Prime Minister's Office

Council Regulation (EC) No 199/2008 of 25 February 2008

concerning the establishment of a Community framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the Common Fisheries Policy

Commission Regulation (EC) No 665/2008 of 14 July 2008

laying down detailed rules for the application of Council Regulation (EC) No 199/2008

Commission Implementing Decision (EU) 2016/1251 of 12 July 2016

adopting a multiannual Union programme for the collection, management and use of data in the fisheries and aquaculture sectors for the period 2017-2019

Hungary's Work Plan for data collection in the fisheries and aquaculture sectors

2019

Version2 – 2018

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Pilot Study 1: Relative share of catches of recreational fisheries compared to commercial fisheries

General comment: This Box fulfils paragraph 4 of Chapter V of the multi-annual Union programme and Article 2 and Article 4 paragraph (3) point (a) of this Decision.
***Not relevant in case of Hungary**, as paragraph 4 of Chapter V of the multi-annual Union programme refers to "commercial catches for all species **in a marine region**"* *(max 900 words)*

Text Box 1E: Anadromous and catadromous species data collection in fresh water

General comment: This Box fulfils paragraph 2 points (b) and (c) of Chapter III of the multi-annual Union programme and Article 2 of this Decision.

Paragraph 2 point (b) of Chapter III refers to "data on anadromous and catadromous species listed in Table 1E caught ***by commercial fisheries*** *during the freshwater part of their lifecycle". Hungary abolished all commercial fisheries on its natural waters as of 01.01.2016, and therefore, this point is* ***not relevant for Hungary****. Hungary has no* ***eel management units*** *as its territory was deemed not to constitute significant eel habitat and was exempted from the obligation to establish an Eel Management Plan as defined under Council Regulation (EC) No 1100/2007, and thus, Paragraph 2 point (c) of Chapter III* ***cannot be applied to Hungary****, either.*

(max 250 words per Area)

SECTION 1: BIOLOGICAL DATA

Pilot Study 2: Level of fishing and impact of fisheries on biological resources and marine ecosystem

General comment: This Box fulfils paragraph 3 point (c) of Chapter III of the multi-annual Union programme and Article 2 and Article 4 paragraph (3) point (b) of this Decision.
***Not relevant in case of Hungary**, as paragraph 3 point (c) of Chapter III of the multi-annual Union programme refers to "data for estimating the level of fishing and the impact of fishing activities on **marine biological resources** and on **marine ecosystems**, such as effects on non-commercial species, predator-prey relationships and natural mortality of fish species in each **marine region**."* *(max 900 words)*

Text Box 1G: List of research surveys at sea

General Comment: This Box fulfils Chapter IV of the multi-annual Union programme and Article 2 and Article 7 paragraph (3) of this Decision. It is intended to specify which research surveys at sea set out in Table 10 of the multi-annual Union programme will be carried out. Member States shall specify whether the research survey is included in Table 10 of the multi-annual Union programme or whether it is an additional survey.
Not relevant for Hungary as a landlocked country. *(max 450 words per survey)*

SECTION 2: FISHING ACTIVITY DATA

Text Box 2A: Fishing activity variables data collection strategy

General comment: This Box fulfils paragraph 4 of Chapter III of the multi-annual Union programme and Article 2, Article 4 paragraph (2) point (b) and Article 5 paragraph (2) of this Decision. It is intended to describe the method used to derive estimates on representative samples where data are not to be recorded under Regulation (EU) No 1224/2009 or where data collected under Regulation (EU) No 1224/2009 are not at the right aggregation level for the intended scientific use.
Not relevant for Hungary as a landlocked country. *(max 900 words per Region)*

Text Box 3A: Population segments for collection of economic and social data for fisheries

General comment: This Box fulfils paragraph 5 points (a) and (b) of Chapter III of the multi-annual Union programme and Article 2, Article 4 paragraphs (1), (2) and (5) and Article 5 paragraph (2) of this Decision. It is intended to specify data to be collected under Tables 5(A) and 6 of the multi-annual Union programme.
Hungary suspended all commercial fisheries on its natural waters as of 01.01.2016. Accordingly, Table 5A on Economic variables for the fleet are not available. *(max 900 words per Region)*

Pilot Study 3: Data on employment by education level and nationality

General comment: This Box fulfils paragraph 5 point (b) and paragraph 6 point (b) of Chapter III of the multi-annual Union programme and Article 2 and Article 3 paragraph (3) point (c) of this Decision. It is intended to specify data to be collected under Table 6 of the multi-annual Union programme.
Data on employment by education level and nationality will be collected together with the other socio-economic data, no additional studies will be done. *(max 900 words)*

Text Box 3B: Population segments for collection of economic and social data for aquaculture

General comment: This Box fulfils paragraph 6 points (a) and (b) of Chapter III of the multi-annual Union programme and Article 2, Article 4 paragraphs (1) and (5) and Article 5 paragraph (2) of this Decision. It is intended to specify data to be collected under Tables 6 and 7 of the multi-annual Union programme.

1. Description of methodologies used to choose the different sources of data

The Research Institute for Agricultural Economics (AKI) has a register on all aquaculture enterprises and detailed (company-level) production data on fish ponds, intensive farms and on nurseries, respectively. Employment data by gender are also available. The National Food Chain Safety Office (NÉBIH) keeps a register of fish hatcheries and pond farms larger than 30 hectares, as well as data on recreational fisheries in natural-waters. These databases are used to designate the target population. In order to improve the coverage, a registration system for all aquaculture farms of over 0.5 ha is currently being developed by the Ministry of Agriculture. Primary data source for economic data will be the questionnaire survey. Aggregated data from aquaculture statistics will be broken down according to Table 9 of Commission Implementing Decision (Eu) 2016/1251. Relevant species categories in case of Hungary are carp and other freshwater fishes (mainly North African catfish and silver carp), that are above the 10% threshold set out in Chaper V. of Commission Implementing Decision (Eu) 2016/1251. The economic variables, for which no known reliable data sources are readily available (personnel costs, energy costs, raw material costs, repair and maintenance, other operating costs, subsidies, capital costs, investments, debt, unpaid labour, employment by age, education level, nationality, status and environmental variables) are planned to be collected through questionnaires addressed to a representative population of aquaculture enterprises by AKI and stored in their statistical database, for which professional requirements were established according to EUROSTAT, FAO and other EU database development demands. Economic data will be based on farm accounts, accounting offices will be involved, where necessary. Further work will be conducted to establish the new elaborated data collection programme covering these variables.

2. Description of methodologies used to choose the different types of data collection

Sampling method was chosen in such a way as to be representative both on EU and national level, thus a census will be applied for data collection from large enterprises (producers with a production over a 400 t/y threshold), while for midsize and small enterprises stratified probability sampling is to be used. To ensure that the sample of aquaculture farms adequately reflects the diversity of aquaculture farming, the sampling frame have to be stratified before the sample of enterprises is selected. Stratification is based on geographical location, pond type, farming technique, produced fish quantity and previous response rate. The sample is drawn at random from the subset of enterprises within the sampling frame.

All data collection is done according to EU and international regulations, standards and guidelines (EUROSTAT, FADN, STECF, etc.).

3. Description of methodologies used to choose sampling frame and allocation scheme

Target population was established according to Commission Implementing Decision (EU) No 2016/1251, i.e. include all profit-oriented enterprises whose primary activity is defined according to the European Classification of Economic Activities NACE code 03.22. Sampling frame is adapted to the domestic conditions regarding fish farming and the fisheries sector in Hungary, and consists economic entities based in Hungary owning fish ponds or intensive fish production systems and units and are included in the register of AKI and NÉBIH. Sampling units are enterprises dealing with fisheries or aquaculture. Stratification is to be used to ensure that the sample taken from the frame covers all categories of interest. The participation of enterprises is on a voluntary basis. If some enterprises that are selected for the sample may not want to participate, it will be replaced by drawing another enterprise from the sampling frame. Data will be collected yearly to be comparable and that trends could be studied together with other variables on a yearly basis.

4. Description of methodologies used for estimation procedures

Missing data will be complemented by contacting the data provider electronically or on phone. In cases where no data are available for estimations the estimations of data providers will be used. Unavailable data are to be imputed based on previous years' returns, where necessary and possible. However, since data provison is voluntary, data providers may refuse to provide some of the requested data (particularly financial data), which may not be possible to estimate (e.g. debt).

5. Description of methodologies used on data quality

Quality assurance and quality control framework follow the commonly used procedures recommended by EUROSTAT, FADN, etc. Checking, approving and entering of the data will be done by the person responsible for data collection at the Statistical Department of AKI. In the frame of data preparation, the completeness of the received forms and of their filling are checked. Checking and correction of errors (including numerical relations within the table) are continued during the data entry. Data provision is assisted by the personal relations between the data provider and the person responsible for data collection. Unlikely values are identified by likelihood tests which compare the value of a variable to the expected value.

The following indicators of accuracy are planned to be used:

- Coefficient of variation, as quality indicator of sampling error, expressed as the square root of the variance of the estimated value divided by the expected value;
- Unit response rate (un-weighted/weighted), to show what percentage of the respondents assigned for responding and actually belonging to the population responded the questionnaire;

- Item response rate (un-weighted/weighted), to express the percentage of respondents answering a given question;
- Achieved sampling rate, expressing the level of coverage in the frame of the data collection;
- Imputation rate, determining to what extent imputation is used within the data set;

Data for 2017 will be available in the first half of 2019. Collection of the economic and social data for aquaculture will be subject of pilot studies in the future.

(max 1000 words)

Pilot Study 4: Environmental data on aquaculture

General comment: This Box fulfils paragraph 6 point (c) of Chapter III of the multi-annual Union programme and Article 2 and Article 4 paragraph (3) point (d) of this Decision. It is intended to specify data to be collected under Table 8 of the multi-annual Union programme.

Hungary is planning to collect environmental data on aquaculture in the frame of a pilot study on a voluntary basis.

Aim of the pilot study

The traditional pond fish farming incorporates a natural system with material cycles that can have a significant impact on economic production. Fish ponds cannot be separated from the natural environment the health condition, the survival and the feed utilization of fish stocks depends on the whole of the biotic factors present, which may be also considered as indicator organisms in the aquatic environment.

Within the framework of a one year pilot project, we wish to assess the mortalities caused by fish-eater birds. We would like to carry out a data collection related to fish mortality and environmental indicators.

Duration of the pilot study

One year

Methodology and expected outcomes of the pilot study

The main indicator group that is planned to be investigated is birds appearing in the pond environment, paying special attention to species nesting, bypassing, congregating, feeding on the ponds. Additionally, a dataset will be created for fish-eater birds appearing at fish farm environments and endangering fish farming. Data collection is planned to be carried out on three representative sampling sites of equal size which are using different fish farming technologies, and performed in the same period using the same methods. According to these data, we may conclude the preferences of the fish eating birds regarding fish species, size and daily consumption and the caused mortality and income loss of the fish farmers may be estimated. Furthermore, quantifiable data may be gathered from which ecosystem service of the traditional fish ponds may be also calculated.

Parameters to be collected during the project:

- environmental data
- species distribution and population size and/or densities of the fish-eater birds (e.g. cormorants, egrets etc.) in different periods and at different type of fish ponds
- stomach-content analysis of the main fish predator (cormorant)

Expected results:

- Estimates on fish mortalities caused by predator birds
- Estimates on income loss of fish farmers due to mortalities caused by fish-eater birds

(max 900 words)

Text Box 3C: Population segments for collection of economic and social data for the processing industry

General comment: This Box fulfils footnote 6 of paragraph 1.1(d) of Chapter III of the multi-annual Union programme, Article 2, Article 4 paragraphs (1) and (5) and Article 5 paragraph (2) of this Decision. It is intended to specify data to be collected under Table 11 of the multi-annual Union programme.

1. Description of methodologies used to choose the different sources of data

Hungary is planning to collect data on the processing industry on a voluntary basis. Since, there is no ongoing specific sectoral data collection on the fish processing sector covering socio-economic data in Hungary, data are to be obtained through questionnaires, interviews and estimation, if necessary. The designation of the target population will be based on the database of the National Food Chain Safety Office's register of fish processing plants and the database of the National Tax and Customs Administration of Hungary, consisting total revenue data of enterprises based on NACE codes. Estimates of the following data are available in the database of the Statistical Department of AKI for the largest actors based on a preliminary survey conducted in 2014: (1) the volume and value of freshwater fish processing (a) from domestic production; (b) imported from EU countries and (c) imported from third countries; (2) the structure of marine fish processing; (3) the volume and value of products of different processing level; and (4) the share of local "high-value" fishes in the total production.

2. Description of methodologies used to choose the different types of data collection

Since the sector is relatively small, a census will be applied, but the participation of companies will be on a voluntary basis, thus some may not want to participate. Socio-economic data specified in table 11 of the Annex of Commission Implementing Decision (EU) No 2016/1251 are planned to be collected through questionnaire surveys (primary quantitative and qualitative market study using standardized questionnaires and in-depth interviews on a representative sample) and in-depth interviews during personal meetings. Response rate is expected to be high according to previous experiences, which will allow to draw conclusions and determine the status of the sector as a whole. In-depth interviews are to be performed in the frame of previously arranged on-site meetings with the owner or CEO of the enterprise aimed at obtaining background information not readily available from statistical data and questionnaires, allowing touching upon areas important for the interviewed person, not only issues considered relevant by the interviewer. Data collection is done according to EU and international regulations, standards and guidelines (EUROSTAT, FADN, STECF, etc.).

3. Description of methodologies used to choose sampling frame and allocation scheme

Enterprises whose activity includes the European Classification of Economic Activities NACE code C10.2 "Processing and preserving of fish, crustaceans and molluscs" are regarded as the target population. Sampling

units are enterprises classified under the category of fish processing plants by the Hungarian Central Statistical Office including enterprises involved in repackaging, smoking and trading.

The planned frequency of data collection will be every three years and a compulsory data provision system is planned to be introduced by the end of the 2014-2020 EMFF programming period in order to ensure further availability of the fish processing data.

4. Description of methodologies used for estimation procedures

Missing data will be complemented by contacting the data provider electronically or on phone. In cases where no data are available for estimations the estimations of data providers will be used. Unavailable data are to be imputed based on previous years' returns, where necessary and possible. Fish processing data on Hungary are expected to have a full coverage, and thus, no need for estimation procedures is envisaged in this case, however since data provison is voluntary, data providers may refuse to provide some of the requested data (particularly financial data), that may not be possible to estimate (e.g. debt).

5. Description of methodologies used on data quality

Quality assurance and quality control framework follow the commonly used procedures (e.g. EUROSTAT, FADN, etc.). Checking, approving and entering of the data will be done by the person responsible for data collection at the Statistical Department of AKI. In the frame of data preparation, the completeness of the received forms and of their filling are checked. Checking and correction of errors (including numerical relations within the table) are continued during the data entry. Data provision is assisted by the personal relations between the data provider and the person responsible for data collection. Data entry will be immediately followed by "data cleaning" in order to find errors and outliers occurred during the questionnaire survey and the data entry. Unlikely values are identified by likelihood tests which compare the value of a variable to the expected value. The questionnaires are evaluated using basic descriptive statistical methods because of the small size of the sample. The following indicators of accuracy are planned to be used:

- Coefficient of variation, as quality indicator of sampling error, expressed as the square root of the variance of the estimated value divided by the expected value;
- Unit response rate (un-weighted/weighted), to show what percentage of the respondents assigned for responding and actually belonging to the population responded the questionnaire;
- Item response rate (un-weighted/weighted), to express the percentage of respondents answering a given question;
- Achieved sampling rate, expressing the level of coverage in the frame of the data collection;
- Imputation rate, determining to what extent imputation is used within the data set

Collection of economic and social data for the processing industry will be subject of pilot studies in the future.
(max 1000 words)

SECTION 4: SAMPLING STRATEGY FOR BIOLOGICAL DATA FROM COMMERCIAL FISHERIES

Text Box 4A: Sampling plan description for biological data

General Comment: This Box fulfils Article 3, Article 4 paragraph (4) and Article 8 of this Decision and forms the basis for the fulfilment of paragraph 2 point (a)(i) of Chapter III of the multi-annual Union programme. This Table refers to data to be collected under Tables 1(A), 1(B) and 1(C) of the multi-annual Union programme.

Not relevant to Hungary *as Tables 1(A), 1(B) and 1(C) of the multi-annual Union programme* ***refer only to marine species****.*

(max 900 words per Region)