector in Bulgaria is **Census and the sampling unit is an aquaculture farm**. Based on our legislation, every owner of an aquaculture farm which is in the register of the aquaculture farms in NAFA, or his representative, is required at the beginning of each year (before January 31) to submit economic and social information for the previous year. The sampling method that we are using is to collect questionnaires for all the aquaculture farms.

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

Every year the President of NAFA 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 enterprise, his representative /like accountant/ in the presence of an employee (someone from the administration) 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 owner and the employee of NAFA put their signatures and the questionnaire is entered in the electronic record-keeping system of the Agency.

##### **4.3 Data validation procedure**

The first quality checks of the questionnaire are made by the employee of NAFA who receives the questionnaire – this initial check is focused mainly on the amount of data filled in. The second check is done by the person who submits the data from the questionnaire in the database of NAFA. 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 enterprise, number of employees, reported production and sales or any other parameter, an employee of the agency contacts the owner of the enterprise and if he is not able to provide a logical explanation, he is obliged to come and edit the value.

##### **4.4 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 aquaculture farms, no estimation is needed, because they are required to submit all the data. If for some reason after 31st of January some of the owners had not reported data for the previous year, an employee of the agency contacts the owner and reminds him of this obligation. In addition, administrative sanction can be imposed to the owner for not fulfilling obligations to report socio-economic information.

## **5. Methodology used for collection of the variables**

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.

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
INCOME	Gross sales per species	Value of output from aquaculture sold during the year = DCF Turnover	MS should avoid duplication of data collection. What does this mean exactly? If “juveniles” (i.e., fish from hatcheries) are sold to another company they should be accounted. So, if the buying company then sales them at a later stage, the fish shall be counted twice.	<b>Derived from administrative source</b> The data source is the official national statistics on sales – sales notes.
	Other income	Other operating income included in company accounts which are excluded from turnover; income coming from other activities than aquaculture, e.g. the licensing of ponds for recreational fishery purposes. Other income, not shown under other headings. Exclude extraordinary and financial incomes. = DCF Other income	More clarification needed on what Commission wants us to collect. Main activity companies/should we exclude other things than aquaculture	Obtained directly from survey “Other income” refers to other operating income included in company accounts which are excluded from turnover; income coming from other activities than aquaculture, e.g. the licensing of ponds for recreational fishery purposes. Other income, not shown under other headings. Extraordinary and financial income should be excluded.
LABOUR COSTS	Personnel costs	Personnel costs are defined as the 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. = DCF Wages and Salaries		Obtained directly from survey
	Value of unpaid labour	Unpaid labour = Work that produces goods or services but is unremunerated. = DCF Imputed value of unpaid labour	Still there is a broad range of options to determine the average wage. If the number of unpaid labour is collected, then the imputed wage per FTE would be sufficient to calculate the value of unpaid labour	Obtained directly from survey

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
<b>ENERGY COSTS</b>	Energy costs	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	The livestock costs should correspond to the variable livestock volume. In the Structural Business Statistics it is included inside 13 11 0 "Total purchases of goods and services".	Obtained directly from survey
<b>REPAIR AND MAINTENANCE</b>	Repair and maintenance	The regular maintenance and repair of fixed assets used in production (items not treated as gross capital formation)		Obtained directly from survey
<b>OTHER OPERATING COSTS</b>	Other operating costs	Other operating costs should comprise outsourcing costs, property or equipment rental charges, the cost of raw materials and supplies that cannot be held in the inventory and have not been already specified (i.e. water, small items of equipment, administrative supplies, etc.), insurance premiums, studies and research costs, external personnel charges, fees payable to intermediaries and professional expenses, advertising costs, transportation charges, travel expenses, the costs of meetings and receptions, postal charges, bank charges (but not interest on bank loans) and other items of expenditure. On the Structural Business Statistics is included inside 13 11 0 "Total purchases of goods and services".		<b>Obtained directly from survey</b>
<b>RAW MATERIAL COSTS</b>	Livestock costs	Costs of livestock during the year.		Obtained directly from survey
	Feed costs	Costs of feed used for aquaculture production during the year.		Obtained directly from survey
<b>SUBSIDIES</b>	Operating subsidies	Direct payments which general government or the institutions of the European Union make to resident producers. Excluding investment subsidies. = DCF Subsidies	Administrative sources, if available, are more precise and therefore are preferable.	Obtained directly from survey
	Subsidies on investments New	Direct payments which general government or the institutions of the European Union make to resident producers to finance all or part of the costs of their acquiring assets.	Administrative sources, if available, are more precise and therefore are preferable.	Obtained directly from survey Obtained from administrative sources

<b>GROUP</b>	<b>Variable</b>	<b>Definition</b>	<b>PGECON advice</b>	<b>Methodology used</b>
<b>SUBSIDIES</b>	Operating subsidies	Direct payments which general government or the institutions of the European Union make to resident producers. Excluding investment subsidies. = DCF Subsidies	Administrative sources, if available, are more precise and therefore are preferable.	Obtained directly from survey
	Subsidies on investments New	Direct payments which general government or the institutions of the European Union make to resident producers to finance all or part of the costs of their acquiring assets.	Administrative sources, if available, are more precise and therefore are preferable.	Obtained directly from survey Obtained from administrative sources
<b>CAPITAL COSTS</b>	Consumption of fixed capital	of normal wear and tear and obsolescence. The estimate of decline in value includes a provision for losses of fixed assets as a result of accidental damage which can be insured against. = DCF Depreciation of capital	It is not clear which is the benefit of switching from "depreciation" to "consumption of fixed capital" - the concepts are somewhat different (see 3.141)	Obtained directly from survey. Represents the reduction in the value of the fixed assets used in production during the accounting period resulting from physical deterioration, normal obsolescence or normal accidental damage (EC study No. FISH/2005/03).
<b>FINANCIAL RESULTS</b>	Financial income	Income from investments and loans forming part of the fixed assets, and other interest receivable. Financial costs, net = Financial expenditures – Financial income		Obtained directly from survey Consider: * Income from participating interests, with a separate indication of that derived from affiliated undertakings. * Income from other investments and loans forming part of the fixed assets, with a separate indication of that derived from affiliated undertakings. Other interest receivable and similar income, with a separate indication of that derived from affiliated undertakings.
	Financial expenditures	Interest payable and similar charges. Financial costs, net = Financial expenditures – Financial income		Obtained directly from survey Considers the Interest payable and similar charges, with a separate indication of those concerning affiliated undertakings.



GROUP	Variable	Definition	PGECON advice	Methodology used
<b>INVESTMENTS</b>	Investments in tangible assets	<p>Net Investments "Purchase and sale of assets during the year"</p> <p>Gross investment in tangible and intangible goods minus sales of tangible and intangible investment goods.</p>	<p>Gross investments = Purchases minus sales Net should be removed from the variable name to avoid confusion with financial accounting net investments, which refers to investments minus depreciation. Investments here should not include depreciation Tangible goods defined in SBS 15 11 0 and intangible goods defined in SBS 15 42 0 and SBS 15 44 1, tangible investment goods defined in 15 210.</p>	<p><b>Obtained directly from survey</b> "Purchase and sale of assets during the year" Investment during the reference period in all tangible goods. Included are new and existing tangible capital goods, whether bought from third parties, acquired under a financial lease contract (i.e. the right to use a durable good in exchange for rental payments over a predetermined and protracted term) or produced for own use (i.e. Capitalised production of tangible capital goods), having a useful life of more than one year including non-produced tangible goods such as land. The threshold for the useful life of a good that can be capitalised may be increased according to company accounting practices where these practices require a greater expected useful life than the 1 year threshold indicated above. All investments are valued prior to (i.e. gross of) value adjustments, and before the deduction of income from disposals. Purchased goods are valued at purchase price, i.e. transport and installation charges, fees, taxes and other costs of ownership transfer are included. The value of goods acquired via financial lease corresponds to the market value of the good if it had been</p>

				<p>purchased in the year of acquisition only. This value is in principle known in the contract or can be estimated by summing -up the part of the instalments that cover the capital reimbursement. The part of instalments corresponding to the interest payments are to be excluded. Own produced tangible goods are valued at production cost. Goods acquired through restructuration (such as mergers, take-overs, break-ups, split-off) are excluded. Purchases of small tools which are not capitalised are included under current expenditure. Sales of tangible goods includes the value of existing tangible capital goods, sold to third parties. Sales of tangible capital goods are valued at the price actually received (excluding VAT), and not at book value, after deducting any costs of ownership transfer incurred by the seller. Value adjustments and disposals other than by sale are excluded</p>
<b>FINANCIAL POSITION</b>	Gross Debt	Amount of money borrowed to be used to finance activities of the aquaculture enterprise.		Obtained directly from survey
	Total assets	An economic asset is a store of value representing the benefits accruing to the economic owner by holding or using the entity over a period of time. It is a means of carrying forward value from one accounting period to another. = DCF Total value of assets		Obtained directly from survey
<b>RAW MATERIAL WEIGHT</b>	Fish Feed used	Quantities of feed used for fish and other aquatic species for aquaculture production. = DCF Raw material volume: Feed		Obtained directly from survey

	Livestock used	Weight of purchased livestock that is meant for production, includes purchase of breeding stocks. Livestock refers to all fish and aquatic species kept or reared in captivity mainly for aqua cultural purposes. = DCF Raw material volume: Livestock	Unclear whether this variable should include only the livestock purchased during the year. Suggestion to amend variable name to: Livestock purchased	Obtained directly from survey
<b>Weight of sales per species</b>		Volume of output from aquaculture sold during the year, including production from hatcheries and nurseries offered for sale = DCF Total sales volume		Derived from administrative source The data source is the official national statistics on sales – sales notes
<b>EMPLOYMENT</b>	Paid labour	Total number of persons who have worked in the enterprise, irrespective of the total number of hours. Total employees = Persons employed + unpaid labour	Propose to rename to Paid persons employed or Paid labour (as in Fleet)	Obtained directly from survey
	Unpaid labour (Number)	Number of persons who have worked for the enterprise that have not received compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind. Total employees = Persons employed + unpaid labour		Obtained directly from survey
	Persons employed (FTE)	Total FTE = Persons employed (FTE) + unpaid labour (FTE)		Obtained directly from survey
	Unpaid labour (FTE)	Number of persons who have worked for the enterprise that have not received compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind.		Obtained directly from survey
	Number of hours worked by employees and unpaid workers New	The aggregate number of hours worked (by total employees) during the reference period.		Obtained directly from survey
<b>NUMBER OF ENTERPRISES</b>	Number of enterprises (by category on the number of persons employed)	Number of aquaculture enterprises in each size category (in terms of number of persons employed). Number of enterprises (by category on the number of persons employed)	Variables should be renamed: "Number of enterprises by size category" Suggested categories: ≤5; 6-10 and >10 FTE	Derived from official Administrative sources (license list exist in NAFA)

VARIABLE GROUP	Variable	Definition	PGECON advice	Methodology used
SOCIAL VARIABLES	Employment by gender	Specification of the meaning of "employment" missing, if reference to all or full-time-part-time required (corresponds to engaged crew or Paid labour for fleet)	<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>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) and shellfish.</p> <p>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.</p>	<p><b>Obtained directly from survey</b></p> <p>PGECON recommends to follow Eurostat practice and separate social variable "Employment by gender" 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 (or) kind of work of people. Hours contractually agreed upon can constitute for employee jobs, the appropriate criteria for determining those figures. Full-</p>

				<p>time equivalent is calculated separately in each job group, then summed.</p> <p>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.</p>
	Unpaid labour by gender	Number of engaged crew / workers that have not received compensation in the form of wages, salaries, fees, gratuities, piecework pay or remuneration in kind.		<p>Obtained directly from survey .</p> <p>PGECON recommends to follow Eurostat practice and separate social variable “Employment by gender” in the following groups:</p> <ul style="list-style-type: none"> <li>- “Male”;</li> <li>- “Female”;</li> <li>- “Unknown” (only if needed).</li> </ul>
	Employment by age	Specification of the meaning of "employment" missing, if reference to all or full-time-part-time required		<p>Obtained directly from survey.</p> <p>Taking into account needs of EMMF for monitoring of employment by age classes and Eurostat practice, PGECON recommends to separate social variable “Employment by age” at least into the following age classes:</p> <ul style="list-style-type: none"> <li>- &lt;=14;</li> <li>- 15-24;</li> <li>- 25-39;</li> <li>- 40-64;</li> <li>- &gt;=65;</li> <li>- “Unknown”</li> </ul>
	Employment by education level	Specification of the meaning of "employment" missing, if reference to all or full-time-part-time		<p>Obtained directly from survey.</p> <p>PGECON recommends to use</p>

		required		<p>the International Standard Classification of Education (ISCED 2011), defining social variable “Employment by education level”. Data collected under EUMAP by MS should allow to provide data at least for the following groups at EU level:</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>Employment by nationality</b>	Specification of the meaning of "employment" missing, if reference to all or full-time-part-time required		<p>Obtained directly from survey. Taking into account national needs and EU requirements it is recommended to separate social variable “Employment by nationality” to at least the following groups:</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>Employment by employment status</b>	Specification of the meaning of "employment" missing, if reference to all or full-time-part-time required		<p>Obtained directly from survey PGECON recommends for data collection of social variable “Employment by employment status” to be reported at least by two categories:</p> <ul style="list-style-type: none"> <li>- “Owner” (vessel owner involved in vessel activity/operation);</li> <li>- “Employee” (all engaged</li> </ul>

				workers on-board, excluding owners). - "Unknown". Possible to disaggregate on a voluntary basis between full and part time employees.
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## **6. 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).