



REFERENCE METADATA

POPULATION GRID 2021 (1000m), Census 2021

| 1. Contact Top | |
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| 1.1. Contact organisation | NSI, National Statistical Institute of Bulgaria (NSI) |
| 1.2. Contact organisation unit | Multi-Domain Statistics, Methodology and Registers Directorate |
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| 2. Metadata update Top | |
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| 2.1. Metadata last certified | 29/07/2024 |
| 2.2. Metadata last posted | 29/07/2024 |
| 2.3. Metadata last update | 29/07/2024 |

| 3. Statistical presentation | | | | | Top |
|--|-------------------------|------------|---------------------------|----------------------------------|---------------------|
| 3.1. Data description | | | | | |
| Population data at grid level, based on the results from the 2021 EU census collection, following Regulation (EC) 763/2008; Regulation (EU) 2017/543; Regulation (EU) 2017/712 and Regulation (EU) 2017/881 and Regulation EU 2018/1799. | | | | | |
| 3.1.1. Resource title | | | | | |
| Population Grid 2021 | | | | | |
| 3.1.2. Resource abstract | | | | | |
| <p>This spatial dataset contains population data on the selected topics from Census 2021 survey (final results), presented at the level of 1000 x 1000m grid cells.</p> <p>The dataset covers the territory of Bulgaria. Population distribution is based on the place of usual residence at the census reference date (07/09/2021). Values for the total population and for the population categories in grid cells are aggregated from point locations of individual census records.</p> <p><i>Total population in the dataset (allocated on map):</i></p> | | | | | |
| Dataset | Variable definition | Field name | Total population - Number | % from the total for the country | |
| Grid 1000mx1000m | Total population | T | 6 461 591 | 99.1 | |
| | Sex– Male | M | 3 105 872 | 99.0 | |
| | Sex – Female | F | 3 355 719 | 99.2 | |
| | Age – under 15 years | Y_LT15 | 913 443 | 99.5 | |
| | Age – 15 to 64 years | Y15_64 | 4 031 129 | 99.1 | |
| | Age – 65 years and over | Y_GE65 | 1 517 019 | 99.0 | |
| 3.1.3. Resource type | | | | | |
| Geodatabase (GDB) | | | | | |
| 3.2. Classification system | | | | | |
| INSPIRE Geographical grid system, Grid_ETRS89-LAEA, resolution 1000m | | | | | |



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| 3.3. Coverage - sector | |
| Not applicable. | |
| 3.4. Statistical concepts and definitions | |
| <p>'Total population' means all persons of a grid cell whose usual residence is located in that grid cell</p> <p>'Usual residence' is 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>The following persons alone shall be considered to be usual residents of the geographical area in question:</p> <ul style="list-style-type: none">(a) those who have lived in their place of usual residence for a continuous period of at least 12 months before the reference date;(b) 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. <p>Where the circumstances described in point (a) or (b) cannot be established, 'usual residence' shall mean the place of legal or registered residence.</p> <p>'Sex' refers to the biological and physiological characteristics that define men and women.</p> <p>'Age' is the age reached in completed years of age at the reference date.</p> | |
| 3.5. Statistical unit | |
| Persons | |
| 3.6. Statistical population | |
| Persons enumerated in the 2021 census are those who were usually resident in the territory of the reporting country at the census reference date. | |
| 3.7. Reference area | |
| The reference area covers Bulgaria's territory. | |
| 3.7.1. Geographic bounding box | |
| West Bound Longitude: | 22.348494 |
| South Bound Latitude: | 41.227327 |
| East Bound Longitude: | 28.636203 |
| North Bound Latitude: | 44.219690 |
| 3.7.2. Spatial resolution | |
| 1000 Unit:m | |
| 3.7.3. Coordinate Reference System | |
| EPSG:3035 - ETRS89 / LAEA Europe | |
| 3.8. Coverage - Time | |
| The data refer to the situation in the country at the census reference date: 07/09/2021. | |
| 3.9. Base period | |
| Not applicable. | |

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| 4. Unit of measure | Top |
| Number of persons. | |

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| 5. Reference Period | Top |
| 2021-09-07 T00:00:00 | |
| 5.1. Temporal extent | |
| 2021-09-07 T00:00:00 | |



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| 6. Institutional Mandate | Top |
| 6.1. Institutional Mandate - legal acts and other agreements | |
| EU implementing regulation 2018/1799 on dissemination of selected topics of the 2021 population and housing census geocoded to a 1 km ² grid; Population and Housing Census 2021 in the Republic of Bulgaria Act | |
| 6.2. Institutional Mandate - data sharing | |
| Data sharing is arranged according to the 2021 Population Census and Housing Census in the Republic of Bulgaria Act and Rules for dissemination of statistical products and services of the National Statistical Institute . | |
| 7. Confidentiality | Top |
| 7.1. Confidentiality - policy | |
| The census data privacy policy is implemented on the basis of the 2021 Population Census and Housing Census in the Republic of Bulgaria Act , according to which NSI undertakes to ensure the protection of individual data by applying the relevant organizational and technical means. This includes applying methods to statistically control the disclosure of individual or sensitive data on aggregate statistics that may be linked to identify a particular statistical unit. | |
| 7.2. Confidentiality - data treatment | |
| The data in the 1000m population grid is not sensitive/confidential. No observation values are suppressed. | |
| 8. Release policy | Top |
| 8.1. Release Calendar | |
| The schedule of census release dates. | |
| 8.2. Release calendar access | |
| https://www.nsi.bg/bg/node/19795 | |
| 8.3. Release policy - user access | |
| The Census data and press releases are published on the NSI website and Information System Infostat in accordance with the Law on Statistics, Rules for dissemination of statistical products and services of the National Statistical Institute and the European Statistics Code of Practice. In line with the Community legal framework and the European Statistics Code of Practice, Eurostat disseminates European statistics on Eurostat's website. The grid datasets provided (Population Grid 2021, 1000m) are subject to NSI's general license policy: License to use statistical information produced and disseminated by the NSI . The datasets or parts of the datasets may not be redistributed or published online (including in GIS or visualization applications) in their original form distributed by NSI. Analytical developments and mapping products, based on the statistical information in the dataset, can be published, but without showing the original values in the individual grid cells. NSI is not responsible for the quality of the information after its reproduction (interpretation), as well as for the purposes for which it is used by the user; When using this statistical product (the data sets), the user is obliged to indicate NSI as the source of the primary information. | |
| 9. Frequency of dissemination | Top |
| Data from the population and housing censuses are disseminated every decade. | |
| 10. Accessibility and clarity | Top |
| 10.1. Dissemination format - News release | |



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| News releases by Census topics are available on NSI webpage and on Census 2021 webpage . |
| 10.2. Dissemination format - Publications |
| No publications available. |
| 10.3. Dissemination format - online database |
| 1. EU CENSUS HUB (Eurostat) 2. Information System Infostat (NSI Bulgaria) |
| 10.4. Dissemination format - microdata access |
| Not applicable. |
| 10.5. Dissemination format - other |
| Other dissemination formats are listed in Rules for dissemination of statistical products and services of the National Statistical Institute |
| 10.6. Documentation on methodology |
| In Bulgarian only - Census 2021 webpage |
| 10.7. Quality management - documentation |
| Methodological documents, questionnaires, instructions and reports available on the Census 2021 webpage |

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| 11. Quality management | Top |
| 11.1. Quality assurance | |
| <p>This dataset represents final population data results of the 2021 Census collection in a 1 km square grid for the territory of Bulgaria. Spatial-based criteria are used when calculating aggregates.</p> <p>Population data is collected during the census period (7. September 2021 – 10. October 2021) via online self-enumeration and door-to-door interviews. The proper application of criteria for place of usual residence is assured by trained enumerators and detailed instructions in online questionnaires.</p> <p>Location data in terms of geographic coordinates (longitude and latitude) of dwelling units were collected by NSI. Dedicated census fieldwork and in-office activities were carried out (using mobile devices and desktop applications) to provide a precise point reference base for the whole territory. Census data were georeferenced to the point locations at the time of collection by the enumerators or during the self-enumeration campaign via tools provided by the e-census platform.</p> <p>High quality of the geographical data is ensured via the use of the latest available national cadastral maps, cadastral data and orthophoto imagery. Geocoding, census mapping and census list production activities are implemented with the collaboration of the local authorities and crossed several validation steps in the preparatory and production stages.</p> | |
| 11.2. Quality management - assessment | |
| <p>An integrated quality and security management system has been implemented in respect of all Census stages and in accordance with the requirements of BDS EN ISO 9001: 2015 and BDS EN ISO 27001: 2017. The certificate fully meets all international requirements and guarantees the quality of the processes and information security of the entire statistical and information infrastructure of the NSI, both at national and regional levels.</p> | |

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| 12. Relevance | Top |
| 12.1. Relevance - User Needs | |
| <p>The census data are addressed to policymakers, researchers, media and the general public.</p> | |
| 12.2. Relevance - User Satisfaction | |
| <p>No user satisfaction surveys are carried out.</p> | |
| 12.3. Completeness | |
| <p>Data are available on all breakdowns of census topics specified in Annex I of the Regulation (EU) 2018/1799 for the 1000m grid.</p> | |



| 13. Accuracy Top |
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| 13.1. Accuracy - overall |
| Reliability and accuracy of grid data for the topic 'place of usual residence' <ul style="list-style-type: none">• 37% of the census population is enumerated via online questionnaire. Location of the place of usual residence collected via self-enumeration is subject to additional verification procedures carried out by the enumerators during the fieldwork; Locations pinpointed in self-enumeration checked for consistency with provided by respondents detailed address descriptions;• 54% of the census population is enumerated via paper questionnaire. Proper application of criteria for place of usual residence assured at data collection with trained enumerators;• 9% of the census population is imputed from administrative sources. For these records, the place of residence corresponds to the current address of the persons on the census reference date of 7 September 2021, according to national law. The 12-month criterion was not applied. |
| 13.2. Sampling error |
| Not applicable. |
| 13.3. Non-sampling error |
| Not applicable. |

| 14. Timeliness and punctuality Top |
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| 14.1. Timeliness |
| Census 2021 grid dataset with final results delivered by 31st March 2024 according to the requirements of Reg. (EU) 2018/1799 |
| 14.1.1. Date of publication |
| 31/12/2022 |
| 14.1.2. Date of last revision |
| 31/03/2024 |
| 14.1.3. Date of creation |
| 31/12/2022 |

| 15. Coherence and comparability Top |
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| 15.1. Comparability - geographical |
| Data are fully comparable between geographical areas. No difference between the production methods used and the definitions applied. No differences in the quality of location data collected. |
| 15.1.1. Geographic information - data quality |
| Positional accuracy: Point locations of dwelling units collected by NSI during pre-enumeration and enumeration activities with the requirement to locate within the building footprint. The position of points is verified with the available national cadastral data and high-resolution national imagery. Locations pinpointed in self-enumeration were checked for consistency with detailed address descriptions provided by respondents; The identified errors in location were reviewed and corrected where possible. |
| Temporal coherence: Census data georeferenced to the point locations at the time of collection by the enumerators or during the self-enumeration campaign via tools provided by the e-census platform - September 7, 2021 - October 10, 2021. |
| Completeness: Values for the total population in grid cells are obtained by aggregating from geocoded individual census records. <ul style="list-style-type: none">• 91% of census microdata is georeferenced to the point locations at the time of collection by the enumerators or during the self-enumeration campaign via tools provided by the e-census platform.• 9% of census microdata is subject to address processing and geocoding to obtain the accurate point location on the map. |
| The unallocated population is mainly imputed from administrative sources, as well as identified apparent error locations collected via self-enumeration and with address descriptions not sufficient to determine precise location. |



| Unallocated population (1000m grid) | | | |
|-------------------------------------|-----------------------|--------------------|----------|
| Variables | Total for the country | Unallocated on map | |
| | <i>Number</i> | <i>Number</i> | <i>%</i> |
| Total population (T) | 6 519 789 | 58 198 | 0.9 |
| Sex – Male (M) | 3 136 262 | 30 390 | 1.0 |
| Sex – Female (F) | 3 383 527 | 27 808 | 0.8 |
| Age – Under 15 years (Y_LT15) | 917 722 | 4 279 | 0.5 |
| Age – 15 to 64 years (Y15_64) | 4 069 400 | 38 271 | 0.9 |
| Age – 65 years and over (Y_GE65) | 1 532 667 | 15 648 | 1.0 |

15.2. Comparability - over time

The Census 2011 population grid data was produced using a combination of aggregation and disaggregation techniques, while the Census 2021 grid data is entirely aggregated from point locations. The two datasets, from 2011 and from 2021, are not fully comparable.

15.3. Coherence - cross domain

Not applicable.

15.4. Coherence - internal

No differences.

16. Cost and Burden

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Census 2021 budget.

17. Data revision

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17.1. Data revision - policy

National policy allows the revision of already published data if there are serious reasons for doing so.

17.2. Data revision - practice

National policy allows the revision of already published data if there are serious reasons for doing so.

18. Statistical processing

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18.1. Source data

Census 2021 dataset, geocoded to high-precision geographic coordinates of place of usual residence.

18.2. Frequency of data collection

Decennial.

18.3. Data collection

Geospatial data derived during census survey operations.

18.4. Data validation

Consistency checks on aggregated values by categories.

18.5. Data compilation

Spatial based criteria used when calculating aggregates. Values for the total population and for the population categories in grid cells aggregated from point locations of individual census records.

18.6. Adjustment

Not applicable.

19. Comment

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None.