Geocoding the 2021 EU wide census

Side event on the 2020 Round of Population and Housing Censuses and the Global Statistical Geospatial Framework

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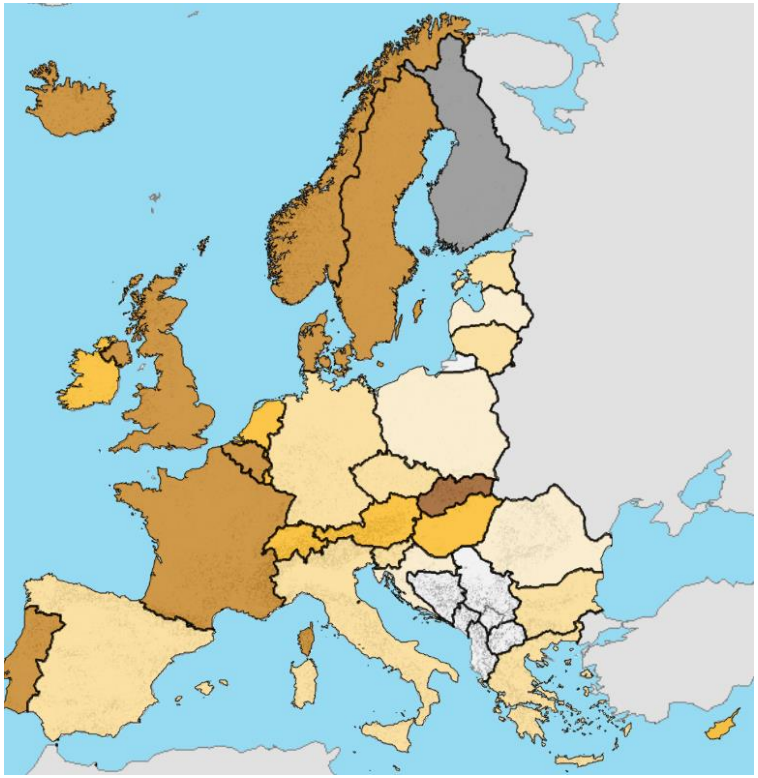
Eurostat

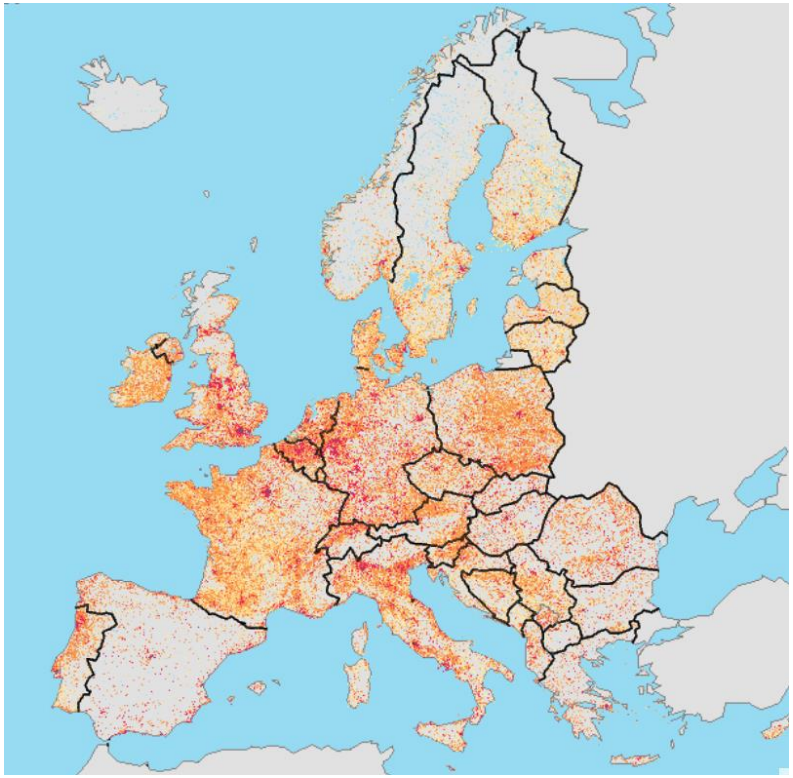
Quick facts on Eurostat

- Statistical office of the European Union and part of the European Commission
- Chairs the European Statistical System (ESS)
- Prepares legislation on European statistics
- The unit for geographical information (GISCO) leads the ESS action on the integration of statistical and geospatial information

European Commission

EU wide geospatial census data - past and future





Key characteristics of the 2011/2021 census in the European Statistical System

- Production mode is a national prerogative: mix of register based censuses, traditional censuses and mixed mode
- EU works via output harmonisation (programme and quality standards)
- 2021 population census key project for advancing data integration for statistics (administrative data, geospatial data)
- So far output geographies comprise only statistical and administrative areas (NUTS system)

=> difficult for cross-border comparison and time series

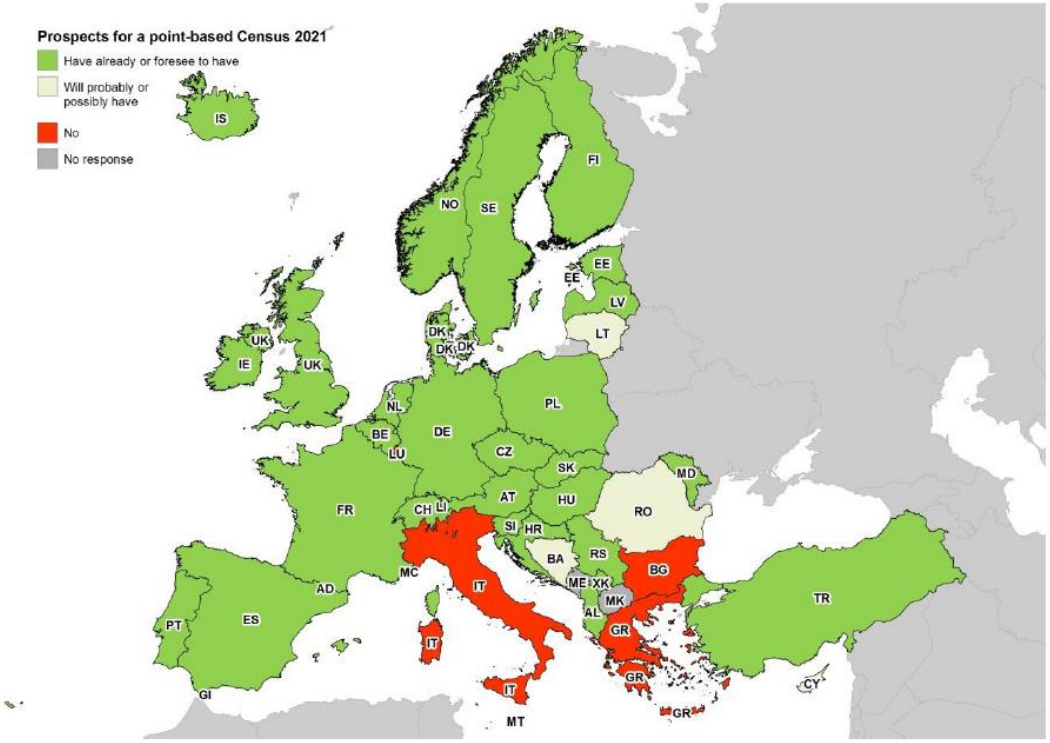
2011/2021 census programme

- Census programme laid down in EU wide legislation – valid for 2011 and 2021
- Maximum spatial resolution of topics are Municipalities, NUTS 3, NUTS 2, NUTS 1 depending on topics and breakdowns
- Already in 2011 many NSIs geocoded all persons and households
  - Operational reasons (better field support, better execution)
  - Grids and other small areas part of the national dissemination programme on top of EU wide programme

=> Opportunity for the GEOSTAT 2011 prototype in cooperation with the European Forum for Geography and Statistics (EFGS)

Capacity of EU Member States to geocode the census, reference year 2015

Map 6. Results obtained for question 1. Do you have or do you foresee that you will have the necessary data and infrastructure to geocode the next population census 2021 on single points (coordinates) such as address locations, buildings or locations of real cadastral parcels?



Source: GEOSTAT 2 project/EFGS

EU population grids – what for?

- EU policies require cross-border analysis (cohesion policy, maritime policy, …)
- EU policies demand higher spatial resolution and territorial classification of information (e.g. rural vs urban) for evidence based decision making
- Statistical output geographies based on administrative areas change frequently
  (NUTS changes every three years => comparison over time difficult)

Key characteristics of the 2021 geocoded (1km²) census

- Complements the existing census programme
- First EU wide legislation on geospatial statistics
- Based on the existing census program and methodology from GEOSTAT projects (GEOSTAT 2011 prototype)
- Covers 13 breakdowns from 6 topics
- Harmonisation of disclosure control practices
- Centralised distribution of geospatial and statistical data to avoid inconsistent national systems
  - Mapping of statistical and geospatial data and metadata (SDMX and INSPIRE standards)
  - Central IT tools developed by Eurostat (Census Hub, see last slide for more info)

Programme of the geocoded census 2021

Census topic categories to be broken down on the 1km^2 reference grid	
0.	SEX.0.: Total population
1.	SEX.1.: Male
2.	SEX.2.: Female
3.	AGE.G.1.: Under 15 years
4.	AGE.G.2.: 15 to 64 years
5.	AGE.G.3.: 65 years and over
6.	CAS.L.1.: Employed persons (optional)
7.	POB.L.1.: Place of birth in reporting country
8.	POB.L.2.1.: Place of birth in other EU Member State
9.	POB.L.2.2.: Place of birth elsewhere
10.	ROY.1.: Place of usual residence one year prior to the census unchanged
11.	ROY.2.1.: Place of usual residence one year prior to the census: move within reporting country
12.	ROY.2.2.: Place of usual residence one year prior to the census: move from outside of the reporting country

Position of EU census principles in the SGF

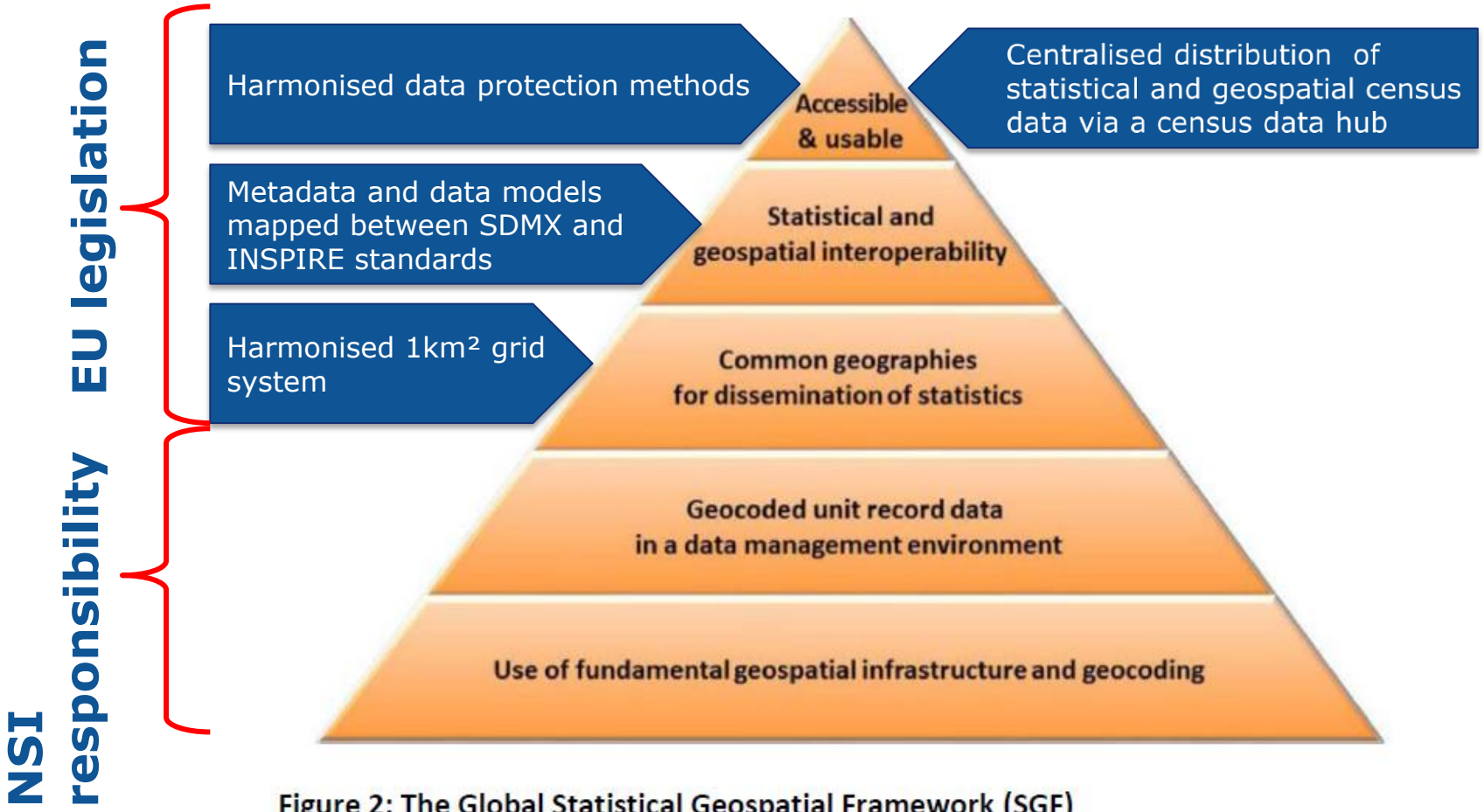


Figure 2: The Global Statistical Geospatial Framework (SGF)

On-going EU wide projects with census and SGF relevance (GEOSTAT)

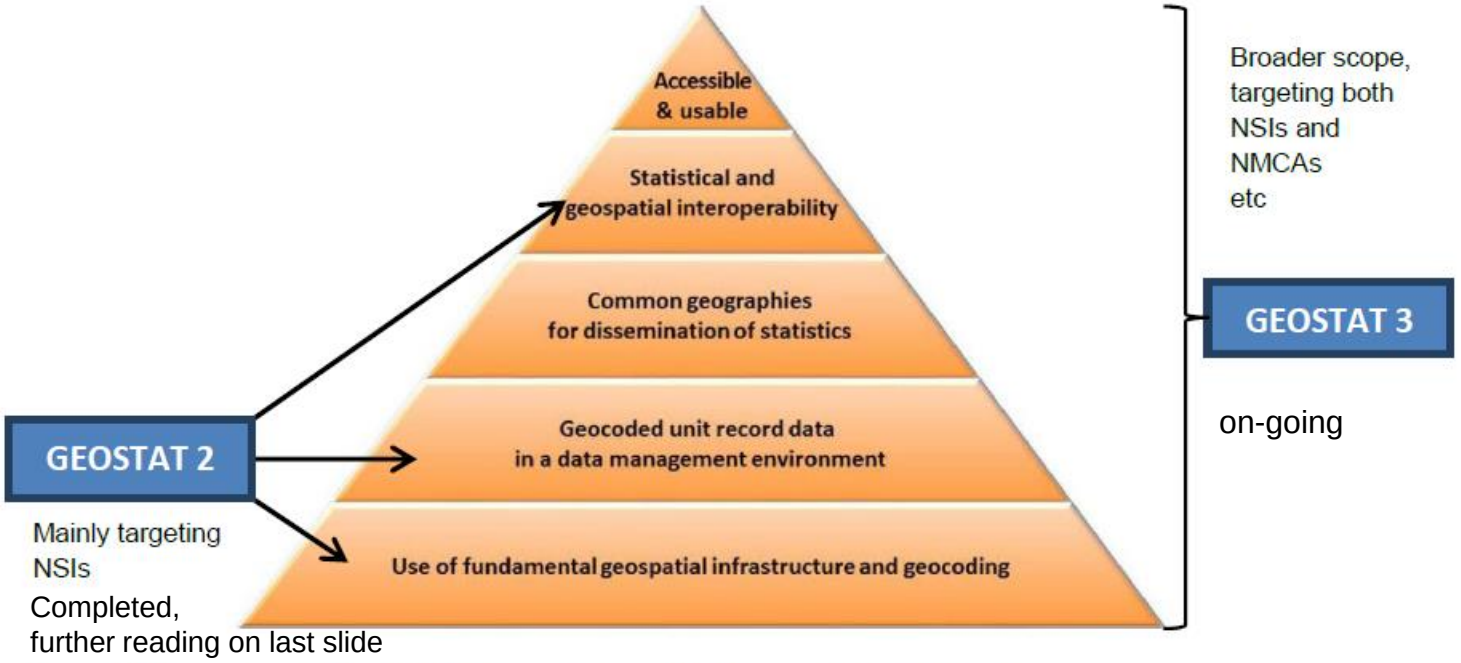


Figure 3: Illustration of the link between the GEOSTAT projects and the SGF.

More ambitious plans for EU geospatial statistics after 2021

- Higher frequency of census information (annual)
- Continue with geocoded census possibly with higher spatial resolution in high density areas such as city centres
- Geocoding of more statistics (social surveys, business registers, agriculture census, …)
- In general, foster data integration

=> requires a consistent and cross-cutting implementation of the SGF principles in all relevant statistical domains

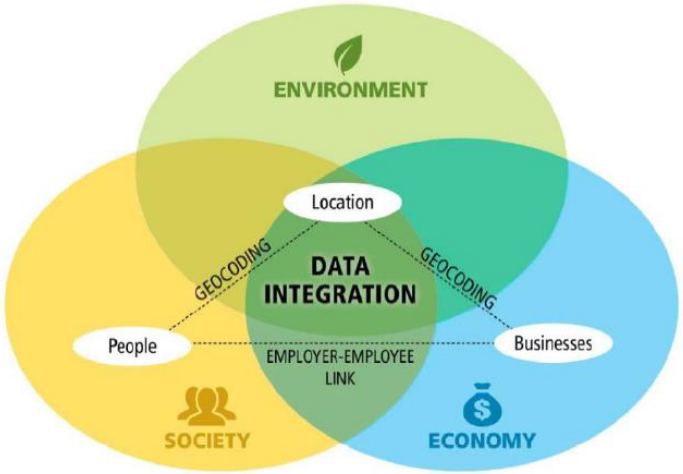


Figure 1: Location as a link between the society, the economy and the environment

Save the Date

EFGS
European Forum for Geography and Statistics
DUBLIN 2017

2-3 Nov, 2017
Dublin Castle,
Dublin,
Ireland
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10th Annual European Forum for Geography & Statistics Conference

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Hosted by the Central Statistics Office and Ordnance Survey Ireland

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EUROPEAN FORUM FOR GEOGRAPHY AND STATISTICS

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Further reading

- European Forum for Geography and Statistics http://www.efgs.info/
- The EFGS 2017 conference website https://www.efgs2017.ie/
- GEOSTAT 2 project page http://www.efgs.info/geostat/geostat2/
- GEOSTAT 3 project page http://www.efgs.info/geostat/geostat-3/
- The GEOSTAT 2011 data http://ec.europa.eu/eurostat/web/gisco/geodata/reference-data/population-distribution-demography/geostat
- UN-GGIM: Europe working group on data integration http://un-ggim-europe.org/content/wg-b-data-integration
- EU wide census http://ec.europa.eu/eurostat/web/population-and-housing-census/overview