

## AQUACULTURE STATISTICS (2018)

### NATIONAL REFERENCE METADATA IN SINGLE INTEGRATED METADATA STRUCTURE (SIMS)

#### **CONCEPT 1- CONTACT**

##### **Sub-Concept 1.1: Contact organisation**

National Statistics Office (NSO)

##### **Sub-Concept 1.2: Contact organisation unit**

Environment, Transport and Agriculture Statistics Unit

##### **Sub-Concept 1.3: Contact name**

Mr. Ronald Tanti

##### **Sub-Concept 1.4: Contact person function**

Head of Unit

##### **Sub-Concept 1.5: Contact mail address**

National Statistics Office,  
Lascaris, Valletta VLT2000,  
Malta.

##### **Sub-Concept 1.6: Contact e-mail address**

[ronald.tanti@gov.mt](mailto:ronald.tanti@gov.mt)

##### **Sub-Concept 1.7: Contact phone number**

+356 2599 7333

#### **CONCEPT 2 – METADATA UPDATE**

##### **Sub-Concept 2.1: Metadata last certified**

29th November 2019.

##### **Sub-Concept 2.2: Metadata last posted**

24<sup>th</sup> September 2020.

##### **Sub-Concept 2.3: Metadata last update**

24<sup>th</sup> September 2020.

## **CONCEPT 3 – STATISTICAL PRESENTATION**

### **Sub-Concept 3.1: Data description**

The characteristics of the aquaculture dataset consist essentially of yearly statistical data on both the volume; and the income and expenditure transaction flows of the fish farming activity engaged by the entire aquaculture industry in Malta. These statistics are collected through an annual census conducted amongst all the registered operators within this industry.

### **Sub-Concept 3.2: Classification system**

In summary, the detailed dataset that is collected through the annual survey comprises statistics which are classified as follows:

- The volume and value of Tuna, Gilthead seabream and European seabass sales carried by the operators.
- The expenses incurred and investments undertaken in connection with the growing and production of the same fish species for commercial purposes in offshore cages or enclosures.

### **Sub-Concept 3.3: Sector coverage**

All the registered operators in the local aquaculture industry are surveyed on an annual basis.

### **Sub-Concept 3.4: Statistical concepts and definitions**

The main concept to be defined relates to the term 'aquaculture industry'. This is entirely dependent on marine resources and has two sectors:

- Tuna farming – relies on captured wild fish and is referred to 'Capture Based Species';
- Farming of 'Closed Cycle Species' – these include sea bream, sea bass, meagre and amberjack that are cultured from eggs produced in hatcheries.

### **Sub-Concept 3.5: Statistical unit**

The statistical units that are observed in this dataset comprise all the registered fish farming enterprises and/or operators in Malta.

### **Sub-Concept 3.6: Statistical population**

The target population consists of all the registered fish farms operating in Malta.

### **Sub-Concept 3.7: Reference area**

Malta and Gozo ([NUTS](#) 1 and 2).

### **Sub-Concept 3.8: Time coverage**

The aquaculture census collects information with reference to the aggregated twelve calendar months preceding the year of the survey. In the annual news release, the data of the previous 4 years is published.

### **Sub-Concept 3.9: Base period**

Not applicable.

## **CONCEPT 4 – UNIT OF MEASURE**

The units of measurement are as follows:

- For economic and financial data (such as turnover), the Euro currency is utilised;
- For volume data (such as the weight of harvested Tuna), the kilogramme is used;
- For other specific variables (such as the number of employees and hours worked), the quantity in units, metres or hours are applied accordingly.

## **CONCEPT 5 – REFERENCE PERIOD**

The statistical variables in the aquaculture census refer to the preceding calendar year.

## **CONCEPT 6 – INSTITUTIONAL MANDATE**

### **Sub-Concept 6.1: Legal acts and other agreements**

[The Malta Statistics Authority \(MSA\) Act](#) empowers the NSO to collect, compile, extract and release official statistics related to demographic, social, environment, economic and general activities and conditions of Malta.

The legal basis for the collection of the aquaculture statistical data is [EC Regulation 762/2008](#).

### **Sub-Concept 6.2: Data sharing**

The statistical data that are collected on an annual basis are shared internally with the National Accounts unit, to safeguard internal and cross-domain coherence; and to avoid burdening respondents repetitively. Ultimately, aggregated data are published in the form of an annual news release, which is later shared with the Department of Fisheries and Aquaculture.

## **CONCEPT 7 - CONFIDENTIALITY**

### **Sub-Concept 7.1: Confidentiality – Policy**

At National level:

The NSO requests information for the compilation of official statistics according to the articles of the MSA Act – Cap. 422 and the Data Protection Act – Cap. 586 of the Laws of Malta implementing the General Data Protection Regulations (GDPR).

Article 40 of the MSA Act stipulates the restrictions on the use of information while Article 41 stipulates the prohibition of disclosure of information. Furthermore, Section IX of the Act (Offences and Penalties) lays down the measures to be taken in case of unlawful exercise of any officer of statistics regarding confidentiality of data.

Since its inception, the NSO has always assured that all data collected remains confidential and that it is used for statistical purposes only according to the articles and derogations stipulated in the

laws quoted above. The Office is obliged to protect the identify of data providers and refrain from divulging any data to third parties that might lead to the identification of persons or entities.

During 2009, the NSO has set up a Statistical Disclosure Committee to ensure that statistical confidentiality is observed, especially when requests for microdata are received.

Upon employment, all NSO employees are informed of the rules and duties pertaining to confidential information and its treatment. In line with stipulations of the MSA Act, before commencing work, every employee is required to take an oath of secrecy whose text is included in the same Act.

An internal policy on anonymisation and pseudo-anonymisation is in place to ascertain that adequate methods are used for the protection of data which the office collects and shares with the public in its capacity as the National Statistics Office. The policy is meant to safeguard confidentiality of both personal and business data entrusted to the NSO. The document provides guidance for all NSO employees who process data on a daily basis as to how anonymisation and pseudo-anonymisation methods should be applied. The policy applies to all confidential, restricted and internal information, regardless of form (paper or electronic documents, applications and databases) that is received, processed, stored and disseminated by the NSO.

At European level:

[Regulation \(EC\) No 223/2009](#) on European statistics (recital 24 and Article 20(4) of 11 March 2009 (OJ L 87, p. 164), stipulates the need to establish common principles and guidelines ensuring the confidentiality of data used for the production of European statistics and the access to those confidential data with due account for technical developments and the requirements of users in a democratic society.

## **Sub-Concept 7.2: Confidentiality – Data Treatment**

Data are published in aggregate form to avoid the presence of low counts which could possibly lead to the identification of respondents within the aquaculture industry. When the particular operator is inevitably indirectly identifiable (due to the presence of unique combinations of particular characteristics), the same operator is asked to provide a written consent to allow the NSO to publish the relevant figures. The relevant data are only published upon formal approval of the data provider (the fish farm).

## **CONCEPT 8 – RELEASE POLICY**

### **Sub-Concept 8.1: Release Calendar**

An advance release calendar is maintained by the NSO and published on the NSO website. The calendar projects three months of news releases (including the current and two subsequent months).

### **Sub-Concept 8.2: Release Calendar access**

[https://nso.gov.mt/en/News\\_Releases/Release\\_Calendar/Pages/News-Release-Calendar.aspx](https://nso.gov.mt/en/News_Releases/Release_Calendar/Pages/News-Release-Calendar.aspx)

### **Sub-Concept 8.3: User access**

An internal policy on dissemination is in place to govern the dissemination of official statistics in an impartial, independent and timely manner, making them available simultaneously to all users.

The NSO's primary channel for the dissemination of official statistics is the NSO website. Tailored requests for statistical information may also be submitted through the NSO website.

Moreover, Aquaculture news releases and publications are available in electronic format on the NSO website.

## **CONCEPT 9 – FREQUENCY OF DISSEMINATION**

Annual.

## **CONCEPT 10 – ACCESSIBILITY AND CLARITY**

### **Sub-Concept 10.1: News release**

Aquaculture statistics News Releases are available on the NSO website and may be accessed through:

[https://nso.gov.mt/en/News\\_Releases/View\\_by\\_Unit/Unit\\_B3/Environment\\_Energy\\_Transport\\_and\\_Agriculture\\_Statistics/Pages/Aquaculture.aspx](https://nso.gov.mt/en/News_Releases/View_by_Unit/Unit_B3/Environment_Energy_Transport_and_Agriculture_Statistics/Pages/Aquaculture.aspx)

### **Sub-Concept 10.2: Publications**

Not applicable.

### **Sub-Concept 10.3: Online Database**

Not applicable.

### **Sub-Concept 10.4: Micro-data access**

Not applicable.

### **Sub-Concept 10.5: Other**

Tabular aquaculture statistics are sent to Eurostat through EDAMIS.

### **Sub-Concept 10.6: Documentation on methodology**

Work processes and procedures for the compilation of Aquaculture statistics are documented in a standardised reporting template and aligned to the GSBPM model. The model covers all phases of the statistical production process, from the initial stages of identifying what statistics are needed and the scope of the particular survey, to the final stages of dissemination and evaluation. GSBPM is only available internally and may be accessed by all NSO employees.

### **Sub-Concept 10.6.1: Metadata completeness rate**

Information about all required metadata concepts (and sub-concepts thereof) are provided.

### **Sub-Concept 10.7: Quality Documentation**

SIMS reports covering aquaculture statistics are available to the public on the NSO's metadata website including concepts related to metadata and quality.

A quality report on aquaculture in accordance with an established structure is compiled every year and sent to Eurostat.

## **CONCEPT 11 – QUALITY MANAGEMENT**

### **Sub-Concept 11.1: Quality Assurance**

The NSO ensures the accuracy of data released to the public and prepares clear methodological notes which explain the processes involved in the collection and production of official statistics. The collected, compiled and published data on aquaculture activity in Malta are thoroughly checked throughout all stages of the statistical production system.

The NSO has developed an internal Quality Management Framework (QMF) which is built on common requirements of the ESS Code of Practice (ESS CoP). A document was prepared to include a set of general quality guidelines spanning over all statistical domains. Assuring methodological soundness is an integral part of the QMF, nonetheless, the document spans also on other areas related to institutional aspects.

Every five to seven years, the NSO participates in a Peer Review exercise through which the compliance of its operations with principles of the ESS CoP is assessed by an expert team. Peer Reviews are indeed part of the European Statistical System (ESS) strategy to implement the ESS CoP. Each NSI is expected to provide information as requested by a standard self-assessment questionnaire. Following this an expert team visits the office to meet NSI representatives and main stakeholders. Peer Reviews result in a compliance report and the listing of a set of Improvement Actions which need to be followed up by the NSI. The next round of Peer Reviews is planned to be carried out in 2022.

### **Sub-Concept 11.2: Quality Assessment**

The collected, compiled and published data on aquaculture activity in Malta are thoroughly checked throughout all stages of the statistical production system.

A system of checks both across time and across different administrative sources is in place to ensure a sound level of accuracy. Long-standing procedures carried out by the unit as well as several cross-checks conducted against any available audited financial statements, provides the NSO with enough confidence to publish aggregated aquaculture data on an annual basis.

## **CONCEPT 12 - RELEVANCE**

### **Sub-Concept 12.1: User needs**

Main users of aquaculture statistics include:

- Media
- Policy makers
- Academics
- Eurostat
- Other international organisations
- Data suppliers themselves
- General public

### **Sub-Concept 12.2: User satisfaction**

The last User Satisfaction Survey was held in 2014 with the aim to collect information about key users' satisfaction with statistical output.

The NSO keeps record of the number of News Releases and publications disseminated on its website; the users to whom statistical products are provided; as well as the number of requests that are processed every year.

### **Sub-Concept 12.3: Data Completeness**

In general, the content of the statistical data satisfies the data-requirements on the subject.

## **CONCEPT 13 – ACCURACY AND RELIABILITY**

### **Sub-Concept 13.1: Overall accuracy**

A system of checks both across time and across different administrative sources is in place to ensure a sound level of accuracy. Long-standing procedures carried out by the unit as well as several cross-checks conducted against any available audited financial statements, provides the NSO with enough confidence to publish aggregated aquaculture data on an annual basis.

### **Sub-Concept 13.2: Sampling errors**

Not applicable. Data collection is census based.

### **Sub-Concept 13.3: Non-sampling error**

Main sources of non-sampling error relate to measurement and processing errors. Measurement errors are minimised through various cross-checks across time, as well as through several automatic validations and processing. The data inputted is re-checked by other statistical officers within the unit.

#### **Sub-Concept 13.3.1: Coverage error**

Not applicable.

##### **Sub-Concept 13.3.1.1: Over Coverage**

Not applicable.

### **Sub-Concept 13.3.1.2: Common Units Proportion**

Not applicable.

### **Sub-Concept 13.3.2: Measurement error**

Measurement errors are minimised through various cross-checks across time, as well as through several automatic validations and processing.

### **Sub-Concept 13.3.3: Non-response error**

Not applicable.

#### **Sub-Concept 13.3.3.1: Unit non-response**

Not applicable.

#### **Sub-Concept 13.3.3.2: Item non-response**

Not applicable. If some questions are unanswered, the relevant fish farm is contacted to ascertain full response.

#### **Sub-Concept 13.3.4: Processing error**

A series of checks (including automatic validation checks) are in place along the compilation process to minimise the processing errors; including the re-checking of the data-input by other statistical officers within the unit.

#### **Sub-Concept 13.3.5: Model assumption error**

Not applicable.

## **CONCEPT 14 – TIMELINESS AND PUNCTUALITY**

### **Sub-Concept 14.1: Timeliness**

The compilation of the data starts with the data-request in mid-June of each year. The collection process usually takes around two months to complete; depending on the availability of the final audited financial statements to the same respondents. Upon receipt of the data, each piece of information is validated and, if necessary, queried with the respondent through a written request. A follow-up process is eventually triggered until enough explanations related to the raised queries are provided. The aquaculture data are then released on the scheduled date and time specified in the afore-mentioned online calendar.

### **Sub-Concept 14.2: Punctuality**

Every annual release on the subject has, to date, been published as scheduled and on time.



## **CONCEPT 15 – COHERENCE AND COMPARABILITY**

### **Sub-Concept 15.1: Comparability – Geographical**

Although there is a comparable methodology adhered to by all countries, in the annual quality report submitted to Eurostat, this item is not required since it is assessed by Eurostat.

### **Sub-Concept 15.2: Comparability – Over Time**

Upon receipt, all data are compared with the latest years' records. A one-time break in series was inevitable to ensure conformity with the guidelines set by the European System of Accounts (ESA) 2010. Time-series data were adjusted retrospectively to allow for comparability and analysis across time.

### **Sub-Concept 15.3: Coherence – Cross Domain**

Not applicable.

#### **Sub-Concept 15.3.1: Coherence – Sub-Annual and Annual statistics**

Not applicable.

#### **Sub-Concept 15.3.2: Coherence – National Accounts**

Aquaculture statistics are coherent with National Accounts. Guidelines within the European System of Accounts (ESA) 2010 are followed. Time-series data were adjusted retrospectively to allow for comparability and analysis across time.

### **Sub-Concept 15.4: Coherence – Internal**

Not applicable.

## **CONCEPT 16 – COST AND BURDEN**

Not available.

## **CONCEPT 17 – DATA REVISION**

### **Sub-Concept 17.1: Data revision – Policy**

Revision of data is compliant with the ESS Code of Practice principles. Any required revisions are carried out in the following year.

At the NSO, there is currently no internal policy governing revisions that occur for all statistics produced. Nonetheless, a revisions policy is being drafted to safeguard a coordinated revisions system across statistical domains.

This policy will take account of the need and causes for revisions; time and frequency of revisions; data and other statistical products affected by such revisions; and length of periods revised.

### **Sub-Concept 17.2: Data revision – Practice and Data Revision**

Any required revisions are carried out in the following year.

## **CONCEPT 18 – STATISTICAL PROCESSING**

### **Sub-Concept 18.1: Source data**

The data are collected through a direct-reporting system based on a survey form distributed to all the operators active in the aquaculture industry.

### **Sub-Concept 18.2: Frequency of data collection**

Annual.

### **Sub-Concept 18.3: Data Collection**

The data are gathered through a tailored survey form distributed to all the enterprises in the industry via e-mail.

### **Sub-Concept 18.4: Data Validation**

Data are checked, re-checked and validated throughout the collection, compilation and presentation processes. Checks are made both with internal administrative data sources as well as with any available external administrative sources.

### **Sub-Concept 18.5: Data Compilation**

The unit ensures that information about all the requested variables in the survey form is duly provided. Any adjustments are carried out at a later stage after consulting with the data provider. No imputations are carried out.

### **Sub-Concept 18.5.1: Imputation**

Not applicable.

### **Sub-Concept 18.6: Adjustment**

Not applicable. The only adjustments that are carried out refer to the afore-mentioned alterations/updates that arise during the checking processes.

### **Sub-Concept 18.6.1: Seasonal Adjustment**

Not applicable.

## **CONCEPT 19 - COMMENTS**

No further comments.