# Single Integrated Metadata Structure (SIMS v2.0)

**Country:** Greece

**Compiling agency: ELSTAT** 

Domain name: Sea Fishery Survey by Motor-Propelled Vessels

# **ELSTAT** metadata Reference metadata 1. Contact 2. Metadata update 3. Statistical Presentation 4. Unit of measure 5. Reference period 6. Institutional mandate 7. Confidentiality 8. Release policy 9. Frequency of dissemination 10. Accessibility and clarity 11. Quality management 12. Relevance 13. Accuracy and reliability 14. Timeliness and punctuality 15. Coherence and comparability 16. Cost and burden 17. Data revision 18. Statistical processing 19. Comment

| 1. Contact                    | <u>Top</u>   |
|-------------------------------|--|
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| 2. Metadata update          | <u>Top</u> |
|-----------------------------|------------|
| 2.1 Metadata last certified | 28/09/2017 |
| 2.2 Metadata last posted    | 28/09/2017 |
| 2.3 Metadata last update    | 28/09/2017 |

# 3. Statistical presentation

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## 3.1 Data description

The Sea Fishery Survey aims at compiling results, that refer to:

- the number, engine horse power and tonnage of the fishing vessels,
- the quantity of catches by main species, by fishery category, by type of fishing gear and by fishing area,
- the value of catches and
- the number of employed persons.

### 3.2 Classification system

Classification of catch species: the implemented system for the published results of Sea Fishery Survey, follows the classification and codification of the Food and Agriculture Organization of the United Nations (FAO) as imprinted in the Annex IV of the Regulation (EC) No 216/2009 of the European Parliament and of the Council of 11 March 2009 on the submission of nominal catch statistics by Member States fishing in certain areas other than those of the North Atlantic (recast) and the FAO ASFIS List of Species for Fishery Statistics Purposes.

Categorization of landings: the implemented system for the published results of Sea Fishery Survey, follows the classification and codification of the Annex III of the Regulation (EC) No 1921/2009 of the European Parliament and of the Council of 18 December 2006 on the submission of statistical data on landings of fishery products in Member States and repealing Council Regulation (EEC) No 1382/91.

Classification of major fishing areas and subdivisions: the implemented system for the published results of Sea Fishery Survey, follows the classification and codification of the Food and Agriculture Organization of the United Nations (FAO) as imprinted in the Annexes I, II and III of the Regulation (EC) No 216/2009 of the European Parliament and of the Council of 11 March 2009 on the submission of nominal catch statistics by Member States fishing in certain areas other than those of the North Atlantic (recast).

# 3.3 Sector coverage

Until the reference year 2015, the sample of the Sea Fishery Survey included only professional motor-propelled fishing vessels with HP of 20 and over. From the reference year 2016 onwards, survey sample includes all professional motor-propelled fishing vessels, irrespective of their horsepower.

### 3.4 Statistical concepts and definitions

- 1. The statistical unit of this survey is the motor-propelled fishing vessel which fishes individually, that is with its own means.
- 2. Fishing vessels are distinguished into three main categories:
- a) overseas fishery vessels,
- b) open sea fishery vessels,
- c) inshore fishery vessels.
- 3. Fishing gear is distinguished into five basic types:
- a) trawls of overseas fishery: this category includes vessels fishing outside of the Mediterranean Sea. Catches from these vessels are mainly frozen.
- b) bottom otter trawls: this category includes vessels of open sea fishery that use trawls.
- c) purse seines: this category includes vessels of open sea fishery that use surrounding nets.

- d) beach seines: this category includes vessels of inshore fishery that use trawls.
- e) other fishing gears of inshore fishery: this category includes vessels of inshore fishery that use gears which are not included in the above categories (gillnets, longlines, traps, dredges etc).
- 4. Catches are distinguished into three categories, according to their quality and predefined criteria:
- a) first,
- b) second,
- c) third.
- 5. Catches are distinguished into four taxonomic groups:
- a) fish.
- b) cephalopods,
- c) crustaceans,
- d) shellfish.
- 6. Value of catches is estimated on the basis of the average annual weighted selling prices by species, applied in the fishing piers all over Greece.
- 7. The total number of persons that have worked on the vessel is defined as employed personnel.
- 8. Fishing area is the area where the largest quantity of catches is fished, according to the responsible for filling in the questionnaire fisherman.

### 3.5 Statistical unit

The statistical unit of this survey is the motor-propelled fishing vessel which fishes individually, that is with its own means.

## 3.6 Statistical population

The total of the professional motor-propelled fishing vessels included in the registry of the Ministry of Shipping and Island Policy.

## 3.7 Reference area

Greece total.

### 3.8 Time coverage

Sea Fishery Survey has been producing results on an annual basis, since 1964. Until the reference year 2015, the survey covered the professional motor-propelled fishing vessels of 20 HP and over. From the reference year 2016 onwards, the survey covers all motor-propelled professional fishing vessels, irrespective of their horsepower. In order to ensure comparability with the previous time series, results referring only to the fishing vessels of 20 HP and over are also published.

Data on the Sea Fishery Survey from 2008 onwards, are available in electronic form at the ELSTAT portal (<a href="http://www.statistics.gr">http://www.statistics.gr</a>) in two formats: a) in a format of published Press Releases (pdf files) and b) in the format of tabulated data classified in respective categories (excel files) and specifically at the link:

http://www.statistics.gr/en/statistics/-/publication/SPA03/-.

For the reference years before 2008, the results of Sea Fishery Survey are available at the digital library of ELSTAT and specifically at the link:

http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p cat=10007977&p topic=10007977.

## 3.9 Base period

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# 4. Unit of measure

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- Values in euro.
- Quantities in metric tonnes.
- Vessels in number.

# 5. Reference period

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Calendar year.

### 6. Institutional mandate

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# 6.1 Legal acts and other agreements

The legal framework concerning the organization and operation of ELSTAT is as follows:

- Law 3832/2010 (Government Gazette No 38, Issue A): "Hellenic Statistical System Establishment of the Hellenic Statistical Authority (ELSTAT) as an Independent Authority", as amended and in force.
- Regulation on the Operation and Administration of the Hellenic Statistical Authority (ELSTAT), 2012, (Government Gazette No 2390, Issue B, 28-8-2012).
- ➤ Regulation (EC) No 223/2009 of the European Parliament and of the Council, on the European statistics (Official Journal of the European Union L 87/164).
- Article 14 of the Law 3470/2006 (Government Gazette No 132, Issue A): "National Export Council, tax regulations and other provisions".
- > Article 3, paragraph 1c, of the Law 3448/2006 (Government Gazette No 57, Issue A): "For the further use of information coming from the public sector and the settlement of matters falling within the responsibility of the Ministry of Interior, Public Administration and Decentralization".
- European Statistics Code of Practice adopted by the Statistical Programme Committee on 24 February 2005 and promulgated in the Commission Recommendation of 25 May 2005 on the independence, integrity and accountability of the national and Community statistical Authorities, after its revision, which was adopted on 28 September 2011 by the European Statistical System Committee.
- ➤ Presidential Decree 226/2000 (Government Gazette No 195, Issue A): "Organization of the General Secretariat of the National Statistical Service of Greece".
- Articles 4, 12, 13, 14, 15 and 16 of the Law 2392/1996 (Government Gazette No 60, Issue A): "Access of the General Secretariat of the National Statistical Service of Greece to administrative sources and administrative files, Statistical Confidentiality Committee, settlement of matters concerning the conduct of censuses and statistical works, as well as of matters of the General Secretariat of the National Statistical Service of Greece".

The Legal Framework is detailed in the following link:

http://www.statistics.gr/en/legal-framework

## At European level, Sea Fishery Survey follows the following European Regulations:

- Regulation (EC) No 216/2009 of the European Parliament and of the Council of 11 March 2009 on the submission of nominal catch statistics by Member States fishing in certain areas other than those of the North Atlantic (recast).
- Regulation (EC) No 1921/2006 of the European Parliament and of the Council of 18 December 2006 on the submission of statistical data on landings of fishery products in Member States and repealing Council Regulation (EEC) No 1382/91.

### 6.2 Data sharing

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# 7. Confidentiality

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## 7.1 Confidentiality - policy

The issues concerning the observance of statistical confidentiality by the Hellenic Statistical Authority (ELSTAT) are arranged by articles 7, 8 and 9 of the Law 3832/2010 as in force, by Articles 8, 10 and 11(2)

of the Regulation on Statistical Obligations of the agencies of the Hellenic Statistical System and by Articles 10 and 15 of the Regulation on the Operation and Administration of ELSTAT.

More precisely:

ELSTAT disseminates the statistics in compliance with the statistical principles of the European Statistics Code of Practice and in particular with the principle of statistical confidentiality.

http://www.statistics.gr/en/statistical-confidentiality

## 7.2 Confidentiality - data treatment

- ELSTAT protects and does not disseminate data it has obtained or it has access to, which enable the direct or indirect identification of the statistical units that have provided them by the disclosure of individual information directly received for statistical purposes or indirectly supplied from administrative or other sources. ELSTAT takes all appropriate preventive measures so as to render impossible the identification of individual statistical units by technical or other means that might reasonably be used by a third party. Statistical data that could potentially enable the identification of the statistical unit are disseminated by ELSTAT if and only if:
  - a) these data have been treated, as it is specifically set out in the Regulation on Statistical Obligations of the agencies of the Hellenic Statistical System (ELSS), in such a way that their dissemination does not prejudice statistical confidentiality or
  - b) the statistical unit has given its consent, without any reservations, for the disclosure of data.
- The confidential data that are transmitted by ELSS agencies to ELSTAT are used exclusively for statistical purposes and the only persons who have the right to have access to these data are the personnel engaged in this task and appointed by an act of the President of ELSTAT.
- ➤ ELSTAT may grant researchers conducting statistical analyses for scientific purposes access to data that enable the indirect identification of the statistical units concerned. The access is granted provided the following conditions are satisfied:
  - a) an appropriate request together with a detailed research proposal in conformity with current scientific standards have been submitted:
  - b) the research proposal indicates in sufficient detail the set of data to be accessed, the methods of analyzing them, and the time needed for the research;
  - c) a contract specifying the conditions for access, the obligations of the researchers, the measures for respecting the confidentiality of statistical data and the sanctions in case of breach of these obligations has been signed by the individual researcher, by his/her institution, or by the organization commissioning the research, as the case may be, and by ELSTAT.
- ➤ Issues referring to the observance of statistical confidentiality are examined by the Statistical Confidentiality Committee (SCC) operating in ELSTAT. The responsibilities of this Committee are to make recommendations to the President of ELSTAT on:
- the level of detail at which statistical data can be disseminated, so as the identification, either directly or indirectly, of the surveyed statistical unit is not possible;
- the anonymization criteria for the microdata provided to users;
- the granting to researchers access to confidential data for scientific purposes.
- The staff of ELSTAT, under any employment status, as well as the temporary survey workers who are employed for the collection of statistical data in statistical surveys conducted by ELSTAT, who acquire access by any means to confidential data, are bound by the principle of confidentiality and must use these data exclusively for the statistical purposes of ELSTAT. After the termination of their term of office, they are not allowed to use these data for any purpose.
- Violation of data confidentiality and/or statistical confidentiality by any civil servant or employee of ELSTAT constitutes the disciplinary offence of violation of duty and may be punished with the penalty of final dismissal.
- ➤ ELSTAT, by its decision, may impose a penalty amounting from ten thousand (10,000) up to two hundred thousand (200,000) euro to anyone who violates the confidentiality of data and/or statistical confidentiality. The penalty is always imposed after the hearing of the defense of the person liable for the breach, depending on the gravity and the repercussions of the violation. Any relapse constitutes an aggravating factor for the assessment of the administrative sanction.

# 8. Release policy

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### 8.1 Release calendar

The release calendar fully meets legal requirements concerning the deadlines for the release of data by:

- meeting the legal and contract requirements concerning the deadlines for the transmission of the survey results.
- ensuring the longest possible time for data checking,
- ensuring additional time in case it is needed.

Regarding the contractual obligations of transmitting the results of the Sea Fishery Survey to the European Institutions, Member States are obliged to transmit the relevant results, 6 months after the end of the reference year to the competent authorities of Eurostat, in compliance with the Regulation (EC) No 1921/2006 of the European Parliament and of the Council of 18 December 2006 on the submission of statistical data on landings of fishery products in Member States and repealing Council Regulation (EC) No 1382/91 and Regulation (EC) No 216/2009 of the European Parliament and of the Council of 11 March 2009 on the submission of nominal catch statistics by Member States fishing in certain areas other than those of the North Atlantic (recast).

Press Release is published 9 months after the end of the reference year.

Users can request data by submitting a request to the Hellenic Statistical Authority, Statistical Information and Publications Division through the portal of ELSTAT (<a href="http://www.statistics.gr/en/statistical-data-request">http://www.statistics.gr/en/statistical-data-request</a>.

#### 8.2 Release calendar access

The annual announcements calendars of ELSTAT are accessible through the website of ELSTAT (<a href="http://www.statistics.gr/en/calendar">http://www.statistics.gr/en/calendar</a>).

#### 8.3 User access

Results are made available to all interested parties through the Press Release and the tables published at the websites of ELSTAT (<a href="http://www.statistics.gr/en">http://www.statistics.gr/en</a>) and Eurostat (<a href="http://ec.europa.eu/eurostat">http://ec.europa.eu/eurostat</a>).

# 9. Frequency of dissemination

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Annual.

# 10. Accessibility and clarity

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#### 10.1 News release

Press Releases of the Sea Fishery Survey are published annually and made available at the link: http://www.statistics.gr/en/statistics/-/publication/SPA03/-.

# 10.2 Publications

The main results of the Sea Fishery Survey are published in the electronic publications under the general title "Greece in figures" accessible via the website of ELSTAT <a href="http://www.statistics.gr/greece-in-figures">http://www.statistics.gr/greece-in-figures</a>, and the specific informative publications in the context of the Thessaloniki International Fair <a href="http://www.statistics.gr/en/elstat-82-tif">http://www.statistics.gr/en/elstat-82-tif</a>.

## 10.3 On-line database

### 10.3.1 Data tables - consultations

Tabulated data are available through the website of ELSTAT <a href="http://www.statistics.gr/en/statistics/-/publication/SPA03/">http://www.statistics.gr/en/statistics/-/publication/SPA03/</a>- as well as the website of Eurostat <a href="http://ec.europa.eu/eurostat/data/database">http://ec.europa.eu/eurostat/data/database</a>.

### 10.4 Micro-data access

Users can request access to microdata by submitting a request to the Hellenic Statistical Authority, Statistical Information and Publications Division through the portal of ELSTAT (<a href="http://www.statistics.gr/en/statistical-data-request">http://www.statistics.gr/en/statistical-data-request</a>.

### 10.5 Other

The results of Sea Fishery Survey for the years before 2008 are available at the digital library of ELSTAT: <a href="http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p">http://dlib.statistics.gr/portal/page/portal/ESYE/categoryyears?p</a> cat=10007977&p topic=10007977.

### <u>10.5.1 Metadata – consultations</u>

### 10.6 Documentation on methodology

The principles of the documentation on the methodology and the dissemination mode of the results of the Sea Fishery Survey are laid down taking into consideration international practices, guidelines and rules set out by Eurostat on the specific statistical theme:

- Regulation (EC) No 216/2009 of the European Parliament and of the Council of 11 March 2009 on the submission of nominal catch statistics by Member States fishing in certain areas other than those of the North Atlantic (recast).
- Regulation (EC) No 1921/2006 of the European Parliament and of the Council of 18 December 2006 on the submission of statistical data on landings of fishery products in Member States and repealing Council Regulation (EEC) No 1382/91.
- European Statistics Code of Practice.
- Quality Assurance Framework of the European Statistical System.
- ESS Quality Glossary.
- ESS Handbook for Quality Reports.
- A brief Methodological Report on Sea Fishery data is available at the link: <a href="http://www.statistics.gr/en/statistics/-/publication/SPA03/-">http://www.statistics.gr/en/statistics/-/publication/SPA03/-</a>.

## 10.6.1 Metadata completeness - rate

100%.

# 10.7 Quality documentation

According to the provisions of paragraph 10.6 Documentation on methodology the following quality reports are available at ELSTAT's website (<a href="http://www.statistics.gr/en/statistics.gr/en/statistics.gr/en/statistics-/publication/SPA03/-:">http://www.statistics.gr/en/stati

- Summary Quality Report for users, Sea Fishery Survey, reference year 2016
- Single Integrated Metadata Structure (SIMS v2.0), Sea Fishery Survey, reference year 2016, Greece.

# 11. Quality management

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## 11.1 Quality assurance

Sea Fishery Survey aims at the assurance and continuous improvement of the quality of the produced statistics and the maintenance of user's trust towards these statistics. Achievement of these goals, as described in the Quality Policy of ELSTAT, is sought through the following principle directions:

- Safeguard and substantiate the operational independence of ELSTAT
- Produce timely and relevant statistics using scientifically sound methods
- Establish and maintain users' trust in the reliability of the statistics
- Safeguard the trust of the statistical units which provide their confidential information for the production of the statistics.

The Quality Policy followed by ELSTAT is available at: <a href="http://www.statistics.gr/documents/20181/2571f853-1e37-46da-9387-595bbe2a162b">http://www.statistics.gr/documents/20181/2571f853-1e37-46da-9387-595bbe2a162b</a>.

Regarding the design of the questionnaire, the frequency of results' production and the type of the collected data, Sea Fishery Survey follows the quality standards laid down by Eurostat and ELSTAT in the relative legal framework. The collected questionnaires undergo completeness and quality checks as regards the information they contain. The final tables transmitted to Eurostat are both checked by ELSTAT and Eurostat.

Initial checks on data completeness in the completed questionnaires are carried out by the local Customs Authorities, who are responsible for collecting them from the fishermen, as well as by employees of the Decentralized Statistical Services of ELSTAT.

Thereinafter, a series of Information Technology (IT) and other controls (logical, time series, extreme values, processing, etc) are carried out by the personnel of the Primary Sector Statistics Division of ELSTAT. In case these controls reveal major changes, fluctuations or errors on catches, an effort to communicate with the competent Customs Authorities and fishermen themselves, is taking place for clarifications.

### 11.2 Quality assessment

Sea Fishery Survey produces high quality results because all the relevant rules for identifying and correcting errors are implemented. Eurostat, as soon as it receives the survey results from each Member State, proceeds with the final quality checks and in case it encounters any problem, it notifies the Member State for either correction or validation of the transmitted data.

12. Relevance <u>Top</u>

### 12.1 User needs

Basic users of the Sea Fishery Survey are: international organizations (Eurostat, FAO), Ministries, enterprises, chambers, Universities, researchers, students, etc.

#### 12.2 User satisfaction

The User Satisfaction Survey is conducted by ELSTAT on a daily basis, through a questionnaire that can be filled (optionally) in by users each time they request and are provided with data by ELSTAT. The Statistical Data Dissemination Section and the Library of ELSTAT, drawing information from the User Satisfaction Survey compile an annual report presenting data on the number of users, the responsiveness level to users' requests, the kind of the requested data, as well as the dissemination mode of the statistical information. For 2011 – 2012, 2013, 2014 and 2015 the results of the user satisfaction survey are available at: http://www.statistics.gr/en/user-satisfaction-survey.

Moreover ELSTAT, since 2010, has established the organization of user conferences. In these conferences, representatives of institutions of public and private sector and of educational and research institutions participate. The user conferences provide an important opportunity for ELSTAT to gather comments and suggestions from users of statistics on the dissemination of statistical information, access to statistics from users and gaps in the produced statistics. The conclusions of the above conferences, as well as the results of the user satisfaction survey that is conducted by ELSTAT, constitute a very useful background for the compilation of multi-annual and annual statistical programs.

Information on the user conferences of ELSTAT are available at: <a href="http://www.statistics.gr/en/user-conference">http://www.statistics.gr/en/user-conference</a>.

#### 12.3 Data completeness

The survey on Sea Fishery covers all variables stipulated in EU Regulations, as well as other variables for covering national needs.

# 13. Accuracy and reliability

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# 13.1 Overall accuracy

All necessary controls (checks for data completeness, for computational errors, for consistency, for extreme values, for comparability over time, etc.) are performed in order to achieve the highest possible accuracy of the results. In addition, comparisons with all the available data from administrative sources are made.

## 13.2 Sampling error

## 1. Estimation of the survey variables

### a) Symbols

h: code of the vessel category (h=1,... 4),

j: code of the fishing gear (j = 1, ....4),

k: code of fishing area (k=1,....,17),

y: a variable of the survey (e.g. quantity of catch),

N<sub>h</sub>: number of vessels in category h,

N<sub>hi</sub>: number of vessels in sub-category hj (sub-category j of the category h),

N<sub>hik</sub>: number of vessels in the fishing area hjk (area k, in the sub-category j belonging to the category h),

nh: the sample of vessels of category h,

n<sub>hik</sub>: sample of vessels in fishing area hjk,

jki: vessel of the series i in the fishing area jk (i=1,...., njk),

 $N_i$ : number of vessels of category j (j =1,....4),

Nik: number of vessels of the sub-category j in the fishing area k,

n<sub>i</sub>: number of sample units in the sub-category j,

n<sub>ik</sub>: number of sample units in area k of the sub-category j,

Y<sub>ik</sub>: sum of the variable y for all the vessels of the survey population in area k of the sub-category j,

Y<sub>i</sub>: sum of the variable y for all the vessels of the population in sub-category j,

Y<sub>hik</sub>: sum of the variable y for all the vessels of the population of the area hik,

Y: sum of the variable y for all the vessels of the population of the open sea and inshore fishery,

The variables of the survey in any month are calculated separately for every final stratum, which is defined by the variables fishing gear and fishing area.

The number of the vessels  $N_{jk}$  of the final stratum jk is not available by the register and thus its is calculated according to the following procedure:

$$(1) \qquad \widehat{N}_{hj} = \frac{N_h}{n_h} \bullet n_{hj}$$

(2) 
$$\widehat{N}_j = \sum_h \frac{N_h}{n_h} \bullet n_{hj}$$

(3) 
$$\widehat{N}_{jk} = \frac{\widehat{N}_j}{n_j} \bullet n_{jk}$$

The raising factor for all the vessels of a final stratum in defined as follows:

$$w_{jk} = \frac{\widehat{N}_j}{n_j}$$

b)  $Y_{ik}$  and Y are calculated according to the following formula:

$$\widehat{Y}_{jk} = w_{ik} \bullet \sum_{i=1}^{n_{jk}} y_{jki}$$

$$\widehat{Y} = \sum_{j} \sum_{k} \sum_{i} w_{ik} \bullet y_{ik}$$

c) The total for the variable y is calculated by adding the corresponding numbers concerning inshore and open sea fishery and those for overseas fishery as follows:

$$\widehat{Y}_{total} = \widehat{Y}_{+} Y_{overseas}$$

where Y<sub>overseas</sub> is the sum of y from all the vessels of overseas fishing.

The annual results are calculated on the basis of the sum of the monthly data.

## 2. Sampling errors

The variation of  $\,Y_{_{jk}}\,$  is calculated according to the following formula:

$$V(\widehat{Y}_{jk}) = \frac{\widehat{N}_{jk} \bullet (\widehat{N}_{jk} - n_{jk})}{n_{jk}} \bullet s_{jk}^{2}$$

where:

$$S_{jk}^{2} = \frac{1}{n_{jk} - 1} \bullet \left[ \sum_{i} y_{jki}^{2} - \frac{\left(\sum_{i} y_{jki}\right)^{2}}{n_{jk}} \right]$$

The variation of  $\widehat{Y}$  is calculated by the formula:

$$V(\widehat{Y}) = \sum_{j} \sum_{k} V(\widehat{Y}_{jk})$$

In the above formula  $\hat{N}_{jk}$  was used instead of  $N_{jk}$ , because for every month  $\eta_{jk} \cong \text{stable} \Rightarrow \hat{N}_{jk} \cong \text{stable} \Rightarrow V(\hat{N}_{jk}) \cong 0$ 

The sampling error for  $\widehat{Y}$  expressed as coefficient of variation (%) is calculated by the formula:

$$CV(\widehat{Y}) = \frac{\sqrt{V(\widehat{Y})}}{\widehat{Y}} \bullet 1$$

Table 1
Coefficient of Variation (%) of the quantity of catch, by species and by month

| Code of species of catch | Jan. | Feb. | Mar. | Apr. | May  | Jun. | Jul. | Aug. | Sept. | Oct. | Nov. | Dec. |
|--------------------------|------|------|------|------|------|------|------|------|-------|------|------|------|
| 8                        | 3.4  | 3.1  | 3.2  | 3.3  | 4.7  | 10   | 8.5  | 8.8  | 13.3  | 3.1  | 3.1  | 3.2  |
| 9                        | 10   | 9.4  | 11.4 | 9    | 9.4  | 27.8 | 31.9 | 26.4 | 34.2  | 10.3 | 8.3  | 7.2  |
| 10                       | 26.4 | 25.7 | 41.8 | 27.4 | 22.2 | 27.9 | 15.4 | 20.2 | 27.6  | 24.5 | 29   | 30.1 |
| 11                       | 8.6  | 6.5  | 5.9  | 6.1  | 8.8  | 13.1 | 11.9 | 12.1 | 12.7  | 6.5  | 5.5  | 5.2  |
| 12                       | 13.1 | 11.6 | 15.7 | 14.4 | 17.6 | 13   | 16.4 | 34.3 | 18.2  | 15.2 | 14.5 | 10.1 |
| 13                       | 61.8 | 32.3 | 11.1 | 8.1  | 6.3  | 7.1  | 6.2  | 9.4  | 6.1   | 8.9  | 17.1 | 45.2 |
| 14                       | 5.8  | 6.6  | 6.4  | 6.7  | 6.7  | 7.4  | 7.6  | 7.8  | 8.5   | 6.9  | 7    | 6.9  |
| 15                       | 8.7  | 6.7  | 8.8  | 8.3  | 6.5  | 7.6  | 15.4 | 10.9 | 9.9   | 8.9  | 8.3  | 21.6 |
| 16                       | 20.5 | 17.2 | 31.6 | 19.3 | 23.3 | 53   | 26.5 | 18.8 | 18.8  | 16.7 | 21.5 | 20.8 |
| 17                       | 23.8 | 34.9 | 28.3 | 34   | 41.7 | 34.8 | 34.1 | 31.8 | 37.4  | 25.5 | 43.3 | 55.2 |
| 18                       | 18.3 | 15.5 | 18   | 36   | 26.8 | 47.8 | 33.1 | 40.2 | 56.9  | 25.2 | 18.7 | 19.4 |
| 19                       | 13.5 | 13.7 | 14.8 | 15.7 | 14.3 | 20.2 | 21.5 | 28.5 | 57    | 22.1 | 11.2 | 9.2  |
| 20                       | 11.8 | 17.4 | 7.2  | 6.9  | 8.1  | 6.5  | 9    | 8.5  | 6.8   | 6.8  | 6.4  | 21.6 |
| 21                       | 17.9 | 17.7 | 12   | 13.6 | 16.1 | 20.4 | 18.5 | 16.2 | 15.6  | 10.7 | 8.1  | 11.4 |
| 22                       | 34.9 | 13.2 | 30.8 | 18.6 | 12.4 | 9.3  | 9.5  | 10.2 | 14.6  | 16.3 | 24.7 | 27.9 |
| 23                       | 4.5  | 3.9  | 4.1  | 4.2  | 5.6  | 7.8  | 7.9  | 8.5  | 14.8  | 5.5  | 3.9  | 3.5  |
| 24                       | 7.4  | 7.4  | 7.8  | 8.9  | 9.2  | 8.5  | 7.3  | 6.8  | 7.6   | 7.6  | 6.9  | 6.6  |
| 25                       | 7.1  | 5.8  | 6.6  | 7.7  | 7.3  | 8.9  | 10.2 | 7.7  | 7.8   | 5.6  | 5    | 5.7  |
| 26                       | 26.2 | 24.3 | 29   | 38.8 | 17.3 | 17.6 | 18.8 | 18.7 | 19.6  | 24.2 | 23   | 20.8 |
| 27                       | 6    | 6.2  | 5.3  | 7.7  | 7.7  | 17.9 | 24.1 | 39.5 | 25.1  | 5.9  | 5    | 4.7  |
| 28                       | 25.7 | 20.6 | 13.8 | 13.7 | 9.1  | 14.5 | 31.4 | 18.9 | 12.2  | 11.3 | 17.6 | 14.2 |
| 29                       | 13.3 | 12.1 | 12.9 | 12   | 10.6 | 13.2 | 14.6 | 13.9 | 16.5  | 13.7 | 12.4 | 15.3 |
| 30                       | 11   | 11.4 | 14.3 | 12.9 | 9.9  | 15.3 | 15.8 | 13.2 | 15.1  | 15.3 | 13.5 | 11.3 |
| 31                       | 4.7  | 4.2  | 4    | 4.8  | 4.8  | 4.2  | 4.3  | 3.2  | 3.1   | 4.1  | 3.2  | 2.9  |
| 32                       | 12.7 | 21.9 | 14.7 | 37.2 | 18.5 | 31.5 | 21.7 | 19.2 | 21.4  | 21   | 15.9 | 34.3 |
| 33                       | 19.3 | 42.7 | 22.5 | 29   | 23.7 | 42.6 | 60.2 | 60.4 | 61    | 14   | 14.6 | 14.6 |

| 34          | 40.9        | 23.5        | 26.7        | 22.7         | 21.1        | 18.7        | 19.8         | 17.5        | 20.1         | 31.8        | 28.9         | 38.2         |
|-------------|-------------|-------------|-------------|--------------|-------------|-------------|--------------|-------------|--------------|-------------|--------------|--------------|
| 35          | 40.6        | 28.4        | 23          | 15.4         | 13.5        | 14.9        | 15.7         | 15.9        | 19           | 15.4        | 18.1         | 18.7         |
| 36          | 35          | 62.3        | 30.4        | 56.3         | 51          | 38.8        | 33.7         | 34.2        | 67.7         | 65.1        | 19.2         | 52.6         |
| 37          | 4.9         | 4.3         | 4.8         | 5.4          | 8.9         | 14.6        | 28.7         | 26.5        | 15.5         | 4.8         | 5            | 5.2          |
| 38          | 7.6         | 11.8        | 7.4         | 10.9         | 12.9        | 63.3        | 41.9         | 39.5        | 37.2         | 10.2        | 8.8          | 7.6          |
| 39          | 10.8        | 47.1        | 11.9        | 11.8         | 15.7        | 27.5        | 46.7         | 42          | 35.9         | 10.6        | 10.9         | 14           |
| 40          | 19.6        | 17.8        | 19.9        | 54.8         | 13.8        | 15          | 15.3         | 11.6        | 12.5         | 14.6        | 13.3         | 18.6         |
| 41          | 36.8        | 31.2        | 24.5        | 24.6         | 19.2        | 24.8        | 37           | 39.1        | 31.6         | 26.7        | 37.1         | 41.7         |
| 42          | 42.5        | 40.8        | 38.9        | 29.3         | 54.5        | 62.5        | 74.1         | 83.9        | 84.3         | 35.7        | 33           | 48.3         |
| 43          | 27.5        | 20.6        | 42.2        | 15.1         | 17.9        | 27.1        | 17.8         | 13.1        | 15.5         | 17.7        | 27.2         | 20.9         |
| 44          | 17          | 10.4        | 10.3        | 10.2         | 11.9        | 18.1        | 16.4         | 21.9        | 18.8         | 11          | 11.7         | 9.2          |
| 45          | 14.3        | 9           | 27.5        | 12           | 11.3        | 15.2        | 11.8         | 23.1        | 28.9         | 17.6        | 9.8          | 10.6         |
| 46          | 27          | 19.6        | 11.4        | 9.6          | 7.1         | 9.1         | 10.5         | 10.1        | 9.8          | 10.9        | 13.8         | 39.1         |
| 47          | 7.1         | 6.7         | 30.8        | 8.4          | 10.5        | 12.1        | 16.6         | 15.8        | 18.5         | 12.8        | 31.9         | 14.7         |
| 48          | 17.4        | 15.9        | 12          | 11.2         | 16          | 20.9        | 20.1         | 13          | 20           | 12          | 13.5         | 11.9         |
| 49          | 13.1        | 12.5        | 11          | 9.7          | 9.8         | 7.9         | 8            | 5.4         | 6.4          | 10.4        | 10.8         | 10.9         |
| 50          | 14.6        | 35.2        | 16.5        | 16           | 15.3        | 25.1        | 13.7         | 13.1        | 17.8         | 11.1        | 10.2         | 12           |
| 51          | 19.4        | 21.7        | 24.6        | 25.6         | 22.7        | 40.2        | 38.1         | 26.1        | 39.1         | 26.4        | 14.1         | 16.9         |
| 52          | 41.4        | 18.4        | 17.5        | 12.5         | 18.1        | 16.3        | 15           | 14.5        | 22.2         | 19.2        | 13           | 35.1         |
| 53          | 7.5         | 7.5         | 7.9         | 5.4          | 5.2         | 6.1         | 5.7          | 7           | 3.9          | 6.7         | 6            | 6.5          |
| 54          | 14.8        | 14.3        | 7.8         | 10.3         | 13          | 15.7        | 15           | 18.1        | 10.1         | 22.1        | 24.8         | 10.6         |
| 55          | 37.6        | 29.3        | 30.7        | 31.7         | 23.9        | 4.5         | 56           | 24.6        | 26.1         | 32.9        | 18.9         | 21.4         |
| 56          | 8.1         | 8.1         | 8.3         | 10.9         | 12.8        | 34.3        | 30.8         | 65.5        | 39.9         | 8.6         | 9.2          | 7.3          |
| 57          | 14.8        | 11.6        | 15.1        | 15.8         | 22.5        | 18.1        | 18.8         | 17.1        | 15.7         | 12.1        | 15.2         | 15.3         |
| 58          | 7.8         | 5.4         | 4           | 4.5          | 5.4         | 4.6         | 4.9          | 4.6         | 8.5          | 8.7         | 4.7          | 3.6          |
| 59          | 32          | 39.8        | 21.7        | 17.6         | 12.4        | 15.2        | 18.6         | 13.9        | 23.2         | 19.9        | 31.9         | 47.7         |
| 60          | 17.7        | 13.3        | 11.4        | 8.4          | 12.8        | 12.2        | 12.3         | 11.9        | 18.8         | 10.6        | 9.1          | 9.8          |
| 61          | 61.3        | 27.6        | 41.4        | 54.2         | 50          | 59.8        | 54.2         | 60.9        | 47.6         | 36.9        | 57.7         | 40.1         |
| 62          | 12.5        | 10.9        | 11.7        | 11.6         | 12.9        | 28.7        | 23.5         | 30.6        | 31.9         | 9.9         | 9.8          | 10           |
| 63          | 3.6         | 2.9         | 2.9         | 3            | 3.9         | 2.7         | 2.9          | 3.6         | 2.5          | 2.6         | 3            | 2.5          |
| 65          | 7           | 6           | 6.2         | 5.6          | 7.9         | 24.8        | 27.3         | 19.8        | 23.5         | 12.8        | 6            | 6.8          |
| 66          | 7.3         | 6.7         | 9.5         | 12           | 2.5         | 15.8        | 18.7         | 10.4        | 1.9          | 6.4         | 5.8          | 6.3          |
| 67          | 8.2         | 7.7         | 7           | 7.2          | 9.6         | 42.5        | 52.7         | 53.4        | 46.8         | 6.7         | 6.4          | 5.9          |
| 68          | 5.8         | 5           | 3.7         | 4            | 6.4         | 6.5         | 6.9          | 9           | 2.4          | 5.4         | 6.7          | 6.3          |
| 69          | 4.2         | 3.9         | 4.5         | 5.5          | 7           | 7.9         | 6.7          | 5.4         | 9            | 5.2         | 4.1          | 4.3          |
| 71          | 23.6        | 25.2        | 12.9        | 9.8          | 1.3         | 9.5         | 10.5         | 18.1        | 0.2          | 37.7        | 38.1         | 44.4         |
| 72          | 6.3         | 4.6         | 5.5         | 5            | 6.1         | 19.9        | 17.1         | 57.4        | 3.3          | 8.6         | 3.9          | 3.8          |
| 73<br>74    | 4.7<br>29.9 | 4.6<br>21.5 | 3.9<br>27.8 | 4.9<br>27.9  | 5.3<br>26.4 | 6.7<br>31.5 | 5<br>30.5    | 5.7<br>36.5 | 3.7          | 6.5<br>52.8 | 4.8          | 5<br>21.4    |
| 75          | 29.9        | 8.9         | 9.5         | 7.7          | 8.4         | 18.3        |              | 16.4        | 53.9<br>26.9 | 11.3        | 24.8<br>7.3  |              |
| 77          | 24          | 24.9        | 23.4        |              | 23.1        | 18.3        | 29.6<br>21.2 | 28.7        | 84.3         | 85          | 22.1         | 8.6          |
|             |             |             | 84.3        | 21.3<br>57.8 | 44.2        | 34.1        | 34.6         | 34.6        | 33.7         |             |              | 27.8<br>62.2 |
| 78<br>79    | 77.9        | 84.4        | 04.3        | 83.5         | 0           |             | 0            | 0           | 33.7         | 42<br>0     | 68.7<br>85.5 | 58           |
| 80          | 48          | 46.1        | 39.7        | 83.5         | 0           | 0           | 0            | 83.9        | 84.3         | 0           | 55.7         | 53.8         |
| 81          | 40          | 27.8        |             |              | 62.7        | 40          | 64.7         | 33.1        |              | 36.5        | 43.1         | 33.2         |
| Fish        | 5.3         |             | 29.5<br>4.3 | 41.1<br>2.7  | 2.4         | 3.1         | 4.2          | 4.8         | 42.1         | 2.8         | 43.1         |              |
| Cephalopods | 3.3         | 3.6         | 3.4         | 3.9          | 4.3         | 5.1         | 4.2          | 4.6         | 4.1<br>2.3   | 4.5         | 3.7          | 3.6          |
| Crustaceans | 4.1         | 3.0         | 3.4         | 3.6          | 3.3         | 5.5         | 4.7<br>5     | 6.9         | 1.9          | 6.8         | 3.7          | 3.6          |
| Shellfish   | 21.9        | 19.6        | 18.9        | 21.3         | 23.6        | 18.6        | 19.7         | 25.6        | 27.2         | 31.3        | 19.9         | 38.9         |
| Total       | 4.3         | 2.5         | 3.5         | 2.3          |             | 2.9         | 19.7         | 4.6         | 3.6          |             | 3.5          |              |
| IOlai       | 4.3         | 2.5         | ა.5         | 2.3          | 2.1         | 2.9         | 4            | 4.0         | ა.ნ          | 2.5         | ა.5          | 6.5          |

After having studied the coefficient of variation CV and the monthly quantity of catch by species, it is concluded that when the quantity of catch increases the Coefficient of Variation (%) declines exponentially and according to the following formula:

$$CV(\%) \cong \frac{440}{\widehat{Y}^{0,34}}$$

where  $\widehat{Y}$  is the estimation of the monthly quantity of catch.

The aforementioned formula does not apply for the species under the codes 13 (anchovy), 15 (bogue), 22

(chub mackerel) and 45 (sardine).

The aforementioned procedure is followed for fishing vessels of 20HP and over separately.

# 13.3 Non-sampling error

## a. Unit non - response

The comparison between survey data and the corresponding data from administrative sources has shown that the non-sampling errors of the survey are not significant.

### b. Item non - response

In case of item non - response, the contribution of local Customs Authorities and fishermen is requested.

### 13.3.1 Coverage error

The number of coverage errors is very small.

### 13.3.1.1 Over-coverage – rate

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### 13.3.1.2 Common units – proportion

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### 13.3.2 Measurement error

In the end of limiting measurement errors, the following procedures are followed:

- Detailed instructions are provided to both fishermen and Customs Authorities for completing questionnaires
- Automated checks are in place to identify errors in the questionnaires.

### 13.3.3 Processing error

These errors include codification errors, data entry errors, etc. and occur in the period between data collection and data analysis. In order to minimize these errors, the questionnaires are checked by the competent employees of ELSTAT. In case major changes are identified in comparison with previous reference years, the competent fisherman or the local Customs Authorities are contacted for clarifications.

## 13.3.4 Model assumption error

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# 14. Timeliness and punctuality

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## 14.1 Timeliness

Survey data are transmitted to Eurostat 6 months after the end of the reference year and are published in the form of Press Releases and tabulated data 9 months after the end of the reference year.

### 14.2 Punctuality

For the reference year 2016, results were transmitted to Eurostat within the deadlines set by the contractual obligations of the survey and published on the scheduled dates according to the release calendar of ELSTAT (http://www.statistics.gr/en/calendar).

# 15. Coherence and comparability

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# 15.1 Comparability - geographical

Data collected in accordance with European Regulations are comparable with those of other European countries as common concepts, definitions and classifications are adopted.

## 15.1.1 Asymmetry for mirror flows statistics - coefficient

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# 15.2 Comparability over time

Until the reference year 2015, the survey covered the professional motor-propelled fishing vessels of 20 HP and over. From the reference year 2016 onwards, the survey covers all motor-propelled professional fishing

vessels irrespective of their horsepower. In order to ensure comparability over time, results referring only to the fishing vessels of 20 HP and over are also published.

### 15.3 Coherence cross-domain

Survey data are compared with those of the Ministry of Rural Development and Food, the Central Market and Fishery Organization (CMFO SA) and the Hellenic Center for Marine Research (HCMR).

## 15.3.1 Coherence – sub annual and annual statistics

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# 15.3.2 Coherence - National Accounts

National Accounts use Sea Fishery Survey data.

#### 15.4 Coherence - internal

All variables are coherent and consistent with each other.

## 16. Cost and burden

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### 17. Data revision

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# 17.1 Revision policy

The revision policy of the Hellenic Statistical Authority (ELSTAT) defines standard rules and principles for data revisions, in accordance with the European Statistics Code of Practice and the principles for a common revision policy for European Statistics contained in the Annex of the European Statistical System (ESS) guidelines on revision policy.

http://www.statistics.gr/documents/20181/a49dca9a-dacf-4b52-b5df-b156216cb354

# 17.2 Revision practice

The released data are final and validated by Eurostat and ELSTAT. However, in cases where errors are detected in the published data, they are revised following the provisions of the Revision Policy instructions mentioned above.

# 18. Statistical processing

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### 18.1 Source data

A printed questionnaire is filled in by the fishermen in charge of fishing vessels.

## 18.2 Frequency of data collection

Monthly.

## 18.3 Data collection

A printed questionnaire is filled in with catch quantities, employment data and information about the fishing vessel (statistical unit) by fishermen. The completed questionnaires are gathered by local Customs Authorities and submitted to the Decentralized Statistical Services of ELSTAT, which after the initial completeness checks, send the questionnaires to the central offices of ELSTAT (Primary Sector Statistics Division) for data entry (Optical Character Recognition, OCR), final checks and their introduction in the Integrated Information System of ELSTAT.

### 18.4 Data validation

Data are validated by ELSTAT and Eurostat.

# 18.5 Data compilation

Primary Sector Statistics Division's employees apply the final checks on data (logical, time series, extreme values, processing, etc) as well as cross checks with data from administrative sources.

After the end of the aforementioned checks, final results are published in the form of Press Releases and

| tables.                    |  |  |
|----------------------------|--|--|
| 18.5.1 Imputation – rate   |  |  |
| -                          |  |  |
| 18.6 Adjustment            |  |  |
| -                          |  |  |
| 18.6.1 Seasonal adjustment |  |  |
| -                          |  |  |

| 19. Comment | <u>Top</u> |
|-------------|------------|
| -           |            |