

CENSUS_INS21ES_A_SE_2021_0000

National Reference Metadata in Euro SDMX Metadata Structure (ESMS)

Compiling agency: Statistics Sweden



Eurostat metadata

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

1. Contact

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1.1. Contact organisation

Statistics Sweden

1.1.1. Responsible party

Statistics Sweden

1.1.2. Responsible party role	Resource Provider Owner Distributor Point of Contact
1.2. Contact organisation unit	Commission Services
1.5. Contact mail address	SCB SSA/UE/UT Klostergatan 23 SE - 701 89 Örebro

2. Metadata update Top	
2.1. Metadata last certified	20/12/2022
2.2. Metadata last posted	20/12/2022
2.3. Metadata last update	20/12/2022

3. Statistical presentation Top	
3.1. Data description	
Statistics on total population broken down into 1 kilometre grid.	
3.1.1. Resource title	
PD.PopulationDistribution.TotalPopulation	
3.1.2. Resource abstract	
Population statistics on 1 km grid (1x1 km). The statistics refers to 2021-12-31.	
3.1.3. Resource type	

Spatial data set
3.1.3.1. Additional information if 'spatial data set' is marked
https://data.europa.eu/en
3.1.4. Resource locator
3.1.5. Unique resource identifier
https://data.europa.eu/en
3.1.6. Coupled resource
https://data.europa.eu/en
3.1.7. Resource language
English
3.1.8. Keyword value
Population Distribution
3.1.9. Originating controlled vocabulary
https://inspire.ec.europa.eu/theme/pd
3.1.10. Metadata language
English
3.2. Classification system
The production of the 2021 Census results is in line with national and international classifications.
3.3. Coverage - sector
Society
3.3.1. Topic category
Society
3.3.2. Spatial data service type
Download Service

3.4. Statistical concepts and definitions

The concepts are according to EU regulations on 2021 Population and Housing Census.

3.4.1. Statistical concepts and definitions - Total population

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.

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.

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.

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.

One minor exception to the above refers to emigrants to Denmark and Norway. They are de-registered from the Swedish population register if they intend to stay in Denmark/Norway for at least six months.

3.4.2. Statistical concepts and definitions - Sex

Registered sex at the reference date - Male and female

3.4.3. Statistical concepts and definitions - Age

The age reached at the reference date (in completed years).

3.4.4. Statistical concepts and definitions - Employed person

‘Employed’ persons comprise all persons aged 15 years or over who during the reference week: (a) performed at least one hour of work for pay or profit, in cash or in kind, or (b) were temporarily absent from a job in which they had already worked and to which they maintained a formal attachment, or from a self-employment activity.

3.4.5. Statistical concepts and definitions - Place of birth

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.

3.4.6. Statistical concepts and definitions - Place of usual residence one year prior to the census

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.

3.5. Statistical unit

Persons in 1 km grid cells.

3.6. Statistical population

Population at reference date 2021-12-31

3.7. Reference area

Sweden

3.7.1. Geographic bounding box

W: 10.95, E:24.17, N: 69.08, S: 55.33

3.7.2. Spatial resolution

1000

Unit:m

3.7.3. Coordinate Reference System

EPSG:3035 - ETRS89 / LAEA Europe

3.8. Coverage - Time

Data refer to the situation in the reporting country at the census reference date.

3.9. Base period

Not applicable.

4. Unit of measure	Top
Counts of statistical units	

5. Reference Period	Top
2021-12-31	
5.1. Temporal extent	
2021-12-31	

6. Institutional Mandate	Top
6.1. Institutional Mandate - legal acts and other agreements	
<p>Statistics Sweden's operations are governed by its directive, laws and ordinances, as well as the annual appropriation directions.</p> <p>Statistics Sweden's directive The directive is an ordinance that contains regulations on the framework and operations management. Ordinance with the directive for Statistics Sweden (2016:822)</p> <p>Laws and ordinances In addition to the directive, several other laws and ordinances govern Statistics Sweden's operations. Official Statistics Act (2001:99) Official Statistics Ordinance (2001:100) General Data Protection Regulation, GDPR, (2016/679) Ordinance concerning Government Authorities' Collection of Data from Businesses Operators and Local Authorities (1982:668) Regulatory Impact Assessment Ordinance (2007:1244)</p>	
6.2. Institutional Mandate - data sharing	
<p>Statistics Sweden's operations are governed by its directive, laws and ordinances, as well as the annual appropriation directions.</p> <p>Statistics Sweden's directive The directive is an ordinance that contains regulations on the framework and operations</p>	

management.

Ordinance with the directive for Statistics Sweden (2016:822)

Laws and ordinances

In addition to the directive, several other laws and ordinances govern Statistics Sweden's operations.

Official Statistics Act (2001:99)

Official Statistics Ordinance (2001:100)

General Data Protection Regulation, GDPR, (2016/679)

Ordinance concerning Government Authorities' Collection of Data from Businesses Operators and Local Authorities (1982:668)

Regulatory Impact Assessment Ordinance (2007:1244)

7. Confidentiality

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7.1. Confidentiality - policy

For confidentiality regarding the authority's specific task for the production of statistics, Chapter 24 Section 8 of the Public Access to Information and Secrecy Act (2009:400) applies. Within the area of statistics, there are also specific rules on the handling of personal data in the Official Statistics Act (2001:99), the Official Statistics Ordinance (2001:100) and the General Data Protection Regulation, GDPR, (2016/679). Data may be used for statistical purposes if there is no doubt that the information can be disclosed without causing harm or economic damage to any individual in the data.

7.2. Confidentiality - data treatment

The cell key method is used as protection method. The method is one of the methods recommended by Eurostat and for extra protection, the implementation originally developed by ABS is used. The parameters used in the Swedish application of the method are not publicly available.

8. Release policy

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8.1. Release calendar

Not applicable. The data is not scheduled for release nationally.

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 Creative commons CC0 1.0 Universiell (Creative commons CC0 1.0 Universiell)
8.3.2. Limitations on public access
https://inspire.ec.europa.eu/metadata-codelist/ConditionsApplyingToAccessAndUse/noConditionsApply

9. Frequency of dissemination	Top
Decennial	

10. Accessibility and clarity	Top
10.1. Dissemination format - News release	
Not applicable	
10.2. Dissemination format - Publications	
Not applicable	
10.3. Dissemination format - online database	
Not applicable	
10.4. Dissemination format - microdata access	
Not applicable	
10.5. Dissemination format - other	
There are publications of nationally adapted data which can be accessed here Open data for grid statistics (scb.se) . The data however differ from the census publication since it is based on grids in	

SWEREF99TM and another confidentiality method is applied on the data.

10.6. Documentation on methodology

The methods used follows the recommendations given by Eurostat. Documents such as EU legislation on the 2021 population and housing censuses EXPLANATORY NOTES, Census Grid DSD - guidelines.

10.7. Quality management - documentation

The data has been harmonised according to existing guidelines and EU Regulations.

11. Quality management

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11.1. Quality assurance

The Swedish Population Register is the fundamental registration of the population in Sweden. It contains information about identity, residence and family relationships. The Swedish Tax Agency is responsible for the Swedish Population Register. The purpose of the register, in accordance with the appropriation directions, is that data in the register should reflect the population's actual residence, identity, and family law conditions, to ensure that various functions in society receive correct information for decisions and measures. The collection, measurement and registration of the information are done by the Swedish Tax Agency. Most data in the population register comes from other government agencies, where reporting is included as part of the working duties of, for example, midwives, wedding officials, courts or doctors. Notification to the Swedish Tax Agency by individuals is only done in a few cases; notifying the name of a new-born child, changing names, migrating within Sweden and immigrating to, and emigrating from Sweden. There are several services to streamline data collection, for example, a web service has been introduced that enables hospitals to report births electronically, and there is an e-service to report migration.

Since the information is used widely in society, the chance of detecting errors increases. Some government agencies, such as the Swedish Social Insurance Agency, the Swedish Migration Agency and the Swedish National Board of Student Aid, by regulation, are obligated to report errors in the Swedish Population Register to the Swedish Tax Agency. In addition, the birth certificate issued by the Swedish Tax Agency can be regarded as an important check on data accuracy. The individual submits a request for a birth certificate, which shows the data contained in the register. A birth certificate is required, for example, when acquiring identity cards, applying for Swedish citizenship or applying for divorce.

The data for the Total Population register (TPR) at Statistics Sweden is retrieved from the Swedish Tax Agency's Swedish Population Register. Several automatic and manual checks are made to ensure the quality of the register, both at a micro and macro level.

The general quality and reliability of the Swedish Population Register is regarded as very high, but there are some deficiencies. In recent years, the Swedish Tax Agency has prioritized the work of improving knowledge about the quality of the Swedish Population Register. Together with the Swedish Tax Agency, Statistics Sweden has developed a method to measure over-coverage, under-coverage and incorrect civil registration address. The method estimates the total error at about 214,000 people or 2.1% of the population in 2019. Incorrect address is the most common source of uncertainty (about 124,000 people). The number of people belonging to the over-coverage is estimated to be around 73,000 and the least common source of uncertainty is under-coverage with around 17,000 people.

Regarding geographic data coordinates for addresses and property are reported weekly to Statistics Sweden from The Land Survey. An annual register is compiled once a year by Statistics Sweden.

Local municipal agencies are the main source for addresses who in turn report to The Land Survey. Property coordinates are calculated as a single coordinate through the median of the building coordinates on the property. If no buildings exists, the center point of the property is used instead. In general, the quality of these coordinates are considered good. Very few properties lack coordinates and none of the addresses do.

A quality check is made to make sure that the coordinates for addresses and property is within the municipal border to which the object is registered. If the coordinates are out of bounds the object is flagged so that it will not be used for geographical statistical purposes. Firstly, a person's adress coordinate will be used. If a person is registered to an adress flagged as out of bounds, then the property coordinate will be used instead. In similar, if a person has no registration to an adress from The Swedish Tax Agency, then the property coordinate will be used. Around 0.17% of the population have no link to an adress nor property and are registered only to their municipality, these are reported in the virtual grid cell.

11.1.1. Lineage

The dataset follows the guidelines provided by Eurostat. The source data is quality assured according to internal guidelines.

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 km² grid.

11.1.3. Conformity, degree

Conformant

11.2. Quality management - assessment

The quality of the geographic information is considered good. Coordinates for addresses and property is reported on a weekly basis. A quality check is made to make sure that the coordinates are within the municipal bound. Very few properties lack coordinates and none of the addresses do.

12. Relevance

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12.1. Relevance - User Needs

The census data disseminated by Eurostat are addressed to policy makers, researchers, media and the general public.

12.2. Relevance - User Satisfaction

No user satisfaction surveys is conducted by Statistics Sweden regarding 2021 census data.

12.3. Completeness

All mandatory variables are reported to Eurostat.

13. Accuracy

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13.1. Accuracy - overall

The statistics are based on the population registered in the Swedish Population Register. Since correct registration in the register is a condition for being able to live a normal life in Sweden, the general quality and reliability of the register is regarded as very high.

Failure to report immigrations and emigrations means that the published population is overestimated by 56,000 persons or 0.5 per cent.

13.2. Sampling error

Not Applicable.

13.3. Non-sampling error

In Sweden there are around 17 000 people without a known permanent residence. They are registered only to their municipality, these people are reported in the virtual grid cell.

14. Timeliness and punctuality	Top
14.1. Timeliness	
The data on the total population on a 1 km grid was sent to Eurostat before 31 December 2022.	
14.1.1. Date of publication	
2022-12-31	
14.1.2. Date of last revision	
31/12/2022	
14.1.3. Date of creation	
31/12/2022	
14.2. Punctuality	
The data on total population on 1 km grid was sent to Eurostat before 31 December 2022.	

15. Coherence and comparability	Top
15.1. Comparability - geographical	
The grid used for the statistics on total population is the one created by Eurostat and was downloaded from here Grids - GISCO - Eurostat (europa.eu) . Therefore the geographical data is comparable between countries that have implemented the census according to current regulations.	
15.1.1. Geographic information - data quality	
The quality of the geographic information is considered good. Coordinates for addresses and property are reported on a weekly basis. A quality check is made to make sure that the coordinates are within the municipal bound. Very few properties lack coordinates and none of the addresses do.	
15.2. Comparability - over time	
The Census is not fully comparable over time.	
15.3. Coherence - cross domain	

The Swedish 2021 Census population is fully coherent with domains like the national official Population statistics.

15.4. Coherence - internal

The Swedish 2021 Census grid statistics tables are fully coherent internally.

16. Cost and Burden

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In order to ensure cost effectiveness Sweden has chosen to do a fully register-based census. The register-based model has no response burden on persons or households. The production and harmonisation of the data according to the regulations and guidelines entail extra costs.

17. Data revision

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17.1. Data revision - policy

Statistics Sweden follows an internal revision policy. All revisions made follow the guidelines and practices set in the policy.

17.2. Data revision - practice

All revisions are made according to the revision policy.

18. Statistical processing

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18.1. Source data

Data for the statistics on population is collected daily from the Swedish Population Register.

Data for the geographical statistics is collected weekly from The Land Survey and compiled once a year to an annual register by Statistics Sweden.

18.2. Frequency of data collection

Data for the statistics on population is collected daily from the Swedish Population Register.

Data for the geographical statistics is collected weekly from The Land Survey and compiled once a year to an annual register by Statistics Sweden.

18.3. Data collection

Administrative data with system-to-system solution.

Administrative data are transferred automatically from the Swedish Tax Agency to Statistics Sweden via a joint service for government agencies for sending data to each other.

18.4. Data validation

The Swedish Population Register is the fundamental registration of the population in Sweden. It contains information about identity, residence and family relationships. The Swedish Tax Agency is responsible for the Swedish Population Register. The purpose of the register, in accordance with the appropriation directions, is that data in the register should reflect the population's actual residence, identity, and family law conditions, to ensure that various functions in society receive correct information for decisions and measures. The collection, measurement and registration of the information are done by the Swedish Tax Agency. Most data in the population register comes from other government agencies, where reporting is included as part of the working duties of, for example, midwives, wedding officials, courts or doctors. Notification to the Swedish Tax Agency by individuals is only done in a few cases; notifying the name of a new-born child, changing names, migrating within Sweden and immigrating to, and emigrating from Sweden. There are several services to streamline data collection, for example, a web service has been introduced that enables hospitals to report births electronically, and there is an e-service to report migration.

Since the information is used widely in society, the chance of detecting errors increases. Some government agencies, such as the Swedish Social Insurance Agency, the Swedish Migration Agency and the Swedish National Board of Student Aid, by regulation, are obligated to report errors in the Swedish Population Register to the Swedish Tax Agency. In addition, the birth certificate issued by the Swedish Tax Agency can be regarded as an important check on data accuracy. The individual submits a request for a birth certificate, which shows the data contained in the register. A birth certificate is required, for example, when acquiring identity cards, applying for Swedish citizenship or applying for divorce.

The data for the Total Population register (TPR) at Statistics Sweden is retrieved from the Swedish Tax Agency's Swedish Population Register. Several automatic and manual checks are made to ensure the quality of the register, both at a micro and macro level.

Regarding geographic data a quality check is made to make sure that the coordinates are within the municipal bound. Very few properties lack coordinates and none of the addresses do.

18.5. Data compilation

The daily data deliveries from the Swedish Population Register contain the births, deaths, changes of address, migrations etc. reported the previous day to the Swedish Tax Agency. For each person in the Swedish Population Register for whom an event is updated, Statistics Sweden receives the relevant information and then updates Statistics Sweden's population database, which holds the previous information on residence, marital status, family, name, citizenship etc.

A population statistical recording is created at the end of every month by extraction and delimitation of the population based on these basic tables. Based on the information about address in the Swedish Population Register, data is compiled on households, which consist of the person or persons living at the same address. The household can consist of one or several families. A family is one or more people living at the same address and having mutual relations. The relation may be e.g. marriage or registered partnership and parents/children, all of which appear as relations in the Swedish Population Register. To be able to assess other couple families (cohabitation), it is assumed that two adults living together and have one or more children in common are defined as cohabitants. To form cohabitants of persons without common children, a model is used based on the following criteria:

- Persons registered in the same dwelling
- Persons at least 18 years old
- Persons are of the opposite sex
- The age difference between the persons is less than 15 years
- The persons are not closely related
- Only *one* possible cohabitant couple can be formed within a household

The coordinates for each person have been converted from Sweref99TM into ETRS89. The coordinate dataset was then joined with the Grid dataset in order to place each person into a grid cell. This was performed in GIS software. The results were then aggregated by Grid ID to create the dataset with the total population on 1 km grid cells.

18.6. Adjustment

National statistics were converted from Sweref99TM into ETRS89. The confidentiality method recommended by Eurostat has been applied to the data. The mandatory variables have been created and the relevant codelists have been used to create the dataset.

No corrections of data are made in addition to those already described under data validation.

19. Comment

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The data is provisional due to a missing variable that is needed to finalize the confidentiality method.

It was not possible to provide area of dissemination with codes as SE-NO since it was regarded as an error by the Mapping assistant. Therefore all grid cells are set as SE.

Related metadata

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