Austrian Work Plan covering 2020-2021

for data collection in the fisheries and aquaculture sectors

Version 2

Vienna, 2019-11-06

Regulation (EC) No 2017/1004 of 17 May 2017
on the establishment of a Union framework for the collection, management and use of data in the fisheries sector and support for scientific advice regarding the common fisheries policy and repealing Council Regulation (EC) No 199/2008

Commission Regulation (EC) No 665/2008 of 14 July 2008
laying down detailed rules for the application of Council Regulation (EC) No 199/2008 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 Delegated Decision (EU) 2019/910 of 13 March 2019 establishing the multiannual Union programme for the collection and management of biological, environmental, technical and socioeconomic data in the fisheries and aquaculture sectors.

Commission Implementing Decision (EU) 2019/909 of 18 February 2019 establishing the list of mandatory research surveys and thresholds for the purposes of the multiannual union programme for the collection and management of data in the fisheries and aquaculture sectors.

CONTENTS

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

General comment: This Box fulfills paragraph 4 of Chapter V of the Delegated Decision on the multi-annual Union programme.

1. Aim of pilot study

Not applicable – Austria is a landlocked country

2. Duration of pilot study

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3. Methodology and expected outcomes of pilot study

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(max 900 words)

Pilot Study 1a: Fish stock evaluation in the southern part of Lake Neusiedl

General comment: This Box fulfills Article 2 and Article 4 paragraph (3) point (a) of this Decision.

1. Aim of pilot study

The southern part of Lake Neusiedl is an important part of the national park Neusiedler See – Seewinkel in Burgenland. Research projects and monitoring during the last years have mainly used net fishing and electro-fishing methods to evaluate the fish community of the lake. While these methods provided good data on species composition and spatial-temporal distribution of fish in Lake Neusiedl, the biomass of the open lake zone is largely unknown. Irregular attempts to get biomass data by using echo-sounding revealed rather the methodological difficulties associated with this method rather than provide reliable quantitative stock estimates.

The aim of the project is to accompany local fishermen on a unique and exceptional fishing campaign in the southern part of the lake to gain information on total biomass of fish and relative proportions of dominant fish species. The campaign has to be embedded in the monitoring and research concept of the national park. The data shall contribute to the fish-ecological monitoring and deepen our understanding of the aquatic communities in the national park. 2. Duration of pilot study

The fishing campaign shall take place in late autumn at low water temperatures. Depending on logistic and technical issues, this can be in autumn 2019 or autumn 2020. Therefore the duration is set as October 2019– February 2021 (including time for data analysis and reporting). 3. Methodology and expected outcomes of pilot study

The fishing campaign itself is fully organised by local fishermen who will use fish trawling to catch the fish. The fish-ecological part covered by this project concentrates on monitoring and supervision of the fishermen in the field, evaluation of the methodology, documentation of the spatial distribution (GPS) of the fish trawls, identification of fish, and messurement of length and biomass. Depending on the catch, age determination will be carried out by counting annual traces on polished opercula. The data analysis and reporting will consider comparable investigations and scientific papers from other large shallow lakes.

SECTION 1: BIOLOGICAL DATA

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

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

Method selected for collecting data.

Not applicable

Austria has no relvant stocks for Anadromous and Catadromous species in Austrian fresh water

For details see Austrian DCF Report 2018

(max 250 words per Area)

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

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General comment: This Box fulfills paragraph 3 point (c) of Chapter III of the Delegated Decision on the multi-annual Union programme

1. Aim of pilot study

no sampling for biological data at sea - Austria is a landlocked country

2. Duration of pilot study

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3. Methodology and expected outcomes of pilot study

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(max 900 words)

Text Box 1G: List of research surveys at sea

> *General Comment: This Box fulfills Chapter I of the Implementing Decision on the multi-annual Union programme. It is intended to specify which reseach surveys at sea set out in the Annex to the Implementing Decision on the multi-annual Union programme will be carried out. Member States shall specify whether the research survey is included in the Implementing Decision on the multi-annual Union programme or whether it is an additional survey*

1. Objectives of the survey

no research surveys at sea - Austria is a landlocked country

2. Description of the methods used in the survey. For mandatory surveys, link to the manuals. Include a graphical representation (map)

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3. For internationally coordinated surveys, describe the participating Member States/vessels and the relevant international group in charge of planning the survey

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4. Where applicable, describe the international task sharing (physical and/or financial) and the cost sharing agreement used

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5. Explain where thresholds apply

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(max 450 words per survey)

Text Box 2A: Fishing activity variables data collection strategy

General comment: This Box fulfills paragraph 4 of Chapter III of the Delegated Decision on the multi-annual Union programme. 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.

1. Description of methodologies used to cross-validate the different sources of data.

Not applicable - no fishing activity above treshold

2. Description of methodologies used to estimate the value of landings.

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3. Description of methodologies used to estimate the average price (it is recommended to use weighted averages, trip by trip)

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4. Description of methodologies used to plan collection of the complementary data (sample plan methodology, type of data collected, frequency of collection etc)

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 (max 900 words per region)

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

General comment: This Box fulfills paragraph 5 points (a) and (b) of Chapter III of the Delegated Decision on the multi-annual Union programme. It is intended to specify data to be collected under Tables 5(A) and 6 of the Delegated Decision on the multi-annual Union programme.

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

Not applicable - no fishing activity above treshold

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

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

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4. Description of methodologies used for estimation procedures

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5. Description of methodologies used on data quality

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(max 900 words per region)

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

General comment: This Box fulfills paragraph 5 point (b) and paragraph 6 point (b) of Chapter III of the Delegated Decision on the multi-annual Union programme. It is intended to specify data to be collected under Table 6 of the Delegated Decision on the multi-annual Union programme..

1. Aim of pilot study

Not applicable

2. Duration of pilot study

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3. Methodology and expected outcomes of pilot study

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(max 900 words)

Pilot Study 3a: Socio-economic data in the fisheries and aquaculture sectors in Austria

General comment: This Box fulfills paragraph 5 points (a) and (b) of Chapter III of the Delegated Decision on the multi-annual Union programme. It is intended to specify data to be collected under Tables 5(A) and 6 of the Delegated Decision on the multi-annual Union programme..

Proposal for a second pilot study on collecting and/or possibilities for collecting socio-economic data in the Austrian fisheries and aquaculture sectors

1. Aim of pilot study

Due to low data availability, little is known about the Austrian aquaculture sector from a socio-economic point of view. The first Austrian pilot study (pilot study 3a 2017-19) on the collection of socio-economic data in domestic fisheries and aquaculture was a step towards a better understanding of the sector's socio-economic situation and towards improved data. This knowledge and database should now be used efficiently.

Based on the results of pilot study 3a (2017-19), the method of a possible branch-tailored data collection, should be further developed. The heterogeneity of the sector and the low availability of data on operating characteristics lead to high variances in the statistical extrapolations. Therefore, data collection using the statistical method introduced in the first pilot study would require very large samples (depending on the variable) to achieve the required accuracy. The achievement of these sample sizes in combination with comprehensive standardized surveys is considered to be highly unlikely, since especially the large number of small businesses would face a disproportionate effort. As a result, low response rates and limited data quality could be expected.

Virtual data sets on so-called representative farms in the sector could remedy this situation and directly tie in with the work of the first socio-economic pilot study. This approach serves to reduce the bureaucratic workload for fish farms resulting from broad surveys and at the same time serves to increase the quality of the data through the detailed mapping of fewer but more representative farms.

The objectives of the new Pilot Study 3a are therefore

- the modeling of socio-economic variables of representative trout and carp farms,

- the statistical projection of the representative farms on the corresponding segment level and

- the further methodological development as a basis for a possible branch-tailored data collection. 2. Duration of pilot study

The pilot study is planned for 12 month.

3. Methodology and expected outcomes of pilot study

Based on the results of pilot study 3a 2017-19, the next step is the development of a simplified data generation approach. For this purpose, representative model companies are generated on a microeconomic level: Based on existing empirical data and in collaboration with sector's and statistics' experts, virtual data sets are created for representative companies. Socio-economic variables are assessed or calculated based on empirical relationships (typical amount of feed used per ton produced, etc.) and validated. Then, the variables are statistically projected (extrapolated) onto the part of the sector represented by the farm, using empirical indicators (e.g., production volume). The results of the first pilot study provide an ideal starting point for developing and testing this approach for Austria.

The approach is based on three pillars:
Existing data:
- Objective: Identification of relevant regions, relevant fish species, relevant production techniques, relevant farm sizes, etc.
- Sources: collected data or administrative data such as aquaculture statistics, business registers, employment statistics, etc.
Focus groups:
- Objective: Definition of representative farms, definition of the variables' values, interpretation of the business context
- Sources: industry representatives and individual companies, scientific experts; based on achieved knowledge from pilot study 3a

surveys:
- Objective: To test and validate the variables and the calculated data on site at individual farms
- Sources: Partially carried out in pilot study 3a, this preparatory work can be used efficiently

In Germany, a pilot study on model farms for aquaculture is currently being carried out. Therefrom, important synergy effects can be expected.

The required data are the variables of Tables 6 and 7, with segmentation acc. Table 9 of the Annex to the Union program for the collection, management and use of data in the fisheries and aquaculture sector 2017-19. The possibility of including the environmental variables (Table 8) should be examined.

Data that are difficult to gather at individual farm level could be determined on the basis of this approach. The results will then be linked to the statistical models of pilot study 3a. This is expected to provide more explanatory variables that can be used for the linear model, resulting in less variance and thus being a significant improvement for the extrapolation of the socio-economic data on farm-elevel to the overall sector.

In addition to information on the current economic performance, socio-economic data also serve to analyze the long-term economic development of the aquaculture sector, as well as the impact of policies and the impact of operational measures such as investment or changes in production processes. The results of pilot study 3a could be used to support policy makers to derive sound policy recommendations for the sector. Socio-economic knowledge of a sector is an essential foundation for knowledge of meaures' impact and targeting.

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

General comment: This Box fulfills 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

Not applicable – Austria is looking by means of the second Pilot study 3a for methodologies and data sources for the collection of economic and social data for aquaculture

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

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

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4. Description of methodologies used for estimation procedures

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5. Description of methodologies used on data quality

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(max 1000 words)

SECTION 3: ECONOMIC AND SOCIAL DATA

Pilot Study 4: Environmental data on aquaculture

General comment: This Box fulfills paragraph 6 point (c) of Chapter III of the Delegated Decision on the multi-annual Union programme. It is intended to specify data to be collected under Table 8 of the Delegated Decision on the multi-annual Union programme

1. Aim of pilot study

Under pilot study 4, a further pilot study for "Identification of the aquaculture potential in focus areas (sub-basins) based on environmental data" is foreseen.

Regarding environmental data on aquaculture (i.e. variables "mortalities" and "medicines or treatments administered"), one aspect of pilot study 3a is to examine the possibility of including the environmental variables in the examined method (see text box 3a).

2. Duration of pilot study

12 months

3. Methodology and expected outcomes of pilot study

Austria is a country with rich water resources that can support aquaculture in a sustainable way. However, since the magnitude of fhe future aquaculture is hard to assess and depends on multiple aspects, new methodological approaches are required. A first country-wide assessment of the aquaculture potential for salmonid species was finished in September 2019 within the DCF sub-pilotstudy 4 aquaNovum. By combining data on environmental conditions, existing uses, legal restrictions and risks areas with a high production potential for trout farming were identified. While aquaNovum aimed for assessing the general aquaculture potential on a national level, local parameters as e.g. the ownership structure, mutual interferences between potential facilities and economic aspects could not be considered.

Therefore, this pilot project shall now incorporate those aspects on a site-scale for previosuly identified focus areas. Furthermore, the need for more detailed data with regard to the availability and quantity of suitable water resources, especially under consideration of climate change (e.g. low flow, water temperature) was raised and should be addressed. Furthermore, a site prioritisation approach should be developed to select the most promising production sites under consideration of potential mutual inteferences.

The data collected, processed and combined in aquaNovum represent an important data-base for practitioners and decision makers in the aquaculture sector and should be further extended. Several requests for a web-based tool icluding individual thematic data layers were raised and highlight the importance for data-driven decision making. However, since the collected data were provided by different sources are highly restricted with regard to their rights of use one work package should elaborate how to make these results available to interested users.

Methodology regarding environmental variables:

The possibility of collecting the environmental variables ("mortalities" and "medicines or treatments administered") will be examined in pilot study 3a, by including them in the described method. Thereby, representative model farms are set up to garther virtual farm data, as the first applied method of survey sampling and extrapolation* does not result in valid data, due to the heterogenity of the sector. Using existing data, focus groups and survey data, virtual data sets are created on a micro-level. Then, the variables are statistically projected (extrapolated) onto the part of the sector represented by the farm, using empirical indicators (e.g., production volume).

*Result of the first pilotstudy 4 of the Austrian MAP 2017-19.

(max 900 words)

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

General comment: This Box fulfills 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

Not applicable - no collection of economic and social data for the processing industry is planed 2017-19

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

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

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4. Description of methodologies used for estimation procedures

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5. Description of methodologies used on data quality

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(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 fulfills paragraph 1.1(d) of Chapter III and Table 10 of the Delegated Decision on the multi-annual Union programme. It is intended to specify data to be collected under Table 10 of the Delegated Decision on the multi-annual Union programme..

Description of the sampling plan according to Article 5 paragraph (3) of this Decision

Not applicable – no data sampling for biological data necessary

(max 900 words per Region)