

**CENSUS\_INS21ES\_A\_ES\_2021\_0000**

National Reference Metadata in Euro SDMX Metadata Structure (ESMS)

Compiling agency: INE (National Statistics Institute)-Spain



## Eurostat 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](#)
- [14. Timeliness and punctuality](#)
- [15. Coherence and comparability](#)
- [16. Cost and Burden](#)
- [17. Data revision](#)
- [18. Statistical processing](#)
- [19. Comment](#)
- [Related Metadata](#)
- [Annexes](#) (including footnotes)

For any question on data and metadata, please contact: [Eurostat user support](#)

## 1. Contact

[Top](#)

### 1.1. Contact organisation

INE (National Statistics Institute)-Spain

<b>1.1.1. Responsible party</b>	INE (National Statistics Institute)-Spain
<b>1.1.2. Responsible party role</b>	Resource Provider Custodian Owner Distributor Originator Point of Contact Processor Publisher
<b>1.2. Contact organisation unit</b>	Census Area  Population Statistics Directorate
<b>1.5. Contact mail address</b>	Instituto Nacional de Estadística  Avenida de Manoteras 50-52 - 28050 Madrid

<b>2. Metadata update</b> <a href="#">Top</a>	
<b>2.1. Metadata last certified</b>	19/12/2022
<b>2.2. Metadata last posted</b>	19/12/2022
<b>2.3. Metadata last update</b>	19/12/2022

<b>3. Statistical presentation</b> <a href="#">Top</a>	
<b>3.1. Data description</b>	
Number of persons in each 1km2 of the European grid	
<b>3.1.1. Resource title</b>	
Number of persons in each 1km2 of the European grid	

<b>3.1.2. Resource abstract</b>
Number of persons in each 1km2 of the European grid
<b>3.1.3. Resource type</b>
Spatial data set series
<b>3.1.3.1. Additional information if 'spatial data set' is marked</b>
<a href="https://data.europa.eu/en">https://data.europa.eu/en</a>
<b>3.1.4. Resource locator</b>
<b>3.1.5. Unique resource identifier</b>
<a href="https://data.europa.eu/en">https://data.europa.eu/en</a>
<b>3.1.6. Coupled resource</b>
<a href="https://data.europa.eu/en">https://data.europa.eu/en</a>
<b>3.1.7. Resource language</b>
ENG
<b>3.1.8. Keyword value</b>
Population Distribution
<b>3.1.9. Originating controlled vocabulary</b>
<a href="https://inspire.ec.europa.eu/theme/pd">https://inspire.ec.europa.eu/theme/pd</a>
<b>3.1.10. Metadata language</b>
ENG
<b>3.2. Classification system</b>

Not applicable
<b>3.3. Coverage - sector</b>
Not applicable
<b>3.3.1. Topic category</b>
Society
<b>3.3.2. Spatial data service type</b>
Download Service
<b>3.4. Statistical concepts and definitions</b>
Not applicable
<b>3.4.1. Statistical concepts and definitions - Total population</b>
<p>For census purposes, the total population of the country consists of all the persons falling within the scope of the census in EU on usual residents.</p> <p>Usual residence means the place where a person normally spends the daily period of rest, regardless of temporary absences for purposes of recreation, holidays, visits to friends and relatives, business, medical treatment or religious pilgrimage.</p> <p>Persons usually resident in the place of enumeration but absent, or expected to be absent, at the time of the census for less than one year shall be considered as temporarily absent persons and thus included in the total usually population. In contrast, persons living or expected to live outside the place of enumeration for one year or more shall not be considered temporarily absent and shall therefore be excluded from the total population. This is regardless of the length of visits that they may pay to their families from time to time.</p> <p>Persons who are enumerated but do not meet the criteria for usual residence in the place of enumeration, i.e. do not live or do not expect to live in the place of enumeration for a continuous period of at least 12 months, are considered temporarily present and are therefore not counted in the total usually resident population. Unless otherwise stated in this report.</p>
<b>3.4.2. Statistical concepts and definitions - Sex</b>
Not applicable
<b>3.4.3. Statistical concepts and definitions - Age</b>
The age reached at the reference date (in completed years).

<b>3.4.4. Statistical concepts and definitions - Employed person</b>
Not applicable
<b>3.4.5. Statistical concepts and definitions - Place of birth</b>
The place of birth for persons born within the country is the civil division in which the person was born; for those born in other countries, it is the country of birth. For persons born in the country (the native-born population), the concept of place of birth usually refers to the geographic unit where the mother of the individual resided at the time of the person's birth.
<b>3.4.6. Statistical concepts and definitions - Place of usual residence one year prior to the census</b>
The relationship between the current place of usual residence and the place of usual residence one year prior to the census.  For all persons that have changed their usual residence more than once within the year prior to the reference date, the previous place of usual residence is the last usual residence from which they moved to their current place of usual residence.
<b>3.5. Statistical unit</b>
Persons
<b>3.6. Statistical population</b>
The population scope of the Census covers all persons, of any nationality, who have their "usual residence" in the national territory.
<b>3.7. Reference area</b>
The operation covers the entire national territory.
<b>3.7.1. Geographic bounding box</b>
The territory is divided into mesh of cells, as defined in Annex II, point 2.1 of Regulation (EU) No 1089/2010. They cover the entire national territory, some of them being shared with neighbouring States. For the unambiguous referencing and identification of a grid cell, the cell code shall be used.  Composed of the cell size and the coordinates of the lower left hand corner of the cell in ETRS89-LAEA. The north and east values shall be divided by 10 times n, where n is the number of leading zeros in the cell size value.
<b>3.7.2. Spatial resolution</b>

1000
Unit:m
<b>3.7.3. Coordinate Reference System</b>
EPSG:3035 - ETRS89 / LAEA Europe
<b>3.8. Coverage - Time</b>
Data refer to the situation in the reporting country at the census reference date. 1/1/2021
<b>3.9. Base period</b>
Not applicable.

<b>4. Unit of measure</b> <a href="#">Top</a>
Counts of statistical units.

<b>5. Reference Period</b> <a href="#">Top</a>
1/1/2021.
<b>5.1. Temporal extent</b>
1/1/2021.

<b>6. Institutional Mandate</b> <a href="#">Top</a>
<b>6.1. Institutional Mandate - legal acts and other agreements</b>
Regulation 763/2008 of the European Parliament and of the Council (together with other implementing regulations), in addition to making the Census compulsory every ten years (affecting the 2011 and 2021 censuses), will ensure the comparability of the results at European Union level in terms of methodology, definitions and the data programme and associated statistical metadata.

While Regulation 763/2008 of the European Parliament and of the Council has not been amended, all implementing regulations setting out the details of the operation have been revised with respect to the 2011 edition. The implementing regulations currently in force are:

- 2017/0881R Commission Implementing Regulation of 23/05/2017. It lays down the modalities and structure of the reports on the quality and technical format for the transmission of the data.

- 2017/0543R Commission Implementing Regulation of 22/03/2017. Establishes technical specifications of the topics and their breakdowns.

- 2017/0712R Commission Regulation of 20/04/2017. Establishes reference year and the programme of statistical data and metadata.

- 2018/1799 Commission Regulation of 21/11/2018 on the establishment of a temporary direct statistical measure for the dissemination of selected topics of the 2021 population and housing census geocoded on a 1 km<sup>2</sup> grid.

The following link facilitates the location of all the rules listed above:

<https://www.ine.es/normativa/leyes/UE/minine.htm#30243>

## 6.2. Institutional Mandate - data sharing

Not applicable

## 7. Confidentiality

[Top](#)

### 7.1. Confidentiality - policy

Law 12/1989, of 9 May, on the Public Statistical Function, obliges the INE not to disseminate personal data under any circumstances, regardless of their origin. Personal data are understood to be those referring to natural or legal persons that either allow the immediate identification of the data subjects, or lead, due to their structure, content or degree of disaggregation, to their indirect identification. Furthermore, Regulation (EC) No 223/2009 of the European Parliament and of the Council of 11 March 2009 on European statistics provides for the need to establish common principles and guidelines to ensure the confidentiality of the data used to produce European statistics and access to such confidential data, taking into account technical progress and user needs in a democratic society.

### 7.2. Confidentiality - data treatment

INE adopts the logical, physical and administrative measures necessary for the effective protection of confidential data, from the collection of data (mainly collected through administrative sources) to its publication.

At the information processing stages, data allowing direct identification are only kept for as long as they are strictly necessary to ensure the quality of the processes.

In the publication of the results tables the detail of the information is analysed in order to avoid that confidential data can be deduced from the statistical units.

Micro-data files are always anonymised.

Moreover, statistical personnel are obliged to maintain statistical confidentiality (Art. 17.1 LFEP).

## 8. Release policy

[Top](#)

### 8.1. Release calendar

Not applicable

### 8.2. Release calendar access

Not applicable

### 8.3. Release policy - user access

Not applicable

#### 8.3.1. Conditions applying to access and use

<https://inspire.ec.europa.eu/metadata-codelist/ConditionsApplyingToAccessAndUse/noConditionsApply>

#### 8.3.2. Limitations on public access

<https://inspire.ec.europa.eu/metadata-codelist/ConditionsApplyingToAccessAndUse/noConditionsApply>

## 9. Frequency of dissemination

[Top](#)

Decennial

<b>10. Accessibility and clarity</b>	<a href="#">Top</a>
<b>10.1. Dissemination format - News release</b>	
Not applicable	
<b>10.2. Dissemination format - Publications</b>	
Not applicable	
<b>10.3. Dissemination format - online database</b>	
Not applicable	
<b>10.4. Dissemination format - microdata access</b>	
Not applicable	
<b>10.5. Dissemination format - other</b>	
Not applicable	
<b>10.6. Documentation on methodology</b>	
Not applicable	
<b>10.7. Quality management - documentation</b>	
Not applicable	

<b>11. Quality management</b>	<a href="#">Top</a>
<b>11.1. Quality assurance</b>	
<p>The quality assurance framework for INE statistics is based on the ESSCoP, the Eurostat European Statistics Code of Practice. The ESSCoP consists of 16 principles, grouped into three areas: Institutional Environment, Processes and Products. Each principle is associated with a series of indicators that allow its measurement. Different tools provided by EUROSTAT are used to assess quality: the indicators already mentioned, the Self-Assessment inspired by the DESAP model, the Peer Review, the User Satisfaction Surveys, and other evaluation procedures.</p> <p>The preparatory work for the 2021 censuses began after the publication of the 2011 census, which has allowed successive "tests" to be completed over the years, in the form of pre-census files, which contribute to guaranteeing the quality of the process and the results.</p>	

Its implementation is based on making maximum use of the available administrative records: broadly speaking, it can be said that Register data is integrated with administrative sources of a labour, education, tax, foreign nationality... so that, from the different registers, almost all the variables studied in the 2011 Census can be constructed.

Throughout these years, a thorough analysis has been made of the administrative sources available, the quality of their content and their suitability for the census objectives. The conclusion reached is that much more information is available and of much higher quality than was expected at the beginning of the analysis, and that almost all the information contained in the questionnaire used in the 2011 Census sample can be constructed from administrative records. This already implies a first improvement in quality with respect to the 2011 census in terms of reducing costs and burden on respondents.

In order to tackle the crosses of administrative records, it has been previously verified that the vast majority of the files have quality identifiers that allow the possibility of making links between the different sources with a percentage of reliability close to 100%.

In the first half of 2017, the Preliminary Draft of the 2021 Population and Housing Censuses was prepared, in which the strategic lines for the project were set out.

During 2016 and 2017, a variable-by-variable study was carried out, known as the Pre-Censal File 2016 (FPC-2016). This work was completed at the end of 2018. Its findings, which were not yet available at the time of drafting the preliminary draft, allowed the strategy to be taken a step further. This "dress rehearsal" of the census has been repeated throughout 2018 and 2019 to obtain the FPC18.

Both in the 2016 pre-census file and in the subsequent file prepared with reference 2018, the vast majority of census variables have been constructed exclusively using administrative sources, and their results have been compared with those obtained in the main reference sources according to the subject matter of each variable, obtaining satisfactory results in all of them.

The minimum information requirements to be provided, determined by the EU Census Regulation, are more than met for all variables referring to population and dwellings. It may, however, be necessary to complete the information with statistical imputation procedures in certain cases, but to a much lesser extent than is used in classical censuses.

On the other hand, the dissemination of the Preliminary Draft Census received proposals, comments and observations from researchers, users and other producers of statistics, which have been taken into account in the improvement of the processes.

#### **11.1.1. Lineage**

The counts have been initially validated, but as they are not final, further revisions and validations are expected.

For 95.5% of the population an aggregate method has been used. The coordinates of the building in which they reside are available and thus the population that falls into the corresponding cell is counted.

Previously, it is validated that the coordinates are coherent with the information of the territorial administrative units at the level of municipality, census section, etc.

In this first provisional version there are 4.5% of the population for which exact coordinates are not yet available. To calculate the cell of this part of the population, a disaggregation method has been used that starts with the population data in the census sections and, in the case that there are several census sections contained in the same grid cell, uses information on land use to distribute the population of the section that does not have exact coordinates in each cell according to the percentage of land compatible with a residential use.

#### **11.1.2. Conformity, specification**

Commission Implementing Regulation (EU) 2018/1799 of 21 November 2018 on the establishment of a temporary direct statistical action for the dissemination of selected topics of the 2021 population and housing census geocoded to a 1 km<sup>2</sup> grid

#### **11.1.3. Conformity, degree**

The resource is fully conform with the above specification.

#### **11.2. Quality management - assessment**

The methodology used to produce the 2021 Population and Housing Censuses, based on the almost exclusive use of administrative records, eliminates, or at least mitigates, some of the most important disadvantages of a census based on direct data collection by citizens, such as:

- The questionnaire respondent does not always know all the answers. Often it is another person who answers for him/her, this is known as a proxy or indirect informant. This person may not have detailed knowledge of some questions (e.g. on economic variables).
- Results based on self-classification (occupation, activity relationship) are often not a good reflection of reality.
- The questionnaire is difficult to fill in for many respondents, leading to errors of all kinds or incomplete information.
- Systematic difficulty in finding certain types of persons. For example, a part of the foreign population is always more difficult to census.

The register-based census becomes a transparent task for society. The census thus designed is also the embodiment of the effort not to bother citizens with information that the Administration already has, although it is not at all easy to deal with in many cases due to technical difficulties of all kinds.

Finally, one of the advantages of this strategy is the possibility of obtaining information more frequently than every ten years, which may even be annual in certain situations.

On the other hand, as was already the case with the 2011 Census, Eurostat has promoted the approval of specific legislation on the quality of the 2021 Census. Regulation (EU) No 881/2017 deals with aspects related to the structure of the reports to be made on the quality of the data and the technical format for the transmission of these data. This provides a reference framework for monitoring the quality of the census operation at European level.

## 12. Relevance

[Top](#)

### 12.1. Relevance - User Needs

Different needs depending on the purpose and usefulness of the information required.

### 12.2. Relevance - User Satisfaction

Not applicable

### 12.3. Completeness

Not applicable

## 13. Accuracy

[Top](#)

### 13.1. Accuracy - overall

Approximately 95,5% have been able to be assigned exact geographic coordinates and the remainder have had a coordinate estimation process applied as described in §18.5.

### 13.2. Sampling error

Not applicable

### 13.3. Non-sampling error

Not applicable

<b>14. Timeliness and punctuality</b>	<a href="#">Top</a>
<b>14.1. Timeliness</b>	
Data submitted on time before 31/12/2022	
<b>14.1.1. Date of publication</b>	
Not applicable	
<b>14.1.2. Date of last revision</b>	
19/12/2022	
<b>14.1.3. Date of creation</b>	
19/12/2022	
<b>14.2. Punctuality</b>	
Data submitted on time before 31/12/2022	

<b>15. Coherence and comparability</b>	<a href="#">Top</a>
<b>15.1. Comparability - geographical</b>	
<p>The methodology applied, the data processing and the filtering and imputation system in the entire geographical scope, guarantees the comparability of the results between the different administrative units.</p> <p>On the other hand, the methodological adaptation to the European census regulations makes comparability with the rest of the European Union countries that disseminate similar information possible.</p>	
<b>15.1.1. Geographic information - data quality</b>	
Not applicable	
<b>15.2. Comparability - over time</b>	
<p>The methodology used in the geo-referencing of the population in the 2021 census is based on registers and is different from that used in the 2011 census, and full comparability between the results of the two census rounds cannot be guaranteed.</p>	

### 15.3. Coherence - cross domain

In general, information from Census is reconcilable with other sources.

Because of the methodology used information is reconcilable with other types of registers.

Differences can appear if we try to compare topics that are not exactly the same (different definitions) or that were not collected using the same methodology (amount of questions, channels, response choices...).

### 15.4. Coherence - internal

Because of the methodology used all the information is coherent.

## 16. Cost and Burden

[Top](#)

Insofar as the census operation does not require the performance of any field operations, the costs refer mainly to human resources employed in the INE Central Services and to the IT infrastructure for development and dissemination.

The total budget for the operation in the 2020 Annual Programme is 1.753,76.

The budget for the years 2021, 2022 and 2023 included in the Draft of the Preliminary Draft of the National Statistical Plan 2021-2024 is:

2021 - 1.197,55

2022 - 1.258,30

2023 - 1.295,44

## 17. Data revision

[Top](#)

### 17.1. Data revision - policy

The INE of Spain has a policy which regulates the basic aspects of statistical data revision, seeking to ensure process transparency and product quality. This policy is laid out in the document approved by the INE board of directors on 13 March of 2015, which is available on the INE website, in the section "Methods and projects/Quality and Code of Practice/INE's Quality management/INE's Revision policy" ([link](#)).

This general policy sets the criteria that the different type of revisions should follow: routine revision- it is the case of statistics whose production process includes regular revisions-; more extensive revision- when methodological or basic reference source changes take place-; and exceptional revision- for instance, when an error appears in a published statistic-.

The reviews are dependent on the availability of new data for the reference date. The definitive results released 12 months after the reference date review those previously released as provisional (6 months after the reference date).

### 17.2. Data revision - practice

There may be revisions to the data submitted.

## 18. Statistical processing

[Top](#)

### 18.1. Source data

The 2021 Population and Housing Census in Spain is based 100% on administrative records. For the georeferencing of the population, the main records used are: Population census file, cadastral files (including both those coming from the General Directorate of Cadastre as well as those coming from the Regional Treasuries), tax return form 100 from the State Tax Administration Agency.

### 18.2. Frequency of data collection

Up to 2021, it has been done every ten years.

### 18.3. Data collection

Census information is compiled from administrative records, so data is collected from the various departments and agencies that produce this information.

### 18.4. Data validation

All files from administrative records are subjected to validation, control, cleansing and cross-checking processes with other files. In order to obtain the georeferenced population, controls are carried out on the physical situation of the population, both at the municipal level and at the census section level (territorial unit below the municipality), with respect to the territorial units in which the geographic coordinates are located.

#### 18.5. Data compilation

By crossing the different registers, it is possible to assign exact geographical coordinates to the population from the cadastral information. However, there is a residue of population for which geographical coordinates have not yet been obtained, or which have been obtained but have not been validated, so in this case, they have been estimated with the following procedure:

One of the priority objectives of the General Directorate of the National Geographic Institute is the production and coordination of geospatial reference information on land cover and land use. SIOSE is the Spanish Land Cover Information System, integrated within the National Plan for Territory Observation (PNOT) whose objective is to generate a Land Cover database for the whole of Spain. For more information (<https://www.siose.es/presentacion>). In SIOSE the national territory is divided into different polygons with a series of typologies indicating their nature.

Using the information provided by SIOSE, the geographical coordinates have been estimated by selecting the polygons throughout the national territory that meet a series of conditions and building typologies that make them susceptible to including dwellings. Within each census section, the population pending georeferencing of said section has been assigned, taking into account the exact georeferenced population in each of the polygons that intersect with the census section.

#### 18.6. Adjustment

Not applicable

#### 19. Comment

[Top](#)

Not applicable

#### Related metadata

[Top](#)

#### Annexes