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Scientific, Technical and Economic Committee for Fisheries (STECF)
-
Social data in the EU fisheries sector
(STECF-19-03)

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Abstract

Commission Decision of 25 February 2016 setting up a Scientific, Technical and Economic Committee for Fisheries, C(2016) 1084, OJ C 74, 26.2.2016, p. 4–10. The Commission may consult the group on any matter relating to marine and fisheries biology, fishing gear technology, fisheries economics, fisheries governance, ecosystem effects of fisheries, aquaculture or similar disciplines. This report deals with social data in the EU fisheries sector.

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Abstract

Commission Decision of 25 February 2016 setting up a Scientific, Technical and Economic Committee for Fisheries, C(2016) 1084, OJ C 74, 26.2.2016, p. 4–10. The Commission may consult the group on any matter relating to marine and fisheries biology, fishing gear technology, fisheries economics, fisheries governance, ecosystem effects of fisheries, aquaculture or similar disciplines. This report on Social data in the EU fisheries sector is the first report of its kind, providing a comprehensive overview of the social data collected under the EU MAP for the EU fishing sector. The report provides information on the social and demographic characteristics of the labour force both at EU and Member States level over the year 2017.

The collection of social indicators for the EU fishing fleet, aquaculture- and fish processing industry was introduced by Regulation No 2017/1004 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 CFP (EU-MAP). The social variables, to be collected every three years from 2018 onwards, are: Employment by gender; Full Time Employment (FTE) by gender; Unpaid labour by gender; Employment by age; Employment by education level; Employment by nationality; Employment by employment status; Total FTE National.

This report contains: i) a review social data in the EU fisheries sector collected under the Data Collection Framework (DCF / EU-MAP) in 2018, (ii) an EU level overview and national chapters describing the data, and (iii) a discussion on potential improvements and refinements in the collection of social data in EU fisheries.

SCIENTIFIC, TECHNICAL AND ECONOMIC COMMITTEE FOR FISHERIES (STECF) - Social data in the EU fisheries sector (STECF-19-03)

Request to the STECF

STECF is requested to review the report of the STECF Expert Working Group meeting, evaluate the findings and assess the delivery by the STECF Expert Working Group on the terms of reference and make any appropriate comments and recommendations with a view to enhancing STECF support to the social dimension of fisheries. STECF is specifically requested to formulate recommendations on how the work by the next STECF Expert Working Group on Social data can be prepared and organised in an optimal manner, including as regards data availability, data verification and coherence with the work of other STECF activities, in particular in the economic area.

STECF observations

Introduction

The collection of social indicators for the EU fishing fleet, aquaculture- and fish processing industry was introduced by Regulation No 2017/1004 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 CFP (EU-MAP). The social variables, to be collected every three years from 2018 onwards, are: Employment by gender; Full Time Employment (FTE) by gender; Unpaid labour by gender; Employment by age; Employment by education level; Employment by nationality; Employment by employment status; Total FTE National.

The STECF Expert Working Group (EWG) 19-03 met in the Joint Research Centre, Ispra, Italy, from 8 to 12 April 2019, to i) review social data in the EU fisheries sector collected under the Data Collection Framework (DCF / EU-MAP) in 2018, (ii) provide an EU level overview and national chapters describing the data, and (iii) discuss potential improvements and refinements in the collection of social data in EU fisheries. The work was conducted by 13 independent experts.

The EWG report on Social data in the EU fisheries sector is the first report of its kind, providing a comprehensive overview of the social data collected under the EU MAP for the EU fishing sector. The report provides information on the social and demographic characteristics of the labour force both at EU and Member States level over the year 2017.

Data call and coverage

The social data were requested from EU Member States as part of the economic data call in February 2019. The data call requested Member States to provide social data for the reference year 2017, estimated at the population level. STECF observes however that the EU-MAP requires the collection of data in 2018, but without any requirement related to a reference year; hence the reference year may vary among Member States, some collecting data in 2018 for 2017 some for 2018. STECF notes that in the future EU-MAP the reference year should be defined as the year over which data were collected instead of the year in which the data was collected.

STECF EWG 19-03 analysed the data provided during the data call and concluded that there has been a very good coverage of the data provided by Member States, especially considering that this was the first call for social data. All 23 coastal Member States reported employment by gender, age and nationality; all but two Member States reported employment by education level and employment by status (these two Member States reported all employment status as employees, i.e., no owners). All but three Member States reported FTE by gender while all but six Member States reported unpaid labour by gender.

STECF observes that data were often reported by Member States at a more disaggregated level than required, by fishing activity (20 Member States) and by fleet segment (12 Member States). This allowed the EWG to analyse the data in more detail, particularly for the small-scale fleet. Three Member States further disaggregated employment by status (distinguishing between full and part time employment) on a voluntary basis.

Findings

In 2017 there were around 150 thousand people employed in the EU fishing fleet, equivalent to some 99 thousand FTEs. The majority of workers in the EU fishing fleet were male at 96%, 4% were female.

STECF observes that there is a slight difference between the number of employees reported for 2017 in the Annual Economic Report AER (STECF EWG 19-06) and in the EWG 19-03 reports. The reason for the observed 3% difference between the two sources needs to be assessed and explained before the next data collection exercise.

Age data was reported in the following age categories: <=14, 15-24, 25-39, 40-64, >=65 and unknown. The 40-64 age class made up the largest proportion (58%) of people employed in the EU fishing fleet, followed by the 25-39 age class at 26%. A further 7% were over 65 years; followed by 5% in the 15-24 age class and 4% were unknown. There is a significant variation in age profiles across the Member States. For example in Estonia 31% of fishers are over 65 while in many other Member States the same category only makes up a very low proportion of the fishing population (1% in Belgium and Germany and 2% in Finland).

Nationality categories reported were: Nationals, EU, European Economic Area EEA, non-EU/EEA. The majority of people employed in the EU fishing fleet were nationals of their own country (86%), followed by non-EU/EEA nations (8%), unknown (3%), other EU countries (3%), and EEA (0.1%).The proportion of nationals working in different Member States fleets varied significantly. For example, 27% of people employed in the Irish fleet were non-Irish nationals and 36% of people employed in the Belgian fleet were non-Belgian nationals. In contrast, 94% of the Italian workers were Italian; 99% of the Portuguese workers were nationals and all the people employed in the Bulgarian fleet were Bulgarian nationals.

Education: all Member States were required to report education at a low, medium and high level. 52% of people employed in the EU fishing fleet were educated to a low level, followed by 24% up to a medium level and 4% up to a high level. The education level was unknown for a relatively high share of the fishing sector (20% of people), which may reflect that such a question can be experienced as being sensitive or personal. Education levels varied considerably across Member States with for example only 1% of Portuguese fishers having a high level of education while the corresponding figure in Sweden was 21%.

Employment Status: Member States reported data on employment status in the three main categories: Employee, Owner, and Unknown. The collection of this data varied between Members States, while some Member States reported data for the owners and employees, others reported full-time and part-time workers.

The data provided by the majority of Member States reported that 61% of people employed in the EU fishing fleet were employees and 36% were vessel owners. The employment status of 3% of the people employed in the EU fishing fleet was unknown. There was wide variation in the employment status variable across Member States with employees for example making up 100% in the Belgian dataset and only 28% in Sweden.

Unpaid labour by gender: in the EU fleet, women accounted for 6.6% of unpaid labour while the gender of 2% of the unpaid labour was unknown. The proportion of women represented in the unpaid labour category is thus almost double their proportion in the total employment (3.8%) and FTE (3.4%) categories.

STECF observes that the EWG proposed some changes in definitions of the social variables in the EU-MAP that would need to be considered by the Commission during revision of the EU MAP. The proposed changes refer to the definition of employment status (add self-employed / share fishers), age groups (split of 40-64 group, or further split in accordance to EUROSTAT sub-categories). The EWG 19-03 also proposed to change the definition of the small scale fishing fleet and large scale fleet used by the AER that excludes vessels <12 m using active gears from the small scale fleet. EWG 19-03 felt that the inclusion of all vessels using active gear into the Large Scale Fleet (LSF) category, regardless of their size, introduces a bias and distorts the analysis of proportions for variables such as gender, employment status and age profiles in the LSF. STECF observes that the definition of the small-scale fleet used in the AER is based on the official definition and cannot be changed. However, the importance of the active <12m segment included in LSF could be investigated using AER data set that includes number of vessels and employment information by fleet segment.

Furthermore, STECF observed that EWG 19-03 proposed a list of new indicators that may be considered by the Commission during the revision of EU-MAP. The list of possible new variables includes vocational / technical training; new entrants; representation and governance.

STECF acknowledges the difficulty to describe the social state of the fishing sector through such quantitative variables; therefore, EWG 19-03 proposed to compile National profiles, which would contain a brief description of some of the most salient social, institutional and legal elements for each Member State. National profiles would contribute to a better understanding of the fisheries management context of each individual country and would facilitate a more proper social analysis in the future.

STECF observes that EWG 19-03 also considered the development of fishing community profiles for selected fishing communities, which could for example be developed in collaboration with ICES WGSOCIAL. Those profiles might require data at a scale lower than the country (e.g. NUTS [Nomenclature of Territorial Unit for Statistics] 2 or 3 level) and further territorial analyses of fishing communities within Member States.

STECF notes that EWG 19-03 also discussed methods and definitions used in Community Profiling and Social Impact Assessments that could be a starting point for further discussions and for the creation of a more permanent social data collection and analytical framework that would support policy decisions.

STECF observes that in order to correctly interpret the data, the indicators presented must be put in the appropriate context i.e. national, regional or even local. For example, the relative low educational level found in some countries may not be specific to fisheries but may reflect a national feature. This contextualisation of indicators and findings is required to assess specific developments of social aspects.

Furthermore, STECF observes and reiterates the recommendations of EWG 18-15 concerning the level of aggregation: when aggregated at the national level, or even at lower NUTS levels, the relative importance of the fisheries sector disappears within the total setting of other economic sectors, highlighting that the importance of fisheries is often very local.

STECF notes that sampling design and raising methodologies to provide estimations scaled up to the entire population should be further assessed to ensure comparability of the approaches used by Member States.

STECF observes that the TORs of EWG 19-03 requested an analysis of average wages per FTE that would require data analysed in the AER and provided in different economic data call tables. The final report of EWG 19-03 did not include this analysis. This issue has been also raised in the report of the EWG stating that the EWG needs closer integration with the economic group working on the AER. Such integration might ensure a more efficient and productive meeting and would also ensure that harmonised data for important figures such as overall employment will be achieved.

STECF conclusions

STECF concludes that the EWG answered the ToRs and acknowledges that the analysis produced is of substantial standard.

STECF concludes that the report provides a first overview of the social and demographic characteristics of the workforce of the EU fishing fleet. However, in line with the conclusions of EWG 19-03, the categories for employment should be extended to include the category 'share fishers'. In addition, it is suggested to include the shore-crew also in the analysis, especially since this very often represents unpaid labour with a higher representation of women. This of course will require a proper definition of whom to consider part of the fisheries work force.

STECF concludes that in order to be able to properly analyse and interpret the data collected, these data should be presented in the adequate national, regional and local context. STECF acknowledges that this specific context could be provided by preparing fisheries sector profiles at the national and local level.

STECF concludes that this may imply that data collection should be stratified by fleet and national division level rather than be provided at the overarching national level only.

STECF concludes that the discussions and the proposals of the EWG 19-03 should be taken into account when revising the EU-MAP. STECF also concludes that the use of the reference year in the EU MAP rather than the year of data collection, especially when requesting data collection every three years, should ensure that all Member States are collecting comparable data over the same period.

Based on EWG 18-15 and EWG 19-03 STECF concludes that in order to fully develop the basis for a social analysis of the fishing sector, there is a need to further develop and operationalise social impact assessment methods. This can be done in close collaboration with the ICES WGSOCIAL and with the EWG responsible for the AER. Such work could be conducted as a proof of concept study showing how social data and methods could inform the Commission. Case studies created by previous projects, such as for example Hatchard et al., 2006; Delaney, 2007; Hatchard et al., 2007; van Hoof, 2009; Strehlow,

2010; Britton and Coulthard, 2013 and the EWG 19-03 results could be used as a starting point. In order to guide this process the EWG should invite policy makers to discuss the specific questions to be addressed in the social analysis of the EU fishing fleet and the social aspects of the CFP.

As mentioned above, STECF concludes that in order to secure coherence between the work on the AER and the collection of social data, the two groups should closely cooperate and compare data sets.

STECF suggestions for the future development of the work

In order to continue the work on the further development of the collection of social data and their analysis and interpretation, STECF suggests to reconvene an EWG on social data the next two years (in 2020-2021) and not await the next collection of social data, foreseen for 2021 (and reported in 2022).

STECF suggests that the 2020-2021 EWGs focus on further developing the methodologies for the collection and interpretation of social data. The EWG shall expand its scope, requesting a multi-disciplinary group of sociologists, economists and data collectors to both further develop the methodology of data collection and interpretation and to prepare the process for the next triennial Social Analysis Report.

STECF supports that a preparatory study be conducted prior to the next EWG meeting. This study would i) provide an overview of already available profiles of EU fishing communities and the methods used in these, and ii) based on this information, elaborate a proof of concept for the collection, analysis and presentation of social data that could form a basis for future reporting and advice.

Finally, regarding the availability of social data, STECF draws also the attention of the EWG on the existence of social data collected that might be requested from MS as part of the Aquaculture Sector Report (cf. STECF EWG 18-19) and the Processing Sector Report (cf. EWG 19-15), both requesting data from Member States on a biannual basis.

The ToRs for the EWG on social data may include:

1. Assess and translate into an operational plan the results of the proof of concept study of collecting and interpreting social data and constructing fisheries sector profiles;
2. Based on the results of the 2018 social data collection and the preparatory study evaluate the current set of social indicators used, expand the current set of indicators where necessary and, based on the proof of concept study further detail a methodology to prepare profiles of fishing communities; this to include among others:
    a. operationalization of indicators for reliance and resilience of fishing communities (see EWG 18-15);
    b. development of the National profiles as proposed by STECF EWG 19-03;
    c. assessment of the coherence and comparability of the employment and FTE indicators reported as part of economic and social data sets and further improvement of definitions and methodologies;
3. Develop EU fishing communities profiles
4. Develop a methodology to describe changes over time of the fishing communities and social developments of these communities based on the community profiles.
5. Develop a methodology to implement an evaluation of impacts of policy on selected fishing communities, based on the community profiles and relevant indicators.

STECF suggests that ToRs of the EWG on social data in 2020 should include points 1 and 2 above while points 3-5 should be addressed after the preparatory study is completed and assessed by the EWG 2020, hence be included in the ToRs for EWG 2021.

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REPORT TO THE STECF

EXPERT WORKING GROUP ON
Social data in the EU fisheries sector
(EWG-19-03)

JRC, Ispra, Italy, 8-12 April 2019

This report does not necessarily reflect the view of the STECF and the European Commission and in no way anticipates the Commission's future policy in this area

1 INTRODUCTION

The STECF Expert Working Group (EWG) 19-03 met in the Joint Research Centre, Ispra, Italy, from 8 to 12 April 2019, i) to review social data in the EU fisheries sector collected under the Data Collection Framework (DCF) in 2018, (ii) to provide an EU level overview and national chapters describing the data (iii) to discuss potential improvements and refinements in the collection of social data in EU fisheries.

The work was conducted by 13 independent experts (see the list of participants). The Terms of Reference are presented below.

Terms of Reference for EWG-19-03 (Social data in the EU fisheries sector)

Background and general objectives

One of the objectives of the Common Fisheries Policy (CFP) is to promote social sustainability. The current legal framework refers to labour conditions, health and safety, as well as to job creation and training, social inclusion and a fair standard of living. Fisheries throughout Europe have undergone major structural changes, leading to important social consequences for both individual fishers as for fishing communities. In a number of fishing communities and regions of the EU, the social importance of the fisheries sector outweighs its direct economic contribution.

There is an increasing need of raising awareness and that more attention should be paid to the social dimension of fisheries. This need is reflected on the social impacts assessed in the framework of impact assessments of policy proposals as well as the social implications of the conservation and structural measures related to the CFP.

However the current lack of comprehensive data and scientific analysis on the social aspects of the CFP compromise these policy assessments. These data could for instance inform initiatives to promote small-scale, artisanal or coastal fishers, as a way of contributing to the livelihood of coastal communities or to facilitate access to the profession of young people.

Against this background, the main objective of this WG will be to produce a stand-alone chapter (separate from the whole report, in the annex) in the 2019 AER of the fishing fleet. This WG should also result in a general discussion on the limitations and analysis of these data and in what capacity they can input to support social impacts analysis in the context of the CFP. Regional sections in this stand-alone chapter are also needed to feed the preparation of the sea basin analyses provided for in the Commission's proposal for the EMFF post 20201. These sections should highlight the main drivers and challenges as regards social sustainability in each sea basin.

Specific objectives

2019 is the first year where social datasets are submitted. These datasets will be analysed by a group of experts with experience in their collection for the STECF EWG for the AER (fishing fleet) alongside social scientists.

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[1] Article 9(5) of COM(2018) 390 final

The specific objectives and priorities are:

1) Endorsement and quality check of social data submitted by MS

The WG –in close cooperation with data experts from the fleet economic report -should lead to a data endorsement by the attending experts and detailed accounts of any data collection and transmission issues.

As a matter of priority, the EWG is requested to ensure that all unresolved data transmission (DT) issues and failures encountered prior to and during the EWG meeting are recorded on line via the Data Transmission Monitoring Tool (DTMT) available at https://datacollection.jrc.ec.europa.eu/web/dcf/dtmt.

Guidance on precisely what should be inserted in the DTMT, log-on credentials and access rights will be provided separately by the STECF Secretariat focal point for the EWG.

The data transmission issues may be further looked by EWG 19-06, to check if data transmission issues have been fixed with the latest uploaded data.

The regulation on the collection of social variables does not specify the need to use stratification and consequently MS are only obliged to report national totals. However, reporting social variables at more disaggregated levels could be desirable when added value to the social analysis is provided.

2) Drafting of stand-alone chapter including the following sections

EU OVERVIEW

- Structure of the EU labour force in the Union fisheries fleet
    - by age,
    - by education level
    - by nationality
    - by employment status (Information on share-fishers and self-employed should be included)
    - gender
- Employment and average wages per FTE
- Unpaid labour
- EU small-scale coastal fleet segments (key socio social indicators)

NATIONAL SECTIONS

Including a section on LSF and EU distant water fleets where relevant

Including a section on small-scale coastal fleet segments where relevant

Including a section on wider social where relevant including profiles of fishing communities.

If data-permitting, a social assessment of the fleets in outermost regions may be attempted.

3) Social analysis in a wider context

Experts are requested to provide recommendations to:

- expand the social analysis to a wider context to include communities profiling, social structures, etc.
- expand the social analysis and coverage to more qualitative measurements
- improve the quality and coverage of current social data in view of the next revision of the DCMAP
- propose methodologies to further integrate social analysis in the impact assessment of CFP measures.

Background

Regulation No 2017/1004, the EU multiannual programme for the collection of fisheries and aquaculture data introduced the collection of social variables for the EU fishing fleet under the Data Collection Framework (EU MAP). The social variables to be collected every three years are: Employment by gender; FTE by gender; Unpaid labour by gender; Employment by age; Employment by education level; Employment by nationality; Employment by employment status; FTE National.

The collection of this social data is a recognition that effective fisheries management and policy development is dependent on having a good understanding of the social importance of fisheries and of social processes that are developing over time. As this is the first year of reporting on social data collection this report presents a snapshot in time and cannot examine trends which will be possible in future reports. In addition to reporting on the data already collected the report outlines some limitations in the current process, refinements which could be made to variables already collected and some potential new variables which would contribute to a greater understanding of the social dimension of fisheries.

Coverage

There has been very good coverage of the data requested under the regulation especially considering that it is the first social data call. All 23 coastal Member States reported employment by gender, age and nationality; all but two Member States reported employment by education level and employment by status (these two Member States reported all employment status as employees, i.e., no owners). All but three Member States reported FTE by gender while all but six Member States reported unpaid labour by gender.

Data were reported at a more disaggregated level than required by supra-region, by fishing activity (20 Member States) and by fleet segment (12 Member States). This allowed the EWG to analyse the data in more detail, particularly for the small-scale fleet.

Three Member States further disaggregated on a voluntary basis employment by status (between full and part time employment).

EU overview

In 2017 there were 147,414 people employed in the EU fishing fleet, equivalent to 98,987 FTEs. The majority of workers in the EU fishing fleet were male at 96.14%, 3.78% were female and the gender was not reported for a marginal percentage (0.08% unknown).

This section reports on the overall figures for particular variables without commenting on any issues or problems regarding for example definitions of variables or categories used. Discussion of these issues is contained in the following sections and in particular the section "Refinement of existing variables".

Age

Age data was reported in the following age categories: <=14, 15-24, 25-39, 40-64, >=65 and unknown. The 40-64 age class made up the largest proportion (58%) of people employed in the EU fishing fleet, followed by the 25-39 age class at 26%. A further 7% were over 65 years, followed by 6% in the 15-24 age class and 7% were

unknown. Less than 0.02% of people employed in the EU fishing fleet were under 14 years.

There is significant variation in age profiles across the MS. For example in Estonia 31% of fishers are over 65 while in many other MS the same category only makes up a very low proportion of the fishing population (1% in Belgium and Germany and 2% in Finland).

Nationality

Nationality categories reported were: Nationals, EU, EEA, non-EU/EEA. The majority of people employed in the EU fishing fleet were nationals of their own country (85.9%), followed by non-EU/EEA nations (7.7%), unknown (3.3%), other EU countries (3%), and EEA (0.1%).

The proportion of nationals working in different member state fleets varied significantly. For example 27.3% of those employed in the Irish fleet were non-Irish nationals and 36.3% of those employed in the Belgian fleet were non-Belgian nationals. In contrast 94% of the Italian workforce were Italian and 99% of the Portuguese workers were nationals and all the people employed in the Bulgarian fleet were Bulgarian nationals apart from 2 people (0.1%) who were from non-EU/EEA nations.

Education

All member states were required to report education at a low, medium and high level.

52% of people employed in the EU fishing fleet were educated to a low level, followed by 24% up to a medium level and 4% up to a high level. The education level for a relatively high 20% of people was unknown.

Education levels varied considerably across Member States with for example only 1% of Portuguese fishers having a high level of education while the corresponding figure in Sweden was 21%.

Employment Status

Member states reported data on employment status in the three main categories, Employee, Owner, Unknown. The collection of this data varied between members states, while some member states reported data for the owners and employees, others reported full-time and part-time workers.

Based on the data provided by the majority of member states, 56% of people employed in the EU fishing fleet were employees and the remaining 36% were vessel owners. The employment status of 3% of the people employed in the EU fishing fleet was unknown and the remaining 4% were distributed equally between employee full and employee part.

There was wide variation in the employment status variable across MS with employees for example making up 100% in the Belgian dataset and only 28% in Sweden.

Unpaid labour by gender

In the EU fleet, women accounted for 6.6% of unpaid labour while the gender of 2% was unknown. The proportion of women represented in the unpaid labour category is thus almost double their proportion in the total employment (3.78%) and FTE (3.35%) categories.

Comparison between small scale fishing and other fishing activities

Gender

The proportion of females employed in the SSCF was greater than in the larger scale fleets. Women made up 5.4% of the total employment in the SSCF across the EU fishing fleet in comparison with 1.9% in the LSF and 2.3% in the DWF.

Age

In comparison to the LSF and DWF the SSCF had a somewhat older age profile. 72% of fishers in the SSCF were above the age of 40 while the corresponding LSF figure was 60%. The DWF has only 35% above 40 years old but there is a relatively high level of unknown age in the DWF sector (22%).

The proportion of fishers above 65 years of age was significantly higher in the SSCF (11%) than the LSF (3%) and DWF (0%).

Similarly the SSCF sector has less young fishers with a combined total of 26% under 40 which is lower than the 36% in the LSF and 43% in the DWF.

Nationality

The nationality indicator demonstrates clear differences between SSCF and LSF. The majority of people employed in the SSCF were nationals (95%). The corresponding figure is 80% in the LSF and 44% in the DWF.

In terms of diversity, the DWF was the one with highest percentage of non-EU/EEA employees (31%), followed by 3% EU and 22% were unknown.

Education

In all of the fishing activities the majority of people employed were educated to a low level. The proportion of people educated to at least medium level was greatest in the SSCF at 32%, with LSF at 25% and DWF at 19%. The high rate of unknown (from 18 to 33%) make it somewhat difficult to be confident that these are reliable estimates of differences between the sectors.

Employment Status

There are clear differences in employment status evident between the SSCF and larger scale sectors. The majority of people employed in the SCF are owners (54%), followed by employees (38%). In the LSF, which tend to employ larger crews, only 18% of fishers are owners and in the DWF the figure for owners is 0%, presumably reflecting the fact that owners of DWF vessels are not generally active fishers.

Key Social Issues identified

EWG 19-03 identified during the meeting a number of key issues where they felt that better data and further research is required in order to develop a better understanding of social issues in EU fisheries. These issues are important in that they helped to inform the discussions about refinement of existing variables and potential new variables.

- New entrants or recruitment of employees to the fishing industry.
- Clarification of gender issues in fisheries and in particular regarding the proportion of women in unpaid labour. A broader definition of unpaid labour is needed to reflect the work done outside the vessel that sustain the operability of the fleet.
- Detailed crew information including remuneration and labour conditions including conditions for migrant workers.
- Changes and patterns in the employment of non-national fishers and potential social impacts such as changes to traditional fishing communities.
- Governance including the social role of effective representation, role of fisher organizations (POs and others) in this representation by fleet segment, and

access to funding and support mechanisms such as EMFF and FLAGS by fleet segment.

Refinement of existing variables

Employment status

The group felt that there was considerable scope to refine and add value to this variable.

PGECON and EUROSTAT recommend the use of various categories but the difficulty with them is that they don't account for all of the most common categories of employment status found in fisheries in particular the share fisher category. Due to the importance of the share fishing arrangement and the fact that it is fundamentally different to the Eurostat categories it is considered important to collect data on this. Also trends or changes to the ratios of share fishers to contract fishers would be very important as they may indicate deeper social changes. An alternative categorisation for this variable is described in full in the report.

New entrants or recruitment to the industry

A low number of new or young entrants to fishing would undoubtedly create issues regarding social sustainability. Quantifying new entrants is not a straightforward issue and being able to do so could be done through a combination of analysis of the fishing vessel register and additional questions in surveys conducted. Factors often given to explain perceived unattractiveness of fishing are working conditions and time away from home relative to shore-based employment. However there are numerous other factors which members of the group have encountered among fishers to explain this including increasing levels of bureaucracy, difficulties in the training of young generations as they are banned from entering commercial small-scale coastal fishing boats as was used traditionally, financial barriers and lack of effective representation among others. It would be necessary to examine the drivers behind these trends in order to correct them with future policy development. EWG 19-03 notes that some MS, e.g. the UK, have estimated recruitment to the fishery from their own pilot studies.

Unpaid labour

EWG 19-03 felt that although many single operator vessels may feature significant levels of unpaid labour their automatic classification as unpaid labour was an artificial by-product of an economic approach which needed to account for investment levels, profits etc. Additionally, it makes it difficult to calculate the proportion of women in unpaid labour as it inflates the number of men. The social group feel that specific questions on the extent of unpaid labour by family members or others both onboard the vessel and ashore should be included in surveys.

Age:

EWG 19-03 felt that the 40-64 age bracket should be broken down further as it is difficult to tell if the figures are being skewed based on this bracket being wider than others. 5-year age brackets as in the EU population census would provide much more useful information without increasing workload.

Definition of small-scale fisheries:

EWG 19-03 are conscious of the fact that there have been extensive discussions at many fora regarding the best definition of small-scale fisheries. However many experts attending EWG 19-03 felt that the inclusion of all vessels using active gear in the LSF category regardless of their size introduces a bias and distorts the analysis of proportions for variables such as gender, employment status and age profiles in the LSF.

Combination of social and economic indicators

EWG discussed possibilities of maximising the utility of the variables already collected by combining them together and with economic variable data also to create indices. As initial candidates discussed were:

- An Aging index. This would be simply done by expressing the age profile as the number of fishers over 65 divided by the number under 40 ($\frac{>65}{<40}$). Higher values would indicate greater aging issues within the population.
- Some social indicators could be easily combined with economic indicators like: i) profit, ii) income, iii) total costs, iv) profit margin, v) imputed value of unpaid labour etc. In this way, it could be interesting to compare some pure economic indicators in groups that are formed by social variables e.g. by grouping vessels using the aging index of the crew: e.g. vessels with >0.5 and vessels with <0.5.
- In the same way, we could apply indices that can be extracted using other social variables like education level, employment status etc.

Potential new variables

Finally we selected candidate new variables which EWG 19-03 felt would add value to the social dataset while not creating a disproportionate increase in data collection workload or complexity. These are suggested as an initial proposal intended to provoke further discussion.

Vocational/Technical training

Issues regarding responses to the Education question point towards a necessity to have a clearer understanding of the level and role of fisheries technical qualification. A new question could be included on this topic following additional discussions to agree on some common categories.

Social/Community structure

The issue of scale is important when considering the dependence of coastal communities on fishing. It is reasonable to assume that the majority of pilot studies or community profiling initiatives would focus on ports which have an active or possibly expanding fisheries sector. However this analysis would miss potential declines in fishing dependency of smaller ports. Measures of fishing activity could include volume of landings, number of landings, number of active vessels operating from a harbour etc.

Some of the variables discussed here are already being collected by MS on either a pilot or ongoing basis.

Other candidate new variables discussed and described in full in the report include:

- Specific job descriptor e.g. owner, skipper, first mate, engineer, cook, deckhand etc.
- Contributing family members on board.
- Family members involved in fishing activities on-shore.
- Kind of fishing activities of family members on-shore.
- Crew size.

Pilot studies, Social Impact Assessments and Community Profiling

A number of experts made presentations on in-depth case studies which were conducted in their member state which went beyond what was required by the regulation. MS conducting such studies included Italy, Croatia, Greece and the UK and Ireland as part of the SECFISH project. Such studies illustrate the benefit of finer scale social data which in some cases allow for the analysis of community level social processes where social data is particularly relevant.

These pilot studies informed the discussion of the possibility of MS conducting more detailed community profiling or social impact assessments (as suggested in the EWG 18-15 Expansion of CFP indicators report). An introduction to how such profiles and assessments could be conducted is included in the full EWG 19-03 report. But time constraints mean that significant further discussion and work are needed in order to develop more detailed guidelines on these initiatives. EWG 19-03 recommends that a follow up workshop could be held in order to continue the development of these guidelines.

Procedural Issues

Significant time at the EWG meeting was taken up with data checking and clean up issues. Given that the social EWG only have a single meeting to prepare the report EWG 19-03 recommend that for future social data EWG meetings the social data should be checked in advance in order to facilitate efficient preparation of the report. This is particularly important for MS who are not represented at the social EWG meeting. Due to the limit on attendance at EWG it is not possible to have an expert from each MS at the social EWG. A solution however, to writing the national chapters, is needed as it is impractical to ask participants to write chapters on MS on which they do not have expert knowledge. Alternatively a second meeting, as is the case for the AER, would greatly enhance the possibility to focus on analysis and synthesis rather than on basic data reporting.

The experience at the first social EWG highlighted the need for closer integration with the economic group working on the AER. Such integration would ensure a more efficient and productive meeting and would also ensure that harmonised data for important figures such as overall employment will be achieved.

Recommendations for future development of social data collection

Another source of useful contextual material, which would not necessitate additions to MS surveys could be the writing of National profiles, in advance of the EWG, which would contain a brief description of some of the salient social, institutional and legal elements for each MS. EWG 19-03 recommends that further work is needed on what these profiles could include. This could be done in tandem with further work on social impact assessments and community profiles. A workshop, possibly facilitated through PGECON, to refine existing variables and define new variables is another possibility.

Close integration between the experts working on social data collection and with the ICES Working Group on Social Indicators would be advisable and cross attendance is likely to produce synergies. ICES WG Social are focussing on objectives and indicators so it appears that there would be an obvious benefit to enhanced linkage.

An obvious issue with expansion and development of social data collection and analysis in EU fisheries is the availability of resources and it is unreasonable to expect that the same personnel who are responsible for collection and/or analysis of economic data can continually expand their workload. Additionally they may not have social science expertise. Accordingly, the development of an effective EU program for social data in fisheries will necessitate the employment of qualified social scientists.

3   BACKGROUND

Regulation No 2017/1004, the EU multiannual programme for the collection of fisheries and aquaculture data introduced the collection of social variables for the EU fishing fleet under the Data Collection Framework (EU MAP).

The collection of this social data is a recognition that effective fisheries management and policy development is dependent on having a good understanding of the social importance of fisheries and of social processes that are developing over time. As this is the first year of reporting on social data collection this report presents a snapshot in time and cannot examine trends which will be possible in future reports. In addition to reporting on the data already collected the report outlines some limitations in the current process, refinements which could be made to variables already collected and some potential new variables which would contribute to a greater understanding of the social dimension of fisheries.

The social variables to be collected every three years are: Employment by gender; FTE by gender; Unpaid labour by gender; Employment by age; Employment by education level; Employment by nationality; Employment by employment status; FTE National.

Although the regulation gives no guidance on how the data should be collected PGECON, in particular from a workshop report from Vilnius in 2017, provides recommendations on how the data should be collected.

Although the Commission Decision does not require stratified data or combined variables PGECON recognised that reporting social variables at more disaggregated levels than national totals and reporting combined variables would add value to the social analysis. Further PGECON and the JRC agreed on a social data template which could accommodate the reporting of data at different stratification levels depending on MS needs.

The following categories for social variables were recommended:

- Age categories: =14, 15-24, 25-39, 40-64, >=65, unknown.
- Education categories: High, Low, Medium, unknown.
- Employment status categories: Employee, Employee full, Employee part, Owner, Unknown.
- Gender categories: Female, Male, Unknown.
- Nationality categories: EEA, EU, national, non-EU/EEA, unknown.

PGECON recommended that social data should be reported (raised) for the total population and that the sampling strategy and size should be reported.

Finally, PGECON recommended not to report additional social indicators, even if the MS collected them. Information on these additional social indicators could be added by the experts when writing the national chapter if they consider relevant.

Social Variable data is reported under the variables Employment, FTE and Unpaid Labour as outlined in the following Figure below

*EU MAP data requirements - Social variables*

Variable group	Variable	Variable code (=acronym)	Segmentation	Unit	Years	Reporting level	Template	Other requested fields
Social	Employment	*socemploy*	by gender	Number	2017	Male / Female / Unknown	map_socio	Sampling strategy Total population Sample population (by vessels or fishers)
			by age	Number	2017	<15 / 15-24 / 25-39 / 40-64 / >64 / unknown		
			by education level	Number	2017	Low (Level 0-2) / Medium (Level 3-4) / High (Level 5-8) / Unknown		
			by nationality	Number	2017	National / EU / EEA / Non-EU-EEA		
			by employment status	Number	2017	Owner / Employee (includes unpaid labour): *full-time / * part-time		
	FTE	*socfte*	by gender	Number	2017	Male / Female / Unknown		
	Unpaid labour	*socunlab*	by gender	Number	2017	Male / Female / Unknown		

4   EU OVERVIEW

In 2017 there were 147,414 people employed in the EU fishing fleet, equivalent to 98,987 FTEs. The majority of workers in the EU fishing fleet were male at 96.14%, 3.78% were female and the gender was not reported for a marginal percentage (0.08% unknown).

- ### *Social structure of the fishers' population*

In EU Member States social data collection has been based on two different levels: vessel level and at crew level. The following sampling strategies were used: census, probability sample survey or non-probability sample survey.
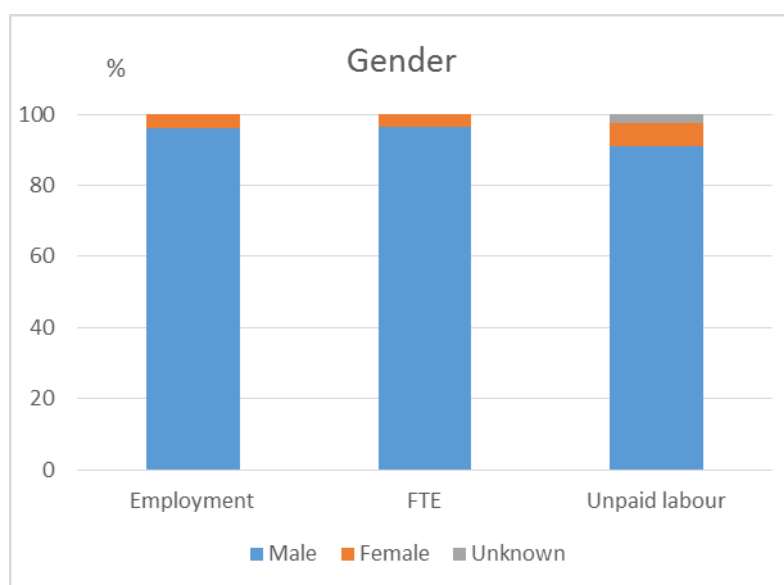
In 2017 there were 147,414 people employed in the EU fishing fleet, equivalent to 98,987 FTEs. The majority (96.14%) of workers in the EU fishing fleet were male, 3.78% were female and the gender was not reported for a marginal percentage (0.08% unknown).

People employed in the fishing fleet are defined here as all paid and unpaid, on-board and onshore workers that support the fishing business, such as harvesting or net mending.
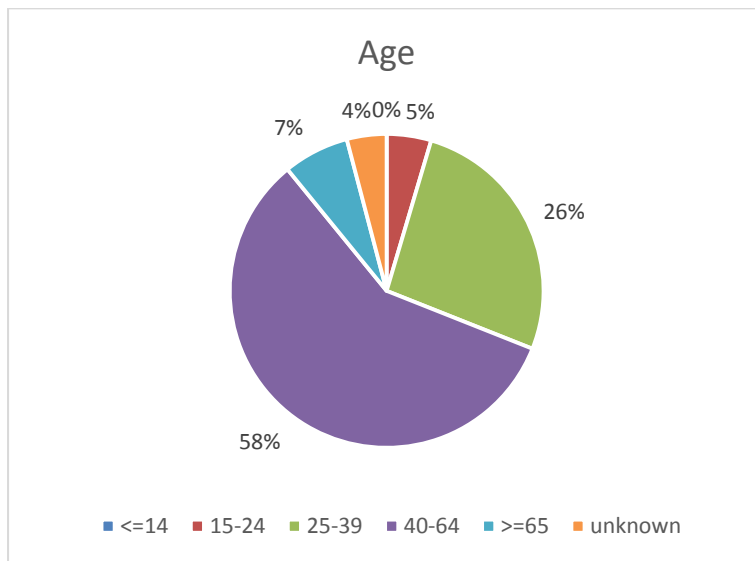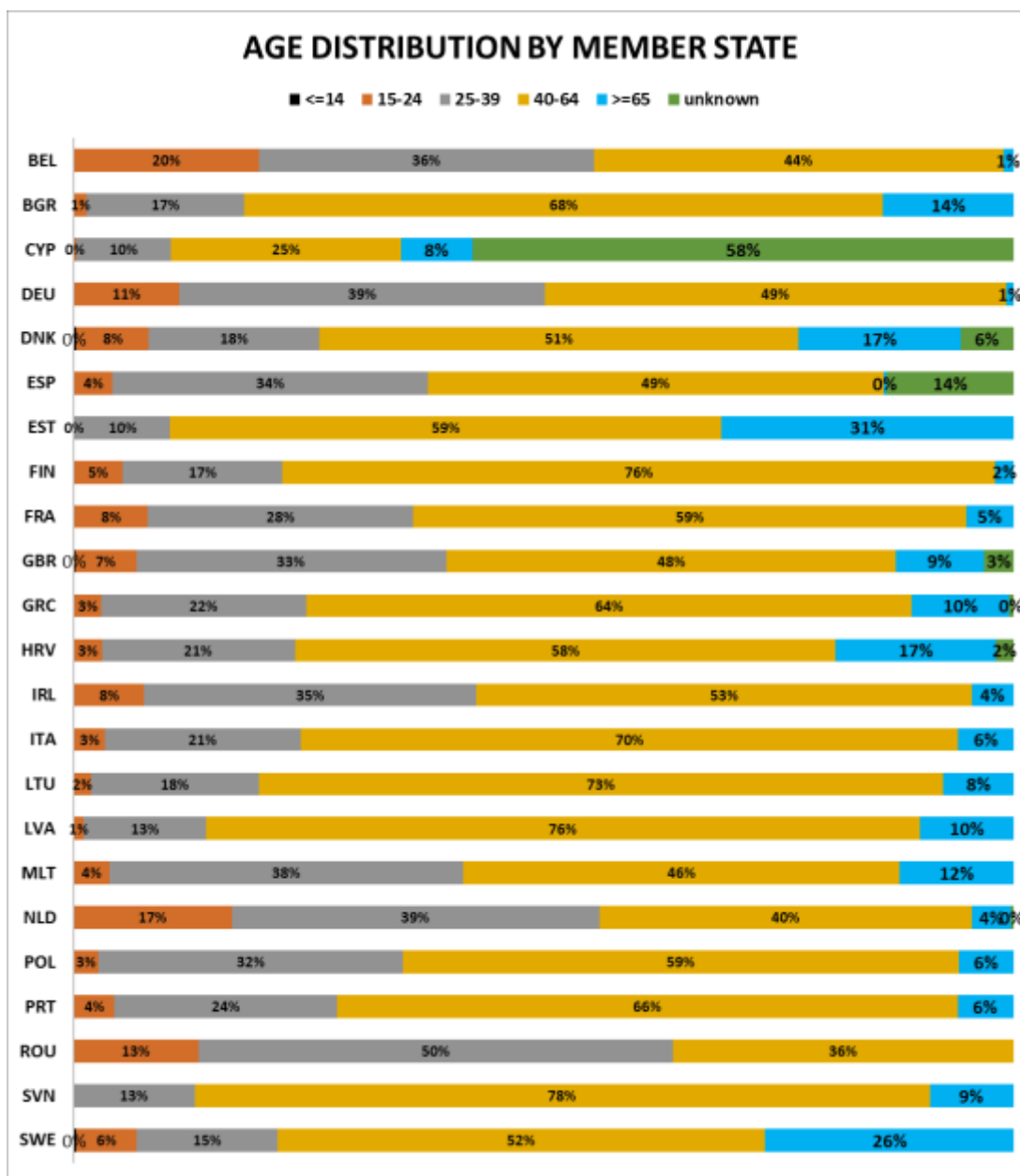
Age

Age data was reported in the following age categories: <=14, 15-24, 25-39, 40-64, >=65 and unknown. For some member states, age data was collected based on the proposed age categories while others collected the actual ages of individuals and assigned to one of the categories.

The 40-64 age class made up the largest proportion (58%) of people employed in the EU fishing fleet, followed by the 25-39 age class at 26%. A further 7% were over 65 years, followed by 6% in the 15-24 age class and 7% were unknown. Less than 0.02% of people employed in the EU fishing fleet were under 14 years.

There is significant variation in age profiles across the MS. For example in Estonia 31% of fishers are over 65 while in many other MS the same category only makes up a very

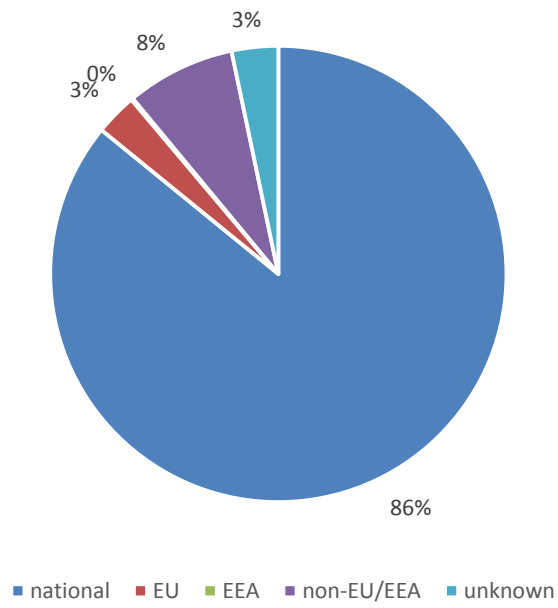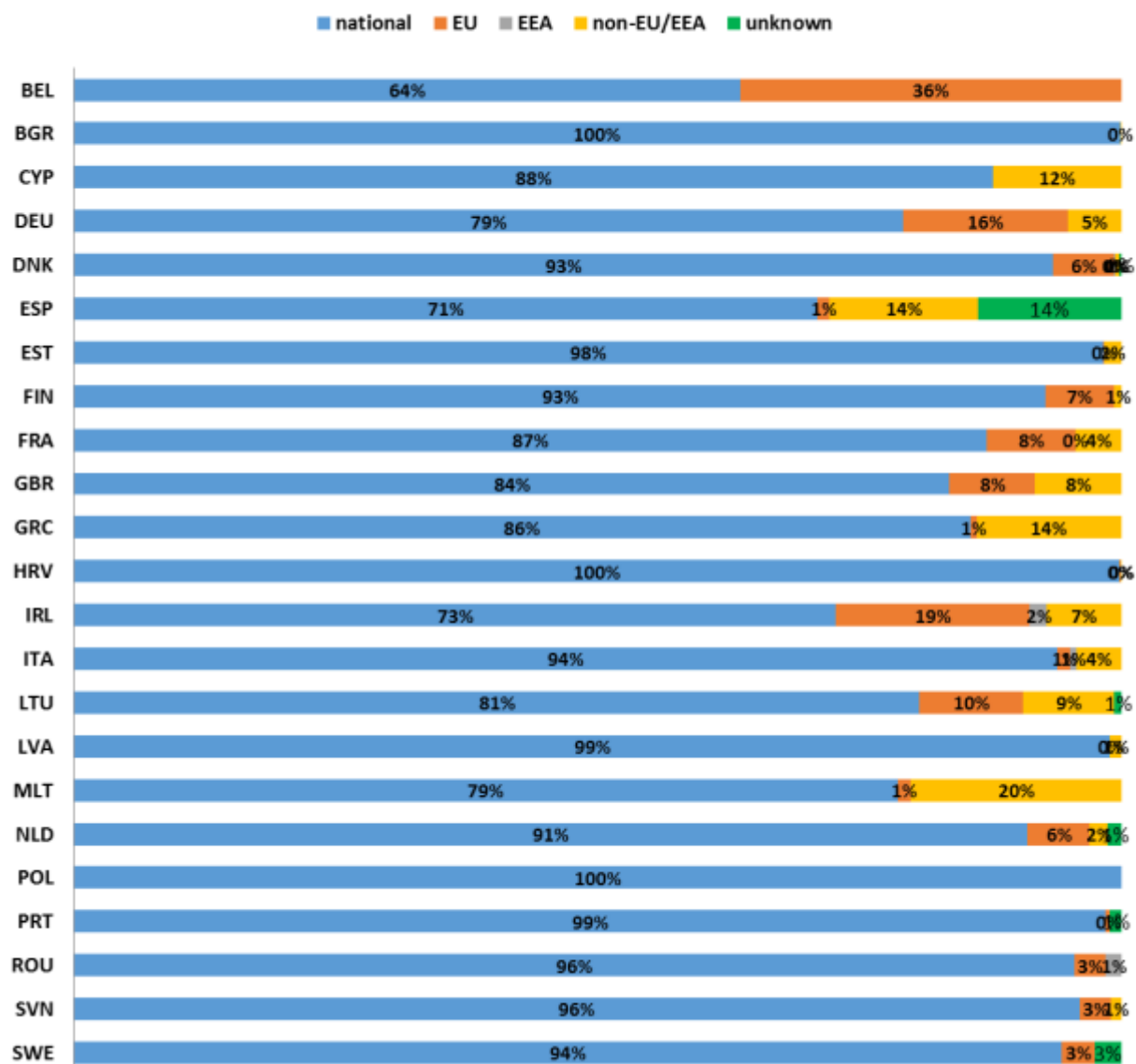low proportion of the fishing population (0% in Greece, 1% in Belgium and Germany and 2% in Finland).

Age

4% 0% 5%

7%

26%

58%

■ <=14   ■ 15-24   ■ 25-39   ■ 40-64   ■ >=65   ■ unknown

AGE DISTRIBUTION BY MEMBER STATE

Legend: ■ <=14 ■ 15-24 ■ 25-39 ■ 40-64 ■ >=65 ■ unknown

Member State	<=14	15-24	25-39	40-64	>=65	unknown
BEL		20%	36%	44%	1%	
BGR	1%	17%		68%	14%	
CYP	0%	10%	25%	8%		58%
DEU		11%	39%	49%	1%	
DNK	0%	8%	18%	51%	17%	6%
ESP		4%	34%	49%	0%	14%
EST	0%	10%		59%	31%	
FIN		5%	17%	76%	2%	
FRA		8%	28%	59%	5%	
GBR	0%	7%	33%	48%	9%	3%
GRC	3%		22%	64%	10%	0%
HRV	3%		21%	58%	17%	2%
IRL		8%	35%	53%	4%	
ITA	3%		21%	70%	6%	
LTU	2%		18%	73%	8%	
LVA	1%		13%	76%	10%	
MLT		4%	38%	46%	12%	
NLD		17%	39%	40%	4%	0%
POL	3%		32%	59%	6%	
PRT		4%	24%	66%	6%	
ROU		13%	50%	36%		
SVN			13%	78%	9%	
SWE	0%	6%	15%	52%	26%	

Nationality

Nationality categories reported were: Nationals, EU, EEA, non-EU/EEA. The majority of people employed in the EU fishing fleet were nationals of their own country (85.9%), followed by non-EU/EEA nations (7.7%), unknown (3.3%), other EU countries (3%), and EEA (0.1%).

The proportion of nationals working in different member state fleets varied significantly. For example 27.3% of those employed in the Irish fleet were non-Irish nationals and 36.3% of those employed in the Belgian fleet were non-Belgian nationals. In contrast 94% of the Italian workforce were Italian and 99% of the Portuguese workers were nationals and all the people employed in the Bulgarian fleet were Bulgarian nationals apart from 2 people (0.1%) who were from non-EU/EEA nations.

Nationality

3%

0%

8%

3%

86%

■ national ■ EU ■ EEA ■ non-EU/EEA ■ unknown

NATIONALITY DISTRIBUTION BY MEMBER STATE

■ national ■ EU ▪ EEA ■ non-EU/EEA ■ unknown

Member State	national	EU	EEA	non-EU/EEA	unknown
BEL	64%	36%			
BGR	100%			0%	
CYP	88%			12%	
DEU	79%	16%		5%	
DNK	93%	6%	0%	1%	
ESP	71%	1%		14%	14%
EST	98%			0% 2%	
FIN	93%	7%		1%	
FRA	87%	8%	0%	4%	
GBR	84%	8%		8%	
GRC	86%	1%		14%	
HRV	100%			0%	
IRL	73%	19%	2%	7%	
ITA	94%	1%	1%	4%	
LTU	81%	10%		9%	1%
LVA	99%			0% 1%	
MLT	79%	1%		20%	
NLD	91%	6%	2%	1%	
POL	100%				
PRT	99%			0%	1%
ROU	96%	3%	1%		
SVN	96%	3%	1%		
SWE	94%	3%			3%

Education

All member states were required to report education at a low, medium and high level[2].

ACADEMIC QUALIFICATIONS		
ISCED code	ISCED Educational attainment levels	Education Level
1	Primary	Low
2	Lower Secondary School	
3	Upper Secondary School	Medium
4	Post-secondary non-tertiary education	
5	Short-cycle tertiary education	High
6	Bachelor's or equivalent level	
7	Master's or equivalent level	
8	Doctoral or equivalent level	
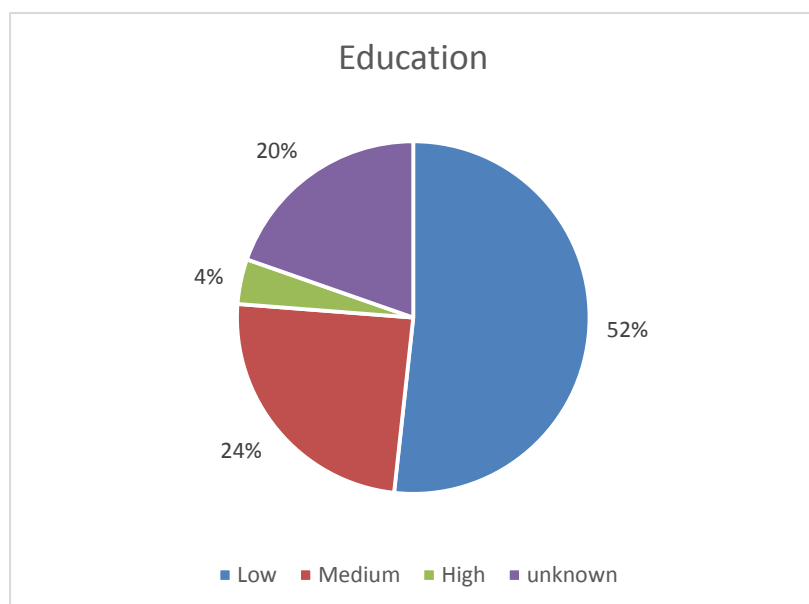
52% of people employed in the EU fishing fleet were educated to a low level, followed by 24% up to a medium level and 4% up to a high level. The education level for a relatively high 20% of people was unknown.

Education levels varied considerably across Member States with for example only 1% of Portuguese fishers having a high level of education while the corresponding figure in Sweden was 21%.

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[2] The education level categories used here are based on ISCED academic qualification classifications.

EDUCATION DISTRIBUTION BY MEMBER STATE
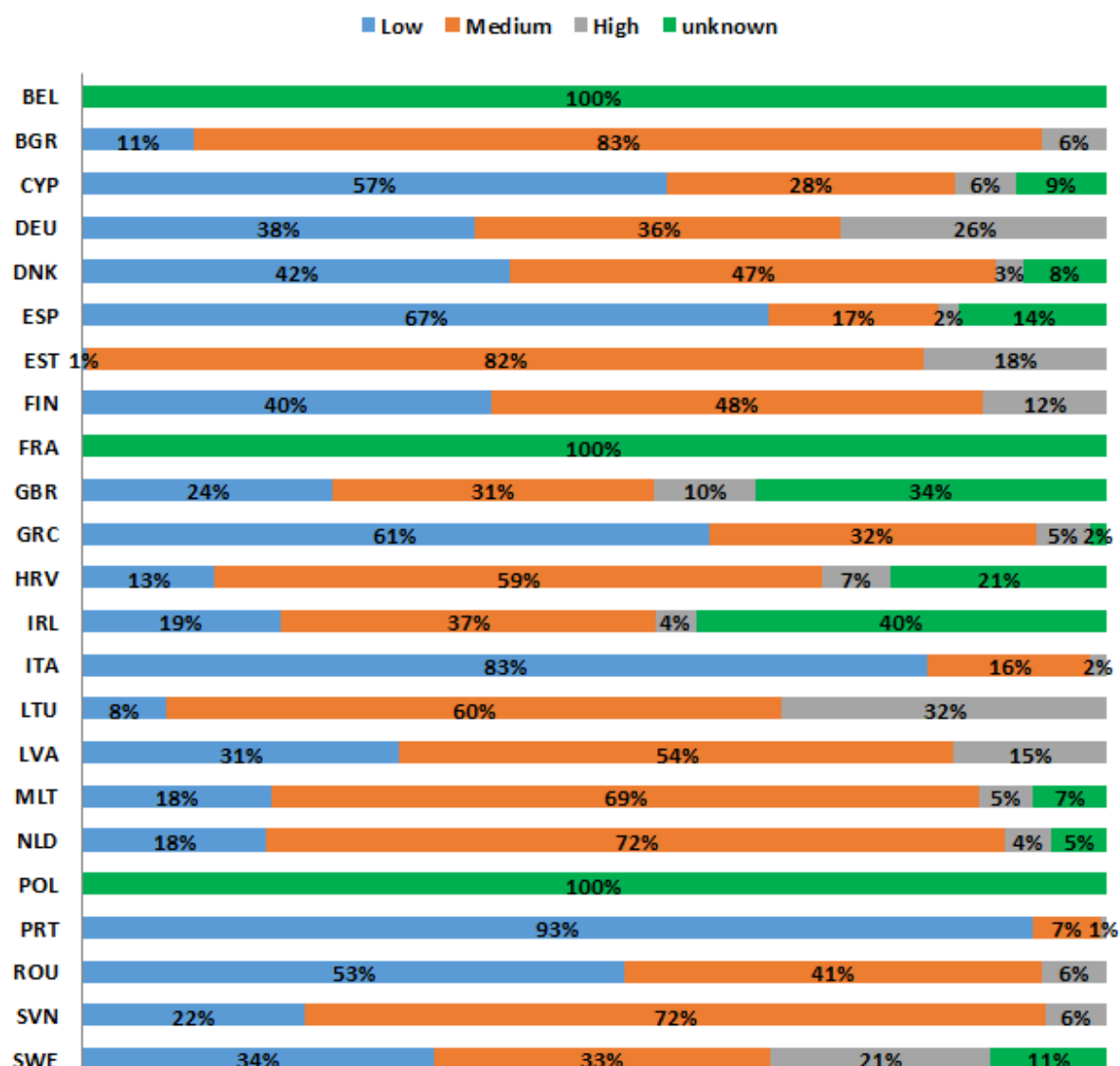
Low — Medium — High — unknown

Member State	Low	Medium	High	unknown
BEL				100%
BGR	11%	83%		6%
CYP	57%	28%	6%	9%
DEU	38%	36%	26%	
DNK	42%	47%	3%	8%
ESP	67%	17%	2%	14%
EST	1%	82%	18%	
FIN	40%	48%	12%	
FRA				100%
GBR	24%	31%	10%	34%
GRC	61%	32%	5%	2%
HRV	13%	59%	7%	21%
IRL	19%	37%	4%	40%
ITA	83%	16%	2%	
LTU	8%	60%	32%	
LVA	31%	54%	15%	
MLT	18%	69%	5%	7%
NLD	18%	72%	4%	5%
POL				100%
PRT	93%	7%	1%	
ROU	53%	41%	6%	
SVN	22%	72%	6%	
SWE	34%	33%	21%	11%

Employment Status

Member states reported data on employment status in the three main categories, Employee, Owner, Unknown. The collection of this data varied between members states, while some member states reported data for the owners and employees, others reported full-time and part-time workers. In the regulation, it is stated that the data for employment status should be collected, but there is no description of the exact required data. PGECON subsequently recommended that at least the categories of owner and employee should be collected.

Based on the data provided by the majority of member states, 56% of people employed in the EU fishing fleet were employees and the remaining 36% were vessel owners. The employment status of 3% of the people employed in the EU fishing fleet was unknown and the remaining 4% were distributed equally between employee full and employee part.

There was wide variation in the employment status variable across MS with employees for example making up 100% in the Belgian dataset and only 28% in Sweden. Two

Member States reported that all of their fishers are employees, 1 country indicated that the employment status of all fishers was unknown.
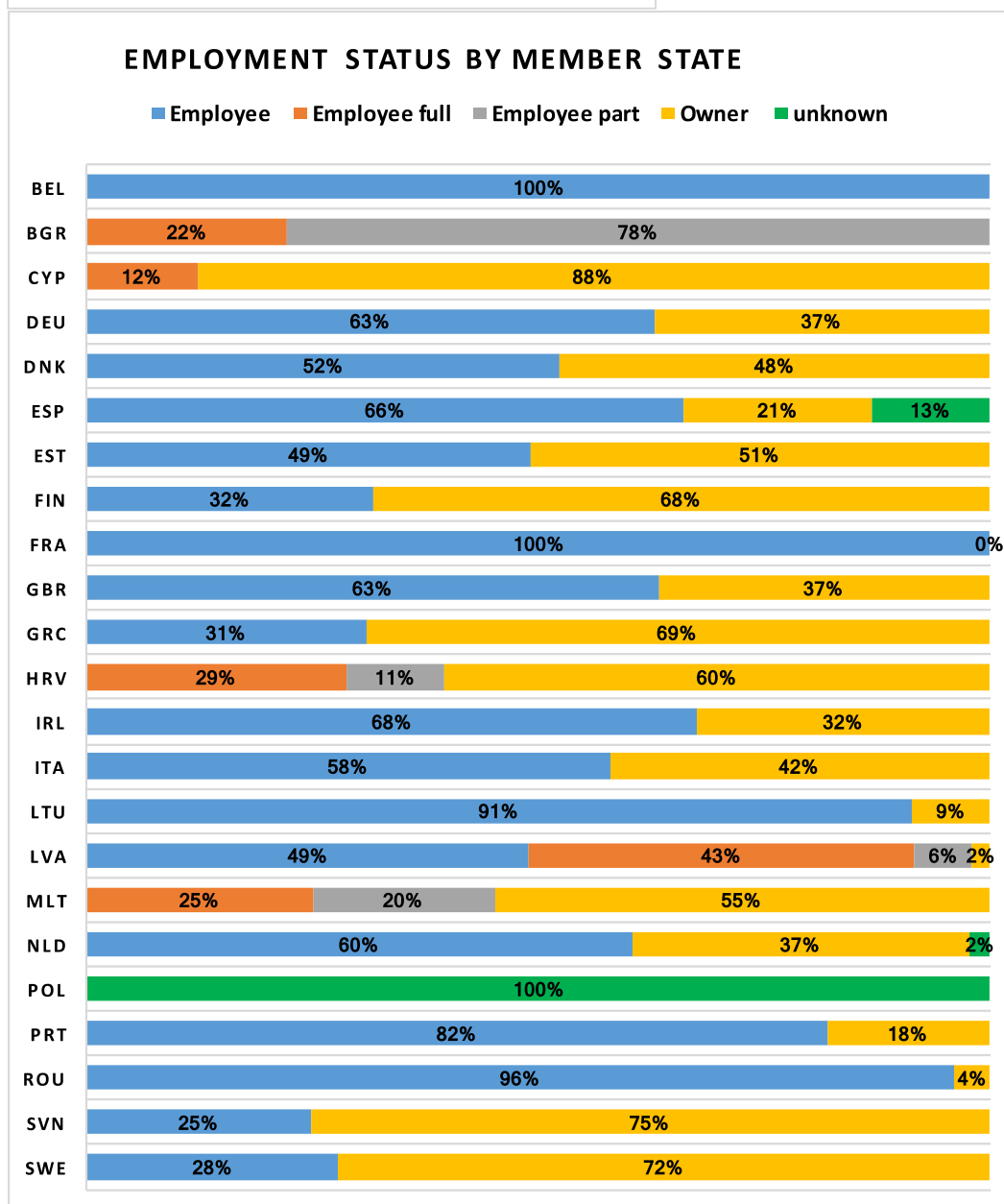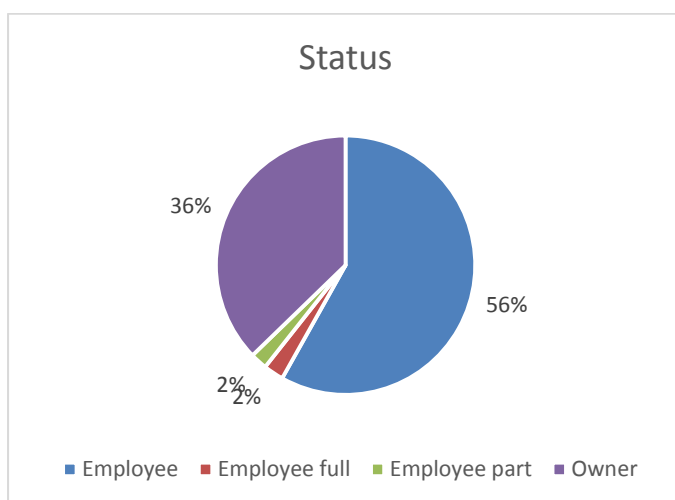
Status

Pie chart legend: ■ Employee 56% ■ Employee full 2% ■ Employee part 2% ■ Owner 36%

EMPLOYMENT STATUS BY MEMBER STATE

Legend: ■ Employee ■ Employee full ■ Employee part ■ Owner ■ unknown

Member State	Employee	Employee full	Employee part	Owner	unknown
BEL	100%				
BGR		22%	78%		
CYP		12%		88%	
DEU	63%			37%	
DNK	52%			48%	
ESP	66%			21%	13%
EST	49%			51%	
FIN	32%			68%	
FRA	100%			0%	
GBR	63%			37%	
GRC	31%			69%	
HRV		29%	11%	60%	
IRL	68%			32%	
ITA	58%			42%	
LTU	91%			9%	
LVA	49%	43%	6%		2%
MLT		25%	20%	55%	
NLD	60%			37%	2%
POL					100%
PRT	82%			18%	
ROU	96%			4%	
SVN	25%			75%	
SWE	28%			72%	

Unpaid labour by gender

In the EU fleet, women accounted for 6.6% of unpaid labour while the gender of 2% was unknown. The proportion of women represented in the unpaid labour category is thus almost double their proportion in the total employment (3.78%) and FTE (3.35%) categories.
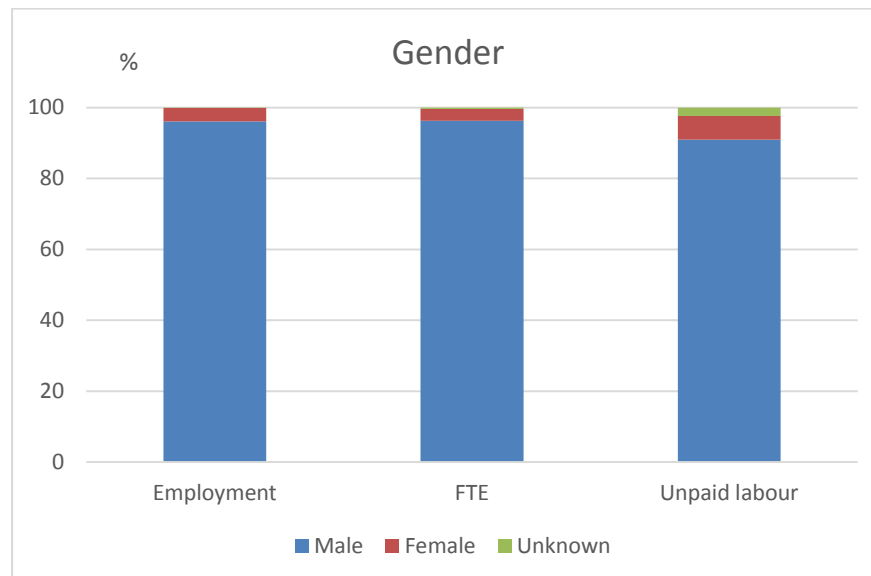
• *Comparison between small scale fishing and other fishing activities*

Fishing activity by gender

The proportion of females employed in the SSCF was greater than in the larger scale fleets. Women made up 5.4% of the total employment in the SSCF across the EU fishing fleet in comparison with 1.9% in the LSF and 2.3% in the DWF.
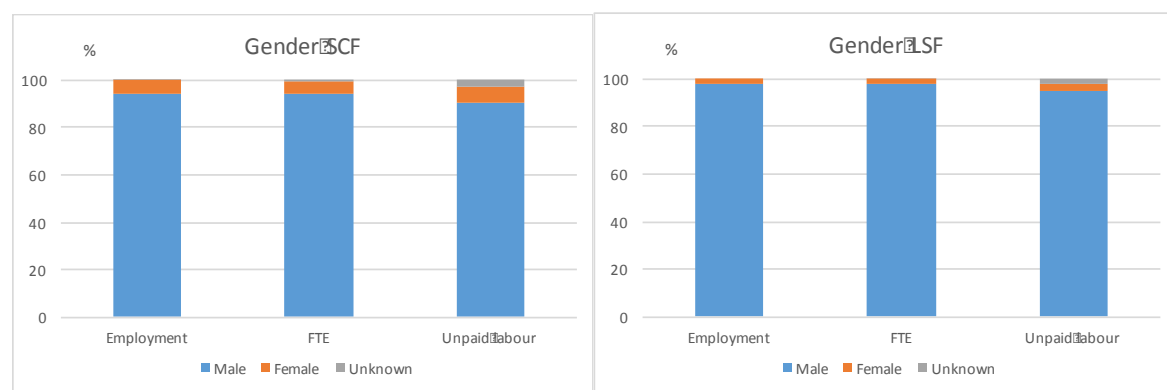
The proportion of females employed in the SCF was greater than in the larger scale fleets. Females made up 5.4% of the total people employed in the SCF across the EU fishing fleet, equivalent to 5.3% of FTEs. The proportion of females employed in the LSF was 1.9% and 2.3% in the DWF.

The data about gender distribution in fisheries shows a low percentage of women in the sector (3.67) and 3.38 FTE), as expected. However, it is not clear what of these numbers

correspond to women on fishing vessels (owners or crew members) and which refers to women working on land for the fishing enterprises. It appears that in some countries these two different situations are merged into a single category of people working for the fisheries enterprises and thus it is difficult to infer the numbers of women working on fishing vessels.

The analysis of unpaid work is even more difficult. In this category the data include sole owners that fish individually, most of whom are men, and also includes supporting relatives, many of whom are women. These are two clearly differentiated activities and including both in the same category obscures heavily the role of the women in the supporting activities. As a result interpreting the 6.6% figure for women in this category is difficult. The data gathering of this variable should be clearly split into two, one that refers to sole owners fishing individually and the other referring to the non-remunerated persons that support the fishing enterprise with a diversity of roles (paid or unpaid / declared or undeclared). Implementation of the Directive 2010/41/EU in the fisheries industry by Member States will provide better data about women's involvement in supporting activities[3].

Age by fishing activity

In comparison to the LSF and DWF the SSCF had a somewhat older age profile. 72% of fishers in the SSCF were above the age of 40 while the corresponding LSF figure was 60%. The DWF has only 35% above 40 years old but there is a relatively high level of unknown age in the DWF sector (22%).

The proportion of fishers above 65 years of age was significantly higher in the SSCF (11%) than the LSF (3%) and DWF (0%).

Similarly the SSCF sector has less young fishers with a combined total of 26% under 40 which is lower than the 36% in the LSF and 43% in the DWF. This finding means that it is necessary to conduct further research on the reasons for the variation in age profiles across different fisheries sectors. This research should focus on SSCF, as its older age profile may compromise the renewal of SSCF fisheries activity in Europe.
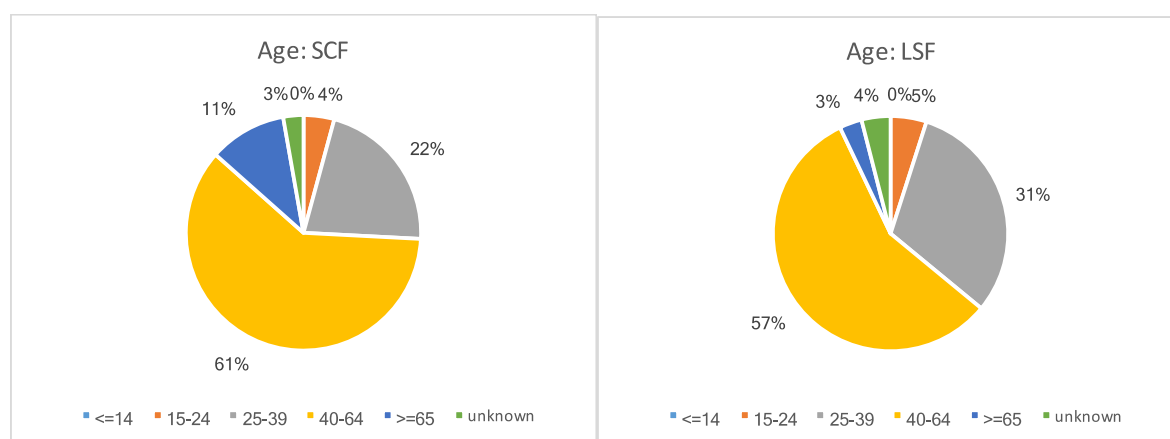
[3] Directive 2010/41/EU of the European Parliament and of the Council of 7 July 2010 on the application of the principle of equal treatment between men and women engaged in an activity in a self-employed capacity and repealing Council Directive 86/613/EEC, http://bit.ly/2Gt5LTe
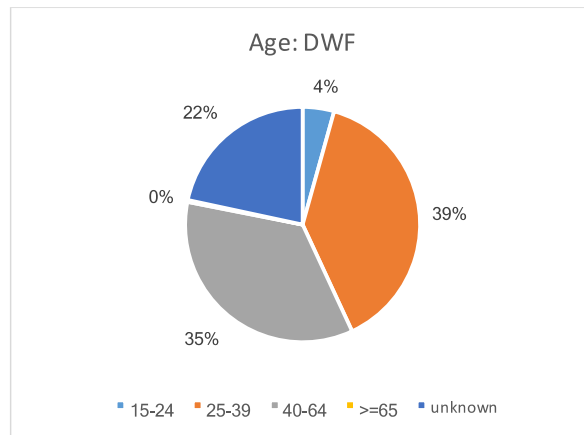
Age: DWF

4%

22%

0%

39%

35%

◼ 15-24 ◼ 25-39 ◼ 40-64 ◼ >=65 ◼ unknown

Nationality

The nationality indicator demonstrates clear differences between SSCF and LSF. The majority of people employed in the SSCF were nationals (95%). The corresponding figure is 80% in the LSF and 44% in the DWF. This may be unsurprising, as in general SSCF are more tied to the local context and coastal communities, and the traditional knowledge and expertise necessary for the fishery is often transmitted by close relatives. More research needs to be done on the reasons for a clearly higher rate of non-EU/EEA in LSF and DWF.

In terms of diversity, the DWF was the one with highest percentage of non-EU/EEA employees (31%), followed by 3% EU and 22% were unknown. It is relevant to say that the DWF may be obliged to include in the crew personnel of certain nationalities due to the fishing agreements signed by the EU, and this increases the figures.
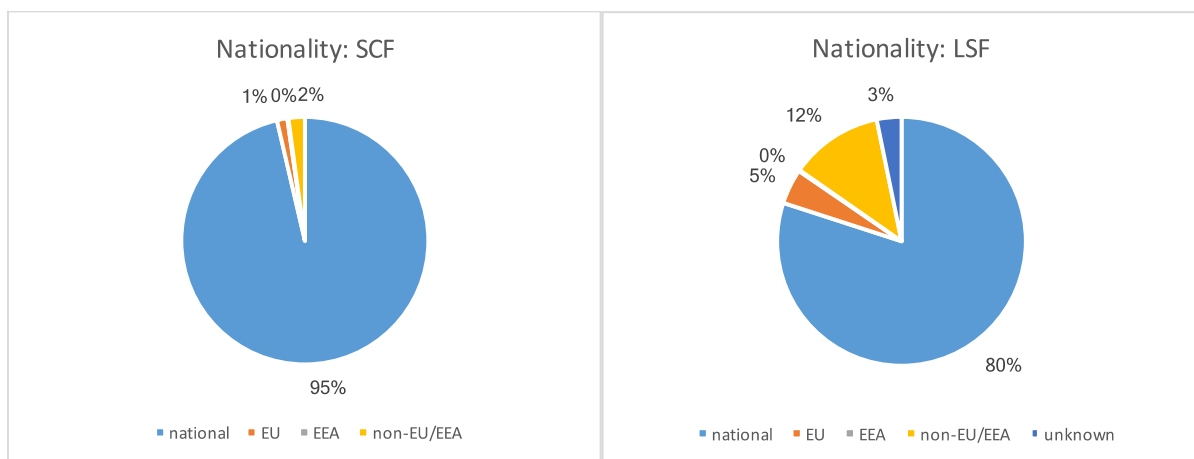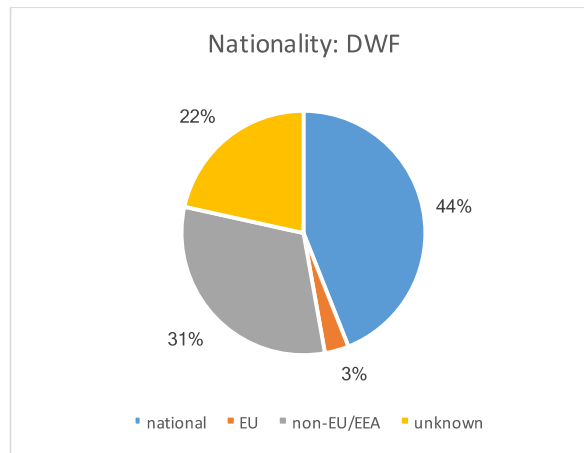
Nationality: SCF

1% 0% 2%

95%

◼ national ◼ EU ◼ EEA ◼ non-EU/EEA

Nationality: LSF

3%

12%

0%

5%

80%

◼ national ◼ EU ◼ EEA ◼ non-EU/EEA ◼ unknown

Nationality: DWF

- 44% national
- 3% EU
- 31% non-EU/EEA
- 22% unknown

Education

In all of the fishing activities the majority of people employed were educated to a low level. The proportion of people educated to at least medium level was greatest in the SSCF at 32%, with LSF at 25% and DWF at 19%. The high rate of unknown (from 18 to 33%) make it somewhat difficult to be confident that these are reliable estimates of differences between the sectors. This high unknown rate may be related to the data gathering instrument, frequently a survey that is answered by the boat owner, not even necessarily the skipper, who may simply ignore this information. This is a barrier to gathering social data and alternative data gathering strategies could be implemented in future including surveys of crew members and not only owners.
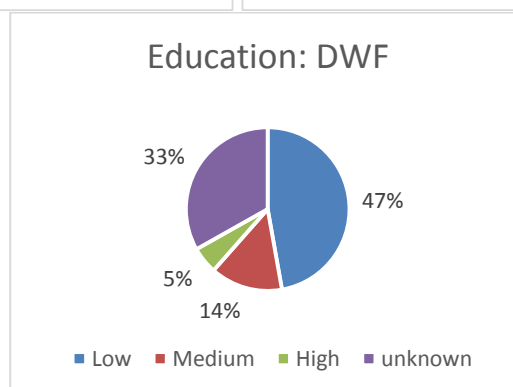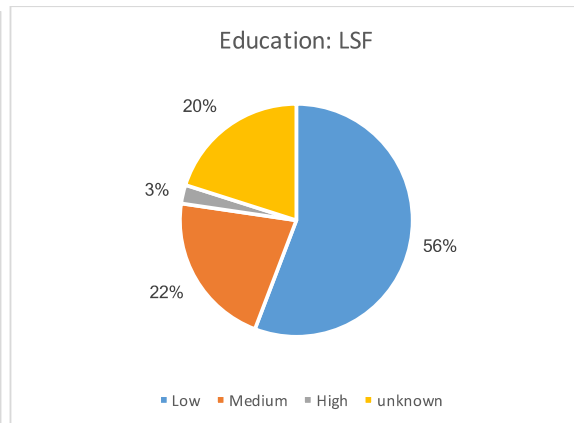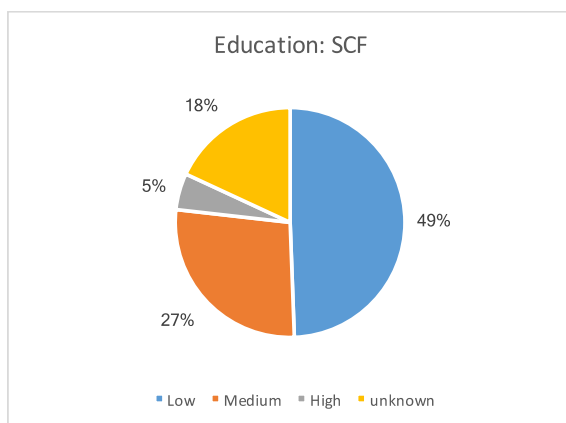
Education: SCF

- 49% Low
- 27% Medium
- 5% High
- 18% unknown

Education: LSF

- 56% Low
- 22% Medium
- 3% High
- 20% unknown

Education: DWF

- 47% Low
- 14% Medium
- 5% High
- 33% unknown

Employment Status

There are clear differences in employment status evident between the SSCF and larger scale sectors. The majority of people employed in the SCF are owners (54%), followed by employees (38%). In the LSF, which tend to employ larger crews, only 18% of fishers are owners and in the DWF the figure for owners is 0%, presumably reflecting the fact that owners of DWF vessels are not generally active fishers.

Status
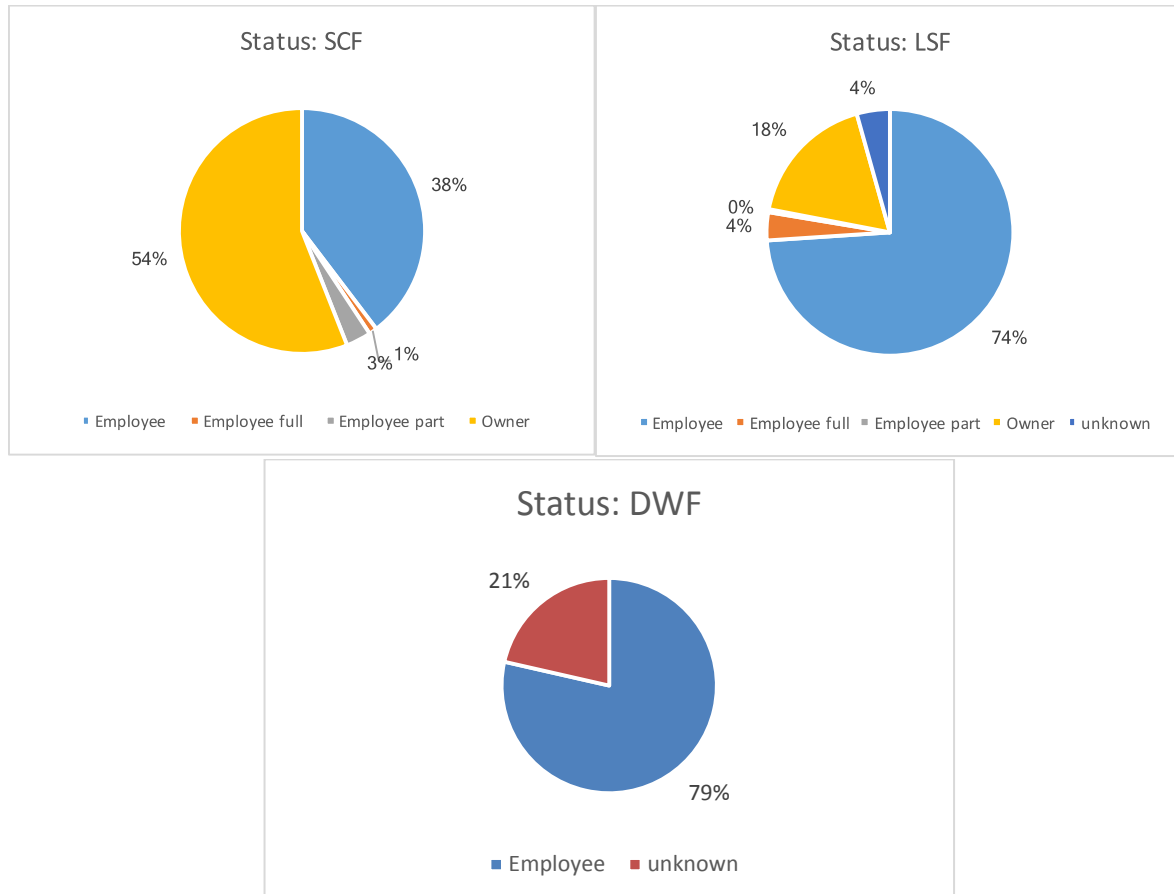
5 NATIONAL CHAPTERS

5.1. Belgium

1. Social structure of the fishers' population
Data such as employment, unpaid labour, gender, nationality, education, are collected by the Belgian administration. However, due to the novelty of the requested data, the new data call structure and the complex Belgian administrative system, most of the social data were not available for the EWG 1903 report.

Population involved in Fisheries harvesting by gender
Gender
In 2017, 482 fishers were involved in Belgium Fisheries harvesting. Only one woman was recorded. Her FTE was estimated at 0.06 while there were 214 male FTEs estimated.

Demography data of fishers' population
Age
In 2017, 44% of the fishers belonged to 40-64 age class (n=210). The youngest fishers (15-24 years) represent only 20% (n=95) of the population involved in fisheries. According to the Social Secretariat of the Coast, around 40% of the fishers were under 35 (data for 2017, Bogaert & Platteau, 2018[4]). Finding appropriate crew remains a challenge, as young people who graduate from the Maritime Institute prefer to work for dredging companies or in tourism. Working days on board can be extremely long (between 4 and 24 hours) and fishing remains a dangerous profession. In 2017, there were 38 accident declarations (Bogaert & Platteau, 2018[1]).

Nationalities
In 2017, The Belgian fleet was mainly composed by national fishers (64%). Other European citizens complete the crew, the majority being Dutch with a small number each of French, Portuguese, Polish and Romanian fishers.

Education
This variable is unknown at the time of writing the report.

Employment:
In the Belgian data set, each and every fisher were noted as 'employees. Therefore, for 2017, EWG 19-03 was not able to make conclusions regarding the diversity of Belgian employment in the fishery harvesting sector. However, it is likely that the vast majority of fishers will be registered as 'employee'.
In 2003, a law on employment ended the "No catch, no pay" era, assuring income security for each trip through a set minimum wage per day at sea. This is unique in Europe. Compared to other member states, Belgian fishers have a relatively high income as they receive a fixed percentage of the gross value of landings that is usually much higher than the guaranteed minimum wage. So, a larger catch usually leads to a higher income[1].

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[4] Van Bogaert, T. & Platteau, J. (reds.) (2018). Uitdagingen voor de Vlaamse Visserij. Landbouw- en Visserijrapport 2018. Departement Landbouw en Visserij, Brussel.

Even if the data mentioned the presence of only one woman in the Belgian fleet in 2017, the family support and mostly partner involvement was not taken into account in the employment. This unpaid labour is not estimated in the data collected for this EWG 1903 report. However, women support their husbands by keeping the household but also repairing, doing maintenance, accounting, managing transportation for the crew, selling products etc. This situation has evolved, as in the offshore fisheries wives/partners are more involved than before. On the other hand, women are less involved in inshore fisheries than they were historically. In this fishery, women used to sell fish and nowadays, few shops exist on market places and belong to professionals not linked to the family[5]. With policy changes direct selling of fish at local markets has decreased. Contrary to the larger vessels, coastal fishing vessels are allowed to sell their landings directly without passage at an auction market. However, this direct commercialization is only allowed at one specific site in Oostende (Town of Oostende 2010[6]).

2. Stratification
No data was provided by segment; however, the Belgian fishing fleet is mostly part of Large Scale Fisheries.

3. Data issues
Few Belgian data were available for this report due to the novelty of the requested data, the new data call structure and the complex Belgian administrative system.
The missing data will be available for the next call, mostly collected by the Belgian administration.

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[5] J. Urquhart et al. (eds.), Social Issues in Sustainable Fisheries Management, MARE Publication Series 9. DOI 10.1007/978-94-007-7911 -2 11, © Springer Science+Business Media Dordrecht 2014.

6 Town of Oostende (2010). Verslag van de Gemeenteraad van 27 augustus 2010, 2010/07.

5.2. Bulgaria

The collection of social indicators for the Bulgarian fishing sector started in 2017. The variables were included in the annual economic survey, which gave the opportunity of collecting Census data. All of the mandatory parameters - age distribution, nationality, education and employment status were collected by gender.

There is some specificity of Bulgarian social parameters presented in the following chapter because based on the Bulgarian legislation all vessels which are operating in the Black sea are in the fleet register. From 1295 active vessels in 2017, 550 have between 1 and 5 days at sea, and 245 vessels were at sea between 6 and 10 days for the whole year.

1. Social structure of the fishers' population

The population involved in fisheries harvesting is mainly male – from 1947 employees 1927 are male. In terms of total employed male represents 98.97%, and the percentage of male FTEs is 98.16% of the total FTE. 20 women are working in fisheries, from them 7 are in the LSF and 13 are in SSF.

Although 2017 was the first year in which in Bulgaria collected such data, the low number of women employed in the sector is not a surprise. The possible reasons for this may be that the work in this sector is not particularly attractive to women – it is hard physical work, vessels' conditions are not always very comfortable and the average salary in the sector is lower compared to the average salary in the country.

Demographic data of fisher population
The age groups used during the data collection were 15-24, 25-39, 40-64 and >= 65.
68% of the total employed (1,323 fishers) were in the age group 40-64, followed by 17% representing people over 65 years, 14% for the age group 25-39 and 1% for the fishers below 24 years.

The possible answers in terms of nationality in the questionnaire were 4: Employees from Bulgaria, Employees from other EU countries, Employees from EEA and Employees from Non-EU/EEA. The results showed that in the Bulgarian fleet there are no employees from the EU or EEA, but there are 2 people, which are from Non-EU/EEA countries. The missing interest from employees from other countries could be due to the low monthly salary.

In terms of education, the most common answer was high school/specialized high school corresponding to Medium education level (83% - 1610 people), followed by primary school which is Low education level (11% - 214 people) and university degree corresponding with High educational level (6% - 123 people).

Age

14% 1% 17%
68%

■ 15-24 ■ 25-39 ■ 40-64 ■ >=65

Nationality

0%
100%

■ national ■ non-EU/EEA

Education

6% 11%
83%

■ Low ■ Medium ■ High

Status

22%
78%

■ Employee full ■ Employee part
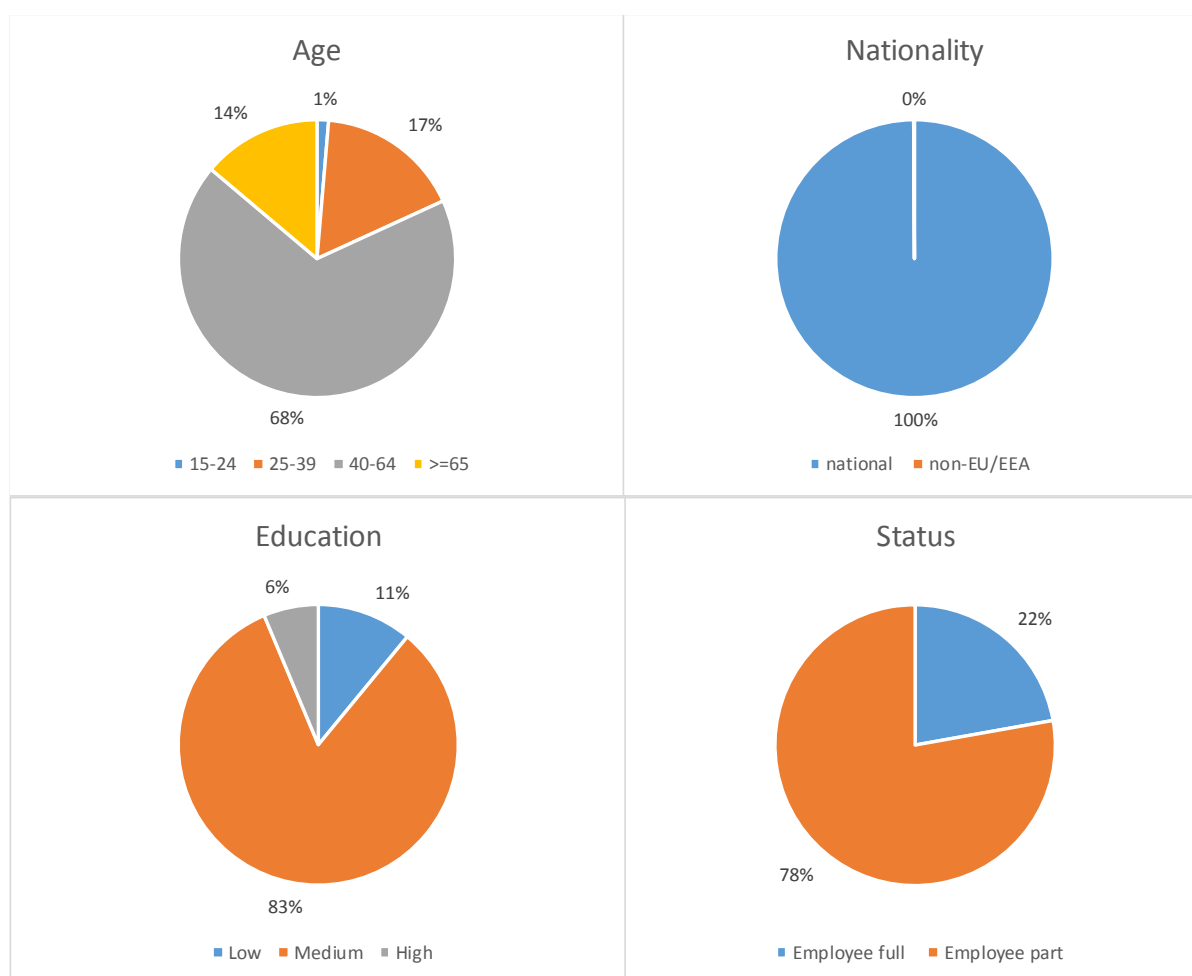
Employment in more details:

In 2017, 894 vessels from all active vessels (1295) were with one fisherman and 266 vessels were with 2 fishers, the remaining 135 vessels had 3 people or more.

The data collection for employment status was already part of the economic questionnaire which was used in previous years. In order to keep the data comparable with the historical time series, the employment status was dedicated mainly to the working time during the year. The possible answers were Full time temporary, Part-time temporary, Full time seasonal and Part-time seasonal and in 2017 the data collection for employment status by gender was incorporated. In order to meet the future needs and have a clearer picture of the employment status, in the 2018 questionnaire a question was included about the owner of the vessels and his role in the fishing activity (in case he is engaged in the process).

Gender and employment.
Since the total number of females in the sector is only 20 (1%), there are no differences in the general distribution of the percentage of age classes, education, employment status and nationality between the total employees and male employees. Based on the age, 13 of the female are in the age class 40-64, 6 of them are between 25-39 years and 1 is over 65 years. There were no women engaged in fisheries from the age class

15-24. In terms of education 14 women graduated from high school and 6 have a university degree. For 11 of them, the work in the fisheries sector is a full-time job and for 9 it is a part-time job or complementary activity to their core work.

Unpaid labour in the sector consists of 485 people and could be separated hypothetically into unpaid family workers and fishers, which are not paying social insurances and do not have a monthly salary. These fishers are mainly people who are at sea less than 10 days per year.
Unpaid labour by gender was collected for the first time in 2017. 473 of all unpaid fishers (workers) are men and 12 are women. While the unpaid women are only in the SSF, the unpaid male workers in the SSF are 441 and in the LSF they are 32.

2. Stratification:

A detailed analysis was done during the meeting on the distribution of employees in the different age classes, education levels, employment status and nationality for the total employees, employees in the LSF and in SSF.

The percentages for the total employees and the fishers from the SSF were quite similar because 1,660 of all 1,947 employees worked in the SSF.
The situation in the LSF is different. 104 of the vessels represent Bulgarian LSF and provide jobs and livelihood to 287 employees (7 female and 280 male).
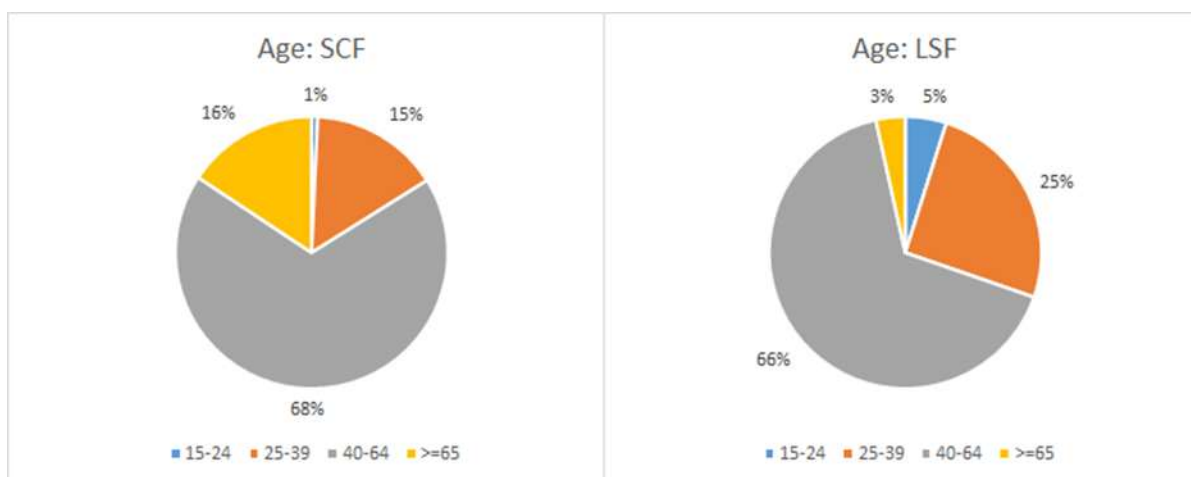
The highest percentage of people is again in the age group 40-64 like in the total and in the SSF, but in all other age groups, there are significant differences. In the age group >=65 years, only 10 people are involved in the LSF, the rest of the fishers are in the SSF. 25% of the fishers in LSF are between 25-39 years, which in terms of percentage is 10% more than the people in the SSF. The youngest fishers (15-24 years) are distributed almost equally between both fleets.

Education: SCF
7%   11%
83%
■ Low ■ Medium ■ High

Education: LSF
4%   13%
83%
■ Low ■ Medium ■ High
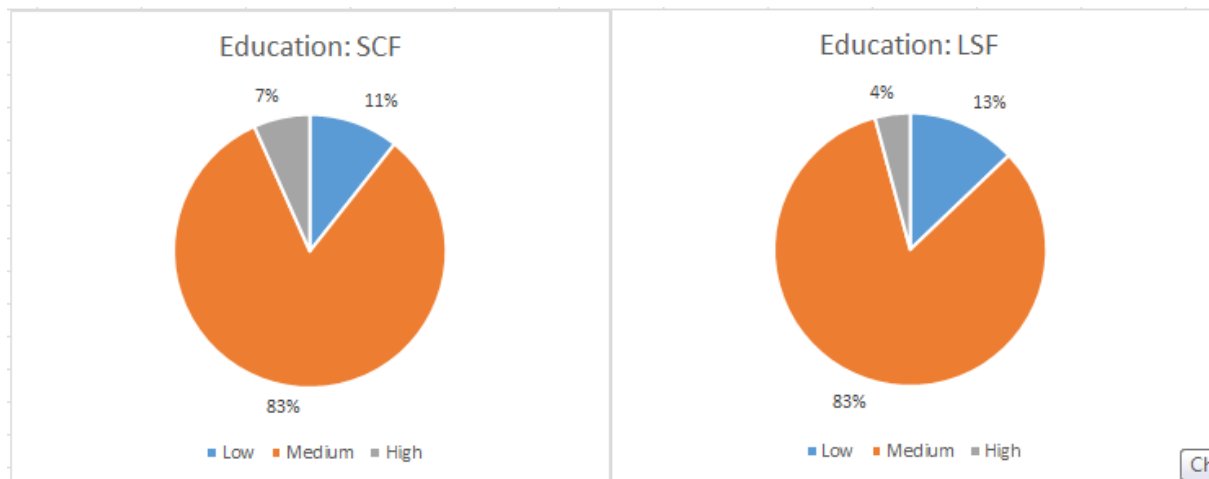
There are no big differences between the LSF and the SSF in terms of education because medium education was the most wide spread in the age class 40-64. The situation with the nationality is the same, only two people are from Non-EU/EEA countries and 1 of them is in the LSF, the other 1 is in the SSF.

Nationality: SCF
0%
100%
■ national ■ non-EU/EEA

Nationality: LSF
0%
100%
■ national ■ non-EU/EEA
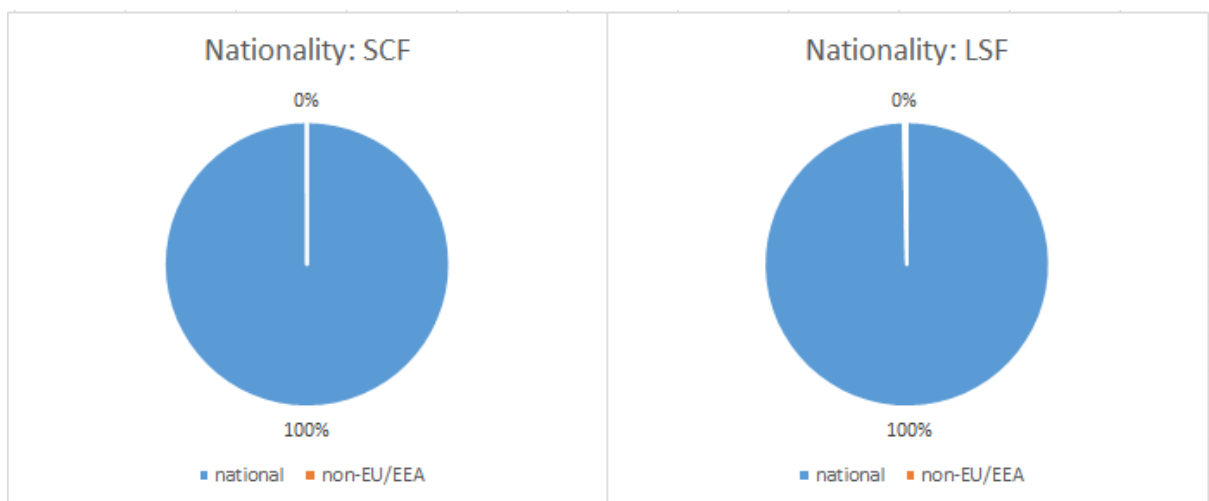
From all 4 parameters, the most significant differences are between the employment status of LSF and SSF. 203 of the fishers, which represent 71% in the LSF, are full-time employees, while the full-time workers are only 14% from the SSF.

Status: SCF

14%
86%
- Employee full - Employee part

Status: LSF

29%
71%
- Employee full - Employee part
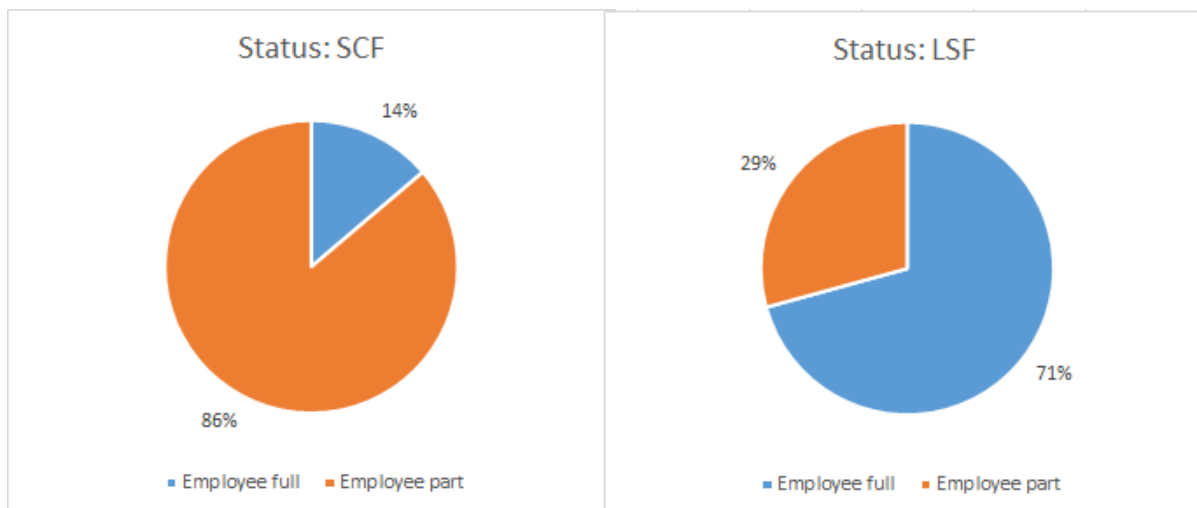
In order to provide a clearer picture on the proportions of different age classes by fishing technique, the age classes in the vessels with different fishing techniques were presented in percentage, because the number of vessels operating with each fishing technique really vary (e.g. Drift and/or fixed netters are 672, while vessels using hooks are 148 and vessels using pots and/or traps are 42, etc.).

PERCENTAGE OF AGE CLASSES IN VESSELS WITH DIFFERENT FISHING TECHNIQUES

Drift and/or fixed netters | Vessels using pots and/or traps | Vessels using hooks | Vessels using polyvalent passive gears only | Vessels using active and passive gears | Purse seiners | Beam trawlers | Pelagic trawlers

■15-24 ■25-39 ■40-64 ■>=65
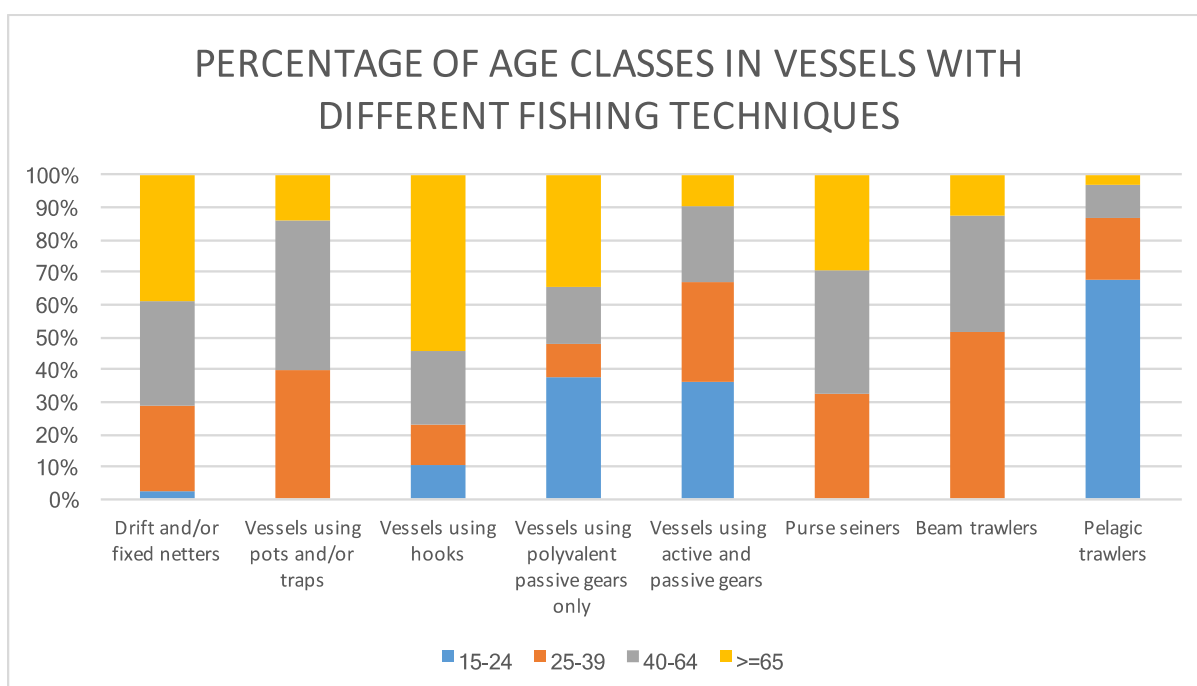
It is interesting that fishers from each age class are interested in different fishing techniques. While the oldest fishers (over 65 years) are fishing mainly with drift and/or fixed nets and hooks, the youngest ones (under 24) are on pelagic trawlers and vessels using active and passive gears. The fishers in the rest to groups 25-39 and 40-64 years prefer drift and/or fixed netters and vessels with active and passive gears. The segment with vessels using active and passive gears in Bulgaria includes also a high number of vessels without gear (used by divers for harvesting Rapa whelk).

EMPOYEES IN LSF AND SCF BY FISHING TECHNIQUE
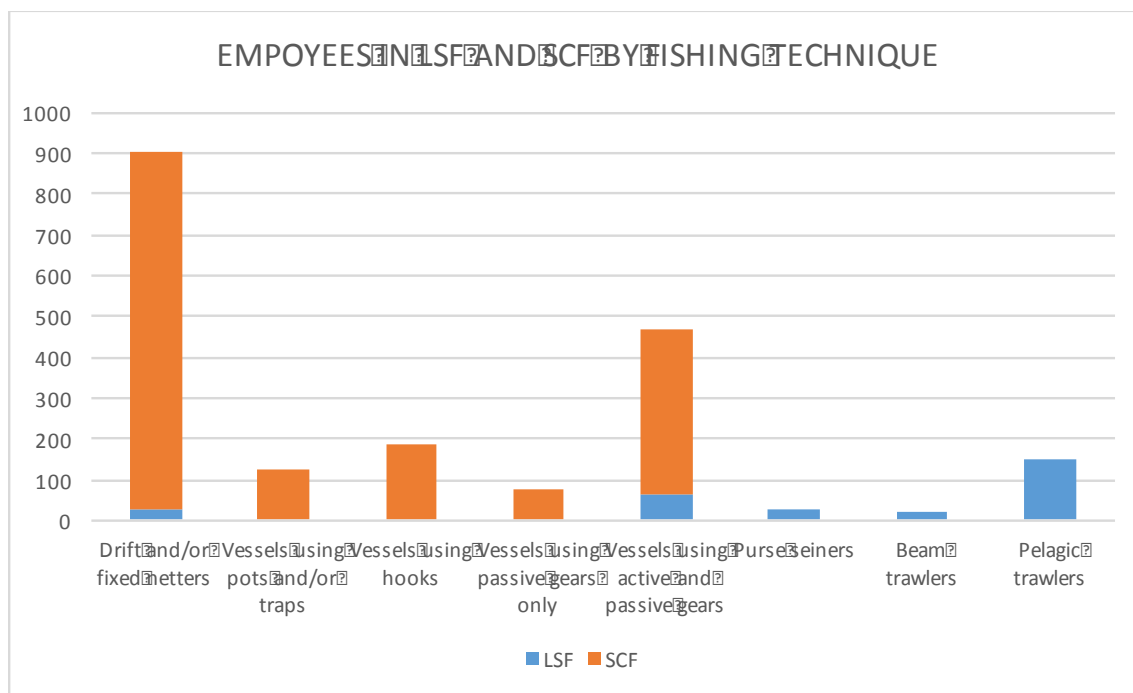
The distribution of people from the LSF and SCF by fishing technique completely corresponds to the number of vessels in these segments. Three categories can be established:

1. Segments which are representing employment in Small-scale fleet only – vessels using pots or/and traps, vessels using hooks and vessels using passive gear only. 2. Segments which are in the Large-scale fleet only – pelagic trawlers, beam trawlers and purse seiners. 3. Segments which are parts of LSF and SCF – drift and/or fixed netters and vessels using passive and active gears. While the presence of netters in both LSF and SCF is not a surprise, having employees in vessels using passive and active gears is more interesting, because the bigger vessels (LSF) in the segment include vessels with different fishing gears, the smaller ones (which are from the SCF) represent mainly vessels without gear (used by divers for harvesting of *Rapana venosa*).

3. Challenges
Since the data on social indicators is only for 2017, more data is needed for determination of the real challenges or making accurate projections.
Based on the provided data, the future expectations on gender are that the number of female employees will remain low, due to the specificity of work and working conditions. In terms of age, it is harder to produce any projection because in Bulgaria 68% of the fishers are in the age group 40-64 and it really depends if 90% of these men are below 45 or over 60 years.

The main challenge in front of the Bulgarian fleet in terms of social impact and qualitative employees might be how to involve more young and educated people. Unfortunately, the average salary for the sector is relatively low compared to the average salary for the country and young people are not attracted by the sector.

4. Data issues
All the available Bulgarian national data, which was collected under DCF was provided for the purpose of the report. The Bulgarian questionnaires for 2017 for the fleet, aquaculture and processing were amended at the end of 2016.
Each year they are updated to provide the opportunity to obtain the necessary data, to analyse more detailed certain indicators or to include new indicators (if any).

5.3. Croatia

Croatian commercial fleet in 2017 consisted of 967 active vessels in large scale fleet and 5082 vessels in small scale fleet with around 3500 vessels in the category of small scale coastal artisanal fisheries. Social data collection has been conducted together with socio-economic data collection. The statistics provided in this chapter are raised from the sample which encompassed 730 vessels; 321 vessels of large scale (35% of total LSF) and 409 (8% of total SCF) vessels of small scale active fleet (23% without small scale coastal artisanal fleet). As social data collection raised some questions on the interpretation of quantitative data, a more qualitative approach has been used in the additional survey that has been conducted through the online form. About 200 answers have been received and some of the results will be implemented and analysed as an addition to a better understanding of the social structure through the chapter.

1. Social structure of the fishers' population

Fishing has a strong tradition in Croatia and makes an important role in preserving coastal and island communities by providing food security and financial independence for many households. The fisheries sector in 2017 gathered 7,890 persons (1,665 FTE) involved in fishing activities on board and on shore, as paid or unpaid workers, out of which almost 94% are men. Women account for 6% of total employment and 5% of FTE which also corresponds to the results of the additional survey. Should be taken to account that most of the women activities are related to on-shore fishing activities as support to family businesses (logistics, accountancy, sales, gear mending). A smaller share of women FTE suggests that this kind of support on fishing activities is rather short and temporary and often appears as a supplementary activity.

Numbers involved in Fisheries by gender
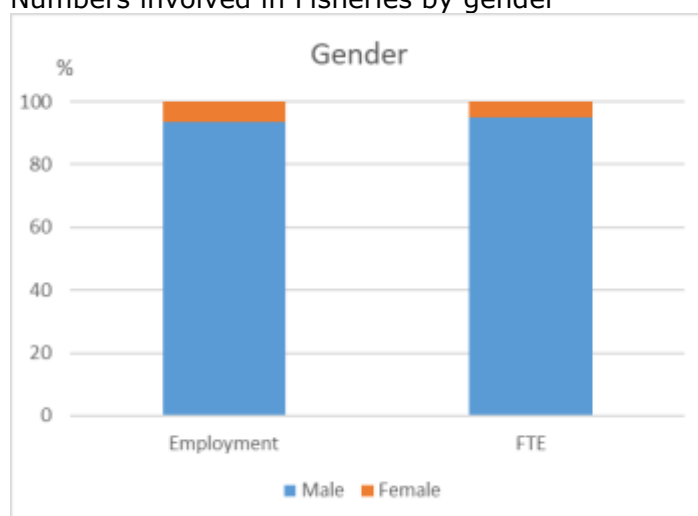
Demographic data of fishers population

Age

Majority of fishers (4,538 fishers) were in the age group of 40-64 years. The age group of older than 65 (retired) made up 17% of the total number of fishers, similar as 25-39 years old (21%) while youngest fishers, 15-24 years, made only 2% of the total population. Potential process of aging will be discussed in the next paragraph.

Nationalities

Although according to the additional survey there is a general lack of qualified fishers in the fleet and lack of labour force in general, the employees and owners both in LSF and SSF are almost 100% national. According to the government Decision from December 2018, the annual quota of 540 licenses for the employment of foreigners - fishers's

workers approved for 2019 could cause some changes in the future structure of nationality, but according to the latest reports, under current conditions, there are no significant changes expected in the next reporting period.

Age

2% 3%
17%
21%
58%

■ 15-24 ■ 25-39 ■ 40-64 ■ >=65 ■ unknown

Nationality

0% 0%
100%

■ national ■ EU ■ non-EU/EEA

Education

13%
21%
7%
59%

■ Low ■ Medium ■ High ■ unknown

Status

29%
11%
60%

■ Employee full ■ Employee part ■ Owner
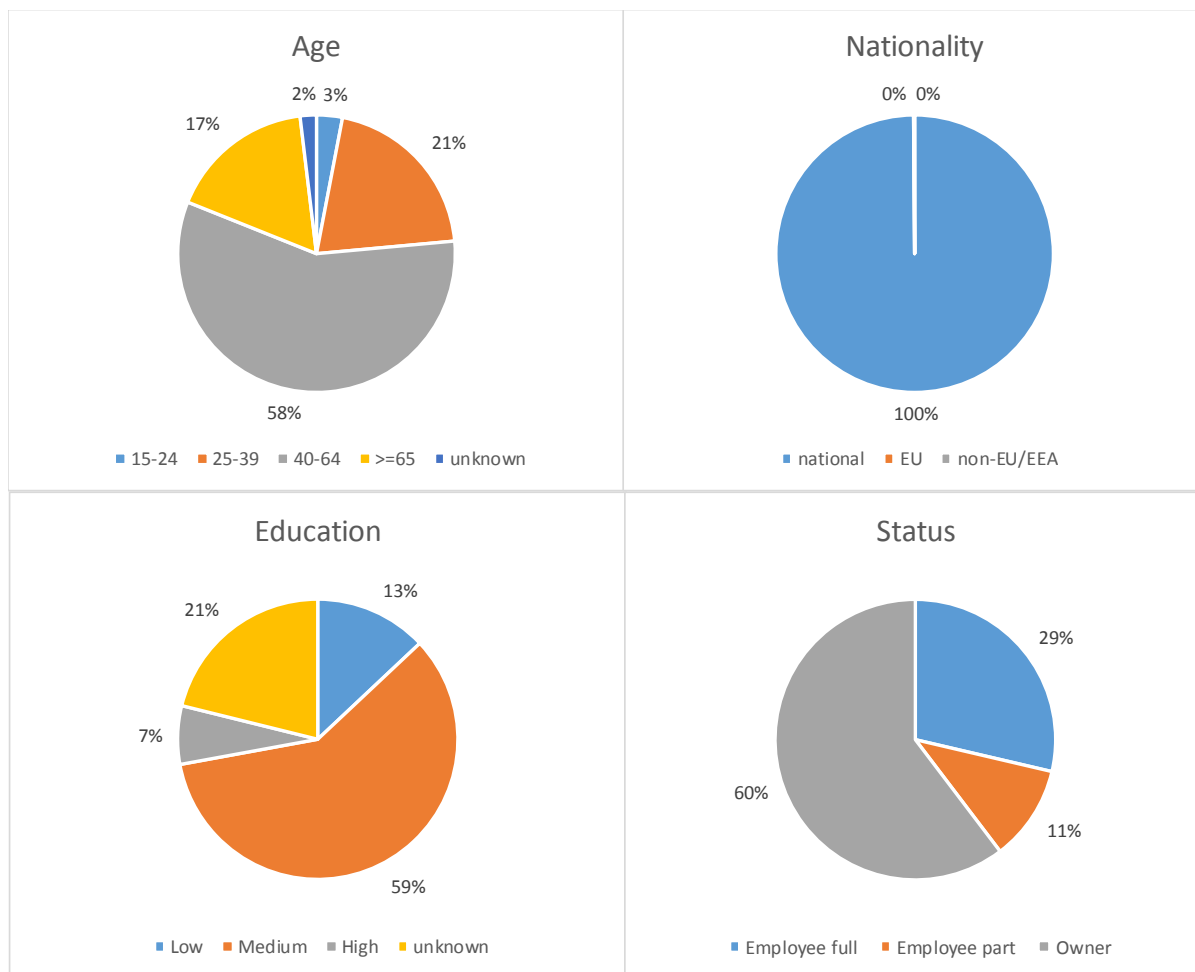
Education

Majority of reported data on the level of education and vocation refers to different kinds of medium level education (59%), since a type of education, according to the additional survey is not critical to becoming engaged in fisheries, especially in cases of large scale fisheries. Moreover, 60% of the respondents in an additional survey stated that their professional education is not related to fisheries at all. For the same reason, for 21% of respondents, the education level remained unknown. 13% of respondents reported a low level and 7% high level of education.

Regarding obligations on additional training, Marine Fisheries Act (Official Gazette no. 62/17, 130/17, 14/19) orders an obligation of finishing the exam on conducting commercial fisheries for responsible persons (license holders or authorized persons) and Maritime Code prescribes the rules on internationally recognized vocational training for skippers in different fleet segments.

Currently, there are 8 high schools in Croatia providing programmes on maritime engineering, nautical, shipping and logistics and there is also one programme specialized for fisheries and nautical with approximately 20 graduates per year (it hasn't been investigated how many of them work in fisheries sector). Although some results of the survey imply that broader system of formal education on fisheries is needed to improve fishers' knowledge and skills, for any conclusions on the level of specialization in the

fishing fleet and needs for additional programmes for fisheries, further investigation is needed.

Wide range of qualifications present in the fisheries sector is closely related to the seasonality of work in fisheries and also applies to increased needs in the tourism sector during the season. Also, inheriting family tradition could be a relevant factor for choosing a job in fisheries rather than profession from formal education since half of the respondents in the additional survey stated that fishing is a tradition in their families and a quarter of the respondents started the business as newcomers.

Regarding attitudes on additional education in fisheries, most of the respondents marked experience as the most relevant factor for successful fishing but also recognized skippers' education as a very important factor in fishing success (more important than crew's education). General opinion on additional education on a voluntary basis is positive but there is certain reluctance towards creating additional educational obligations for fishers. When asked about areas where additional education is needed, 65% of respondents marked "Knowledge on legal regulation", 57% marked "Paperwork and administration", 50% "Use of digital technology", 48% "Ecosystem and fish stock" and 46% "Specific fishing skills".

Employment in more detail (if available):
Out of 7890 persons employed in fisheries in 2017, 4760 (60%) were owners, 2261 (29%) full-time employees and 869 (11%) part-time employees. All of the owners counted in were engaged in fishing activities (in some cases, especially in large scale fisheries, owners were not involved in fishing activities so they were not counted in). All three segments – employee full, employee part and owner are dominated by men but some variations are still present in gender distribution - as mentioned, women are mostly included as employee part (28% of total employees part), supporting fishing activities on shore and men dominate as owners (98%).

Age distribution in employment status varies from the larger share of younger age groups in the category of employee full to almost insignificant share of younger age groups in the category of owners. The additional survey also showed a similar distribution in experience in fisheries, where fishers with more than 15 years of experience dominated in the group of owners.

A small share of young people in a group of owners suggests that there is a lack of initiative (or opportunities) in starting a business in fisheries for the newcomers. When asked about the motivation of young people to stay engaged in fisheries, the respondents agreed on the general lack of motivation. On the other hand, most of the respondents also would never recommend their children to also choose fisheries as future employment. These trends, according to age statistics, could lead to aging and absence of successors in fisheries business. On the other hand, 49% of the respondents would not change their job in fisheries for a job in the area of their professional education nor for a job in any other area which would require an additional education (for a higher salary than in fisheries).

Except for the hard work conditions and low income, some of the respondents, both in younger and older age groups mentioned complicated legal procedures which are not easy to follow when starting and obtaining business in fisheries, non-competitive fish price, insufficiently developed infrastructure and need of subsidies for the initial capital for starting a business (buying vessels and gears). Despite the tough work conditions, many of the respondents expressed an emotional connection with the job (you can work in fisheries only if you love it) and need of formal and informal education since the childhood in order to promote consuming fish and working in fisheries.

According to the Croatian Labour Act, fishers on board are provided with beneficiary work experience which enables them to retire earlier, as one year experience on board is counted as 1 year and 3 months of work experience in total. However, this rule does not apply to (vessel and/or family business) owners working on board.

Defining unpaid labour is particularly important for the segment of small scale coastal artisanal fleet which accounts for 3500 vessels in segments PGPVL0006 and PGPVL0612. Due to legal restrictions, authorized persons in this category could only be natural persons without legal rights to be involved in first sales and without obligations to pay social security fees. However, reporting on fishing activities is mandatory for this category so as for any other category of commercial fisheries. Since there is no income, salaries or any kind of remuneration in this category, all of the participants are considered as unpaid labour. Still, this category with a large number of participants is of great social importance as supplementary activity and food security for households.

2. Stratification / Segmentation
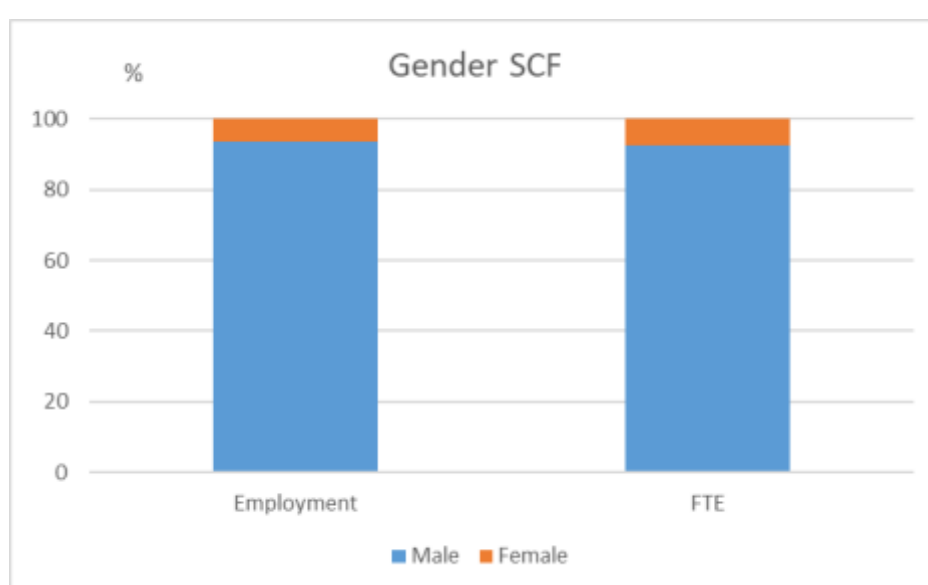
The number of people employed in small scale fleet reflects the number of vessels - 5290 (average 1 worker-owner per vessel + supporting family members) were involved in small scale fisheries, out of which 342 were women involved in activities on board or on shore. The number of fishers corresponds to 217 FTE (201 men and 16 women). Majority in SSF were self-employed - 78% were owners (mostly self-employed without employees), 14% Employee part and only 8% Employee full which may indicate the social vulnerability of this, in terms of social impact and social and cultural value, large fishing activity. In case of family businesses, it is not always easy to precisely calculate the number of working hours in fishing since they are often integrated with other activities – agriculture, transport or tourism or became a natural part of life, inseparable of other daily activities. Because of that reason, the number of working hours may be underestimated.

Although the majority of the fishers were in the age group of 40-64 years, a significant share (24%) was in a group of >=65, which implies family workers usually involved as unpaid labour and retired fishers in the category of small scale artisanal coastal fishing. Only 13% of the respondents in small scale fisheries were 25-39 years old and 1% 15-24 years old.

Half of the small scale fishers have a medium level education, 12% high and 8% low education. However, since a significant share of respondents missed to fulfil the data on

education and there wasn't any other resource of information, 29% of data on education for small scale fleet remained unknown. Almost with completely national workers, this segment again indicates relying on the family tradition and support of family members.
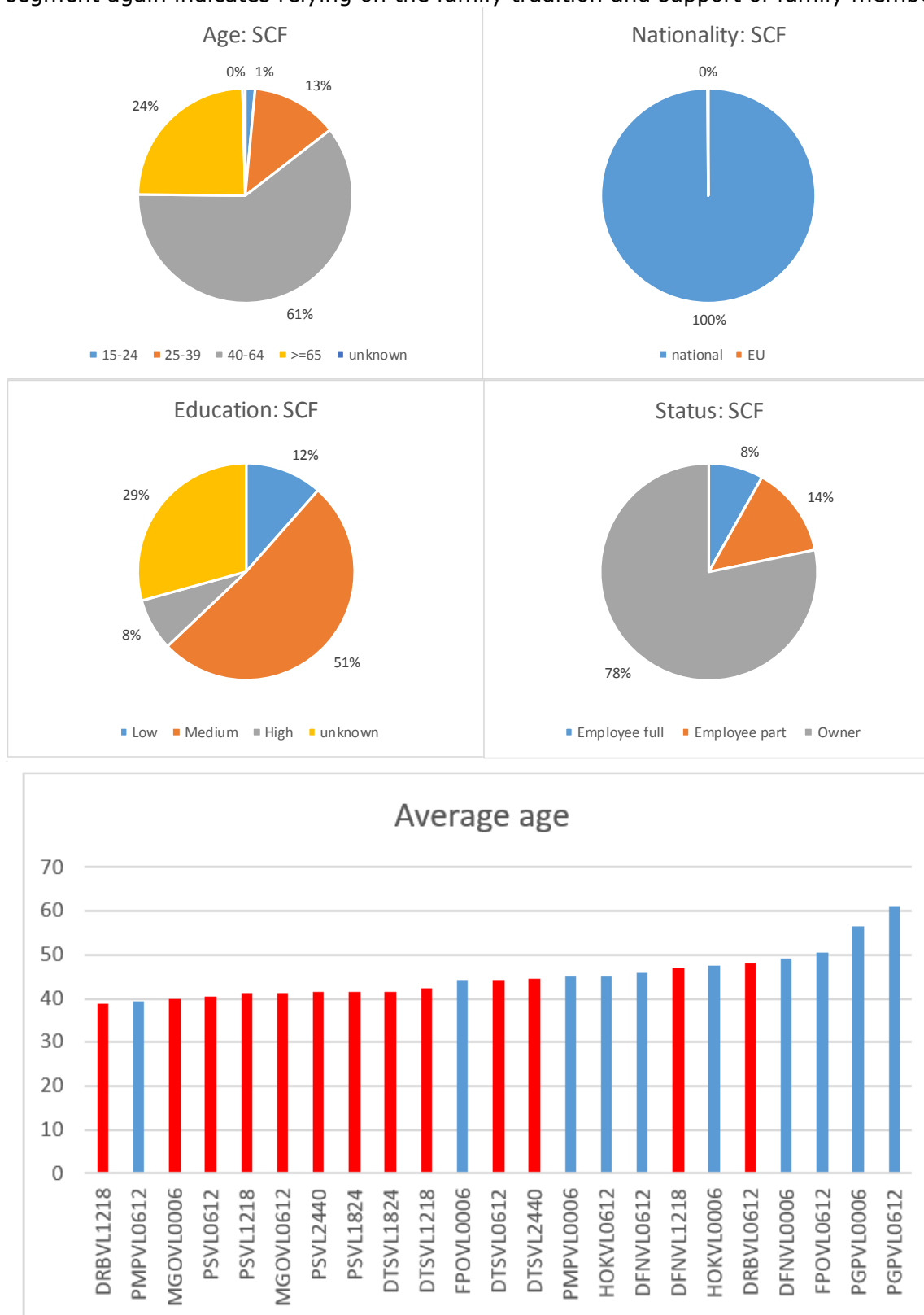
The average age varies between fleet segments as the activities of specific segment attract different age groups. According to data on year of birth, in average younger fishers are in large scale fleet (around 40 years) while fishers in small scale fisheries are in average around 50 years old with the oldest fishers in PGPVL0612, in average 62

years old. It has to be taken to account that during the competition for license holders in small scale coastal artisanal fisheries, an advantage was given to the older applicants.

Gender LSF

Age: LSF

Nationality: LSF

Education: LSF

Status: LSF
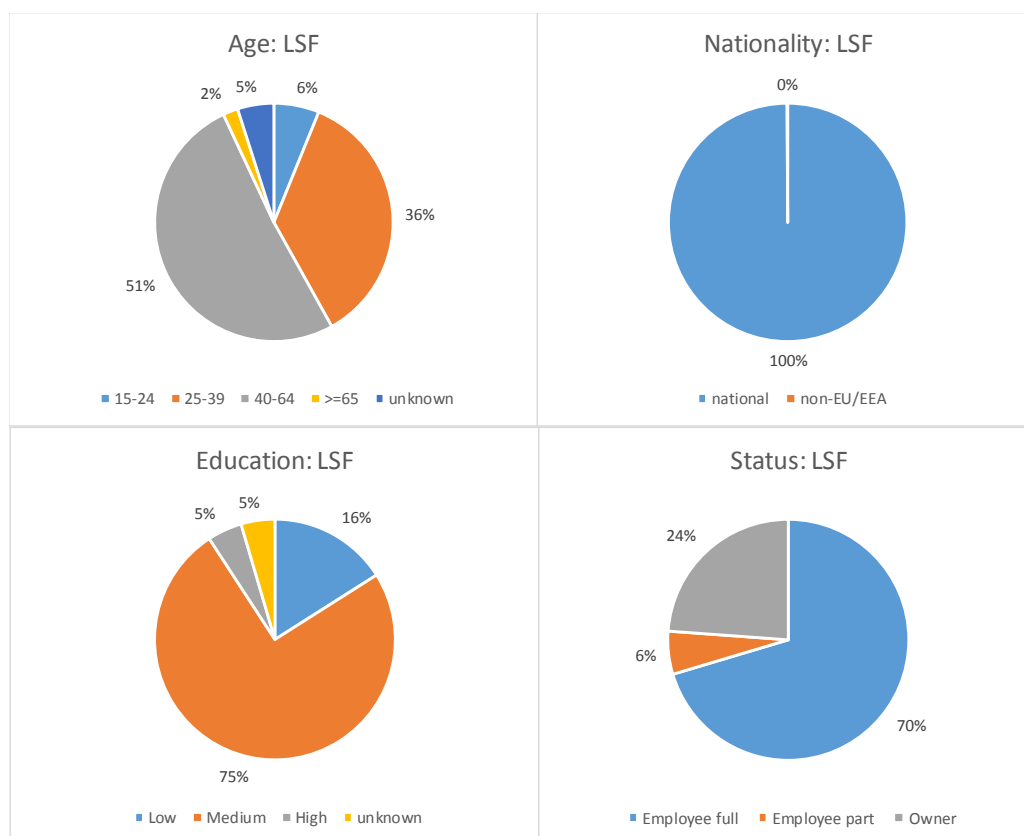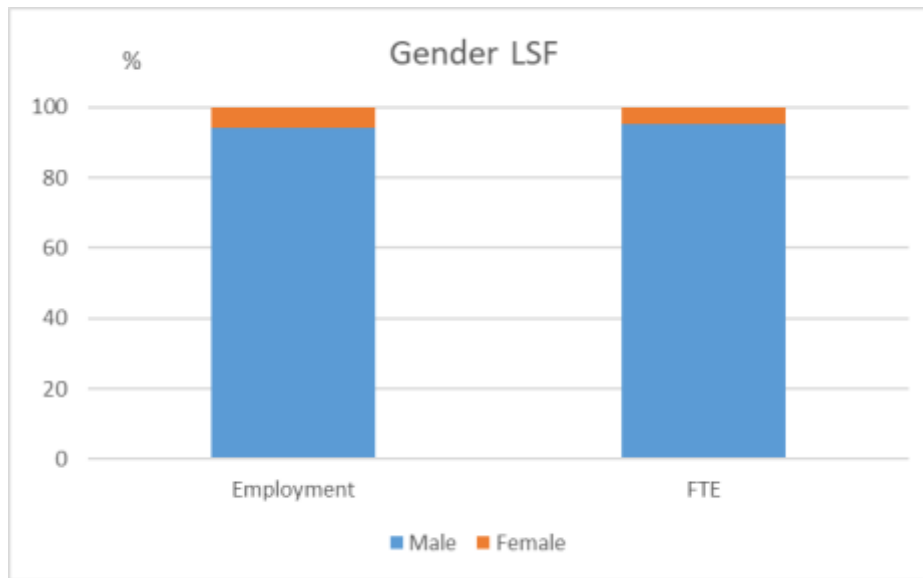
2600 people (average 3 crew members per vessel) were involved in large scale fisheries, which corresponds to 1380 male FTE and 69 female FTE. Also, age distribution by fishing activity reflected more vibrant activity in large scale fleet than in small scale fleet with a larger share of younger age groups (42% of fishers younger than 39 years, 2% >=65 years).

In contrary with small scale fleet, 24% of fishers are owners and majority (mostly on purse seiners and trawlers) worked as full-time employees (70%). However, in this group were also counted seasonal full-time workers, which was reflected in the

calculation of FTE. Similar as in small scale fleet, there are rare cases of foreign workers onboard and onshore.

75% of fishers in large scale fisheries have medium level education, the share of low-level education is a bit higher than in SCF with 16% and 5% of fishers have high-level education. An intensive fluctuation of labour force also left some marks on the social data collection – as formal education is mostly irrelevant for hiring on board, for some of crew members accountancy did not have data on education so in many cases it remained unknown.

Seasonality of work, overlapping with tourism, harsh work conditions, and relatively good income cause a big fluctuation in labour force in large scale fleet segments. According to survey results, half of the owners' have to employ the new employees once or a few times a year. In addition, the results of additional survey suggest that employees from large scale vessels are more likely to think about changing profession while fishers in small scale fleet, often the only working onboard have expressed more social and cultural connections with a nature of fishing job and are less likely to think about changing profession, especially in cases of financial dependency on fisheries, but independent of their professional education.

4. Challenges
Challenges in the social aspect of fisheries are complex and multi-dimensional. Retaining skilled and motivated crew members and owners in fisheries could be a basis for further improvement of employment stability. A strong family tradition in fisheries could be an advantage for getting fishing rights and with careful management could bring benefit both to fishers and community. However, the motivation of youngsters to choose employment in fisheries is not so strong, due to harsh work conditions, complicated legal requirements and difficulties in market access.

Although fishers, in general, consider themselves skilled and enough educated, there are still a lot of opportunities and will to improve the welfare in the fishing sector, both from the administrative and scientific advice, which could increase the attractiveness and stability of fisheries' sector. While most of the fishers are well skilled for catching fish, knowledge, and opportunities on sales of fish and commercialization of fishing products need to be improved in order achieve better prices and placement of fish products which further could lead to reasonable work conditions and less exposure to dangerous situations at sea.

Regarding the safety issue, Commission recently adopted a report calling on the EU Member States to ratify STCW-F Convention on Standards of Training, Certification, and Watchkeeping for Fishing Vessels Personnel, which should offer extra protection to fishers. In addition, according to the economic report, the overaged fleet could also indicate potential safety issues.

Another way to achieve this goal is the added value of fish products through branding of domestic fish and promotion of traditional and local processed products. The role of women, often overlooked in fisheries, could be of critical significance for this task. Taking this way could mean more involvement of women but also ensuring successors in families. To make this step forward, it is necessary to improve a network of local fisheries organizations and direct the activities of FLAG's in this direction.

The knowledge of fishers regarding ecosystem and sustainability could also be improved through communication with scientific institutions. According to the additional survey, fishers have no strongly expressed attitudes about scientific advice on certain stocks, but they are in most cases willing to be involved in process of data collection for the scientific purposes which could make some benefit for both sides.

5. Data issues

Data collected through the social data collection reflect the labour in fishing activities for the sampling units – fishing vessels. The data has been raised to the total number of jobs according to the economic data report. Although socio-economic and social data collection have been conducted together with minimized differences in methodology and the collected sample is considered as a representative, there could be a possibility of discrepancies after raising data to the total. For further data collection, along with upcoming changes in the procedure of Croatian data collection, a better response is expected. Therefore, besides the social data provided by license holders, there is also need for better understanding of the legal basis for employment and social security in the fisheries sector, so as a better understanding of relations between social and economic indicators provided through socio-economic data collection.

5.4. Cyprus

1. Social structure of the fishers' population
Cyprus fishery is dominated by small-scale vessels dispersed across many landing places. The Small-Scale Fleet (vessels under 12m using passive gears) is by far the most significant segment of the Cyprus fleet since it represents around the 95% of the total fleet in terms of number of vessels and thus, employment.

The small-scale fleet segment is mainly operated with bottom set nets and bottom longlines, targeting demersal species. Cyprus Fisheries Law[7] provides for a limited number of licenses for this segment annually and divides it into three (3) subcategories: vessels with fishing license category A' (full-time activity in fisheries), vessels with fishing license category B' (part-time activity in fisheries) and vessels with fishing license category C' (periodic activity in fisheries). The fishing activity of the professional fishing license category (C) is performed on a periodic basis since they are allowed to fish only a total of 70 days each year. Consequently, their income from fisheries activities is too low and they do not use any assistants in their fishing activities.

The large –scale fleet composes of *Polyvalent passive gears vessels* and trawlers *with length >12m.* Vessels using *Polyvalent 'passive' gears with length ≥12m* range from 12-26m (the large majority from 12-18m) and are engaged in two fisheries; mainly in the large pelagic fishery using drifting longlines and operating around Cyprus waters and the eastern Mediterranean (targeting swordfish, bluefin tuna and albacore), but also in the inshore demersal fishery using mostly set nets and set longlines. A limited number of licenses are provided for this segment annually.

Demersal trawlers range from 22-27 m. The licensed trawlers are categorised, based on their type of license, in those fishing in the territorial waters of Cyprus and those fishing in international waters (eastern and central Mediterranean). A small number of non-exclusive trawlers may receive a license for participating at the large pelagic fishery as well.

Employment was estimated at 1 134 jobs in 2017, a 2% increase from the 1 117 jobs in 2016. Even if the increase is small it is an important sign for employment if taking into account that the previous three years it was reducing mainly due to the scrapping of vessels. Around 30% of the vessels of A' and B' category of small-scale fleet segment were scrapped with public aid within the framework of the Scheme of Permanent Cessation, co-funded by the European Fisheries Fund 2007-2013 and the European Maritime and Fisheries Fund 2014-2020 and their licences were cancelled, resulting in a significant reduction in the number of licenced vessels and thus, employment.

In 2017, the total jobs corresponded to 689 FTEs, an increase of 3% compared to 2016 (668 FTEs), or about an average of 2 fishers per vessel or 1 FTE per vessel in 2017.

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[7] Basic Fisheries Law Cap. 135 and subsequent amendments of 1961 to 2007, Fisheries Regulations of 1990 to 2012 based on Article 6 of the Basic Law.

Very few women have professional fishing licences. In SSCF there are three women who have professional licences and only one woman in the LSF segment is employed in professional fishing. The women have low or medium level of education.

Numbers involved in Fisheries harvesting by gender
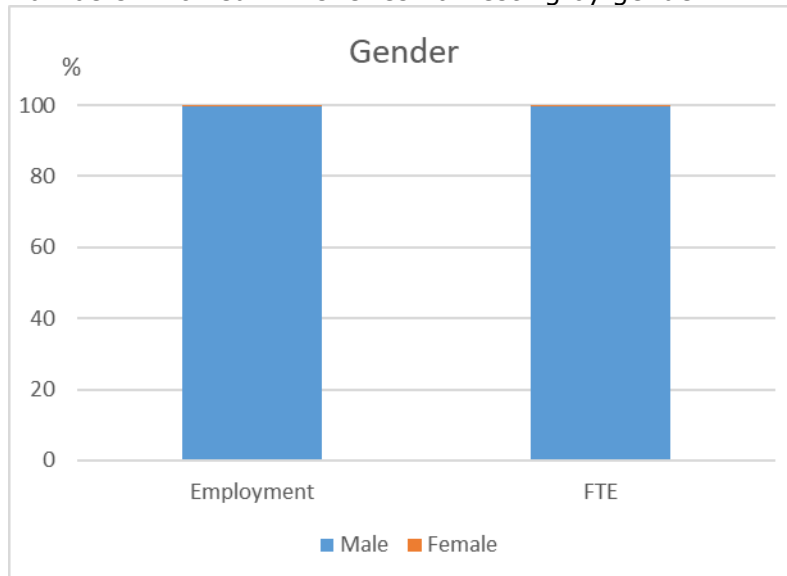
Demographic data of fishers population
As shown below, most of the fishers 88%, are nationals. In the SSCF both owners and assistants are all Cypriots or EU nationals. The non-EU nationals are employed only in LSF segments. The majority of the fishers are aged 40-64 years old. Young fishers employed in fishery is around 10% only. It is nearly the same percentage as the owners older than the age of 65.

As for the education level, the majority of the fishers (57%) are of low education level, whereas the minority, only 6%, has high education level. The rest of the fishers, around 30% have finished high school.

Most of the fishers (88%) are owners of the vessels. Most of the owners with the exemption of 1-2 cases are Cypriot nationals. According to the national legislation only individuals can hold a small-scale inshore fishing licence. The SSCF vessels with fishing license category C' (periodic activity in fisheries) do not have any assistants. All of them are Cypriot individuals. As for the owners of the vessels of SSCF with fishing license category A' (full-time activity in fisheries) and the vessels with fishing license category B' (part-time activity in fisheries) are allowed to have one or two assistants the most. On the other hand, the large –scale fleet of Polyvalent passive gears vessels and trawlers with length >12m are allowed to use a number of assistants. In the case of trawlers the owners do not go onboard and thus, all the crew are employees and with small exemptions they are all non-EU nationals. However, the owners of the Polyvalent passive gears vessels with length ≥12m go onboard and work full-time. All of their employees are non-EU nationals.

Age — 15-24, 25-39, 40-64, >=65, unknown
0%, 10%, 25%, 8%, 58%

Nationality — national, non-EU/EEA
88%, 12%

Education — Low, Medium, High, unknown
57%, 28%, 6%, 9%

Status — Employee full, Owner
12%, 88%
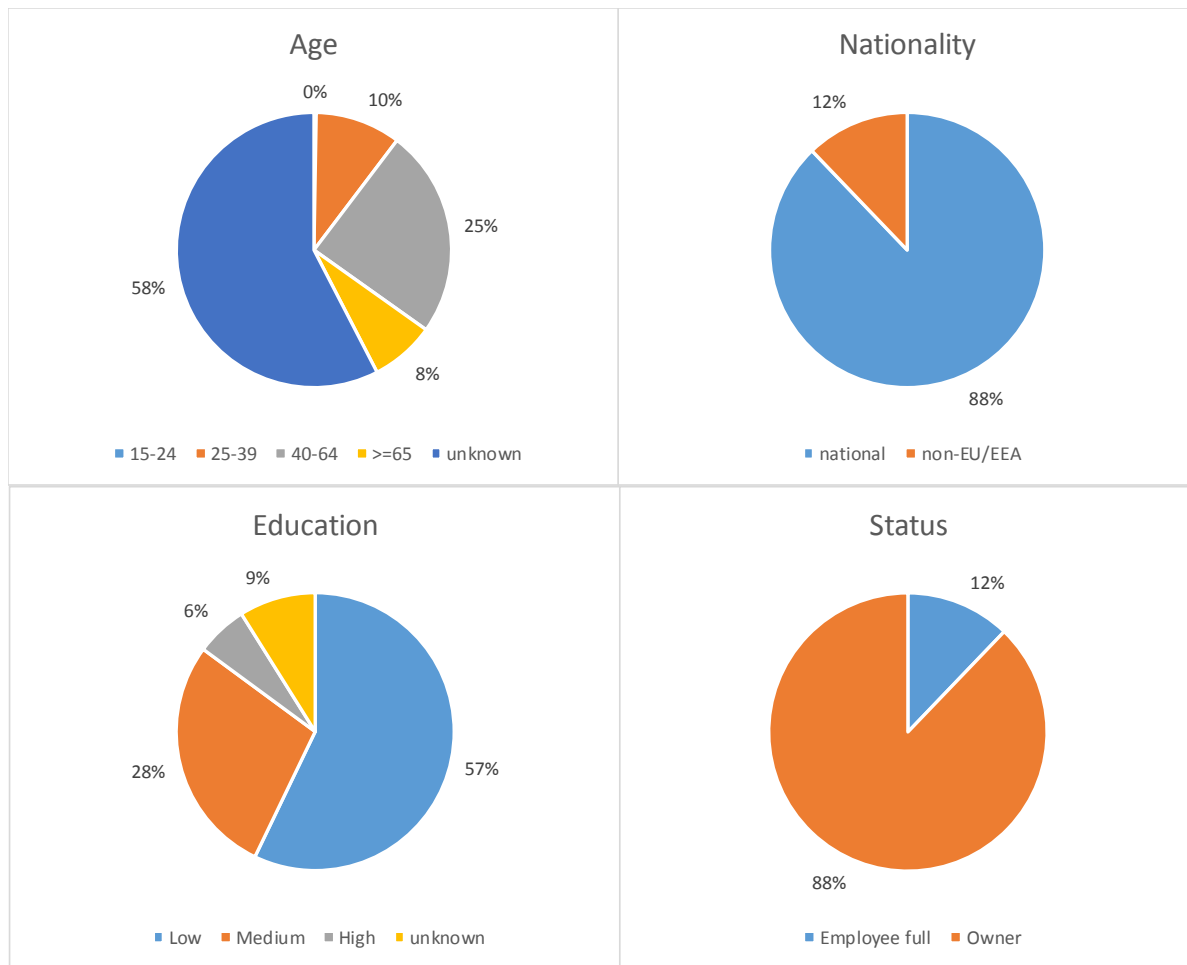
2. Stratification/Segmentation

Small - Scale Fleet (SSCF)

The total persons employed in SSCF was estimated at 962, corresponding to 517 FTEs in 2017. There is a big difference between the number of total jobs and the FTE because most of the fishers do not have the fishing profession as their main activity. As described above there are (3) subcategories of SSCF: vessels with fishing license category A' (full-time activity in fisheries), vessels with fishing license category B' (part-time activity in fisheries) and vessels with fishing license category C' (periodic activity in fisheries). Fishing is the main activity only for the owners of the fishing license category A'. The other two categories B' and C' do not have fishing as their main profession.

Based on the national law the fishers in small-scale fishery should be individuals. All the fishers with the exemption of 1 person are Cypriots. The vast majority of fishers are men. There are only 3 women who hold a professional fishing licence. The age of most of the fishers is unknown, but from those whose age is known the majority (17%) belong to the 40-64 years old age group. The majority of fishers are of low education level, estimated at 54%, whereas 29% are of medium education and only 7% of high education. In terms of status, all the fishers who hold licences category C' whom do not have fishery as their main professional activity, are owners since they do not have any assistants. As for the licences categories A' and B' the majority of fishers are owners but there is a significant number of assistants too (59% and 41% respectively). All of the fishers working in coastal inshore fishery are considered as unpaid labour.

Gender SCF

Age: SCF

25-39 — 6%
40-64 — 17%
>=65 — 9%
unknown — 68%

Nationality: SCF

national — 100%

Education: SCF

Low — 54%
Medium — 29%
High — 7%
unknown — 10%

Status: SCF

Owner — 100%
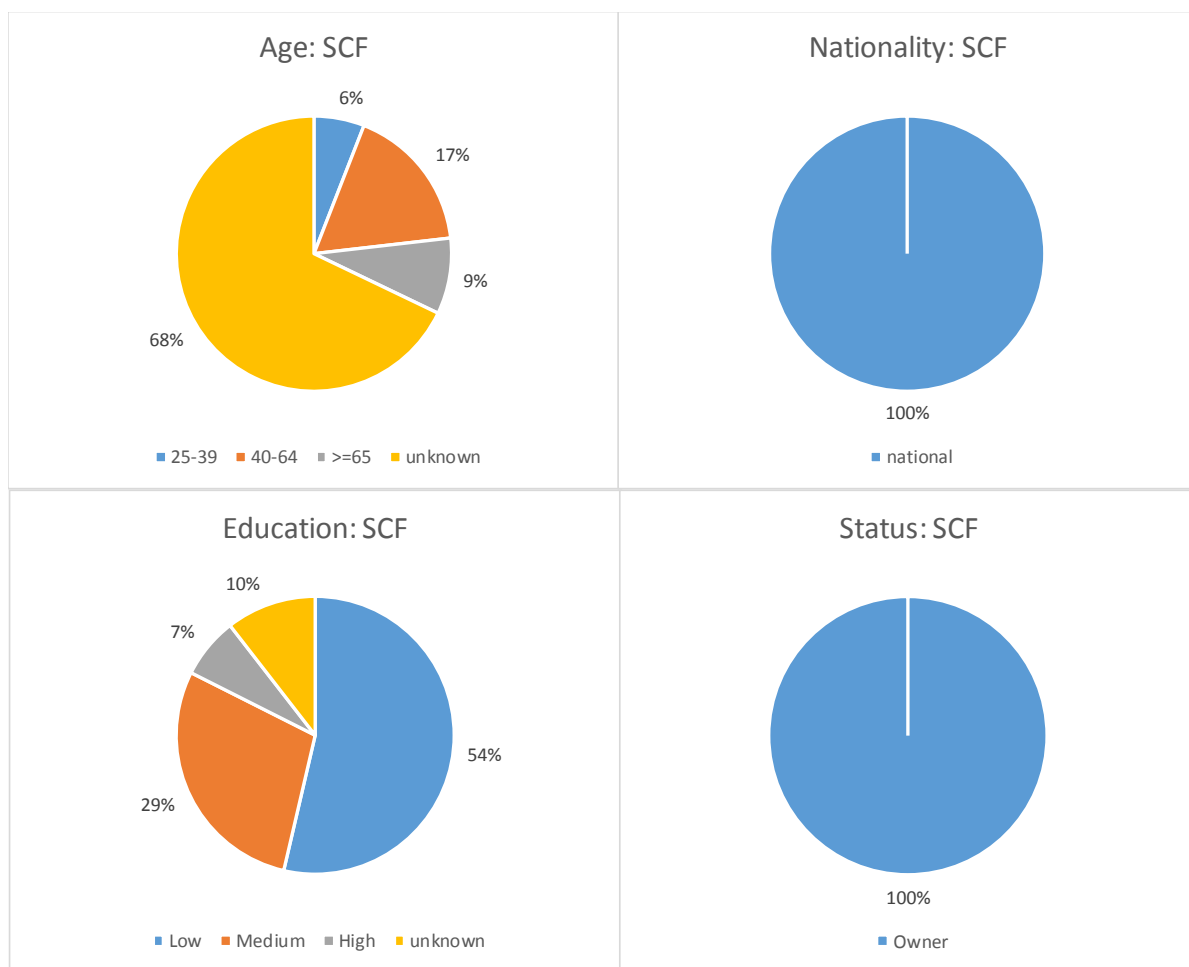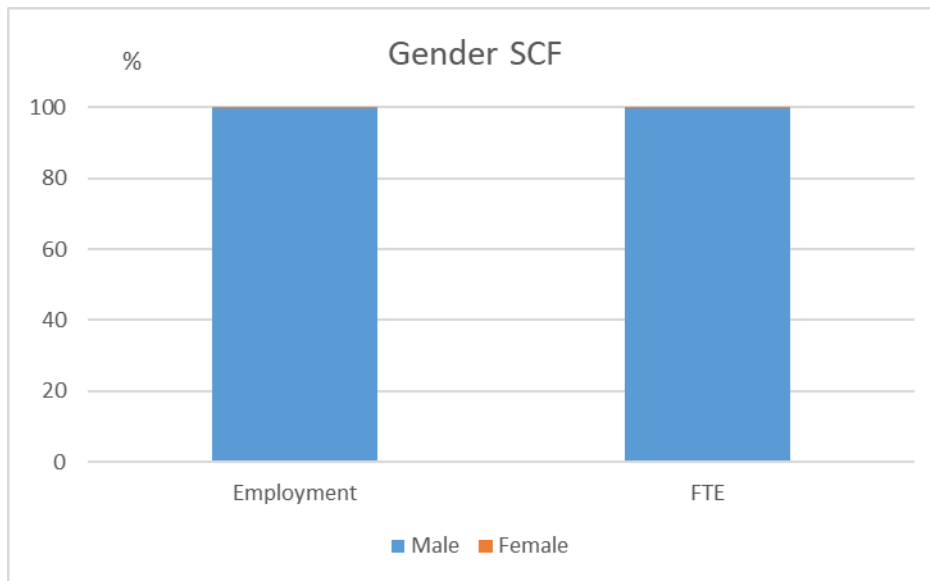
Large- Scale Fleet (LSF)

In 2017 the total engaged crew is estimated at 172 jobs, corresponding to 172 FTEs. The 34 owners of the Vessels using *Polyvalent 'passive' gears with length ≥12m* are working onboard and they are considered as unpaid labour. Among them there is one woman. She is the only woman in the LSF since all the rest are men. The owners of the demersal trawlers do not work onboard.

Except for the owners in the LSF who are all Cypriots and account for the 20% of the total number of fishers in LSF, all the rest, 80%, are full-time employees and all of them are non-EU nationals. Most of them are not working all year around but for certain months, mainly the summer ones during the large pelagic fishery when they target swordfish and albacore.

The vast majority of the fishers, 65%, belong to the 40-64 age group, whereas the fishers aged 25-39 years old is estimated at 33%. The young fishers at the age group 15-24 years old represent only the 2% of the total number of fishers in the large fleet segment, showing that an age renewal problem exists in Cyprus fishery. The young people are not interested in dealing with such a difficult profession with uncertain, low income.

Nearly all the employees who, as explained above, are all non-EU nationals are low educated representing the 77% of the total fishers. In contrary, the owners who are all Cypriots are medium educated representing the 23% of the total fishers.

Age: LSF — 2%, 33%, 65% (15-24, 25-39, 40-64)

Nationality: LSF — 20%, 80% (national, non-EU/EEA)

Education: LSF — 23%, 77% (Low, Medium)

Status: LSF — 20%, 80% (Employee full, Owner)
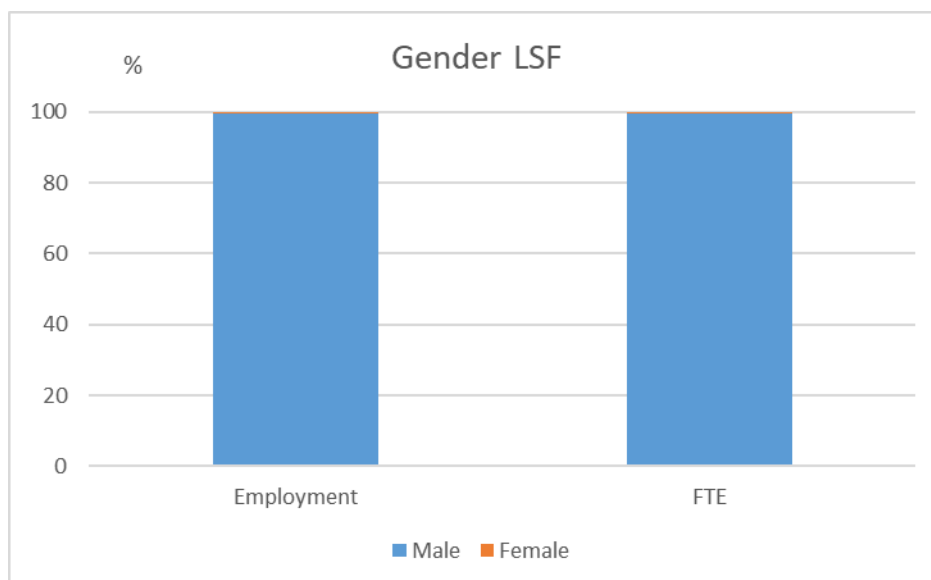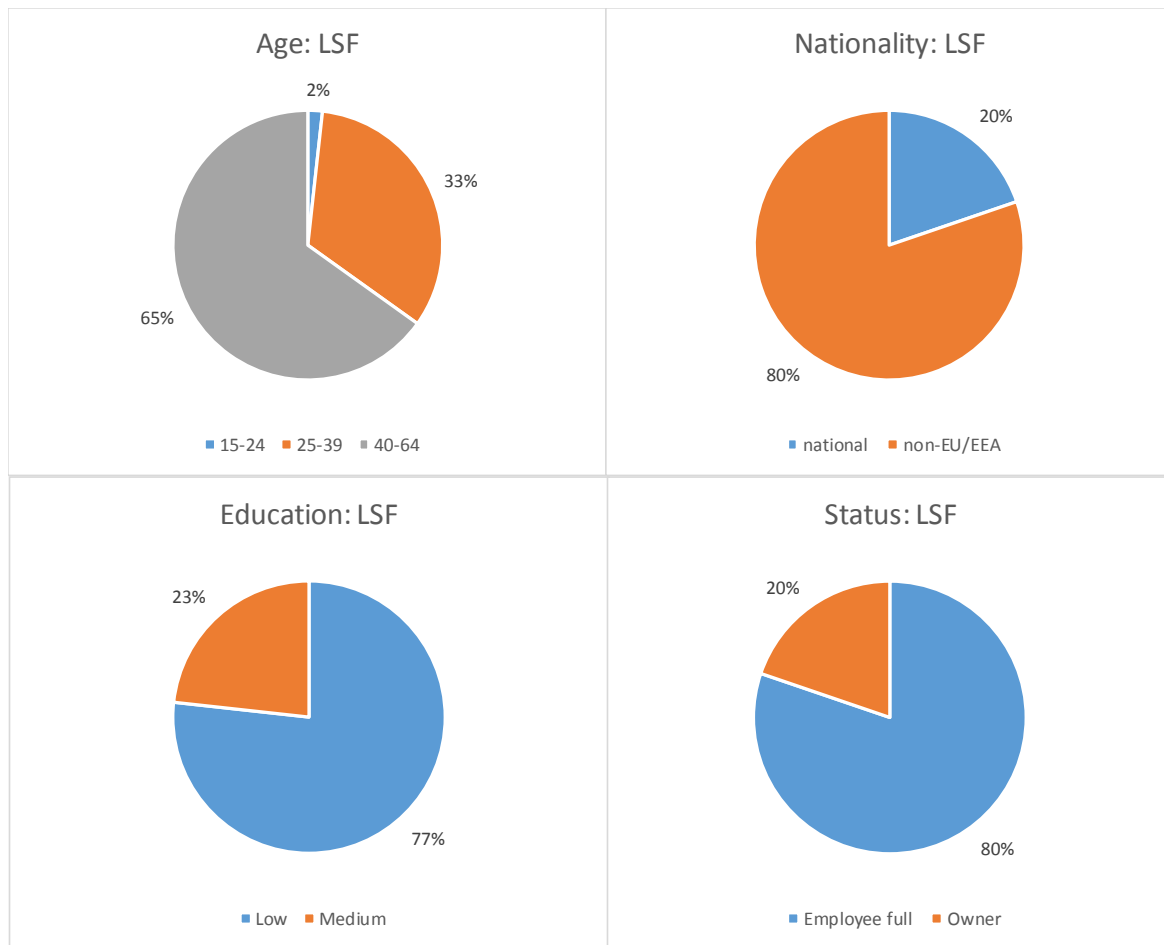
3. Summary text

Obviously, there is a problem of age renewal in Cyprus fishery both in SSCF and LSF since the majority of the fishers are aged 40-64 years old. Moreover, most fishers are of low education and thus, training may be a necessity. Very few women, only 4 are dealing professionally with fishing.

The vast majority of the fishers are Cypriots. Actually, all the fishers in SSCF, who according to national law have to be individuals, are Cyprus nationals no matter if they are the owners or the employees. On the other hand, all the employees in the LSF are non-EU nationals. They are full time employed in fishery but, most of them are working for certain months during the pelagic fishery season of albacore. As it is in the case of SSCF all the owners of the LSF are Cypriots.

As for the status of fishers all the owners of SSCF and the ones of the polyvalent passive gears vessels with length >12m are directly involved in fishing. This is not the case for the trawlers, where the owners do not work onboard.

In SSCF an important number of fishers do not have fishing as their only source of income or even their main job and thus, there is a significant difference between the total people employed in fishing and the FTEs.

4. Challenges

Due to the fact that the young people are the minority among fishers it is important to give incentives to young fishers to enter this profession. Also due to the fact that most of the people are low educated, trainings may need to take place to help the fishers with their profession.

5.5. Denmark

1. Social structure of the fishers' population

Denmark had in 2017, 2,082 persons employed in the fisheries sector, with 1,861 males, 105 females and 116 persons whose gender has not been reported.

Numbers involved in Fisheries harvesting by gender

Demographic data of fishers population

Most of the persons (54%) employed in the fisheries sector were between 40 and 64 years old. Most of them (93%) were Danish and some (6%) from other EU countries. The presence of persons from EEA countries and non-EU/EEA was very small.

Age

6% 0% 8%
18%
19%
54%

■ <=14 ■ 15-24 ■ 25-39 ■ 40-64 ■ >=65 ■ unknown

Nationality

6% 0%
93%

■ national ■ EU ■ EEA ■ non-EU/EEA ■ unknown

Education

8%
3%
42%
47%

■ Low ■ Medium ■ High ■ unknown

Status

48%
52%

■ Employee ■ Owner

2. Stratification / Segmentation

Gender SCF

%
100
80
60
40
20
0

Employment

■ Male ■ Female ■ Unknown

Age: SCF

Segment	Percentage
15-24	1%
25-39	10%
40-64	46%
>=65	42%
unknown	1%

Nationality: SCF

Segment	Percentage
national	97%
EU	3%

Education: SCF

Segment	Percentage
Low	56%
Medium	37%
High	3%
unknown	4%

Status: SCF

Segment	Percentage
Employee	12%
Owner	88%

Gender LSF

Segment
Male
Female
Unknown

Employment

Age: LSF

8% 0% 11%

9%

23%

57%

■ <=14 ■ 15-24 ■ 25-39 ■ 40-64 ■ >=65 ■ unknown

Nationality: LSF

7% 0% 1% 0%

92%

■ national ■ EU ■ EEA ■ non-EU/EEA ■ unknown

Education: LSF

10%

2%

37%

51%

■ Low ■ Medium ■ High ■ unknown

Status: LSF

33%

67%

■ Employee ■ Owner

5. Data issues
Data on FTE and unpaid labour by gender have not been reported.

5.6. Estonia

1. Social structure of the fishers' population

Demographic data of fishers population
The Estonian Baltic Sea fishing fleet is nationally divided into a large-scale fleet (LSF) and a small-scale coastal fleet (SSCF). The LSF operates outside the coastal zone using pelagic trawls. The SSCF operates in Estonian coastal waters using mainly passive gears.

Total employment was estimated at 2,100 jobs, corresponding to 483 FTEs in 2017. The big difference between numbers of total employed and FTE refers that there are many persons in the sector for whom fishing is not the only source of income. However, it mainly concerns the small scale coastal fishery. Most fishers are men with only 2% of women employed in professional fishing. The majority, 59% of fishers are between 40-64 years old. Younger fishers (25-39 years) make up a small percentage of the total with 10%. Considering nationality, fishers are dominated by Estonians (98%). The share of fishers with medium and high level of education is 82% and 18%, respectively. In terms of status the balance between employees and owners is quite equal, 49% and 51% respectively.

Age

- 25-39: 10%
- 40-64: 59%
- >=65: 31%
- 0: 0%

Nationality

- national: 98%
- EU: 0%
- non-EU/EEA: 2%

Education

- Low: 1%
- Medium: 82%
- High: 18%

Status

- Employee: 49%
- Owner: 51%
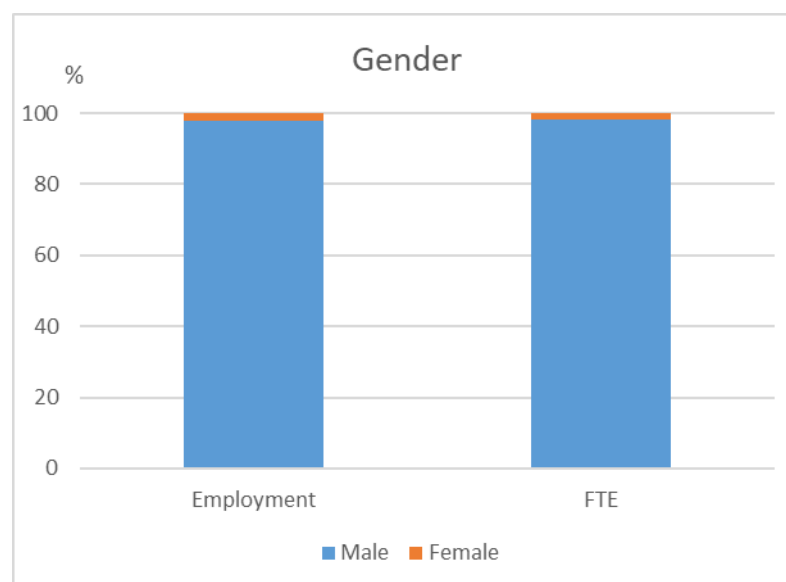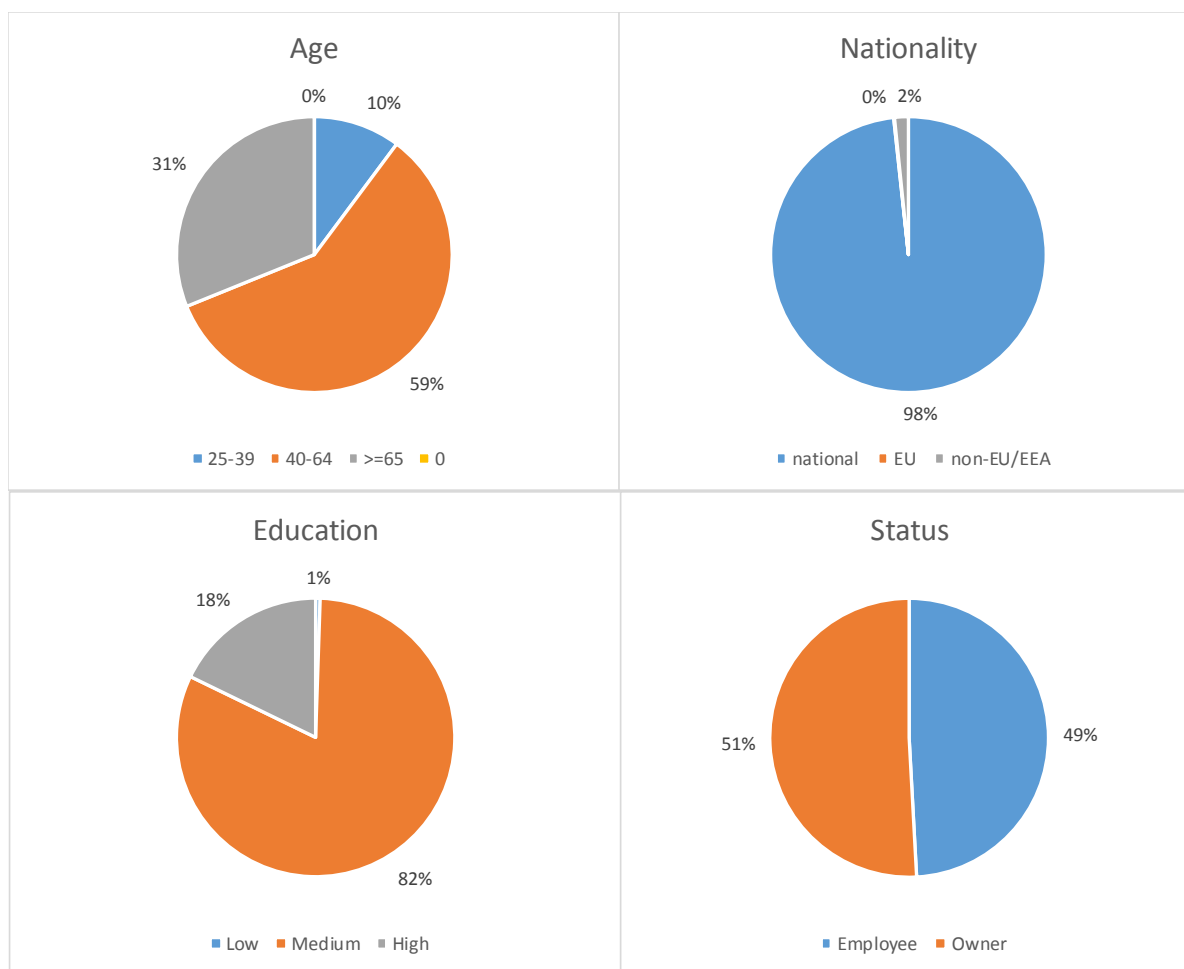
2. Stratification/Segmentation

Small-scale coastal fisheries (SSCF)

SSCF employment was estimated at 1,950 jobs, corresponding to 333 FTEs in 2017. The big difference between numbers of total employed and FTE refers that there are many persons in the segment for whom fishing is not the only source of income. Most of fishers are men. Only 2% of women are employed in professional coastal fishing. The majority, 57% of fishers are aged 40-64 years old. Younger fishers make up a small percentage of the total with 10%. Fishers involved in the coastal fishery are all Estonians. The share of fishers with medium and high level of education is 81% and 19%, respectively. In terms of status the balance between employees and owners is inclined towards the owners, 45% and 55% respectively.

Gender SCF

Age: SCF

10%

31%

57%

■ 25-39 ■ 40-64 ■ >=65

Nationality: SCF

100%

■ national

Education: SCF

19%

0%

81%

■ Low ■ Medium ■ High

Status: SCF

45%

55%

■ Employee ■ Owner
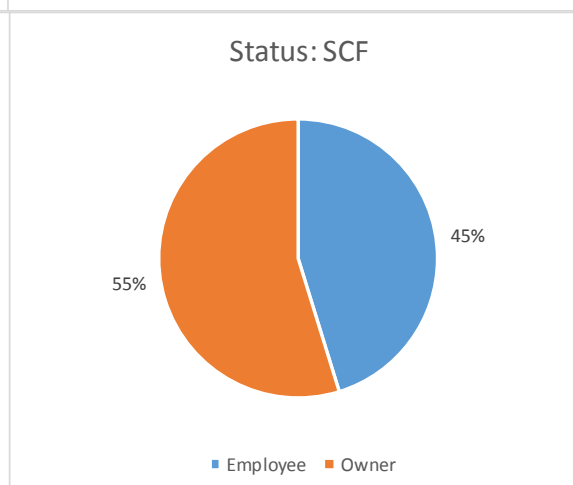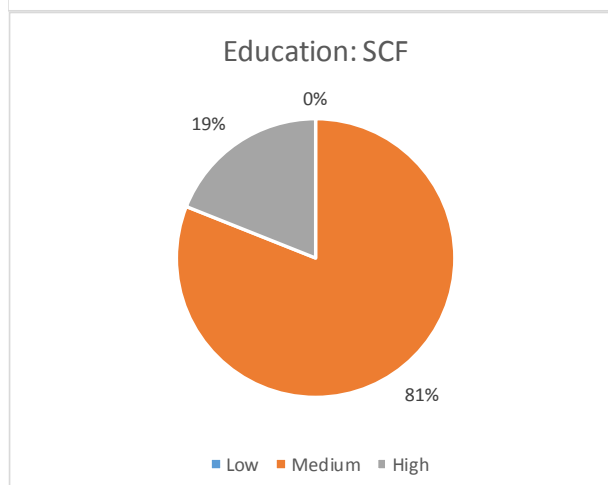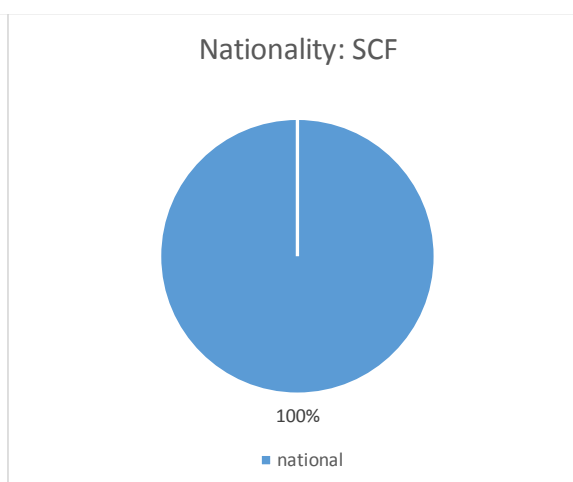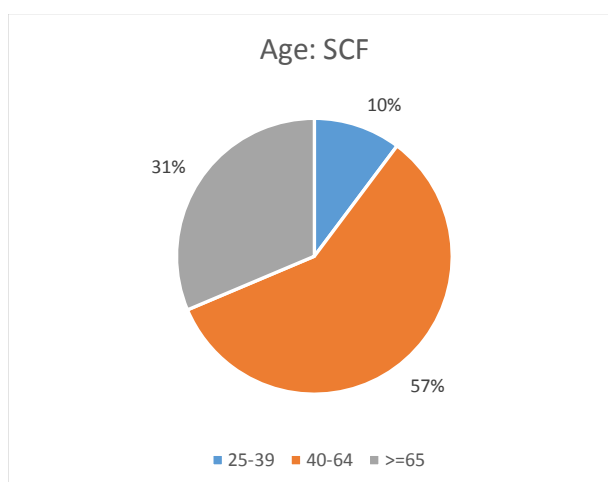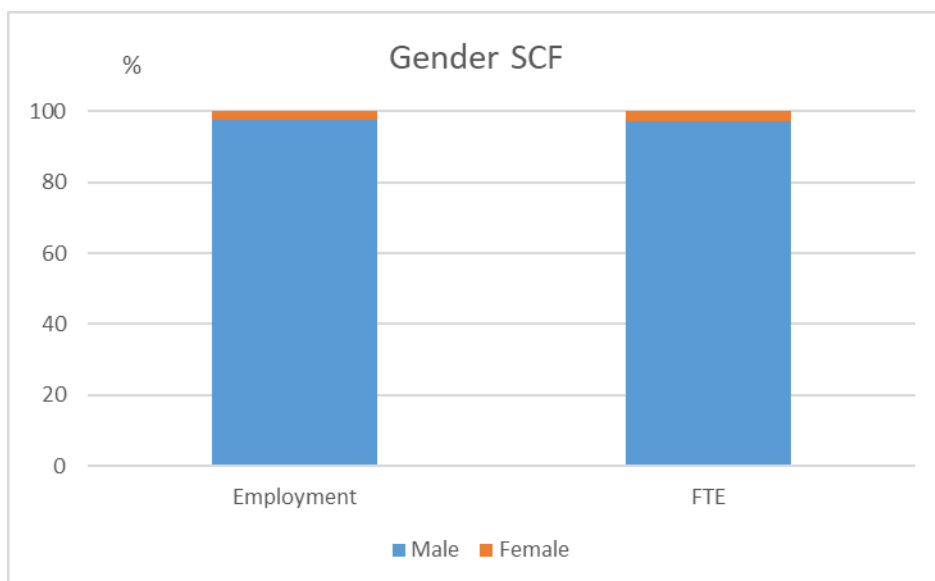
Large-scale fisheries (LSF)

Total employment was estimated at 150 jobs, corresponding to 150 FTEs in 2017. All fishers are men. The majority, 79% of fishers are aged 40-64 years old. Younger fishers (25-39 years) make up quite a small percentage of the total with 14%. Considering nationality LSF fishers are dominated by Estonians (76%). But also fishers with other EU and non-EU/EAA nationalities are represented, 1% and 23% respectively. The share of

fishers with low, medium and high level of education is 7%, 90% and 3%, respectively. In terms of status only employees are directly involved in fishing.

Gender: LSF

%

Age: LSF

Nationality: LSF

Education: LSF

Status: LSF
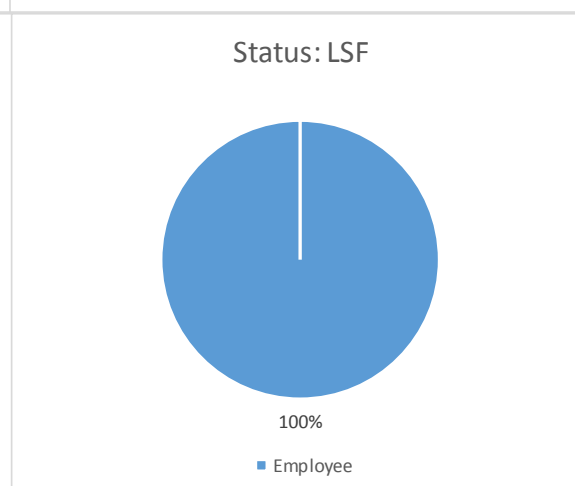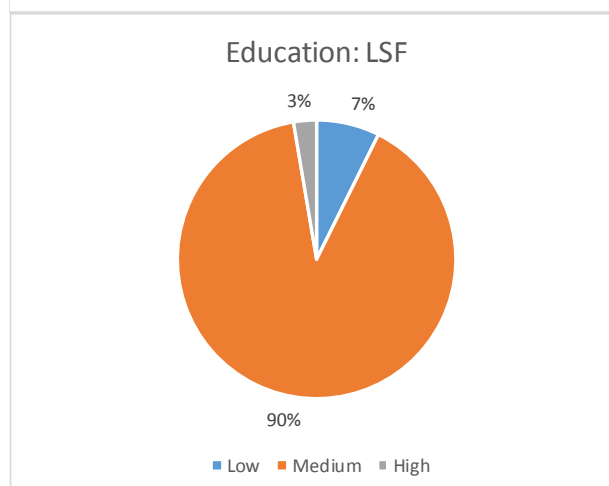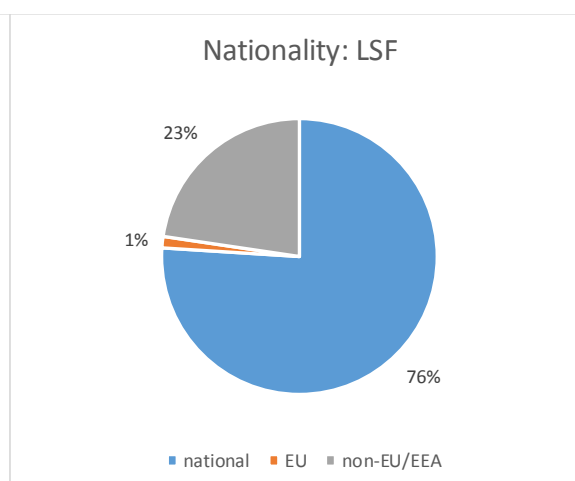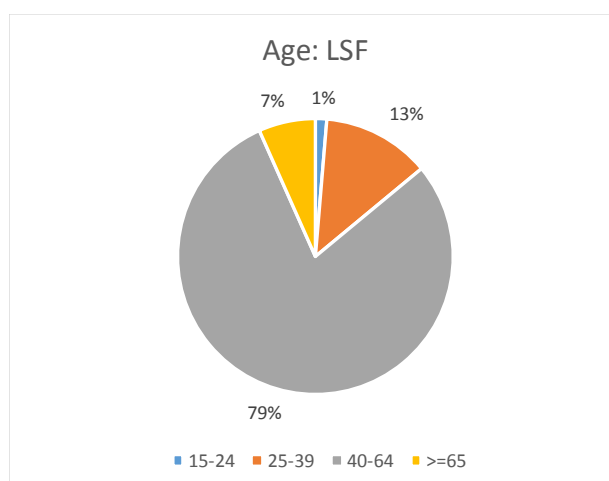
3. Summary text

In short, most of Estonian fishers are well-educated 40-64 years old men having Estonian nationality. Although there are differences, it is broadly suitable for

characterizing both (SSCF, LSF) segments. The most important differences between the two segments are:

- LSF fishers are full time employed. In SSCF there is a big difference between numbers of total employed and FTE which refers that for many persons in the segment professional fishing is not the only source of income.

- In case of LSF all fishers working on board are men. However, 2% women are employed in professional coastal fishing.

- Fishers involved in coastal fishery are all Estonians, but LSF fishers include also other EU and non-EU/EAA nationalities.

- In terms of status only employees are directly involved in fishing in LSF. In SSCF the balance between employees and owners is inclined towards the owners.

4. Challenges

Average age of coastal fishers is quite high. Also, there is a tendency of historical fishing rights being bought by companies engaged in hobby fishery under the label of commercial fishing. This has led to a situation where young people and newcomers from coastal villages cannot enter the sector due to high prices and high initial investment.

5. Data issues

The data concerning social variables were collected as listed and defined in Commission Decision (EU) 2016/1251. The survey was carried out on a voluntary basis.

5.7. Finland

1. Social structure of the fishers' population

Numbers involved in Fisheries harvesting by gender

In Finland in 2017 there were 1,230 fishers, 245 in terms of FTE, of which 90% was male.

Age

- 15-24: 5%
- 25-39: 17%
- 40-64: 76%
- >=65: 2%

Nationality

- national: 93%
- EU: 7%

Education

- Low: 40%
- Medium: 48%
- High: 12%

Status

- Employee: 32%
- Owner: 68%
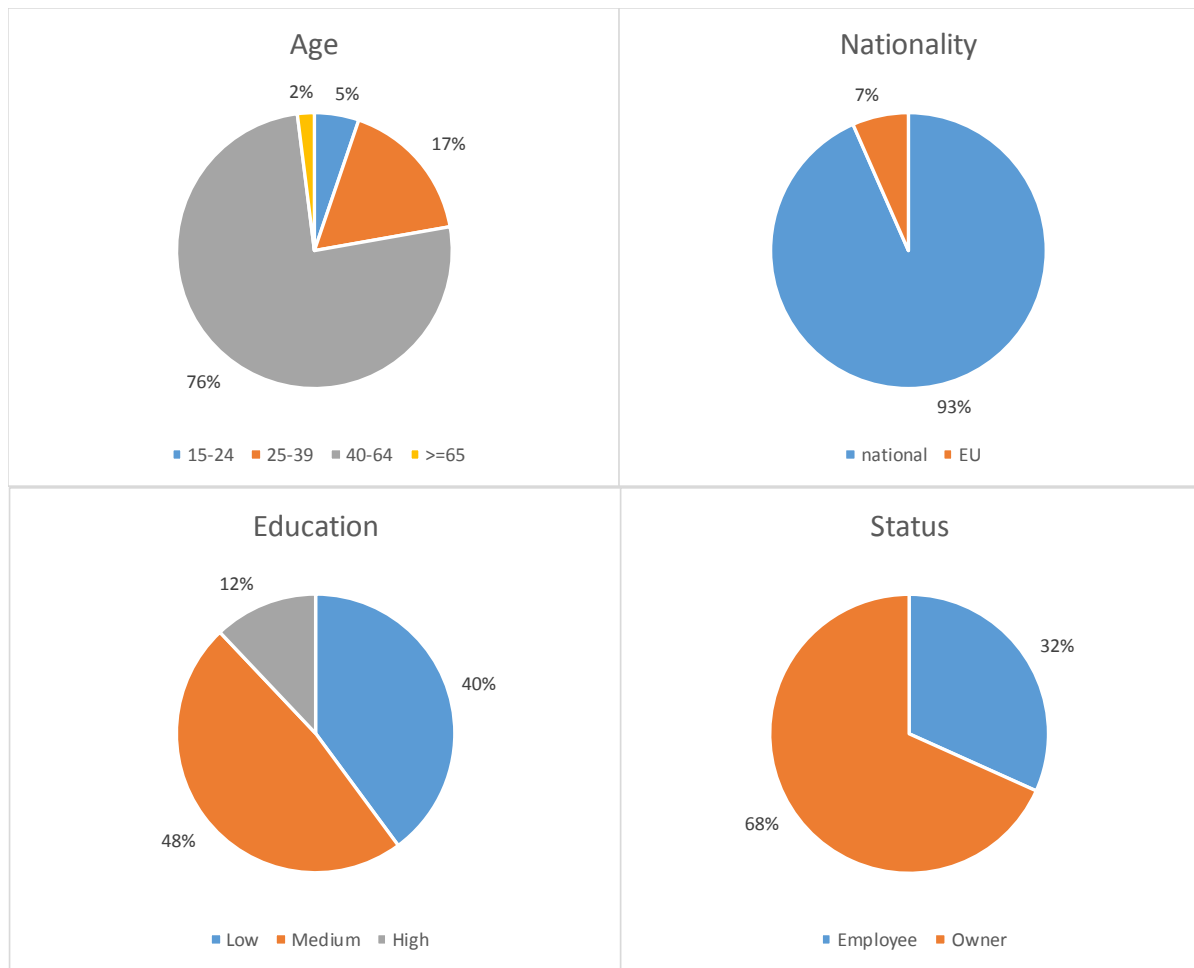
2. Summary

The socioeconomic profile of Finnish fisherman is: an aging Finnish male with low to medium education. In 2017 there were 1,230 fishers, 245 in terms of FTE, of which 90% was male. The vast majority of the fishers were over 40 years old, only 22% were under 40 years old. Half of the fishers had only the primary school education and 40% had secondary level education. Some 10% of fishers had a higher level education. Only 7% of fishers working in the Finnish fleet were non-Finnish.

3. Challenges

The outcome of the social data collection was not anything unanticipated. It has been recognized that aging fishers and low number of young people entering the profession predicts a rapid decline in the number of fishers, especially in coastal fishing in the marine area. Therefore there is a clear objective in EMFF to support the entry into the sector of young fishers.

4. Data issues

Social data collection is based on employment statistics of Statistics Finland that is census data. This data is combined with the economic data by enterprise and estimated for the total target population.

5.8.   France

1. Social structure of the fishers' population

Number of persons involved in Fisheries harvesting: women and men
This section presents the total number of fishers involves in fisheries harvesting by gender in 2017 in France.
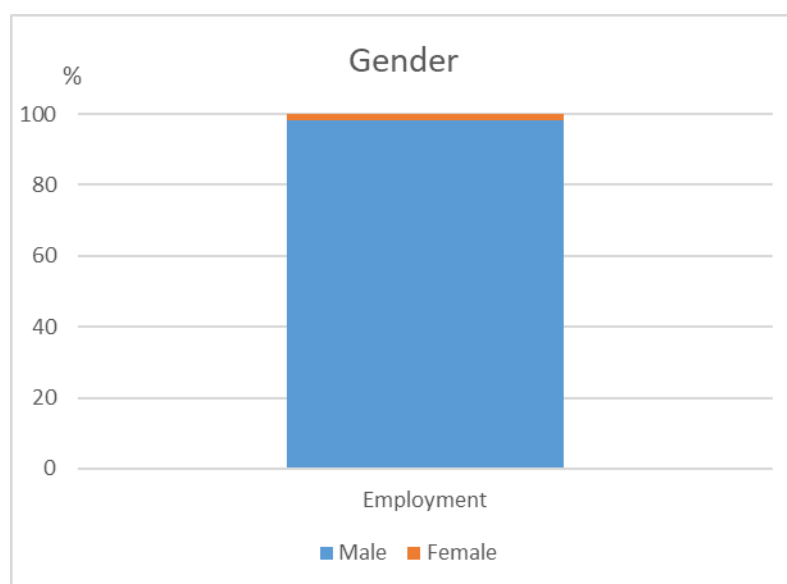
In 2017, French fishing (including OFR supra-region) employed 13,500 people (owners and crew members on board fishing vessels). The total number of fishers is composed of 96% men and 2% women. For 2% the gender is unknown. The labour force is larger in NAO, with 59% men and 46% women. 26% (n=3391) of male and 35 % of female (n=73) are working in OFR. Finally, 15% men and 18% female work in MBS.

French fisheries have specific working conditions, for example early time of departure of vessels from the harbour, very long working days on board and long fishing trips, especially for LSF and DWF. This could explain the low level of employment of people responsible for families and children with problems like accessing child care for younger children. Small scale fisheries may represent an opportunity for these population as they have the possibility to manage their own work according to the household needs. The high number of women working in fisheries in MBS (n=35) and OFR (n=73) supra regions can be explained by the presence of small scale fleet. In MBS the majority of women are working on vessels between 6-12 meters of length. In OFR, 96% of women (n=70) are working on vessels between 0-10 meters of length. Very few women are found in larger scale fisheries vessels as for example one woman on board on purse seine fleet operating in OFR (Indian Ocean/South Atlantic). The DFN fleet segment concentrates 25% of men and 25% of women of the total employment in this supra region.

FTE

For 2017, the workforce is equivalent to 6,623 Full Time Equivalent jobs. In MBS there are 201 FTE in LSF and 381 in SCF. In NAO the number is higher: there are 4,045 FTE in LSF and 1,315 in SCF. For OFR we have similar values to MBS with 204 FTE for DWF, 118 for LSF and 357 for SCF. These numbers include both men and women.

Demographic data of fishers' population
Age

The French fishing population is aging as the majority is concentrated in the class of 40-64 years old (59%) to which we can add the 5% of persons from 65 and more years old. In the opposite the classes of 15-24 and 25-39 years are respectively 8% and 28% of the total population.

Age
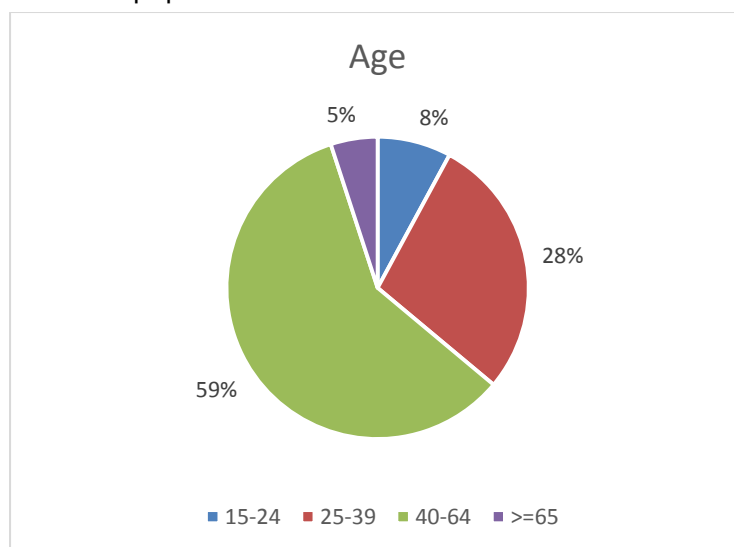
One explanation of this low percentage of young people in the fisheries industry could be explained by safety regulations which forbid the carrying on board of fishers' children from their early age as happened in the past. The transmission of knowledge is happening later and children may find other interests and vocations in the meantime.

Although Maritime high schools offer the opportunity for students to work in the fishing industry, after graduation, they may prefer to work in other economic sectors than fishing. And that despite the fact that French SCF fisheries fleet not operate during week-end with the objective to allow owners and crew to enjoy family and social life.

The lack of the transmission of knowledge in early age, hard working conditions and long absence from home and communities may prevent young people from entering the fisheries sector. To these social aspects it should be added difficulties in accessing financial capital and resources (quota) for those who wish to become vessels owners.

The presence of 5% persons of 65 and more years old is an interesting issue to explore as the retirement age in fisheries is 55 years old. It is interesting to understand why fishers over this age continue fishing. Do they fish because they want to complete their

retirement pension income or because fisheries become their way life or because they support their children working on board of fishing vessels? All these elderly people receive the retirement pension but at the same time continue to pay their social security contribution.

Nationalities

More than 85% (n=11 468) of the French fishers' population is constituted by French citizens, 8% (n=1 109) are from Europe and 4% (n=573) not EU/EEA; 2% are unknown.
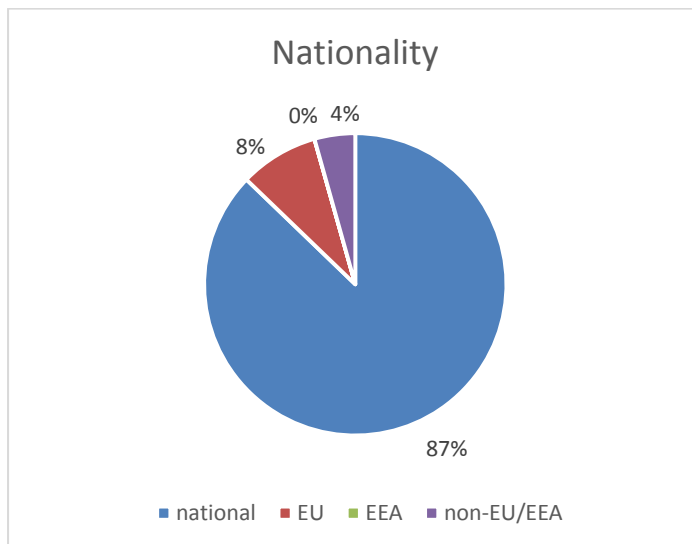
The most significant aspect is the presence in NAO supra region of 14% (n=1062) of crew members onboard originating from other EU countries such as Spain, Portugal and Poland. The EU labour is a response to the lack of local crew and to the need of qualified crews. Higher income in French fisheries attracts crew members from other EU countries.

In terms of regions 12% of the total of non-Europeans (n=67) are found in the MBS supra region and are working mainly on purse-seines and trawlers and are originated from North African French speaking countries. 26% of Non-European (n=149) are found in NAO supra region and they are mainly working on fleet segments as DTS and DFN. 62% of the Non-European (n=357) are found in OFR supra region.

The low number of non-European crew in France may be linked to the fact that the remuneration and the social security cost are the same for national, European and non-European citizens.

Education

For 2017, this variable is not available for the EWG 19-03 meeting. The social security system does not register this type of information. To obtain such data especially for the crew members, MS should collect this information through a specific survey.

Employment in more detail:
In France according to the collective conventions negotiated and signed by social partners, the revenue of all persons working on onboard of fishing vessels is based on shares.
Available data do not allow EWG 1903 to break down the employment status between owner and crew, by gender and by age.

Unpaid labour by gender
For 2017, this variable is not available for the EWG 1903 meeting as the French administration does not consider the revenue of one owner working alone on his boat as unpaid labour.
Within the French context unpaid labour depends on wives or life partners or other members of the family supporting the fisheries enterprises by realising different tasks on land. Women for example could perform administrative tasks linked to the family enterprises, mending nets, prepare longlines, bait longlines, buy food for the boats, carry fish between vessels and clients, sell fish at markets, etc. For many years, these supporting activities were invisible and didn't benefit from legal recognition. Wives unpaid contribution was first recognized by the Fisheries Act in 1997 in accordance with the EU regulation 86/613/EEC8. For 10 years the collaborative spouse status was voluntary and only few women were registered to the social security under this status. Since 2008, due to the modernisation of economy law, Loi n° 2008-776 of modernisation of the economy articles 16 and 19, the status has become compulsory for all wives and life partners (PACS) engaged in the family enterprise. The revision of the directive 86/613/ECC by the directive 2010/41/EU 9 has been transposed in French law by two decrees - n° 2014-1336 and n° 2014-1337 of 6th of November 2014 - adjusting the status of collaborative spouse in fisheries enterprises.
The collaborative spouse status is granted by the fisheries social security system called ENIM (Établissement National des Invalides de la Marine). It allows the spouses or life partners having a regular activity within the family enterprise without remuneration to access maternity leave and retirement pension and later access to health system under some conditions. The application to obtain the status is submitted by the manager of the fishing enterprise, usually the husband.

2. Stratification/Segmentation

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[8] Directive 86/613/ECC, Article 6, on the application of the principle of equal treatment between men and women engaged in an activity, including agriculture, in a self-employed capacity and on the protection of self-employed women during pregnancy and motherhood.
[9] Directive 2010/41/UE of European Parliament and Council of the 7th of July 2010, on the application of the principal of equal treatment between men and women engaged in an activity in the self-employed capacity, and repealing the Council directive 86/613/ECC.

Gender for LSF, SSF, DWF

In 2017, 53% of the French fishers (n=7,157) work in the SSCF while 43% of these population (n=5,840) are involved in LSF.

EWG 19-03 underlines the preponderance of women in French fisheries in the SSCF (81%) mainly located in OFR countries due to the high level of the SSCF fleets in this supra region where 97% of women are in small scale and coastal fisheries.
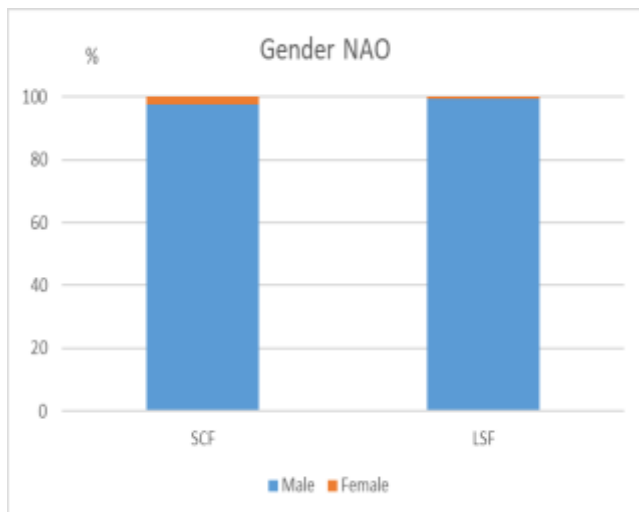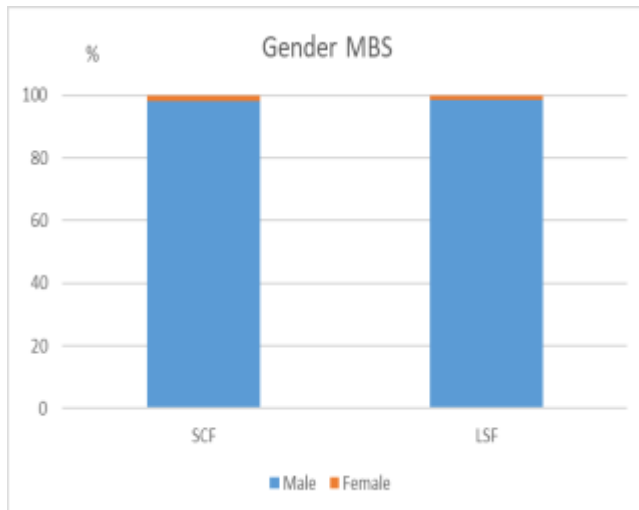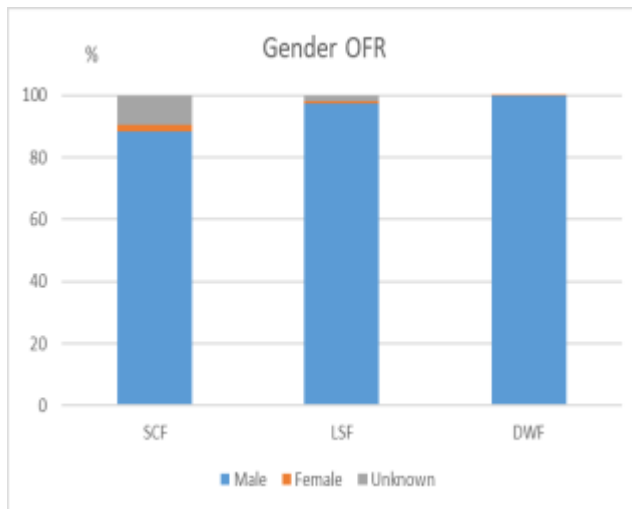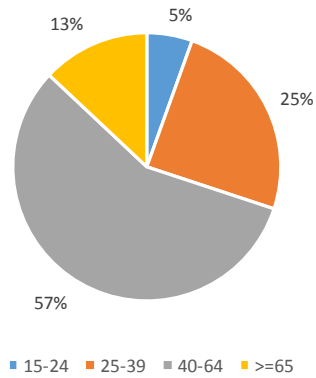
Fleet SSF, LSF, DWF by age

In 2017, French fishers age classes are divided almost equally between SSCF and LSF. 53% of fishers of 40-64 years old fishing are in the SSCF and 44% are in LSF. This class of age is the most representative of fishers' pyramid in SSCF, LSF and DWF with respectively 57%, 58% and 59% of the fishers of their own fishing activity. The youngest class for France is not under 15 years old with the class of 15-24 years old are found in LSF with 56% (n=581).

In MSB, 13% of the fishers (n=194) are supposed to be retired (more than 64 years old) and are still active in the SSCF.

This fishing activity has also the youngest population repartition in NAO supra region with 12% of the fishers (n=294). The LSF of this supra region compiles young population (n=527).

The LSF in OFR supra region has the oldest age pyramid with a concentration of fishers belonging to class 40-64 years old (71% of the fishers of this class).

Age: MBS SCF
5%, 25%, 57%, 13%
15-24, 25-39, 40-64, >=65

Nationality: MBS SCF
1%, 1%, 97%
national, EU, non-EU/EEA

Age NAO SCF
12%, 34%, 51%, 3%
15-24, 25-39, 40-64, >=65

Nationality NAO SCF
1%, 99%
national, EU

Age: NAO LSF
1%, 10%, 31%, 58%
15-24, 25-39, 40-64, >=65

Nationality NAO LSF
20%, 0%, 3%, 77%
national, EU, EEA, non-EU/EEA

Age: MBS LSF

- 8% (15-24)
- 24% (25-39)
- 61% (40-64)
- 8% (>=65)

Nationality: MBS LSF

- 89% (national)
- 3% (EU)
- 8% (non-EU/EEA)

Age OFR SCF

- 2% (15-24)
- 20% (25-39)
- 68% (40-64)
- 10% (>=65)

Nationality OFR SCF

- 89% (national)
- 0% (EU)
- 10% (non-EU/EEA)

Age: DWF

- 3% (15-24)
- 37% (25-39)
- 59% (40-64)
- 0% (>=65)
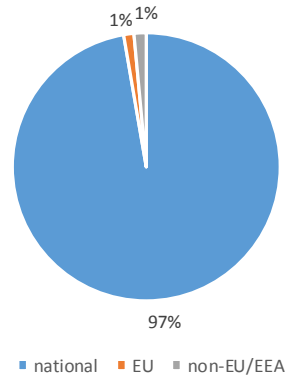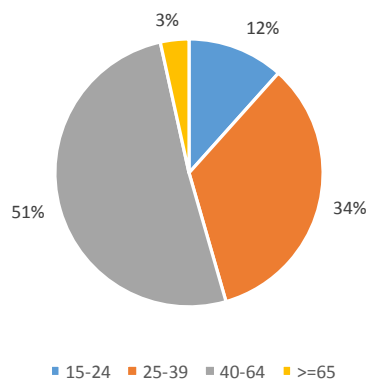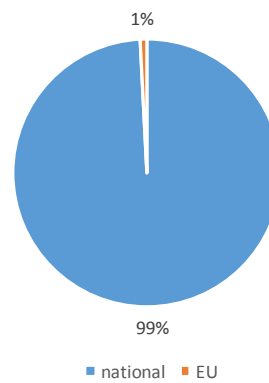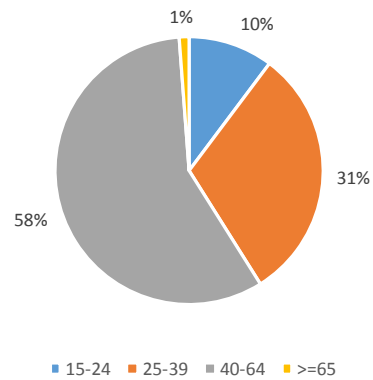
Nationality: DWF
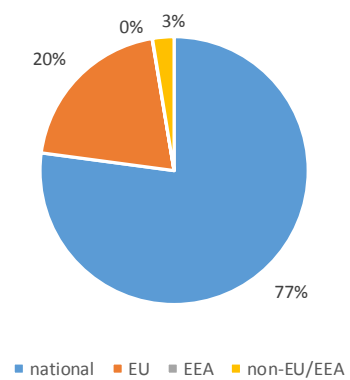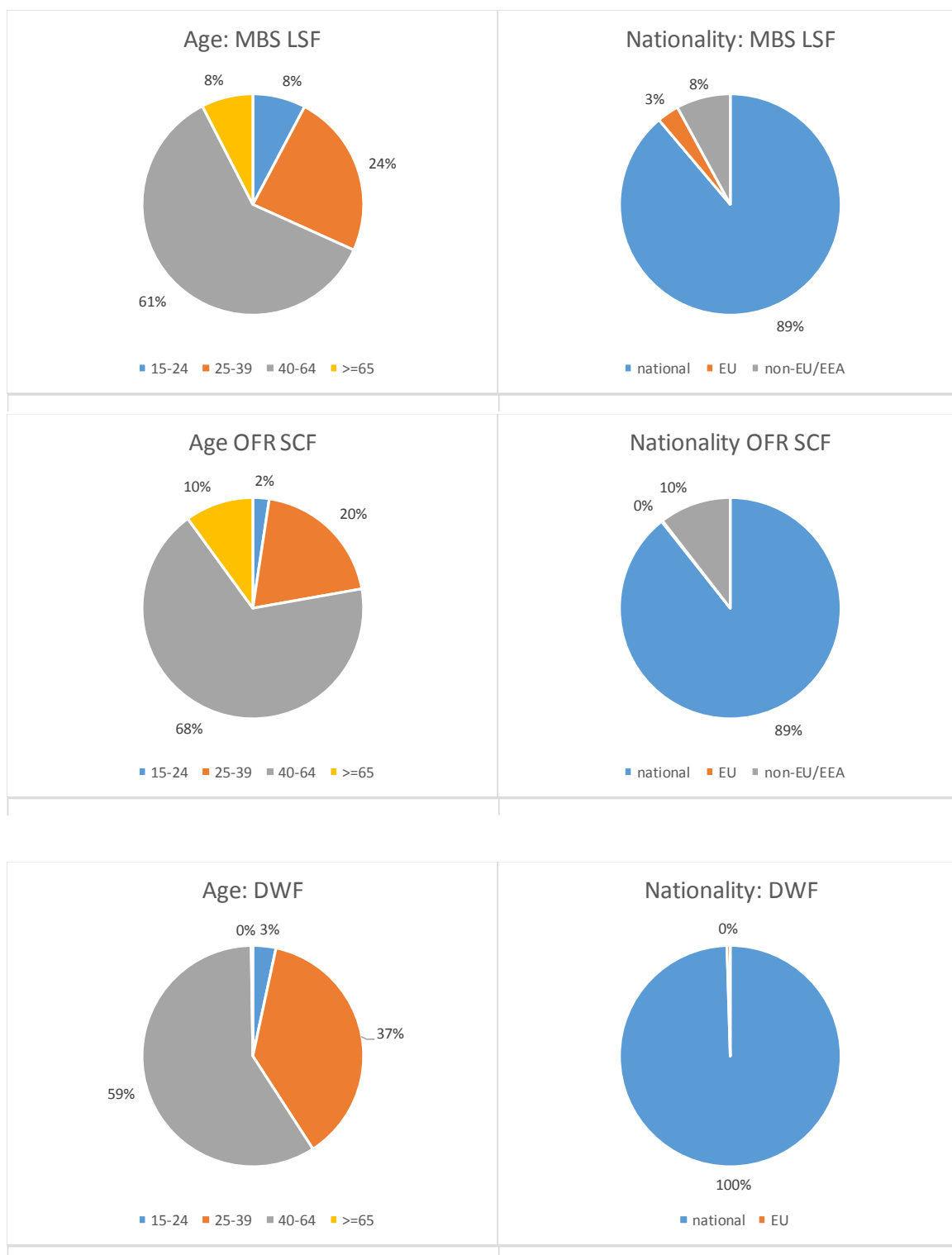
- 100% (national)
- 0% (EU)

Nationality for LSF, SSF DWF

The majority of crew members working in French fleets are national citizens. Crew members originating from the EU are representing 8% of the total labour in fisheries harvesting in 2017. However, 96% of the European fishers are in the LSF (n=1061). Very few non-European fishers are reported in the data set presented by ENIM in 2017 (n=575) divided between SSCF (43%) and LSF (57%).

For the DWF, only 2 fishers originating from other European countries from a total of 447 fishers. 94% of the total European crew work is based in the supra region NAO, specifically in LSF. In this fleet, we found also 135 fishers from non-European countries. In MBS, the LSF has 46 fishers from non-European countries (68% of the non-EU employment in MBS).

Very few fishers in LSF and SSCF are from European countries meanwhile the LSF concentrates non-European citizen with 37% of the crew (n=68). 9% of the fishers in SSCF originate from non-Europe countries.

3. Summary

The aim of this report is to present and analyse the social indicators related to the French fisheries sector gathered within the frame of DCMAP in 2018. The data analyses below are provided by the national social security system (ENIM) of seamen to which adheres fishers, shellfish farmers, seamen of maritime transports and merchant vessels and the activity data set. This specific regime of social security for seamen (*marins*), found its origins in the 17th century, taken its current form in 1930. Since this date, all persons (owners, skippers and crews) working onboard of French fisheries contributes to ENIM which covers them for the health insurance, sickness and maternity leaves, retirement pension and other social benefits that they can beneficiate. So, fisheries population involves in harvesting is affiliated to ENIM and pays a monthly contribution according to the position is occupied onboard of the vessels. In ENIM is found 20 different classes and the rate of the retire pension that fishers will perceive is depending of the class they belong. The majority of the fishing population is found between the classes from 1 to 8 which are regrouping mainly owners and crews working in the small scale and coastal fisheries fleets. The ENIM data is a precious source to provide social indicators as for example the age, gender, nationality by fleet and supra regions as well as a portion of the number of collaborative spouses having a legal status. However, the education level of the global population which is one of the social indicators requested by DC MAP, is not collected in the ENIM system.

This report is presenting only the indicators for which data is available: total population by gender, age, nationality. It is missing the unpaid labour as is defined by DCMAP. For this indicator the report underlines that unpaid employment in France mainly englobes unpaid labour supporting families' fisheries enterprises mainly realized by spouses or partners of vessels owners and not owner in SSCF as described in PFGECON. In France this contribution is legally recognized by law since 1997 in accordance with the regulation 86/613/ECC modified by the directive 2010/41/EU.

4. Challenges

It is difficult to clarify the contribution of women to unpaid labour.

5. Data issues

In relation with national available data for this report it is necessary to have the FTE by gender for the next data collection.

For the age indicators we need to add a new cluster starting from 55 years old as it is the age for retirement pension for fishers in some EU Member States.

We don't have a distinction in the data between employees, owners, engineers, etc. which would be useful.

We don't have Educational status but it will be difficult to get data on the education level of the crew.

Future proposals from the social WG for the next data collection

- Clarification about the unpaid labour for the future and social scientists may have a different definition than economists use regarding unpaid labour which is supporting work.
- Identifying the support given by family and wives/partners is important because it shows the interdependence of households to fisheries activity. Evaluating family dependence is an interesting indicator especially during especially during unplanned events such as the closing of a fishery or the disappearance of the resource, etc. Because social resilience may be dependent on that.

5.9.   Germany

1. Social structure of the fishers' population

For centuries marine fisheries had characterised coastal communities at the German North and Baltic Sea. Nowadays, fisheries have lost its former importance for the majority of coastal communities. Nonetheless, the history of fisheries forms local identities. Some coastal towns are still characterised by the fisheries infrastructure like fishing ports or processing halls, which have become tourist attractions today. But, overall the number of SSF companies declines continuously. There are many factors which influence the decline of German coastal fisheries: price transmission from imported seafood, low innovativeness, low investment rates and unprofitability might be the most important. But, some significant differences between SSF, LSF and DWF can be observed. DWF have invested regularly in new vessels and equipment, which have resulted in an increased productivity, thus strengthening their competitiveness and profitability. Five out of eight long distance trawlers can be considered as modern equipped with present-day storage and processing facilities on board and enhanced comfort for the crew. The two older vessels left will be replaced in the near future. LSF companies have started to invest into new vessels in the meanwhile as well. For both activities the future development seems to be better than it appears to be for the SSF. However, there are limits for SSF investments. Longlines and gillnets as the gears characterising SSF are very labour intensive. There is only a very little room for automatization. Further, necessary investments might be harmed by an economically unsure situation currently.

In 2017, 1,668 persons worked onboard of one of the 1,398[10] German fisheries vessels. The national FTE was 1,422. Most of the persons worked onboard or 839, have been engaged in SSF activities. 522 worked in LSF and 307 in DWF. 620 fishers owned a vessel. 1,048 fishers were employed. Regarding labour in total (employment and unpaid owners) SSF activities are the most important fisheries in Germany, although traditional supporting (unpaid) work from the fishers' household (accountancy, marketing, communication, gear maintenance etc.) have not been counted by the statistics. Of course, considering job creation per vessel, LSF and in particular the few DWF vessels are more substantial. According to the data of the Bundesknappschaft Bahn See, a

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[10] incl. inactive vessels without landings in 2017.

national accident insurance agency, in which fishers have to register themselves mandatory, 22% of the employed fishers were hired as skippers or first mates, 3% had a contract as engineer, 2% as cook, 56% of fishers worked as employed deckhand and 18% in another onboard activity. Almost 100% of fishers are male. Only in LSF, three women were involved in onboard activities.

2. Demographic data on fishers population per fishing activity

Age

In contrast to a European public debate on fishers' age, overaging seems not to be an issue for the German fleet; at least for the employees. 46.5% of the employed fishers were between 40-64 years old. 39.6% of them were between 25-39 years old, 12.8% were between 14-24 years old and only 1% were older than 65 years keeping on working after retirement. Taking a further look at the largest age class 40-64 year, the picture is even more evident: According to data from the Bundesknappschaft Bahn See out of a sample of 593 employed fishers, only 88 fishers or 15% were older than 55 years old. However, there is no data on age for unpaid labour available, which has a high share in SSF in particular (see below).
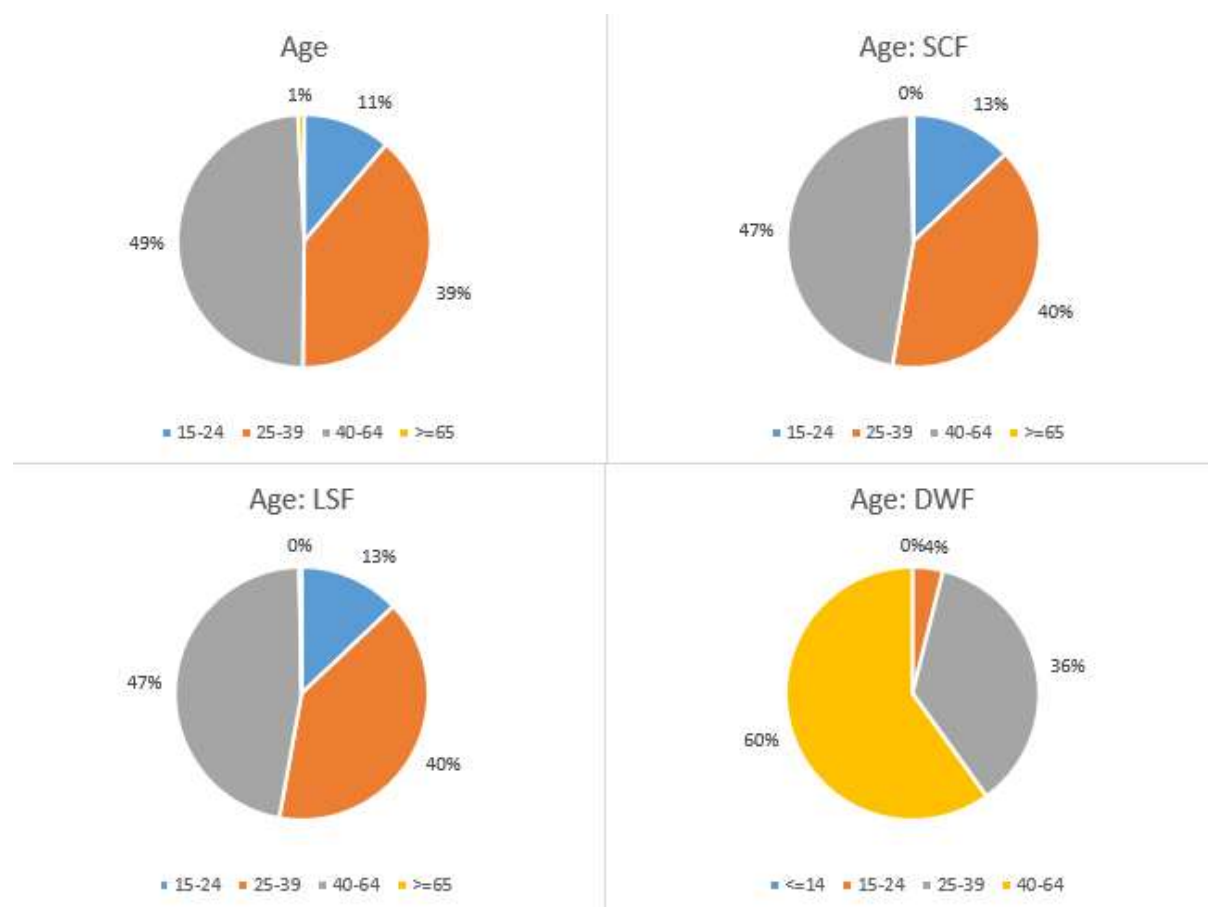
Gender

Considering only onboard activities in statistics, gender is not an issue for the German fishing fleet. SSF, LSF and DWF are almost solely male domains. Official DCF data reports only three woman in LSF for 2017. Remarkable, the German labour agency (Bundesagentur für Arbeit) reports for the same year 166 women out of 695 full-time insurable employments in marine fisheries. This corresponds to a share of 24%. Anyway, the labour agency data is not linked to DCF data, which define the vessel and thus the fishing activity as its statistical unit. Regarding the statistics of the national labour agency, the reliability of gender data in marine fisheries can be seen as uncertain, because interviewees (employers) allocate their activity autonomously to a wide defined category. Nonetheless, the role of woman as unpaid, on-land family labour and supporters of the male dominated onboard fishing activity might be totally underestimated in particular for the German SSF.

Nationality

Out of all 1,668 fishers the overwhelming majority or 79% are of German nationality. 16% of the fishers are from other EU Member states. Only 5% or 85 fishers have a non-EU nationality and these work solely in the DWF. In that point, fisheries are overall much less international compared to the fish processing industry in Germany. In particular, 93% of SSF fishers were German. Usually, SSF are linked strongly to one home port and to the local community. With increasing range and independency from one single home port, the share of different nationalities increases: 12% of the LSF fishers have a non-German but EU-nationality. Finally, the DWF are most international having a share of 28% of non-EU nationalities and 45% EU nationalities onboard. This internationality

might be caused by the fact that the German DWF fleet is owned by two non-German companies, Die Deutsche Fischfang Union as subsidiary of Samherji from Iceland and Parlevliet & Van der Plas from Netherlands and the international fishing grounds in and outside the EU waters used by DWF.
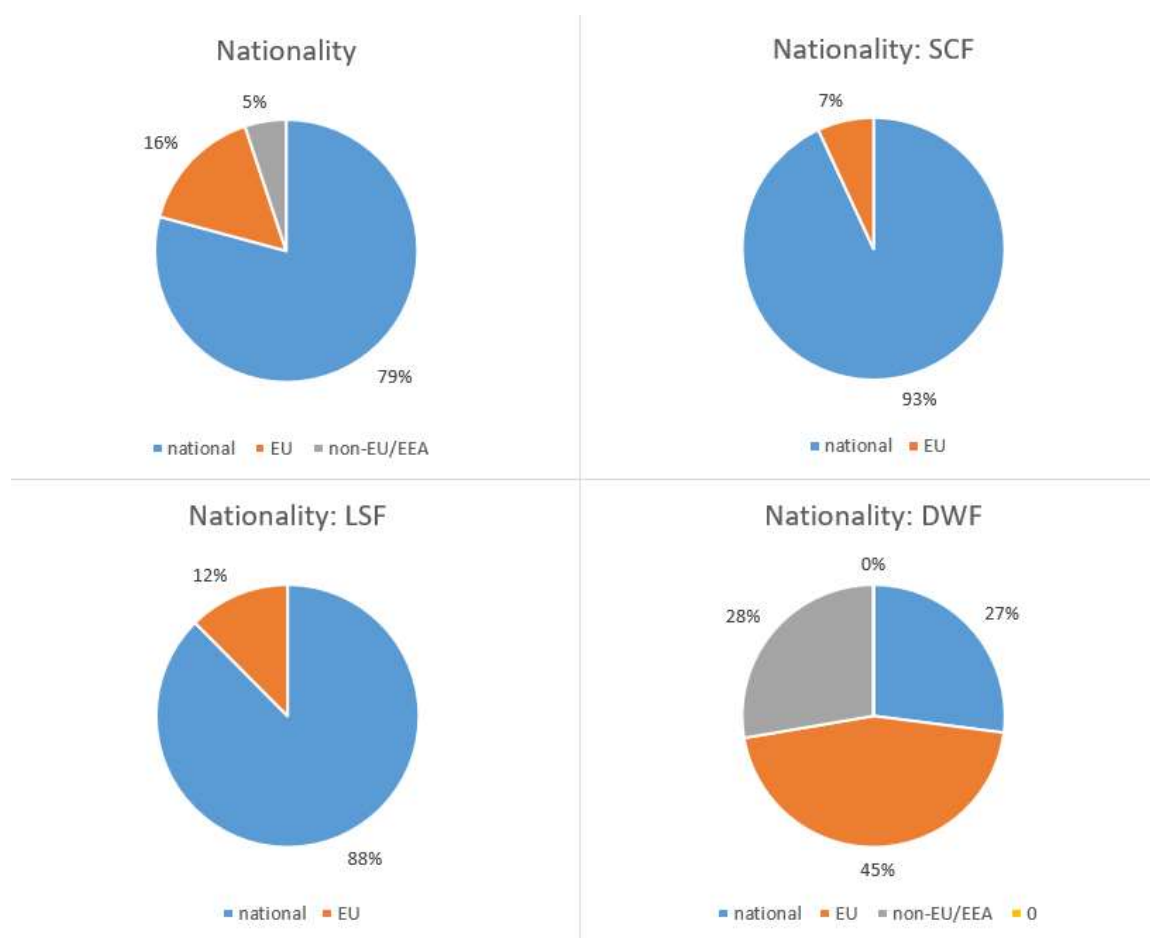
Education

Regarding the level of education, Germany projected the class of education for its fishers according to the position, which employed fishers have onboard (according to Bundesknappschaft Bahn See). Following that projection, 26% of the fishers were educated at a high level, 36% on medium and 38% on low level. Notwithstanding, the share of high educated fishers might be overestimated. In particular regarding the SSF, not every skipper might has a short-cycle tertiary education at least, but a lower nautical license without any further educational pre-condition. In fact, a non-representative survey of a brown shrimp fishers' community in 2017 (n=14) painted a different picture, where nine fishers were low educated and five had a medium education level. No one had a high education level. An additional DCF survey under SSF and LSF companies (n=53) seems to confirm the assumption, that the majority of fishers tend to be low (42%) or medium (47%) educated. Only 11% of the fishers had a short-cycle tertiary education or higher. In consequence, the social mobility of fishers can be seen as

significantly lower than in the average German population, where according to the last census 27.3% of the population older than 15 year old had at least a high school degree in 2012.
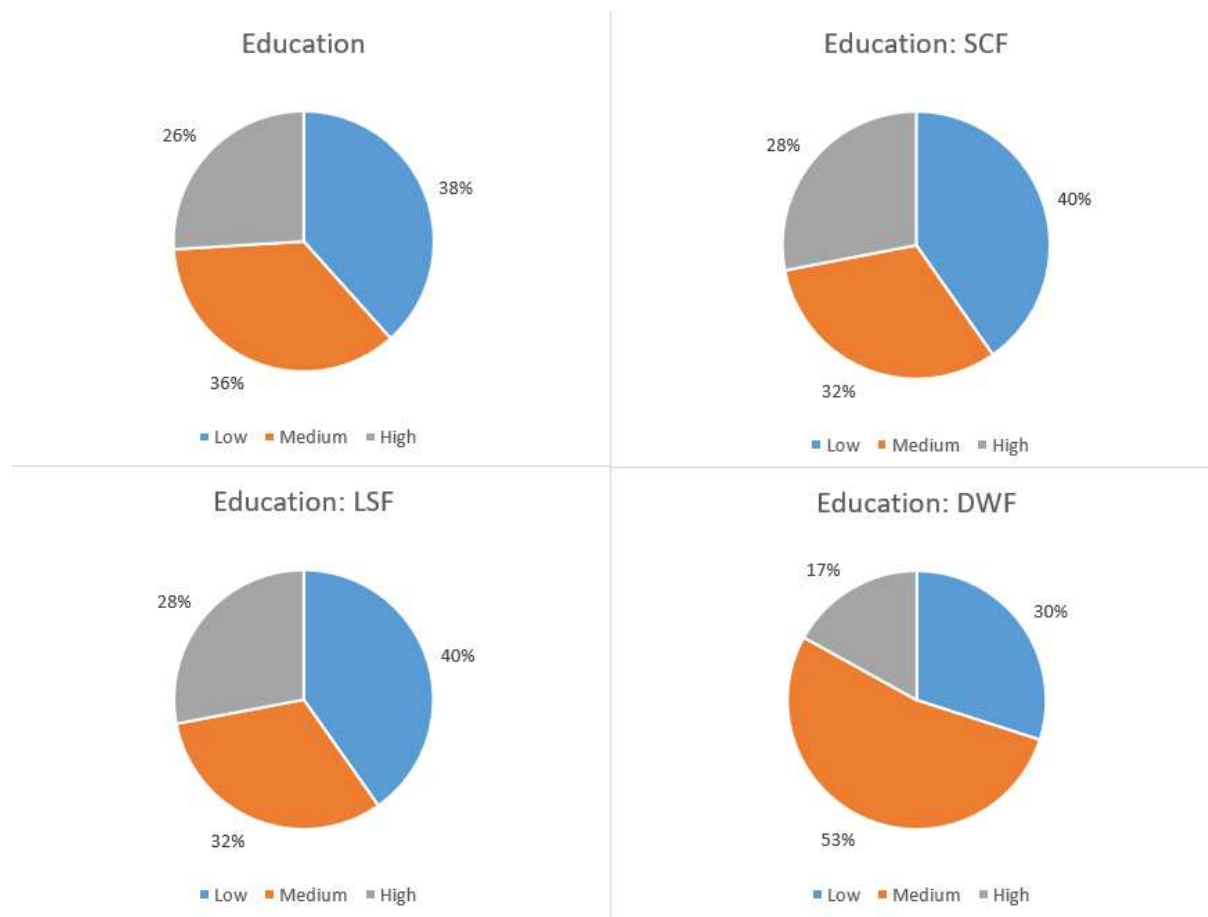
Status

Out of the total 1,668 fishers 1,048 were employees, 351 fishers worked as unpaid labour and 620 owned a vessel. There is no data available on the concrete work-input per hours for unpaid labour. The highest share of ownerships had the SSF (42% or 356) and LSF (51% or 264). There are only employees in DWF. Taking additional information from the Bundesagentur für Arbeit (National Labour Agency) into account (record date June 30, 2017), 84% of all employees in the marine fisheries sector have worked as full-time labour and 16% as part-time. 48 fishers were employed under an apprenticeship scheme.

Status

Status: SCF

Status: LSF

Status: DWF
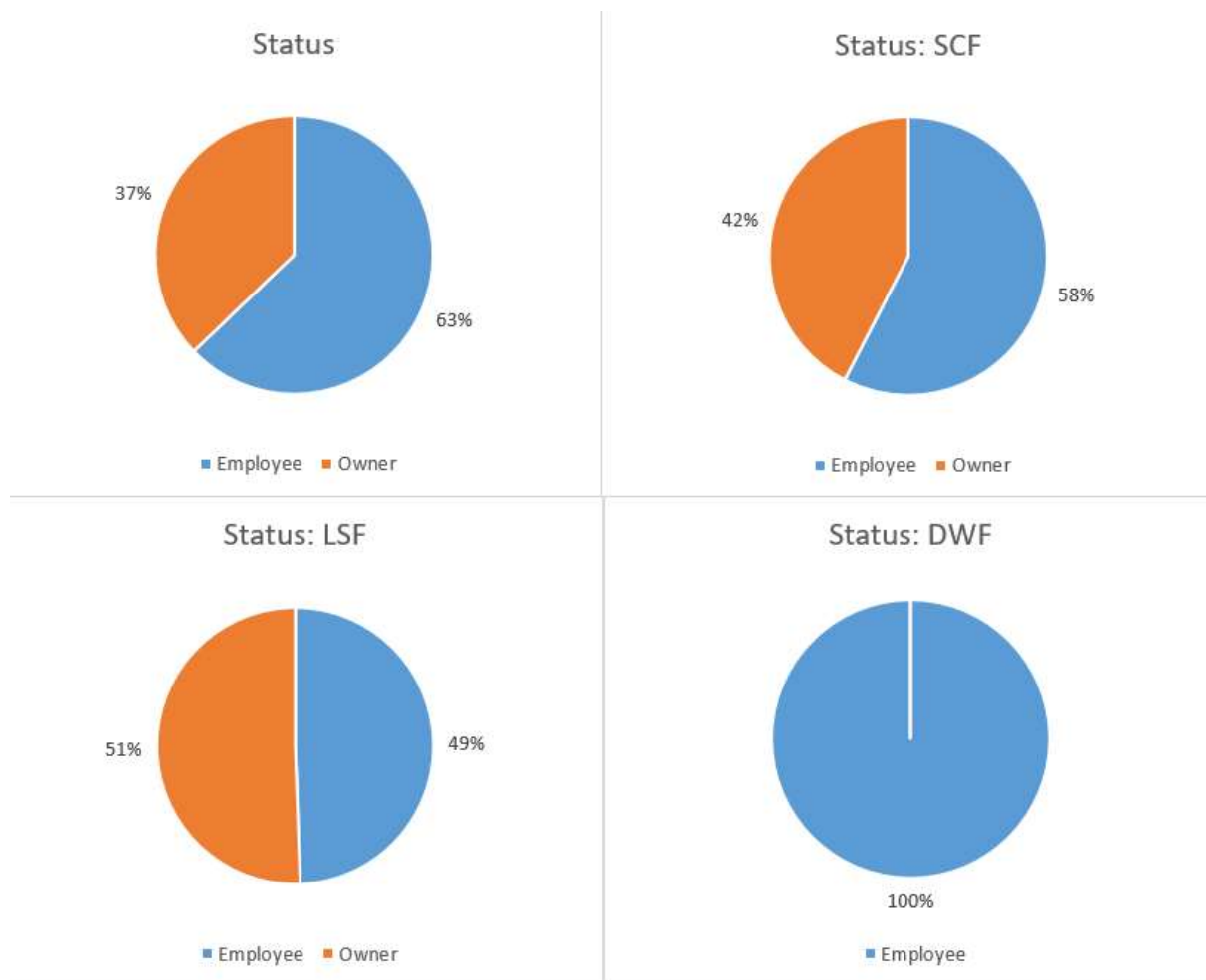
3. Challenges

There is a lack of knowledge regarding the question of social adaptation. What will happen, if fisheries will disappear from their home ports and coastal communities? Although and thanks to investments in DWF and LSF the sector improve its productivity, but the number of vessels have decreased continuously. Although, coastal SSF and LSF are not an important economic sector on national level any more, in some counties it is still forming the social and cultural background of a place. In the same communities fisheries might have positive externalities towards gastronomy and attraction of tourism providing a "maritime atmosphere". An ongoing decline of SSF and LSF probably leads to a negative social impact towards those places. A well-known example for the fall of an important fisheries port is the recent history of Bremerhaven in the Northwest of Germany, where the former German DWF fleet was located. Its final ruin in the late 1980s has caused social challenges for the city development until today. If it is the political willingness to maintain SSF and regarding the issue of exploitation of a renewable source of food, which opportunities could be used to provide additional income to fishers or increase their incomes from fisheries to maintain SSF? Is the

structure of age, education and gender of fishers' community suitable to adapt towards harsh competitiveness and a critical public? To succeed in future might be also depend on the degree of innovation adoption, no matter if the innovation might be tangible (new products) or intangible (marketing strategies, producer organisation etc.). The degree of being open-minded towards innovation itself may depend on the age, the education and the gender. According to the sociologist and innovation researcher Everett Rogers (†2004) the older, the uneducated, and more masculine a community is, the less innovative it will be.

4. Data issues

The data available on the social dimension of the German fisheries is incomplete and challenging to draw conclusions from. Although there are eight variables – related to gender, age, education, nationality and status – it has been hardly able to describe the social dimension of German fisheries for two reasons. First, the data uploaded has not been finalised until the expert meeting have started to write this report. Second and in case of gender most obviously, there is a contradiction between data from other sources like the national labour statistics and the DCF data. Of course, the definition of the population of various surveys differ. But, that leads to the more general question of how to operationalise the collection of social variables. Is the vessel or the company really the most appropriate unit to refer? Or might the fishers' household be a better unit for analysing the social dimension of fisheries in EU? In future, there is further discussion needed to clarify that point.

5.10. Greece

1. Social structure of the fishers' population

The fishing sector has a high socioeconomic importance in Greece. It provides income and employment in coastal areas while it is acknowledged as part of their cultural heritage, strongly connected with their culture and traditions. Therefore, fishing sector is vital for local economies and contributes to the social cohesion of coastal communities. Its role is even more important in remote areas and small islands, where there are few alternatives economic activities (AGRERI, 2018).

For the reference year 2017, it is estimated that Greek fishing sector provide employment to 22,471 fishers. Among them, there are 1,900 women (about 9% share). However, in terms of FTE, women have a much lower contribution (6%). This is an indication that women in fisheries are under-employed. It is remarkable that, in total, the FTE per employee is about 0.91, but in the case of women, this ratio is much lower (0.68). Several factors may explain this fact. Firstly, many women work mainly (or exclusively) on-shore. Moreover, the phenomenon of pluriactivity (i.e. household's combination of fishing and non-fishing activities) in the regional areas of Greece is very strong and common in the family-type business model that dominate small-scale fisheries. In this framework, women provide employment in several other economic activities of the primary (e.g. agriculture), secondary (processing) and/or tertiary sector (rooms to let, tavernas etc.). Finally, women are also highly engaged in household activities (e.g. bearing children, providing food), 'subsidizing' in this way their husbands' fishing activities and spending much of their working force (Liontakis et al., 2019).

Figure 1. Numbers involved in Fisheries harvesting by gender

Demographic data of fishers' population
Age
About 65% of fishers belong to the age class '40-64'. Age classes '25-39' and '>65' possess the second and third place respectively. It is important to emphasize that the ratio of '>65' age class to the '25-39' age class is about 0.28, indicating that aging population is not – at least for now – an important issue, even though age class '15-24' has a very low share (3%).

Nationalities
According to Figure 2, most fishers are Greeks. Fishing activity is an important activity tightly connected with the tradition and the culture of several coastal communities in Greece. In addition, it offers income and employment in many remote areas with few alternative employment options (AGRERI, 2018). Interestingly, there is an important share of fishers with non-EU/EEA nationality. This share mainly represents the employees of the LSF and consists almost exclusively by Egyptians. A tiny part of EU citizens is also present. This share probably represents labour force that is usually engaged in agriculture but occasionally offer labour also to fisheries.

Education
The majority of fishers have low or medium education level (61% and 32%, respectively). However, it is important to emphasize the fact that there is a small share of probably overqualified employees in fisheries (1,211 fishers representing 5% of the total). This share mainly represents young fishers with bachelor's degrees that decide to follow fishing profession but also youth that cannot be absorbed by other industries. In the latter case, the fishing enterprises that provide employment belong to the broader family of the youngsters.
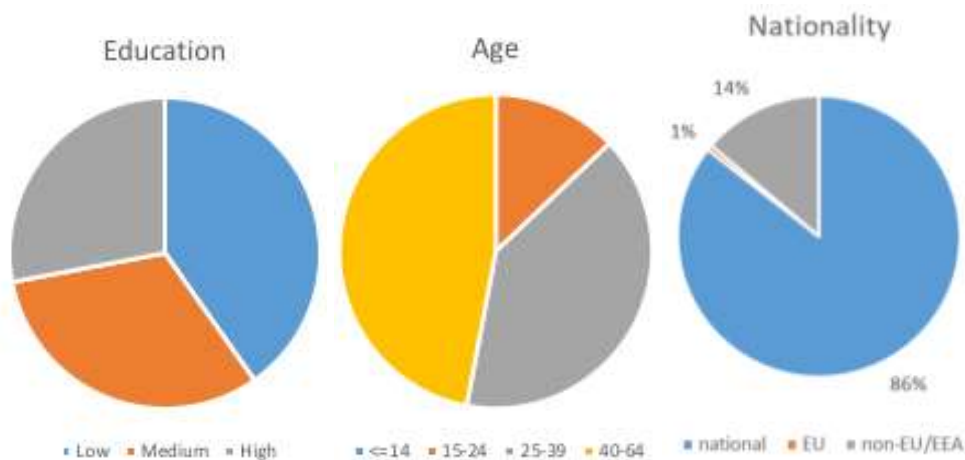
Figure 2. Age, Nationality and Education level in Greek fisheries

Employment in more detail
Status employment
Greek fishing sector mainly consists by small-scale vessels (about 95%). In most cases, the owners of these vessels provide the most or even the total work force. This is the reason why the 69% of fishers in Greece are owners of the fishing vessels.
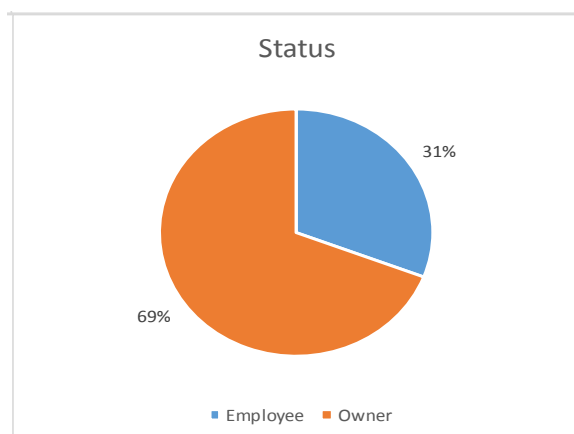
Figure 3. Employment status in small-scale fisheries

Unpaid labour by gender
Figure 4 depicts the share of unpaid to total labour in Greek fisheries. Obviously, unpaid labour is very common in Greece, contributing to about 65% of total labour. Female unpaid labour contribution to total female labour is about 10 units higher, indicating the fact that they usually contribute in a supplementary way to the family business and basically on-shore. However, the situation is totally different, when the captain is filtered out from the crew. In that case, the majority of men crew is paid, while the majority of the women crew is unpaid (see the corresponding chapter for SCF sector).
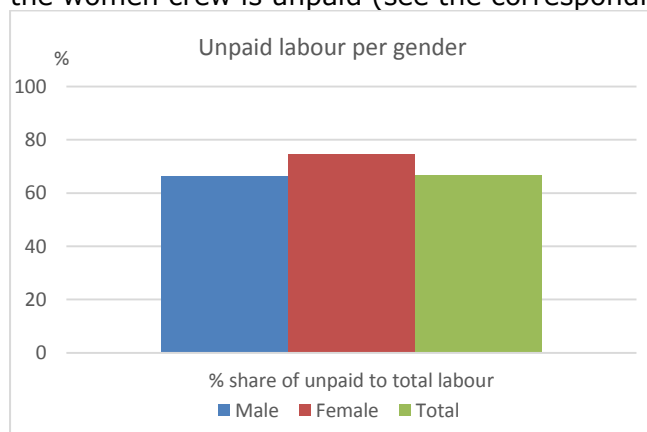
Figure 4. Unpaid labour by gender

2. Stratification / Segmentation
SSF sector dominates Greek fisheries and usually SSF enterprises follow the family-model type of business. For this reason, they highly deviate from the more 'entrepreneurial' type of large-scale vessels fishing enterprises. In the following paragraphs, some distinctive characteristics for each segment are illustrated.

SCF sector
In SCF sector, the women contribution in terms of employment is about 9% (1,872 women) but it is less in terms of FTE (1,231 FTEs, 6% share). Women mainly participate in on-shore activities that are related to fishing activity (e.g. clearing and preparing the fishing gears, cleaning the vessels, reporting landings etc.). Of course, women contribution is not limited to these kinds of activities. As it has been already mentioned, their contribution is often related to the pluriactivity phenomenon, which is very strong in Greece. Finally, women are also engaged in household activities 'subsidizing' in this way their husbands' fishing activities.
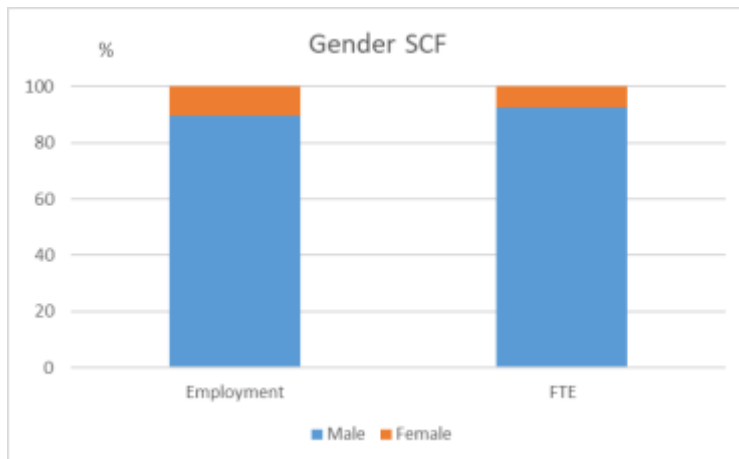
Figure 5. Employment and FTE per gender in SCF.

It is also important to emphasize that according to MS estimations, there are about 1,400 unpaid women in SCF. While at a first glance there are no important differences with men, if the captains are filtered out from the crew, the situation is completely different (Figure 6). In this case the unpaid share of women is raising up to 65%, while in the case of men, the corresponding share is going down to 30% (Liontakis et al., 2019). This gives a clearer picture of the unpaid labour per gender and highlights the 'unseen' role of women in fisheries.
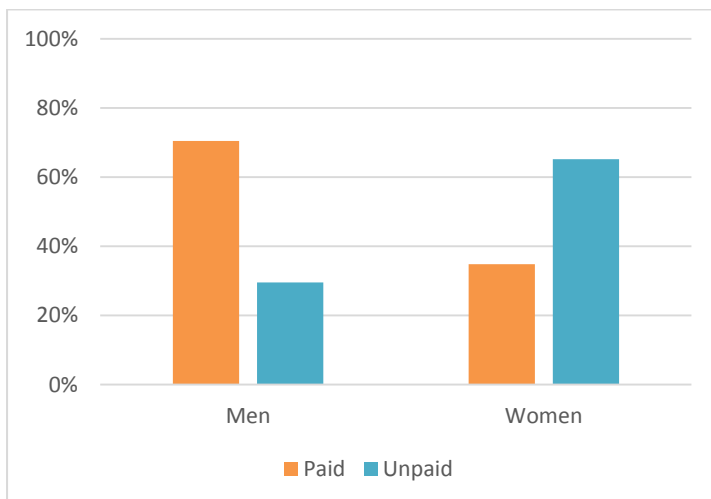
Figure 6. Unpaid labour by gender, after filtering put captains

As far as the age and the education level are concerned, the distributions are very similar to those of the total fleet, as expected due to the fact that SCF dominated the Greek fleet. However, there are some deviations in the case of 'Nationality' and 'Employment status' level. In the SCF, the vast majority of fishers are Greeks. This fact reveals that SCF is tight with the traditions and culture of coastal areas and many Greeks actually decide to follow the family business. This is also an indication that fisher profession has a positive public perception in many coastal areas. Another distinct characteristic of the SCF is that fishers are usually owners or co-owners of the vessels, and this is the reason why owners are 80% of the fishers.
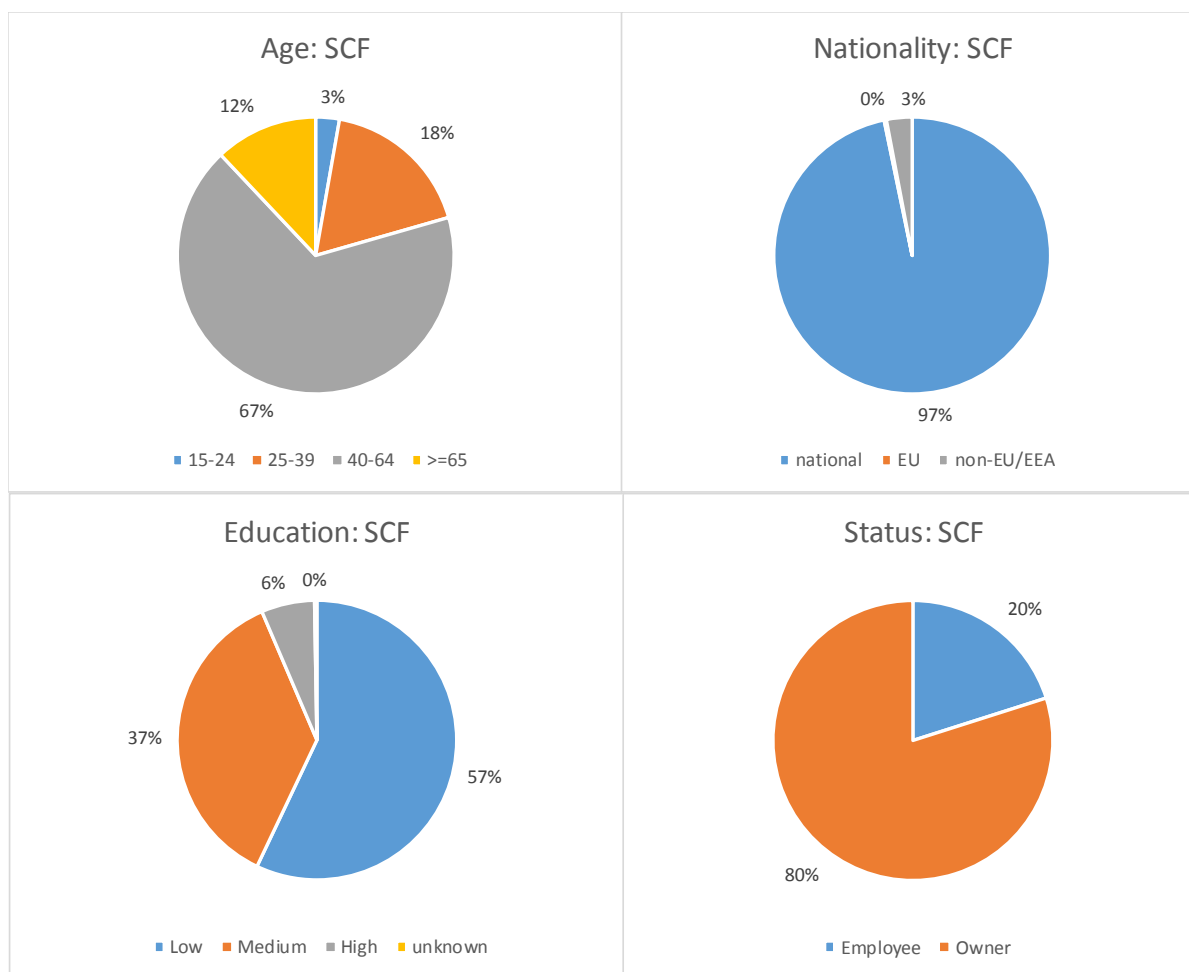
Figure 7. Age, Nationality, Education level and employment status in SCF.

LSF

In the LSF sector, women are almost absent both in terms of employment and FTE. More specifically, it is estimated that only 40 women are employed in the LSF, contributing to 11 FTEs. In addition, about half of them are unpaid. Therefore, their overall contribution can be considered as negligible for the LSF sector.
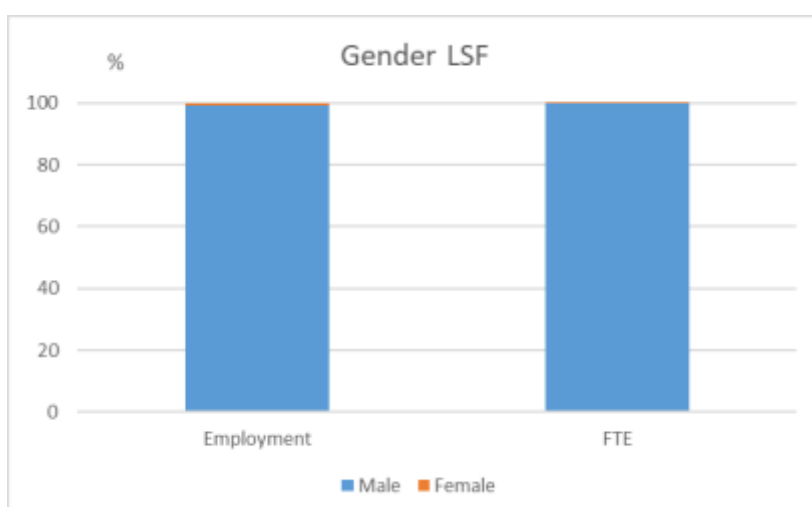
Figure 8. Employment and FTE by gender in LSF

Exploring the age class distribution of LSF (Figure 9), it is obvious that fishers employed in the LSF are younger and this could be an indication of a more 'healthy' and economically sustainable sector. Nationality figures reveal that the sector, in terms of employment, is dominated by non-EU fishers (usually Egyptians) which are hired as expert working force.
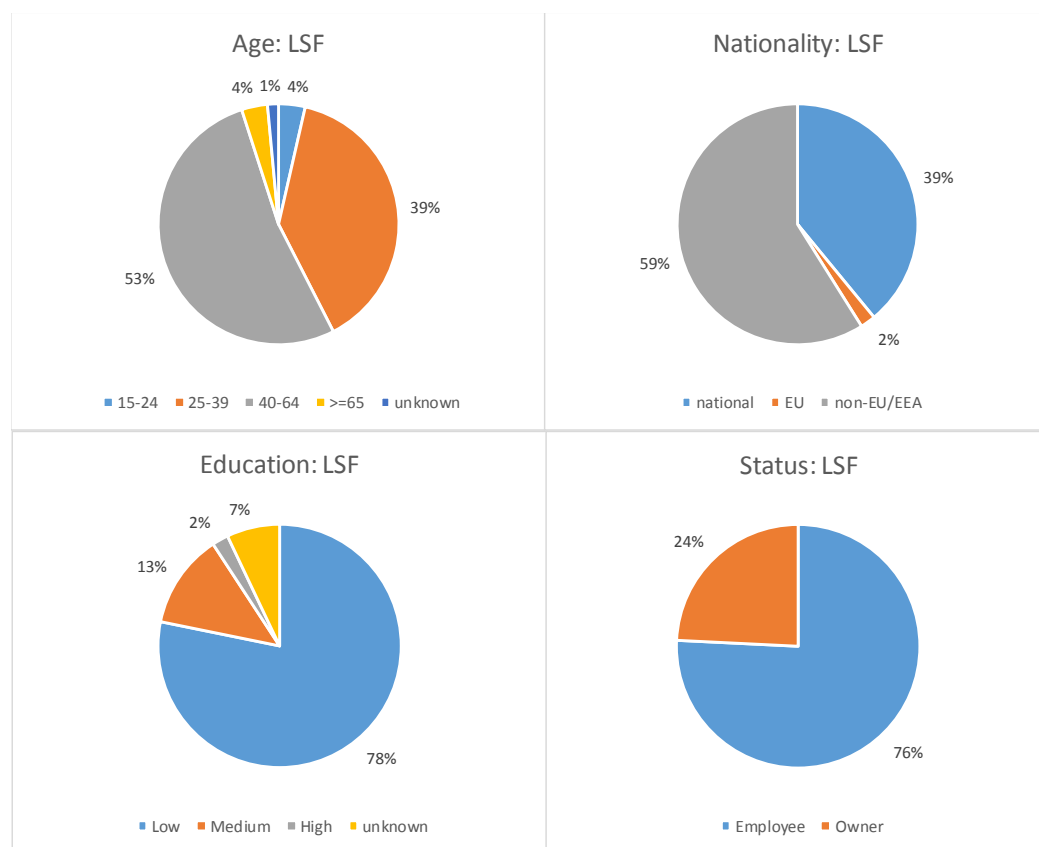
Figure 9. Age, Nationality, Education level and employment status in LSF.

3. Additional sections

An issue of great importance for Greek fisheries, and especially SCF, is the role of women. This issue should be further explored to reveal and emphasize the 'overlooked' role of women. In a recent attempt to further analyse EU-MAP data, AGRERI (2018) and Liontakis et al. (2019) reveal some additional figures about the on-shore activity and unpaid labour of women in fisheries. On-shore activity of female fishers is close to 60%, while in the case of men, on shore activity level is about 30%. The main on shore activities reported are:

- Clearing Nets

- Preparing gears for fishing Activity

- Cleaning vessel

- Minor repairs in vessel

- Paperwork[11]

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[11] Paperwork is included in on-shore activities as, at least partially, corresponds to professional fishers' obligations like reporting of catch, fuel refunding etc.
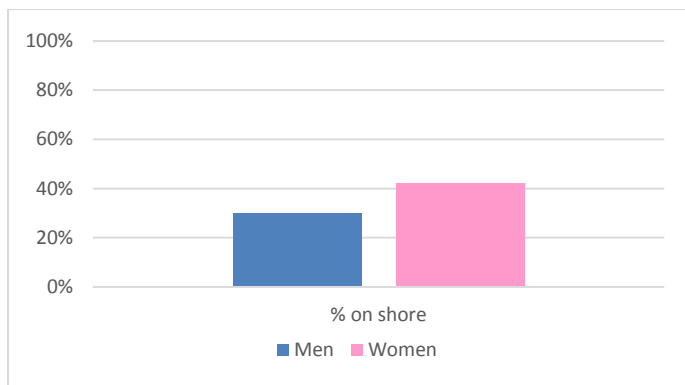
Figure 10. On shore activity by gender in SCF

In addition, participation of SCF fishers in collective actions by gender were explored. Results indicate that men participation is much higher (50% versus 20%). However, according to authors, it is obvious that these figures need some qualitative weighting (adjustment). The reason is that, in many occasions, fishers' collective actions are in fact inactive or of low activity. On the other hand, there are several women collective actions that have high activity level and can be considered as best practices. One success story of the contribution of EMFF funding that increased employment, diversified local activities and created new source of income is the establishment of an innovative fish processing and packaging small-scale facility in the fish auction of Kalymnos Island, by the women association 'Ypapanti' (AGRERI, 2018). In this case, low commercial value fishes are used as raw material to produce high added value food products. The facility is managed by the fishers's wives via their social cooperative enterprise. In this way, women's entrepreneurship has been empowered, since fishers's wives had the opportunity to get trained in fish processing and packaging as well as to gain valuable know-how and develop managerial skills (AGRERI, 2018).

4. Challenges
Below are listed some thoughts about issues that can potentially assist to a better understanding of fisheries in social terms.

- Are there extension services in fisheries? What is their social impact and how they can contribute to increase the (low) human capital in fisheries?

- What is the degree of collaboration/networking among fishers and among different stakeholders (fishers/administration officers/researchers-academia)?

- What is the degree of innovation uptake in fisheries? Are there any ways to increase it?

5. Data issues
In Greece, social data collection has been aligned with economic data collection. Therefore, the same data collection scheme has been utilized. During the on-field social data collection, MS find only minor difficulties to gather data. These difficulties are mainly related to the fact that in some occasions (mainly in LSF), interviewee has no information for all the members of the crew regarding age and education level.

References
AGRERI (2018). Social variables analysis of fisheries sector: The case of Greece (Reference year 2016). Athens.

Liontakis A, Mantziaris, S., Valakas, G., Sintori, A. and I. Tzouramani (2019). The overlooked role of women in fisheries: the case of the Greek small-scale fishing sector. Oral Presentation at the XXIV Conference of the European Association of

Fisheries Economists, Faculty of Geography, Santiago de Compostela, April 2-4, Spain.

5.11. Ireland

1. Social structure of the fishers' population
Ireland has a long tradition of fishing which plays an important role in rural coastal communities. In 2017 there were 1,954 registered vessels in the Irish fishing fleet, 1,316 of which were estimated to be active. Of these active vessels there are varying amounts of activity with some vessels having low activity working seasonally to provide additional supplementary household income to others with high activity and profitability. Since 2008 total active vessels have remained stable. However, employment and Full Time Equivalents has decreased since 2008 by 17% and 11% respectively. This decrease could be because of many factors including an artefact of the sampling design, an actual decrease in numbers as crew size is reduced to save costs, or because of the difficulty in some segments in attracting workers. In 2017 there were 3,062 people working in the industry accounting for 2,608 FTEs with a further 322 involved in the industry in an unpaid capacity.

Demographic data of fishers population
Gender
Employment is defined here as all jobs directly related to fishing activity. Of the 3,062 people engaged in 2017, 3,006 (98.1 %) of the people employed were males, equivalent to 98.5% of FTEs. The remaining estimated 57 (1.9 %) people employed were females, equivalent to 1.5 % of FTEs. Women typically fulfilled onshore roles, such as accounting and other administrative roles although there were also some women working as skippers and deckhands. Eurostat figures for Ireland in 2012 indicated that the share of female employment stood at 10% for the fisheries and aquaculture sector, slightly under the European average of 12.6%. The Central Statistics Office (CSO) of Ireland's, quarterly national household survey indicated that one out of ten employees are women (11.7%) in the Irish agriculture, forestry and fishing NACE sectors (Rev.2, Code A) compared to 36.9% for the rest of Europe. Fishery specific data are harder to quantify. The data collected for DC MAP purposes indicated that there were 1.9% women employed in the fishing industry. However, as this is based on raised sample data this figure is an estimate with unknown variability. The overall seafood sector including aquaculture and processing has an estimated 15% of women working in the industry.

Age
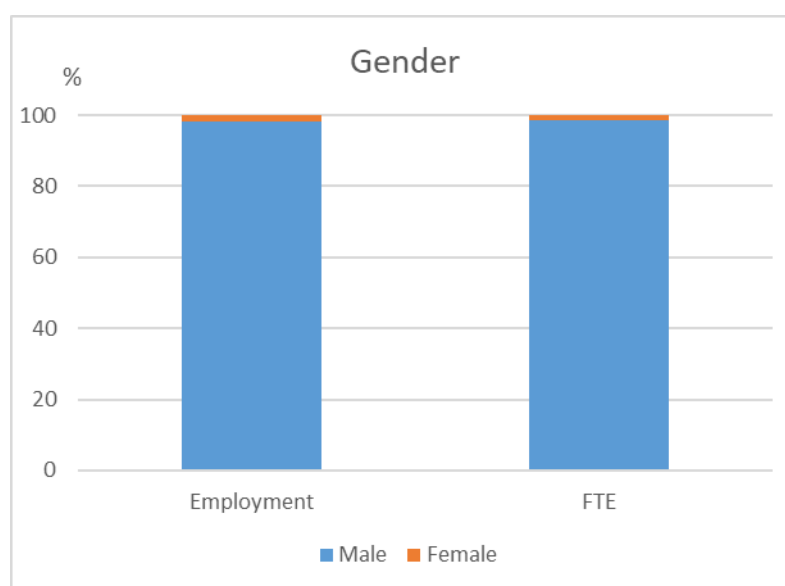
The majority (88%) of people employed are within the age group, 25 and 64 years of age. Of these, 53% of the people employed were in the 40-64 years age and 35% were within the 25-39 years age band. The age bracket of 15-24 made up the smallest group of the active population with a value of 4%. The remaining 8%, equivalent to 137 people, were in the >=65 age band. The Irish industry is often described as an aging industry and time series data from 2008 would suggest that this is the case and the industry has indicated that attracting young fishers into the sector is difficult.

Age

4%   8%

35%

53%

■ 15-24   ■ 25-39   ■ 40-64   ■ >=65
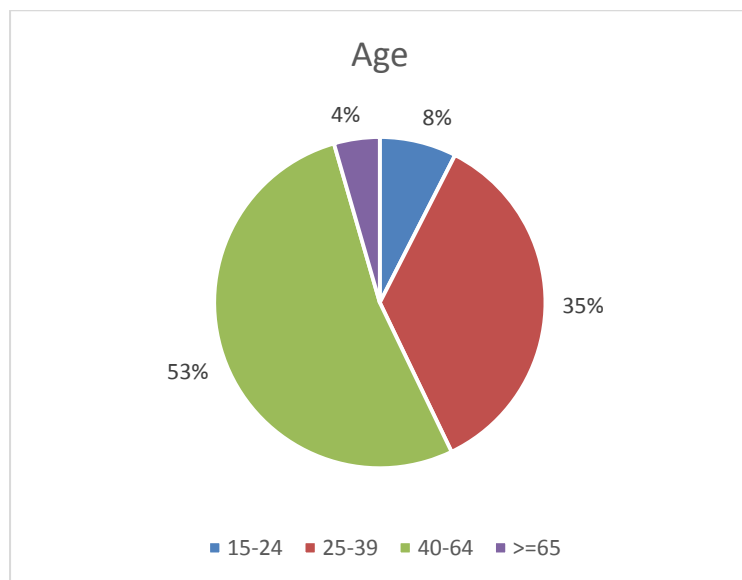
Nationality

Employment in the Irish fishing fleet is made up mostly of Irish nationals (2 228, equivalent to 73%). There were 568 EU nationals (equivalent to 19% of total workers) working in the Irish fishing fleet. EEA workers make up 2% with the remainder 7% (218) being non-EU/EEA nationals. In December 2015, a taskforce was set up to address work conditions of non-EU/EEA workers in the industry. The taskforce produced a report recommending the introduction of a scheme that would "allow for the structured and transparent employment of non-EEA workers within a defined framework in the Irish fishing fleet". The task force recommended that the State establish a depository of such atypical worker contracts to be put in place which would monitor overall numbers (to be capped at 500), allocating a unique reference number to each contract that will apply only to non-officer crew members working on vessels which are over 15m in overall length and licensed and registered in the Polyvalent, Beamer or Specific segments of the Irish sea-fishing fleets. The data presented here is an estimated of non-EU/EEA workers based on sample data and estimates non-EU/EEA number to be 218. Al of these are restricted to drift netters, demersal trawlers and potters between 12 and 40m. There are no non-EU/EEA workers in the SCF and Pelagic sectors. The Migrant Rights Centre Ireland (MRCI) report that in 2016, 182 permits were issued for non-EEA fishers working on Irish boats so the data estimated by DC MAP may be an over-estimate as it is based on raised sample data.

Education

In 2017, 4% of the people employed in the Irish fishing fleet were educated up to a high level, 37% up to a medium level and 19% up to a low level. These data were self-declared on surveys by the vessel owner or skipper for the entire vessel crew. As such and being cognisant that these figures are based on sample data, these figures must be taken as a broad estimate. Along with asking for education level the Irish survey also asked what vocational training was taken by crew during the year and this came out as the highest level of reported education at 40%. The National Seafood Development

Agency (BIM) delivered training to 1,477 people, the majority of which were related to fishery training, including certificates (e.g. skipper tickets, engineering) (n=190), safety at sea training (n=1000), and radio communications (n=142). However, of these training there is no data to suggest how many of these individuals work directly in the fishing sector.
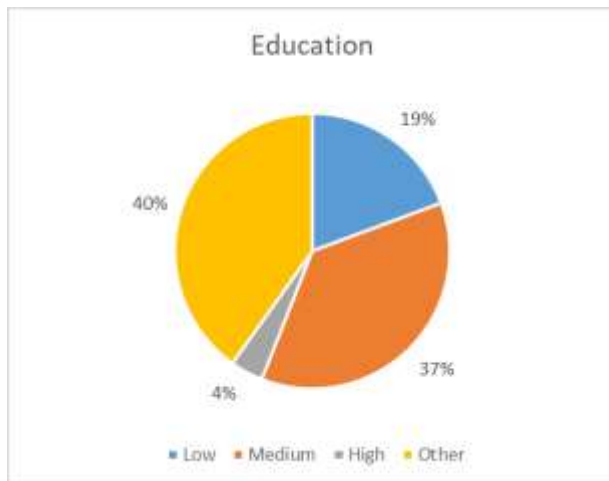

Status

The majority (68%) of workers were employees and 32% were owners. In the Irish fishing fleet, most fishing crew are self-employed, and remunerations is normally on a share basis. For the purposes of non-EEA crew members working in the whitefish fleet under the Atypical Working Scheme the crew from non-EEA countries must be employed directly by a sea-fishing boat licence holder under a written contract of employment for a duration of 12 months.
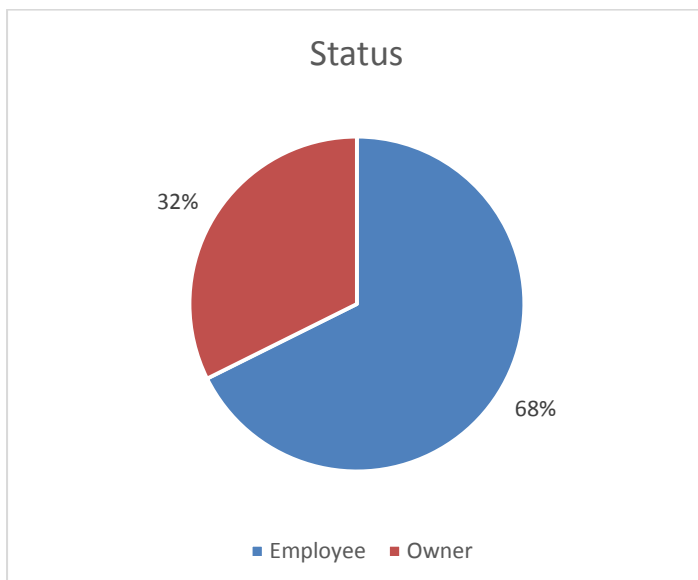
Unpaid labour by gender

An estimate of unpaid work by family members (presumed to be mostly women) directly relating to fishing activities in Ireland was estimated to be worth €5.9 million in 2017 with the majority (73%) of this cost being accounted for by vessels less than 12 meters in length. However, this figure is based on a sample rate of 13% of the total active fishing fleet and should be used with caution. The figure for unpaid labour might be higher as at this level of estimation it would only equate to 6% of the total estimated wage and salary for the entire fleet. Social data collection for 2017 did not provide

sufficient data to make a conclusion on the percentage of unpaid labour by gender. As a result, the percentage for the gender proportion for overall employment was used to divide unpaid labour which most likely devalues the role of women in these statistics.
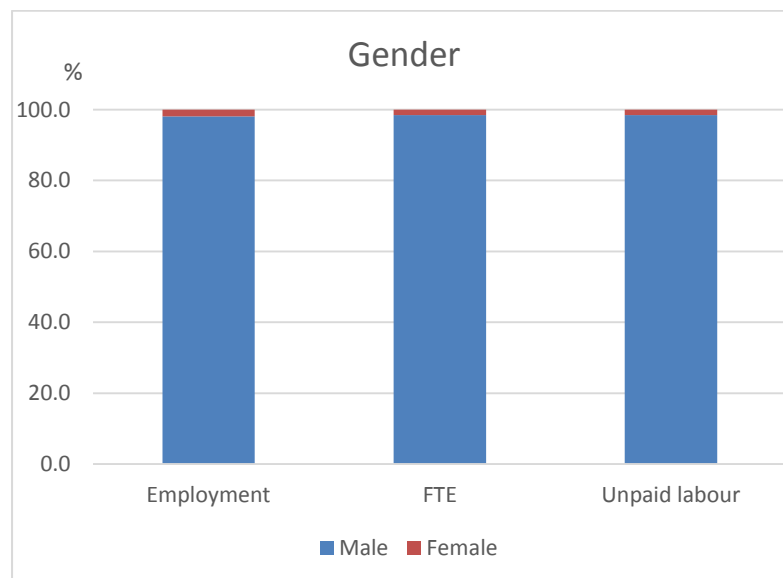
2. Stratification / Segmentation

Employment by Fishing Activity
LSF employed 1 976 people in total, followed by 1 087 in the SCF.

Gender by Fishing Activity
The Irish SCF employed less than 1% of females while the LSF employed 2.5%. These numbers are undoubtable an underestimation as the data for unpaid labour for females is known, from anecdotal evidence, to be higher than that estimated from surveys. It is likely that this fishing activity employs a greater proportion of women because many of the businesses operating in this sector are smaller family enterprises that rely on support from friends and family.

Age by Fishing Activity
The age profiles for SCF and LSF shows similar patterns. As with other parameters these data are based on sample data and as such represent proportions of the sample data. The sampling rate for SCF was lower than that of LSF so it is possible a different age pattern would appear if a large sample from the SCF was achieved.

Age: SCF — 10%, 30%, 55%, 6%. Legend: 15-24, 25-39, 40-64, >=65

Age: LSF — 6%, 39%, 51%, 4%. Legend: 15-24, 25-39, 40-64, >=65
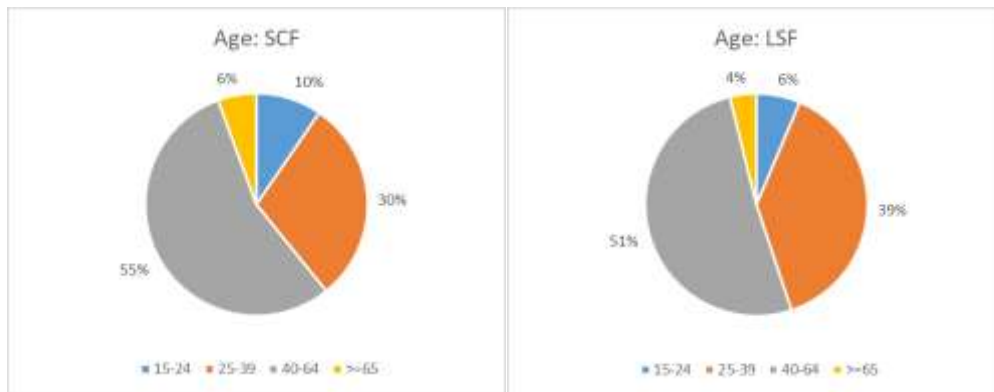
Nationality by Fishing Activity

The Irish LSF employed the greatest proportion of non-nationals. Just under 40% of the people employed in this fishing activity were from EU or non-EU/EEA nations. Non-EU/EEA workers in the LSF made up the 11% of the people employed but only stood at 1% for the SCF.

The SCF employment was made up of 95% Irish workers. This is not usurping as many of the SCF are single operator vessels which are fished by the owners who are Irish.

Nationality: SCF — 4%, 1%, 95%. Legend: national, EU, non-EU/EEA

Nationality: LSF — 11%, 2%, 26%, 60%. Legend: national, EU, EEA, non-EU/EEA
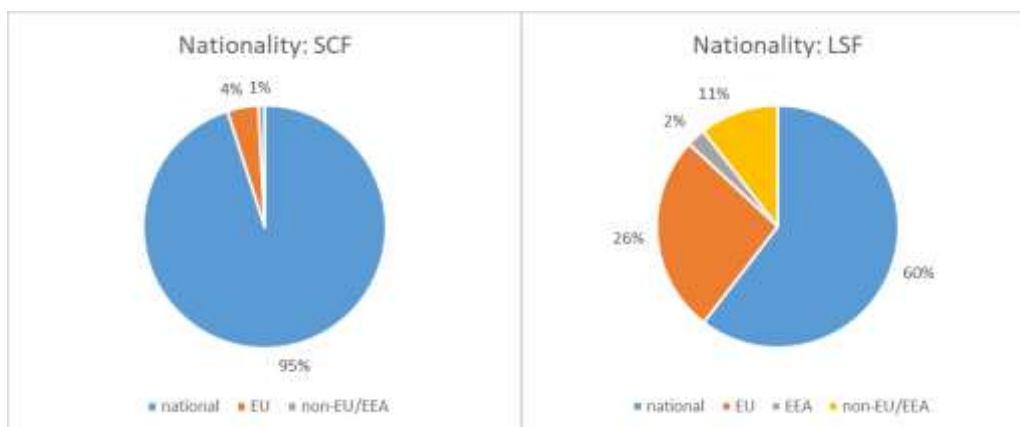
Education by Fishing Activity

From the data sampled there was no reported high education level for SCF while this was reported as 6% for the LSF. Medium education was reported as 42% for the LSF and 26% for the SCF. As fishers were given the opportunity to indicate if vocational training was conducted during the year these data are also presented with 71% of the SCF and 23% of the LSF indicating that training occurred during the year.

Education: SCF — 2%, 26%, 0%, 71%. Legend: Low, Medium, High, Other

Education: LSF — 23%, 29%, 6%, 42%. Legend: Low, Medium, High, Other

Status by Fishing Activity

There was a greater proportion of owners to employees in the SCF than the other fishing activities. In the SCF 52% of people were owners, compared to 21% in the LSF. Vessels operating in the SCF tend to be either single-handed or employ small crews of up to 2 additional workers, of which the owner may be one crew member, while the LSF tend to employ larger crews.
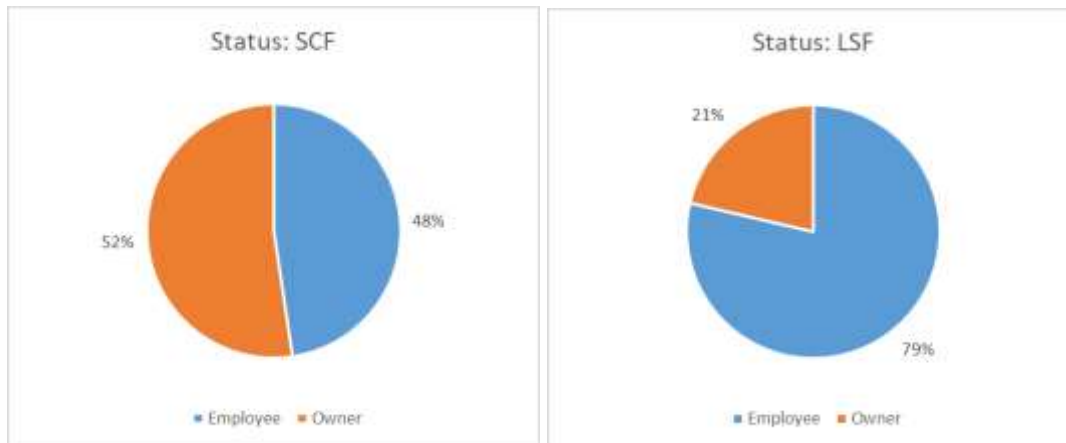
3. Challenges

Access to labour is a major challenge repeatedly communicated by the fishing industry. The ability to recruit and retain skilled and reliable crew is challenging for many vessel owners, particularly in some rural communities where emigration is high and/or population growth is slower than urban areas. Attracting new entrants into the industry has also been muted as a challenge with young people seeing the industry as not providing social mobility and the work being undesirable. In addition, as most vessels operate on a share system wage is highly correlated to vessel performance which act as a deterrent as wages may not be consistent or secure.

4. Data issues

Data was gathered through a postal questionnaire. Skippers provided data about themselves and their crew (if any). Survey responses are around 13% and the questions in the survey were consistently answered for all responders with only a small number not providing data on educational level.

Education level may have proved to be a sensitive subject (because of the questions related to academic qualification) meaning some skippers refused to comment on their education level. An opportunity was given to the Skippers to provided data for themselves and their crew (if any) about any other training they have or took during the year (e.g. Skipper tickets, engineer qualifications, sea safety etc.).

The data presented here is from sample data. As such the totals provided are based on raised data using sampling proportions by variable applied to the overall employment and FTE totals. As these data are raised from sample data there is uncertainty around the estimates and they could be an under or over estimation.

5.12. Italy

1. Social structure of the fishers' population
Total population of active workers in professional fishing (during the year 2017) was 25,499 employees, equal to 20,269 FTEs. The persons involved during the referring year in all activities strictly related to the fishery on vessels are considered. The self-employed are considered, too.

The total employed were 25,499, of which less than 400 were women in fishing. Referring to the number of female employees, is marginal, around 1.5% on the total number of employees and 1.4% referred to Italian FTEs. The data were based and estimated on the Italian active fleet in 2017; total active vessels have been 11,255, of which 8 included in DWF, 7,346 SSF vessels and, finally, 3,901 vessels aggregated into LSF fishing activity.

Numbers involved in Fisheries harvesting by gender
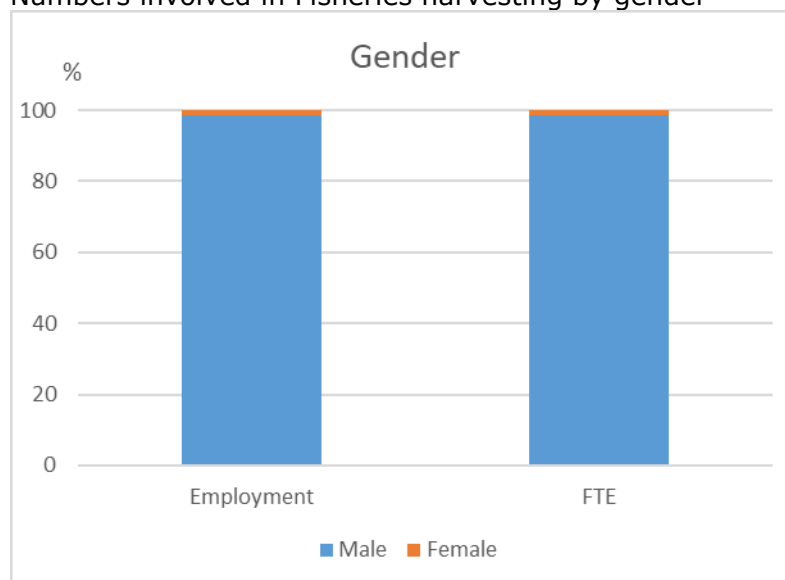
The women represent a low number of employees, according to the Italian fishing tradition. In some fishing activities, i.e., the women are missing, because the working conditions and the number of fishing-days are not suited to the employed woman who, in addition to being a fisherwoman, must comply with other activities in family, but in local community, too. Furthermore, the presence of women refers only to women who have the title to be embarked or who, even without a professional qualification, represent self-employed persons who support family activities and carry out work not on vessels[12].

Considering FTE, women in fishing work less than 6 hours per day on average (5.9 hours per day), compared to the average 6.4 hours per day worked by fishers. In terms of FTEs, there were no significant differences between female or male employees. The difference was emphasized in absolute terms as the number of men compared to women. Furthermore, the aspect has been estimated at national level, although there is

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[12] Study of the role of women in fisheries in the Mediterranean and the Black Sea Ref. No. 04 (EASME/EMFF/2016/1.3.2.5/03)- Final Report. ISBN 978-92-9202-435-2. doi:10.2826/819677, pag. 112 and ss.

awareness that it is very variable based on the different local coastal fishing communities.

Demographic data of fishers population
The demographic data on Italians employed in professional fishing have been collated through a sample survey based on questionnaires. During 2018 the first survey was conducted to acquire data on age, nationality, status (owners/employees) and educational level. The results are reported below and refer to the national level. The analysis of the demographic data was based on a number of 25,414 employees, which is lower than the figure referring to employees at national level (25,499).

The difference (84 employees, equal to 84 FTE) refer to fishers in DWF vessels, in total 8 active vessels in the referred year. For them it was possible to gather information on the gender (by means of a field survey and desk - analysis of balance sheet data -). All the fishers in the DWF are employed and not self-employed. No information has been acquired on other demographic data.

The data commented below takes referred to fishing activities SCF and LSF.
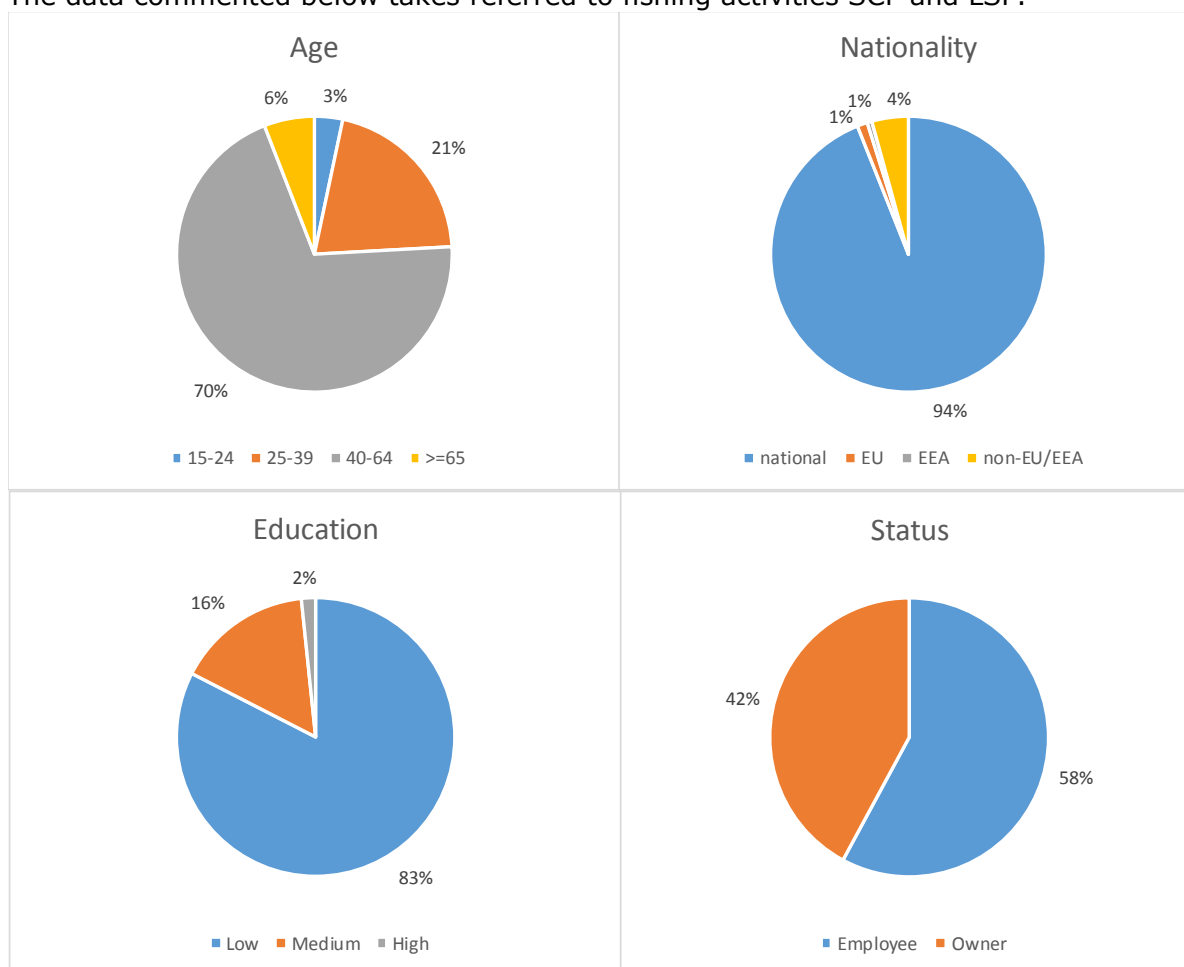
Age
The age group not represented is the one up to 14 years old. The missing data could be related to the current legislation: according to which the instruction, given for at least 10 years in the age group between 6 and 16, is mandatory. Only about 6% are in the age class >65 years old. While less than 3% is included in the age class 15-24 year old. In the next few years the average age of the employed will continue to be high. Over 90% of employees active in 2017 have been employed in two age groups: 25-39 (about 21%) and 40-64 (70%). Italian fishing labour force could gradually be represented by elderly

women and men. The retirement time from work is quite long, because in Italian welfare and social legislation the job of fisherman is not recognized as an "exhausting" job, but as a "heavy job". The fishers, therefore, cannot benefit from reductions in the number of years of active work recognized for the calculation of the pension, which is paid at the end of working activity, that is to say, by age at 67 for men and 65 for women.

The data reported can also be interpreted based on the innovation of the Italian school system starting from 2010, in which numerous reforms have made it possible to bring the school closer to local communities and to the needs in terms of employment and professionalism. Individuals who fall into the age class 25-39, have experienced the evolution and dynamics of the compulsory school system, therefore it is likely that, in the coastal communities, there has been a greater approach of the youngest to professional fishing.

Nationalities
SCF absorbs over 94% of Italian employed professionals. There was 4% (low presence) of employees from the North African area, Bangladesh (No-EEA). Poor presence of EU employees (about 2%), in particular distributed on the Adriatic and Ionian sides. The data must certainly be analysed, in the future, taking into account the migratory flows in the Mediterranean, which have been recorded in important coastal fishing areas, such as Sicily, Puglia and the Tyrrhenian Sea.

Education
At a national level, over 83% of employees have a low educational level, just over 16% on average and only the remaining 2% declare a high level (degree or other qualifications beyond the degree). In both SCF and LSF fishing activities it has been pointed out that there are high levels of professionalism, for example naval engineers, biologists, economists, but these professionals do not have professional dependency links, they advise, therefore they represent human resources to support services to the sector. The high educational level is twice as high in SCF compared to LSF. The aspect is linked to the children of fishers who have a high level of education, are directly involved in the activities of parents, but also deal with other aspects related to fishing (the accounting of fishing cooperatives, territorial marketing to generate income as a product of small-scale coastal fishing, or participating in the tourism offer of coastal communities). Many of the professionals in the medium level of education report three-year upper secondary school diplomas, which allows a professional qualification to be finalized for the purpose of obtaining a professional qualification and enrolment in the "placement of seafarers", as well as the personal navigation booklet.

Status
The prevailing status has been that of a self-employed owner, owner of the vessel that does not work on the boat (over 58%). The value has a strong relationship with the type of Italian fishing activity, where over 65% of vessels fall under the SCF. In this fishing attractiveness, obviously, there is often the direct involvement of the owner on the boats. In many cases the owner is not self-employed, but the dynamics of the unpaid employment varies according to different and numerous to the Italian coastal areas.
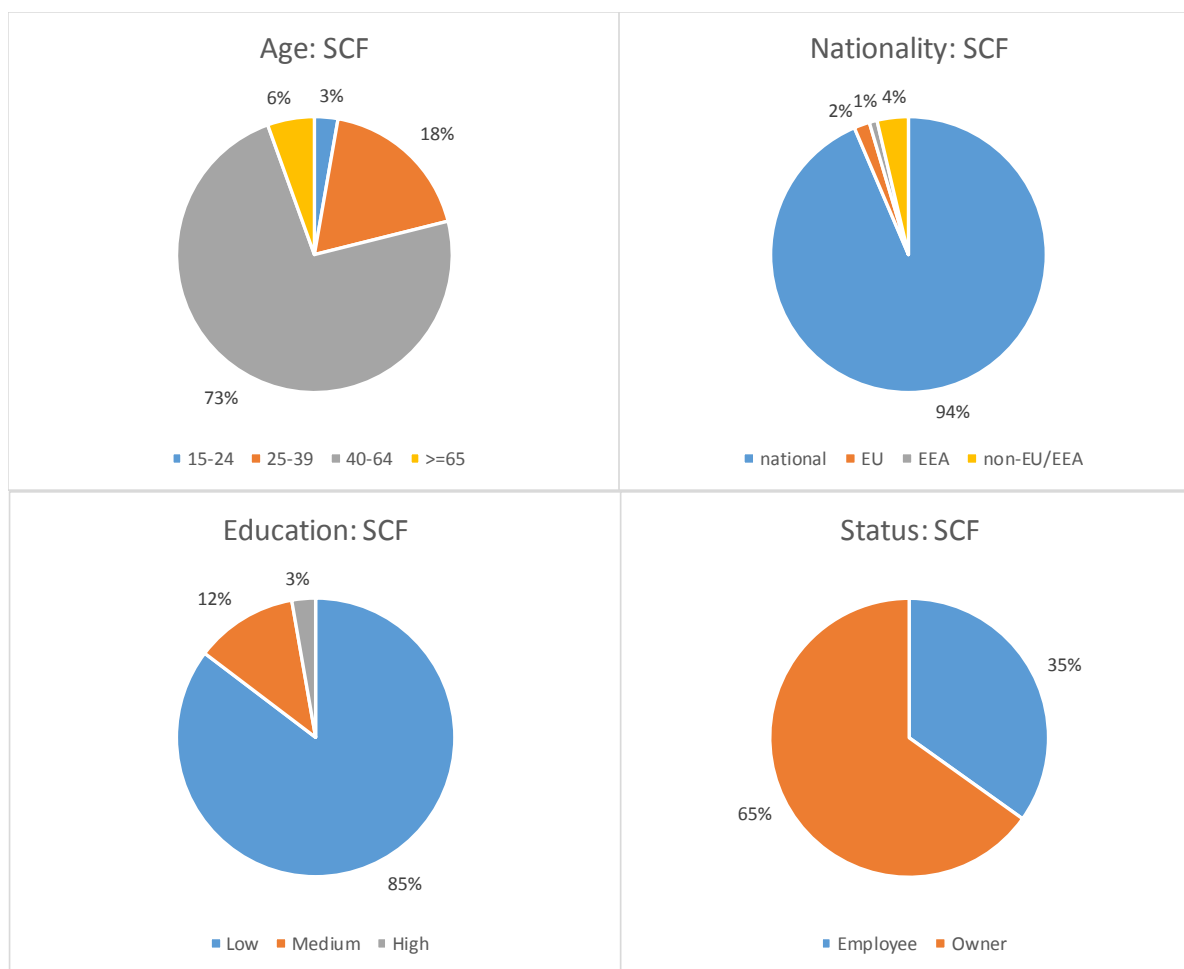
2. Stratification / Segmentation
The reference population is represented by the universe of vessels of the Italian fleet in 2017. The sample unit is the vessel, uniquely identified by the number with which it is associated in the Fleet Register. Additional information used for the design of the survey on the sample units included LFT and geographical sub-area (GSA) to which the fishing vessel. Social data was collected relate to all persons employed on each fishing vessel included in the sample. The population was subjected to stratification, so homogeneous sub-populations were defined. The sample units were extracted from these homogeneous sub-populations. The stratification has guaranteed to have a sample as representative as possible of the analysed reality. This stratification has been
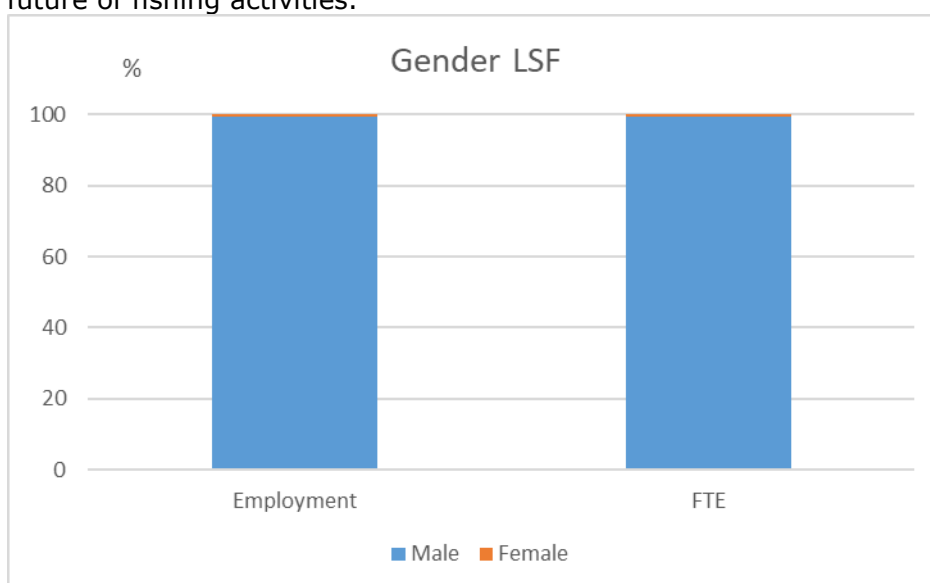
implemented to avoid distorted estimates. The strata covered by the survey were 14, (coming from the combination of small scale fisheries (SCF) or vessels in large scale fisheries (LSF). The boats to be surveyed were randomly extracted from the list of boats already surveyed with reference to economic data. In addition to the two aggregates (SCF and LSF) the oceanic vessel layer has been added, i.e. those vessels operating in non-Italian seas. The distant water fisheries (DWF) group was investigated in a census manner and, therefore, excluded from the sampling plan.
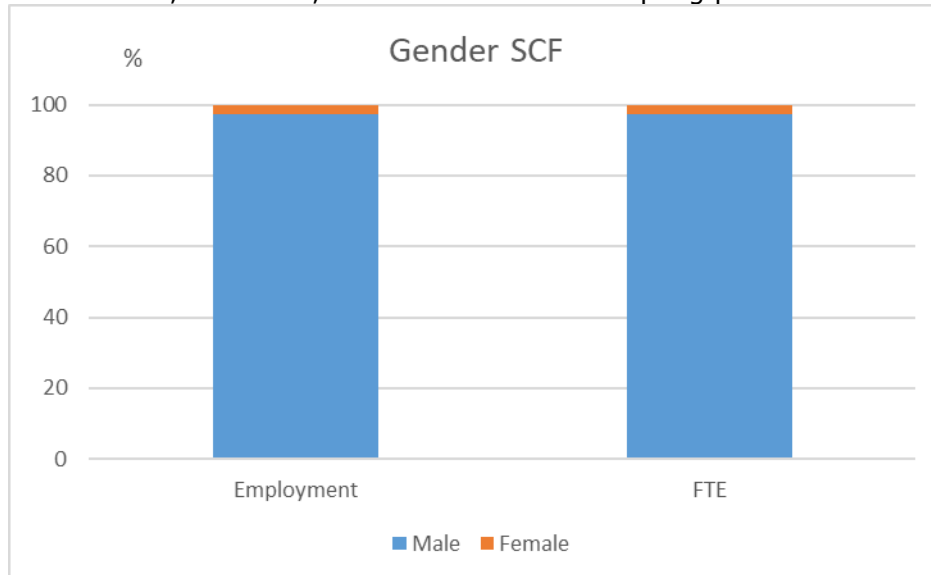
More than 65% of active vessels (2017) belong to the SCF. The total employed in the SCF numbered 11,996 of which 97% were males and 330 were women (the remaining 3%). According to these data, therefore, over 47% of the employees of fishing belong to SCF.

Age: SCF

- 3%
- 18%
- 73%
- 6%

■ 15-24　■ 25-39　■ 40-64　■ >=65

Nationality: SCF

- 2%
- 1%
- 4%
- 94%

■ national　■ EU　■ EEA　■ non-EU/EEA

Education: SCF

- 12%
- 3%
- 85%

■ Low　■ Medium　■ High

Status: SCF

- 35%
- 65%

■ Employee　■ Owner

In SCF, 73% of employees are aged 40-64. In line with the national figure, also in the SCF the two middle age classes include over 91% of the employed. The personal data is significantly variable with respect to the characteristics of different coastal communities. Analysing the demographic data, interactions with the fishing community in which the employee is based were highlighted. Factors such as age, level of development, and the propensity to corporate risk (and therefore to be the vessel's owner) are conditioned by the expectations that the fishing communities have towards the economically sustainable future of fishing activities.

Gender LSF

■ Male　■ Female

Age: LSF

- 4% 15-24
- 23% 25-39
- 67% 40-64
- 6% >=65

■ 15-24 ■ 25-39 ■ 40-64 ■ >=65

Nationality: LSF

- 94% national
- 1%
- 0%
- 5% non-EU/EEA

■ national ■ EU ■ EEA ■ non-EU/EEA

Education: LSF

- 80% Low
- 19% Medium
- 1% High

■ Low ■ Medium ■ High

Status: LSF

- 78% Employee
- 22% Owner

■ Employee ■ Owner
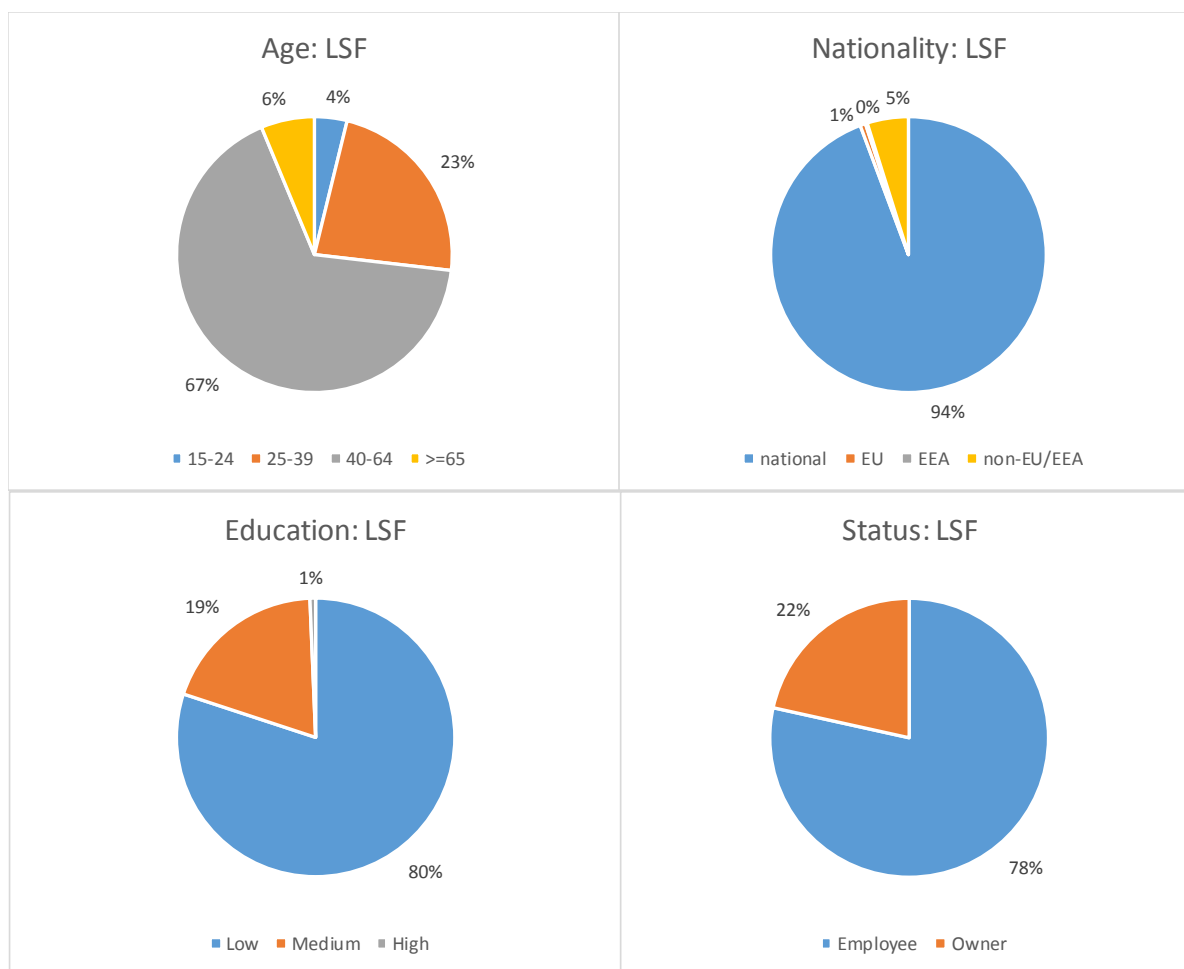
With around 13,420 total employees in the LFS, over 99% are males. The same values refer to the FTEs, since in the professional fishing (LSF) the collective national contracts are applied in which the employed work full-time. In LSF less than 1% of the total employment is unpaid work. Among men in LSF, only 1.3% of it is unpaid labour. Among women in LSF, (which in total are estimated 62), about 8% is declared unpaid labour.

In the LFS fishing activity the percentages vary slightly between employed with low level (80%) and employed with average education level (19%). The presence of high professional profiles is still shrinking (less than 1% are employed with a high level of education).In the type of fishing activity, qualified workers with experience in navigation are required. There are more specific requirements for gaining recognition as a sailor, or other professional roles. Even the owners of the boat who have the role of captain, are obliged to hold a high school diploma (so average level of education) or, only if born before 1953, can have a low educational level, but demonstrate continuity significant of years of navigation and certified experience in the role to play. The industrial fishing activity of vessels in LFS also affects the number of owners, compared to those employed. Over 70% of employees in the LSF have employee status. In LSF less than 10% is a non-Italian workforce. The presence of foreigners (mainly no-EU/EEA) is greater in larger vessels engaged in multi-day fishing.
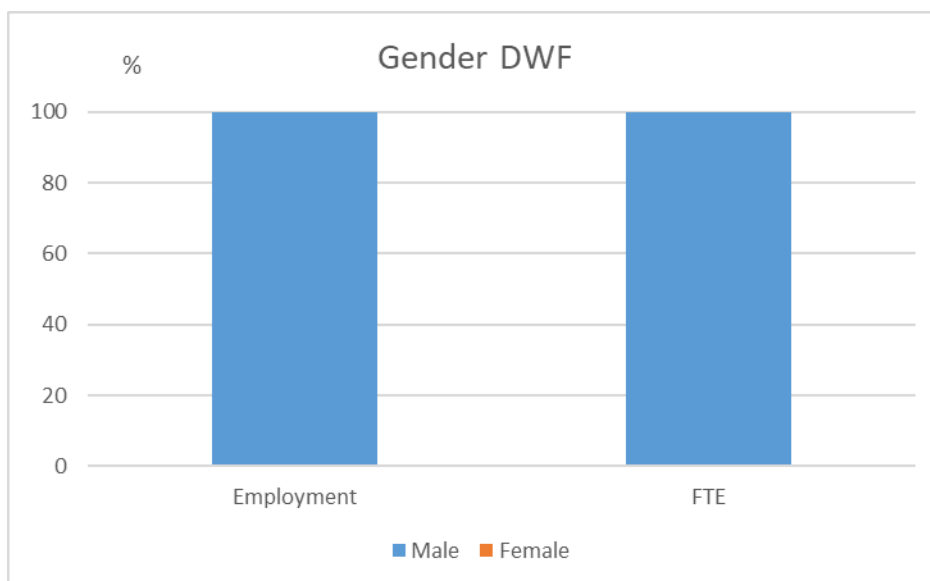
The DWF, the data has already been commented on, and the totals of employees and their gender have been reported. No other information has been collected. A census has been carried out, with only 8 vessels active and no information is reported for unpaid employees, therefore they are all employed who receive a salary. Women have not been employed in DWF. The investigation allowed to acquire information that could not be ascertained with respect to the nationality of the employees. Surely the license holders have Italian nationality.

3. Additional sections

Under the Economic Data Collection has been developed investigations based on coastal traditions similar in traditions, prevalent fishing systems. During 2017, pilot studies (PS) were finalized in GSA17, to investigate the methodology to be adopted to start (in 2018) the data collection on social variables in Italian fishing. The sample of boats has been selected with a simple random extraction referred to the SSF units. The PS related to GSA 17 produced three case studies (CS). Interviews with local stakeholders were carried out in the PS preparatory planning, and information was acquired on significant differences between the Northern, Central and Southern fishing communities in GSA 17. The *ex-ante* survey (desk and field activities carried out, such as vis a vis interviews to institutional representatives of fishers and owners, lawyers, fiscal and tax agency, insurance and sanitary national security, National occupational accident system, etc.) has been finalized to obtain a questionnaire based on around 40 questions. It was answered by representatives of the fishers (both owners and self-employed or employed) operating in Chioggia (North Adriatic), Cavatina-Ancona (Middle Adriatic) and Termoli (south Adriatic).

The PS has been based, finally, on Focus Group Discussion (FGD) so that the results of the questionnaires were discussed by other groups of stakeholders, not previously involved neither in the *ex-ante* activity nor in the questionnaire phase.

Focus Group			
GSA	**Compartment**	**N. stakeholders**	**FGD duration**
17	Ancona	10	80 min
17	Termoli	12	85 min

Differences have been emphasized about interest of fishers in investing in the sector, level of trust and satisfaction of their work and their style of life / quality of life, opportunities related to good dialogue with the coastal community (FLAGs, POs, MPAs, others direct and indirect related sector, environmentalists, etc.). Significant dynamism was found, during Pilot Study for feasibility analysis of data collection for social variables, in GSA 17, specifically in Termoli (southern part of GSA 17).Where there is a fruitful interaction with the local FLAG. The population is participatory and enhances the local fish supply. The fishing community is well integrated and an interest is also reported by young people (average age 30-35 years) and wives and mothers who are women aboard their children's or husbands' vessels. In SCF, the level of education shows a rate of over 85% which has a low level of education, only 12% on average and 2% high. The very low degree of education depends on the average age of those employed in the SCF. The aspect should also be analysed on the basis of specific upper secondary schools (vocational schools, where, starting from the 2018/2019 school year) that have activated specific courses to train professional fishers, fish farmers, as well as nautical technicians and naval.

The analysis of the level of education must also be correlated also to regional plans of educational needs of the territory. Starting in 2010, a school reform is underway which involves training throughout the life of young people, above all conveying the needs of the local economic sector (NUTS II).

Specific results referring to the analysis of the Termoli area have highlighted the following:

- inadequate training of professional fishing employees;

- low level of education, which severely limits the possibility of converting into other activities related to fishing (such as tourism);

- difficulty in involving women (wives, daughters, fishers-like), because the status of adjuvant in a family business is not legally recognized, so salary costs would be too high;

- difficulty in accessing the EMFF because the minimum thresholds are too high for the realities of small fishing companies (eligible beneficiaries);

- difficulty in complying with regulatory constraints for on-board equipment used in tourism fishing (engine obligation <25 hp, while it is customary for all professional fishers to use a 40 hp engine);

- difficulty in integrating income with agreements with local tourism, because for the area fishers the requirements to administer food cannot be guaranteed. To this is added that the vessels of the analysed coastal community are structurally unable to accommodate tourists, because some boats do not have hygienic structures among the equipment on board.

The focus groups provided information about women in fishing, too. Strong participation of women in small-scale fishing has been recorded. In Veneto there is a traditional niche located in the Polesine area, where women practice fishing. In these areas women have an important role, because, in addition to performing the job of a fisherman, they take care of the family. In other areas of the Northern Adriatic (Goro), on the other hand, women play an active role in managing the commercial activities of their family members. In Cavatina Marche, on the other hand, the role of women is transversal, but mainly based on supporting all the phases not on board, from the repair of the networks to the marketing, up to the assistance to the administrative and fiscal activities of the

family fishing companies. In Termoli, women are both involved in fishing tourism and in activities on board (seasonal) and are also owners of fishing licenses. In general, in Adriatic women involved both on board and on land have a higher level of education than their male peers. The interviewed women are recognized as having greater capacity to enhance the local catch: this is very important to increase income and implement forms of certification of fish offer. Particular interest in the area of Cavatina Marche/Ancona and Termoli has been shown to develop new professions to support the state of well-being of the sea, in fact the problem of enhancing the product of discards has been addressed, but also the marine litter (mainly represented by plastic also referred wastes/socks come from mussel long-line installations).

4. Challenges
The questionnaire for the collection of Italian social data included additional questions to consider:
- other certifications
- dependence or integration of income with other activities related to fishing
- safety and accidents at work
- presence of work exclusively on land

Referring to certifications, over 50% of employees in fishing do not hold certifications. Employees who declared other certifications, referred to the certifications obtained for safety. Other certifications concern the diver, use of electronic equipment for navigation safety (these mainly refer to employees in the LSF). Some areas referred that the need was to have new fishers, young and with a medium-high educational level. For the future this could be favoured for the application, in 2018, of the decree MIUR (ministry of research) n ° 24-05-2018, which introduces new school profiles in secondary schools. Among the new profiles is the diploma in vocational education Commercial fishing and fish productions. The first start year was 2018/2019. With reference to other activities carried out to supplement income, almost all of the sample declared that it was a professional fisherman's main activity. Less than 30% of employees receive subsidies for temporary stop of work. For the SCF it has been underlined the lack of aggregating the local fishing offer, enhancing it and selling it. Discussions and feedback have been received about the interest in the marine litter[13] and the involvement of the fishers, also reducing the costs for the social and environmental service they carry out. Importance to create a network of local producers organisations and network with FLAG's have been received as a best practice for better profiling the socio-economic variables of coastal communities.

5. Data issues
The data collected are consistent with the national demographic reality, especially in terms of age, nationality and status. Data was gathered through a questionnaire with the vessel owner or skipper. Owners or skippers provided data about themselves and their crew (if any). In some cases the interviewees have not been able to provide answers about the level of education, or other variables, such as certification and professional training activities, other economic activities carried out by crew members. More difficulties have been in the DWF data collection. Difficulty in providing basic information about your crew (age, nationality and level of education). Issues have been to provide

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[13] Marine litter (discussion in Italy, France, Spain). During the interview phases (aimed at collecting social data), expressions of interest were received to learn and test voluntarily sustainable practices for the marine litter. The intention that came from the stakeholders concerns integrating waste management systems with the recycling of marine litters. In some coastal areas, it has been considered as an opportunity to generate new skills.

data that can represent smaller geographical areas, to make the social data more accessible to numerous end users. According the process of feasibility analysis based on pilot study and on different case studies, have been received more detailed data and qualitative information for understanding the different dynamics and interaction of employees and their community.

5.13. Latvia

1. Social structure of the fishers' population
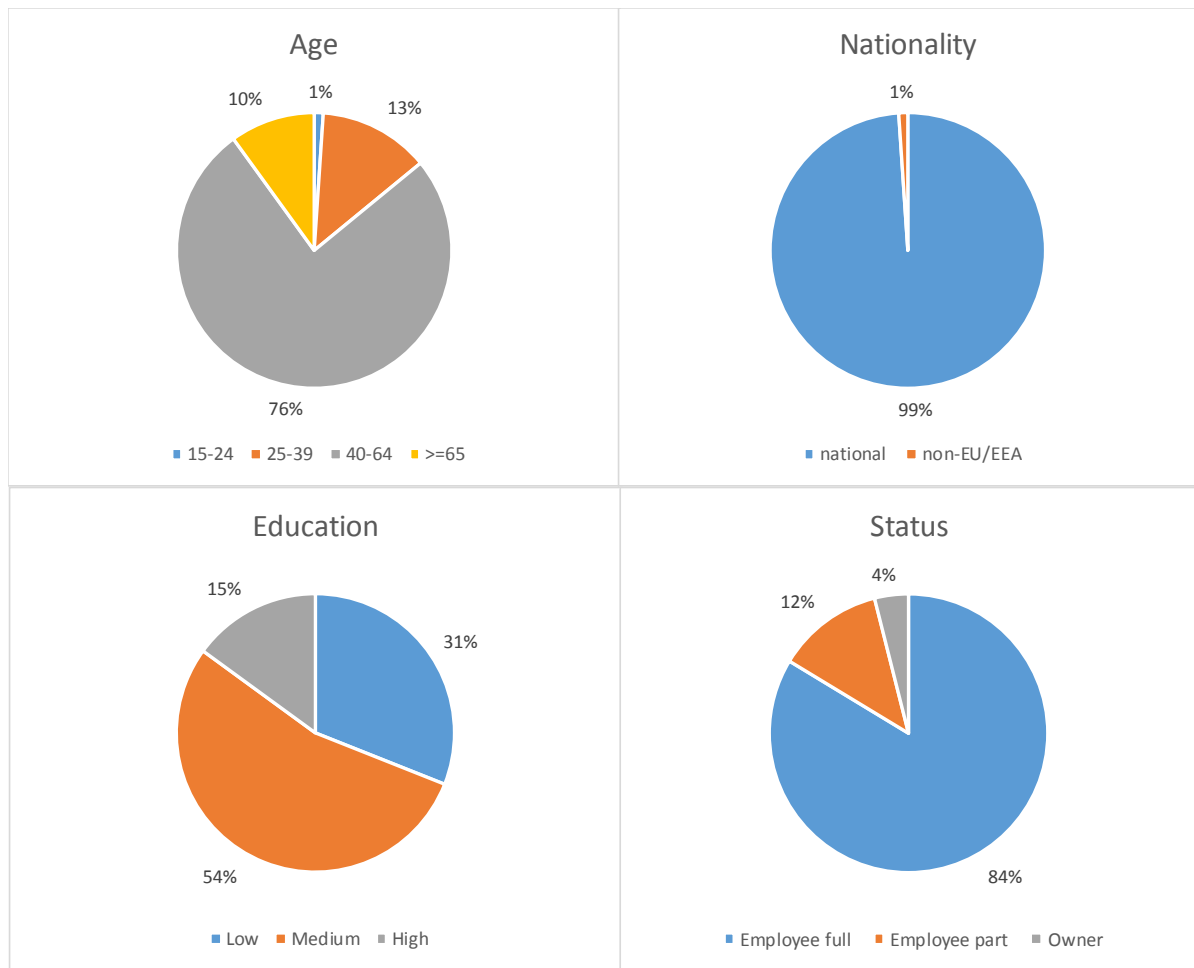
Numbers involved in Fisheries harvesting by gender
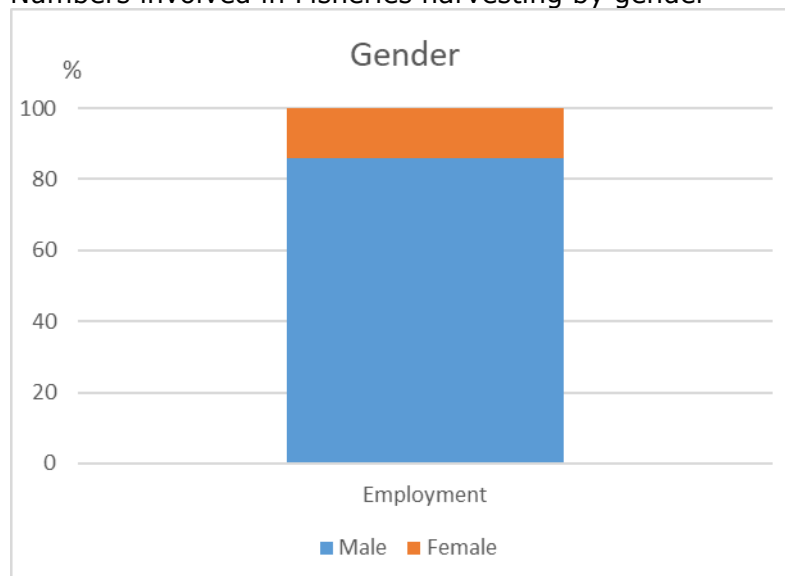
Demographic data of fishers population
The employment of the Baltic Sea fleet was estimated around 661 jobs; corresponding 326 FTEs in 2017. The total employment and the FTE decreased by 33% and 25% respectively between 2008 and 2017 while the Gross Value Added per FTE increased by 16% during the same period. Compared to other member states, Latvia has a low wage for fishers. However, the average salary in fishery sector was by 9% higher than the average salary in Latvia in 2017.

The fishers on the Baltic Sea vessels as well as on the coastal regions usually are local Latvia inhabitants.

The small fishing enterprises very often are a family business. However, the 86% of employment in the fishery sector are older than 40 years old because to choose the fishers profession is not popular for the younger generation. The main reasons are the harsh working conditions, outdated equipment and low wages. The employment younger than 40 years who wants to stay in the industry are trying to find work abroad where they can get better wages and working conditions. The most popular countries for job search in the fishery sector are Ireland and UK.

The majority of employment (54%) have a medium education. Currently there are 12 maritime educational and training institutions in Latvia where training programmes for seafarers can be acquired. The owners of companies usually have high education in business or law. The employees in fishery sector choose following education areas: business, economic, administration and finance – 29%; agriculture, forestry and fisheries – 23%; education and science - 6%; other areas – 42% of employment.

Age

10%	1%
13%	
76%	

■ 15-24 ■ 25-39 ■ 40-64 ■ >=65

Nationality

1%

99%

■ national ■ non-EU/EEA

Education

15%

31%

54%

■ Low ■ Medium ■ High

Status

4%

12%

84%

■ Employee full ■ Employee part ■ Owner

Employment in more detail

The 73% from the total number of employees have an indefinite contract. The 84% are full time employed and 4% are owners of the enterprises who are involved in fishing. The 54% are employed in the sector less than 5 years and only 7% are employed more than 20 years. The 10% from the total number of employees have a special employment status as pensioner (73%), a person with disability (24%) and student (3%).

2. Stratification / Segmentation

The data was collected for the SSF and LSF segments. Due to the small number of fishing companies in the sector and for the protection of the confidential data the data cannot be divided by main fishing activity.

3. Challenges

The changes which could affect the social situation in Latvia were connected to the decommissioning of the vessels between 2008 and 2017. Vessel scrapping between 2008 and 2017 as well as other structural changes in fleet segments had a positive impact on incomes and minimised the total costs resulting in an increase in profitability and overall improvement in the economic effectiveness of several fishing firms. However, the changes in the fleet may have had impact on the employment in Latvian coastal regions and especially on the SSF where the opportunities to find the job outside the fishery are low. The low salary and heavy working conditions also contribute to the outflow of labour abroad and force young people to choose other professions outside the fisheries.

The fishery sector in Latvia depends on the economic situation in the external markets as well as on the turnover of the fish processing enterprises. The most important buyers of fresh fish are fish processing enterprises in Latvia and in neighbouring countries. The main produced product types are fresh or frozen fish and prepared or canned fish. The negative impact on total processing industry turnover, purchase of raw materials from fishery sector and employment was caused by the ban of the product trade by Russia. The export to the Russian Federation was completely discontinued in 2017.

4. Data issues
The data collection of the social variables was conducting in 2018 the data was collected for 2017. The programming of computerized self-fulfilling questionnaires was implemented. The programming was carried out using the Lime Survey software. The automatically generated individual access to the online questionnaire form was sent to each respondent by e-mail. The enterprise was observation unit for the survey. The type of data collection was census with achieved sample rate 24%. The following variables were included in the questionnaire: employment by gender, employment by age, employment by education level, nationality and employment by employment status. The results were raised from sample to the population based on the total number of employees in the sector. The collected social data could be used for the overall analysis in the fishery sector. Furthermore, the received social data could be included into a subsequent forecast for the development of Latvian fishing fleet.

5.14. Lithuania

1. Social structure of the fishers' population
Numbers involved in Fisheries harvesting by gender

Gender

Demographic data of fishers population

Age

Nationality

Education
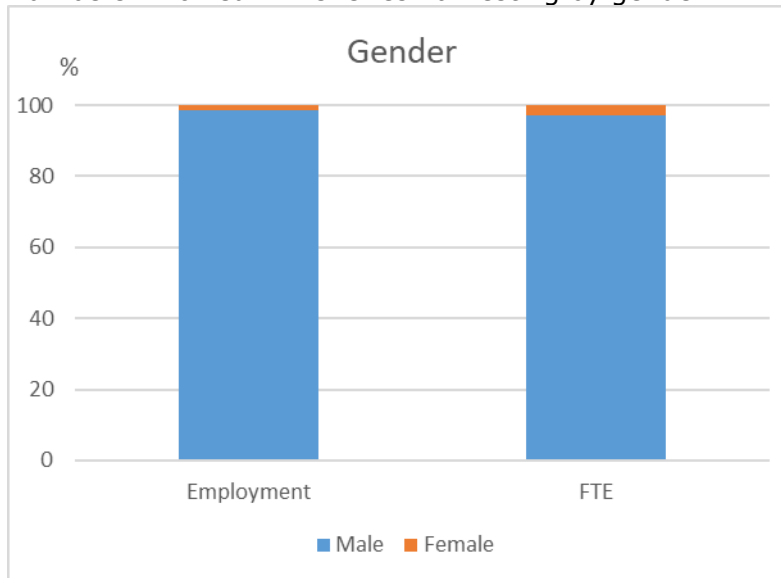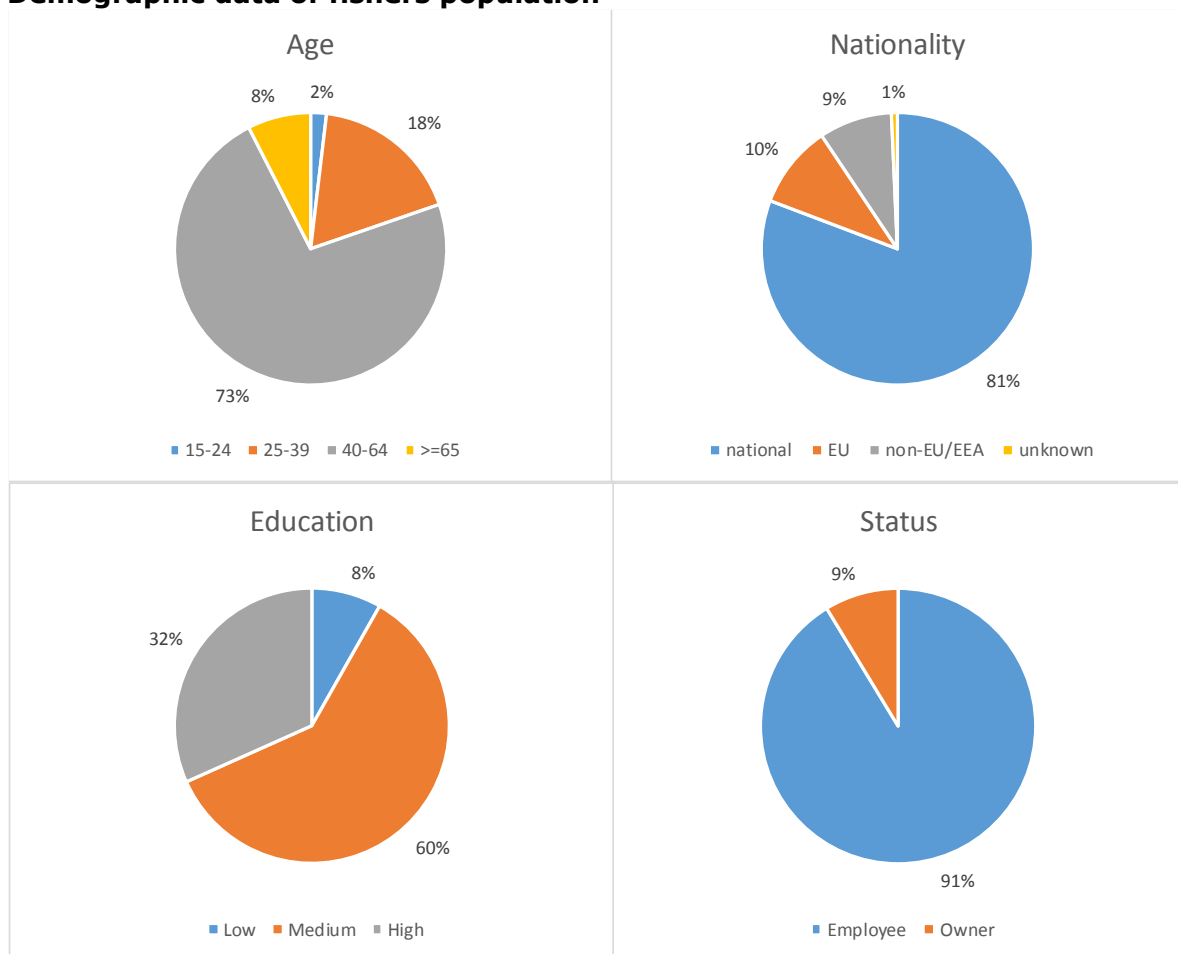
Status

Employment in more detail:

Status employment (owner, employee, unknown)
Concerning status of the employment in Lithuanian fishing fleet, around 9% of total employees were owners of the fishing company. The largest contribution of owners in fishing operations were observed in small scale fisheries, where insignificant part of them was considered as unpaid labour. Large scale fleet and long distance fleet employees were mostly hired crew members.

Status employment by education
In order to assess the education of employees in the fishing industry, the standard levels of education programs recommended by the PGECON were grouped into three categories (low medium and high). Although the International Standard Classification of Education ISCED 2011 divides education programs in a relatively abstract manner and does not adapt to specific specializations, national legislation prior to development of survey questionnaire has been analysed in order to indicate the specific educational requirement and it compatibility with particular qualification. Minimum qualification and education requirements for vessel deck officers, and other personnel employed on board are defined in the legislation of the Republic of Lithuania. Therefore, the education groups from survey can be linked to specialized educational institutions which prepare specialists for the marine fisheries.

Fishers working on large scale fleet in Baltic Sea and long distance fleet must complete appropriate special training courses in accordance with the Code of Training, Certification and Watchkeeping for Mariner, adopted in 1995 resolution 2. The requirements of the STCW Code, which are mandatory for a separate category of fishers, are defined in 2005 August 8 Order of the Minister of Transport and Communications of the Republic of Lithuania No. 3-355 "Approval of the Maritime Degrees of the Republic of Lithuania, Maritime Degrees, Global Maritime Distress Security Systems Radio Operator Diplomas, Marine Degree Certificates, Certificates of Issuance and Recognition of Mariners, and Special Certificates for Mariners". The requirements for small-scale fishers are much simpler, and a document issued by a training institution confirming that they have completed the training of skipper, is sufficient. A person wishing to obtain a mariner's certificate of competency and meeting the minimum requirements for an ordinary deck mariner is required to complete a Mariner's Training Program. For this program, the minimum level of education is basic, followed by the vocational qualification of mariner.

According to the results of survey, about 10% of vessel deck stuff and machinery engineers had ICED 0-2 training, corresponding to the degree obtained after vocational education programs. Some of the coastal fishers, vessel's cook and deck workers also had education in this group. Approximately 68% of the vessel's deck and engineer staff had an ISCED 3-4 level of education, corresponding to secondary education programs giving access to secondary education and vocational training programs, or corresponding to vocational training programs with secondary education entitling them to required qualification on board. This group of education was dominant among coastal fishers (including skippers), vessel's cook, motorists and other vessel engineers. Around 22% of the vessel's deck and engine department staff had higher education. Higher education was dominated by vessel mechanics and other engineers.

The positions of senior vessel deck officers were dominated by higher education, equivalent to ISCED 5-8 level, accounting for about 77% of all vessel deck officers. Such educational level requirements are provided by law. The remaining part, about 23% of vessel deck officers, had ISCED 3-4 education.

Comparing fisheries to the agriculture, the average level of education of Lithuanian fishing fleet companies was relatively higher. For example, according to Eurostat 2017

data, employees with higher ISCED 5-8 education in Lithuanian agriculture (excluding fisheries) sector was accounted for 12% of the total workforce, whereas the Lithuanian maritime fisheries sector this level of education was around 35%.

Status employment by gender
In 2017 around 85% of total number of employees in Lithuanian fishing fleet, including staff on shore, were male, whereas among fishers on board, male gender was accounted for 98%. Women in fisheries were mostly employed on small scale fleet, on shore positions, and in overall employment were accounted for 2%.

Employment status by age
In 2017 around 73% of total employees on board belongs to 40-64 age group, 18% to 25-39 age group and only 2% to the youngest employees from 15 to 24 years old. According to the survey data by positions on the vessel, around 75% of deck and engine room employees were 40-64 years old, whereas 17% of these workers were in the 25-39 age group. The highest number of fishers in 25-39 age group were from small scale fisheries, where the overall average age per person was 46 year.

The dominant age group for deck officers was 40-64 and was accounted for 75% of all employees in such position. The oldest employees in deck officer position were electro-radio navigators, with an average age of 67, while the average age of the captains was 51 years.

Results from survey indicate that fishing fleet is characterized by aging trend of the workforce with insufficient involvement of younger generation. However, in some positions, as vessel engineers, vessel navigators and vessel deck officers, modest involvement of younger specialists was observed.

Aging trends in the fishing industry were also confirmed by a comparison with the agricultural sector. According to Eurostat data of employment in the Lithuanian agricultural production sector (crop production, animal husbandry, hunting and related businesses) shows that the percentage of young workers working in agriculture is around 25% higher than in the fisheries sector. For example, in 2017 around 27% of all employees in the agricultural production sector belongs to combined 15-39 age group, whereas in the fisheries sector, this age group has 20% of total employees.

Unpaid labour by gender
Unpaid labour in Lithuanian fishing fleet were identified only in small scale fisheries, where individual enterprises and family business are the most dominant legal status of entities and could have an unpaid labour involved in business operations. In 2017 around 76% of unpaid labour were male and 23% females.

Labour by nationality
Analysing the social data of the fishing sector and the distribution of employees by age group, the increasing deficiency of qualified workforce was observed. This trend is also confirmed by the results from survey on the distribution of workforce by nationality of fishers. In the absence of employees in the domestic market, companies are forced to look for labour abroad. The Lithuanian fishing sector is no exception. The large scale Baltic Sea Fleet and the long distance fleet recruited employees from other EU countries and from third countries. In 2017 employment of Lithuanian fishing fleet consisted from 81% of national workers, 10% of employees had nationality of other EU countries and 9% were from third countries. Around 70% of the employees from the third countries had a Russian nationality, 19% were from Ukraine and the rest part from other third countries. Employees from the third countries were mainly employed as engineers, trawlers and motorists. Around 90% of employees from other EU countries had Latvian nationality. Latvians worked in positions such as captain assistants, navigators and electro-radio navigators. A fairly large number of foreign workers were employed in the

vessel deck officer's position, where 55% of the employees had Lithuanian nationality, 28% of other EU countries and 17% of third countries.

Comparing the average age among employees of different nationalities and national employees no significant difference was found. For example, the average age of fisher having Lithuanian nationality was 51 years, employed form other EU countries had the same average age, whereas fishers form third countries were 50 years old in average. All foreign fishers had male gender.

2. Stratification/Segmentation

Small scale fleet segment is dominated by small individual, often family-based fishing companies that include a larger proportion of women as family members in the fishing business compared to large scale and long distance fleets. Coastal enterprises are also characterized by relatively higher unpaid labour, including family members in business regardless of gender. Small scale fleet consisted from 89% of male employees and 11% from females. Female were involved in the administrative duties of the family business, marketing and contributed to the tasks on shore related to landings as well as preparation of equipment and other fisheries related duties. Around one third – 34% of total employed in small scale fleet were owners of enterprises and 66% were hired employees.

Education level in small scale fleet was dominant by medium, ISCED 3-4 level, accounting for 79% of total employment in this segment. Around 11% of fishers in small scale fleet had high education (ISCED 5-8) and 9% low education (ISCED 0-2). Although small scale fleet segment has relatively high number of employees with medium and high education, requirements for such education level in order to operate in coastal areas are not necessary.

Compare to the average age of employees from large scale Baltic Sea fleet and long distance segment, coastal fishers were slightly younger in average age. The average age of a coastal fisherman was 46 years, a skipper in coastal fleet - 52 years old and workers on the shore were 49 years on average. Around 70% of small scale fleet fishers were 40-64 years old, 23% belonged to 25-39 age group and 7% were older than 65. Fisheries in coastal has a seasonal pattern and revenues from landings are as additional income and secondary employment.

In the coastal fleet 99% of total employees had Lithuanian nationality.

Gender: SCF

Age: SCF

7% 1%
23%
70%

■ 15-24 ■ 25-39 ■ 40-64 ■ >=65

Nationality: SCF

0%
99%

■ national ■ EU

Education: SCF

11% 9%
79%

■ Low ■ Medium ■ High

Status: SCF

34%
66%

■ Employee ■ Owner
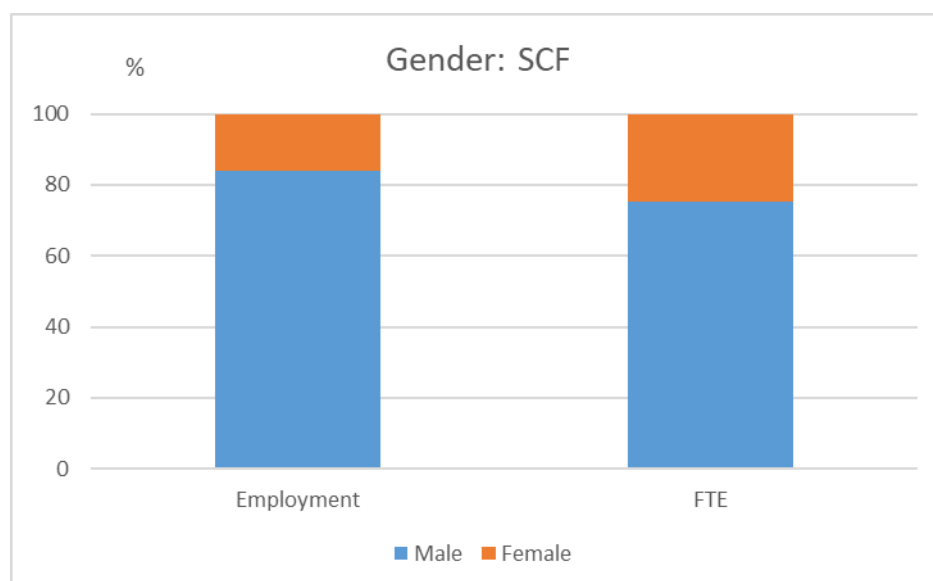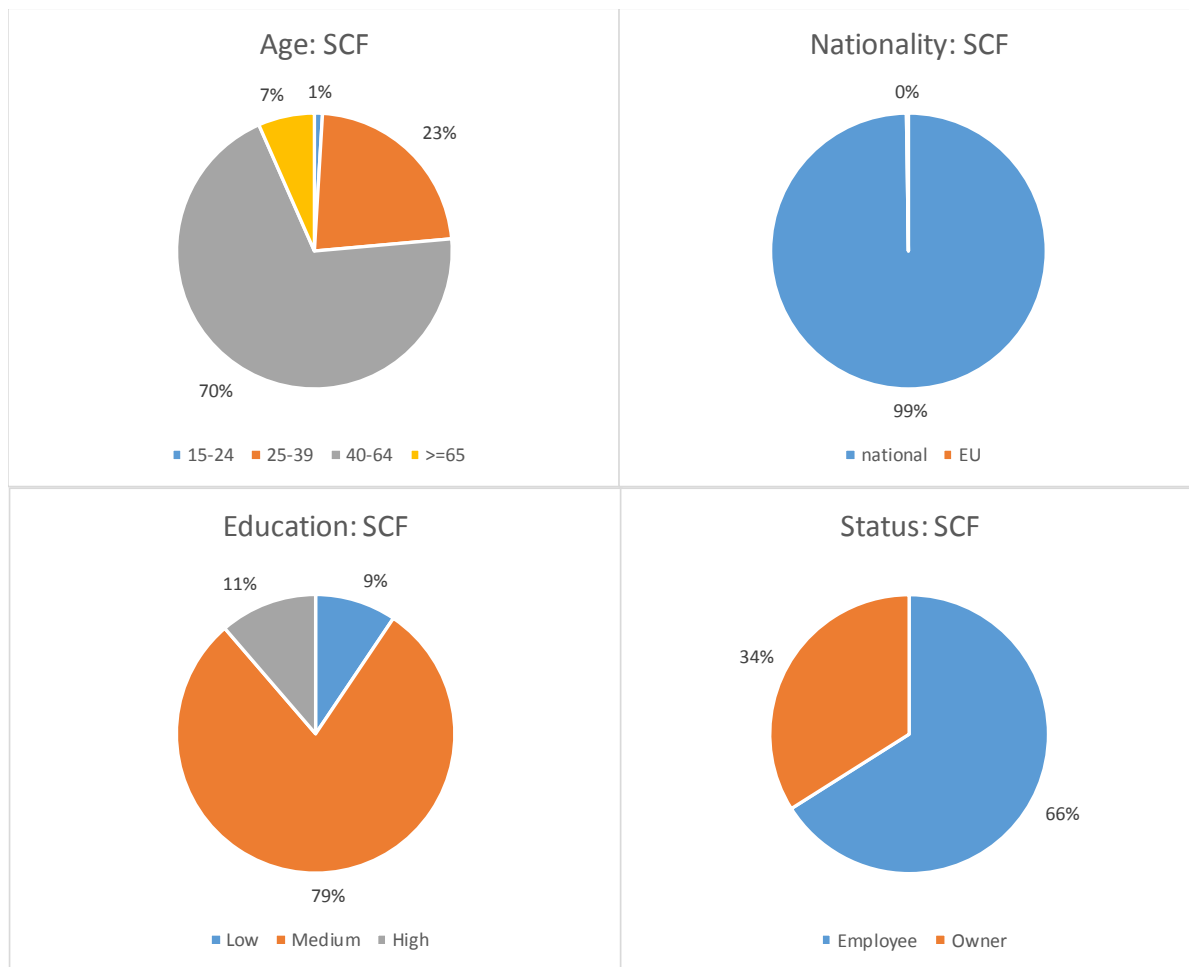
Large scale fleet operating in Baltic Sea, employed on board only male gender fishers. The average age of employees in Baltic Sea fishing enterprises were 56 years and compare to the fleet of other fishing areas as small scale segment and long distance fleet, had the mostly aged employment. According to the study results, 80% of large scale fleet fishers were in 40-64 age group, around 11% were older than 65 years and only 8% were in 25-39 age group. Younger workers were vessel's deck fishers, which is characterized by high workloads. Vessel engineers were on average 57 years old and this shows that this job has not attracted young labour recently and may have difficulties over time for recruitment of proper specialists. About 18% of the vessel engineers were over 65 years old. Large scale fleet is operated only by JSC companies, so there were no unpaid labour, and 99% of employees were hired crew with only 1% of owners.

Meanwhile, around 50% of the employees in the Baltic Sea large scale vessels had high education, 42% of employees had medium education and low education. All employees on board in large scale fleet were males.

As was mention before, large scale fleet had relatively high recruitment from other countries, mainly from other EU Member States. Survey results indicates that from total large scale fleet employees, 69% had Lithuanian nationality, 28% from other EU countries and 3% from third countries. Around 44% of employees from other EU countries were recruited for senior deck officer positions, 30% as vessel deck employees and 26% were employed in machinery compartment of the vessel.

Gender: LSF

Age: LSF

Nationality: LSF

Education: LSF

Status: LSF
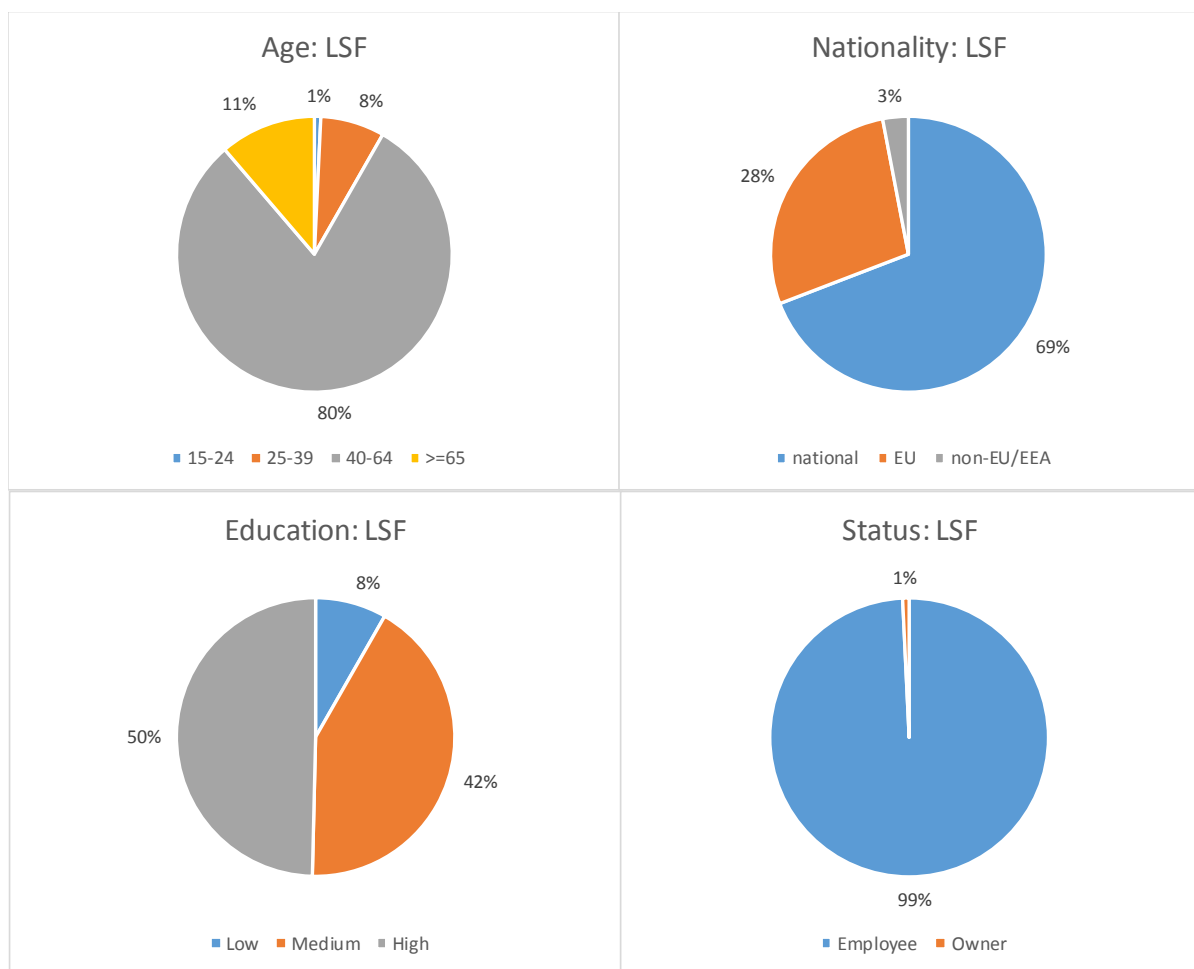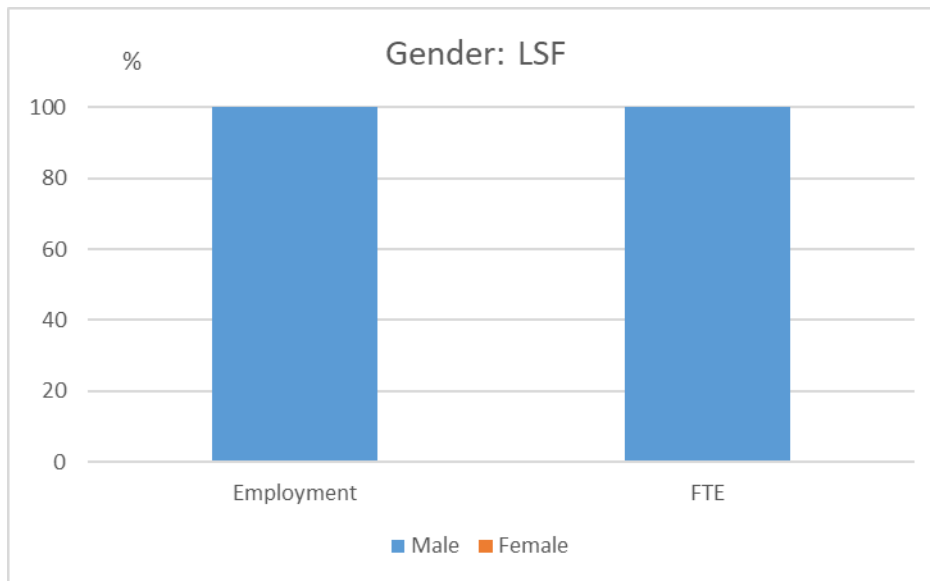
Lithuanian long distance fleet is the most important segment in terms of number of employees, it covers around 42% of total employed by national fleet in 2017. Employment by gender in this segment is very similar to large scale fleet, with the vast majority of crew having male gender. The dominant age group was 40-64 year old fishers, accounting for 69% of all workers on vessel board. Around 22% of the workers were in the 25-39 age group. Most of the workers in this age group were among the senior vessel deck officers. About 3% of the workforce belonged to the age group of 15-

24, all of them worked in the position of a vessel deck worker. The average age of vessel engineers was about 50 years.

Gender: DWF

Age: DWF

Nationality: DWF

Education: DWF

Status: DWF
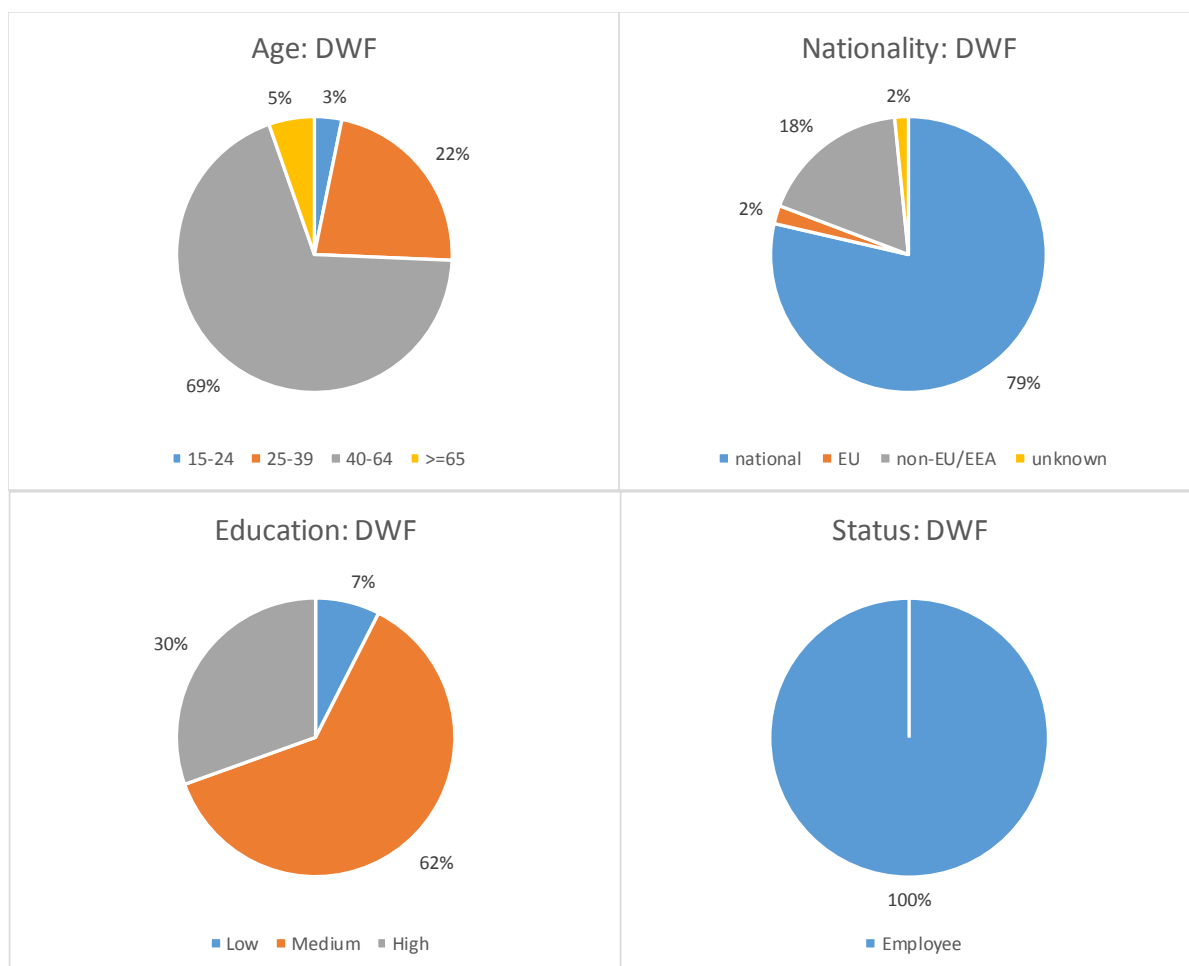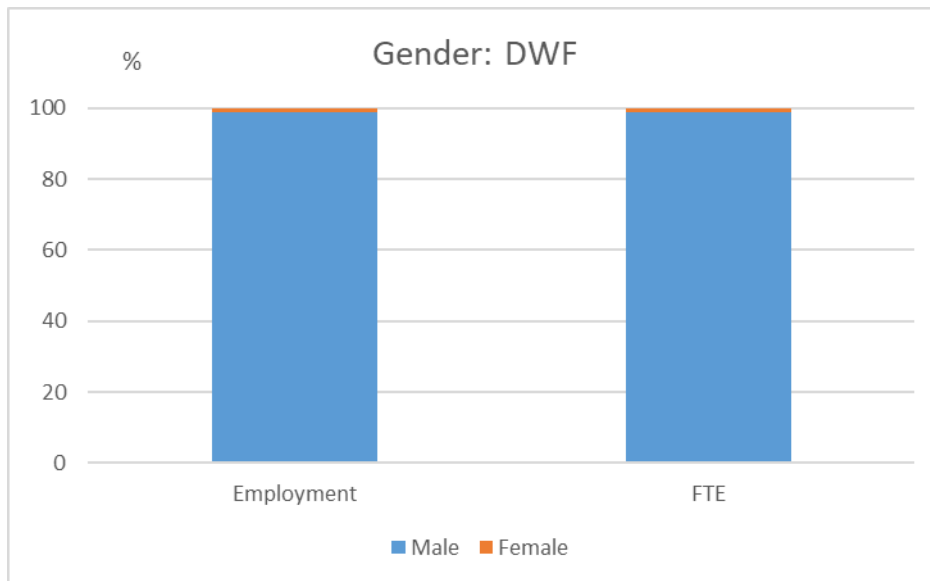
Approximately 62% of long distance fleet employees had high education, 30% medium and 7% low education level. As long distance fleet operators are large capital JSC entities, 100% of survey population was hired employees and owners are not involved in fishing operations. Results indicates that 79% of total crew members had Lithuanian

nationality, 18% were recruited from third countries. Workers from third countries were hired for vessel machinery compartment positions as engineers, mechanics and other related positions. Around 30% of long distance fleet employees having foreign nationality were employed in vessel deck officers positions, as captains, captain assistants, navigators and etc.

3. Challenges
Concerning gender distribution in national fleet, it is expected to remain unchanged with dominant part for male gender employees. Female gender employees are more involved in small scale fisheries for the labour on shore.

Regarding the future expectations for the fishers age, data from the survey shows the tendency of aging labour, especially in large scale Baltic fleet and long distance fleet segments. There are signals that fleet is running out of the qualified labour force relating to vessel senior deck officers and specialist for the work in the vessel machinery compartment. Such positions currently were filled by the employees from third countries and with some extent from other EU countries, mainly from Latvia. Recently observed tendency of cessation of fishing business by Lithuanian capital companies and repurchasing it by foreign countries will likely increase employment from other countries. Therefore, employment of crew with Lithuanian nationality will likely decline in large scale fleet segments.

The deficiency of qualified large scale fisheries labour was driven by termination of study programs, related to preparation of specialized trawler engineers, senior deck officers of fishing vessels and other related specializations. It is also important to ensure the availability of retraining programs or upgrading fishers skills to the on board labour in non-fishing vessels, in fish processing plants, ship repairing companies or to increase qualification for vessel deck officers positions, vessel mechanics to work on larger and newly equipped vessels. Such needs are also foreseen in prepared local led development strategies for 2016-2023 period in fisheries dependent region of Lithuania.

4. Data issues
No data issues were identified

5.15. Malta

1. Social structure of the fishers' population

Numbers involved in Fisheries harvesting by gender

Demographic data of fishers population

In the Maltese fisheries sector, the labour force totalled to 1,134 individuals, Male fishermen/workers are the ones who majorly work in this sector, as out of the total employed in this sector 98% (1,116) were male, whereas the remaining 2% were female. A similar representation is observed in the number of FTEs of this sector, since only 3% (25) of the 810 FTEs where female. The majority of the workers in the sector are of Maltese nationality (79% equivalent to 892 workers), 20% (228) of the sector's workforce are from Non-EU/EEA countries, and only 1% (14) of the workforce is from EU Member States.

Data for 2017 shows that Maltese fisheries sector may be moving towards and aging population within its labour force. 46% of the labour force is aged between 40-64 and 12% are over 65 years old, totalling 57% of the population. 38% of the workforce is aged between 25-39, and only 4% fall under the age group between 15 and 24 years old. The average age of the workforce in the Maltese fisheries sector is 46 years of age.

The data collection exercise showed that the majority of the labour force in the fisheries sector has medium levels of education attainment (69%), 18% with low level of education, and 5% with a high level of education attainment. The remaining 7%, out of the 1,134 individuals were deemed as unknown.

Age	Nationality
4% 12% 38% 46%	20% 1% 79%
■ 15-24 ■ 25-39 ■ 40-64 ■ >=65	■ national ■ EU ■ non-EU/EEA

Education	Status
7% 5% 18% 69%	25% 55% 20%
■ Low ■ Medium ■ High ■ unknown	■ Employee full ■ Employee part ■ Owner
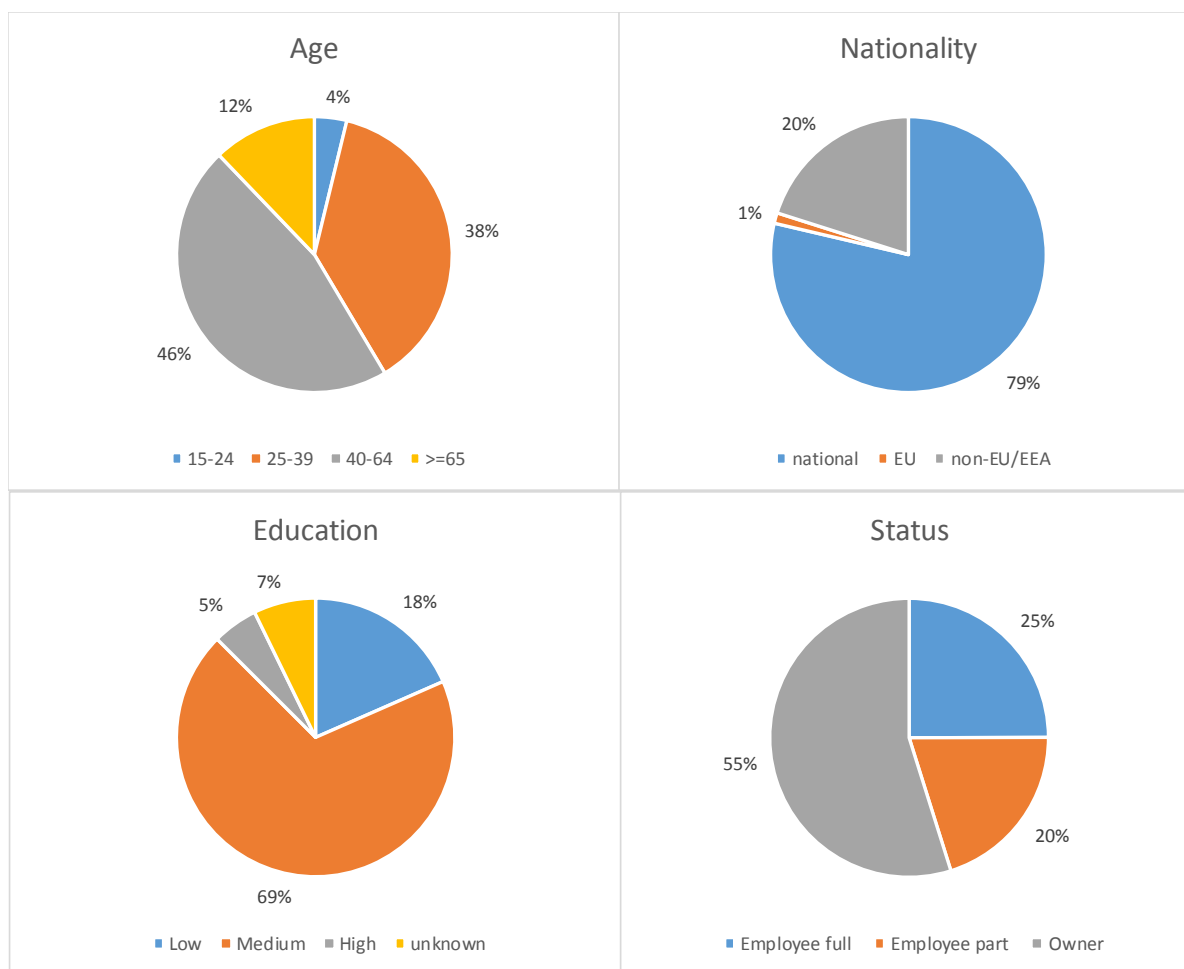
Employment in more detail (if available):

Status employment (owner, employee, unknown)
Most of the workforce (55%) is composed by owners of fishing operations, this is to be expected since Maltese fleet is composed mostly by small scale vessels with one owner, owning more than one vessel. The remaining 45% is a mixture of fulltime and part-time employees. Employees are mostly employed on a full-time basis (25% of the workforce equivalent to 283 are full-time employees), the number of employes employed on a part-time basis amount to 229 individuals (20%).

Unpaid labor by gender
Following a similar structure as to the gender demographic of the Maltese fisheries sector workforce, most unpaid labor is contributed by men (98%) whereas only 2% of the unpaid workforce is composed of females. All but one female participant of this workforce falls under the category of paid labourer. Furthermore 68% (i.e. 757 out of 1,116) of the male workforce is involved in the sector on an unpaid labor basis.

2. Stratification/Segmentation

Employment by main fishing activities (SSF, LSF, DWF) and by supra region (for countries where the data is available)

Considering that the majority of the national fleet is composed of small scale vessel, the majority of the labour force works (78%) operates the small scale fisheries segments. All female participants in the Maltese fisheries sector work within the small scale fisheries.

This segment is majorly composed from male participants (98%). 802 workers out of the 890 working in the SCF are Maltese nationals, 82 are from non-EU/EEA and 2 are from EU Member States. In the LSF 60% of the workforce is composed of non-EU/EEA nationals, 35% from Maltese nationals, and the remaining 5% are from EU Member states.

The potential aging population concern is mainly found in the SCF segment since out of the 890 participants since 64% of the workforce is over 40 years of age. On the contrary in the LSF segments, the workforce is predominantly composed of participants between the age group of 25 to 39 years of age. This age group has 58% of the total population working in this class, 39% who are between 40 years and 64 years, and only 2% are above 65 and work in LSF.

Both LSF and SCF's workforces mostly have obtain medium levels of education attainment, 52% and 74% respectively.

The data on employment status shown for both SCF and LSF is very normal, considering the fleet structure of Malta. Since in SCF most vessels are operated by 1 owner, 64% of the population is composed of owners, whereas the remaining 36% is composed from full-time (24%) and part-time employees (12%) on these fishing operations. On the other hand LSF operates mostly with engaged crew members, in fact 80% of the population are employees engaged on the fishing operation, 72% of which are engaged on a full time basis and 8% on a part-time basis.

Age: SCF

4% | 32% | 49% | 12%

■ 15-24 ■ 25-39 ■ 40-64 ■ >=65

Nationality: SCF

0% | 7% | 91%

■ national ■ EU ■ non-EU/EEA

Education: SCF

15% | 74% | 7% | 5%

■ Low ■ Medium ■ High ■ unknown

Status: SCF

12% | 24% | 64%

■ Employee full ■ Employee part ■ Owner

Gender: LSF

%

100
80
60
40
20
0

Employment | FTE

■ Male ■ Female

Age: LSF

2% 2%

39%

58%

■ 15-24 ■ 25-39 ■ 40-64 ■ >=65

Nationality: LSF

35%

60%

5%

■ national ■ EU ■ non-EU/EEA

Education: LSF

16%

1%

31%

52%

■ Low ■ Medium ■ High ■ unknown

Status: LSF

20%

7%

72%

■ Employee full ■ Employee part ■ Owner

3. Summary text

In Malta 1,134 individuals participate in its fisheries sector, Male fishermen/workers are the ones who majorly work in this sector, as out of the total employed in this sector 98% (1,116) were male, whereas the remaining 2% were female. All female participants in the Maltese fisheries sector work within the small scale fisheries. The sector is showing a potential aging population concern, specifically in the SCF segments. The average age of the workforce in the Maltese fisheries sector is 46 years of age. The majority of the labour force in the fisheries sector has medium levels of education attainment (69%), 18% with low level of education, and 5% with a high level of education attainment.

Most of the workforce (55%) is composed by owners of fishing operations, this is to be expected since Maltese fleet is composed mostly by small scale vessels with one owner, owning more than one vessel. The remaining 45% is a mixture of fulltime and part-time employees.

4. Challenges

Although the Maltese fishing fleet is benefiting from a number of young people who voluntarily help their family whilst at sea, on a seasonal basis, the Maltese fishing industry is experiencing the challenge to obtain the young generation into the profession of fishing. Fishing in Malta is mainly seasonal and as a consequence some of the full-time fishers own at least one small and one large vessel which enable them to practice off-shore fishing during the milder seasons and coastal activities during the winter months. Additionally, extra hands are sometimes recruited for bluefin tuna seines and common dolphinfish seasons.

Over 85% of the active fishing vessels are small-scale fishers whose landing volumes, in general, are not that significant compared to the large scale vessels. These jobs are at risk as fish stocks in the Mediterranean are declining. Food security, livelihoods, and regional stability and security are all under threat.

Although the Maltese fisheries contribute a small percentage to Malta's gross domestic product, the sector creates is important to other industries of the economy, mainly tourism and catering.

5. Data issues

Although no major issues were detected given that the Maltese fishing fleet is mainly composed of small-scale fisheries, it is very challenging to collect precise and complete data from the fishers. The reason being that the majority of small-scale fishery do not maintain employment records and thus they do not have the means to provide data being requested. Having said this, Malta does its best to enhance the quality of the data at data collection level and also at analysis level.

5.16. The Netherlands

1. Social structure of the fishers' population

Regarding to the gender of the crew aboard, almost the entire Dutch fleet consists of males. In total the estimated number of employees at active Dutch fishing vessels is 1,700. In FTE this number is around 1,455. Both numbers are excluding the crew at Dutch pelagic trawlers since the data collection for this part of the fleet is still work in progress at the time of writing. In 2017 there were 8 pelagic trawler in the Dutch fishing fleet. Expected is that including Dutch pelagic trawlers, the number of employed persons of the total Dutch fleet will surpass 2,100. Among the estimated 1,700 employees aboard there were only 3 female workers known. This is less than 1% of the total number of employees. During the data collection process of social variables the Dutch fleet provided feedback that there is willingness and openness to stimulate females to work in the fishing fleet. However, according to the respondents there is a limitation in the maximum gross tonnage permitted for fishing vessels by EU legislation. To be able to stimulate females to work in the fishing fleet the required facilities (e.g. separated bath rooms) should be aboard in line with good employment conditions. This is a paradox according to the industry. Since employers should invest into the required facilities to stimulate employability. Especially to encourage females to become part of the labour market in the fishing fleet. However, to increase employability the economic performances should not decrease. Building these new facilities aboard means sacrificing a significant part of the available gross tonnage and therefore sacrificing fishing capacity necessary for sustainable economic performance. Therefore, from practical reasons there is a major limitation that could discourage females to enter the job market of the EU fishing fleet.
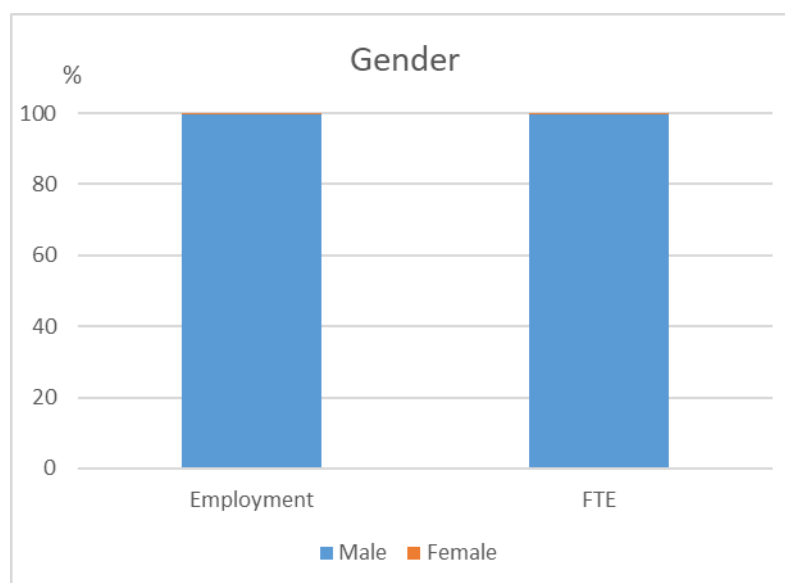
Demographic data of fishers population
Most of the crew are at the age of 40-64 years with a 40% (675 employees) of the total fleet. The second largest category of age is 25-39 years with 39% (665 employees) followed by 15-24 years with 17% (286 employees) and older than 65 years is on average 4% (68 employees). Considering the 17% of the category 15-24 years it could be clarified by the education required to become a skilled employee in fisheries. Students needs to acquire the qualified certificates before entering the fishing fleet as an employees. Frequently these students younger than 25 years do have internships aboard of fishing vessels during the study program.

Regarding nationality most of the employees are Dutch (91%). From the total fleet 6% has a nationality from an EU country other than the Netherlands. Solely 2% of the total 1,700 (excluding pelagic trawlers) has a nationality of outside EU.

Among the Dutch fishing fleet 72% of the employees is medium educated, 18% has a low education, 5% of the total employees is unknow and 4% has a high education. While, the grade of education is relevant it is even more important to have insights about the qualified certification among the fishing crew for security reasons. Fishing could have risks because of the weather conditions at sea and the labour intensity of the job. Therefore, it would be meaningful to know more about the level of sufficient qualified certifications (e.g. risk monitoring, first aid etc.) among employees.
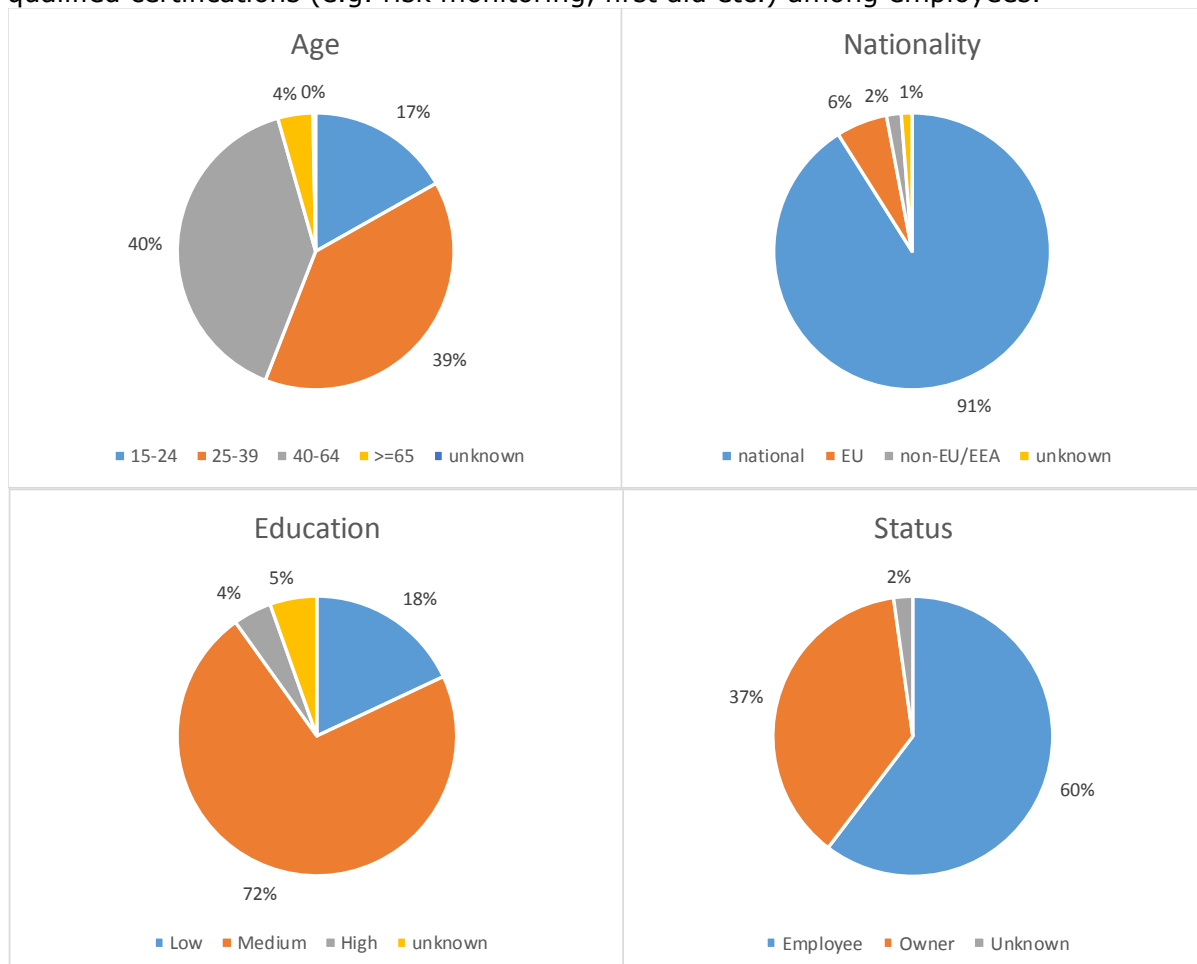
Employment in more detail:

Status employment (owner, employee, unknown)
Of the total fleet 60% is an employee and 37% is owner of the fishing vessel. The resting 2% of the total employees is unknown. In the Dutch fishing fleet the largest part

consists of family owned enterprises. Therefore still more than a third of the active fishing vessels are owned by the family members. Despite the pelagic trawlers are family owned business, the ratio of owners versus employees is to expected lower. These pelagic trawlers are not yet included in this report. Regarding to the employment status 99% of the total fleet consists of male employees and owners. Focusing on the owners most of them are 40-65 years old (49%) followed by the category 25-39 years (36%), 15-24 years (8%) and older than 65 years (8%). Especially among the group of owners with the age between 40 and 65 years it would be relevant to gain more insights about the extent of available succession in case of family owned business. Among employees the age varies from 25-39 years (42%), 40-65 years (34%), 15-24 years (21%) to even older than 65 years (2%).

<u>Unpaid labour by gender</u>
From the collected data it is known that there are 432 unpaid labour workers in the Dutch fishing fleet. Most of them are pensioned fishers who still contribute with certain tasks (e.g. driving crew to harbour). Relatively to the total of 1,700 paid employees this is 25% on average. Of these unpaid labour workers 99% are males. The questions rises to what extend respondents define unpaid labour in a consistent and similar way since many females are involved in family owned business (e.g. financial administration).

2. Stratification/Segmentation
Both in Large Scale Fleet (LSF) as Small Scale Fleet (SSF) there are hardly any female employees, namely less than 1% of the total fleet. Considering the age of employees of the SSF almost half of the total (44%) are 40-64 years, followed by 20% in the age of 25-39 years as well 20% as for the category of 15-24 years and 16% older than 65 years. Many more employees (60%) are older than 40 years in the SSF compared to the total fleet (44%). The explanation in general is that SSF is less labour intensive than LSF. Therefore SSF is more accessible for fishing crew older than for instance 55 years. In the LSF 43% of all employees are 25-39 years old, 29% are 40-64 years, 16% 15-24 years and only 1% is older than 65 years. Comparing the SSF with LSF for employment status it is notable that SSF consist of more owners (67% of this fleet) where LSF is the opposite where owners are 31% of this fleet segment. This could be clarified by the number of workers per vessel that differ between the SSF and LSF. In the SSF frequently the owners are the only crew aboard where in the LSF owners are supported by multiple employees especially at large cutters (length >25 meters). Since there is no data yet of the pelagic trawlers in this report there are no insights about the Distant Waters Fleet (DWF). In the LSF employees often obtained a medium education (77%) or low education (14%). In the SSF most employees do have medium education (49%) however more employees obtained a low education (35%) compared to the LSF.

For both fleet segments most of the employees are Dutch as nationality. In the SSF 84% is from the Netherlands and 9% is from the EU where the resting 7% is unknown. In the LSF 93% is from the Netherlands, 5% is from another EU country and 2% is from outside EU.

Gender SCF

%

Male　Female

Age: SCF

20%
20%
44%
16%

■ 15-24 ■ 25-39 ■ 40-64 ■ >=65

Nationality: SCF

7%
9%
84%

■ national ■ EU ■ unknown

Education: SCF

35%
49%
9%
7%

■ Low ■ Medium ■ High ■ unknown

Status: SCF

33%
67%

■ Employee ■ Owner

Gender LSF

Age: LSF

15-24: 16%
25-39: 43%
40-64: 39%
>=65: 1%
unknown: 0%

Nationality: LSF

national: 93%
EU: 5%
non-EU/EEA: 2%
unknown: 0%

Education: LSF

Low: 14%
Medium: 77%
High: 3%
unknown: 5%

Status: LSF

Employee: 66%
Owner: 31%
Unknown: 3%

3. Summary text

The total Dutch fleet excluding the 8 Dutch pelagic trawlers consist of an estimated 1,700 employees. The expected number of employees surpass the 2,100 employees if the pelagic trawlers would be included. The number of unpaid labour workers (estimated on 432 persons) are not included in these totals. Almost the entire fleet consists of males (99%). However, the fleet is not unwilling towards inclusion of female employees

but there is a limitations that discourages the stimulation females to enter the job market of fisheries (see paragraph 1). The largest part of the fleet crew has a medium education (72%). However it would be even more relevant to have insights about the presence of required security certificates (e.g. risk monitoring, first aid etc.) among employees and owners aboard of fishing vessels. Since fishing has some risks primarily caused by the weather conditions at sea and labour intensity of the job. Solely 2% of the employees has a nationality from outside the EU, 91% is Dutch and 6% is from another EU country. Since many fishing enterprises are family owned business there are many owners (37%) among the fleet crew aboard of the vessels.

4. Challenges
One of the major challenges is to acquire sufficient educated employees who do have the required qualified certificates. Because of the decreasing economic performances of the Dutch fleet and uncertainty about the coming years (Brexit, banned pulse fishing, landing obligation and closed fishing areas for nature protection and wind parks) the recruitment of new fisheries students is becoming more difficult.

5. Data issues
The social data for the pelagic trawlers is lacking in this report as it is still work in progress. Pelagic enterprises are currently collecting the social data. Moreover, there are doubts about the number of unpaid labour as there are hardly females included in the collected data. From an expert judgment point of view it is expected that the number of unpaid labour has to be higher because in many family owned business they have an important part time role in the business (e.g. financial administration).

5.17. Poland

1. Social structure of the fishers' population
The Polish fisheries is divided into the Baltic Sea and a long distant fleet that operates exclusively outside Baltic Sea i.e. North and Central Atlantic as well as South Pacific. Information provided in the chapter refers to the Baltic Sea fleet only.

Numbers involved in Fisheries harvesting by gender
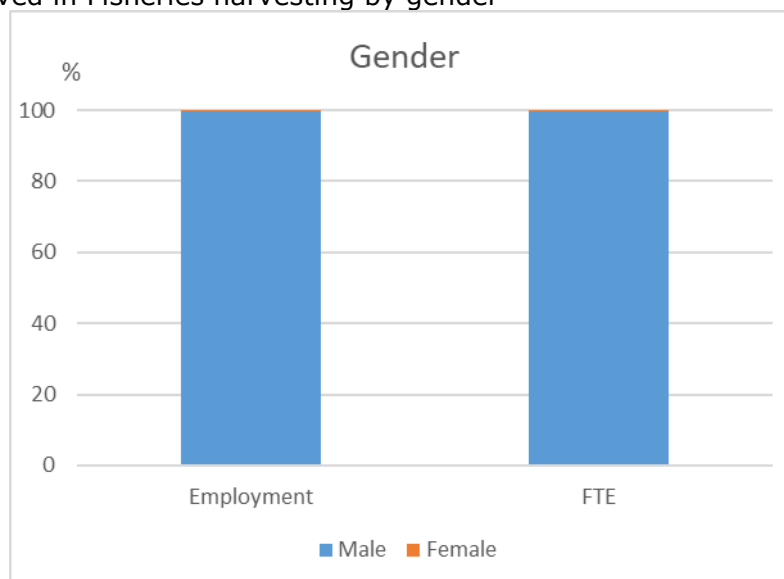
According to estimation there were about hundred women employed in the fisheries (4% of the total population), mostly in the small scale fisheries sector in 2017. Based on available data share of female workers in the total employment has never exceeded the 4% since 2008. Vast majority of the women working in the fisheries are vessels owners - about 80% compared to 40% of male employed in 2017. The indicator is much higher for SSF (80% women and 55% of men) than for the LSF (65% of women compared to 20% of men).

Demographic data of fishers population
In 2017 most of the fishers belonged to 40-64 old age group, 32% were between 25-39 age old. The number of fishers in the oldest age group and its relative share in the total employment has increased since 2008 from 1% to 6%, while fishers belonged to a middle age group (25-39) decreased from 36% to 32%. A relative share of workers 40-64 years old fluctuated in 2008-2017 between 56-61%.

A low educated personnel dominate in the education structure of the Polish fisheries. In 2017 60% of fishers had low education level (primary, grammar school or vocational school), 33% had medium level (secondary school) and 7% had higher or bachelor education degree. The share of low educated people has decrease since 2008 (68%) and increased for high educated (by 3 percentage points). This reflects the general tendencies observed in Poland in recent years where share of highly educated working people increase form 14% in 2010 to 25% in 2014.

Age

- 15-24 — 3%
- 25-39 — 32%
- 40-64 — 59%
- >=65 — 6%

Education

- High — 7%
- Low — 60%
- Medium — 33%

Status

- Employee — 58%
- Owners — 42%
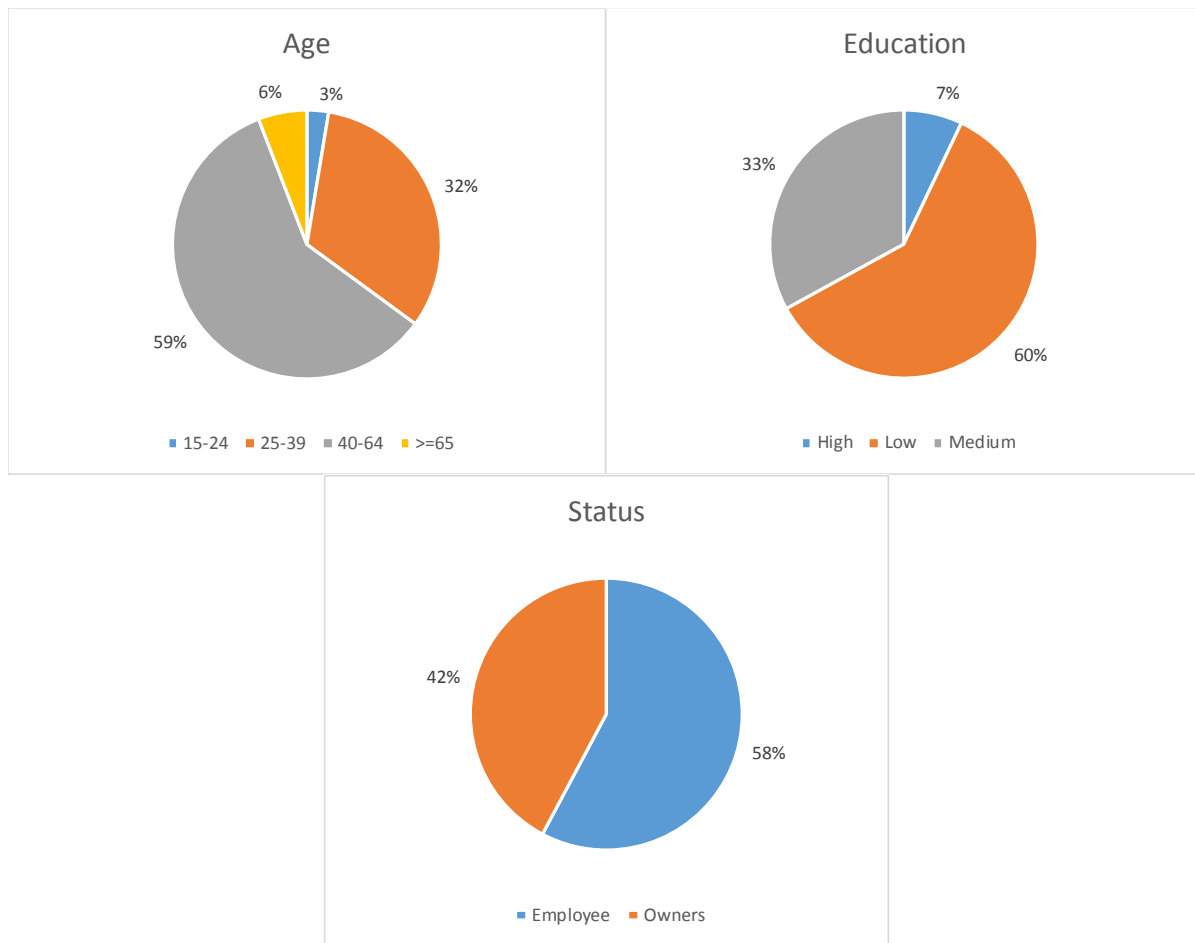
2. Stratification/Segmentation.

As was written earlier the vast majority of the women working in the fisheries are vessels owners. The indicator is much higher for SSF (80% women and 55% of men) than for the LSF (65% of women compared to 20% of men).

Age structure were no significant different in small and large scale fisheries, except for a slightly higher share of fishers above 65 years in SSF (8%) compared to LSF (2%) in 2017.

The share of highly educated is slightly higher in SSF (7%) compared to 6% in LSF, however SSF is characterised as well by higher share of low educated people and lower share of fishers belonging to the group of medium level. This may be explained by higher skills required from fishers working on bigger vessels.

Information about nationality structure was not available. According to expert knowledge there were few foreign fishers employed in the Baltic fleet. This situation is different in DWF. Ina case when the vessels are operating under a fishing agreement with third countries (e.g. Mauritania or Morocco) usually it is required to hire native workers on board.

Gender: SCF

%

	Employment	FTE

Legend: ■ Male ■ Female

Age: SCF

2%
8%
32%
58%

Legend: ■ 15-24 ■ 25-39 ■ 40-64 ■ >=65

Education: SCF

7%
29%
64%

Legend: ■ High ■ Low ■ Medium

Status: SCF

45%
55%

Legend: ■ Employee ■ Owners

Gender: LSF

Age: LSF

- 15-24
- 25-39
- 40-64
- >=65

Education: LSF

- High
- Low
- Medium

Status: LSF
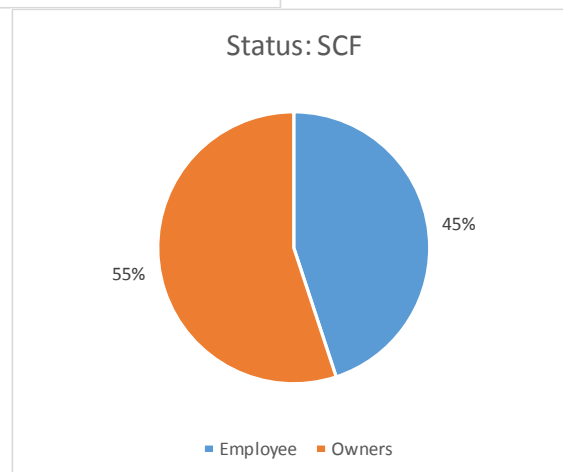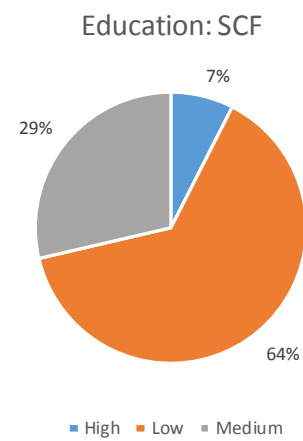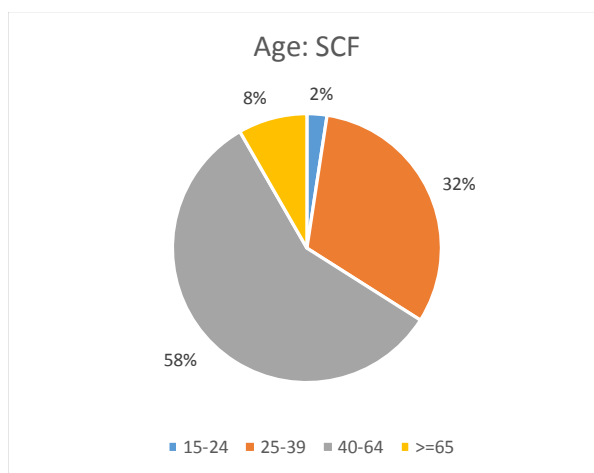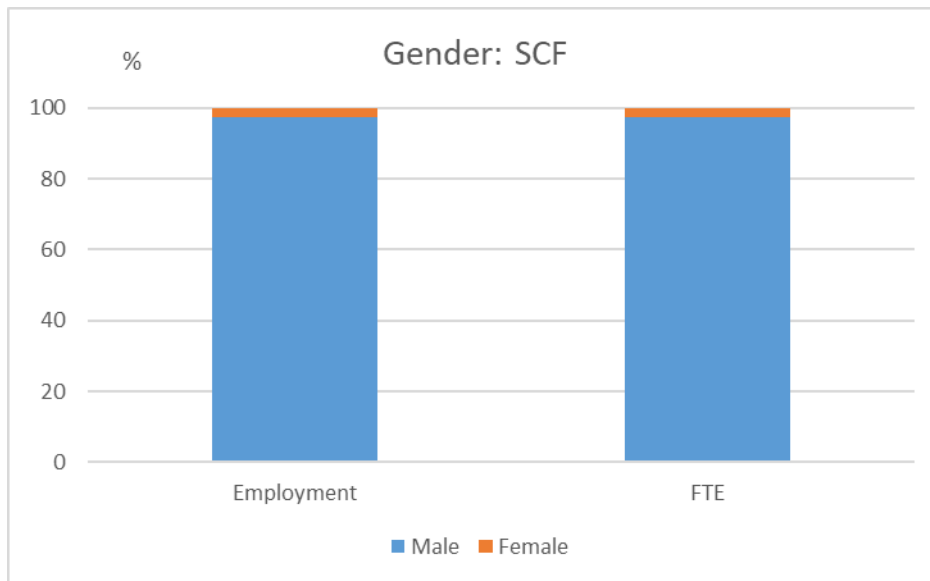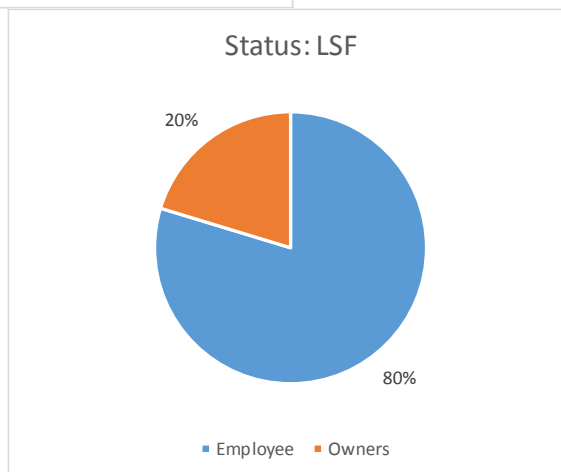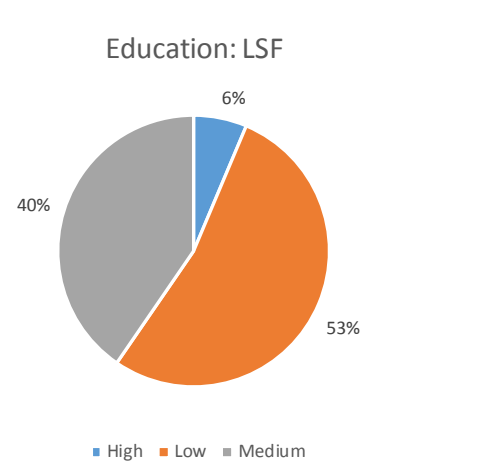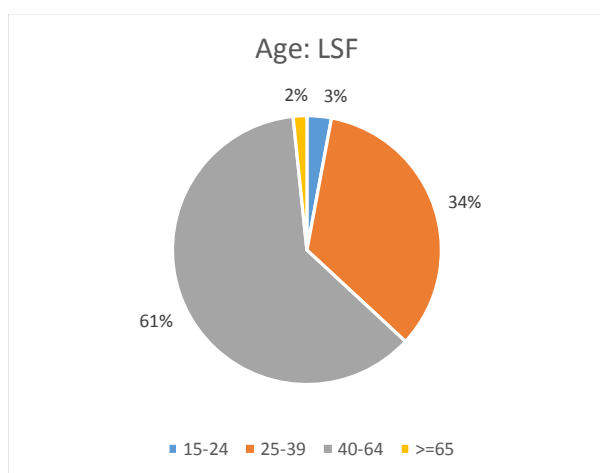
- Employee
- Owners

3. Summary text

People over 40 years old dominated in the employment structure of Polish Baltic Sea fleet in 2017 (65%). The share of that group in the total employment has increased but not significantly (+4 percentage points) since 2008. The number of women engaged in fisheries was estimated at about 100 contributed to 4% of total employment, no significant change in the past 10 years.

4. Challenges
The fishing sector complains unsatisfied availability of properly educated workers. The insufficient number of qualified fisheries labour is caused by termination of study programs related to preparation of specialized fishing vessel workers. High migration abroad of fishers that lost their jobs after the fleet reduction program these workers did not help solved the problem. On the other hand deteriorating economic condition of the fleet (especially small scale one) as well as increasing salaries in other professions encourage fishers to leave the fishery. There are EMFF money envisaged for fishers willing to diversify their activity, which if used, may also affect employment in fisheries.

5. Data issues
The way the employment data are collected in Poland makes not possible high level variables disaggregation. However all necessary data at higher level of aggregation were available (total employment by age, gender, education or employment status). The data about nationality were missing however according to expert knowledge employment of non-EU workers in the Baltic Sea is negligible.

5.18. Portugal

1. Social structure of the fishers' population

Numbers involved in Fisheries harvesting by gender

Gender
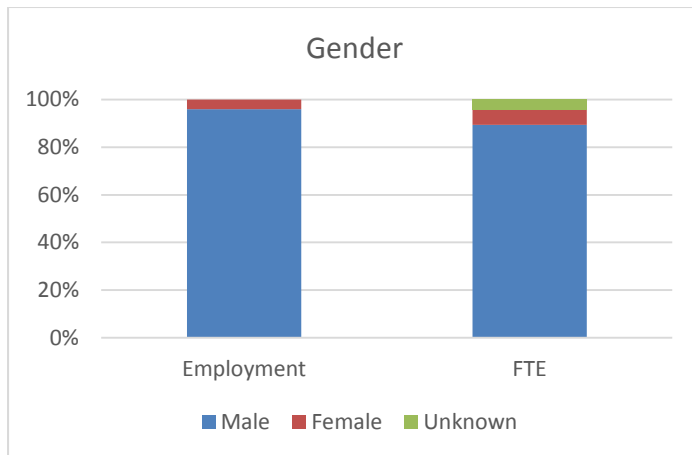
Demographic data of fishers population
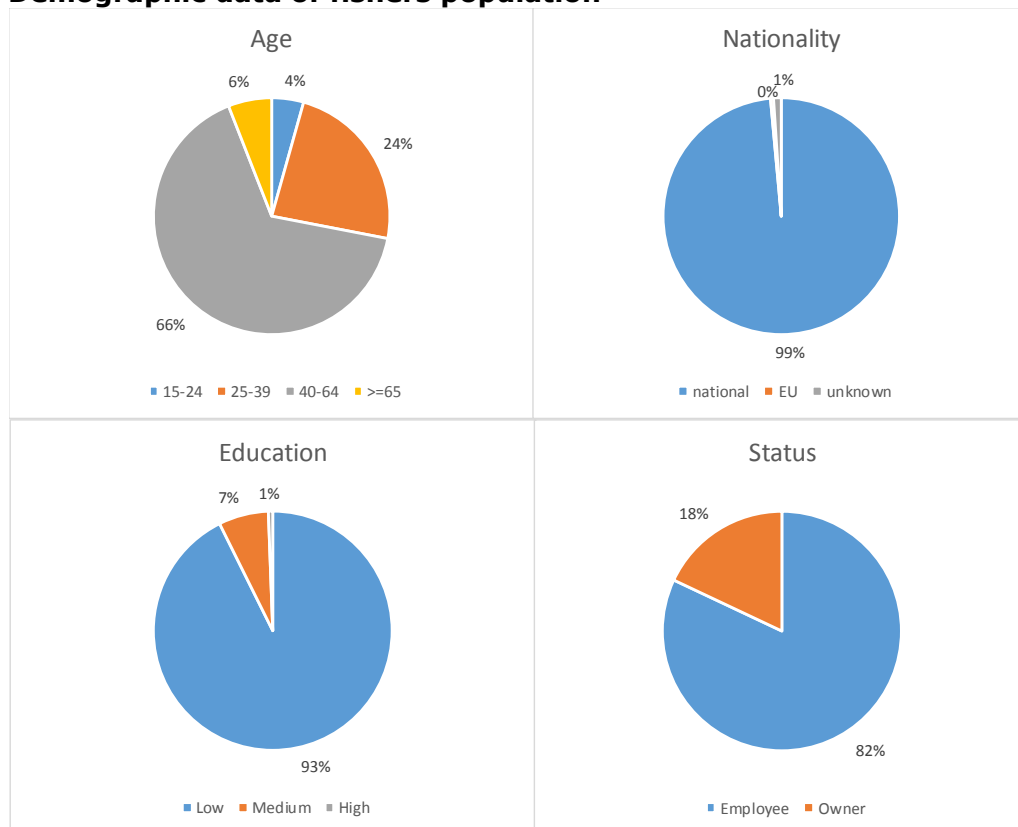
It is estimated that approximately 19,500 individuals operate in the Portuguese fleet, mostly male (96%) and nationals (99%).

The majority of workers in the fisheries sector are in the 40-64 year age group (66%), with only 10% of fishers under the age of 25.

The level of academic qualifications of the fishery workers is quite low and only 8% of this population has a qualification equal to or above the medium level.

With regard to professional status, it is estimated that vessel owners account for 18% of jobs in this sector.

Employment in more detail:

Employment status by gender
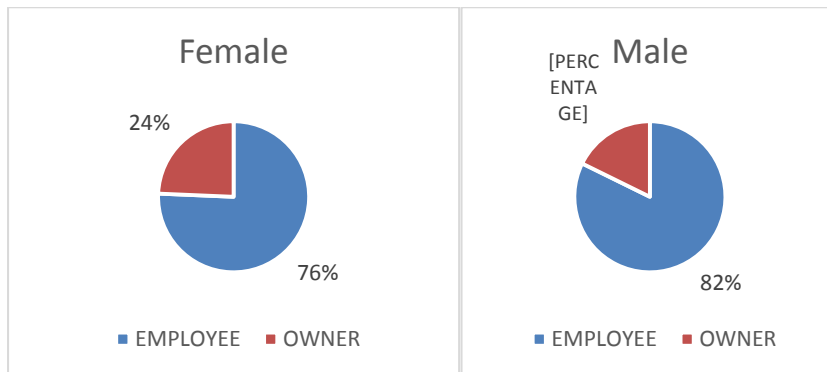
Status employment by age
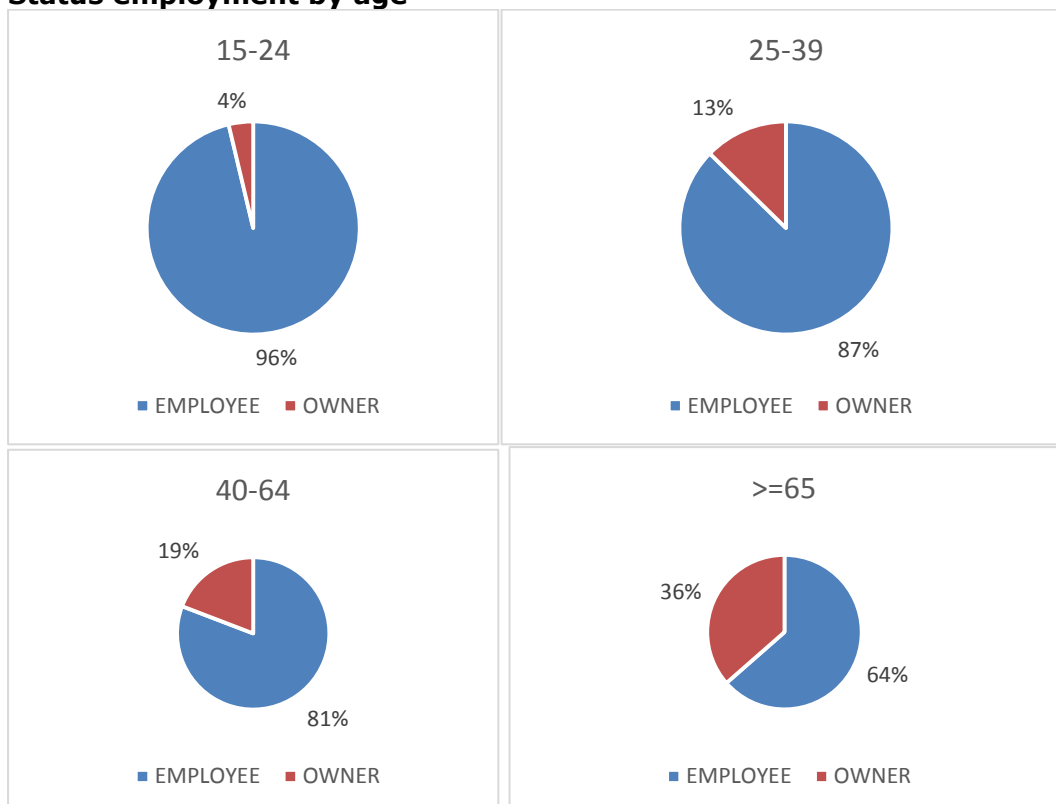
It was verified that the percentage of owners is higher in the female gender (24%) than in the male (18%), which may indicate that women are more likely to be involved in the administrative side of the business than working on board vessels.

As expected, a higher percentage of owners is observed in higher age groups.

Unpaid labour for gender

It was not possible to evaluate the distribution of unpaid work by gender since the unpaid labour variable was obtained through the fleet economic survey where this distinction is not made.

2. Stratification/Segmentation

Employment by main fishing activities (SSF, LSF, DWF) and by supra region
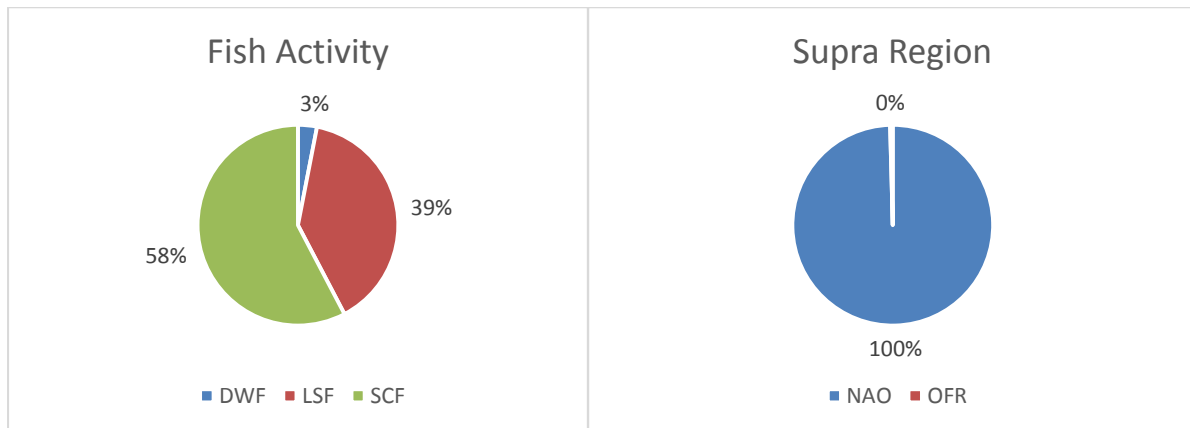
Most fishing workers are concentrated in the SCF (58%), although the LSF also employs a substantial part of the workforce (39%). Only 3% of fishers work on DWF vessels, since this segment comprises only a few vessels.

Given the small capacity of the Portuguese DWF, almost all fishing workers operate in the NAO supra region. However, in this particular case, these data may be a little biased due to a relatively outdated record in long-term fishers.

Fleet SSF/LSF, DWF by age (LSF and SSF)
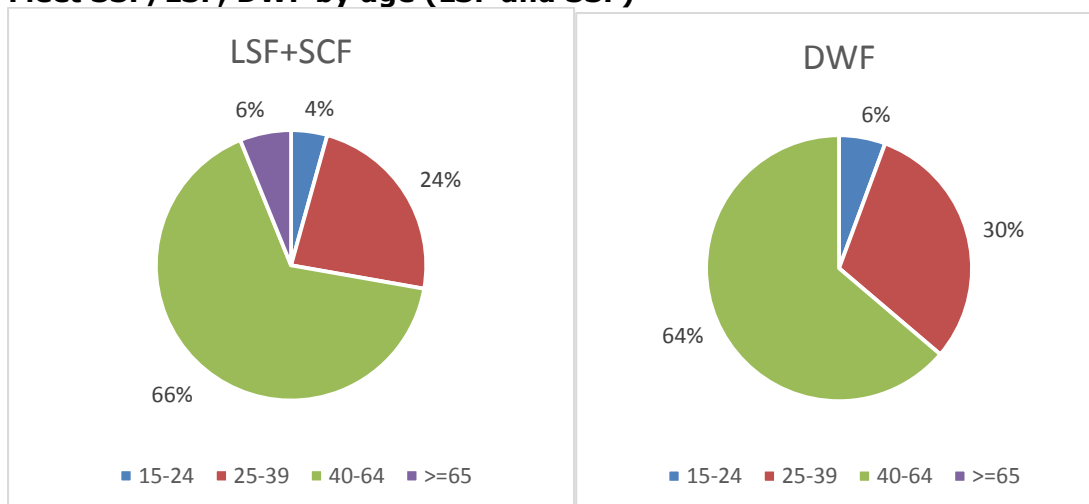
With regard to age, and as expected, it is found that fishers of SCF and LCF are older than those of DWF. Relating to the DWF, it should be noted that, in addition to the fact that there are no fishers over 65, 36% of the workers are under 40 years of age.

Gender for LSF, SSF, DWF
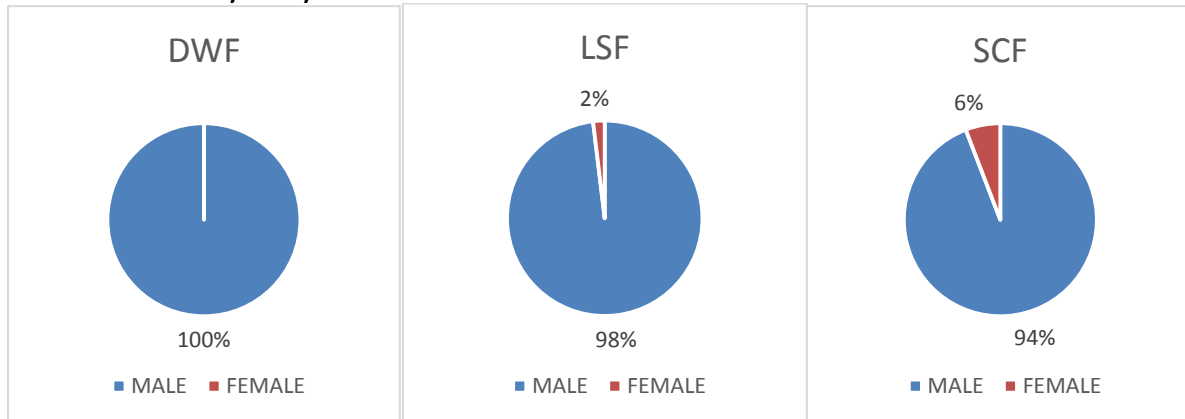
As expected, the role of women in fisheries much more important as the type of fishing is closer to the coast. In fact, while in the SCF they represent about 6% of the workforce, in the LSF this figure drops to 2% and there are no women at work in the DWF.

Small Coastal Fleet (SCF)
As already mentioned, women have higher representation in SCF (6%), when compared to other fishing activities.

It is also important to highlight the role of unpaid work in the SCF, which accounts for 13% of the FTE.

Regarding age distribution, this is not the fishing activity with the oldest workforce. Although 7% of the fishers are elderly, it has 31% of workers under 40. In addition, it is not the one that presents the lowest education, as 9% of these fishers have a medium education level or more.

It should also be noted that 2% of SCF fishers are not nationals.

Age: Mainland SCF

5%
26%
61%
7%

■ 15-24 ■ 25-39 ■ 40-64 ■ >=65

Nationality: Mainland SCF

1% 1%
98%

■ national ■ EU ■ unknown

Education: mainland SCF

9% 1%
91%

■ Low ■ Medium ■ High

Status: Mainland SCF

33%
67%

■ Employee ■ Owner
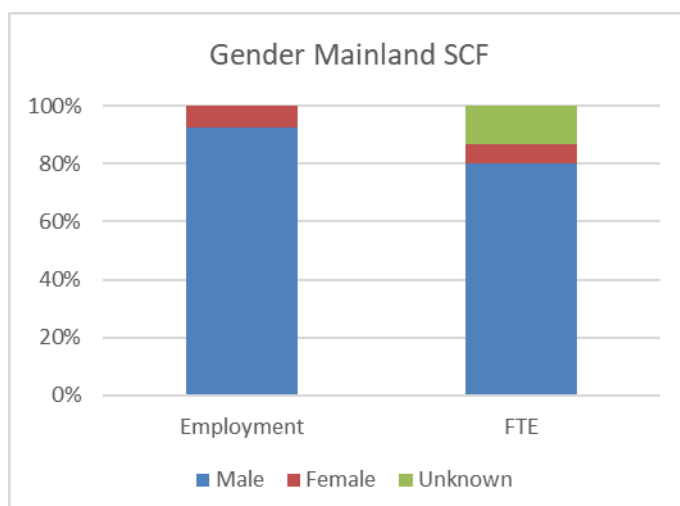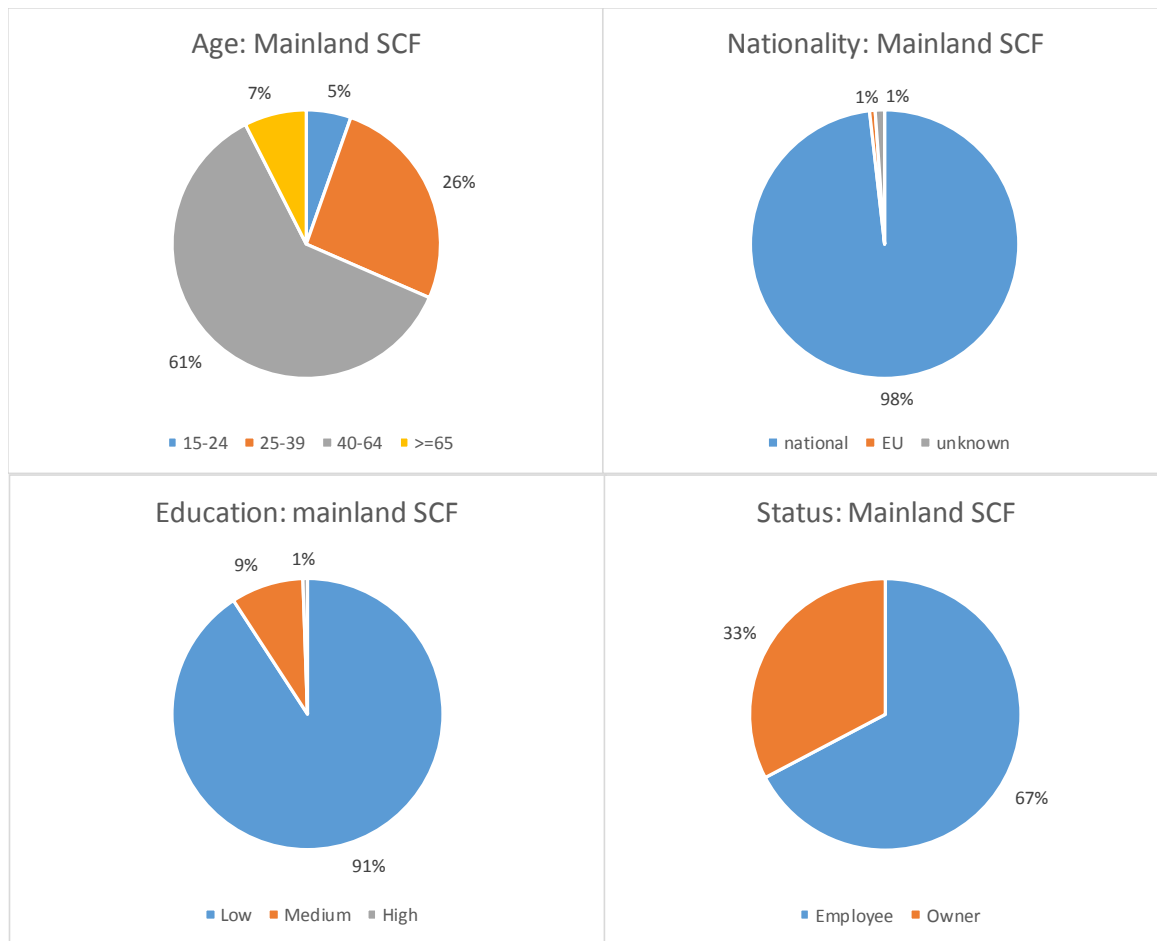
Large Scale Fleet (LSF)

In the LSF, women are poorly represented, making up only 2% of the workforce. Also, unpaid labour is less representative than in SCF.

As regards age structure, this is the oldest fishing activity, with 73% of workers over 40 years of age. As regards the nationality of fishers, the percentage of nationals is similar to that of SCF (98%) but more fishers are observed outside the EU (2%).

The education level is also lower than in SCF, with only 5% of workers with medium or higher education.

Given the type of companies operating LSF, it is observed that only 3% of the work is carried out by the vessel owners.

Gender Mainland LSF

Age: Mainland LSF

- 15-24: 4%
- 25-39: 22%
- 40-64: 69%
- >=65: 4%

Nationality: Mainland LSF

- national: 98%
- EU: 0%
- unknown: 2%

Education: Mainland LSF

- Low: 95%
- Medium: 5%
- High: 0%

Status: Mainland LSF

- Employee: 97%
- Owner: 3%
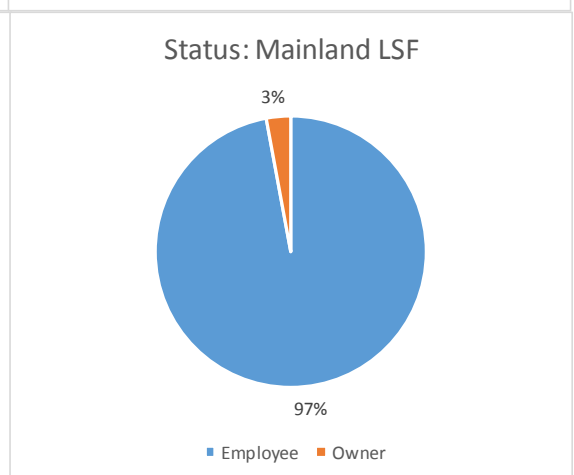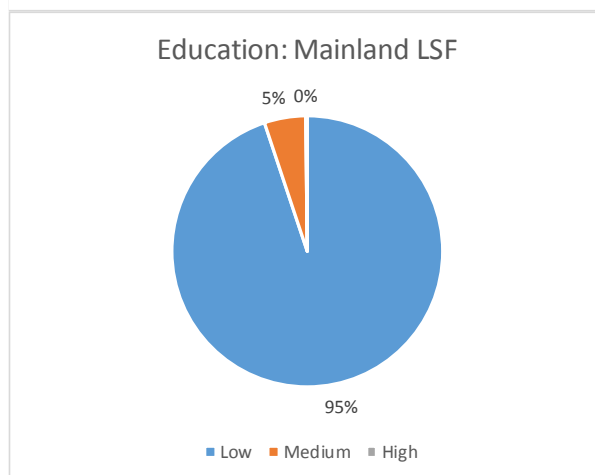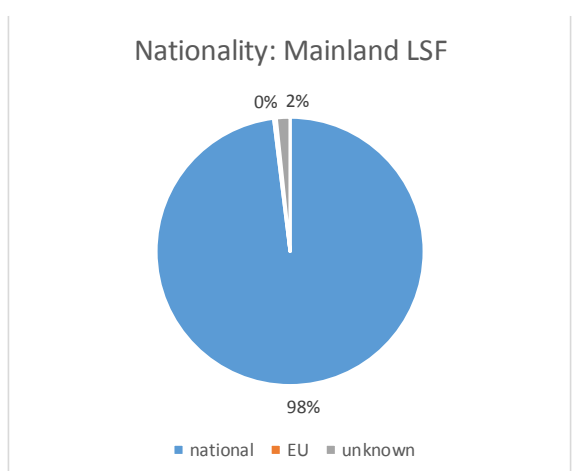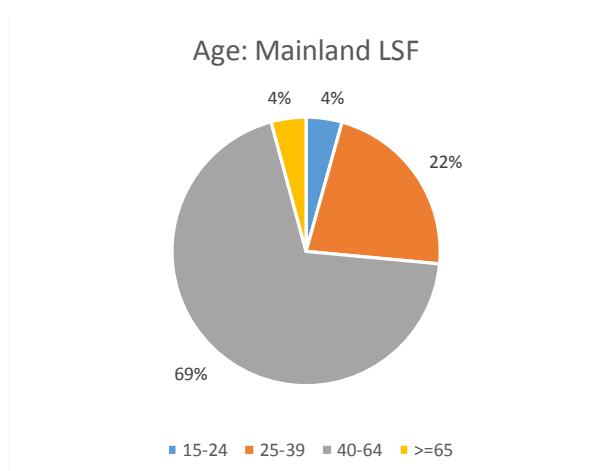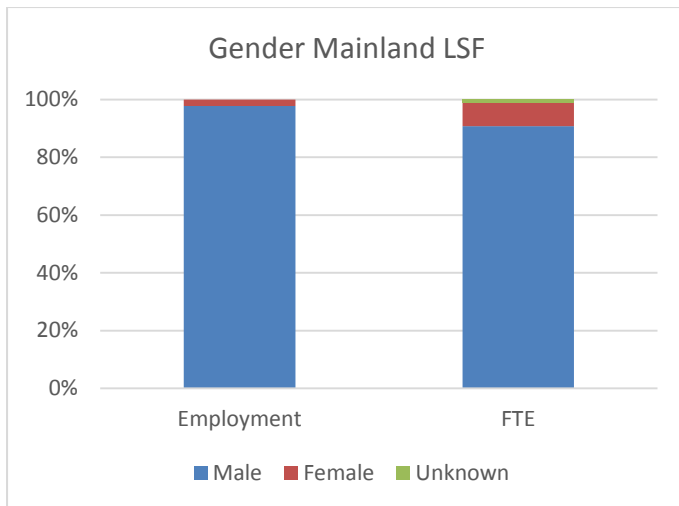
Distant Water Fleet (DWF)

All of the workers operating in the DWF are male, almost all Portuguese. However, nationality may be underestimated given the characteristics of the data source, which is still largely supported by paper.

The educational level also has better indicators in the DWF when compared to the other fleets since more than 7% of workers have a medium level and 4% even have a higher education level.

This type of activity is the least aged, with 37% of workers under 40 years of age and no senior staff.

It should also be noted that all workers in this fleet are employers.


Gender Mainland DWF

Age: Mainland DWF

Nationality: Mainland DWF


Education: Mainland DWF

Status: Mainland DWF
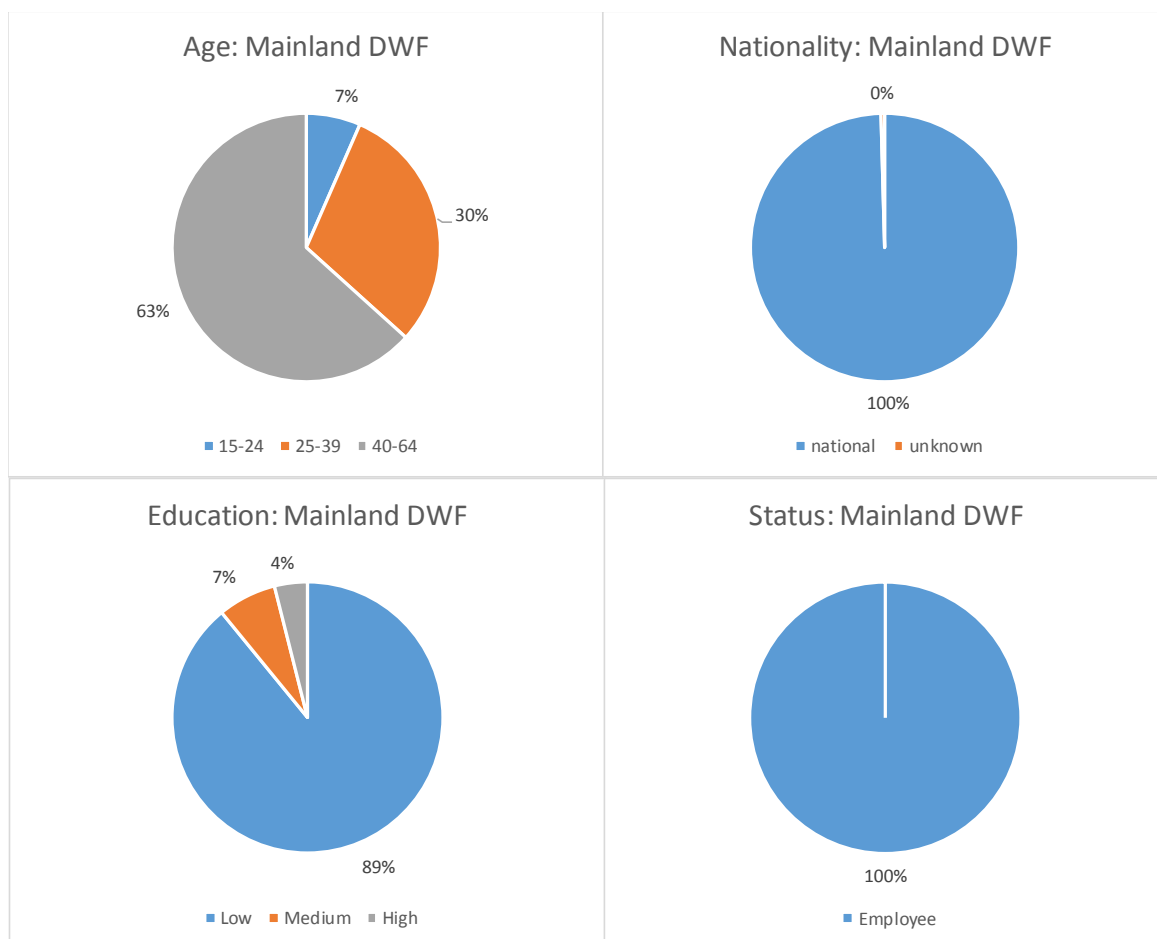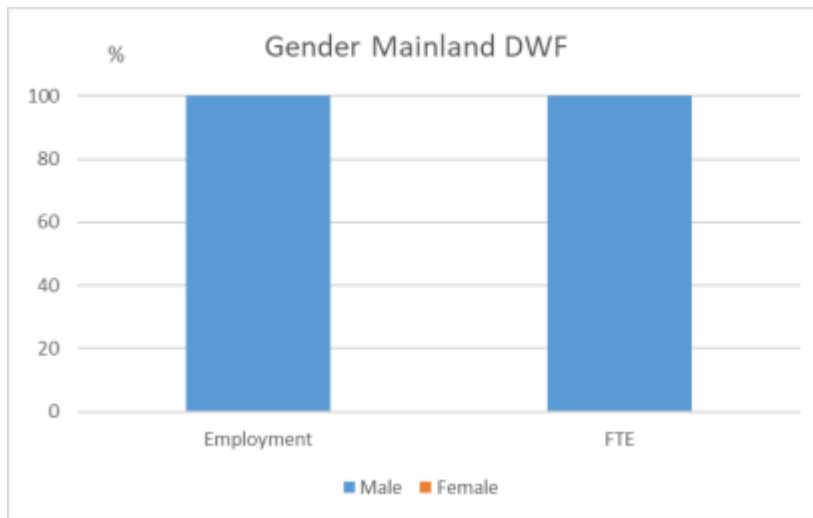
Madeira Outermost Region (P2 geoindicator)

Madeira Small Scale Fleet

In the coastal fleet of the Madeira Islands, there is a very low female participation (1%) in fishing activities but a significant amount of unpaid work (10% of the FTE).

The population involved in this activity is quite old, with 81% of the workers being over 40 years of age, with the elderly representing 10% of the individuals. Almost all of the individuals are of Portuguese nationality, and their level of academic qualification tends to be low: only 10% at medium or higher level.

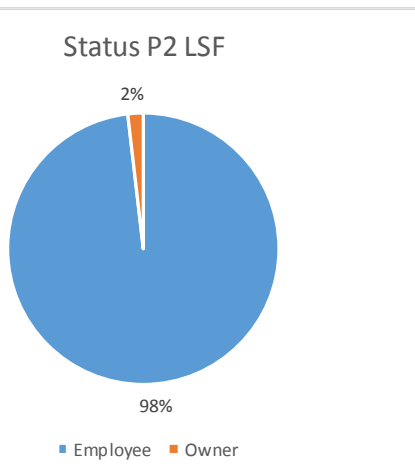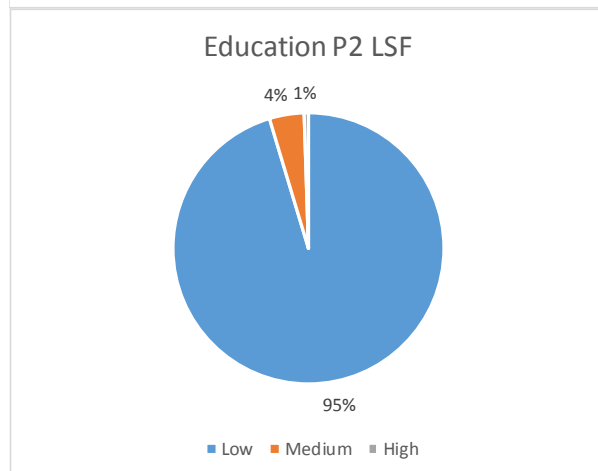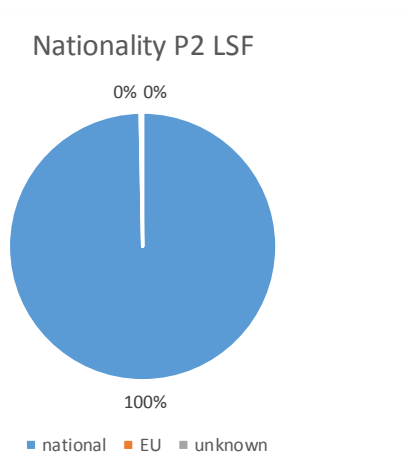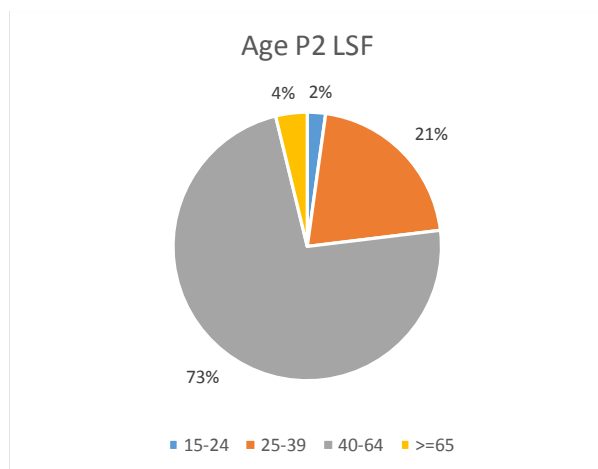With regard to professional status, 20% of jobs are occupied by vessels owners.
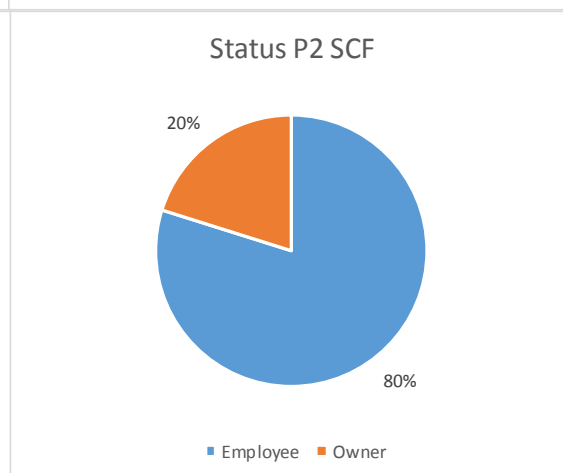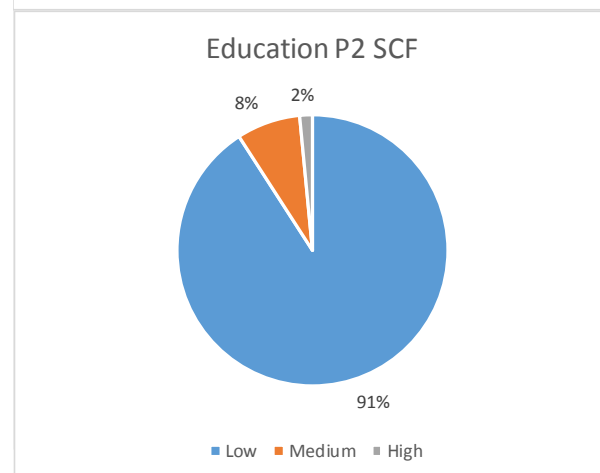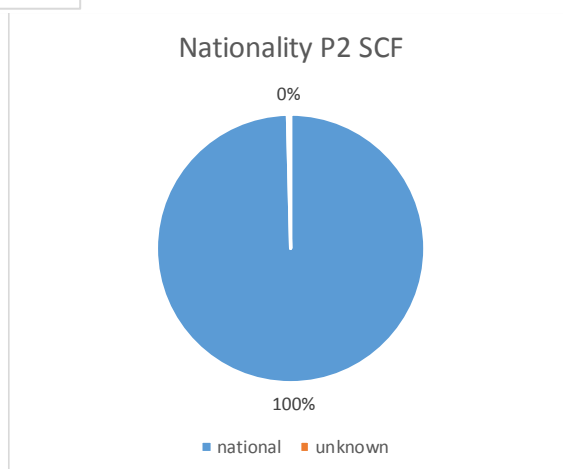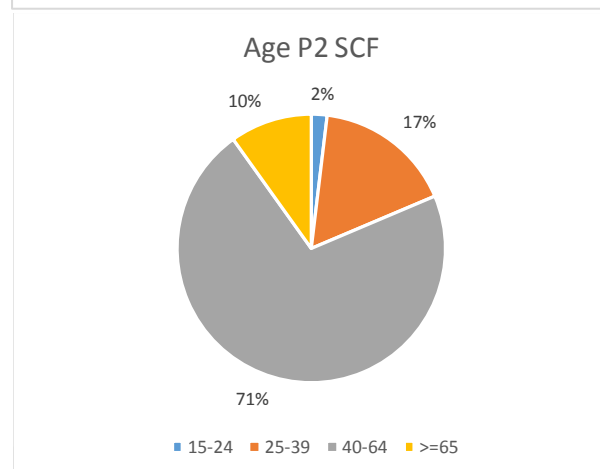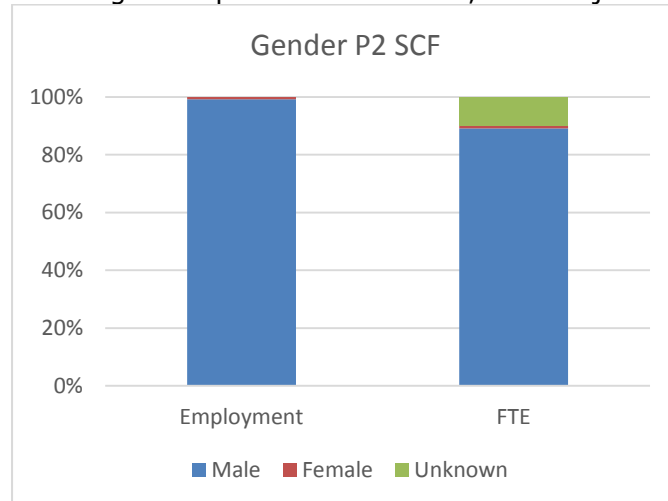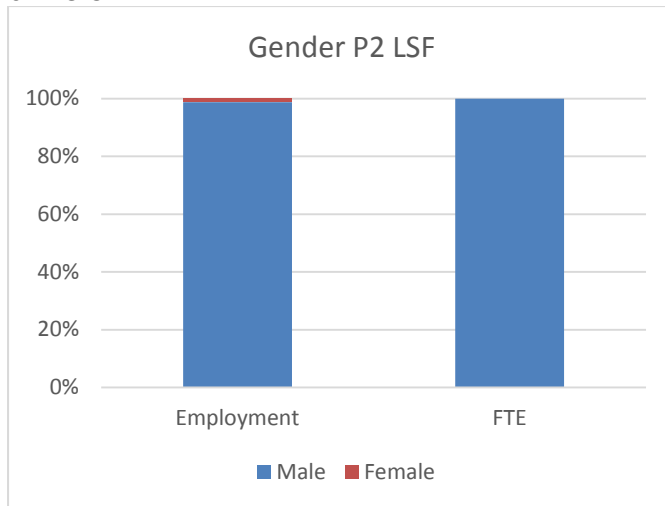
Madeira Large Scale Fleet

In the LSF of Madeira almost all workers are male and no use of unpaid work is observed. The population of this segment is slightly less aged, with only 23% of workers under the age of 40.

Regarding the level of education, the figures point to a more negative scenario in this type of activity, with only 5% of those involved with medium or higher level.

With regard to professional status, and as expected, only 2% of workers are vessel owners.

Gender P2 LSF

Legend: Male, Female

Age P2 LSF

4% 2% 21% 73% 4%

Legend: 15-24, 25-39, 40-64, >=65

Nationality P2 LSF

0% 0% 100%

Legend: national, EU, unknown

Education P2 LSF

4% 1% 95%

Legend: Low, Medium, High

Status P2 LSF

2% 98%

Legend: Employee, Owner

Distant Water Fleet

Azores Outermost Region.
In the coastal fleet of the Azores Outermost Region, there is a low female participation in fishing activities (4% of jobs), representing unpaid work 6% of the FTE. Almost all workers are of Portuguese nationality.
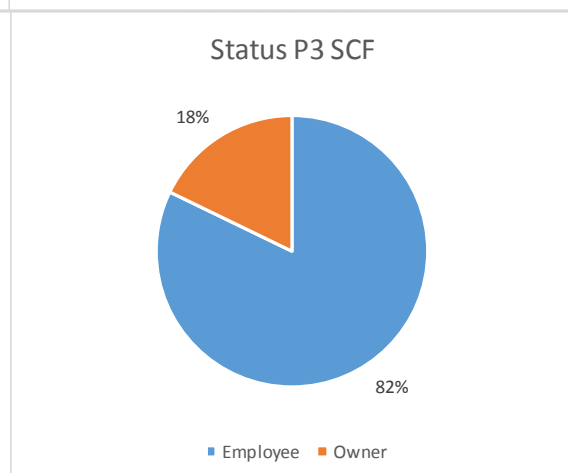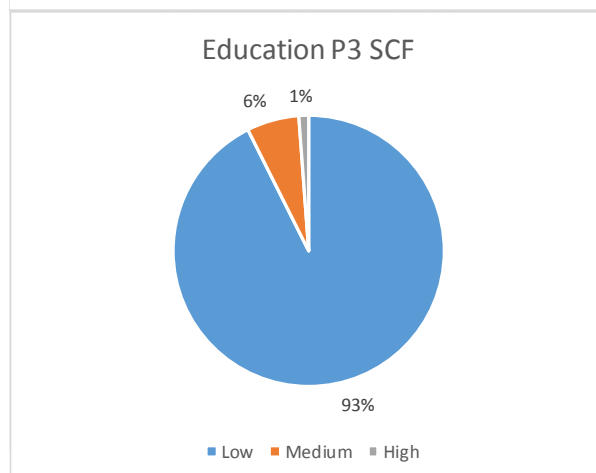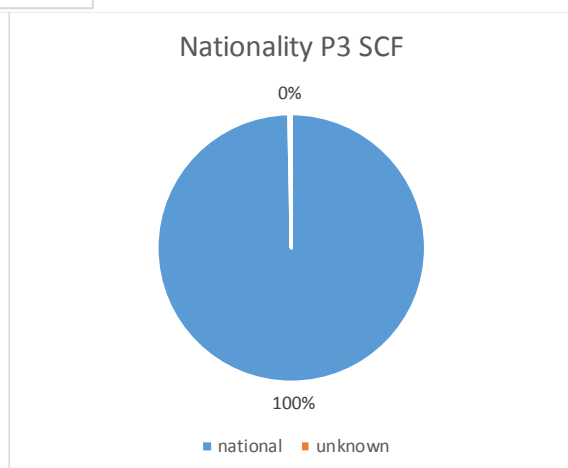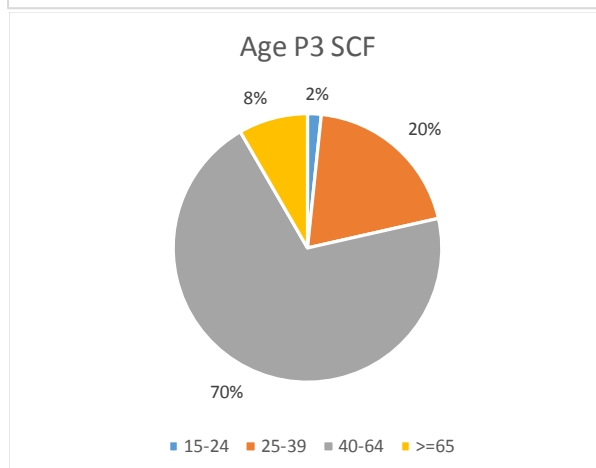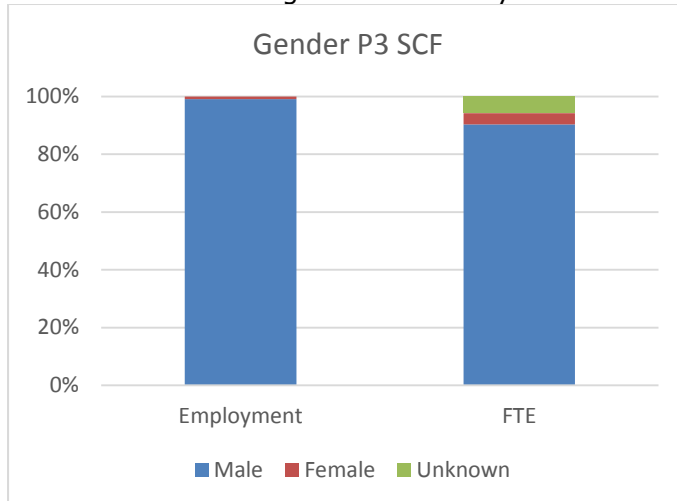
As regards the demographic structure of fishery workers, there is a somewhat aging population with 78% of workers over 40 years of age, and 8% of workers over 65.

The education level of the SFC workers in the Azores is quite low, since 93% of the population have only the lowest level of education.

With regard to professional status, the owners of the vessels in the fishing activities are less involved, as in the Madeira Outermost Region, when compared with the SFC of the Mainland. Only 18% are the owner of the vessel.

Large Scale Fleet

In the LSF of the Azores Outermost Region there is a female involvement similar to what can be seen in the SCF (4%), however, this activity uses less unpaid labour, which is responsible for only 2% of the FTE. Almost all workers are of Portuguese nationality.

Gender P3 LSF

Age: P3 LSF

Nationality P3 LSF

Education P3 LSF

Status P3 LSF
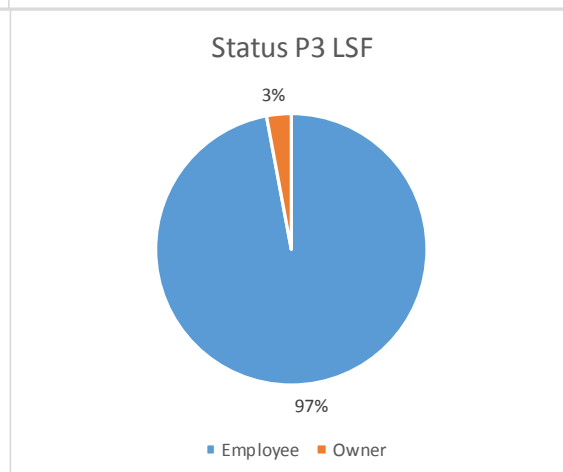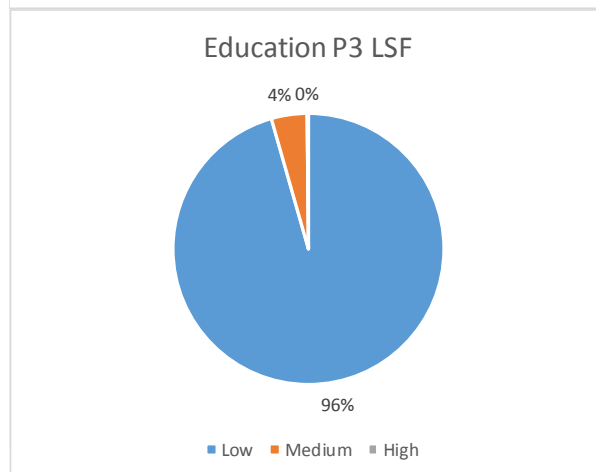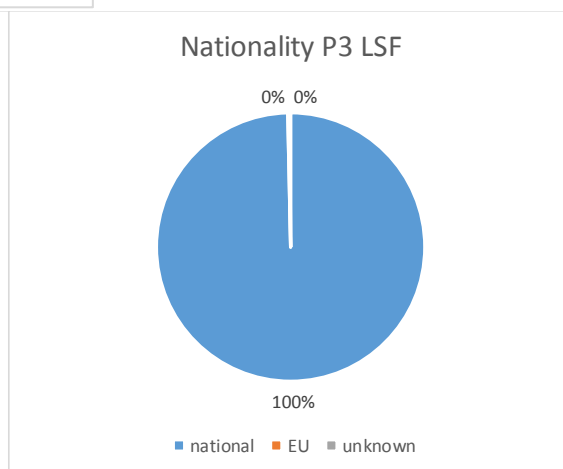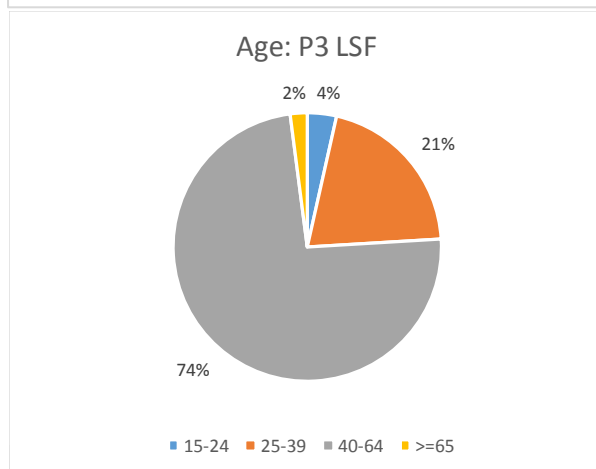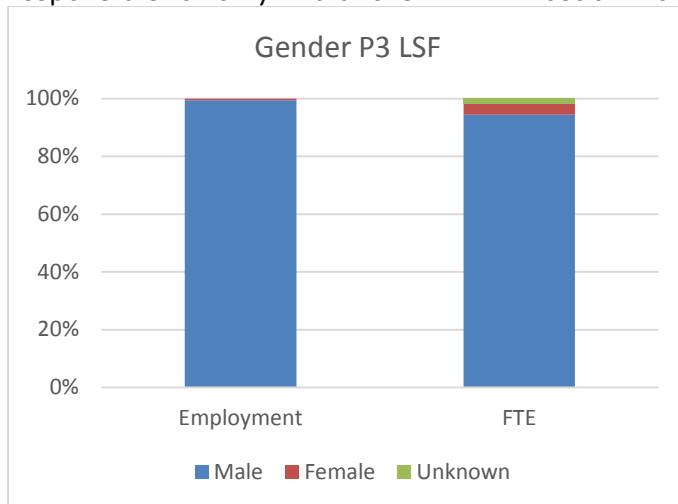
The academic level is lower when compared to that of the LSF, with 96% of workers having a low level of education. The distribution of LSF's professional status in the Azores is similar to that in Madeira, and is observed that only 3% of the workers are the owners of the vessel.

3. Summary text

The social data collected under the Fleet socio-economic data call reveal the existence of an almost exclusively male fishing population, aged and with a low level of education, especially in SCF and the Autonomous Regions.

In summary, at national level, it is found that:

– More than 90% of the remunerated national FTE is provided by male individuals;

– 72% of the population is over 40 years old and only 4% is under 25;

– 93% of fishers have a low level of education and the population with higher education does not reach 1%

4. Challenges

Taking into account the evidence of the data, the main challenges are to reverse the aging trend of the fishers population and increase the level of education.

5. Data issues

With regard to the data collected, it should be pointed out that the variables 'socfte' and 'socunlab' were obtained through the sample survey used for the fleet economic data call, later raising. However, the values related to the variable 'socemploy' were determined from the registry of the enrolled maritime workers, which correspond to a compilation of information on registries delivered by workers to their captaincies, that due to some constraints in terms of data support and/or aggregation, does not cover the entire population. For that reason, this information has also been raised through specific procedures for this purpose.

The sample unit is the vessel and the sample sub-unit is the maritime worker (person) registered with in the Maritime Authority during the year 2017. Each person is identified by the person number associated with the registration number of a vessel.

5.19. Romania

1. Social structure of the fishers' population

In 2017 there were 406 persons employed in the Romanian fisheries sector, with an FTE of 60. This shows the large share of part-time in Romanian fisheries. All persons employed were male.

Numbers involved in Fisheries harvesting by gender
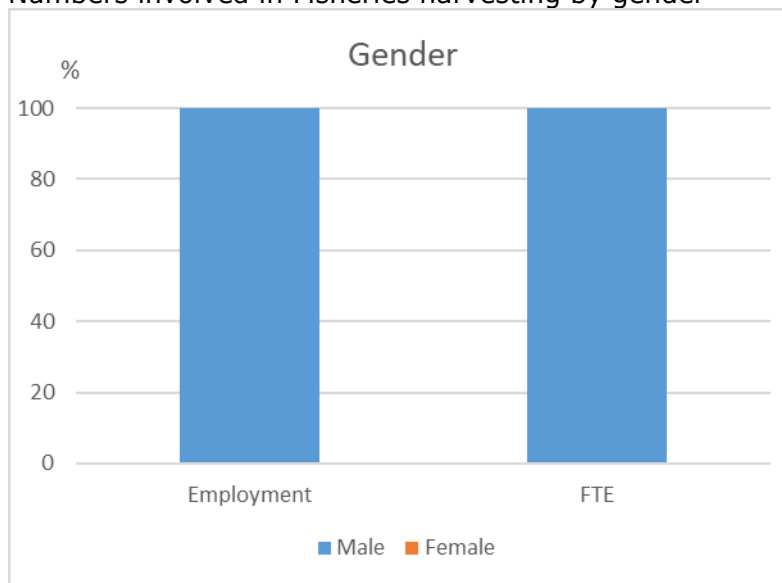
Demographic data of fishers population

About half of the persons employed in the Romania fisheries sector are between 25 and 39 years old. Most of them (96%) are Romanian, but there also persons form other EU and EEA countries employed.

Age

- 13% — 15-24
- 50% — 25-39
- 36% — 40-64

Nationality

- 96% — national
- 3% — EU
- 1% — EEA

Education

- 53% — Low
- 41% — Medium
- 6% — High

Status

- 96% — Employee
- 4% — Owner

2. Stratification/Segmentation

Gender: SCF

Male   Female

Age: SCF

11%

47%

42%

■ 15-24　■ 25-39　■ 40-64

Nationality: SCF

2%

98%

■ national　■ EU

Education: SCF

2%

50%

48%

■ Low　■ Medium　■ High

Status: SCF

4%

96%

■ Employee　■ Owner

Gender: LSF

%

100

80

60

40

20

0

Employment　　FTE

■ Male　■ Female

Age: LSF

18%
21%
61%

■ 15-24 ■ 25-39 ■ 40-64

Nationality: LSF

6%
5%
89%

■ national ■ EU ■ EEA

Education: LSF

19%
18%
63%

■ Low ■ Medium ■ High

Status: LSF

3%
97%

■ Employee ■ Owner

3. Data issues

No expert on Romanian fisheries could attend the meeting, so data could not be analysed in detail.

5.20. Slovenia

1. Social structure of the fishers' population

Slovenian fishers operate only in a limited fishing area of North Adriatic Sea. In 2017 Slovenian fisheries sector employed 101 person, 2 of them were women. Which in terms of FTE represents for male 61.8 FTE and for female 1 FTE.

Figure 1: Employment and FTE distribution in Slovenian fisheries sector by gender.

Regarding the distribution between large scale fisheries (LSF) and small costal fisheries (SCF) 22 men are employed in large scale fisheries which represents 9.8 FTE. All others are employed in SCF and represent 53 FTE.

Entire Slovenian fishing fleet in year 2017 was composed by vessels bellow 18 meters LOA and they operated in a very limited fishing area of North Adriatic Sea where fishing opportunities for LSF are very limited and hindered by different factors in Gulf of Trieste. This factors are political and economic (position between two very developed and regionally very important fishing fleets and fishing markets), geographic (shallow and warm sea) and biological (shared migratory stocks) characteristics of the fishing area. Because of this Slovenian LSF is performing fishing activities in very limited extend because it depends on the seasonality of the migratory and shared fish stocks. This reflects also in the social and employment structure of the LSF.

On the other hand the majority of fishers are employed in SCF, 77 males and 2 female fishers. This represents in terms of FTE 52 for male and 1 FTE for female.

Demographic data of fishers population

In 78% Slovenian fisheries are in age range between 40 and 64 years, 13% are in age range between 25 and 39 year and 9% are above 65 years. Their education is in 72% medium in 22% low and in 6% high. By nationality they are in 96% national Slovenian in 3% their nationality is from the EU member states and in 1% they are of non-EU/EEA nationality. In 75% they are owners of the fishing vessels and in 25% they are employees. Regarding gender fishery sector is almost only male domain.
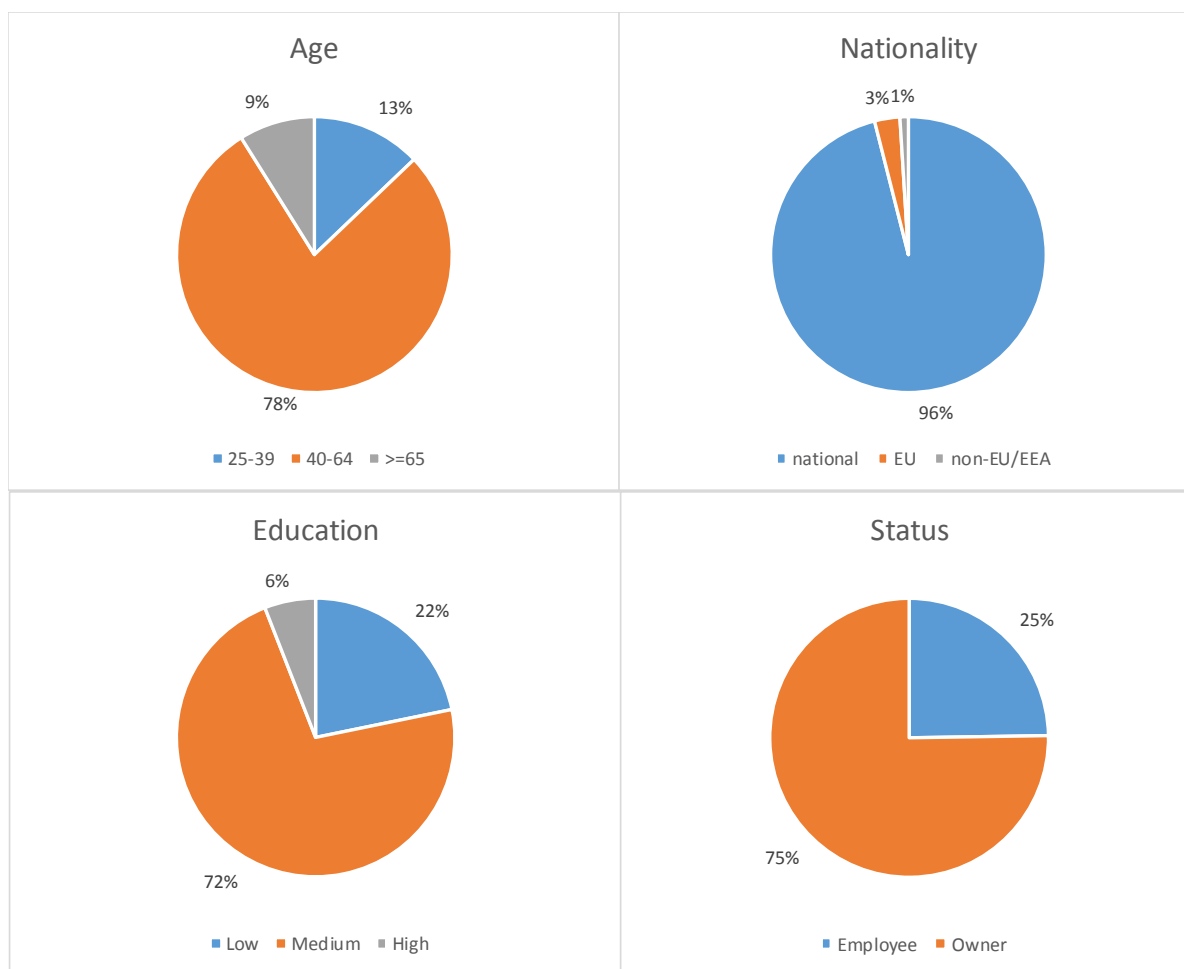
Figure 2: Education, age, nationality and employment status of Slovenian fishers.

The situation in LSF is different because the majority of Slovenian fishers are involved in SCF and SCF has greater impact on the entire population of Slovenian fishers. Even though the entire population is very small in number it is very important for the coastal communities. Coastal communities are shaped by this small fishing sector that represents the core cultural and social heritage in terms of food, fishing techniques, fishing ports and tourist attraction and potential.

Age distribution in LSF is composed by 82% of the fishers that are in age range between 40 and 64 years, other 18% are between 25 and 39 years. Their education is in 27% low and in 73% medium, by nationality they are in 86% national Slovenians in 9% they have nationality of an EU country and in 5% they have nationality of a non-EU/EEA country. In 45% they are owners of the fishing vessels and in 55% they are employees.

In LSF it is significantly larger share of employees that in the entire fleet or in SCF. Reason for this is that the crews for LSF are composed by more fishers than the crews for SCF. In changing conditions of the migratory and shared fish stocks in the North Adriatic Sea, Slovenian LSF is in front of big challenges in finding its position in a limited maritime space which has a lot of users. For Slovenian purse seiners from the LSF in last 2 years it was not economical to perform fishing activities because of the ratio between all costs, especially crew costs and oil costs and the amount of fish landed.

On the other hand the SCF has an age structure that is composed by 77% of fishers in range from 40 to 64 years, 12% from 25 to 39 years and also 11% of fishers above 65 years. Their education is in 72% medium in 20% low and in 8% high. Their nationality is in 99% national Slovenian and in 1% their nationality is form another EU country.

Regarding the employment they are in 84% owners of the vessels and in 16% employees.

Data from SCF contributes most to the demographic characteristics of the Slovenian fishing sector. As it is very small sector and the majority of the sector represent SCF it seems that is of vital importance for the viability of Slovenian fishing sector.

Employment in more detail (if available):
For the Slovenian fisheries sector it is typical that the employments status of the majority is as self-employed owner of the fishing vessels. This occurs in 75%. The percentage of owners is higher in the SCF 84% and lower in LSF 45%. Reasons for this are in the characteristics of the LSF which requires crews composed by more fishers. Usually trawlers have at least 2 members of a crew and purse seiners at least 6 members of a crew. In case of SCF crew is usually composed by only 1 fisher who is usually also owner of a fishing vessel.

In Slovenian fishing fleet 99% of employees are men. For the age structure 78% of the fishers are between 40 and 64 years and only 13% are aged between 25 and 39 years.

Regarding unpaid labours it is labour done by self-employed owners of fishing vessels and their family members and all profit that they have. In practice it is only data on their profit that they have based on their work that is not paid by salary or social contributions because even family members don't perform any kind of work related to the fisheries without payment. According to the data unpaid labour is performed only by men.

For the entire fleet 59% of all employed fishers performed unpaid labour, this share is higher in SCF 65% and around 41% in LSF. It is in relation with the ownership of the vessels and employment status. As the ownership of the vessels and self-employed status is higher in the SCF also unpaid labour is higher in SCF then in LSF.

2. Stratification / Segmentation
The majority of employees in fishing sector are men. The entire sector is very small in comparison to regional level and is composed mainly by SCF. SCF represents 78% of all employments in fisheries sector and 100% for women employment in fisheries sector. There are three employment and social security types for fishers. Firstly is self-employed fisher, secondly is employed fisher in a fishing company and thirdly is fisher as natural person that has a special social status.

Age structure in SCF and in LSF is almost the same and 78% of fishers are in between 40 and 64 years. All fishers above 65 years are engaged in SCF and 60% of fishers between 25 and 39 years. By nationality there is very small difference between LSF and SCF. In SCF 99% of national Slovenian are employed on the other hand in LSF 86% of national Slovenian are employed. However the actual numbers of employees in fisheries sector is low and for the Slovenian case their nationally is not of the main importance.
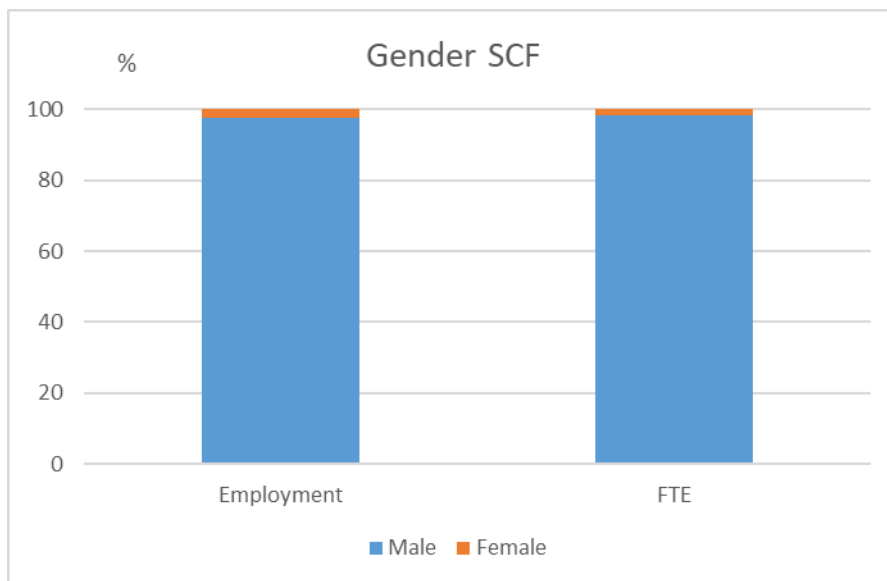
Figure 3: Employment in SCF by gender and FTE.
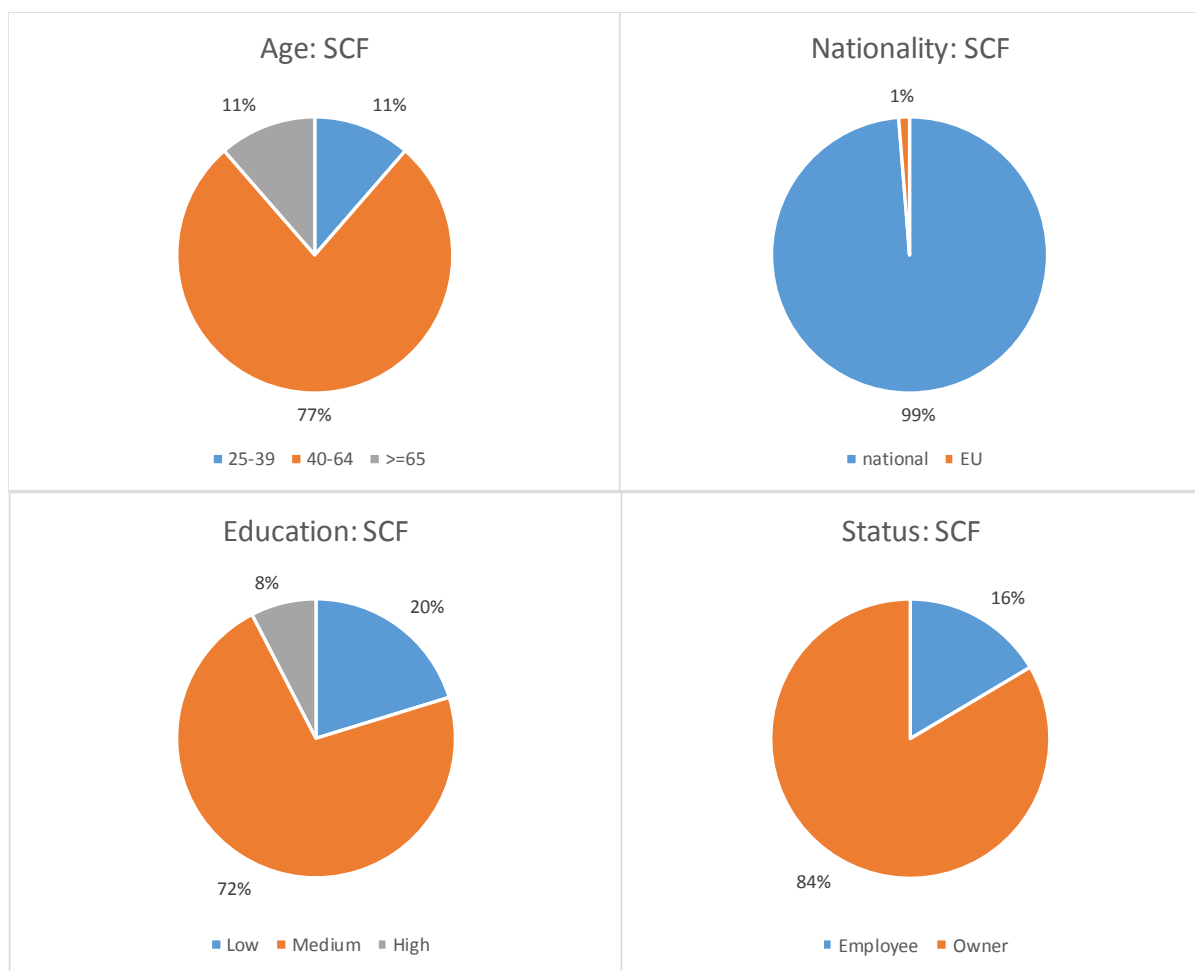
Figure 4: Education, age, nationality and employment status of Slovenian SCF fishers.
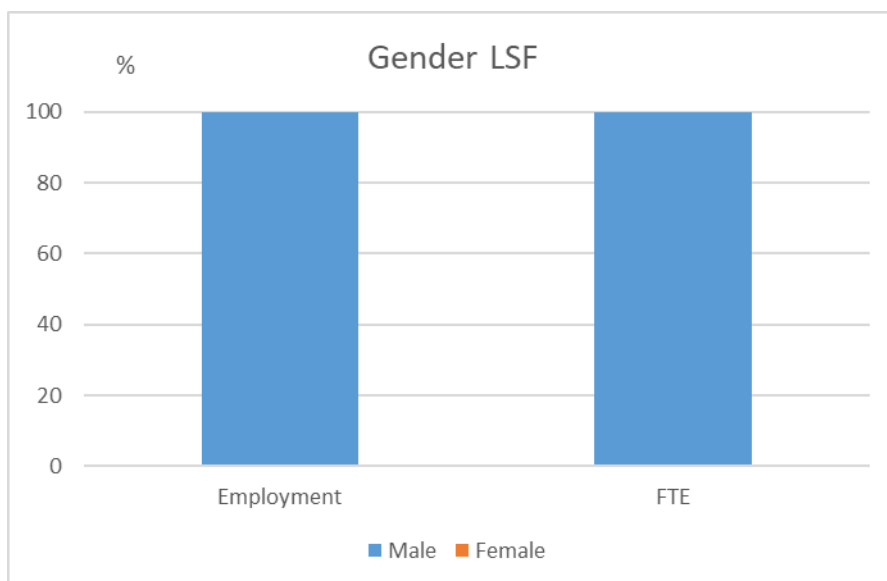
Figure 5: Employment in LSF by gender and FTE.
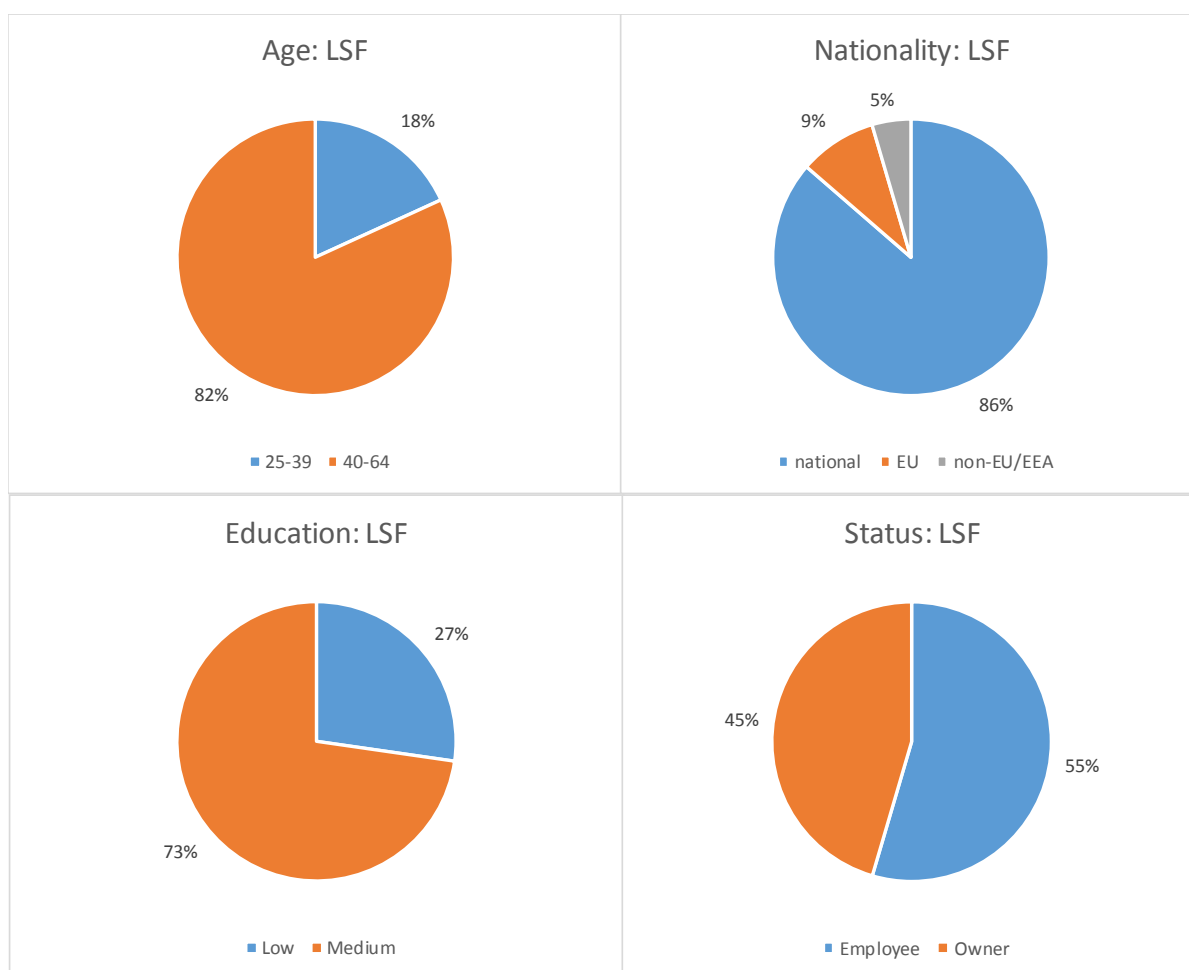
Figure 6: Education, age, nationality and employment status of Slovenian LSF fishers.

Because of unstable situation which depends from different factors employment in fishing is not in top of the employment preferences and it doesn't attract young people. Because of very limited fishing grounds and state of the migratory shared stocks in North Adriatic Sea on which Slovenian fisheries sector has negligible influence because of its very small landings and together with the high decrease in landings for more than

85% in last 10 years it is very important for the preservation of Slovenian fishing sector that any future management measures on regional level take in the account already done management activities in the past to reduce fishing effort and pressure on fishing stocks.

Proposed management measures should be proportional to area of fishing grounds, already done past management activities that reflect in current landings and regional influence of the fisheries sector on shared and migratory fish stocks. They should take into consideration also the influence of proposed management actions on the viability of fishing sector and possible social impact on the entire fishing community.

It seems that social mobility between fishers is limited. This is related to the general economic situation and mostly medium and low education level among fishers. Majority of them have medium education (72%) and the same applies for the LSF and SCF. Together with the age distribution their social mobility is limited to the activities in the area that require medium education, like in tourism, commercial port services and other service activities.

3. Summary text

In Slovenia there are 2 commercial fishing activities SCF and LSF. In the social aspect SCF is more important because it employs 78% of all fishers and the value of landed species is higher. On the other hand LSF is composed mainly by bottom trawlers which represent the majority in landing quantities. Other fishing activity in LSF is purse seiners. They are targeting migratory shared stocks of small pelagic species and this represents the smallest fishing activity of the fishing fleet. The importance of fisheries sector is evident in coastal community which reflects the cultural and social heritage of fisheries in terms of food, fishing techniques, fishing ports and tourist attraction. Nationality of the fishers is mainly national Slovenian. Their age is mainly between 40 and 64 years, as also the average age of Slovenian population is. Their education is mainly medium or low. Regarding the employment status there are three different options. In SCF self-employment status together with the ownership of the vessel is the most common. In LSF employment in a fisheries company is the most common status and there is also third option which is usually used in SCF this is a special social category of fisher natural person, they are usually also owners of a fishing vessel. For various reasons landings of Slovenian fisheries fleet is decreasing for last 15 years and diversification is only one of the options that many fishers have to deal with to enable social security for themselves and their households. Finding additional income in fisheries related activities and also outside fisheries is in many cases challenging activity. Because of the age and education structure there are not many possibilities for social mobility and they have to seek opportunities in other activities related to the maritime space like tourism, commercial port activities and other service activities. For the future of fisheries sector very careful management actions should be taken. Management of such fragile sector requires precautionary approach and very in depth analyses and consideration of already done management activities and their consequences on the social and economic viability of the sector.

4. Challenges

It seems that in front of Slovenian fisheries sector are big challenges because of its characteristics. One of them is size. With landing that are around 126 tons per year and regionally negligible impact on shared migratory fish stocks in North Adriatic Sea. Fishing fleet is very old and fishing vessels are small. Because of the management measures that were taken in past years and very limited fishing grounds and state of the shared migratory fish stocks in North Adriatic Sea fishing sector is decreasing in landed quantities.

It seems that LSF especially segment of purse seiners (PS) is less active than in the past and it is seeking for new employment opportunities. Fishers form LSF shift from LSF to SCF or in economic activities outside fisheries. LSC depends more and more only on trawlers. Fishing sector is not attracting young people to employ as it is not offering stable working conditions and stable income. Other activities that are also related to the maritime space and are competing with fisheries are more attractive and young people prefer to employ in tourism, commercial port activities and other service activities.

For the future it is essential that the fisheries sector remains vital and contributes to the vitality of local area. It represents the core cultural, touristic and social heritage of the local community. However it is essential to find fine balance between fishing opportunities and fishing ability and enable fishers to diversify their income in fisheries related and complementary activities and also outside fisheries. It is also important to enable conditions for fishers to perform investments in new vessels and gain new working skills and involvement in local and regional projects lead by FLAGs.

5. Data issues

Regarding the collection of the social data there are no major data issues. For the future it is needed to make clear delimitation between professional fishers that live only from fishing and with fisheries related complementary activities and fishers whose primary source of income is not from fisheries. Currently both groups of fishers have fishing licences for commercial fishing even if their fishing activity may vary a lot. Some fishers in practice go on sea less than 60 days or even less and others more than 250 days. Both groups are considered professional fishers even if their main income is from fisheries and with fisheries related and complementary activities or from other activities outside fisheries. Also definition of active fishing vessels is to be discussed as it is considered to be active if it performs at least one fishing activity in one year.

Perhaps also new social variables for better understanding of social mobility and social status of fishers could be introduced as number of years of employment in fisheries sector, number of dependent family members of fishers and ratio between different age groups.

5.21. Spain

Fisheries in Spain is an activity with a deep history, differentiated between fishing sea basins: North of Spain and Cantabrian Sea, Mediterranean Sea, Gulf of Cadiz and the Canary Islands. In the data available in STECF these fishing regions have been aggregated into North Atlantic and Mediterranean, highlighting some aspects for the Canary Islands. Although fisheries is not crucial for the overall Spanish economy, it is locally, socially and culturally very important and produces several territorial identities within the country. The relevance of fisheries is clearly differentiated inside these regions, with some of them like Galicia showing a stronger dependency on fishing activity.

1. Social structure of the fishers' population

The employment in the fisheries sector in Spain includes 34,326 persons (of those 1,217 are women, 3.55%) with an equivalent in FTE of 29,202 (of those 853 are women, 2.92%). It is relevant to note the amount of unpaid labour in the sector, as it amounts to 7,693 persons, of those 602 are women. At 7.83% this is the highest percentage of women's participation in the fisheries sector. The distribution between sea-basins show that 24.95% of the workforce is located in the Mediterranean (MBS), 60.59% in the North Atlantic (NAO) and 14.46% in the other fishing regions (distant-water fleet). Data about Canary Islands and the Spanish fleet working in Morocco are included in the NAO.

North Atlantic Fisheries (NAO) generate a large amount of direct employment with 20,797 persons in total. On the contrary the Mediterranean (MBS) provides less than half the employment of fishers than the NAO with 8,564 persons. This can be related to the dimension of the fleet, which is much bigger in NAO than in the Mediterranean, and also linked to the relevance of fisheries activity and small-scale fisheries in regions like Galicia, the most important in Spain. The fleet of OFR (distant-water fleet) has a total amount of 4,965 persons, and a full-time employment (FTE) of 6,051. It is the only fishery where the FTE is higher than the number of persons employed.

The gender dimension of fisheries is dominated by male population as the percentage of women in both the Mediterranean and Atlantic Ocean is rather low. In general terms women's involvement in fisheries represents 3.55% of the total employment and 2.92% of the full-time employment. It is only in the unpaid labour where this percentage of women increases, up to 7.82%. However, some differences may be highlighted in different areas of Spain, as in the Mediterranean area the percentage of women is under 1.9% both in total numbers and FTE. Probably this is due to the relevance of tertiary sector job opportunities that absorbs women's work that otherwise could be engaged in fisheries. The data on gender employment in the Atlantic Spain suggest that in this area the relevance of the alternative employment in services or other sectors is lower, and as a consequence the presence of women in the fisheries activity is higher than in the Mediterranean area, reaching a 4.33% of the total workforce and a 3.62% of the full time employment. The fishing technology where the presence of women is more relevant in this area of Spain is PMP, vessels using passive and active gears, that correspond to the small-scale gears category of the Spanish regulation (419 women in the fleet 0-12 meters). The presence of women as unpaid labour in this sea basin is especially high, reaching 9.16% of the total and 526 persons. That is nearly three times as much the percentage that appears in the Mediterranean region (3.75%).

In the case of the other fishing regions (OFR) that basically refers to large scale distant waters fleet, the percentage of the women in the activity is also relatively low, around 3.10% in total employment and 2.29% in full time employment.
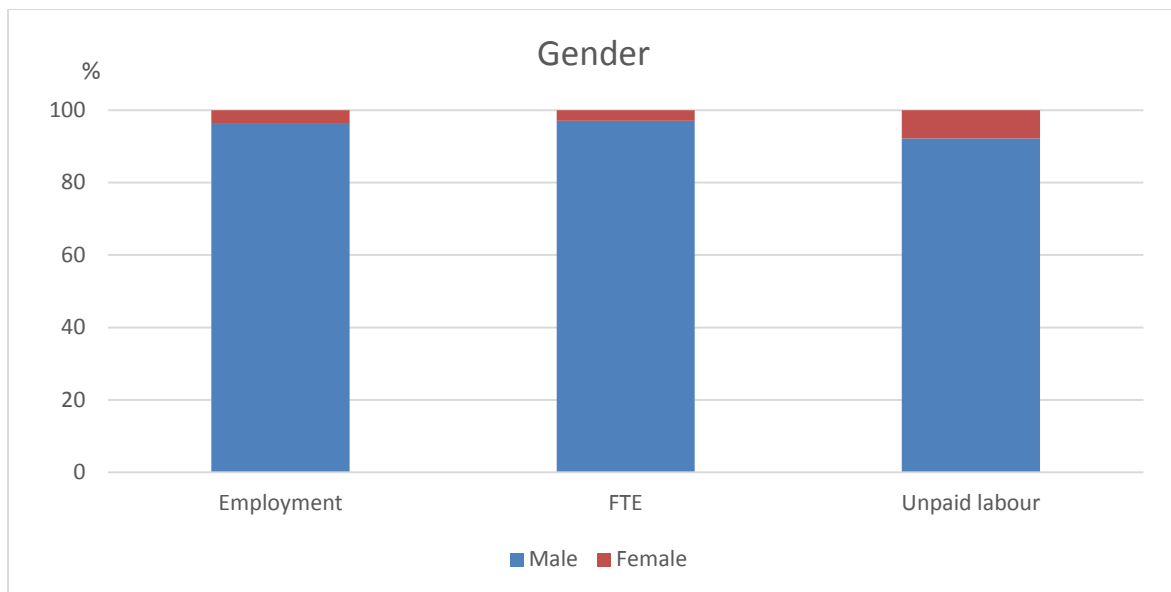
Overall we can find some gender differences between the large-scale (LSF plus DWF) vs the small scale coastal fleets, as the percentage of women in small-scale (5.37%) almost double that in the large-scale fleet (2.83%).

We need to emphasize some relevant caveats about the data on gender in fisheries. The numbers refer to fishing enterprises, and the related workforce at land or at sea, as the survey that provides these data in Spain includes all the employment related to these enterprises and the data in DCF is the aggregated output on this variable. This way the data of women involved in fisheries is not equivalent to the number of women onboard fishing vessels, as the former may include women working on land in administrative work and other activities. Besides this, it is relevant to note that all the activity of shell-fishing on foot, developed in regions like Galicia mainly by women, is not included in these data as the activity is not regarded as fisheries, despite the fact that it is ingrained in fishing communities and fishers organizations.

Furthermore, it is necessary to highlight ambiguities in the data about unpaid work. It includes the ship-owner in boats operated individually but also the members of the family involved in the operation of the boat, so that women or other family members working on land and not receiving a salary may be included in this data. Counting together both realities generates confusion in the analysis of unpaid labour. It is not clear to us how this data responds to the traditional roles of women in fishing families in repairing nets and in the selling of seafood products, but also the occasional labour force in fishing provided by the sons or elders. Therefore, household production has been important for the social reproduction of the productive units around one or more boats. These roles are especially relevant in small-scale fisheries to keep the long-term viability of the activity.

Demographic data of fishers population

Age
The overview of the age structure of fisheries employment in Spain reveals that 49% are in the 40-64 age group, 34% in the cohort of 25 to 39 and only 4% in the 15 to 24 age group. It is relevant to note the importance of the unknown category at 14%.

It is also interesting to note that in the Mediterranean (MBS) shows a more elderly population as 58% are in the 40-64 cohort. Young people (from 15 to 24) only represent 5% of the fishers. In view of these numbers it appears that the Mediterranean workforce has clear difficulties for generational renewal. However, the SSCF in this area shows a

better situation, with a lower percentage of 53% in the 40-64 cohort. The LSF in the same cohort reaches 61%. Added to that, this segment of the fleet integrates the largest number of non-EU/EEA, probably in the younger cohorts, that may not compensate for the aged national workforce, meaning this fleet may have some problems regarding aging.

Age

- 15-24
- 25-39
- 40-64
- >=65
- unknown

Age: MBS SCF

- 15-24
- 25-39
- 40-64
- unknown

Age: MBS LSF

- 15-24
- 25-39
- 40-64
- >=65
- unknown
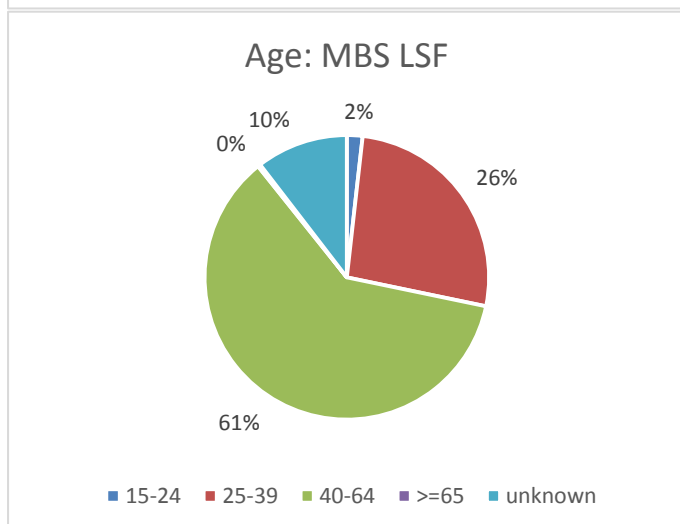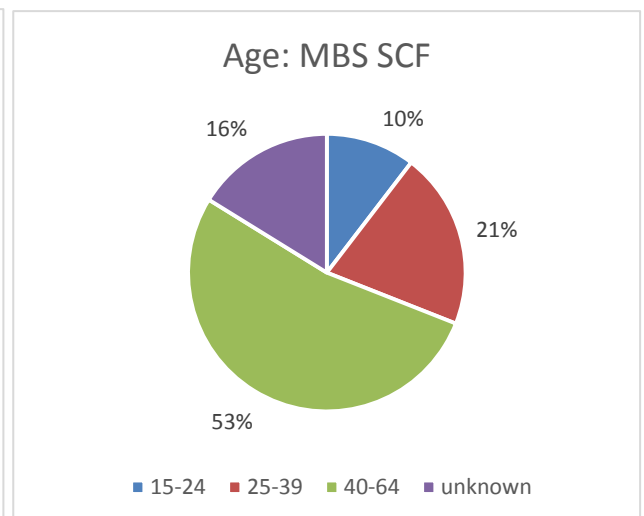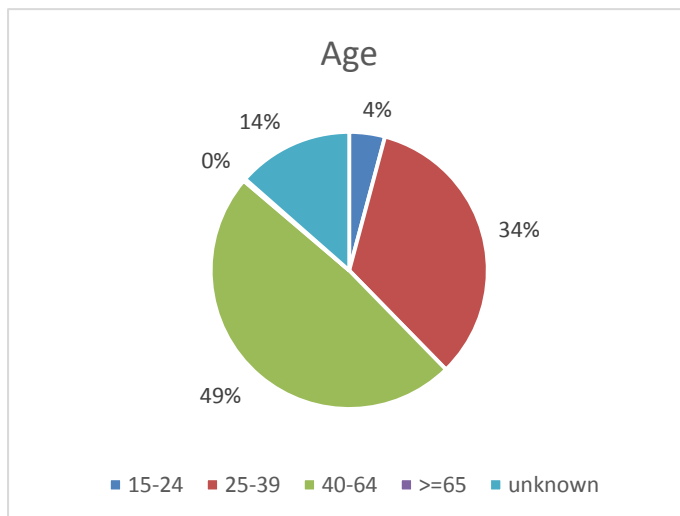
In NAO the difference between SCF and LSF is less. In SSCF the 40-64 cohort is 47% versus 49% in the LSF. The younger cohort (25-39) is also very similar (36% vs 37%). In general, the workforce in this area is younger than that in MBS.

Age NAO SCF

5%
11%
1%
36%
47%

■ 15-24 ■ 25-39 ■ 40-64 ■ >=65 ■ unknown

Age: NAO LSF

10%
3%
0%
37%
49%

■ 15-24 ■ 25-39 ■ 40-64 ■ >=65 ■ unknown
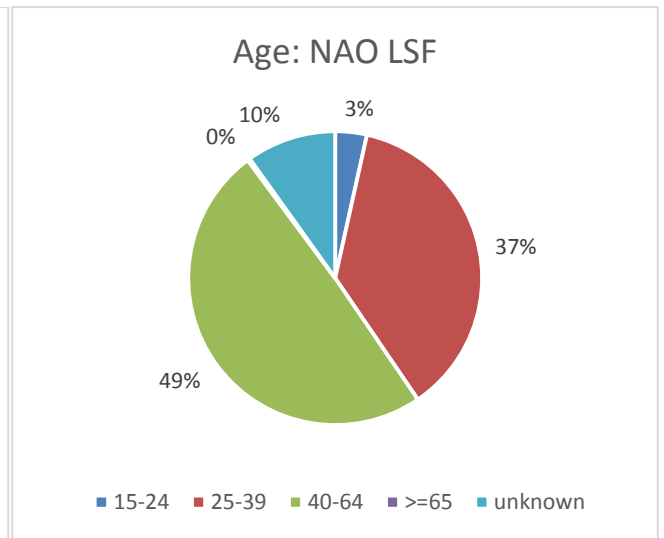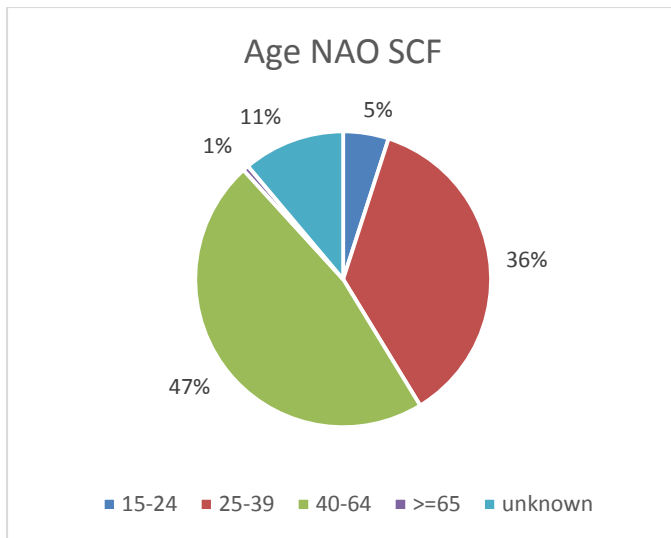
The age profile improves when we look at the DWF data, where 2,207 fishers are under 40 years (45%) whereas the 40-65 cohort includes 1,325 (27%). We lack further qualitative information to explain why this segment of the fleet has a higher percentage of younger fishers. Nevertheless, we have to take into consideration the pretty high percentage of unknown in this segment of the fleet (1,430, 29%), and the high rate of non-EU/EEA in this workforce, that may explain the younger fishers.

In the case of the Canary Islands the age of the workforce comparing LSF and SSCF shows a similarly aged scenario, with 60% in the cohort of 40-64 years.

Age: DWF

5%
29%
40%
0%
27%

■ 15-24 ■ 25-39 ■ 40-64 ■ >=65 ■ unknown
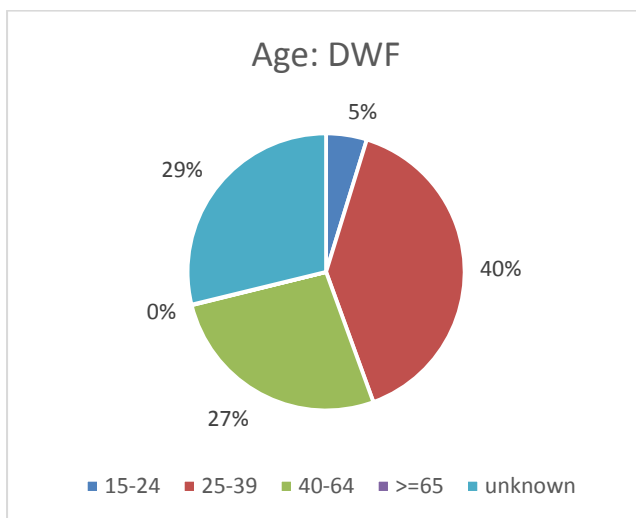
Nationalities
The workforce in the fisheries sector is predominantly national, with 71% of the total, followed by the non-EU/EEA (14%), unknown data (14%) and other EU nationalities (1%).

Nationality

- national 71%
- EU 1%
- non-EU/EEA 14%
- unknown 14%
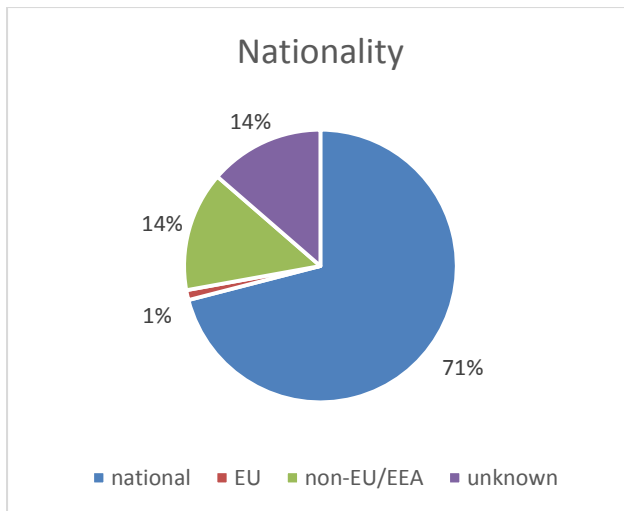
In general, the workforce of the fisheries sector in the Mediterranean basin is national (71%), but with a notable presence of non-EU/EEA plus unknown. It is relevant to note that more than half of the non-EU/EEA workforce (1,212) is in the purse seine fisheries (665), as this seems to require large crews in which local fishers are frequently reluctant to engage. The second fleet with more non-EU/EEA workforce is the trawler fleet (DTS), accounting for nearly one third of the total (295). This general data about the MBS compares with the details of the SSCF, where the percentage of national population is 81%, with only a 2% of non-UE-EEA and 16% of unknown. This means that the rate of non-UE-EEA is much higher in the LSF, reaching 20% plus 11% unknown.

Nationality: MBS SCF

- national 81%
- non-EU/EEA 2%
- unknown 16%

Nationality: MBS LSF
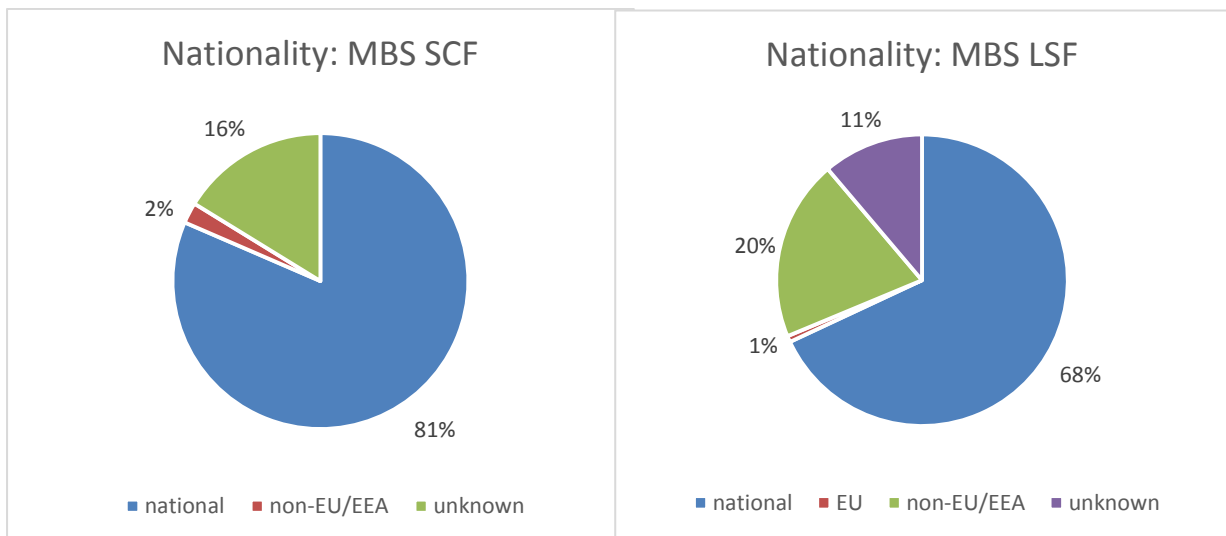
- national 68%
- EU 1%
- non-EU/EEA 20%
- unknown 11%

In the NAO the total percentage of non-EU/EEA fishers is lower than in the Mediterranean, (9% non-EU/EEA). Again, the number of non-EU/EEA fishers linked to purse seiners is high, but much lower than in the Mediterranean, and other fleets include a lower percentage, like polyvalent passive gears, trawlers and, hooks. It is relevant to note that the number of unknown nationality data is rather high and accumulates especially in some of these fishing techniques. The differences between SSCF and LSF are relevant, as in the SSCF the rate of non-EU/EEA is rather small (1%). Similarly, in the Canary Islands LSF data shows a 22% of non-EU/EEA, while in the SSCF it is a 3% showing a clear contrast between these fleets.

Nationality NAO SCF

11%
1%
88%

national   non-EU/EEA   unknown

Nationality NAO LSF

10%
12%
2%
77%

national   EU   non-EU/EEA   unknown
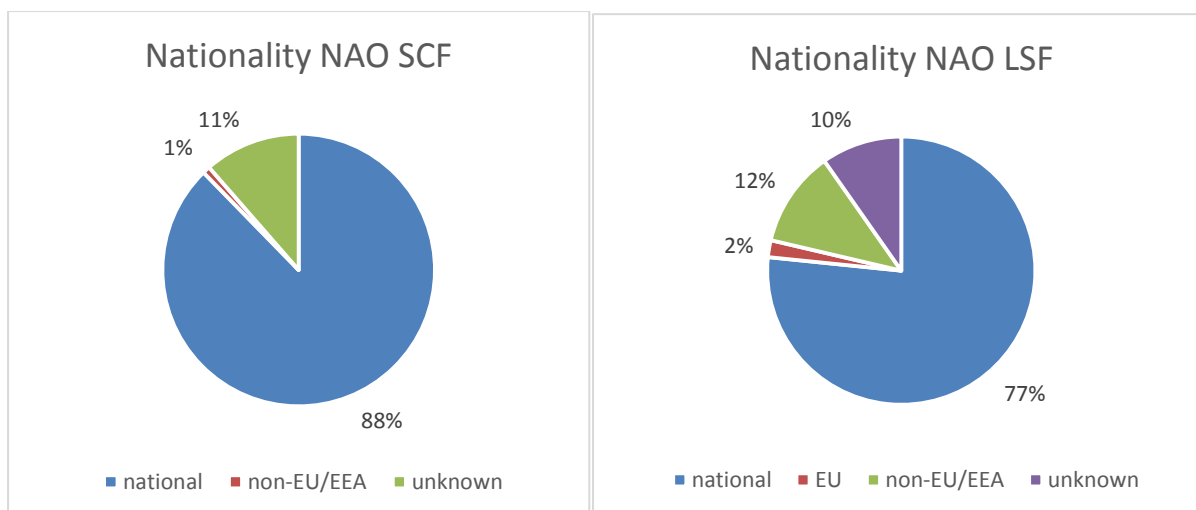
In the distant-water fleet the non-EU/EEA workforce looks especially relevant, as their numbers (1922 fishers, 39%) surpass the national fishers (1570, 32%). As also happens in other fleets, the number of other EU nationalities is rather low, only 51 persons in this case. The largest number of the non-EU/EEA workforce is concentrated in the purse seiners (560), being higher than the national workforce (439), even that the data of unknowns is also noticeable (434). The high rate of unknown data is relevant for all the fleets mentioned above, but in the distant water fleet reaches a high of 29%.

Nationality: DWF

29%
32%
1%
39%

national   EU   non-EU/EEA   unknown
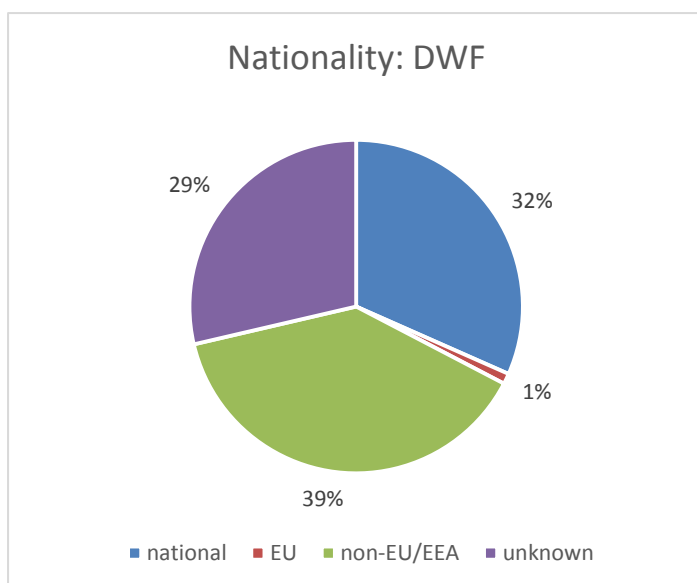
Education and fisheries workforce

About 67% of fishers have a low education, only 2% of them have high education, and an average of 17% medium education, with a large percentage of unknown data (14%).

Education

- Low
- Medium
- High
- unknown

14%
2%
17%
67%
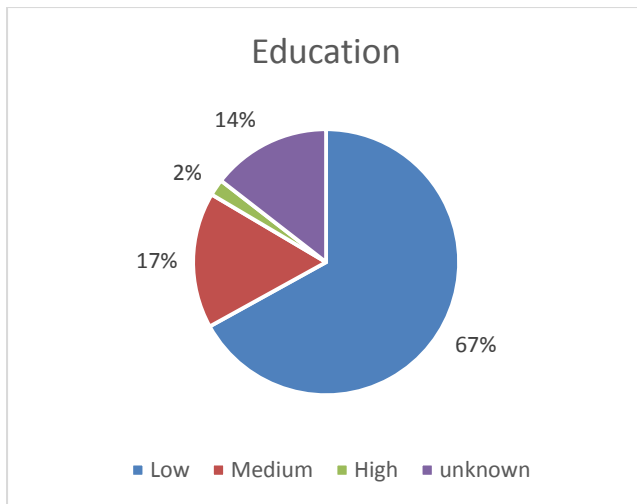
Analysing the data in more detail, we find that in the MBS SSCF the rate of low education is 68%, higher than in the general data, with medium education up to a 13% and 2% with high education. This rate of high education is lower in the LSF in the same sea basin, reaching only 1%. In the distant water fleet the rate of low education reaches a 55%, with a 12% of medium education, and a 4% of high education (the highest rate in all the fleets). It is relevant to note the high rate of unknown, a 29%. The NAO area show low rates of fishers with high education (1% in SSCF and 2% in LSF) with high rates of low education. Otherwise the unknown data about the education of workforce in this fishing activity is rather high, around 10-11%.

Education: MBS SCF

16%
2%
13%
68%

- Low
- Medium
- High
- unknown

Education: MBS LSF

15%
1%
16%
68%

- Low
- Medium
- High
- unknown
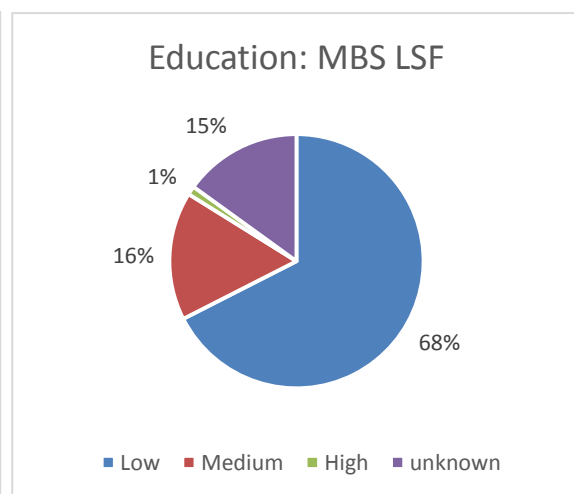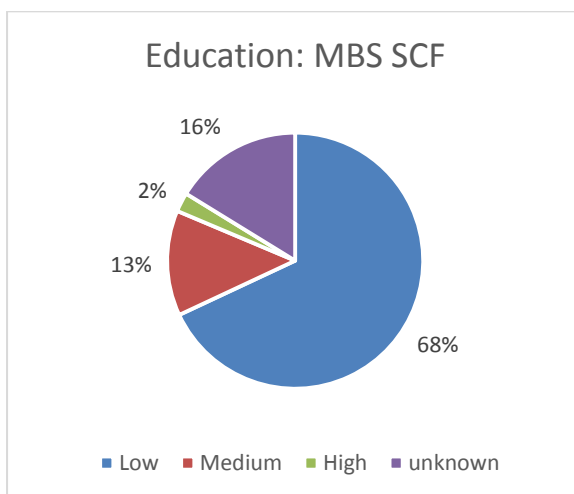
In the Canary Islands area, the rate of low education in LSF is 80% with medium education of 12% and high education of 5%, a rather high rate. However, in the SSCF the rate of medium education is much higher (25%) and the low segment is lower (60%) with a high percentage of unknown (15%) and a non-existent rate of high.

Education NAO SCF

11%
1%
23%
65%

Low Medium High unknown

Education NAO LSF

10%
2%
16%
72%

Low Medium High unknown
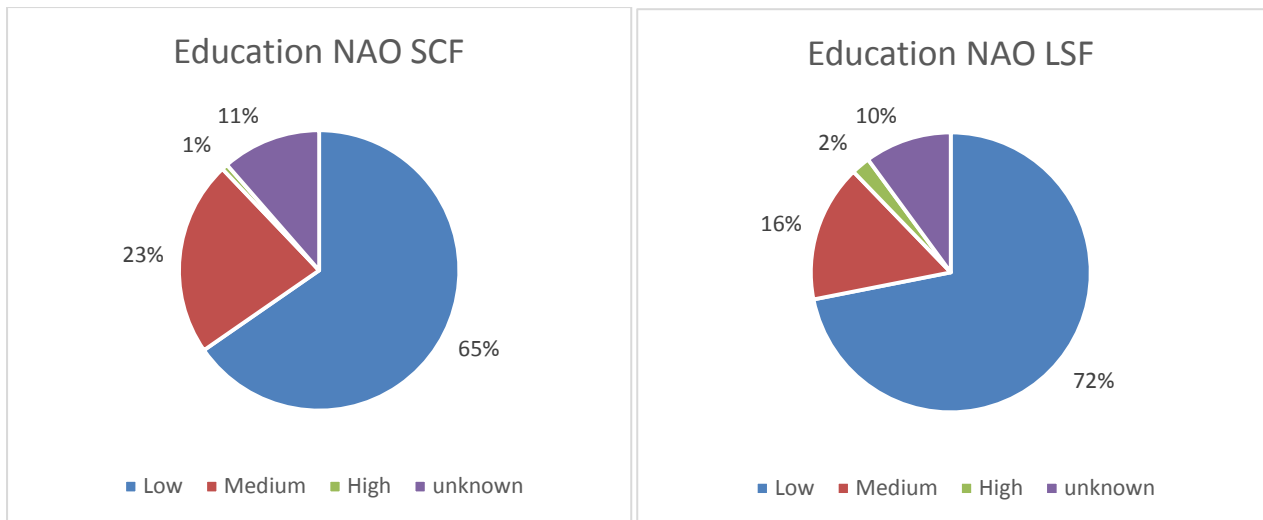
Employment in more details:
The status of the employment shows a relatively large percentage of owners, that reaches 21%. This is related to the large proportion of small-scale fleets that only have one or two persons onboard, and to the relatively small size of the crew. This way, the percentage of the crew from the total is a 66%, with a rate of unknown of 13%. That is equivalent to a medium crew in the Spanish fleet of around four persons.

Status

13%
21%
66%

Employee Owner unknown
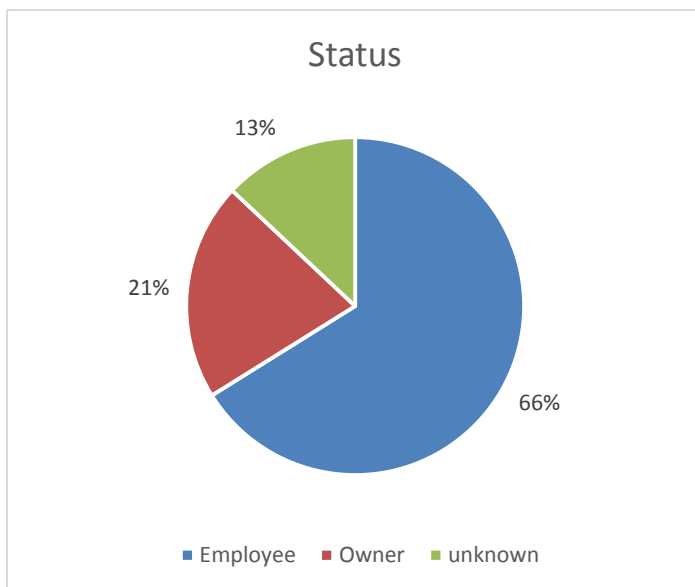
In the MBS SSCF the data shows a lower number of persons onboard, with a 43% of owners and a 41% of employees, reaching a 16% of unknown. So the medium crew in this segment of the fleet is around two persons. In the LSF in this basin, the percentage of owners is 9%, with a medium size of the crew much higher than in the other case. This larger demand of crewmembers explains an increased presence of non-EU/EEA in this fleet segment, as to find this number of crewmembers in the local workforce may be more difficult.

Status: MBS SCF

Status: MBS LSF

- Employee ■ Owner ■ unknown
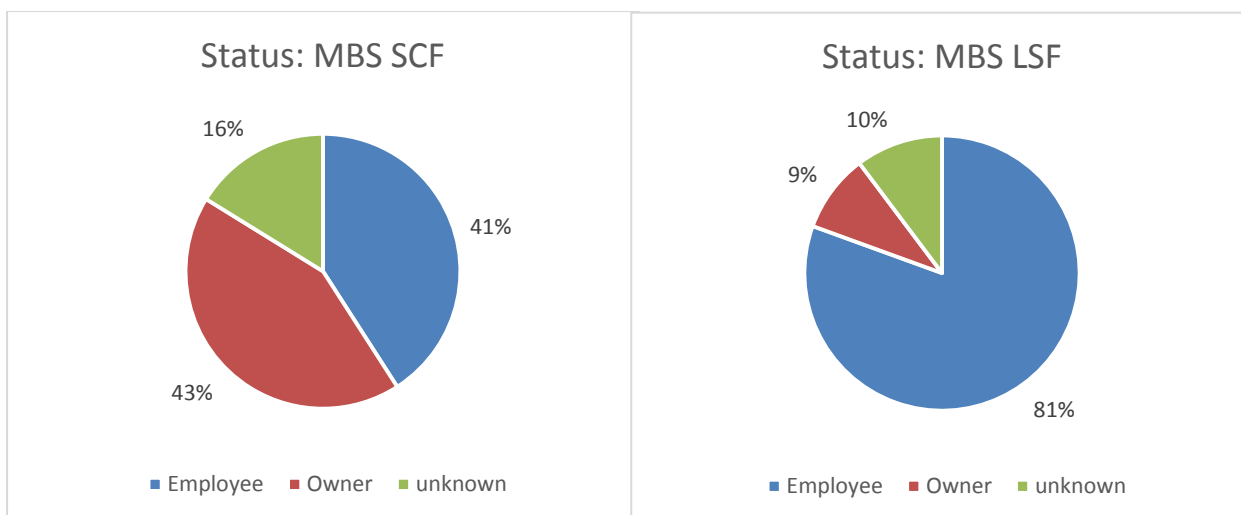
At NAO LSF the proportion of owners is 19%, versus 71% of employee and 10% of unknown, this should be related to a large number of small boats that do not fit in the SSF definition. In the SSCF the proportion of owners at 42% and crewmen at 48% is very similar.

In the Canary Islands SSCF there is a similar proportion of employees (46%) and owners (39%), indicating a medium size of the crew of two persons. However, in the LSF the proportion of owners is the lowest at 5% (with 5% of unknown). This may be related to a clearer differentiation of LSF, with less small boats linked to towed gears than in other areas, as most towed gears are banned in the Canary Islands.

Status NAO SCF

Status NAO LSF

- Employee ■ Owner ■ unknown
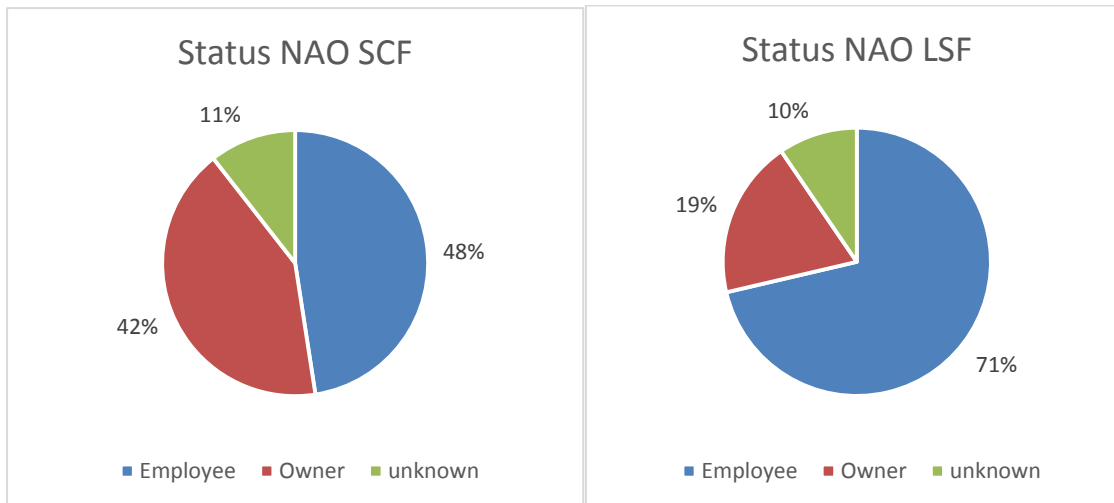
2. Stratification/Segmentation
Small-scale vs large scale fisheries in the NOA and MBS
It is relevant to note the discrepancies between the fleet included in the European EMFF definition of small-scale fisheries and the Spanish modality of small-scale gears, the most approximate to the EU definition. Taking into account the EU definition that do not include towed gears the numbers of the small-scale fleet are many hundreds boats lower that with the national classification (under the 12m length limit), as the boats that use small purse seiners or that may use dredges (*rastros*) even temporarily in some moments of the year for shellfish are excluded from the category of small-scale fisheries. It is the case that these boats belong to the same organizations, the same communities,

share similar boat typologies and market strategies in relation to the fleets included in the EU definition. In this sense, we suggest the caveat that with a broader and perhaps more realistic definition the numbers related to the small-scale coastal sector would be higher.

In general terms, in the provided data, the employment linked to the large-scale sector (24,662, including 698 female) persons is much higher than in the small-scale sector (9,664 persons, including 519 female). The percentage of females in LSF (2.82%) is much lower than in the SSCF (5.46%), due to the more intense implication of family in the productive units.

The data show higher numbers of workforce in LSF both in the North Atlantic Ocean and the Mediterranean area. In the Mediterranean the employment involved in the SSCF (2,853 persons) is lower than in the LSF (5,711 persons), approximately half of the total amount, with a higher proportion of women in the SSCF. In the NAO, the data on employment are higher, as in LSF we find 13,986 persons while in the SSCF it is 6,811 persons, again approximately half of the total. In this case, the percentage of women in SSCF more than doubles (6.66%) the one in the LSF (3.20%).

The data on Other Fishing Regions show zero employment on SSCF and 4,965 persons in LSF, as usual in any distant water fleet.

3. Challenges

Social analysis of fisheries needs to be articulated with other dimensions of the activity, specifically the ecosystem and the economic dimension. However, specific methodologies need to be developed to cope with the need for qualitative data that allow a better contextualization and holistic analysis of quantitative information. Currently the social data provided in this initial analysis allow some further description of social issues, but the capacity to address with this data the most relevant challenges for the fisheries sector looks very limited.

In this sense, a set of specific challenges needs to be addressed. First of all, it is necessary to develop new strategies in the short and long term for the gathering of social data. In the short term a cumulative focus with the actual methodological strategy of Member States perhaps would be the most adequate for increasing the social information available. However, the capacity to address some relevant concerns with this strategy looks rather limited in the long term, requiring an innovation in the methodologies of data gathering currently implemented by the member states. This implies the development of community profiles and strategies like social impact assessment that involves more intensive fieldwork. This analysis of representative pilot sites will provide a more realistic setting of social data, defining a number of fishing community profiles at different scales (by regions) taking some key variables as drivers to choose the pilot sites. This may drive to consider specific regional variables derived from fishing community profiles, especially when it is necessary to contrast a diversity of data with qualitative information for specific case studies integrating social, economic, and biological issues to be addressed. In general, the social data should be articulated with economic and ecosystem indicators and especially the social impact assessment strategies should take this into account.

In the short term, it is also necessary to harmonize and define more clearly some social variables gathered by MS, such us unpaid labour. This variable currently includes case of the boat owners fishing on their own, but also the case of other persons in the family contributing with work to the productive unit, usually women, young persons or elders. This needs to be clearly differentiated, and from a social point of view it is difficult to assume the role of individual fish owner as unpaid work, creating a conceptual issue.

4. Data issues

In relation with national available data for this report some categories are not clear enough. Unpaid labour is unclear as the kind of labour it refers to is not specified. It is important to clarify the social and economic impact of unpaid labour in the social sustainability of fisheries. At least some of this unpaid labour can be related to household production. This had been paramount for supporting fisher families economy. Usually it includes care and socialization of children and elder people, but also food and clothing, and in fisheries' families it also refers to the role of women in repairing nets and in the marketisation of seafood products but also the labour force in fishing provided by the sons. Therefore, household production was important for the social reproduction of the unit of production.

5.22. Sweden

1. Social structure of the fishers' population

Numbers involved in Fisheries harvesting by gender
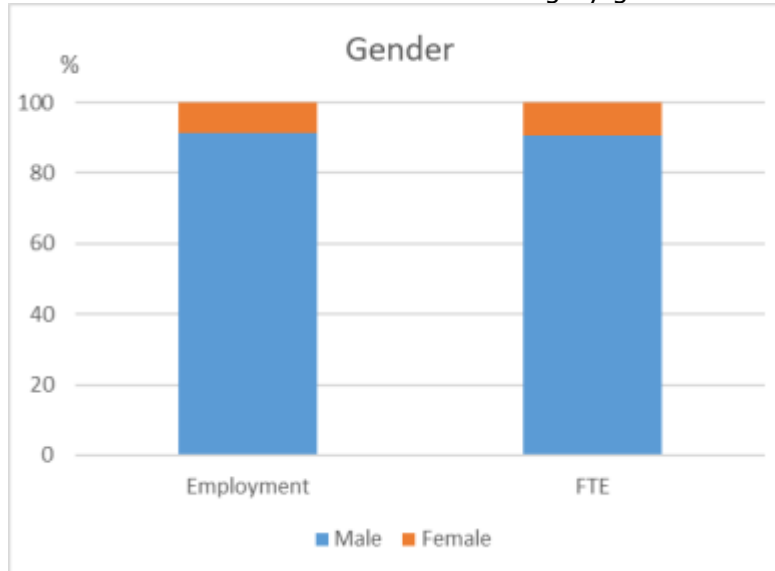
Demographic data of fishers population

2. Stratification/Segmentation

Gender SCF

%

	Male	Female
Employment	~94	~6
FTE	~94	~6

Age: SCF

- 0% <=14
- 3% 15-24
- 9% 25-39
- 51% 40-64
- 37% >=65

Legend: <=14 · 15-24 · 25-39 · 40-64 · >=65

Nationality: SCF

- 94% national
- 4% EU
- 2% unknown

Legend: national · EU · unknown

Education: SCF

- 40% Low
- 35% Medium
- 19% High
- 6% unknown

Legend: Low · Medium · High · unknown

Status: SCF

- 15% Employee
- 85% Owner

Legend: Employee · Owner

Gender LSF

Age: LSF

Nationality: LSF

Education: LSF

Status: LSF
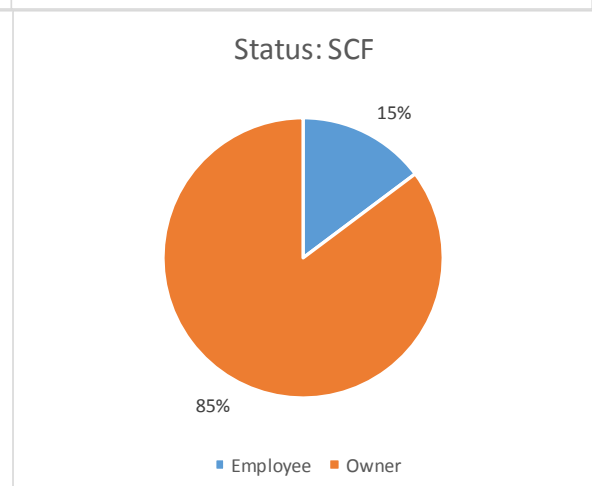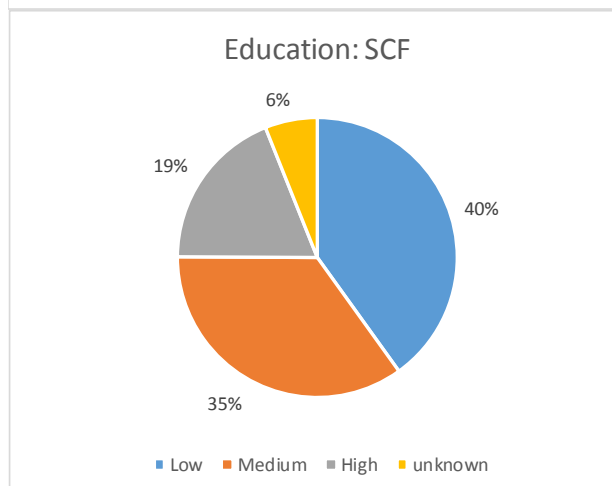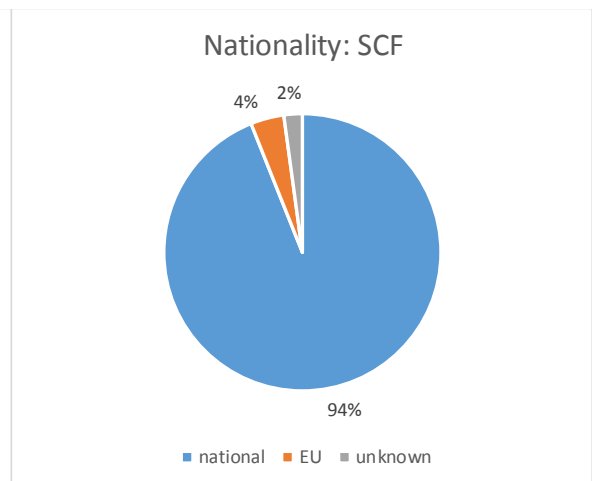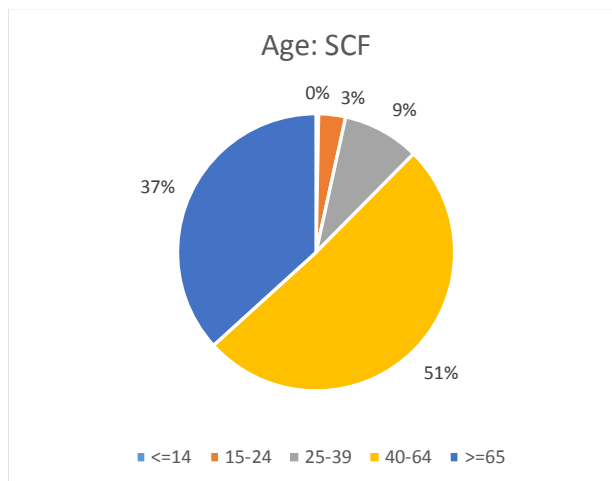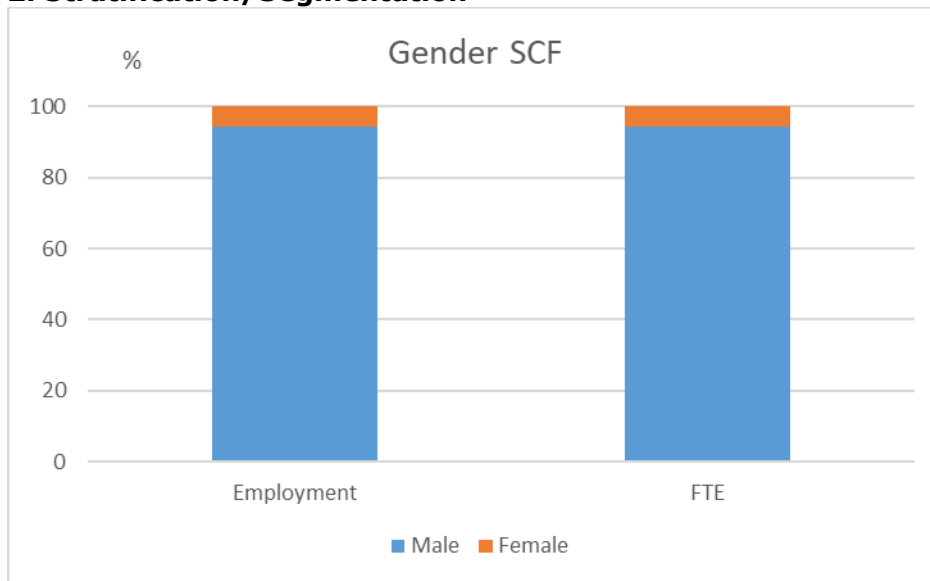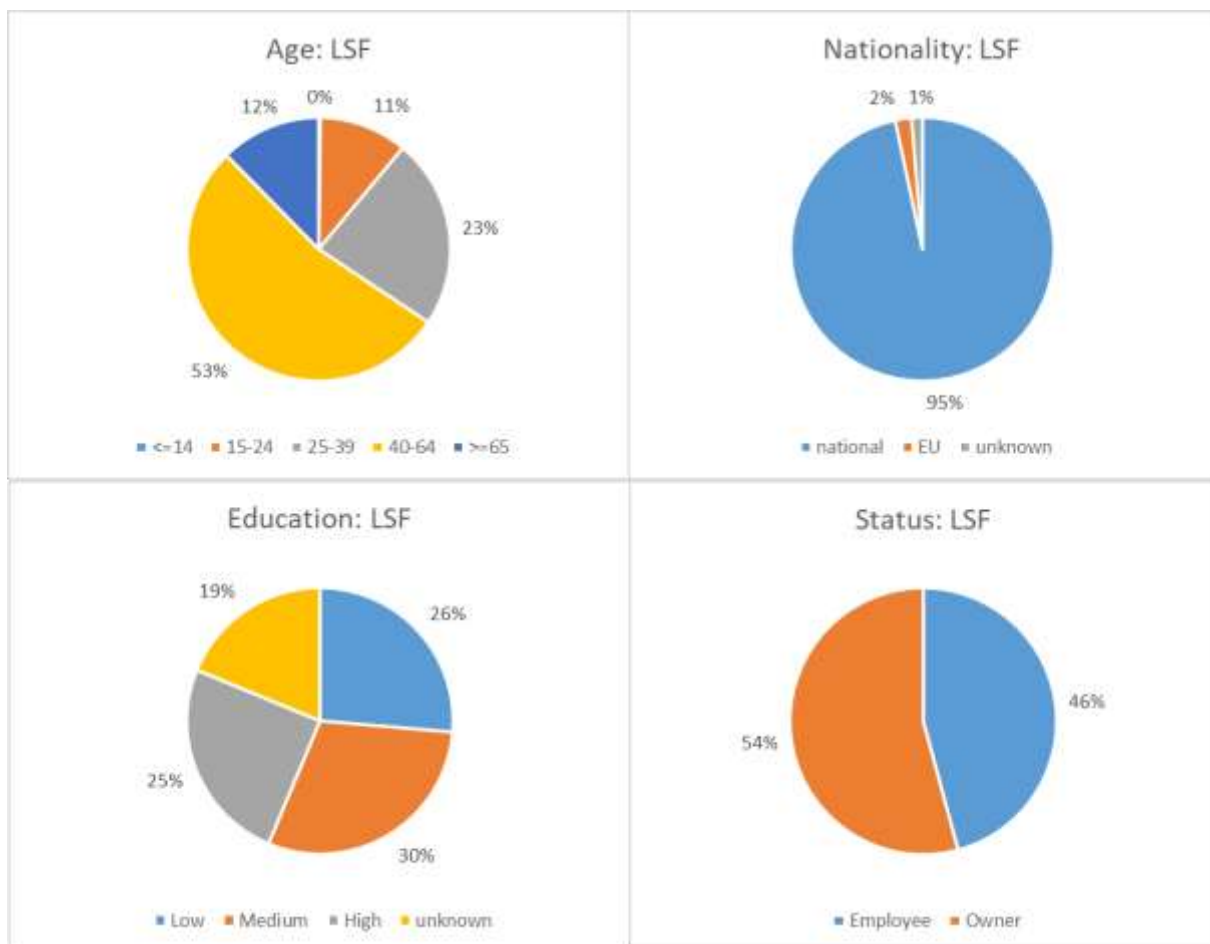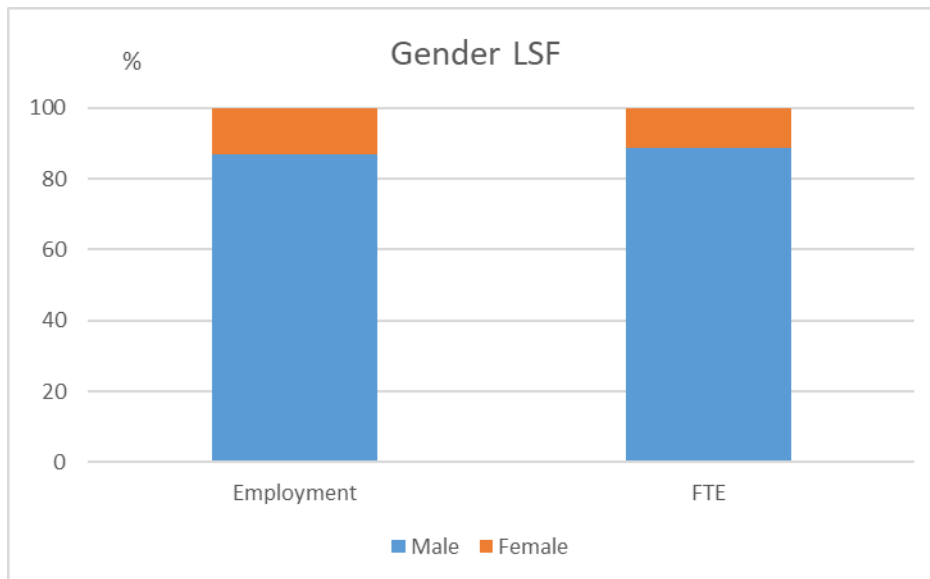
3. Summary text

The Swedish fishing fleet is quite a diverse fleet with a range of different gears and fishing methods. Fishing is mostly done in the North Sea and the Baltic Sea where most of the small scale fisheries are situated in the Baltic Sea along the cost. The fleet consist of approximately 911 active fishing vessels, the fleet has an overall high average age with a large share older than 64 years old, these fishers are mainly part of the SCF. Even if they are retired, they keep their fishing license; as fishing is a way of living rather than

a job. They often fish alone or with the help of a neighbour or a friend. On the contrary, the pelagic fishing has a lower average age, has several employees, and always try to fish rationally, i.e. maximizing profit.

In 2017 the Swedish fleet had approximately 1449 workers connected to a fishing activity, where 91% were men. The gender distribution for SCF and LSF have some differences where the LSF employ a higher share of women, 13% compared to 6% in SCF. Furthermore, the distribution of FTE is similar, which means that there is no discrepancy between gender and working hours per day. Of the total 1449 employees, approximately 160 of these are unpaid, working pro bono. 29% of these are women, which is significantly different compared to the overall gender distribution. The unpaid labour is most likely administrative tasks, reparation of gear or a friend helping out once in a while. The share of unpaid women is similar for SCF and LSF.

88% in the SCF is 40 years or older, compared to 65% in the LSF. Biggest difference is for age group >64; in SCF 37% is at least 65 years old compared to 12% in LSF. One similarity between the two fleets is that age group 40-64 years old represents approximately 50% of the fishers in both fleets. While older retirees dominate the SCF, the LSF has a younger work force.

Regarding nationality, the distribution is similar between SCF and LSF. Approximately 94% of owners and employees come from Sweden and 3% from EU and 3% is currently unknown.

As expected, the education level in the SCF is generally lower than in the LSF. 25% of the workers in the LSF have a high education level compared to 19% in SCF. For LSF there is a larger share of unknown education level, which have an effect on the overall distribution. When not considering the unknown one can see the difference in education between the two fleets is larger, 20% for the SCF and 31% for the LSF.

The LSF has an even distribution between owners and employees while the SCF has a larger share of owners relative to employees, 85% and 15% respectively. Overall the Swedish fishing fleet consist of mainly owners working on their boat alone or occasionally with some help from a part-time employee.

4. Challenges

The biggest challenge for the Swedish fishing sector is the recruitment of new young fishers. Due to high entry-barriers with different licenses and regulations, new young fishers have a hard time to get a share of the resource. Licenses and permits are distributed via a grandfathering system, which favours fishers already included in the system. Furthermore, capacity regulations also have a negative effect on the recruitment of new young fishers who wants to enter the market; there is simply no capacity left for young fishers to enter. Another reason for young fishers not being able to enter the market is the fact that fishers whom do not have profit as main reason for fishing raises the competition level on the market, making it harder to enter the market.

Expectations is that the average age will continue to rise and the gender distribution should be more or less the same in the short run. Although, one could argue that the general gender equality movement would affect the fishing sector as well, resulting in a larger share of women in the sector. Education level will in the long run rise if more young fishers find their way into the sector. Knowledge about fishing methods and other fishing activities is not learned via traditional education but instead learned by practice. Thus, education level is not a substantial causal effect for a person's knowledge about fishing. Instead, a higher education level could increase the rationality of the sector,

when facing decisions due to changed market situations. Thus, in the long run a higher educational level could have a significant positive effect on profit due to higher rationality and better decision making in the sector.

5. Data issues
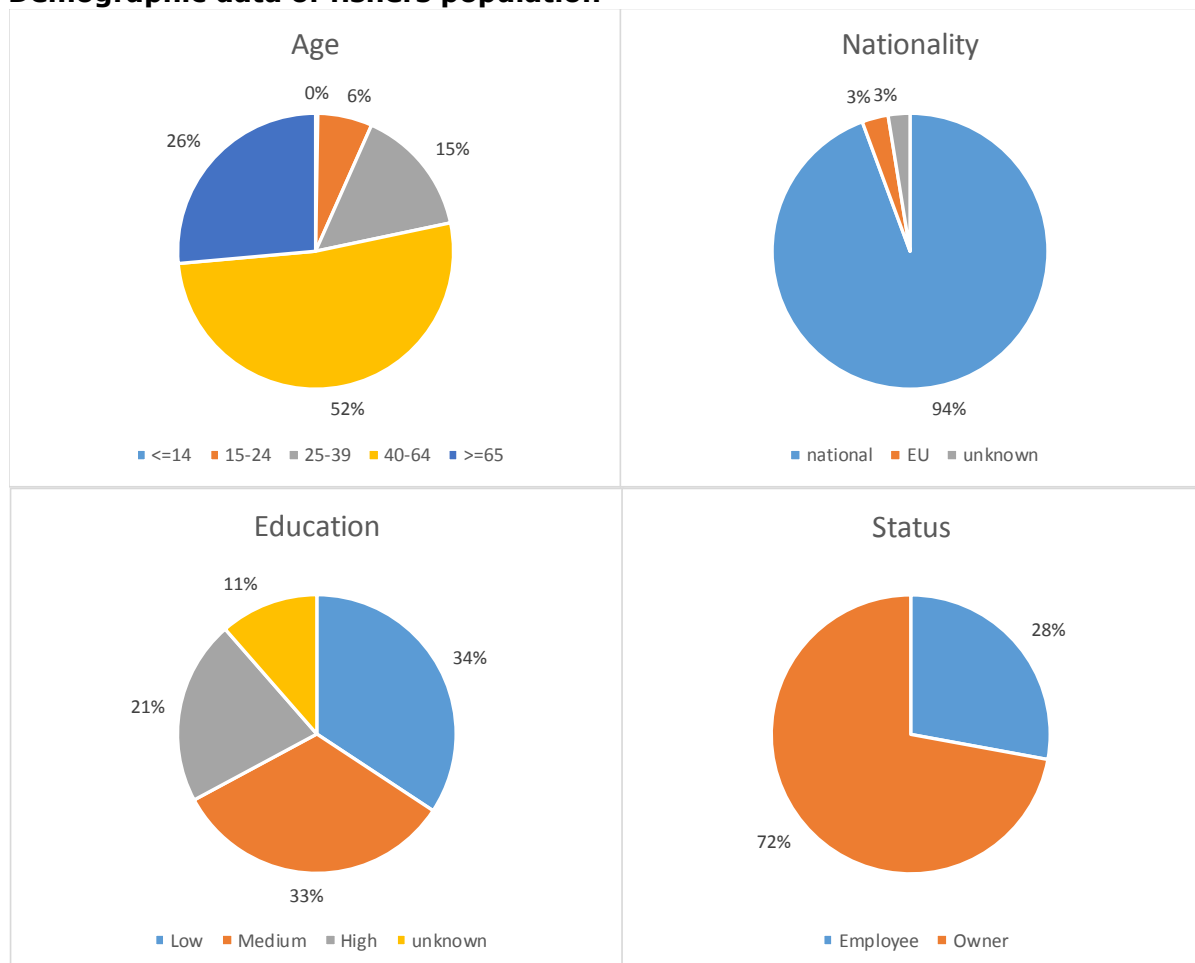Not any known data issues. The estimation method used for raising the data could need adjustments or further development.

5.23. United Kingdom

1. Social structure of the fishers' population
Fishing has a strong tradition in the UK and plays an important role in coastal communities across the country, both rural and urban. In 2017 there were 6,148 vessels in the UK fishing fleet, 4,701 of which were active. Of these active vessels 1,669 were low activity with an annual turnover of less than £10,000. Low activity vessels tend to work seasonally or part time and on average spent less than 24 days at sea in 2017. The size of the UK fishing fleet has been shrinking for several decades and the MMO (the UKs main marine and fisheries regulatory authority) estimates that the number of fishers working in the UK fleet has also declined, although the average number of FTEs per vessel appear relatively stable from 2008-2017. In 2017 there were 11,431 people working in the UK fishing fleet.

Demographic data of fishers population
Gender
Employment is defined here as all jobs that support the fishing business in harvesting and onshore labour. There were 11,431 people w in the UK fishing industry in 2017. 11,190 (97.9%) of the people employed were males, equivalent to 98.6% of FTEs. The remaining 241 (2.1%) people employed were females, equivalent to 1.4% of FTEs. Women typically fulfilled onshore roles, such as accounting and other administrative roles although there were also some women working as deckhands.
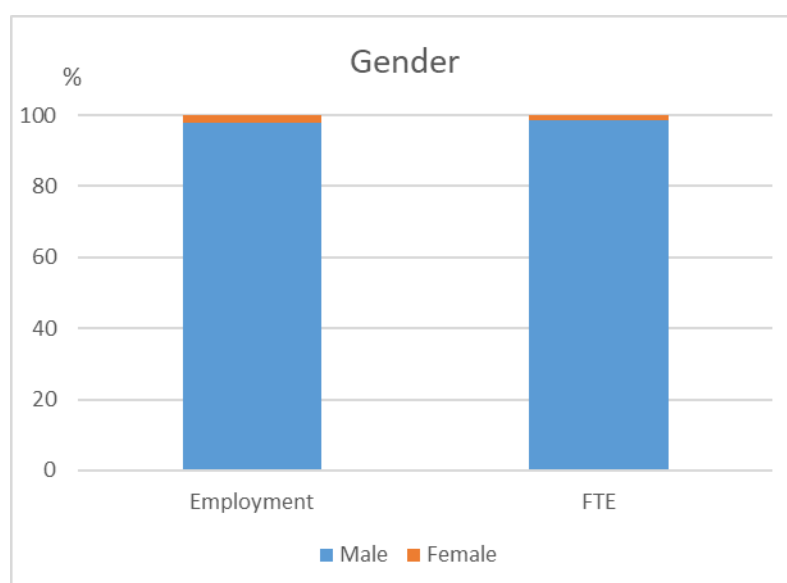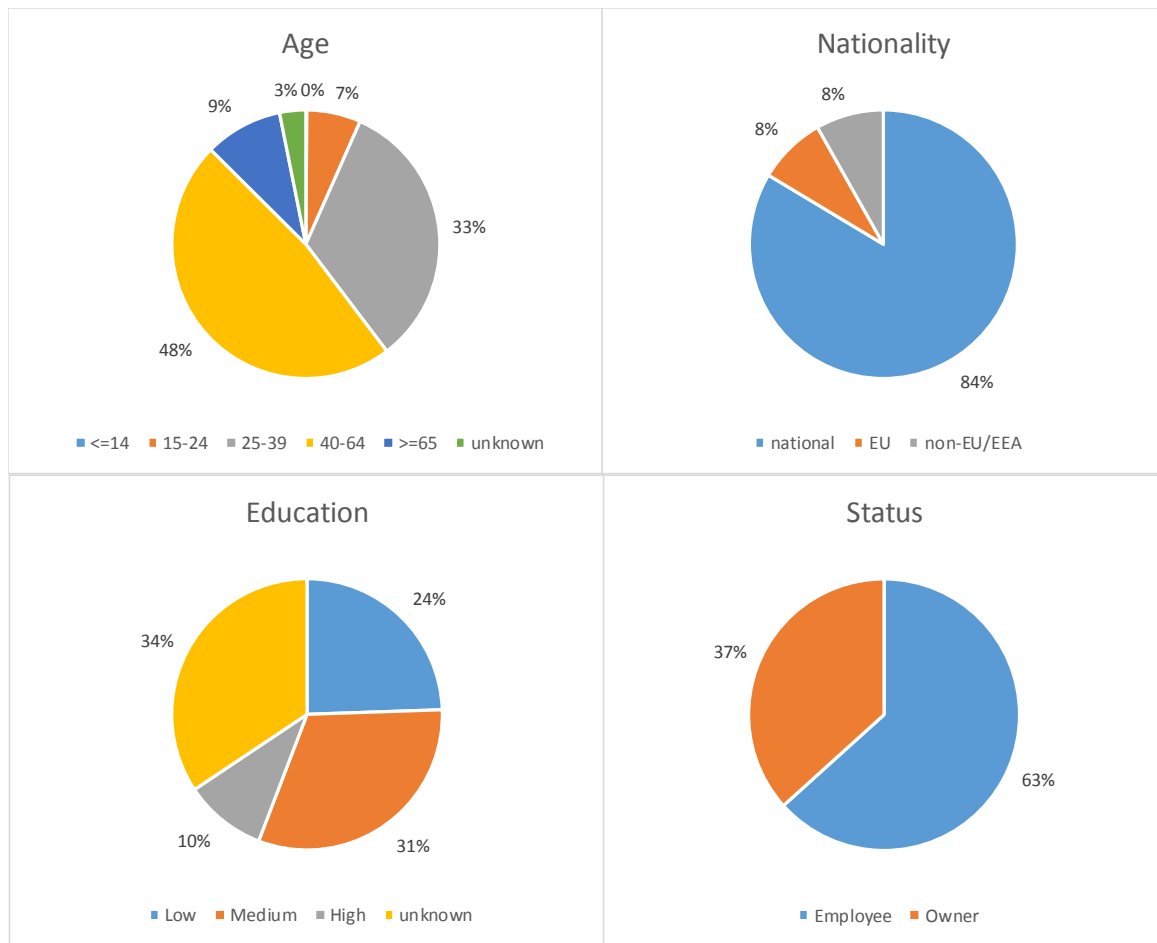
Age
The majority (88%) of people employed in the UK fishing fleet are within the active population age group, between 15 and 64 years of age. The majority of people working in the UK fishing fleet were within the 40-46 years age band, this group made up 5,460 (48%) people of the total, followed by 3,775 (33%) people in the 25-39 years age band. Youngsters aged from 15-24 made up the smallest group of the active population working in the UK fishing fleet with 6.5% of people in this age band. Of the remaining 12% of people not within the active population age range, the age of 361 (3%) of people was unknown, 14 (0.1%) were 14 years or under and 1,075 (9.4%) were in the >=65 age band. The UK fishing fleet is often described as an aging industry and despite a large proportion of people aged 65 or over, a 2017 pilot study by Seafish found that the average age in a sample of 877 fishers was 42 years, comparable with the average UK labour force.

Nationality
Employment in the UK fishing fleet is made up mostly of UK nationals. The majority (84%, n=9,555) of people employed in the UK fishing industry were UK nationals.

There were 936 (8%) non-EU/EEA nationals working in the UK fishing fleet. Non-EU/EEA workers in the UK fishing fleet were mostly from the Philippines, followed by Ghana and India. Non-EU/EEA nationals in the UK fishing fleet work mostly as deckhands although some hold positions as engineers. The majority of non-EU/EEA workers in the UK fishing fleet work in the Scottish or Northern Irish demersal trawl sector.

There were 939 (8%) EU nationals working in the UK fishing fleet. EU nationals working in the UK fishing fleet are mostly from Latvia, Lithuania, Romania and Poland. EU

nationals work mostly as deckhands although some also hold positions as engineers, skippers and first mates.

Although largely British, the proportion on non-UK workers in the UK fishing fleet is greater than the overall labour market. In 2017 16% of workers in the UK fishing fleet were non-UK nationals and in the same year the UKs Office for National Statistics estimated that approximately 11% of the total UK labour force was non-UK nationals.

Education
In 2017, 10% of the people employed in the UK fishing fleet were educated up to a high level, 31% up to a medium level and 24% to a low level. Education level for 34% of the UK fishing fleet is unknown, due to low response rates when answering this question.

In addition to academic qualifications fishing crew and skippers can undertake vocational training above the basic mandatory seagoing training. A 2017 Seafish pilot study found that in a sample of 833 people, 321 held undertaken skippers training (for vessels above or below 16.5m and coastal skippers training).

Status
The majority (63%, n=7,239) of workers were employees and 4,192 (37%) were owners. In the UK fishing fleet, most fishing crew are self-employed and remunerations is normally on a share basis. Some fishing crew are paid a contract salary, although this is uncommon especially for UK nationals. Normally salaried workers are from non-UK nations.

Unpaid labour by gender
There were 686 unpaid workers in the UK fishing fleet, equivalent to 5.8% of the total people employed. The majority (96.9%, n=665) of unpaid workers were male, however 21 (3%) were female. Unpaid labour in the UK fishing fleet included hobby fishing, friends or relatives providing assistance (onshore and offshore), and owners or skippers of vessels not turning a profit at the time of the questionnaire but with expectations of future profits.

Gender
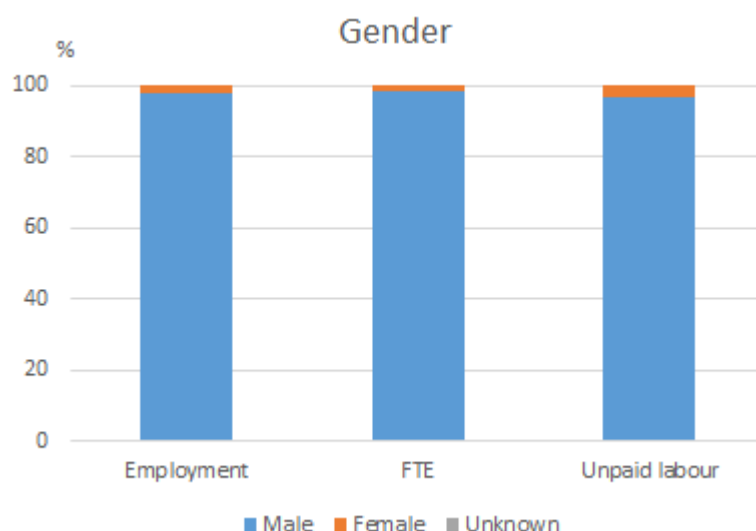
2. Stratification / Segmentation

Employment by Fishing Activity
LSF employed 5,711 people in total, followed by 5,332 in the SCF and 388 in the DWF.

The UK SCF employed the greatest proportion of females at 196 people (3.7% of the total people employed in that fishing activity) equivalent to 3.8% FTEs. It is likely that this fishing activity employs a greater proportion of women because many of the businesses operating in this sector are smaller family enterprises that rely on support (both paid and unpaid) from friends and family. There were fewer women working in the larger fleets. The UK LSF employed 45 women (0.8% of the total people employed in that fishing activity) equivalent to 0.8% of FTEs. There were no women working in the UK DWF.

Gender by Fishing Activity

Age by Fishing Activity

The SCF had the largest proportion of people in the >=65 age band, 818 (15%) of people working in this fishing activity were 65 years or over. In the UK the SCF is a popular activity with fishers who have retired from working on larger vessels, which may explain why the proportion of workers over 65 is greater for this fishing activity. The UK SCF also employed the greatest proportion of youngsters, aged between 15 and 24, 9% of workers in the SCF were in this age band, compared to 5% in the LSF and none in the DWF. The DWF employed the fewest people aged 65 or over with 3 people (0.7%) in this age group, compared to 4% in the LSF and 15% in the SCF.

Age: SCF

1% 0% 9%
16%
29%
46%

■ <=14 ■ 15-24 ■ 25-39 ■ 40-64 ■ >=65 ■ unknown

Age: LSF

5% 0% 5%
5%
38%
52%

■ <=14 ■ 15-24 ■ 25-39 ■ 40-64 ■ >=65 ■ unknown

Age: DWF

1% 1%
44%
54%

■ 25-39 ■ 40-64 ■ >=65 ■ unknown
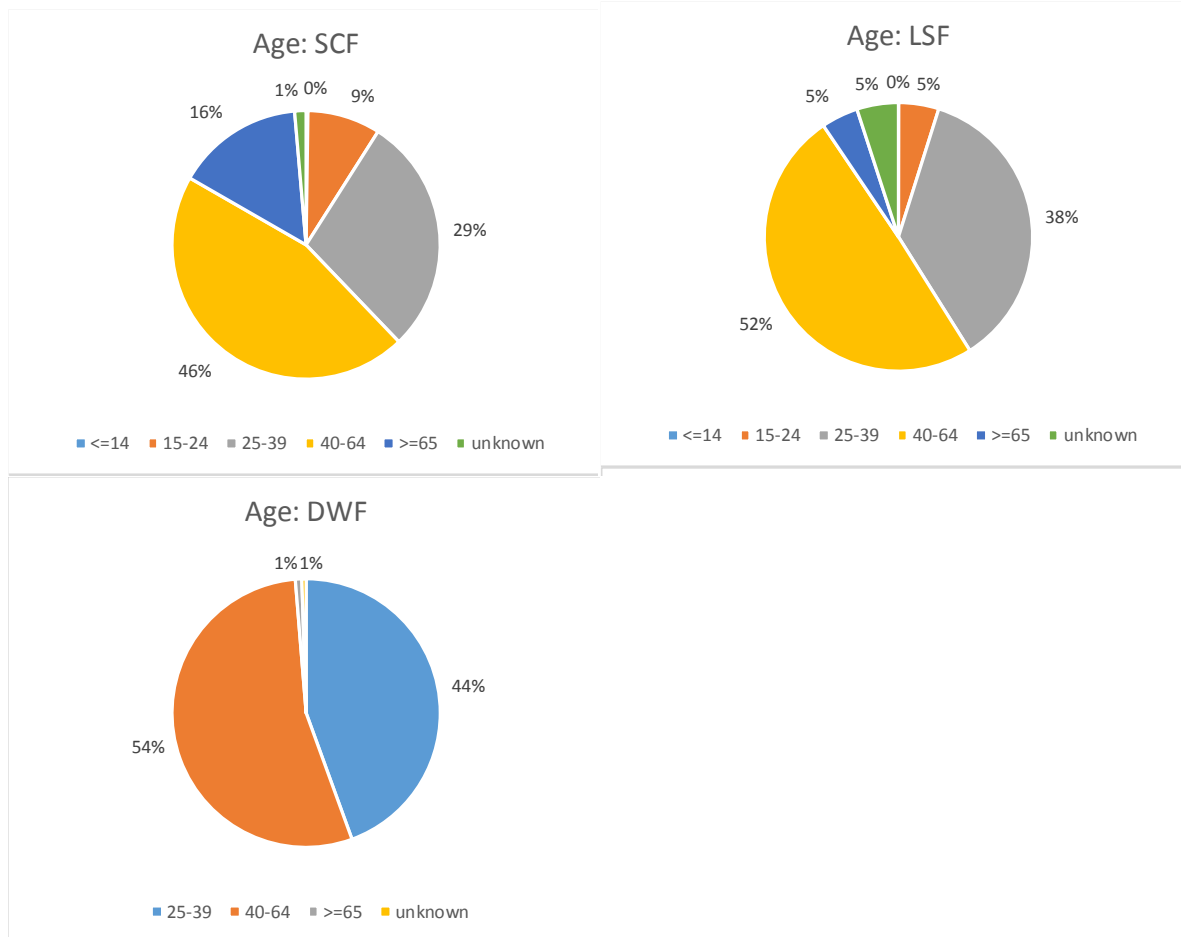
Nationality by Fishing Activity

The UK LSF employed the greatest proportion of non-UK nationals. In the LSF 4,316 (76%) of the people employed in this fishing activity were UK nationals. Non-EU/EEA workers made up the 15% of the people employed in this fishing activity, equivalent to 884 people while EU nationals made up 9% of the people employed in this fishing activity, equivalent to 511 people.

The SCF was also largely made up of UK nationals and the proportion of UK nations was greatest in this fishing activity at 4,896 people (92%). There were 431 (8%) EU nationals working in the SCF and 22 (0.4%) non-EU/EEA nationals.

Nationality: SCF

Nationality: LSF

Nationality: DWF
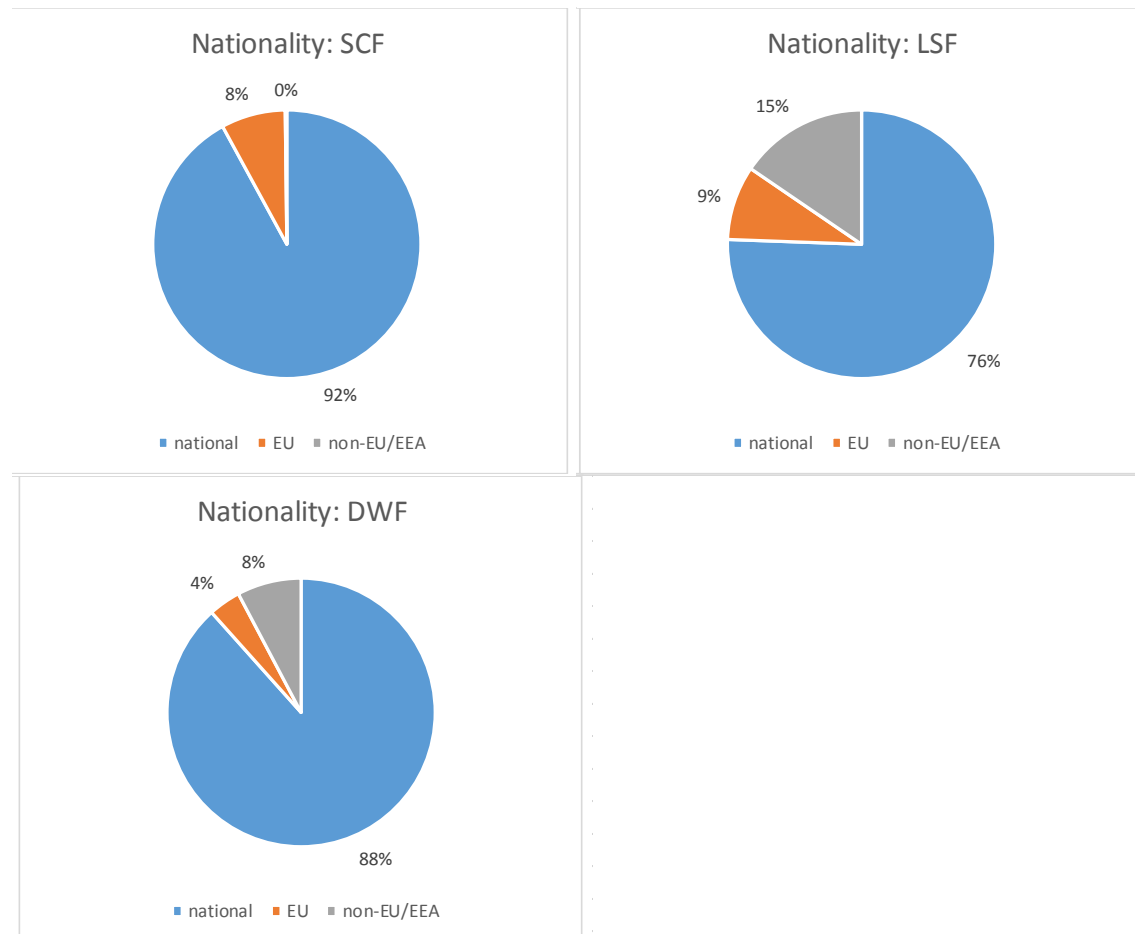
Education by Fishing Activity

For the majority of people (239 or 76%) in the UK DWF education level was unknown and in the LSF the education level of 2,517 people (44%) was unknown. The proportion of people whose education level is unknown is greater in the DWF and LSF than SCF likely because these fishing activities tend to employ larger crews and the skipper may not always have known the education level of all of their crew. The proportion of people whose education level is unknown is much lower in the SCF and show that 742 (14%) people are educated up to a high level and 1,844 people (35%) up to a medium level. It appears that there was a larger proportion of people educated to a medium or high level in the SCF than the LSF or DWF, however this may be related to sampling issues.
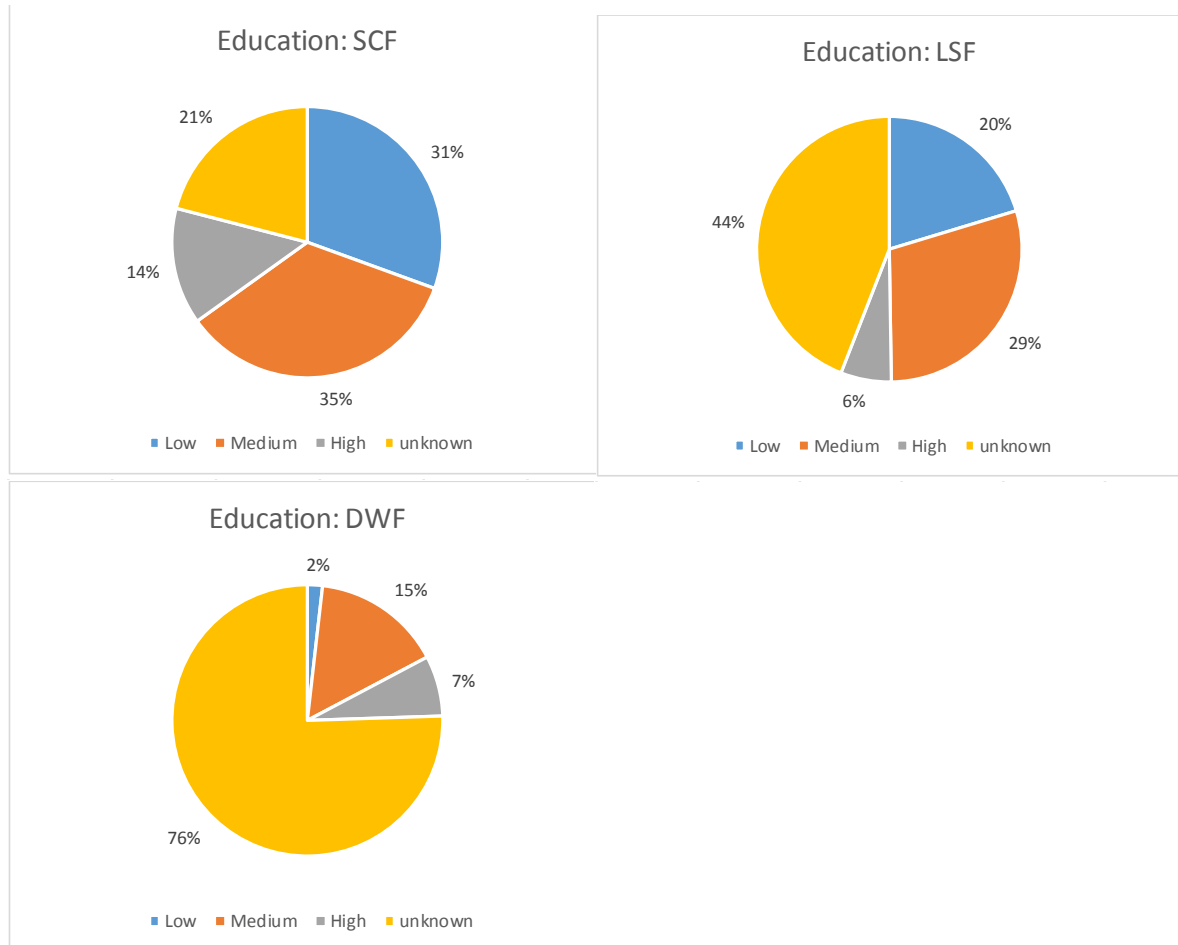
Education: SCF

31% Low
35% Medium
14% High
21% unknown

Education: LSF

20% Low
29% Medium
6% High
44% unknown

Education: DWF

2% Low
15% Medium
7% High
76% unknown

Status by Fishing Activity

There was a greater proportion of owners to employees in the SCF than the other fishing activities. In the SCF 2,747 people (52%) were owners, compared to 25% in the LSF and 8% in the DWF. Vessels operating in the SCF tend to be either single-handed or employ small crews, while the LSF and DWF tend to employ larger crews.

Status: SCF

48% Employee
52% Owner

- Employee - Owner

Status: LSF

25% Owner
75% Employee

- Employee - Owner

Status: DWF

8% Owner
92% Employee

- Employee - Owner
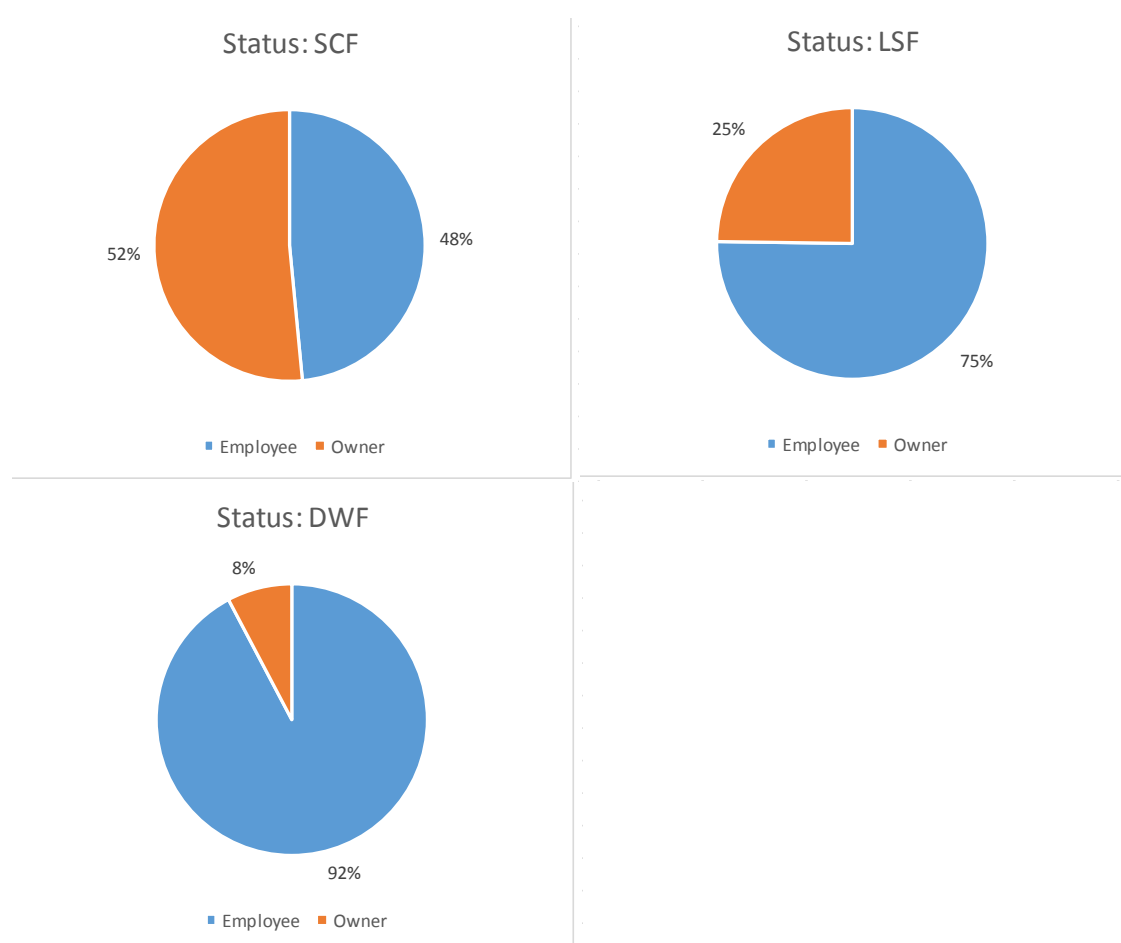
3. Challenges

Ability to recruit and retain skilled and reliable crew is a major challenge for many vessel owners, particularly in some rural communities where population growth is slower than urban areas. In some cases skippers and vessel owners have reported having to postpone or cancel fishing trips, losing days at sea and fishing income because they have been unable to recruit enough crew. In the past youngsters would often learn the trade from the older generation, sometimes before leaving school, however changes in workplace regulations mean that traditional routes into the industry are now much less common. Results from series of focus groups with 16-17 year olds from areas with strong fishing traditions, conducted by Seafish, indicated that careers in the seafood industry were poorly understood by youngsters and undesirable, there was perception amongst participants that seafood jobs were 'smelly, dirty and possibly dangerous' with limited possibility of career progression. In the UK fishers are usually employed on a share basis and new recruits typically get a lower share than a fully trained crew member. Remuneration is therefore closely linked with vessel performance and poor catches could deter new recruits from staying with a vessel.

In some areas skills shortages are compensated by the ability of vessel owners to hire crew from non-EEA countries, in particular the Philippines, on special seafarers, transit

visas. Under this arrangement vessels must operate outside territorial waters and because of the geography of the UK it is not possible for vessel owners operating in some parts of the country to hire non-EEA crew under this arrangement.

It can be challenging for newcomers to join the industry without having fishing rights. Many fishing businesses are inherited from family, however outsiders have to make a significant financial investment to join the industry and it can be very difficult for them to access finance.

4. Data issues

Data was collected at vessel level via a survey. Skippers and vessel owners completed the survey, providing information about themselves and their crew (if any). The sample covered 313 UK fishing vessels and 914 individual fishers, equivalent to 7% of active vessels and 7% of jobs in the UK fishing fleet in 2016. Survey data was raised to the population using Seafish UK fleet segments.

Data was gathered through a questionnaire with the vessel owner or skipper. Owners or skippers provided data about themselves and their crew (if any). In most cases owners and skippers were willing and able to provide good data on themselves, however in some cases they were reluctant to respond to some questions. Education level in particular proved to be a sensitive subject (because of embarrassment related to academic qualification) meaning response rates to this question were low leading to a large proportion of people with unknown education level. There were also problems relating to owners or skippers providing data on their crew (if any) as they did not always know or remember information about all of their crew, especially education level and to a certain extent also age.

6 KEY SOCIAL ISSUES IDENTIFIED

EWG 19-03 identified during the meeting a number of key issues where they felt that better data and further research is required in order to develop a better understanding of social issues in EU fisheries. These issues are important in that they helped to inform the discussions about refinement of existing variables and potential new variables.

- New entrants or recruitment of employees to the fishing industry.
- Clarification of gender issues in fisheries and in particular regarding the category of unpaid labour.
- Detailed crew information including remuneration and labour conditions including conditions for migrant workers.
- Changes and patterns in the employment of non-national fishers and potential social impacts such as changes to traditional fishing communities.
- Governance including the social role of effective representation, role of fisher organizations (POs and others) in this representation by fleet segment, and access to funding and support mechanisms such as EMFF and FLAGS by fleet segment.

7   REFINEMENT OF EXISTING VARIABLES

The value of data is often only revealed in a relevant comparison. Regarding social data, and in particular demographic data as it is collected under the DCF (gender, nationality, age, education, status), the level of comparison is questioned. Collection of demographic data is normally the starting point of social structure analysis of a specific unit (e.g. nations or households) and thus to identify imbalances between the chosen units. Up to now, the data collection on social data is designed as additional information about the EU fishing fleets, to compare fleets of different nations on the one hand and the situation between the different fishing activities SSCF, LDF and DWF on the other hand.

An effective way to interpret the (specific) social dimension of EU fisheries might be to contrast EU fisheries and non-fishing sectors (agriculture or even non-food industries) in addition. Only in contrasting different sectors can their particularities be identified. As an example and according to Eurostat data, 22.5% of the EU population, which was between 25 and 64 years old, had reached the highest educational level in 2017. In fisheries, only 4% of fishers were educated to a high level. Does that mean, fishers are less educated and thus at greater risk of unemployment than the average EU citizen? Further, in Germany, 25% of employees working in the agriculture sector (or 238,210 out of total 944,470) were female in 2013 according to the same source. In German fisheries, less than 0.2% were female in 2017. What does that say about the working environment in the fishing sector? Is the referring unit ("fishing activity") misleading and are there more women involved in fisheries, but indirectly? Why is the sector so unattractive for women or why are women so invisible here, while in other food producing sectors they have a definitely higher share? And, this is a more (ethical and) political question: Is that fair?

It the task of social science to identify social imbalances, but scientists cannot judge if a social phenomenon is right. For example, if EU fishers are less educated and less well paid compared to people in the banking industry, that might be seen as unfair, but the preconditions for both professions are hard to compare. In contrast, if the employment in EU fisheries decreases and its education level is very low even compared to other related food producing sectors, this imbalance probably leads to serious social crisis. That is why, collecting social variables in fisheries should be in line with the social data collection in other sectors at least in its definition of variables.

The institutions, which are responsible for data collection, should review already existing data from different sources and check if this data could be harmonised to the needs of fisheries data collection or vice versa. Insurances like the German *Bundesknappschaft Bahn See* or public labour agencies already conduct valuable social data on fisheries in some MS, although it does not fit always to the current DCF definition for social variables. A good starting point for harmonising statistics and adding to their value could be to take *EC No 1201/2009* (regulation on population and housing census) as an orientation for the definition of variables. The census already considered data on age, gender, nationality, employment status and educational attainment. *EC No 1201/2009* set the standards for a wide range of national statistic agencies. It must be mentioned that the last census took place in 2011 which is a too large period of time for the purposes of DCF. Nonetheless social variables are not as dynamic as economic indicators.

Employment status

The group felt that there was considerable scope to refine and add value to this variable.

PGECON recommends at least separation between the following two categories:

• owner / employer (vessel owner involved in vessel activity/operation)

• employee (all engaged workers on-board, excluding owners)

The EUROSTAT Labour Force Survey uses the following categories:

• Self-employed with employees
• Self-employed without employees
• Employee
• Family worker.

The difficulty with both the PGECON and Eurostat categorisations is that they don't account for all of the most common categories of employment status found in fisheries. In any case the currently available data does not allow for meaningful analysis and even the Eurostat categorisation would be beneficial. But due to the importance of the share fishing arrangement and the fact that it is fundamentally different to the Eurostat categories it is considered important to collect data on this. Also trends or changes to the ratios of share fishers to contract fishers would be very important as they may indicate deeper social changes.

An alternative categorisation could be:

• Vessel owner and skipper
• Vessel owner (not fishing)
• Share fisher skipper
• Share fisher crew
• Employee under Fixed Contract with vessel
• Employee under Fixed Contract with agency
• Family member providing unpaid labour aboard vessel
• Family member providing unpaid labour ashore

There are also further levels of refinement which could be sought here although it is likely that these may only be practically available for pilot studies due to the workload involved. Such further details could include information on social welfare protection, pensions etc. Again these require further discussion.

New entrants or recruitment to the industry

A low number of new or young entrants to fishing would undoubtedly create issues regarding social sustainability. Quantifying new entrants is not a straightforward issue and being able to do so could be done through a combination of analysis of the fishing vessel register and additional questions in surveys conducted. Factors often given to explain perceived unattractiveness of fishing are working conditions and time away from home relative to shore based employment. However there are numerous other factors which members of the group have encountered among fishers to explain this including increasing levels of bureaucracy, financial barriers and lack of effective representation among others. It would be necessary to examine the drivers behind these trends in order to correct them with future policy development. EWG 19-03 notes that some MS, e.g. the UK, have estimated recruitment to the fishery from their own pilot studies.

Unpaid labour

EWG 19-03 felt that although many single operator vessels may feature significant levels of unpaid labour their automatic classification as unpaid labour was an artificial by-product of an economic approach which needed to account for investment levels, profits etc. Additionally, it makes it difficult to calculate the proportion of women in unpaid labour as it inflates the number of men. The social group feel that specific questions on the extent of unpaid labour by family members or others both onboard the vessel and ashore should be included in surveys.

Age

EWG 19-03 felt that the 40-64 age bracket should be broken down further as it is difficult to tell if the figures are being skewed based on this bracket being wider than others. 5 year age brackets as in the EU population census would provide much more useful information without increasing workload.

Some of the variables discussed here are already being collected by MS on either a pilot or ongoing basis.

Combination of social and economic indicators

EWG 19-03 discussed possibilities of maximising the utility of the variables already collected by combining them together and with economic variable data also to create indices. Initial candidates discussed were:

- An Aging index. This would be simply done by expressing the age profile as the number of fishers over 65 divided by the number under 40 ($\frac{>65}{<40}$). Higher values would indicate greater aging issues within the population.
- Some social indicators could also be easily combined with economic indicators like: i) profit, ii) income, iii) total costs, iv) profit margin, v) imputed value of unpaid labour etc. In this way, it could be interesting to compare some pure economic indicators in groups that are formed by social variables e.g. by grouping vessels using the aging index of the crew: e.g. vessels with >0.5 and vessels with <0.5
- In the same way, we could apply indices that can be extracted using other social variables like education level, employment status etc.

8   POTENTIAL NEW VARIABLES

According to the terms of Reference for STECF EWG 19-03 (Social data in the EU fisheries sector), social variables are provided to assess the viability of livelihoods of all social actors involved in fisheries, especially in those fisheries which are more vulnerable such as small-scale, artisanal or coastal fisheries. The list of social data which could potentially be collected is very broad and long and could range from social capital to economic disparity and inequity to suicide rates, health of local cultural institutions, individual and collective well-being etc. We selected candidate new variables which EWG 19-03 felt would be aligned with the needs of the main end-users and add value to the social dataset while not creating a disproportionate increase in data collection workload or complexity. These are suggested as an initial proposal intended to provoke further discussion.

The fisheries sector is holistic and multi-dimensional and involves multiple actors. The sea-land relation is the pivot of the social organization of fisheries traditionally structured by the division of labour by roles of gender and age mainly in the production and social reproduction (family involvement especially in workforce and socialization) that ensures its preservation. To identify suitable social variables to assess social sustainability, we need to approach fishing activity as a sea-land activity considering both spheres as a unique arena instead of separated as traditionally considered. Therefore, it is suggested to expand the scope of the data collection to all fisheries spheres different than focus only on harvesting. Likewise, gender and age should be considered as fixed variables to be crossed with each of the social variables.

Vocational/Technical training

Issues regarding responses to the Education question point towards a necessity to have a clearer understanding of the level and role of fisheries technical qualification. A new question could be included on this topic following additional discussions to agree on some common categories.

Social/Community structure

The issue of scale is important when considering the dependence of coastal communities on fishing. It is reasonable to assume that the majority of pilot studies or community profiling initiatives would focus on ports which have an active or possibly expanding fisheries sector. However this analysis would miss potential declines in fishing dependency of smaller ports. Measures of fishing activity could include volume of landings, number of landings, number of active vessels operating from a harbour etc. Questions related to this issue could help to identify whether there has been any kind of migration movement motivated by changes in the fishing activity. This is an important question that can assess how the state of resources, fisheries policies, decline in fishing profitability among other reasons can impact on workforce.

Specific Job descriptor

These could include for example owner, skipper, first mate, engineer, cook, deckhand etc. This variable as multi-choice optional question will allow experts to assert whether owner is involved in fishing activity and also to have an insight in the different roles

existing onboard. The question is especially suitable for LSF and DWF. Information on job position could tell us more on level of specialization of the fishing fleet. It is suggested to cross the new variable with age, gender and education. This variable can help to identify the line of descendants and family continuation in fishing activity as well as it will enable to detect possible explanations of the lack of fisherwomen among other questions on fisheries unit of production features.

Type of fishing activity by family members on-shore

Care and socialisation (of young and elder); maintenance of means of production (nets, vessel, etc.); processing; distribution and/or marketization of the product.

Representation and governance

Perceived role of fisher organizations (POs and others, if any) in the representation and involvement of fishers in the governance of the activity, by boat size and fleet segment.

9   PILOT STUDIES, SOCIAL IMPACT ASSESSMENTS AND COMMUNITY PROFILING

A number of member states made presentations on in-depth case studies which they had conducted which went beyond what was required by the regulation. MS conducting such studies included Italy, Croatia, Greece and the UK and Ireland as part of the SECFISH project. Such studies illustrate the benefit of finer scale social data which in some cases allow for the analysis of community level social processes where social data is particularly relevant. Presentations from some of these case studies are contained in Annex II.

These pilot studies informed the discussion of the possibility of MS conducting more detailed community profiling or social impact assessments (as suggested in the EWG 18-15 Expansion of CFP indicators report). This section is introduction to how such profiles and assessments could be conducted. Time constraints mean that significant further discussion and work are needed in order to develop more detailed guidelines on these initiatives. EWG 19-03 recommends that a follow up workshop could be held in order to continue the development of these guidelines.

- ***Community Profiles***

What are community profiles and why compile them?

The Common Fisheries Policy shall ensure exploitation of living aquatic resources that provides sustainable economic, environmental and social conditions. Consequently, it is necessary to understand how management actions (e.g., the landings obligation, recovery plans, reduction in TACs, etc.) impact the fisheries of the European Union. A key tool for investigating the social and economic conditions of the fisheries and fishing communities is the "community profile." Profiles provide detailed, background sociocultural, institutional (including governance), and economic data and information in qualitative and quantitative forms which can be used for management decision making and impact assessments.

"Community" can be defined in innumerable ways, though it has traditionally been defined through a place-based approach. This means a port, town, or city may be profiled. Sometimes the definition rests on the availability of statistical data (e.g. NUTS level), rather than the social or governance ones.

A community profile can be organized in many different ways but most consist of the following themes/topics:

   a. **People and Place** Brief, background description describing the community [e.g., location, demographic profile, history (including key industries), character (fishing related festivals, events), etc. (subsection **Demographics**: the demographic make-up of each community, overall, and the fishing sector, by gender, age, ethnicity, and other demographic attributes deemed appropriate.)

   b. **Social and cultural structure:** Understanding the social structure of the community is important since a key factor for resilience/sustainability is ***community support***. Communities differ in the degree to which social capital, i.e., networks of people able to lend aid, is available to people and fishing operations affected by regulations. The more community support, the better the

communities can absorb the impact of new hazards or regulations and allow fishing activities to survive change.

c. **Infrastructure** and Facilities (port, train, highway, airport, museums, etc.)

d. **Current economy** (including employment, incomes)

e. **Involvement in the Fisheries** Detailed description of fishing and fishing related activities (e.g., size of fisheries/fleets, including LSF, SSF, recreational, conflicts among fleets, etc.)

f. **Employment**: employment data compiled and analysed, focusing on each community's dependency and reliance on the fisheries: catching, shoreside, ancillary industries, etc. (this theme can be divided between place (employment in general) and Involvement in Fisheries (employment specific to fisheries)

g. **Governance:** Organisation of fishing related institutions, such as fishing organizations, unions, producer's organisations, federations, etc. Well- structured groups which work together help mitigate impacts and limit vulnerability. Include relationships and interactions with other levels of governance; regulatory frameworks;

h. **Perceptions of challenges and opportunities:** natural environment; social environment; governance environment; markets

i. **"Footprint" of the fisheries in the community**:

Additionally, some profiles include both "snapshots" (short profiles); and longer, more comprehensive ones. These can be communicated to stakeholders in different ways14 such as online or in written reports; they can also be updated differently according to needs. All are organized according to their own local situation and regulatory requirements.

Some limited fisheries community profiles have been compiled in Europe though projects and consultancies for the EC (e.g., UNCOVER; BIM 2013; "Profiling of Small-scale coastal fisheries in the Baltic Sea") and European fisheries groups ("Dataframe" for the North Sea Women's Network). Community Profiling and SIA are more common outside of Europe.

Outside of Europe, the United States' National Marine Fisheries Service (NMFS) has a programme to profile all fishing dependent communities15. NMFS is undertaking this work directly as a result of US law and policy. The most notable of these laws are the National Standard Eight of the Magnuson-Stevens Fishery Conservation and Management Act (MSFCMA); the National Environmental Policy Act (NEPA); and the Regulatory Flexibility and Small Business Acts. Profiles are based upon regulatory frameworks in the area of study commissioned so European profiles would need to be adapted to European conditions and needs.

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[14] A map of profiled communities:
https://www.afsc.noaa.gov/REFM/Socioeconomics/Projects/communitysnapshots/fullmap.php
[15] For example, NOAA's Northwest Science Center:
https://www.nwfsc.noaa.gov/research/divisions/cb/ecosystem/humandim/communityprofiles/index.cfm
NOAA's Alaska Science Center:
https://www.afsc.noaa.gov/REFM/Socioeconomics/Projects/communities/profiles.php

Social Impact Assessment

Community profiles can be a key tool in conducting efficient social impact assessments. Social impact assessment (SIA) is the process of analysing, monitoring, and managing the intended and unintended social consequences, both positive and negative, of planned interventions (policies, programs, plans, projects) and any sociocultural changes triggered by those interventions.

The primary purpose of SIA is to bring about a more sustainable and equitable biophysical and human environment. SIA ca be either prospective – ex-ante ("before the event"), which is an attempt to foresee and hence avoid or minimize unwanted impacts, or retrospective ("after the fact") which is conducted to understand what the impacts were.

Some key themes found in SIA include:

Quality of Life: Will there be a measurable difference in the quality of life in the community as a result of what the proposed action is doing, or might do, in the future?

Distributional impacts: a) Who are the groups to be impacted? (Women, elderly, young, sub-group (e.g., fisher type), natives, newcomers, ethnic group; b) How will the impacts be distributed? (All subgroups will not be impacted the same)

In the European Union there is no shared agreement on what "social" impacts means, limiting the use of SIA as a policy tool.

Community Profiling and Social Impact Assessment

To conduct an SIA and compile a fisheries community profile from the beginning, the required methodology would follow a three-stage process: selection of communities, compiling of data, and analysis, including impact analyses.

Selection of Communities

The first step carried out by an analyst in an SIA is a scoping process to determine the sociocultural variables relevant to the management and policy questions. This may require initial sketches of the sociocultural system that may be affected by the management action. Management actions affect a range of social entities including individuals, firms, families, and communities, and therefore an SIA must attend to these as distinct units of analysis (Pollnac et al., 2006).

Special attention should be given to social groups that may gain or lose from the management choices made. These populations may not always be readily visible at stakeholder meetings or on newspaper op-ed pages. Thus, scoping, therefore, requires an assessment of each part of the sociocultural system that is likely to be affected, with specific attention to any marginalized populations because environmental justice issues

may also be involved (Pollnac et al., 2006). Of primary concern is measuring how the well-being of system participants will change. The objective is not to include every sociocultural element in the system; it is to do an initial assessment that identifies the critical populations that have a significant stake in the management action and the issues of concern to these populations that may increase or decrease their well-being. The next step following the scoping process is to operationalize the relevant variables by defining the variables in a way that facilitates measurement (Pollnac et al., 2006).

A variety of instruments available for these assessments are given in the appendix. Limited financial resources, time constraints, and staff skill level might further limit the variables and measures chosen. The North Sea Women's Network, with funding from Defra, commissioned a study on how to conduct such a study on a limited time and financial budget. The results are their "Dataframe" (further described below).

More important than simply identifying variables, however, is discerning the relationships among them. This is because the impact on one variable or variable set may be transmitted to another linked variable or variable set through cumulative processes, feedback loops, and other systematic relationships. These relationships can exist both within single levels of analysis (e.g. the community) and across levels of analysis (e.g. the individual, the family, and the community). Some of these relationships are explored in the following sections (Pollnac et al 2006 give some model variables and methods in their appendix).

A traditional approach might follow the following:

- Background literature review on the fishery and fishing communities, including sociocultural and historical.
- EU and Member State labour regulations, regional development schemes, structural funds, and the like.
- An investigation into the overall conditions of the fleet and view of current management conditions, including production and marketing of the catches.
- Defining dependency with NUTS data and pinpointing suitable field sites.
- Field visits to confirm suitable field sites and make contact with key informants and PO representatives.

NUTS data are a difficult issue to tackle as depending on the scale the data available (e.g., NUTS III) may not match the scale of community being discussed (e.g., NUTS V). In many cases, such data may be available from the MS or municipal governments; this is sometimes expensive (e.g., Denmark).

The second phase involves the fieldwork period conducted with qualitative and quantitative social science research methodology. Such methodology involves

- structured and semi-structured surveys/interviews with key individuals and groups,
- participatory rapid appraisal methods.

In addition to textual sources, data should be gathered from key informant semi-structured interviews; surveys, and when appropriate, focus groups. Qualitative data analysis involves the use of standard social science analysis software such as NVivo; quantitative data should be analysed with a standard analysis program such as SPSS.

To focus the research and increase time efficiency, fieldwork often concentrates on key indicators, variables and characteristics:

- population characteristics;
- direct and indirect economic impacts on the fishing industry and ancillary industries;
- structure and relative importance of the fishing industry within the community;
- community and institutional structures;
- political and social resources;
- individual and family factors; and
- community resources.

NOAA's newest approach looks at social indicators via three categories of indices:

- Social vulnerability indices
- Gentrification pressure indices
- Fishing engagement and reliance indices

Social vulnerability indices:

- **Personal disruption** represents factors that disrupt a community member's ability to respond to change because of personal circumstances affecting family life or educational levels or propensity to be affected by poverty. A high rank indicates more personal disruption and a more vulnerable population.
- **Population composition** shows the presence of populations who are traditionally considered more vulnerable due to circumstances often associated with low incomes and fewer resources. A high rank indicates a more vulnerable population.
- **Poverty** is a commonly used indicator of vulnerable populations. A high rank indicates a high rate of poverty and a more vulnerable population.
- **Labour force** characterizes the strength and stability of the labour force and employment opportunities that may exist. A high rank means likely fewer employment opportunities and a more vulnerable population.
- **Housing characteristics** is a measure of infrastructure vulnerability and includes factors that indicate housing that may be vulnerable to coastal hazards. A high rank means a more vulnerable infrastructure and a more vulnerable population. On the other hand, the opposite interpretation might be that more affordable housing could mean less vulnerability for some populations.

Gentrification pressure indices

- **Housing Disruption** represents factors that indicate a fluctuating housing market where some displacement may occur due to rising home values and rents. A high rank means more vulnerability for those in need of affordable housing and a population more vulnerable to gentrification.
- **Retiree migration** characterizes areas with a higher concentration of retirees and elderly people in the population. A high rank indicates a population more vulnerable to gentrification as retirees seek out the amenities of coastal living.
- **Urban sprawl** describes areas experiencing gentrification through increasing population and higher costs of living. A high rank indicates a population more vulnerable to gentrification.

Fishing engagement and reliance indices

- **Commercial fishing engagement** measures the presence of commercial fishing through fishing activity as shown through quota holders and vessel landings. A high rank indicates more engagement.
- **Commercial fishing reliance** measures the presence of commercial fishing in relation to the population of a community through fishing activity. A high rank indicates more reliance.

10   PROCEDURAL ISSUES

Significant time at the EWG meeting was taken up with data checking and clean up issues. Given that the social EWG only have a single meeting to prepare the report EWG 19-03 recommend that for future social data EWG meetings the social data should be checked in advance in order to facilitate efficient preparation of the report. This is particularly important for MS who are not represented at the social EWG meeting. Due to the limit on attendance at EWG it is not possible to have a representative of all 23 relevant MS at the social EWG. A solution however, to writing the national chapters, is needed as it is impractical to ask participants to write chapters on MS on which they do not have expert knowledge. Alternatively a second meeting, as is the case for the AER, would greatly enhance the possibility to focus on analysis and synthesis rather than on basic data reporting.

The experience at the first social EWG highlighted the need for closer integration with the economic group working on the AER. Such integration would ensure a more efficient and productive meeting and would also ensure that harmonised data for important figures such as overall employment will be achieved.

11 RECOMMENDATIONS FOR FUTURE SOCIAL DATA COLLECTION AND ANALYSIS

Another source of useful contextual material, which would not necessitate additions to MS surveys could be the writing of National profiles, in advance of the EWG, which would contain a brief description of some of the salient social, institutional and legal elements for each MS. EWG 19-03 recommends that further work is needed on what these profiles could include. This could be done in tandem with further work on social impact assessments and community profiles. A workshop, possibly facilitated through PGECON, to refine existing variables and define new variables is another possibility.

Close integration between the experts working on social data collection and with the ICES Working Group on Social Indicators would be advisable and cross attendance is likely to produce synergies. ICES WG Social are focussing on objectives and indicators so it appears that there would be an obvious benefit to enhanced linkage.

An obvious issue with expansion and development of social data collection and analysis in EU fisheries is the availability of resources and it is unreasonable to expect that the same personnel who are responsible for collection and/or analysis of economic data can continually expand their workload. Additionally they may not have social science expertise. Accordingly, the development of an effective EU program for social data in fisheries will necessitate the employment of qualified social scientists.

12   DATA COVERAGE

Coverage of the social data call related to the EU fishing fleet

As foreseen in the Regulation No 2017/1004, the EU multiannual programme for the collection, management and use of data in the fisheries and aquaculture sectors introduces the collection of social variables for the EU fishing fleet under the Data Collection Framework (EU MAP).

The social data outlined in Table 1 shall be collected every three years starting from 2018.

Table 1. Social variables for the fishing sector

Variable	Unit
Employment by gender	Number
FTE by gender	Number
Unpaid labour by gender	Number
Employment by age	Number
Employment by education level	Number per education level
Employment by nationality	Number from national, EU, EEA and Non-EU/EEA
Employment by employment status	Number
FTE National	Number

Member States were requested to submit the social data from the 29th of January 2019 to the 4th of March. Data resubmissions to correct identified issues were allowed until the 26th of April 2019. All Member States submitted the requested data before the deadlines.

There have been a very good coverage of the data requested under the regulation (see Table 2), especially considering that it is the first social data call. All 23 coastal Member States reported employment by gender, age and nationality; all but two Member States (Belgium and France) out of the 23 Member States reported employment by education level and employment by status (these two Member States reported all employment status as employees, i.e., no owners). Only three Member States (Denmark, France and Malta) out of 23 missed to report FTE by gender. While six Member States (Belgium, Denmark, France, Malta and Poland, while Portugal reported all of them as unknown) missed to report the unpaid labour by gender.

Moreover, data were reported voluntarily further disaggregated than required by supra-region, by fishing activity (20 Member States) and by fleet segment (12 Member States)

(see Table 3). This allowed the EWG to analyse in more detail the data reported, and in particular at the small-scale fleet.

Only three Member States further disaggregated on a voluntary basis employment by status (between full and part time employment) (see Table 1).

The main quality issue detected was the use of decimals for reporting employment (France, Italy, the Netherlands, Portugal and Sweden) and unpaid labour (Italy, the Netherlands and Sweden).

Another issue is the lack of experts from Denmark and Romania attending either the EWG 19 03 or EWG 19 04, which lead to having less detailed national chapters for both Member States.

Table 2. Coverage of the reported variables by Member State

	Employment						FTE	Unpaid labour
	by gender	by age	by education level	by nationality	by employment status	Full/Part time (voluntary disaggregation)	by gender	by gender
BEL	1	1		1	All employees		1	
BGR	1	1	1	1	1	1	1	1
CYP	1	1	1	1	1	All full time	1	1
DEU	1	1	1	1	1		1	1
DNK	1	1	1	1	1			
ESP	1	1	1	1	1		1	1
EST	1	1	1	1	1		1	1
FIN	1	1	1	1	1		1	1
FRA	1	1	All unknown	1	All employees			
GBR	1	1	1	1	1		1	1
GRC	1	1	1	1	1		1	1
HRV	1	1	1	1	1	1	1	1
IRL	1	1	1	1	1		1	1
ITA	1	1	1	1	1		1	1
LTU	1	1	1	1	1		1	1
LVA	1	1	1	1	1	1		
MLT	1	1	1	1	1	1	1	1
NLD	1	1	1	1	1		1	1
POL	1	1	1	1	1		1	
PRT	1	1	1	1	1		1	All unknown

ROU	1	1	1	1	1		1	1
SVN	1	1	1	1	1		1	1
SWE	1	1	1	1	1		1	1
TOTAL	23	23	21	23	21	4	20	17

Table 3. Disaggregation level of the data reported by Member State

| | Disaggregation (voluntary) | | |
	Fishing activity	Fleet	Comments
BEL			
BGR	1	1	
CYP	1	1	
DEU	1		
DNK	1		
ESP	Inserted	1	for supra-region + Canary Islands
EST	1		
FIN			
FRA	Inserted	1	for supra-region + French Guiana, Guadeloupe, Martinique, Saint-Martin, Reunion and Mayotte
GBR	1		
GRC	1	1	
HRV	1	1	
IRL	1		
ITA	1		
LTU	1		Individual data
LVA			
MLT	1	1	
NLD	1		
POL	Inserted	1	
PRT	1	1	for supra-region + Azores and Madeira
ROU	Inserted	1	
SVN	1	1	
SWE	Inserted	1	
TOTAL	15 + 5	12	

Inserted means that even if not reported explicitly, it was obtained based on the reported fleet segment level data.

13   CONTACT DETAILS OF EWG-19-03 PARTICIPANTS

[1] - Information on EWG participant's affiliations is displayed for information only. In any case, Members of the STECF, invited experts, and JRC experts shall act independently. In the context of the STECF work, the committee members and other experts do not represent the institutions/bodies they are affiliated to in their daily jobs. STECF members and experts also declare at each meeting of the STECF and of its Expert Working Groups any specific interest which might be considered prejudicial to their independence in relation to specific items on the agenda. These declarations are displayed on the public meeting's website if experts explicitly authorized the JRC to do so in accordance with EU legislation on the protection of personnel data. For more information: http://stecf.jrc.ec.europa.eu/adm-declarations

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14   LIST OF ANNEXES

List of Background Documents

Background documents are published on the meeting's web site on:
http://stecf.jrc.ec.europa.eu/web/stecf/ewg19-03

STECF

The Scientific, Technical and Economic Committee for Fisheries (STECF) has been established by the European Commission. The STECF is being consulted at regular intervals on matters pertaining to the conservation and management of living aquatic resources, including biological, economic, environmental, social and technical considerations.

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