

CENSUS\_INS21ES\_A\_SK\_2021\_0000

National Reference Metadata in Euro SDMX Metadata Structure (ESMS)

Compiling agency: Statistical Office of the Slovak Republic



## Eurostat metadata

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

<b>1. Contact</b> <a href="#">Top</a>	
<b>1.1. Contact organisation</b>	Statistical Office of the Slovak Republic
<b>1.1.1. Responsible party</b>	Statistical Office of the Slovak Republic

<b>1.1.2. Responsible party role</b>	Owner
<b>1.2. Contact organisation unit</b>	Population Statistics Department of the Statistical Office of the Slovak Republic
<b>1.5. Contact mail address</b>	Lamačská cesta 3/C 840 05 Bratislava

<b>2. Metadata update</b> <a href="#">Top</a>	
<b>2.1. Metadata last certified</b>	31/12/2022
<b>2.2. Metadata last posted</b>	31/12/2022
<b>2.3. Metadata last update</b>	31/12/2022

<b>3. Statistical presentation</b> <a href="#">Top</a>	
<b>3.1. Data description</b>	
In the Slovak Republic, there has been a combined census; the content, scope and method of its conducting was established by law. Residents had an obligation, for the first time in history, to whether to fill out the Census Sheets in electronic form by the Internet. The census reference date was midnight between the 31th December 2020 and the 1st January 2021.	
<b>3.1.1. Resource title</b>	
Population and Housing Census 2021	
<b>3.1.2. Resource abstract</b>	
Data from Population and Housing Census 2021 provided in GRID 1 km x 1 km	
<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>	
<b>3.1.4. Resource locator</b>	

<a href="https://data.europa.eu/en">https://data.europa.eu/en</a>
<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>
English
<b>3.1.8. Keyword value</b>
Population Distribution, Total Population, Grid, Census 2021
<b>3.1.9. Originating controlled vocabulary</b>
<b>3.1.10. Metadata language</b>
English
<b>3.2. Classification system</b>
<b>3.3. Coverage - sector</b>
<b>3.3.1. Topic category</b>
Society
<b>3.3.2. Spatial data service type</b>
View Service
<b>3.4. Statistical concepts and definitions</b>
<b>3.4.1. Statistical concepts and definitions - Total population</b>

Usual residence shall mean 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.

The following persons alone shall be considered to be usual residents of the geographical area in question, those who have lived in their place of usual residence for a continuous period of at least 12 months before the reference date or those who arrived in their place of usual residence during the 12 months before the reference date with the intention of staying there for at least one year. If the previous conditions cannot be fulfilled, 'usual residence' shall mean the place of legal or registered residence.

#### **3.4.2. Statistical concepts and definitions - Sex**

Sex: refers to the biological characteristics of a person, i.e. the fact whether they are anatomically female or male.

#### **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**

Employment status: expresses information on the position of a resident held at the workplace (employee, businessman and other – resident not included in any of the categories). Information on employment status was collected among persons with the following economic activity: working, working pensioner, person on maternity leave, person on parental leave.

- Employee refers to a person who has an employment relationship for a fixed or indefinite period of time or is in service. It also includes data on a person who works on the basis of a work performance agreement or an agreement on work activities.
- Businessman refers to a person who is a businessman.
- Other is a person who does not belong to any of the previous categories (e.g. member of a cooperative society, self-employed, interpreter, and expert).

#### **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

inhabitant

### 3.6. Statistical population

Total population

### 3.7. Reference area

the Slovak Republic

#### 3.7.1. Geographic bounding box

northernmost point: Oravská Polhora, 49°36'49.43"N 19°28'2.52"E

southernmost point: Patince, 47°44'1.29"N 18°17'20.93"E

westernmost point: Záhorská Ves, 48°22'50.24"N 16°50'0.74"E

easternmost point: Nová Sedlica, 49°5'16.81"N 22°33'56.7"E

#### 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 (1.1.2021).

### 3.9. Base period

Not applicable

## 4. Unit of measure

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number (absolute value)

<b>5. Reference Period</b>	<a href="#">Top</a>
01. 01. 2021	
<b>5.1. Temporal extent</b>	
Not applicable	

<b>6. Institutional Mandate</b>	<a href="#">Top</a>
<b>6.1. Institutional Mandate - legal acts and other agreements</b>	
<p>Act n. 223/2019 Z. z. on the 2021 Population and Housing Census</p> <p>Act n. 540/2001 Z. z. on State statistics</p> <p>Commission implementing regulation (EU) 2018/1799 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</p> <p>Commission implementing regulation (EU) 2017/543 laying down rules for the application of Regulation (EC) No. 763/2008 of the European Parliament and of the Council on population and housing censuses as regards the technical specifications of the topics and of their breakdowns</p>	
<b>6.2. Institutional Mandate - data sharing</b>	
<p>Act n. 223/2019 Z. z. on the 2021 Population and Housing Census</p> <p>Act n. 540/2001 Z. z. on State statistics</p> <p>Commission implementing regulation (EU) 2018/1799 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</p> <p>Commission implementing regulation (EU) 2017/543 laying down rules for the application of Regulation (EC) No. 763/2008 of the European Parliament and of the Council on population and housing censuses as regards the technical specifications of the topics and of their breakdowns</p>	

<b>7. Confidentiality</b>	<a href="#">Top</a>
<b>7.1. Confidentiality - policy</b>	
Act n. 540/2001 Z. z. on State statistics	

Act n. 18/2018 Z. z. on Personal data protection

## 7.2. Confidentiality - data treatment

Statistical disclosure control method for data was swapping method.

## 8. Release policy

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### 8.1. Release calendar

Data are made available 18 months after the end of the reference period (December 2022).

### 8.2. Release calendar access

December 2022

### 8.3. Release policy - user access

Statistical information dissemination policy of the Statistical Office of the Slovak Republic is in accordance with Act n. 540/2001 Z. z. on State statistics amended and with the dissemination and development strategy of the Statistical Office of the Slovak Republic and Eurostat. Publication and submission of statistical information comply with European Statistics Procedure Codex criteria, which are namely timeliness, accuracy, reliability, clarity, impartiality, objectiveness, professional independence and expense efficiency. Publication policy is adjusted to user preferences. The 2021 Population and Housing Census data are provided cost-free at [www.scitanie.sk](http://www.scitanie.sk) as basic results, extended results and geospatial data on population, houses, dwellings and households.

#### 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

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Decennial

<b>10. Accessibility and clarity</b>	<a href="#">Top</a>
<b>10.1. Dissemination format - News release</b>	
News and informative messages are available at: <a href="http://www.scitanie.sk/en">www.scitanie.sk/en</a>	
<b>10.2. Dissemination format - Publications</b>	
The publications will be published in 2023.	
<b>10.3. Dissemination format - online database</b>	
<a href="http://www.scitanie.sk/en">www.scitanie.sk/en</a> The Statistical Office of the SR has been publishing continuously the results of population and housing census in electronic form for the Slovak Republic, regions, districts and municipalities from december 2021.	
<b>10.4. Dissemination format - microdata access</b>	
Microdata are provided under special conditions. Access to microdata is provided either by FTP server, personal download of a password-protected file, or through the Safe centrum. Safe centrum is a secured room, which is supervised and where researchers can analyze the data on the computer where necessary software is installed to analyze data (Microsoft Excel, SAS, etc.) . This computer is not connected to the Internet, internal network does not have a functional USB port or CD driver. It is not possible in any way to export or send the microdata. Expert of the Office applies protection methods and then makes data available for researcher - applicant.	
<b>10.5. Dissemination format - other</b>	
Open Data	
<b>10.6. Documentation on methodology</b>	
Methodology and metadata are provided: <a href="https://www.scitanie.sk/en">https://www.scitanie.sk/en</a>	
<b>10.7. Quality management - documentation</b>	
Quality was performed on the input data. The output data quality will be performed in 2023. These are internal documents.	

<b>11. Quality management</b>	<a href="#">Top</a>

### 11.1. Quality assurance

Quality manual:

National framework for assessing the quality of administrative data intended for statistical purposes (internal document).

#### 11.1.1. Lineage

The dataset of the total population was provided in the official version.

The goal of the 2021 Population and Housing Census was to acquire mutually compatible data, localised up to the level of the address point with Y, X coordinates. Territorial data was fundamental from this perspective, and every census resident, house or dwelling was geolocalised in space (i.e. was given X, Y coordinates). Therefore, it was necessary to statistically process spatial data from administrative data sources to the level of the address point of the occupied or unoccupied house/dwelling.

#### 11.1.2. Conformity, specification

#### 11.1.3. Conformity, degree

### 11.2. Quality management - assessment

The Information system of Territorial preparation was created, containing spatial and database identification of all inhabited/habitable objects in the statistical territorial unit, where in the residents could have dwelt at the time of the census, regardless of whether they had or hadn't had any registered residence. Territorial preparation was the base for the 2021 Housing and Population Census. Following the end of the housing census, an electronic population census, with a large role played also by the territorial preparation and the population census was paired with the housing census data by assigning house numbers to address points.

Addresses not gained from administrative data sources were completed on municipalities 'request as so-called Statistical address points and addresses without Y, X coordinates in administrative sources were also geocoded. The tool used for geocoding was ESRI geocoding.

In parallel with electronic data collection from the population a preparation of Administrative data sources on population for statistical processing. Activities covered data imports to the information system and careful processing into the transformation layer. Following the end of population data collection, population data processing began by late June 2021. The first milestone of population data processing was the creation of the so-called Integrated database (IDB). IDB contains data from administrative sources and from the electronic population census. The IDB is created by merging transformation layer tables of administrative data sources and forms in such a manner, that for

each resident's ID there is only one record in the IDB. IDB contains data from administrative data sources valid to the same date of reference (01.01.2021).

## 12. Relevance

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### 12.1. Relevance - User Needs

Main users: public administration, self-government, scientific researchers, universities, private sector.

Main needs: standard outputs to ensure spatial data.

### 12.2. Relevance - User Satisfaction

SO SR surveys

### 12.3. Completeness

The data cover the total population of the Slovak Republic at the reference date.

## 13. Accuracy

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### 13.1. Accuracy - overall

Total population - There are no particular reason for data unreliability for this topic.

Grids with 2021 Census results are protected by the swapping method. Its principle is the detection of grids with increased risk of identification of persons in them and application of protection by means of transfer of persons.

Transfers are realized from grids with the highest population to grids with low population (1-2) with minimum population in each grid being 3. The "place of birth" was identified as a sensitive variable among the variables provided in the grid form, and therefore grids with 1-2 inhabitants, among whom at least 1 was born abroad, while grids with 1-2 inhabitants, all born in Slovakia, are not subject to data protection.

Transfers of inhabitants among grids are realized within the territory of the municipality (LAU2). In case of a grid in need of data protection and its area is located within two distinct municipalities and has a population of 2 inhabitants, each with permanent residence in another municipality, an inhabitant of the more populous municipality is transferred into the grid of concern.

Data protection in the sense of the defined methodology has been carried out in 145 grids. Inhabitants have been transferred from a total number of 133 grids. In total the transfers have

influenced 278 grids, which makes up 1,58% of all populated grids. The total number of persons who have been transferred from the most populous into the protected grids is 198, constituting 0,004% of all inhabitants.

This method guarantees an adequate protection of identifiable individuals, considering the fact that data protection was focused only at persons at risk, maintains a high information quality of data.

The applied method is perturbative, i.e. it lowers the volume of data in the most populated grids and increases the volume of data in the least populated grids.

### 13.2. Sampling error

Not applicable

### 13.3. Non-sampling error

Not applicable

## 14. Timeliness and punctuality

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### 14.1. Timeliness

730 calendar days are between the census reference day (1st January 2021) and deadline for transmission data to Commission (31st December 2022).

#### 14.1.1. Date of publication

31th December 2022

#### 14.1.2. Date of last revision

14/12/2022

#### 14.1.3. Date of creation

14/12/2022

### 14.2. Punctuality

0 day

## 15. Coherence and comparability

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### 15.1. Comparability - geographical

Geocoded data on a 1 km<sup>2</sup> - sized grid with population for the year 2021 is comparable with 2011 population data geocoded on a grid of cells sized 1 km<sup>2</sup>

#### 15.1.1. Geographic information - data quality

Each address point has an evaluated source of geometry, which has the Y and X coordinates of the address points. The address points coordinates were obtained from 5 distinct sources. Firstly, the Address register, containing 95,52% of them. Secondly, the Information system of the Real Estate Cadastre supplemented 1,48% of Y, X coordinates created as centroid parcels. Thirdly, the 2011 census provided 0,80% of Y, X coordinates. Fourthly, the Statistical Office of the SR had two methods of collecting coordinates – with the first one being the so-called statistical address points, created by the Statistical Office of the SR based on request from municipalities and created for occupied dwellings, which cannot be paired with an address point in Address register nor any conscription number (e. g. shacks, unapproved family houses...) and the second being ESRI geocoding for address points, whose address is known and consists of residential buildings or occupied dwellings and their Y, X coordinates could not be obtained. This category makes up 1,97%. Lastly, there are coordinates for municipality centroids, created for inhabitants with a permanent residence in the municipality (with conscription numbers being unknown). This category accounts for 0,24% cases.

### 15.2. Comparability - over time

Geocoded data on a 1 km<sup>2</sup> - sized grid with population for the year 2021, is comparable with 2011 population data geocoded on a grid of cells sized 1 km<sup>2</sup>

### 15.3. Coherence - cross domain

The 2021 census data are fully accepted and used by the social statistics.

### 15.4. Coherence - internal

Internal coherence is assured by regulations (EU Regulations).

## 16. Cost and Burden

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Total budget for the 2021 Population and Housing Census is EUR 60 million.

## 17. Data revision

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### 17.1. Data revision - policy

The data are definitive, without the need for revisions.

### 17.2. Data revision - practice

The data are definitive, without the need for revisions.

## 18. Statistical processing

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### 18.1. Source data

Data collection during the 2021 census in Slovakia was for the first time fully electronic. It was an integrated census, combining data from administrative data sources with sources from inhabitants and sources gained from municipalities and from apartment building managers. Two forms have been created for the 2021 census: one for the electronic population and housing census, with data completed by municipalities, related to house and dwelling characteristics, and the other for the electronic population census.

The administrative data sources used for the Territorial Preparation were the: Address Register, Cadastre of Real Estate, Basic Database for the Geographic Information System, 2011 Population and Housing Census. For the general enumeration of the population, data from administrative registers of the Ministry of Interior Information System were used for the Register of Natural Persons, the Financial Administrations of the Slovak Republic (Tax returns from income taxes of Natural persons, Reports on the statement of total income from dependent activity), Information system of the Ministry of Education, Science, Research and Sport SR for Higher Education (Central Register of Students of Higher Education and Central Register of Higher Education Employees), Information System of the Information system of the Ministry of Education, Science, Research and Sport SR for Regional Education (Central Register of Children, Pupils and Students and Central Register of Pedagogical Employees, Professional Employees and Other Employees of Schools and School Facilities), Social Insurance IS (List of Insured Persons, List of Recipients of Pension Benefits), Office of Healthcare Surveillance IS (Central Register of Insured Persons), Evidence of the Unemployed, Database of Parental Allowance Recipients, Database of Caregiving Allowance Recipients from the IS of Employment Services, Records of Accused and Convicted Persons of the Prison and Judicial Guards Corps and finally from the IS of the Statistical Office of the SR (Register of the Organisations, Register of Legal Persons, Death Reports and Moving Reports). From the mentioned administrative sources, an Integrated Database (IDB) was created with over 6 000 000 records to 1.1.2021

Since the 2021 Population and Housing Census was a so-called integrated census using administrative registers and data collection from inhabitants, a study has been created to define processes of "Signs of Life" assignments to each inhabitant. The principle of the "Signs of Life" lies in the fact that the inhabitant of the given administrative unit somehow reflects into selected data

sources in the given year and so accumulates the so-called Signs of Life. Based on this method each inhabitant was assigned a marker:

SoL = inhabitant has permanent residence in the SR.

SoLX = inhabitant does not have permanent residence in the SR.

## 18.2. Frequency of data collection

decennial

## 18.3. Data collection

The 2021 Population and Housing Census was realised by integrating several data sources, thus being a transition from a traditional census to a combined census. Data collection took place in the form of an electronic housing census (between 01. 06. 2020 and 12. 02. 2021). In the form of an electronic housing population census (taking place between 15. 02. 2021 a 31. 03. 2021) 86,01% of the estimated number of residents within the Slovak Republic were counted, in contrast to the previous expectations of 70%. The last phase consisted of an electronic assisted population count (taking place between 03. 05. 2021 and 13. 06. 2021).

## 18.4. Data validation

Validation was carried out, it was necessary to apply procedures such as elimination of duplicates, autocorrections, data checks between different administrative data sources, determination of prioritization of data sources.

## 18.5. Data compilation

The basic database represents a definitive set of microdata about every inhabitant, i.e. about every resident. Each object is assigned a unique and unequivocal identifier. These identifiers allow records to be linked with other BDs. Microdata is structured into variables, the variables were defined and described according to a scheme based on international requirements and recommendations and on national requirements, while respecting legislative changes. Comparability in relation to past censuses and in relation to individual administrative resources was ensured to the maximum extent. In case of necessary changes, transformation codes were developed for the given variable.

## 18.6. Adjustment

## 19. Comment

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**Related metadata**

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**Annexes**