

FINAL

Austrian Annual Report 2017 under

Regulation (EU) 2017/1004

Commission Implementing Decision (EU) 2016/1701

Commission Implementing Decision (EU) 2016/1251

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

Commission Implementing Decision (EU) 2016/8827

adopting an Austrian working programme for the collection, management and use of data in the fisheries and aquaculture sectors for the period 2017-2019

Version for Annual Reports 2017-2019

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SECTION 1: BIOLOGICAL DATA

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

This text box is applicable to the AR. MS should transfer the information from their accepted WP before filling in the additional section highlighted in grey.

General comment: This box fulfils paragraph 4 of Chapter V of the multiannual Union programme and Article 2 and Article 4 paragraph (3) point (a) of the Decision (EU) 2016/1701.
General comment: This box is applicable to the Annual Report. This box is intended to provide information on the results obtained from the implementation of the pilot study.
1. Aim of pilot study <u>Not applicable – Austria is a landlocked country</u> 2. Duration of pilot study - 3. Methodology and expected outcomes of pilot study -
Brief description of the results obtained (including deviations from planned and justifications as to why if this was not the case). Not applicable – Austria is a landlocked country 5. Incorporation of results from pilot study into regular sampling by the Member State. <i>Not applicable – Austria is a landlocked country</i>

Pilot Study 1a: Data collection of whitefish stocks in three Austrian Alpine lakes

This text box is applicable to the AR. MS should transfer the information from their accepted WP before filling in the additional section highlighted in grey.

General comment: This box fulfils paragraph 4 of Chapter V of the multiannual Union programme and Article 2 and Article 4 paragraph (3) point (a) of the Decision (EU) 2016/1701.
General comment: This box is applicable to the Annual Report. This box is intended to provide information on the results obtained from the implementation of the pilot study.
1. Aim of pilot study For a long-term and effective management of commercially used fish stocks (whitefish) it is of the utmost importance to not only keep catch statistics, but also to regularly collect data on population structure and stock size. With such regularly collected data, it is possible to suitably analyse changes in fish stocks and to timely respond to changes. Age and length structures, growth, condition factor and age at maturity constitute

important and essential fish biological basic data in this context. To estimate the amount of fish that can be taken sustainably, a hydroacoustic assessment of fish biomass is essential. It is the aim of the proposed pilot study to create a suitable starting point for ensuring optimum response in the event of landlocked countries being subject to a mandatory collection of socio-economic data in the future.

2. Duration of pilot study

The main fish species exploited commercially in the Austrian lakes is whitefish, and, accordingly, whitefish stocks are subject to high fishing pressure. Thus, for the period 2017-2019, the examination of whitefish stocks of three Austrian lakes (Lake Wolfgangsee, Lake Attersee and Lake Hallstättersee) is planned. The collection takes place annually in late September/early October respectively.

3. Methodology and expected outcomes of pilot study

The fish (appr. 150 animals per examination year) are caught using a fleet of gill nets with 9 different mesh sizes (15, 20, 25, 30, 35, 45, 55 and 70 mm) or with standardised Nordic multi-mesh nets. The aim in this context is to catch, to the extent possible, all age groups equally well. In order to be able to compare the samples of the different lakes, the catches are performed as CPUE (catch per unit effort). The caught fish are measured, weighed and tested for abnormalities (damage caused by hooks, injuries, parasites, etc.). Moreover, scale samples (whitefish) are taken for determination of age, sex and maturity stage age.

Age determination will be made by counting annuli from projected slide images of dried and cleaned scales. Two independent readers, to whom information such as length or weight will not be available, have to age each fish three times. The most frequent age-value will be used for further calculations.

The results are represented in histograms or plots in the form of growth curves, age and length structures as well as plots representing maturity stage.

The overall fish biomass of the lakes is estimated with a scientific echo sounder (SIMRAD EK 60 with a 7°x7° composite split beam transducer). Surveys are conducted exclusively during night hours along zigzag transects three times (autumn to winter) per lake. The acoustic data is analysed with Sonar 5 Pro post-processing software. Based on these data overall fish biomass as well as mean size distribution in 2 cm classes will be calculated.

Owners of fishing rights will be involved in the monitoring programme and provided with yearly data on stocking and harvest.

At the end of this monitoring programme profound ecological data sets on the development of age and length structure, maturity and growth of whitefish will be available. Age and length structure can be used to draw conclusions about fishing pressure and reproduction success. Data on age and length at maturity allow verification of the used mesh size and/or of the existing minimum size limit. Based on the data of growth and condition factor changes in food supply and problems with dense populations can be derived.

Moreover, after the study has been completed, data on the overall fish biomass will be available for each lake as a basis to size up sustainable yield.

A short annual report will be prepared after finishing the yearly surveys and a final report at the end of the Study. The final report will contain recommendations how to optimise the fisheries management of the investigated lakes.

Due the Setting of the Project the sampling will start in July 2018.

The focus 2017 was preparing the sampling and the necessary legal organisation. In 2017 there have not been any tasks that we put invoice of the grant.

5. Incorporation of results from pilot study into regular sampling by the Member State.

Not applicable – till now there is no regular sampling in landlocked countries

Guidance for evaluators

For pilot studies, particular attention should be paid to the following aspects:

- Overall quality of the description of the implementation of the Pilot Study
- Provision of sampling protocols, does sampling design follow internationally agreed protocols?
- Soundness of conclusions drawn from the Pilot Study
- Follow-up suggested by MS
- Other comments / recommendations

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

This text box is applicable to the AR. MS should transfer the information from their accepted WP before filling in the additional section highlighted in grey.

General comment: This box fulfills paragraph 2 points (b) and (c) of Chapter III of the multiannual Union programme and Article 2 of the Decision (EU) 2016/1701.

General comment: This box is applicable to the Annual Report.

Method selected for collecting data.

Not applicable

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

(max 250 words per Area)

Were the planned number achieved? Yes/ No

If answer is No, Member State shall explain why not, and what measures were taken to avoid non-conformity.

Not applicable

(max 500 words per Area)

Guidance for evaluators

The expert evaluators may be able to judge whether the explanations given in Text Box 1E are appropriate. However, it may be that advice has to be sought from end users to determine whether non-conformities have a material effect on their use of the data collected under the multiannual Union programme, and whether or not the explanations are acceptable

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

This text box is applicable to the AR. MS should transfer the information from their accepted WP before filling in the additional section highlighted in grey.

General comment: This Box fulfills paragraph 3 point (c) of Chapter III of the multiannual Union programme and Article 2 and Article 4 paragraph (3) point (b) of the Decision (EU) 2016/1701.
General comment: This box is applicable to the Annual Report. This box is intended to provide information on the results obtained from the implementation of the pilot study.
1. Aim of pilot study <u>no sampling for biological data at sea - Austria is a landlocked country</u> 2. Duration of pilot study - 3. Methodology and expected outcomes of pilot study - (max 900 words)
Brief description of the results obtained (including deviations from planned and justifications as to why if this was not the case). - regular sampling 4. Achievement of the original expected outcomes of pilot study and justification if this was not the case <i>Not applicable</i> Austria has no relevant stocks for relevant Anadromous and relevant Catadromous species in Austrian fresh water. 5. Incorporation of results from pilot study into regular sampling by the MS - (max 900 words)

Guidance for evaluators

Data Quality

For pilot studies, particular attention should be paid to the following aspects:

- Overall quality of the description of the implementation of the Pilot Study
- Provision of sampling protocols, does sampling design follow internationally agreed protocols?

- Soundness of conclusions drawn from the Pilot Study
- Follow-up suggested by MS
- Other comments / recommendations

Text Box 1G: List of research surveys at sea

This text box is applicable to the AR. MS should transfer the information from their accepted WP before filling in the additional section highlighted in grey.

General comment: This box fulfills Chapter IV of the multiannual Union programme and Article 2 and Article 7 paragraph (3) of the Decision (EU) 2016/1701. It is intended to specify which research surveys at sea set out in Table 10 of the multiannual Union programme will be carried out. Member States shall specify whether the research survey is included in Table 10 of the multiannual Union programme or whether it is an additional survey.

General comment: This box is applicable to the Annual Report. This box should provide complementary information on the performance of the surveys, the results and their main use.

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)
-
 3. For internationally coordinated surveys, describe the participating Member States/ vessels and the relevant international group in charge of planning the survey
-
 4. Where applicable, describe the international task-sharing (physical and/or financial) and the cost-sharing agreement used
-
 5. Explain where thresholds apply
-
- (max. 450 words per survey)

6. Graphical representation (map) showing the positions (locations) of the realized samples. Member State shall provide maps presenting the spatial distribution of the main sampling types obtained during the survey.

Not applicable

7. For internationally coordinated surveys, provide a link to the latest meeting report of the coordination group.

Member State shall provide a hyperlink to the meeting report from the body coordinating the survey (ICES, MEDITS coordination group, MEDIAS coordination group etc.). For non-international coordinated surveys, Member State shall refer to any status report (e.g. Cruise report).

Not applicable

8. List the main use of the results of the survey (e.g. indices, abundance estimates and environmental indicators).

Member State shall specify in which context the results are used (on routine basis), both on an international as well as on a national context.

Not applicable

9. Extended comments (Tables 1G and 1H)

If the Member State has extended AR Comments, these can be placed under this section. If this is the case, a reference to this text box should be provided in the corresponding tables.

Not applicable

(max 450 words per survey)

Guidance for evaluators

Evaluators should check if the spatial distribution of the samples corresponds to the spatial distribution mapped in the Work Plan. Furthermore, the existence of the links to relevant coordination group reports and other status reports should be verified.

SECTION 2: FISHING ACTIVITY DATA

Text Box 2A: Fishing activity variables data collection strategy

This text box is applicable to the AR. MS should transfer the information from their accepted WP before filling in the additional section highlighted in grey.

General comment: This box fulfills paragraph 4 of Chapter III of the multiannual Union programme and Article 2, Article 4 paragraph (2) point (b) and Article 5 paragraph (2) of the Decision (EU) 2016/1701. 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.
General comment: This box is applicable to the Annual Report. This box should provide information on the implementation of the data collection of fishing activity variables of Member States.
1. Description of methodologies used to cross-validate the different sources of data <u>Not applicable - no fishing activity above threshold</u>
2. Description of methodologies used to estimate the value of landings -
3. Description of methodologies used to estimate the average price (it is recommended to use weighted averages, trip by trip) -
4. Description of methodologies used to plan collection of the complementary data (sample plan methodology, type of data collected, frequency of collection etc) - (max 900 words per Region)
5. Deviations from Work Plan methodology used to cross-validate the different sources of data List the deviations (if any) and explain the reasons for the deviations. Actions to avoid deviations. Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped. <u>Not applicable - no fishing activity above threshold</u>
6. Deviations from Work Plan methodology used to estimate the value of landings. List the deviations (if any) and explain the reasons for the deviations. Actions to avoid deviations Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped. <u>Not applicable - no fishing activity above threshold</u>
7. Deviations from Work Plan methodology used to estimate the average price.

List the deviations (if any) and explain the reasons for the deviations.

Actions to avoid deviations.

Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped.

Not applicable - no fishing activity above threshold

8. Deviations from Work Plan methodology used to plan collection of the complementary data

List the deviations (if any) and explain the reasons for the deviations.

Actions to avoid deviations

Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped.

Not applicable - no fishing activity above threshold

(max 900 words per Region)

Guidance for evaluators

- Are there any deviations to cross-validation of different sources?
- Are there any deviations from the WP concerning estimation of the value of landings?
- Are there any deviations from the WP concerning estimation of the average price clearly described?
- Are there any deviations from the WP concerning methodologies used to plan collection of the complementary data?

SECTION 3: ECONOMIC AND SOCIAL DATA

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

This text box is applicable to the AR. MS should transfer the information from their accepted WP before filling in the additional section highlighted in grey.

General comment: This box fulfils paragraph 5 points (a) and (b) of Chapter III of the multiannual Union programme and Article 2, Article 4 paragraphs (1), (2) and (5) and Article 5 paragraph (2) of the Decision (EU) 2016/1701. It is intended to specify data to be collected under Tables 5(A) and 6 of the multiannual Union programme.

General comment: This box is applicable to the Annual Report. This box should provide information on the implementation of the fleet socio-economic data collection of Member States.

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

Not applicable - no fishing activity above threshold

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

-

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

-

4. Description of methodologies used for estimation procedures

-

5. Description of methodologies used on data quality

-

(max 900 words per Region)

6. Deviations from Work Plan methodology for selection of data source

List the deviations (if any) from the methodology used to select data source compared to what was planned in the Work Plan, and explain the reasons for the deviations.

Actions to avoid deviations

Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped.

Not applicable - no fishing activity above threshold

7. Deviations from Work Plan methodology to choose type of data collection

List the deviations (if any) from the methodologies to choose type of data collection scheme compared to what was planned in the Work Plan, and explain the reasons for the deviations.

Actions to avoid deviations

Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped.

Not applicable - no fishing activity above threshold

8. Deviations from Work Plan methodology regarding sampling frame and allocation scheme

List the deviations (if any) from the methodologies used regarding sampling frame and allocation scheme compared to what was planned in the Work Plan, and explain the reasons for the deviations.

Actions to avoid deviations

Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped.

Not applicable - no fishing activity above threshold

9. Deviations from Work Plan methodology used for estimation procedures

List the deviations (if any) from the methodologies used for estimation procedures compared to what was planned in the Work Plan, and explain the reasons for the deviations.

Actions to avoid deviations

Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped.

Not applicable - no fishing activity above threshold

10. Quality assurance

10.1 Sound methodology

Briefly describe if the data collection follow methodologies, guidelines and best practices agreed in expert groups and whether methodologies are documented and are made publicly available.

10.2. Accuracy and reliability

Response rate and Achieved sample rate are provided in Table 3A.

For additional information, briefly describe how raw data inputs, intermediate results and outputs are regularly assessed and validated and how errors are identified, documented and dealt with.

10.3. Accessibility and Clarity

Indicate with Yes or No

Are methodological documents publicly available?

Are data stored in databases?

Where can methodological and other documentation be found?

Provide the web link, if documentation is publicly available

Not applicable - no fishing activity above threshold

(max 1000 words)

Guidance for evaluators

- Is there any deviation from the approved WP in terms of:
 - o methodology for selection of data source;
 - o methodologies used to choose the different types of data collection;
 - o methodologies used to choose sampling frame and allocation scheme;
 - o methodologies used for estimation procedures;
- Are all data sources deviating from the WP (see table 3A) described and justified concisely and do they appear appropriate? If not, what is missing?
- Are the planned types of data collection deviating from the WP described and justified and is it mentioned why certain types are applied? If not, what is missing?
- Are sampling frames and allocation schemes described and justified, where applicable? If not, what is missing?
- Are estimation procedures deviating from WP described and justified? If not, what is missing?

Concerning Section 5 of Text Box 3A

Description of methodologies used in terms of quality indicators (response rate, achieved sample rate, suggested in SGECA 09-02) should be checked in Table 3A, along with Table 5B. In relation to table 5B, additional information on use of best practices and methodologies agreed in PGECON as well as accessibility of methodologies and accuracy of collected data should be evaluated by checking:

- Do the MS follow methodologies, guidelines and best practices agreed in PGECON?
- Do MS apply data validation tools and whether errors are identified and assessed?
- Are methodologies publicly available for end-users/data providers and whether data are stored in databases?

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

This text box is applicable to the AR. MS should transfer the information from their accepted WP before filling in the additional section highlighted in grey.

General comment: This box fulfills paragraph 5 point (b) and paragraph 6 point (b) of Chapter III of the multiannual Union programme and Article 2 and Article 3 paragraph (3) point (c) of the Decision (EU) 2016/1701. It is intended to specify data to be collected under Table 6 of the multiannual Union programme.
General comment: This box is applicable to the Annual Report. This box is intended to provide information on the results obtained from the implementation of the pilot study (including deviations from planned and justifications as to why if this was not the case).
1. Aim of pilot study <u>Not applicable</u>
2. Duration of pilot study -
3. Methodology and expected outcomes of pilot study

- (max 900 words)
4. Achievement of the original expected outcomes of pilot study and justification if this was not the case. - 5. Incorporation of results from pilot study into regular sampling by the Member State. - (max 900 words)

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

This text box is applicable to the AR. MS should transfer the information from their accepted WP before filling in the additional section highlighted in grey.

General comment: This box fulfills paragraph 5 point (b) and paragraph 6 point (b) of Chapter III of the multiannual Union programme and Article 2 and Article 3 paragraph (3) point (c) of the Decision (EU) 2016/1701. It is intended to specify data to be collected under Table 6 of the multiannual Union programme.
General comment: This box is applicable to the Annual Report. This box is intended to provide information on the results obtained from the implementation of the pilot study (including deviations from planned and justifications as to why if this was not the case).
<u>1. Aim of pilot study</u> Being a landlocked country, Austria is currently largely exempt from data collection in the fisheries and aquaculture sectors. This is why for this sector, when compared with other member states, only few data sets are available and/or there is comparably little knowledge on the development potential of existing social and economic data sets that could be evaluated for the sector. By way of a pilot project on the collection of socio-economic data, a comprehensive picture of data availability regarding the Austrian fisheries and aquaculture sectors is to be created, and, moreover, possibilities for collecting currently not yet (sufficiently) existing data sets are to be pinpointed and, to the extent possible, made operational (first pilot collections going beyond feasibility). This way, not only the basic possibility of collecting data and generating pilot data sets and/or a political monitoring system, but also the practicability, proportionality as well as the technical optimisability of data collection are to be identified. The aim of the proposed pilot study is the creation of a suitable starting point for ensuring optimum response in the event of landlocked countries being subject to mandatory collection of socio-economic data in the future. <u>2. Duration of pilot study</u> The implementation period of the pilot study is scheduled for appr. 18 months. The pilot study is to be completed, in any event, at the end of 2018. <u>3. Methodology and expected outcomes of pilot study</u> The basis for the pilot study is constituted by the variables given in <i>Table 6: Social variables for the fishing and aquaculture sectors</i> and <i>Table 7: Economic variables for the aquaculture sector</i>, by taking into account <i>Table 9: Segmentation to be applied for the collection of aquaculture data</i> of the Annex to the

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

In a first step, existing databanks and databases are screened to identify the availability of the mentioned variables and/or the respective modification/evaluability of these databases. In this process, the following databases are important in particular:

- Labour Market Database (AMDB) of the Austrian Public Employment Service (AMS) and of the Federal Austrian Ministry of Labour, Social Affairs and Consumer Protection (BMASK) (based on a pooling of insurance data of the Main Association of Austrian Social Security Institutions (HVSV) and AMS data)
- Coordinated labour statistics (including published indicators from the areas of demographics, education, labour statistics as well as households and families)

For those data for which no database exists, a suitable collection method is to be considered in a next step. In this process, different methods may be used:

- Additional information may be collected e.g. by way of direct interviews with companies (on-site, over the phone or through the post) (presumably mainly concerning cost data). To keep collection costs as well as the effort expended by the companies low, the prerequisite for and significance of a suitable sample are to be verified in this context (concentration sample).
- Another option is constituted by the collection of data by way of contribution-margin calculations, as they are currently carried out e.g. for agricultural holdings featuring cash crop production, cattle farming or pig farming. The possibilities for application of the methods have to be assessed in the course of study implementation.

In particular, with regard to the area of employment data for gainfully employed persons, valid and comparably easy-to-collect data sets as the Labour Market Database are expected – that provides information on the employment status of all persons who have a registered address in Austria – constitutes a reliable and comprehensive instrument.

The pilot study also is to serve the purpose of assessing and subsequently minimising the effort caused by longer-term data collection regarding the indicators given in Tables 6 and 7 of the Commission Implementing Decision. Thus, it shall be ensured that data collection is designed in such a way as to not entail any disproportionate effort. This is to minimise the risk that the cooperation of companies in terms of data collection is discouraged. It shall also be considered that due to the small-scale nature of the sector in Austria, a collection of company indicators according to the individual predetermined segments (salmon, trout, carp etc. pursuant to Table 9) is to be analysed for usefulness. It is reasonably expected that difficulties will arise mainly with regard to the surveying of unpaid labour.² Duration of pilot study

(max 900 words)

4. Achievement of the original expected outcomes of pilot study and justification if this was not the case.

Up to this project stage (start in Nov 2017), the first Working Package (data screening) is still under elaboration. Therefore, no outcome or recommendations can be reported yet. For the same reason, Table 5a and 5b cannot be filled out yet; they will be completed as soon as outcomes of the Pilot Study can be reported.

So far, a screening of several relevant databases which could contain economic and/or social information regarding the sector has been conducted – either by screening the datasets or by screening the respective metadata and documentations. Furthermore, information from statistical experts was obtained. Up to now, the following databases on employment, production, etc. have been investigated:

- Labour Market Database (AMDB)
- National Labour Force Survey

- Structural Business Statistics
- Agricultural and Forestry Register
- Agricultural Structure Survey
- Agricultural Accounting
- Aquaculture Production
- Agricultural and Forestry Operational Information System
- Veterinary Information System
- Aquaculture Register
- forms regarding pond funding
- forms regarding EFF/EMFF funding
- Coordinated Labour Statistics
- National Accounts (VGR)
- Business Register
- Workplace Census
- Educational Register

As it was expected, many of these databases do not entail the rather particular information on the aquaculture and fisheries sector that is requested in Table 6 and Table 7 of the Annex to the Commission Implementing Decision. The existing databases contain at least some useable data, though not in the required detail, such as:

- number of businesses in main occupation (AMDB, for fishery and aquaculture separately)
- labour costs (calculated as secondary data) (HVSV labour cost data, for fishery and aquaculture separately)
- number of employees in main occupation by sex, age and nationality (AMDB, for fishery and aquaculture separately)
- number of employment relationships, full-time equivalents, work volume (each separated into employees and self-employed), gross wages and salaries, compensation of employees (VGR, for both fishery and aquaculture together)
- gross fixed capital formation, gross fixed assets, net assets, production value at basic prices (VGR, for both fishery and aquaculture together)

As there was a delay in the delivery of certain datasets (e.g. AMDB), the exhaustive screening is not finished yet (national authorities have been informed). Relating to this, the intersection of existing administrative records is still a matter of further investigation within this pilot study (e.g. Coordinated Labour Statistics, Educational Register).

Further administrative data was requested from the Federal Ministry, in cooperation with the lead partner of Pilot Study 4. However, national statistical authorities gave the feedback that they would be also interested in additional not-administrative data regarding the sector with the objective of an improved internal quality management of the existing datasets. This emphasises the need of an alternative way of data gathering (especially by means of a survey), which will be the subject of Working Package 3 of this Pilot Study.

For this project, the overall challenge is that some of the databases are based on micro census (e.g. Labour Force Survey). In this case, the databases do not exhibit valid values for fishery and aquaculture due to the small-scale nature of the sector and due to the small size of the sample. This applies, for instance, to educational data or unpaid family workers. A further challenge is that the requirements for economic data in the sector have not yet been defined sufficiently. Apparently, the requirements will be specified in a workshop during the PGECON 2018 meeting, where the project team will be represented. Before this date we cannot specify the implementation of the variables in the design of a potential questionnaire.

The screening of the existing data has shown that Table 9 of the Annex to the Commission Implementing Decision cannot be applied on most of the administrative datasets, as existing administrative data usually does not refer to this kind of differentiation. Currently, it would only be possible to report employment and production data for certain species (salmon, trout, carp etc.), but not for all species and not for all indicators. Due to the smallscale nature of the Austrian sector it is very likely that more detailed datasets on factors like, e.g., education or income resolved by fish species and the way of farming as well as by regions could not be reported, e.g., to the public or to interested external stakeholders to meet data protection standards.

At the same time, research is carried out on the population of companies for the planned survey, which should be best matching with existing datasets. A data request has been submitted to the responsible authority. Further work in this area is the subject of Working Package 2.

Stakeholders as well as the team of Pilot Study 4 were contacted for relevant issues. Special attention is paid to the coordination with the team of Pilot Study 4 as there are intersections regarding the relevant data and the planning of a survey. The industry representation is another important stakeholder, especially with regard to the preparation and implementation of the planned survey.

5. Incorporation of results from pilot study into regular sampling by the Member State.

At this rather early stage, no final recommendations can be made regarding this question. This task will be elaborated together with stakeholders in the context of Working Package 2 and 3 and will be finalised by end of the project.

(max 900 words)

Guidance for evaluators

- Overall quality of the description of the implementation of the Pilot Study
- Provision of sampling protocols, does sampling design follow internationally agreed protocols?
- Soundness of conclusions drawn from the Pilot Study
- Follow-up suggested by MS
- Other comments / recommendations

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

This text box is applicable to the AR. MS should transfer the information from their accepted WP before filling in the additional section highlighted in grey.

General comment: This box fulfills paragraph 6 points (a) and (b) of Chapter III of the multiannual Union programme and Article 2, Article 4 paragraphs (1) and (5) and Article 5 paragraph (2) of the Decision (EU) 2016/1701. It is intended to specify data to be collected under Tables 6 and 7 of the multiannual Union programme.

General comment: This box is applicable to the Annual Report. This box should provide information on the implementation of the socio-economic data collection for aquaculture of Member States.
1. Description of methodologies used to choose the different sources of data <u>Not applicable – Austria is looking by Pilot study 3a for methodologies and data sources for the collection of economic and social data for aquaculture</u> 2. Description of methodologies used to choose the different types of data collection - 3. Description of methodologies used to choose sampling frame and allocation scheme - 4. Description of methodologies used for estimation procedures - 5. Description of methodologies used on data quality - (max 1000 words)
6. Deviations from Work Plan methodology for selection of data source List the deviations (if any) from the methodology used to select data source compared to what was planned in the Work Plan, and explain the reasons for the deviations. Actions to avoid deviations Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped. <u>Not applicable – Austria is looking by Pilot study 3a for methodologies and data sources for the collection of economic and social data for aquaculture</u> 7. Deviations from Work Plan methodology to choose type of data collection List the deviations (if any) from the methodologies to choose type of data collection scheme compared to what was planned in the Work Plan, and explain the reasons for the deviations. Actions to avoid deviations Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped. <u>Not applicable – Austria is looking by Pilot study 3a for methodologies and data sources for the collection of economic and social data for aquaculture</u> 8. Deviations from Work Plan methodology regarding sampling frame and allocation scheme List the deviations (if any) from the methodologies used regarding sampling frame and allocation scheme compared to what was planned in the Work Plan, and explain the reasons for the deviations. Actions to avoid deviations

Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped.

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

9. Deviations from Work Plan methodology used for estimation procedures

List the deviations (if any) from the methodologies used for estimation procedures compared to what was planned in the Work Plan, and explain the reasons for the deviations.

Actions to avoid deviations

Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped.

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

10. Quality assurance

10.1 Sound methodology

Briefly describe if the data collection follow methodologies, guidelines and best practices agreed in expert groups and whether methodologies are documented and are made publicly available.

10.2. Accuracy and reliability

Response rate and Achieved sample rate are provided in Table 3B.

For additional information, briefly describe how raw data inputs, intermediate results and outputs are regularly assessed and validated and how errors are identified, documented and dealt with.

10.3. Accessibility and Clarity

Indicate with Yes or No

Are methodological documents publicly available?

Are data stored in databases?

Where can methodological and other documentation be found?

Provide the web link, if documentation is publicly available

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

(max 1000 words)

Guidance for evaluators

- Is there any deviation from the approved WP in terms of:
 - o methodology for selection of data source;
 - o methodologies used to choose the different types of data collection;
 - o methodologies used to choose sampling frame and allocation scheme;
 - o methodologies used for estimation procedures;
- Are all data sources deviating from the WP (see table 3B) described and justified concisely and do they appear appropriate? If not, what is missing?
- Are the planned types of data collection deviating from the WP described and justified and is it mentioned why certain types are applied? If not, what is missing?
- Are sampling frame and allocation scheme described and justified, where applicable? If not, what is missing?
- Are estimation procedures deviating from the WP described and justified? If not, what is missing?

Concerning section 5 of Text Box 3B

Description of methodologies used in terms of quality indicators (response rate, achieved sample rate, suggested in SGECA 09-02) should be checked in Table 3B along with Table 5B. In relation to table 5B additional information on use of best practices and methodologies agreed in PGECON as well as accessibility of methodologies and accuracy of collected data should be evaluated by checking:

- Do the MS follow methodologies, guidelines and best practices agreed in PGECON?
- Do MS apply data validation tools and whether errors are identified and assessed?
- Are methodologies publicly available for end-users/data providers and whether data are stored in databases?

Pilot Study 4: Environmental data on aquaculture

This text box is applicable to the AR. MS should transfer the information from their accepted WP before filling in the additional section highlighted in grey.

General comment: This box fulfills paragraph 6 point (c) of Chapter III of the multiannual Union programme and Article 2 and Article 4 paragraph (3) point (d) of the Decision (EU) 2016/1701. It is intended to specify data to be collected under Table 8 of the multiannual Union programme.

General comment: This box is applicable to the Annual Report. This box is intended to provide information on the results obtained from the implementation of the pilot study (including deviations from planned and justifications as to why if this was not the case).

1. Aim of pilot study

- Ecosystem services assessment of Austrian aquaculture
- Assessment of fish mortalities caused by predators focusing on the European otter
- Identifying key factors to increase the national fish production

2. Duration of pilot study

24 months

3. Methodology and expected outcomes of pilot study

- **Ecosystem services assessment of Austrian aquaculture**

An assessment of the Ecosystem Services (ESS) of Austria's aquaculture will be compiled. The Environment Agency Austria has already developed a methodology for the assessment of ESS in Agriculture. This includes the estimation of different ESS in qualitative, quantitative and monetary terms. For the issue of aquaculture this methodology will be adapted. The Study "Ponds in the landscape – IMPORTANCE, FUNCTION & THREATS" (<http://www.wasseraktiv.at/resources/files/2014/9/10/6668/teiche-landschaft-ebook.pdf>) provides the data basis for the ESS assessment.

The main outcome will be values for different ESS, as example provisioning functions (production), regulation functions (i.a. water protection), cultural functions (i.a. recreation) or habitat functions (i.a. biodiversity).

The study will also take account of the specific conditions of production in organic aquaculture and its effects on the environment. Therefore the number of organic fish farms, production volume etc. will be collected and processed by official statistics and qualitative interviews with sector experts and representative entrepreneurs.

The ESS of Austria's aquaculture can be compared to the current situation of supply with seawater and freshwater fish from abroad, if related results of studies are available.

- **Assessment of fish mortalities caused by predators focusing on the European otter**

Conflicts arising from otter (*Lutra lutra*) predation on commercial fish are nowadays a common phenomenon in many European countries. At fish farms, damage is usually defined as loss of stocked fish revealed when a pond is drained. Since a fish farming period expands usually over several months, the recorded losses at the moment of pond draining represent damage accumulated during a longer period. At this time the causes of damage are not necessarily evident any more.

A number of different reasons for losses (other fish predators, fish diseases etc.) exist and the otter is only one of them. Therefore, it is extremely difficult to properly assign the correct amount of damage to the different causes of loss. A standardized method to estimate fish mortalities caused by otters will be applied which provides information on the damage and losses in fish farms due to specific predators.

Methodological approach:

- Semi-qualitative questionnaire-based survey among commercial fisheries in Austria
- Estimation of otter densities in the area of 3-5 selected and representative fish farms
- Estimation of fish mortalities taking into consideration following factors: Disease, parasites, injuries, fishery, predators
- Assessment of the effects on fish populations caused by predators, particularly the otter
- Comparison between the survey and the empiric investigation

- **Identifying key factors to increase the national fish production**

In 2014 Austria adopted the strategy paper "Aquaculture 2020 – Austrian strategy to increase the national fish production". The key target within this strategy is to raise the degree of self-supply with freshwater fish from

then 34 % to 60 % until 2020. At present it seems that this objective cannot be attained. There are various reasons discussed, but none of these reasons is verified. A survey as described below will identify key factors and barriers for the sustainable increase of production.

Methodological approach:

- Quantitative questionnaire-based survey among authorizing authorities of Austrian Provincial Governments
- Semi-qualitative questionnaire-based survey among commercial fisheries and business sector representatives in Austria
- Identifying key factors (and barriers) to increase national fish production.

(max 900 words)

4. Achievement of the original expected outcomes of pilot study and justification if this was not the case.

The Environment Agency Austria as the contractor of the Pilot Study 4 covers the achievement of the aims:

- Ecosystem services assessment of aquaculture in Austria
- Assessment of fish mortalities caused by predators focusing on the European otter
- Identification of key factors to increase the national fish production

Based on the aims, the Pilot study is divided into three modules. A steering group was installed in order to accompany the pilot study and evaluate the results.

1st module – Ecosystem service of aquaculture in Austria

The focus of this module is on the capture data and the assessment of Ecosystem Services of Austria's aquaculture.

Besides giving an overview of the legal framework and the definition of aquaculture in Austria, an analysis of the status quo of aquaculture production in Austria will be given. On the one hand, the analysis of the status quo serves as a basis for the assessment of the Ecosystem Services, on the other hand for the survey planned within the 3rd module.

Data for the description of the status quo of the aquaculture production have already been requested from the Federal Ministry of Sustainability and Tourism and will be delivered by April 2018. The data provided by the Ministry will help to identify any data gaps, which would then be closed by the surveys carried out in the 3rd module.

Additionally, the description of potential environmental effects and the requested data form the basis for mapping out ecosystem services provided by organic and/or sustainable aquaculture in Austria.

In a final step the collected data on aquaculture production in Austria and its role in providing Ecosystem Services will be put in a comparable context with international data on aquaculture production (seawater and freshwater fish), provided there is enough data available.

Currently the theoretical framework of the module is in progress and the relevant data are requested. For the time being, there are no deviations conceivable.

2nd module – assessment of fish mortalities caused by predators focusing on the European otter

Module 2a: This module will be implemented in collaboration with the University of Natural Resources and Life Sciences, Vienna. The estimation of otter densities, the amount of damage caused by otter, the estimation of fish mortalities and the effect on fish populations caused by fish predators, particularly the otter, will be implemented in a study, which is expected to start in April 2018.

Module 2b: Initiation of a dialogue network on "predators" in aquaculture. In addition to the tasks described in the Austrian work plan 2017-19 on Pilot study 4 "Environmental data on aquaculture", the establishment of an exchange and dialogue platform or network is planned in Module 2b.

Being an issue of active discussion between the different stakeholders, the topic of predation in aquaculture facilities has the potential for conflicts between the different interest groups.

The establishment of a network is intended to facilitate:

- the cooperative development of management approaches for predators, focused on the European otter
- the establishment of a dialogue, affected by mutual respect and equivalent exchange of views and experiences
- the development and discussion of measures to reduce production losses induced by predators
- the improvement of communication between all relevant stakeholder in Austria
- The development of strategies for cooperative conflict resolution

Within this module, it is intended to plan and implement the initiating phase of the platform. Work packages are planned as follows:

- Analysis of experiences of other conflict related platforms/networks
- Mapping of stakeholders, establishment of contact
- Two meetings

Actual status of work:

- Inquiry of possible tools has been started
- Inquiry of existing networks, projects, and communication tools has been started

3rd module - Identification of key factors to increase the national fish production

The third module deals with the identification of obstacles and potentials for increasing aquaculture production in Austria by two surveys. For this purpose, a working group of technical and environmental experts as well as a sociologist has been established.

The structure and results of both surveys - the survey of Statistics Austria, as well as the survey campaign by the Austrian Trout Breeder Association from 2008 - are used as the basis for the development of the two planned specific surveys. Therefore, contact was made with the responsible institutions. A data request to the Federal Ministry of Sustainability and Tourism is currently being prepared to receive the results of the surveys. Furthermore, the master data of the aquaculture farms from the Statistics Austria are required to establish contact for the survey on site. The sample of the interviews will be determined on the basis of this data.

After receiving the requested data aquaculture farmers will be clustered according to production types, production volume, business growth, as well as other parameters. Thereafter, the samples will be determined by random selection. Simultaneously, the two questionnaires will be designed. In accordance with the Steering Group (including aquaculture representatives) the timing for the interviews will then be set. It is expected that carp farmers will be interviewed in summer 2018 and trout farmers in winter 2018/2019.

5. Incorporation of results from pilot study into regular sampling by the Member State.

The aim of the pilot study 4 is to prepare data for a possible incorporation of results and establish a basis for the regular sampling.

Excel table 5a and 5b will be filled out when results are available.

(max 900 words)

Guidance for evaluators

- Overall quality of the description of the implementation of the Pilot Study
- Provision of sampling protocols, does sampling design follow internationally agreed protocols?
- Soundness of conclusions drawn from the Pilot Study
- Follow-up suggested by MS
- Other comments / recommendations

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

This text box is applicable to the AR. MS should transfer the information from their accepted WP, before filling in the additional section highlighted in grey.

General comment: This box fulfils footnote 6 of paragraph 1.1(d) of Chapter III of the multiannual Union programme, Article 2, Article 4 paragraphs (1) and (5) and Article 5 paragraph (2) of Decision (EU) 2016/1701. It is intended to specify data to be collected under Table 11 of the multiannual Union programme.

General comment: This box is applicable to the Annual Report. This box should provide information on the implementation of the socio-economic data collection for aquaculture of Member States.

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 planned 2017-19

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

-

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

-

4. Description of methodologies used for estimation procedures

-

5. Description of methodologies used on data quality

-

(max 1000 words)

6. Deviations from Work Plan methodology for selection of data source

List the deviations (if any) from the methodology used to select data source compared to what was planned in the Work Plan, and explain the reasons for the deviations.

Actions to avoid deviations

Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped.

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

7. Deviations from Work Plan methodology to choose type of data collection

List the deviations (if any) from the methodologies to choose type of data collection scheme compared to what was planned in the Work Plan, and explain the reasons for the deviations.

Actions to avoid deviations

Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped.

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

8. Deviations from Work Plan methodology regarding sampling frame and allocation scheme

List the deviations (if any) from the methodologies used regarding sampling frame and allocation scheme compared to what was planned in the Work Plan, and explain the reasons for the deviations.

Actions to avoid deviations

Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped.

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

9. Deviations from Work Plan methodology used for estimation procedures

List the deviations (if any) from the methodologies used for estimation procedures compared to what was planned in the Work Plan, and explain the reasons for the deviations.

Actions to avoid deviations

Briefly describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section can be skipped.

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

10. Quality assurance

10.1 Sound methodology

Briefly describe if the data collection follow methodologies, guidelines and best practices agreed in expert groups and whether methodologies are documented and are made publicly available.

10.2. Accuracy and reliability

Response rate and Achieved sample rate are provided in Table 3C.

For additional information, briefly describe how raw data inputs, intermediate results and outputs are regularly assessed and validated and how errors are identified, documented and dealt with.

10.3. Accessibility and Clarity

Indicate with Yes or No:

Are methodological documents publicly available?

Are data stored in databases?

Where can methodological and other documentation be found?

Provide the web link, if documentation is publicly available.

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

(max 1000 words)

Guidance for evaluators

- Is there any deviation from the approved WP in terms of:
 - o methodology for selection of data source;
 - o methodologies used to choose the different types of data collection;
 - o methodologies used to choose sampling frame and allocation scheme;
 - o methodologies used for estimation procedures;
- Are all data sources deviating from the WP (see table 3C) described and justified concisely and do they appear appropriate? If not, what is missing?
- Are the planned types of data collection deviating from the WP described and justified and is it mentioned why certain types are applied? If not, what is missing?
- Are sampling frame and allocation scheme described and justified, where applicable? If not, what is missing?
- Are estimation procedures deviating from the WP described and justified? If not, what is missing?

SECTION 4: SAMPLING STRATEGY FOR BIOLOGICAL DATA FROM COMMERCIAL FISHERIES

Text Box 4A- Sampling plan description for biological data

This text box is applicable to the AR. MS should transfer the information from their accepted WP, before filling in the additional section highlighted in grey.

General comment: This box fulfills Article 3, Article 4 paragraph (4) and Article 8 of the Decision (EU) 2016/1701 and forms the basis for the fulfilment of paragraph 2 point (a)(i) of Chapter III of the multiannual Union programme. This Table refers to data to be collected under Tables 1(A), 1(B) and 1(C) of the multiannual Union programme.

General comment: This box is applicable to the Annual Report. This box should provide information on the deviations from the planned sampling of Member States.

Description of the sampling plan according to Article 5 paragraph (3) of the Decision (EU) 2016/1701

Not applicable – no data sampling for biological data necessary

(max 900 words per region)

Deviation from the sampling plan according to Article 5 paragraph (3) of the Decision (EU) 2016/1701:

Deviations from the Work Plan

Member State shall list the deviations (if any) in the achieved data collection, compared to what was planned in the Work Plan and explain the reasons for the deviations.

Not applicable – no data sampling for biological data necessary

Action to avoid deviations

Member State shall describe the actions that will be considered / have been taken to avoid the deviations in the future and when these actions are expected to produce effect. If there are no deviations, then this section is not applicable.

Not applicable – no data sampling for biological data necessary

(max. 1000 words per region OR fishing ground)

Guidance for evaluators

- Are all MS participating in sampling listed? Cross-check with links to planned regional and international coordination or bi- and multilateral agreements in Table 7A
- Are strata with no coverage (i.e. no planned number of PSUs) being reported?
- Does the MS provide sufficient justification for any deviations from the WP?