

# Statistics on agricultural land prices and rents

Handbook  
2020 Edition





## Preface

In recent years, the European Commission has acknowledged the need for comparable statistics on agricultural land prices and rents in the EU. Actions were undertaken to develop a common Target Methodology for data collection on Agricultural Land Prices and Rents (ALPR). A first draft of the methodology for land prices and rents was presented at the Working Group on Agricultural Accounts and Prices in December 2008 and the final version of the common methodology was discussed and agreed between Eurostat, DG AGRI and the Member States during the meeting of the Working Group from December 2010. In February 2017, in the light of the pilot implementation, a Common Methodology for establishing statistics on agricultural land prices and rents was agreed by the Working Group. In October 2018, an ESS agreement was signed, covering the binding elements of the methodology.

The present handbook is drafted based on the information from the agreed 2017 Common methodology, considering as well the information from the analysis of the national metadata and the preparation of the EU metadata for ALPR.

The present handbook presents the methodology of Agricultural Land Prices and Rents.

## Abbreviations and acronyms

Code	Description
ESS	European Statistical system
EU	European Union
EWA	EDAMIS Web Application
EWP	EDAMIS Web Portal
FSS	Farm Structure Survey
IFS	Integrated Farm Statistics
ALPR	Agricultural Land Prices and Rents
MoA	Ministry of Agriculture
MS	Member State(s)
NE	Non existing
NS	Non-significant
NSI	National Statistical Institute
NUTS	Nomenclature of Territorial Units for Statistics

# Table of contents

<b>Preface .....</b>	<b>1</b>
<b>Abbreviations and acronyms .....</b>	<b>2</b>
<b>Table of contents.....</b>	<b>3</b>
<b>1 Introduction.....</b>	<b>6</b>
1.1 <i>Aim.....</i>	6
1.2 <i>Structure of the handbook.....</i>	6
1.3 <i>Co-operation with Member States.....</i>	7
1.4 <i>User needs assessment .....</i>	7
1.5 <i>Legal basis.....</i>	7
1.6 <i>Changes from previous versions.....</i>	7
<b>2 Methodology .....</b>	<b>8</b>
2.1 <i>General remarks .....</i>	8
2.2 <i>Coverage.....</i>	8
2.2.1 <i>Field of observation .....</i>	8
2.3 <i>Data sources.....</i>	9
2.3.1 <i>Direct observation.....</i>	10
2.3.2 <i>Collection via a network of experts.....</i>	10
2.3.3 <i>Administrative sources.....</i>	10
2.4 <i>Treatment of NS/NE variables.....</i>	10
2.5 <i>Precision requirements .....</i>	10
2.6 <i>Reference period .....</i>	11
2.7 <i>Reporting frequencies.....</i>	11
2.8 <i>Units of measurement.....</i>	11
2.8.1 <i>Currency.....</i>	11
<b>3 Classification .....</b>	<b>12</b>
3.1 <i>Specific definitions and concepts .....</i>	12
3.1.1 <i>Land prices .....</i>	12
3.1.2 <i>Land rents .....</i>	13
<b>4 Data processing.....</b>	<b>15</b>
4.1 <i>Introduction.....</i>	15
4.2 <i>Revision.....</i>	15
4.3 <i>Validation .....</i>	15
4.4 <i>Calculation of national aggregates.....</i>	15
4.4.1 <i>Land prices aggregation at country level.....</i>	15
4.4.2 <i>Land rents aggregation at country level .....</i>	16

<b>5</b>	<b>Data structure .....</b>	<b>17</b>
5.1	<i>Introduction.....</i>	17
5.2	<i>Dataset structure definition.....</i>	17
<b>6</b>	<b>Data transmission.....</b>	<b>18</b>
6.1	<i>Deadlines for data submission.....</i>	18
6.2	<i>Templates for data submission.....</i>	18
6.3	<i>Transmission method (EDAMIS).....</i>	18
6.3.1	<i>Eurostat single entry point.....</i>	18
6.3.2	<i>EDAMIS webforms .....</i>	19
6.4	<i>Completeness.....</i>	19
6.5	<i>Flags for data transmission .....</i>	19
6.5.1	<i>Observation status flags .....</i>	19
6.5.2	<i>Confidentiality status flags.....</i>	20
<b>7</b>	<b>Data validation .....</b>	<b>21</b>
7.1	<i>Introduction.....</i>	21
7.2	<i>Validation procedure.....</i>	22
7.2.1	<i>Completeness.....</i>	23
7.2.2	<i>Codes .....</i>	23
7.3	<i>Validation rules.....</i>	23
7.4	<i>Methodology compliance.....</i>	24
<b>8</b>	<b>Quality reports .....</b>	<b>25</b>
8.1	<i>Introduction.....</i>	25
8.2	<i>Communication of methodological changes.....</i>	25
8.3	<i>Quality reports.....</i>	25
8.3.1	<i>ESS Standard for Quality Reports (ESQRS 2.0) .....</i>	26
8.3.2	<i>Report structure.....</i>	26
<b>9</b>	<b>Data dissemination.....</b>	<b>27</b>
9.1	<i>Confidentiality.....</i>	27
9.1.1	<i>Data storage .....</i>	27
9.2	<i>Flags for data dissemination .....</i>	27
9.3	<i>Codes in data dissemination.....</i>	28
9.4	<i>Calculation of EU aggregates.....</i>	29
9.4.1	<i>EU 28 data aggregation .....</i>	29
9.5	<i>Production of dissemination products.....</i>	29
9.5.1	<i>Conversion into EURO.....</i>	29
9.6	<i>Disseminated data.....</i>	29
<b>Annex I – Example aggregation.....</b>		<b>30</b>
<b>Annex II – Description of the templates used for the data transmission .....</b>		<b>31</b>

<b>Annex III Structure of the Quality Reports.....</b>	<b>32</b>
<b>Annex IV Transmission method (ESS-MH) .....</b>	<b>35</b>
Logging in with EU Login .....	35
Creating an EU Login .....	36
Editing the metadata handler template.....	37
Validating the quality report.....	37
ESS-MH support .....	37
<b>Bibliography .....</b>	<b>38</b>

# 1

## Introduction

### 1.1 Aim

The objective of an EU agricultural land prices and rents methodology is to collect comparable statistical information on the prices and rents of agricultural land for agricultural use in the European Union, as land is a primary resource in terms of agricultural production.

The diversity of the data sources emphasise the importance of implementing a harmonised methodology. This Handbook intends to provide a support to the data providers and users by describing the collection, processing and data dissemination.

The main aims of the present handbook are:

- to provide the Member States with common concepts and definitions in order to improve harmonisation and comparability of the data produced in the Member States and published by Eurostat, and
- to provide the data users with methodological and conceptual clarifications for improving data interpretation.

The statistics of land prices and rents, expressed as absolute prices, facilitate an insight into various key issues (sales versus rental markets, effect of new users, CAP changes, environmental pressures, etc.). In addition, they provide information on the relationship between the farmland value and the agricultural income as well as on risks for farm viability due to land prices and rents. Furthermore, regional data enable the identification of the situations where land prices are a driving factor in terms of structural change

The land price statistics represents the value of one hectare of free agricultural land in the reference period (calendar year).

The agricultural land rent represents the price of renting one hectare of agricultural land in the reference period (calendar year).

### 1.2 Structure of the handbook

This Handbook is based on the Eurostat's template and on a standardised table of content.



## 1.3 Co-operation with Member States

The national authorities of the Member States (National Statistical Offices and/or Ministries of Agriculture) are responsible for collecting annual information on land (absolute) prices and rents, and for calculating the corresponding average prices at national level.

The Working Group on Agricultural Accounts and Prices (AAP) discusses all questions relating to EU agricultural Land Price and Rents statistics, which usually meets annually in Luxembourg. The Member States are represented in this Working Party by officials of the National Statistical Service and/or the Ministry of Agriculture responsible for statistics on Agricultural Accounts and Prices.

Matters of fundamental importance related to land prices and rents issue are also placed on the agenda of the Directors' Group for Agricultural Statistics (DGAS), which meets also annually, and to which the Member States are represented by the persons in charge of agricultural statistics as a whole.

## 1.4 User needs assessment

In terms of user needs, key users such as DG AGRI (Directorate-General of the European Commission for Agriculture and Rural Development), DG GROW (Directorate-General of the European Commission for Internal Market, Industry, Entrepreneurship and SMEs), other European Commission services and National Accounts need to follow developments in the land market and to evaluate the impact of policies on it. For this purpose, the provision of data at the Member State level on rents and land prices is a necessity.

The enlargement of the EU in the early part of the 21<sup>st</sup> Century increased the need for data on land prices. The main use of these statistics is to make comparisons between Member States on the level of and the trend in agricultural land prices and rents (selling, purchase price/rental price). Agricultural land prices and rents data are published every year in the Annual Report of DG AGRI and also at regular intervals at national level in several Member States.

## 1.5 Legal basis

EU agricultural land price and rent statistics are based on an ESS agreement of October 2018 between Eurostat and the Member States.

## 1.6 Changes from previous versions

The current Handbook follows closely the content of the final Common Methodology agreed between Eurostat, DG AGRI and the Member States during the meeting of the Working Group in December 2010 and updated in February 2017. However, an adjustment to the standard structure, as well as further development and update of the content has been performed.

# 2

## Methodology

### 2.1 General remarks

Land is the main mean of production in agriculture, it is the base factor of agricultural production, and it has specific characteristics determined by different elements: soil, hydrology, biology, climate, etc., which determine a certain value and price. Based on the price, the land is included in the state wealth, circulates in the area of goods and capital, the land market, while land price is included as main component next to rent, dividends, etc. The prices of agricultural land in the EU can vary quite considerably amongst and within countries.

### 2.2 Coverage

The data sources used for land prices and rents should enable information to be provided at least at NUTS-level-2. To calculate the average price, it is up to the Member States to decide whether to apply a threshold to the size of land exchanged or to cut-off the extreme prices in order to exclude outliers from the collected information.

The core sector that is covered is the agriculture sector. Thus, all units with an agricultural (primary or secondary) activity are covered, regardless of whether the purpose of the units is commercial. Non-economic activity (kitchen gardening for own consumption only) is not covered. The other sectors covered might include those activities involved in the land transactions for selling prices, such as notaries, public land management agencies, real estate companies, etc.

#### 2.2.1 Field of observation

##### 2.2.1.1 LAND PRICES

The price of one hectare of agricultural land sold/purchased for agricultural use is defined as observation unit. The field of observation should include arable land and/or permanent grassland sold to (or purchased from) private owners or estate agencies who sell land for agricultural use. In order to keep the price of agricultural land as pure as possible, transactions for non-agricultural purposes (e.g. construction sites) and transactions of land between relatives should be excluded.

The categories of land for which prices are observed are the arable land and the permanent grassland. Member States are not obliged to provide data for land categories below 5 per cent of utilised agricultural land based on the latest Farm Structure Survey data.

- **Arable land** - land worked (ploughed or tilled) regularly, generally under a system of crop rotation (as defined for the latest Farm Structure Survey).

For those Member States for which (i) the irrigable arable land area<sup>1</sup> exceeds 15 percent of the total Utilised Agricultural Area (UAA) according to the latest Farm Structure Survey (FSS) or Integrated Farm Statistics (IFS) data available and (ii) the differences in price per hectare show significant higher level (more than 50 percent) in comparison with the non-irrigable arable land, the information provided should also be broken down into irrigable and non-irrigable arable land.

The distinction between irrigable and non-irrigable land area is made on the basis of the definitions below:

- **irrigable arable land** – arable land area which could, if necessary, be irrigated in the reference year using the equipment and the quantity of water normally accessible;
- **non-irrigable arable land** - arable land area which cannot be irrigated due to the lack of access to water for irrigation<sup>2</sup>.
- **Permanent grassland** - land used permanently (for five years or more) to grow herbaceous forage crops, through cultivation (sown) or naturally (self-seeded) and which is not included in crop rotation.

### 2.2.1.2 LAND RENTS

The renting price of one hectare of arable land and/or permanent grassland rented for agricultural use is defined as observation unit. The categories of land for which rent prices are observed are the arable land and the permanent grassland.

- **Arable land** - land worked (ploughed or tilled) regularly, generally under a system of crop rotation. (as defined for the latest Farm Structure Survey).
- **Permanent grassland** - land used permanently (for five years or more) to grow herbaceous forage crops, through cultivation (sown) or naturally (self-seeded) and that is not included in crop rotation.

All Member States should provide aggregated figures for arable land/permanent grassland. Where the detailed prices for renting arable land or permanent grassland are available and appropriate data for separate weights exist, they shall be provided. They are otherwise non-mandatory.

## 2.3 Data sources

Bearing in mind the general objective established in the common methodology, the statistical data can be collected by means of (not necessarily in order of priority):

- Direct observation of land prices and rents
- Statistical data collection via a network of experts

<sup>1</sup> Although the area of irrigable land and arable land are provided by FSS/IFS, the area of irrigable arable land is not necessarily provided. Member States concerned may need to use additional sources.

<sup>2</sup> Represents the price of arable land, which is not included under irrigable arable land.

- Use of administrative data

In some cases, Member States could combine one or both of the first two data collection methods mentioned above with the administrative data sources.

### 2.3.1 Direct observation

The land prices and rents can be collected by direct observation per category of agricultural land described above.

In this case, the agricultural holding is contacted directly and asked about prices of actual transactions related to the holding or about an average theoretical price/rent. The data can be collected through separate surveys or be integrated into a system of surveys that already exists such as land use surveys, agricultural economic indicators or farm structure surveys.

#### 2.3.1.1 LAND PRICES

Depending on the data sources in each Member State, these prices can be collected from the owner of agricultural land who is selling agricultural land for agricultural use (selling prices) or from the physical person/legal entity who is purchasing agricultural land for agricultural use (purchase prices).

#### 2.3.1.2 LAND RENTS

The renting prices should be collected from the person renting the agricultural land for agricultural use (renting price paid).

### 2.3.2 Collection via a network of experts

The practice of using "expert estimates" can involve experts from regional statistical offices, local representations of the ministries of agriculture, agents from the real estate agencies at the regional level, the agricultural advisory service, among others.

### 2.3.3 Administrative sources

Various administrative data sources can be used, in particular tax records of tax authorities, records from real estate agencies, notarial records or various other administrative registers.

## 2.4 Treatment of NS/NE variables

The countries are exempted from transmitting data broken down into irrigable and non-irrigable arable land, if the irrigable arable land area is not exceeding 15 per cent of the total UAA (according to the latest FSS/IFS data available) and the price differences per hectare show a less significant level (less than 50 percent) in comparison with the non-irrigable arable land price per hectare.

Where the number of transactions is insufficient in a given area for a type of land, the figures can be considered as non-significant.

## 2.5 Precision requirements

To calculate the average price, it is up to the Member States to decide whether to apply or not a threshold to the size of land exchanged, to cut-off the extreme prices in order to exclude outliers from the collected information.

## 2.6 Reference period

The reference period for land prices and rents is the calendar year.

## 2.7 Reporting frequencies

Agricultural land price and rent data are provided annually.

The deadlines agreed between Eurostat and Member States for data transmission are:

Collections	Transmission date via eDamis	
Land prices	9 months	After the end of the reference period
Land rents	+1 year	After the end of the reference period

## 2.8 Units of measurement

### 2.8.1 Currency

The prices and rents data are provided in national currency and are converted into Euro by using the corresponding annual exchange rate, to enable comparisons among Member States. Agricultural land prices are expressed in Euros per hectare.

# 3

## Classification

### 3.1 Specific definitions and concepts

#### 3.1.1 Land prices

##### Land price

Price of one hectare of agricultural land sold/purchased for agricultural use

According to the market price concept, the price of agricultural land (arable land, permanent grassland) is the price received/paid by the holder in a free trade without deduction of taxes or levies and without the inclusion of subsidies. In practice, this means the actual price agreed upon by the persons closing the transaction. Any tax the seller may be obliged to subsequently pay as a result of selling the land, such as capital gains tax, would not be deducted from the price.

The selling/purchase price of land

##### Includes

- arable land sold to (or purchased from) private owners or estate agencies who sell land for agricultural use
- permanent grassland sold to (or purchased from) private owners or estate agencies who sell land for agricultural use
- taxes and levies

##### Excludes

- costs of transferring the ownership (therefore lawyer's fees, registration taxes and real estate tax are not included in the land price);
- deductible VAT;
- the entitlements related to the land;
- the value of any monetary compensation received by farmers for the sale/acquisition of the Utilised Agricultural Area (UAA);
- the value of any building on the sold/purchased agricultural land;
- inheritance transfers.

**Arable land (ARAT)**

Land worked (ploughed or tilled) regularly, generally under a system of crop rotation

**Crop rotation**

Crop rotation is the practice of alternating crops grown on a specific field in a planned pattern or sequence in successive crop years so that crops of the same species are not grown without interruption on the same field. In a rotation the crops are normally changed annually, but they can also be multi-annual.

Although there is no limit to the number of crops being used in a crop rotation, nor in the amount of time that a rotation takes to complete, it is commonly accepted to use a threshold of 5 years to distinguish between arable land and permanent crops or permanent grassland. This means that, if a plot is used for the same crop for 5 years or more, without in the meantime removing the preceding crop and establishing a new one, then this plot is not considered to be in crop rotation and therefore is not to be taken as part of arable land.

**Special cases**

There are crops that do not fit this pattern and are treated differently. For example hops has been chosen to always be an arable crop, despite being perennial and often being renewed at intervals beyond 5 years, and berries are considered permanent crops despite being renewed sometimes annually.

**Total irrigable area (ARAIB)**

The total irrigable area is the total maximum utilised agricultural area, which could be irrigated in the reference year using the equipment and the quantity of water normally available on the holding.

**Non-irrigable area (ARAXIB)**

The non-irrigable area is the arable land area which cannot be irrigated due to lack of access to water for irrigation.

**Permanent grassland (J0000)**

The permanent grassland is the land used permanently (for several consecutive years, normally 5 years or more) to grow herbaceous fodder, forage or energy purpose crops, through cultivation (sown) or naturally (self-seeded), and which is not included in the crop rotation on the holding.

**3.1.2 Land rents****Land rent**

The land rent corresponds to the payment made to the owner of the land in return for making the assets (agricultural land) available to another physical person/legal person/legal entity

No distinction is made taking into consideration the duration of the renting contract/agreement and the time for contracting. Therefore, all rents for land (even if the land is rented for more than one year) should be taken into account for the calculation of average rent.

---

### The rental price of agricultural land

#### Includes

- the actual rent price agreed upon by the persons closing the transaction
- related levies/taxes
- payments in kind<sup>3</sup> valued at the current year price

#### Excludes

- entitlements related to the land
  - deductible VAT
  - rentals of buildings or dwellings situated on the land
  - any other expenses related to other assets except the agricultural land (current maintenance expenditure on buildings, buildings insurance, depreciation of buildings, rents paid for the professional use of non-residential buildings etc.)
- 

<sup>3</sup> The contracts concerning the payment in kind, partially or solely, fall within the scope.



# 4

## Data processing

### 4.1 Introduction

This chapter refers to specific instructions for processes that are run by Member States.

### 4.2 Revision

Member States may revise the provisional time series at any time. The latest FSS/IFS results are used to weight the statistics. For the FSS/IFS years, the Member States may provide first results based on the previous FSS/IFS data and revise them after having new data available. When new data are received from a Member State, the updates are made in Eurostat public database.

### 4.3 Validation

Eurostat checks the agricultural land price and rent data which it receives from the Member States. Any queries are dealt with on a bilateral basis with the competent experts in the Member States.

### 4.4 Calculation of national aggregates

#### 4.4.1 Land prices aggregation at country level

Agricultural land prices at NUTS 0 and NUTS I levels are aggregated by calculating a weighted average using the regional (NUTS II) average price and the information on area (NUTS II) provided by the latest data from FSS/IFS by category of land (arable land, permanent grassland). Agricultural land prices for year  $n$ ,  $n+1$  and  $n+2$ , and possibly  $n+4$  and  $n+5$  (at the end of year 2021, the latest FSS/IFS available data will still be from FSS 2016 in several Member states) will be weighted by the FSS/IFS data of year  $n$ .

The average price could be expressed in the form:

$$\bar{p} = \frac{\sum_i \bar{p}_i \omega_i}{\sum_i \omega_i}$$

where

$p_{ij}$  is the average price of a hectare in the  $j^{\text{th}}$  NUTS2 region within the  $i^{\text{th}}$  NUTS1 region

$\bar{p}_i$  is the average price in the  $i^{\text{th}}$  NUTS1 region

$\bar{p}$  is the average price at national level

$w_{ij}$  is the area of arable land (or the permanent grassland) for the  $j^{\text{th}}$  NUTS2 region within the  $i^{\text{th}}$  NUTS1 region

$\sum_j \omega_{ij} = \omega_i$  is the weight of the  $i^{\text{th}}$  NUTS1 region measured by the hectares of arable land or permanent grassland

#### 4.4.2 Land rents aggregation at country level

The aggregation of agricultural rents at NUTS 0 and NUTS I levels is made by calculating a weighted average using the regional (NUTS II) average renting price and the information on rented area (NUTS II) provided by the latest data available from the FSS/IFS. Agricultural land rents for year  $n$ ,  $n+1$  and  $n+2$ , and possibly  $n+4$  and  $n+5$  (at the end of year 2021, the latest FSS/IFS available data will still be from FSS 2016 in several Member states) will be weighted by the FSS/IFS data of year  $n$ .

##### Note

The method for aggregation of either the land prices or the land rents data needs to be distinguished, as both forms are using the latest available FSS/IFS data and, therefore, the defined FSS/IFS characteristics. The measured land prices are extrapolated to the whole arable and permanent grassland area, while the land rents are extrapolated to the only rented utilised agricultural area.

An example for the aggregation of land prices information from NUTS 2 to NUTS 0 data is presented in Annex I.

# 5

## Data structure

### 5.1 Introduction

The Data Structure Definition (DSD) describes how the information is structured in a specific dataset. An agreed structure is important, because it enables to design the content of the files to be transmitted. It clarifies any communication regarding data transmission and referring to the codes, rather than to the translated labels.

### 5.2 Dataset structure definition

Land prices and rents data are transmitted by the Member States to Eurostat through EDAMIS (see 6.3.2) with the Webforms interface (EWF), which handles the data structure definition.

The data structure definitions of the grouped data sets PRAG\_LANPRI\_A and PRAGLANREN\_A can be found on the EDMIS website (limited access) at <https://webgate.ec.europa.eu/edamis>.

Annex II provides the description of the templates used for the data transmission.

# 6

## Data transmission

### 6.1 Deadlines for data submission

Agricultural land price and rent data are provided annually. The deadline agreed between Eurostat and the Member States for the transmission is, for agricultural land prices, nine months after the end of the reference year, and for rent statistics the deadline is one year after the end of the reference year.

### 6.2 Templates for data submission

The template description is available to all EDAMIS users (but only to them) at [https://webgate.ec.europa.eu/edamis/mis/index.cfm?TargetUrl=webform/disp\\_web\\_form\\_list&from=mis&iThemeSeq=-1&iDomainSeq=10000071&iDatasetSeq=-1](https://webgate.ec.europa.eu/edamis/mis/index.cfm?TargetUrl=webform/disp_web_form_list&from=mis&iThemeSeq=-1&iDomainSeq=10000071&iDatasetSeq=-1)

### 6.3 Transmission method (EDAMIS)

The tool to be used for delivery of data to Eurostat is Eurostat's data transmission program EDAMIS.

The EDAMIS Web Application (eWA) is installed in all National Statistical Institutes and a number of other organisations. A local coordinator is available in each NSI who can provide access to eWA and offer any assistance that might be necessary.

Where an EDAMIS Web Application is not available, data providers can use the EDAMIS Web Portal (eWP). This is an internet based solution, available through an internet browser, which does not require a local installation. The Eurostat EDAMIS support team will provide access.

For information concerning EDAMIS or data transmission to Eurostat in general, you can contact directly the support team ([estat-support-EDAMIS@ec.europa.eu](mailto:estat-support-EDAMIS@ec.europa.eu)).

#### 6.3.1 Eurostat single entry point

The Single Entry Point (SEP) concept is that data for all statistical domains should arrive at a central reception place in Eurostat, so that they can be automatically monitored, checked and delivered into the target production environment, with a set of common informatics tools. The SEP implies that incoming data files are identified as instances of a dataset which is included in the inventory of datasets to be transmitted by Member States to Eurostat. The aim of this activity is to ensure efficient, secure and monitored transmission of statistical data from Member States to Eurostat.

## 6.3.2 EDAMIS webforms

EDAMIS (Electronic Data files Administration and Management Information System) is an integrated set of tools for the transmission of statistics from Member States to Eurostat via the Single Entry Point. EDAMIS is installed in all the National Statistical Institutes (NSIs) and in several other organisations (ministries, agencies, central banks...). Data senders who do not have an EDAMIS installation at their disposal can connect to the EDAMIS Web Portal on internet and directly upload their data.

From the perspective of the Member States, there are two visible components of EDAMIS:

- EDAMIS Web Application (EWA): NSIs normally send data through EWA. This application is installed on one server at the NSI, and can be accessed by authorised NSI staff members on their intranet, through a web browser interface. EWA can also be used for fully automatic transmission of data files to Eurostat.
- EDAMIS Web Portal (EWP): Eurostat receives data from around 600 different national authorities. Unlike NSIs, many of these send small numbers of data files to Eurostat, so few that they cannot be expected to use applications which require a local installation. EWP is a web portal through which data files can be directly uploaded to Eurostat. This is a simple solution for national authorities other than NSIs that currently send data by email. EWP requires no local installation as it is used via a normal Internet connection and a web browser. Some Web Forms are also becoming available in EDAMIS for direct entry of small volume of data.

The Management Information System (MIS), accessed through the EDAMIS portal, gives also access to online traffic reports, which are updated in real time and show the actual reception date as well as the indicative deadline for each dataset occurrence. It also gives access to reports on datasets, users and organisations.

## 6.4 Completeness

Completeness is limited to the number of Member States who agree and can provide the agricultural land prices and rents statistics.

## 6.5 Flags for data transmission

### 6.5.1 Observation status flags

Observation status refers to particular information linked to the status of a single value in the data transmission. It transfers important information to Eurostat and/or the end users of the data. The observation status flags are listed and explained in Table 1.

Where the FSS/IFS areas are not yet available, or if these areas are provisional FSS/IFS results, the aggregates calculated on this basis must be flagged as provisional.

Table 1 – Observation status flags

Code value	Code description	Detailed explanation	Visible on the website
E	Estimated value	Observation obtained through an estimation methodology (e.g. to produce back-casts) or based on the use of a limited amount of data or ad hoc sampling and through additional calculations (e.g. to produce a value at an early stage of the production stage while not all data are available). This flag is used for both MS and Eurostat estimates in situations when estimates are calculated for missing data.	(Value) e
P	Provisional value	An observation is characterized as "provisional" when the source agency – while it bases its calculations on its standard production methodology – considers that the data, almost certainly, are expected to be revised.	(Value) p

## 6.5.2 Confidentiality status flags

The confidentiality status flag list is presented in Table 2. The possible confidential regional data are not expected to be transmitted by the Member States.

Table 2 – Confidentiality status flags

Code value	Code description	Detailed explanation	Visible on the website
C	Confidential statistical information	Confidential statistical information (primary confidentiality) due to identifiable respondents. Measures also should be taken to prevent not only direct access, but also indirect deduction or calculation by other users and parties, probably by considering and treating additional observations as "confidential" (secondary confidentiality management). No other use than the above mentioned is allowed.	:c

# 7

## Data validation

### 7.1 Introduction

Validation is a key task performed in all statistical domains.

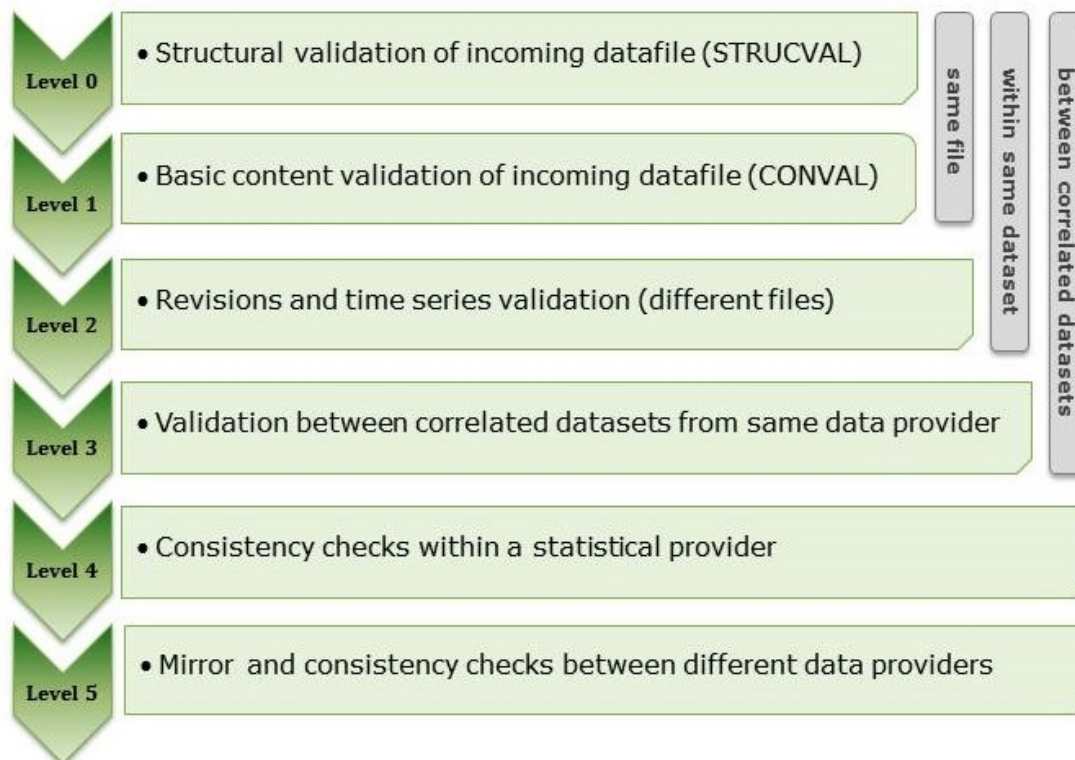
Data validation is implemented at several stages in the process:

- During data entry by the data providers (use of EDAMIS web forms),
- Before data loading in the Eurostat production database, manual validation supported by Excel worksheet formulas
- In the Eurostat production database (MDT)
- Out of the data process, compliance of the national methodology is checked against the EU requirements.

Efficient data validation is essential for high quality statistics. Guidelines for assigning validation responsibilities within the whole production chain, standard validation levels, a good selection of validation rules, standards for validation reports and error/warning messages and common documentation standards of the validation process are important elements of a good data validation policy.

In principle, all data validation processes share a common approach, as shown in the diagram below.

Figure 1 – Validation

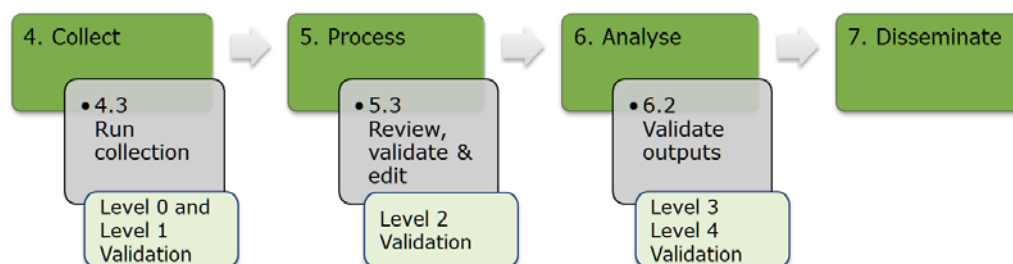


## 7.2 Validation procedure

Eurostat checks the agricultural land price and rent data which it receives from the Member States. Any queries are dealt with on a bilateral basis with the competent experts in the Member States.

The data supplied to Eurostat are validated according to the following procedure:

Figure 2 – Validation process (GSBPM notation)



Step 4.3 is the first sub-process of GSBPM where validation checks are accomplished. Those checks are purely related to one instance of a dataset.

Eurostat's EDAMIS web portal uses the corresponding SDMX files, therefore the data files are created automatically and this implies that they are syntactically correct and well formed. This corresponds to a level 0 structural validation.



Closely linked is a level 1 validation, which is a basic content validation. A basic checking of the records within the data file is done there. Firstly, a semantic check of the records itself is made. Then a set of validation rules for an intra-file check is applied.

Step 5.3 is the part of the process where a level 2 validation takes place. In GSBPM this sub-process is specifically referred to validation. The sub-process is in fact named 'review & validate'. This sub-process examines data to try to identify potential problems, errors and discrepancies. It can also be referred to as input data validation. At this stage of the process the new data file is checked against the corresponding time series. The new data are checked using predefined validation rules in a set order. In case problems are found, suspicious or erroneous data are marked for manual inspection. At this stage it is also checked whether all data for the reference year were reported, i.e. a check for completeness.

Step 6.2 is named 'Validate outputs'. In this sub-process, statisticians validate the quality of the outputs produced in accordance with a general quality framework and with expectations.

In practice this is an iterative process. After those validation steps data are disseminated.

## 7.2.1 Completeness

The completeness of the file is verified.

## 7.2.2 Codes

Codes used for categorical fields are checked against the list of valid codes given in this manual.

## 7.3 Validation rules

The data collection tool (webforms) covers the structural checks of the files to be transmitted to Eurostat. No additional pre-validation rule is carried out during data transmission.

The checks performed by Eurostat in the statistical production system (MDT) are especially the following:

- Completeness of the data files
  - Data are available for the required variables, types of land and regions;
- Detection of suspicious values
  - Breaks in the time series;
  - Difference with aggregates (of types of land, of regions) calculated based on the Eurostat FSS/IFS data;
  - The irrigable areas are more expensive than the non-irrigable areas.
- Detection of errors
  - The value of an aggregate is out of the range of the values of its components;
  - For an aggregate with two components, the weight for successive years is the same if the same FSS/IFS reference year is used.

## 7.4 Methodology compliance

Where evidence for non-compliance of the methodology is observed, Eurostat considers the received data as non-publishable. Especially, these data are not comparable with the other series, and therefore non-usable for aggregation of the EU results.

# 8

## Quality

### 8.1 Introduction

The requirements for quality reports on agricultural land prices and rents are still provisional. Information displayed in the present heading is therefore subject to updates, especially depending on the agreements to be discussed within the ESS.

The methods used should be well documented as part of a statistical metadata system. Metadata is systematic, descriptive information about the statistics produced that ensure the increase of cross-national comparability of the data. The first metadata collection on land prices and rents was made in 2017-2018. The metadata revisions should be encouraged every five years.

### 8.2 Communication of methodological changes

Each Member State shall inform the Commission (Eurostat) of any methodological or other change, including any deviation from the rules provided in Common Methodology for establishing statistics on agricultural land prices and rents that could have a considerable effect on the statistical data and data series.

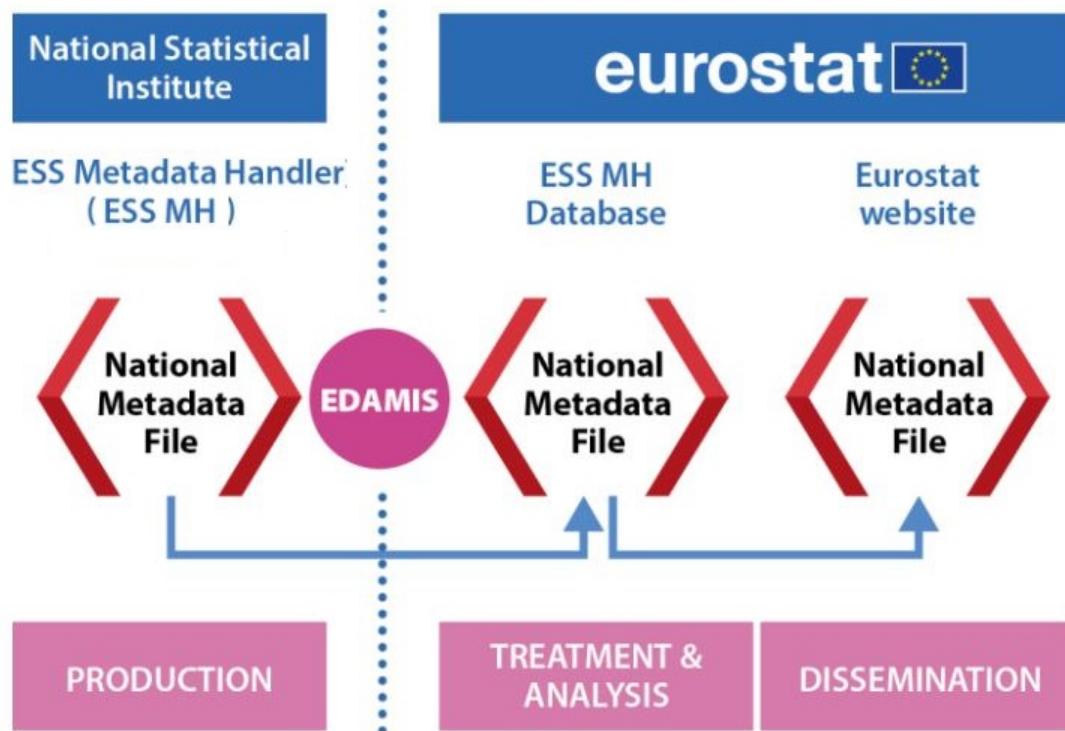
### 8.3 Quality reports

Member States shall provide the Commission (Eurostat) with reference metadata in accordance with the exchange standard specified by the Commission (Eurostat), i.e. the Euro SDMX Metadata Structure.

Member States shall provide the required metadata (including quality) in accordance with an exchange standard specified by the Commission (Eurostat). The metadata shall be provided to Eurostat through the single entry point.

The reports are published on Eurostat website ([https://ec.europa.eu/eurostat/cache/metadata/en/apri\\_lpr\\_esms.htm](https://ec.europa.eu/eurostat/cache/metadata/en/apri_lpr_esms.htm)) which follows the ESS Standard for quality reports.

Figure 3 – High level business process for reporting SDMX compliant reference metadata



### 8.3.1 ESS Standard for Quality Reports (ESQRS 2.0)

The ESS Standard for Quality Reports Structure (ESQRS) contains the description and representation of statistical metadata concepts to be used for providing detailed information for assessing data quality. The broad concepts used are compatible with the SDMX cross-domain concepts and with the common terminology as published within the SDMX Glossary (2016). The detailed quality concepts are based on the ESS Standard for Quality Reports (ESQR) from 2009.

The ESQRS is addressed to the European Statistical System. It is implemented at Eurostat and at national level: the application of the concepts and sub concepts at European level and at national level are provided in the [ESS Handbook for Quality Reports \(EHQR\) from 2014](#) and the [ESS Guidelines for the implementation of the ESS Quality and Performance Indicators from 2014](#).

The [Single Integrated Metadata Structure v2.0](#) combines both underlying reporting structures (ESMS 2.0 and ESQRS 2.0), and is the standard for quality reporting according to Article 12 of Regulation 223/2009 on European statistics.

### 8.3.2 Report structure

The proposed structure of metadata file provided in Annex III is based on the version of EURO-SDMX Metadata Structure (ESMS) 2.0 adapted for the collection of methodological information on land prices and rents. Only the main concepts, from which deviations could have a major impact on data series, or which could provide good information for a proper interpretation of the data, were kept in the presented version that was used for a first exercise of metadata collection in 2017-2018.

The detailed description of data transmission method in ESS Metadata Handler (MH) is provided in Annex IV to this Handbook.

# 9

## Data dissemination

### 9.1 Confidentiality

[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.

Since 2017, Eurostat does not collect any longer the confidential data for the normal statistical production of agricultural land prices and rents data. Nevertheless, some confidential data have been previously collected for developing the common methodology. These data were however simply discarded from the dissemination.

#### 9.1.1 Data storage

Data on agricultural land prices and rents are received from the Member States and automatically loaded in a production database, where they are processed and stored. Access to this database is restricted to staff members doing data validation and processing. When ready, the data are automatically transferred from MDT to the public dissemination database (Eurobase). It can be consulted by the external users, free of charge, through the Eurostat website (<https://ec.europa.eu/eurostat/web/agriculture/data/database>).

### 9.2 Flags for data dissemination

The flags used for data dissemination by Eurostat are the same as for the data transmission by the Member States.

The confidentiality flag ("C") cannot be combined with any other flag (e.g. with P) and any attempt to do so would be meaningless.

Table x – Observation status flags

Code value	Code description	Detailed explanation	Visible on the website
<b>E</b>	Estimated value	Observation obtained through an estimation methodology (e.g. to produce back-casts) or based on the use of a limited amount of data or ad hoc sampling and through additional calculations (e.g. to produce a value at an early stage of the production stage while not all data are available). It may also be used in case of experimental data (e.g. in the context of a pilot ahead of a full scale production process) or in case of data of (anticipated/assessed) low quality. If needed, additional (uncoded) information can be provided through (free text) "comments" at the observation level or at a higher level.	<b>(Value) e</b>
<b>P</b>	Provisional value	An observation is characterized as "provisional" when the source agency – while it bases its calculations on its standard production methodology – considers that the data, almost certainly, are expected to be revised.	<b>(Value) p</b>

### 9.3 Codes in data dissemination

As far as possible, the codes that are used for data collection are also used in data dissemination. The codes are available also in Eurobase (see Annex II)

## 9.4 Calculation of EU aggregates

### 9.4.1 EU 28 data aggregation

When data on land prices and rents are available for all EU Member States, the aggregation of the land prices and rents for the European Union as a whole is made by calculating a weighted average using the national data converted into Euro and the information on area provided by the latest FSS/IFS data available by category of land (arable land, permanent grassland).

## 9.5 Production of dissemination products

### 9.5.1 Conversion into EURO

The agricultural land price and rent data expressed in national currency are converted into Euro by Eurostat, using the annual exchange rate of the corresponding year, in order to allow comparisons between the Member States.

## 9.6 Disseminated data

Data on land prices and rents are stored in Eurobase and can be consulted by external users, free of charge, via the Eurostat web site. (<http://ec.europa.eu/eurostat/data/database>).

## Annex I – Example aggregation

NUTS0 level	NUTS1 level	NUTS2 level	Average price NUTS2 source=LP data collection	Arable land (ha) source=FSS	Average Price x Arable land (ha) (column 4 x 5)		Average price NUTS0 and NUTS1 (column 7 / 5)
1	2	3	4	5	6	7	8
		CO_11	9885,00	810.799	$810799 \times 9885$	=	8.014.748.115
		CO_12	1177,00	2.710	$2710 \times 1177$	=	3.189.670
	<b>CO_1</b>			<b>813.509</b>			<b>8.017.937.785</b>
		CO_21	4116,00	92.850	$92850 \times 4116$	=	382.170.600
		CO_22	6083,00	203.180	$203180 \times 6083$	=	1.235.943.940
		CO_23	5248,00	151.280	$151280 \times 5248$	=	793.917.440
	<b>CO_2</b>			<b>447.310</b>			<b>2.412.031.980</b>
<b>Country</b>				<b>1.260.819</b>			<b>10.429.969.765</b>
							<b>8272,3767</b>



## Annex II – Description of the templates used for the data transmission

### Land Prices

'LANDP2018' form template detail

General description for form template 'LANDP2018'

-----  
 Grouped dataset, "PRAG\_LANDPR\_A\_GR"  
 Dataset, "PRAG\_LANPRI\_A"  
 Form name, "LANDP2018"  
 Form description, "Land prices by NUTS 2, version 2018"  
 Data periodicity, "Annual"

PRAG\_LANDP

Code	Description
LANDP-ARA	Arable Land
LANDP-ARAI	Irrigable arable land
LANDP-ARAXI	Non-irrigable arable land
LANDP-J0000	Permanent grassland

### Land rents

'LANDR2018' form template detail

General description for form template 'LANDR2018'

-----  
 Grouped dataset, "PRAG\_LANDPR\_A\_GR"  
 Dataset, "PRAG\_LANREN\_A"  
 Form name, "LANDR2018"  
 Form description, "Land rents by NUTS 2, version 2018"  
 Data periodicity, "Annual"

PRAG\_LANDR

Code	Description
LANDR-ARA_J0000	Arable land and/or permanent grassland
LANDR-ARA	Arable Land
LANDR-J0000	Permanent grassland

## Annex III Structure of the Quality Reports

	<b>Concept Name</b>	<b>Descriptions</b>
<b>1</b>	<b>Contact</b>	Individual or organisational contact points for the data or metadata, including information on how to reach the contact points.
1.1	Contact organisation	The name of the organisation of the contact points for the data or metadata.
1.2	Contact organisation unit	An addressable subdivision of an organisation
1.3	Contact email address	
<b>2.</b>	<b>Metadata update</b>	The date on which the metadata element was inserted or modified in the database.
2.1	Metadata last certified	Date of the latest certification provided by the domain manager to confirm that the metadata posted are still up-to-date, even if the content has not been amended.
2.2	Metadata last posted	Date of the latest dissemination of the metadata.
2.3	Metadata last updated	Date of last update of the content of the metadata.
<b>3</b>	<b>Statistical presentation</b>	A general description of the statistical process, its outputs, and their evolution over time
3.1	Data description	Main characteristics of the data set described in an easily understandable manner, referring to the data and indicators disseminated.
3.2	Classification system	Arrangement or division of objects into groups based on characteristics which the objects have in common.
3.3	Coverage - sector	Main economic or other sectors covered by the statistics.
3.4	Statistical concepts and definitions	Statistical characteristics of statistical observations.
3.5	Statistical unit	Entity for which information is sought and for which statistics are ultimately compiled.
3.6	Statistical population	The total membership or population or "universe" of a defined class of people, objects or events.
3.7	Reference area	The country or geographic area to which the measured statistical phenomenon relates.
3.8	Coverage - time	The length of time for which data are available.
3.9	Base period	The period of time used as the base of an index number, or to which a constant series refers.
<b>4</b>	<b>Unit of measure</b>	The unit in which the data values are measured.
<b>5</b>	<b>Reference period</b>	The period of time or point in time to which the measured observation is intended to refer.
<b>6</b>	<b>Institutional mandate</b>	Set of rules or other formal set of instructions assigning responsibility as well as the authority to an organisation for the collection, processing, and dissemination of statistics.
6.1	Legal acts and other agreements	
6.2	Data sharing	
<b>7</b>	<b>Confidentiality</b>	A property of data indicating the extent to which their unauthorised disclosure could be prejudicial or harmful to the interest of the source or other relevant parties.
7.1	Confidentiality - policy	Legislative measures or other formal procedures which prevent unauthorised disclosure of data that identify a person or economic entity either directly or indirectly.
7.2	Confidentiality - data	Rules applied for treating the data set to ensure statistical confidentiality

	Concept Name	Descriptions
	treatment	and prevent unauthorised disclosure.
<b>8</b>	<b>Release policy</b>	Rules for disseminating statistical data to interested parties
8.1	Release calendar	The schedule of statistics release dates.
8.2	Release calendar access	Access to the release calendar information.
8.3	User access	The policy for release the data to users.
<b>9</b>	<b>Frequency of dissemination</b>	The time interval at which the statistics are disseminated over a given time period.
<b>10</b>	<b>Accessibility and clarity</b>	The conditions and modalities by which users can obtain, use and interpret data.
10.1	Dissemination format - News release	Regular or ad-hoc press releases in connection with the data.
10.2	Dissemination format - Publications	Regular or ad-hoc publications in which the data are made available to the public.
10.3	Dissemination format - online database	Information about on-line databases in which the disseminated data can be accessed.
10.4	Dissemination format - microdata access	Information on whether micro-data are also disseminated.
10.5	Dissemination format - other	Reference to the most important other data dissemination channel.
10.6	Documentation on methodology	Descriptive text and references to methodological documents available.
10.7	Quality management - documentation	Documentation on procedures applied for quality management and quality assessment.
<b>11</b>	<b>Quality management</b>	Systems and frameworks in place within an organisation to manage the quality of statistical products and processes.
11.1	Quality assurance	All systematic activities implemented that can be demonstrated to provide confidence that the processes will fulfil the requirements for the statistical output.
11.2	Quality management - assessment	Overall assessment of data quality, based on standard quality criteria.
<b>12</b>	<b>Relevance</b>	The degree to which statistical information meet current and potential needs of the users.
12.1	Relevance - User Needs	Description of users and their respective needs with respect to the statistical data.
12.2	Relevance - User Satisfaction	Measures to determine user satisfaction.
12.3	Completeness	The extent to which all statistics being needed are available.
<b>13</b>	<b>Accuracy</b>	<u>Accuracy</u> : closeness of computations or estimates to the exact or true values that the statistics were intended to measure
13.1	Accuracy - overall	Assessment of accuracy, linked to a certain data set or domain, which is summarising the various components into one single measure.
13.2	Sampling error	That part of the difference between a population value and an estimate thereof, derived from a random sample, which is due to the fact that only a subset of the population is enumerated.
13.3	Non-sampling error	Error in sample estimates that cannot be attributed to sampling fluctuations.
<b>14</b>	<b>Timeliness and punctuality</b>	
14.1	Timeliness	The length of time between the end of the reference period and the first data release to the public.

	<b>Concept Name</b>	<b>Descriptions</b>
14.2	Punctuality	Time lag between the actual delivery of the data and the target date when it should have been delivered.
<b>15</b>	<b>Coherence and comparability</b>	Adequacy of statistics to be reliably combined in different ways and for various uses and the extent to which differences between statistics can be attributed to differences between the true values of the statistical characteristics
15.1	Comparability - geographical	The differences in the regional methodologies and any issue regarding regional comparability
15.2	Comparability - over time	Information on the length of comparable time series, reference periods at which series breaks occur, the reasons for the breaks and their treatments
<b>16</b>	<b>Cost and Burden</b>	Cost associated with the collection and production of a statistical product and burden on respondents.
<b>17</b>	<b>Data revision</b>	
17.1	Data revision - policy	Policy aimed at ensuring the transparency of disseminated data, whereby preliminary data are compiled and are later revised.
17.2	Data revision - practice	Information on the data revision practice.
<b>18</b>	<b>Statistical processing</b>	
18.1	Source data	Characteristics and components of the raw statistical data used for compiling statistical aggregates. Indicate if the data set is based on a survey or on administrative data sources.
18.2	Frequency of data collection	The frequency with which the data are collected
18.3	Data collection	The method used to gather data from respondents
18.4	Data validation	Process of monitoring the results of data compilation and ensuring the quality of the statistical results
18.5	Data compilation	The operations performed on data to derive new information according to a given set of rules
18.6	Adjustment	The set of procedures employed to modify statistical data to enable it to conform to national or international standards or to address data quality differences when compiling specific data sets
<b>19</b>	<b>Comments</b>	Supplementary descriptive text which can be attached to data or metadata
<b>Related metadata</b>		
<b>Annexes</b>		

## Annex IV Transmission method (ESS-MH)

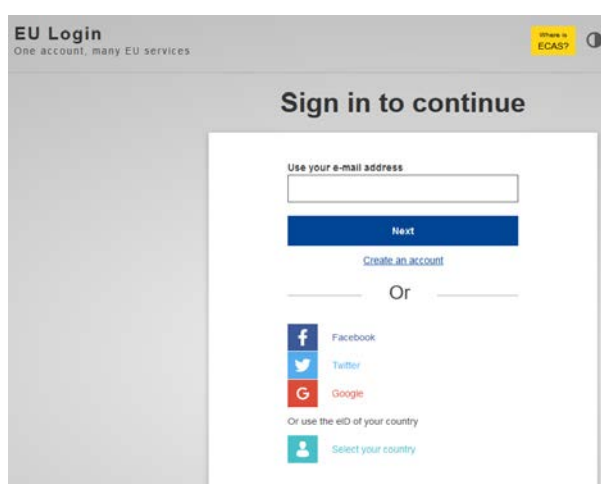
The methodological reports of the national system for Integrated Farms Statistics are to be submitted by filling the Quality Report template available at the ESS Metadata Handler at: <https://webgate.ec.europa.eu/estat/spe/metaconv/>

Due to issues encountered in the past, we advise to use Firefox or Google Chrome instead of Internet Explorer for editing your quality report.

### Logging in with EU Login

Use you EU Login UID and password to access the ESS Metadata Handler.

Figure 4 – Welcome screen of the ESS Metadata Handler





The EU login is using your email address as a user name. However, access to the ESS MH can currently only be provided using your unique identifier (UID).

This UID usually consists of the first 5 letters of your last name and the first 2 letters of your name, for example: Sarah Anybody -> anybosa.

You can find your UID after logging in to the EU Login

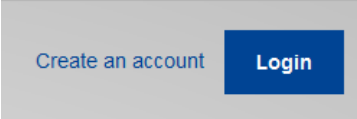
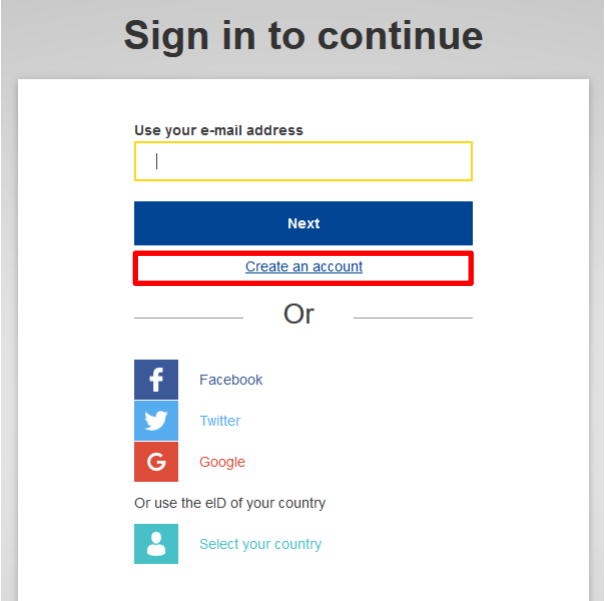
<p>Go to your name on the upper right side of the page and click on the icon next to it</p>	
---	--

Click on 'My Account' and subsequently on "my account details"	 <a href="#">My account details</a>
Find your UID on the third line of the details provided ("anybosa")	

Please send your EU Login UID to [ESTAT-metadata@ec.europa.eu](mailto:ESTAT-metadata@ec.europa.eu) to be granted access to the ESS MH. Note that no access can be granted without the UID. An email address is not sufficient.

## Creating an EU Login

If you do not have an EU Login yet, you can create an account


On the top right corner	
Or on the main screen	

## Editing the metadata handler template

Once you are logged in, you will find your country file prefilled with information from your previous quality report.

Please fill the report as thoroughly as possible.

For many of the concepts used, we have added guidelines, which you can find directly in the Metadata Handler.

Use the 'Edit' button to modify the prefilled answers.	
The (i) button gives access to further guidelines	

Do not forget to save all data entries and submit your final report for validation.

## Validating the quality report

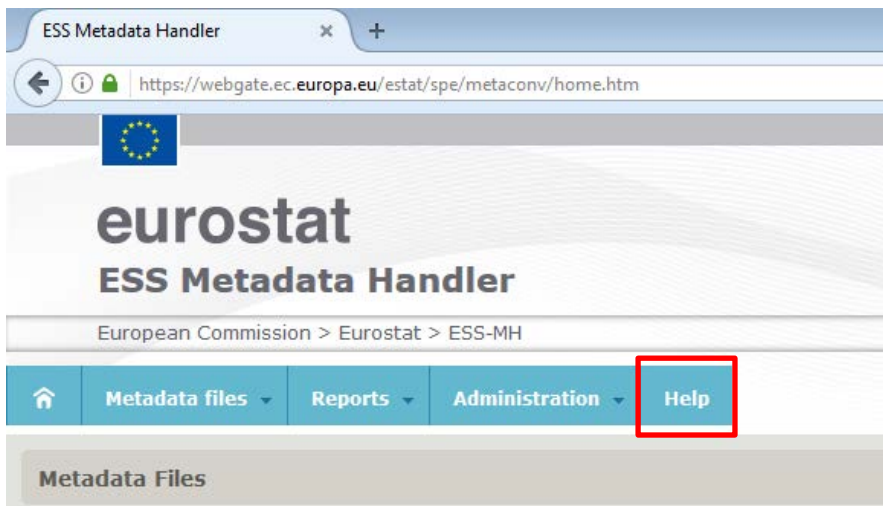
After validation, your national statistics quality report will be published on the Eurostat public database.

For any information that you do not want to be published, you must tick the appropriate box	<input checked="" type="checkbox"/> <b>Restricted from publication</b>
---	--

For further help on the EU Login go to <https://webgate.ec.europa.eu/cas/help.html>.

## ESS-MH support

Should you experience difficulties with the ESS MH tool, please contact [ESTAT-Metadata@ec.europa.eu](mailto:ESTAT-Metadata@ec.europa.eu).

<p>The general user guide of the ESS-MH can be found on the 'Help' page of the tool</p>	
---	--

## Bibliography

Common methodology on land prices and rents Version February 2017.