



NMCAs response to global challenges – focusing on global challenge for climate change

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Outlook - response to global challenges

- The climate change does not stop at the borders!
- Necessity and importance of harmonising data across boundaries
- How could the combination of statistics and spatial data contribute to the solution of the climate crisis?
- NMCAs' role in tackling global challenges
- European perspective

The climate change does not stop at the borders!

Necessity and importance of harmonising data across boundaries

WHY?

- To ensure **comparability** of the situation in the different regions, countries and global
- To develop and implement **targeted policies** to fight the challenges by actions
- To **measure the changes** efficiently and in a trusted manner
- To achieve **effective data aggregation** for the European Union and beyond
- The geostatistical data integration (by increasing availability and quality of georeferenced information) helps support **more localized actions and policies** (e.g. city planning, local development/risk mitigation plans, local climate action resilience/mitigation measures...)
- It provides a higher resolution (more detailed) view of the situation, allowing policies (and resources) to be more focused and consequently more efficient

Why can geostatistical data integration address climate-related and other global challenges ?

- Geographical and statistical information are **key components** for evidence and scientific based decision making
- Global challenges and Commission priorities (sustainable development, competitiveness, defence, biodiversity preservation, etc.) have a **strong spatial component** which cannot be addressed without reliable geographical information
- Growing importance of reliable information in the new context of **public opinion manipulations** is paramount to protect democracy and individual rights
- **New methodological and technical developments** (AI) offer new opportunities to do more, faster

How can the combination of statistics and spatial data contribute to the solution of the climate crisis?

Statistics: the science of collecting, analyzing, presenting, and interpreting data to measure economy, society and the environment

Spatial data: information about the physical location and shape of objects on Earth

Response to global challenges requires

“Thinking global and acting local”

Integration of statistical and spatial data delivers underlining information
about the climate change and for defining actions

How can the combination of statistics and spatial data contribute to the solution of the climate crisis? II

Integration of both can

- demonstrate the **triggering factors of climate change** (e.g. drought over large parts of Europe)
- support **evidence-based decision and policy making** at national, regional and global level by developing **comparable indicators** to measure the changes and risks (e.g. land use and land cover, public health)
- help **identifying the global challenges and measuring their impact** by the caused changes (e.g. water consumption for agriculture; air pollution due transport)
- enable targeted and timelier policy actions by offering **quicker and more granular information** about the different observed phenomena, their interlinkages and impact
- **visualisation** of the recognized phenomena and storytelling to inform and alert citizens, businesses and the public sector
- Improve the **communication on global challenges**, including behavioral issues

NMCAs role in tackling global challenges

- Support **national policy making** with reliable geospatial data
 - By delivering authoritative geospatial data
 - By ensuring cross-policy coherence
- Contribute to the **European policy making by sharing reliable national geospatial data**
- **Enable Eurogeographics goals** e.g.
 - to produce European scaled data
 - to contribute to standardisation and harmonisation
- **Strengthen the global activities** (e.g. UN) to tackle challenges (e.g. climate change, disaster management) and monitoring policies such as SDGs with comparable data

NMCAs role in tackling global challenges II

- **Basic role:** ensuring availability of high-quality, up-to-date and harmonised geospatial information
- NMCAs may need to **adapt** their **activities** to focus more on tackling global challenges
- They could **act as data aggregators** to integrate thematic data/statistics from other organisations/partners on top of geometrical and topographic description.
 - building related information (e.g. building energy performance certificates, transaction cost, etc.)
 - LiDAR data, which have now become standard datasets produced by NMCAs (this data is used for forestry monitoring, land slide risk estimation, glacier melting monitoring, archaeology, etc.)
 - earth observation data usage for policy making

EU priorities are linked to global challenges

- Focus on **economic growth**, enterprises and innovation by ensuring competitiveness, prosperity and fairness
- Meeting Europe's **security and defense challenges** and **enhancing preparedness and crisis management**
- Promoting **social fairness**, increasing solidarity in the society, and ensuring equal opportunities for all
- Build a **competitive and resilient agriculture and food system, safeguarding biodiversity and preparing for a changing climate**
- **Tackle global challenges** and **promote peace, partnerships**, and economic stability

European Commission's priorities for 2024-2029

- A new plan for Europe's sustainable prosperity and competitiveness
- A new era for European defence and security
- Supporting people, strengthening our societies and our social model
- Sustaining our quality of life: Food security, water and nature
- Protecting our democracy, upholding our values
- A global Europe: Leveraging our power and partnerships
- Delivering together and preparing our Union for the future

Eurostat – role and mandate

- Eurostat mission is to **provide high-quality statistics and data on Europe** (EU, country, regions, cities)
- Eurostat produces European statistics **in partnership** in the European Statistical System (ESS) including National Statistical Institutes (NSIs) and other national authorities (ONAs) – EU, EEA and CH
- Eurostat **coordinates statistical and related activities inside the Commission** and
- Eurostat supports **the policy making with sectoral data**
- Eurostat **contributes to European and international fora** and helps ensuring high data quality
- Eurostat produces geospatial **visualization and geostatistical analysis** to support fighting global challenges

How can Eurostat support the process?

- **Bridging between NSIs and NMCAs** for closer cooperation (e.g. Working Group and EFGS)
- **Support and promote** the development of European geographical information and existing initiatives (from national to European level)
- **Funding:** NMCA-NSI joint application for Eurostat GEOS grants
- **Contribution to international work including** offering grants to UNECE and UNGGIM
- **Better communication** on existing geo-statistical products
- **Publishing findings** (e.g. geospatial accessibility assessment)
- **Disseminating aggregated data**

Examples of spatial analyses for policy support

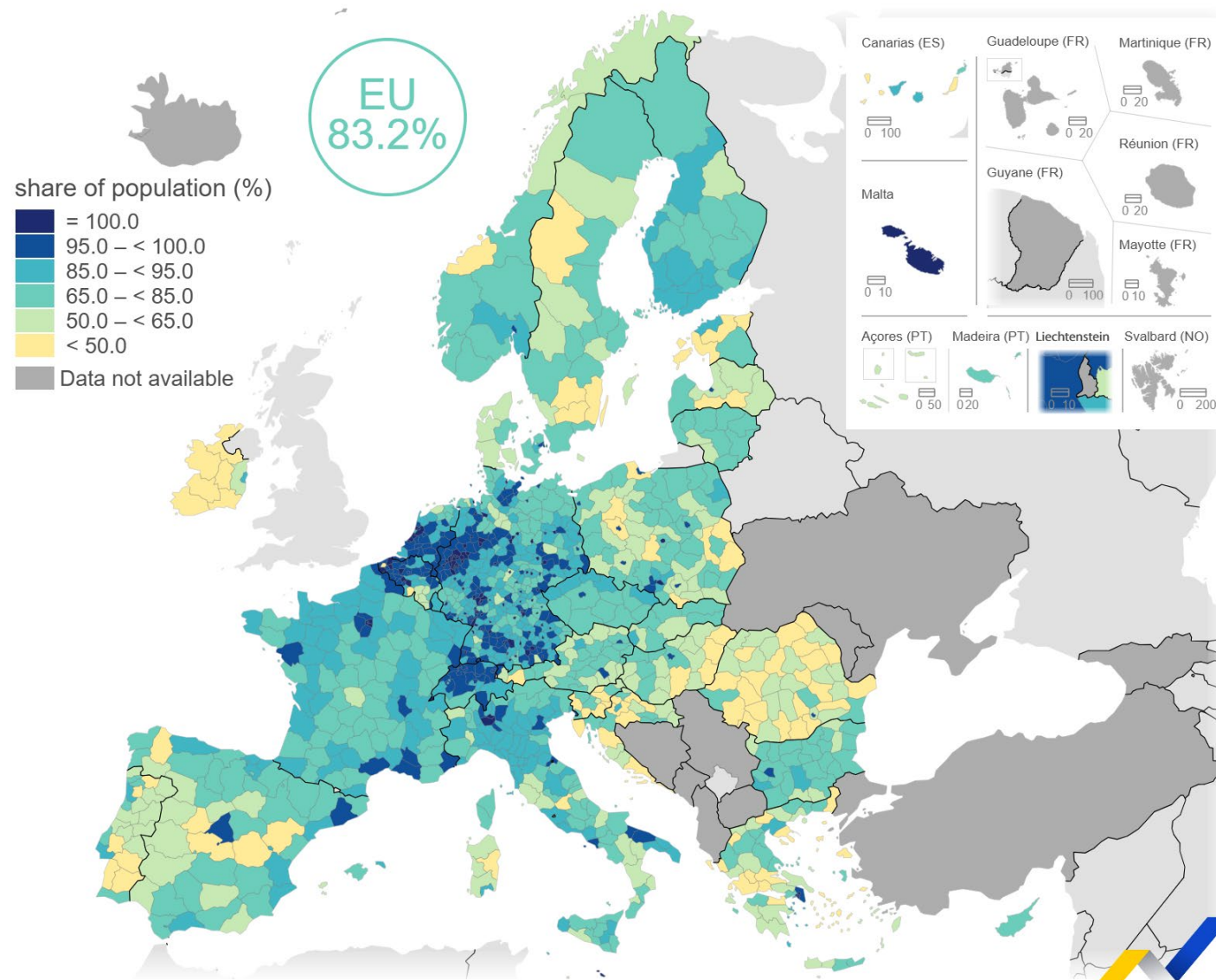


https://ec.europa.eu/regional_policy/en/newsroom/news/2019/01/01-03-2019-access-to-universities-in-the-eu-a-regional-and-territorial-analysis



https://ec.europa.eu/regional_policy/sources/docgener/focus/2013_09_passenger.pdf

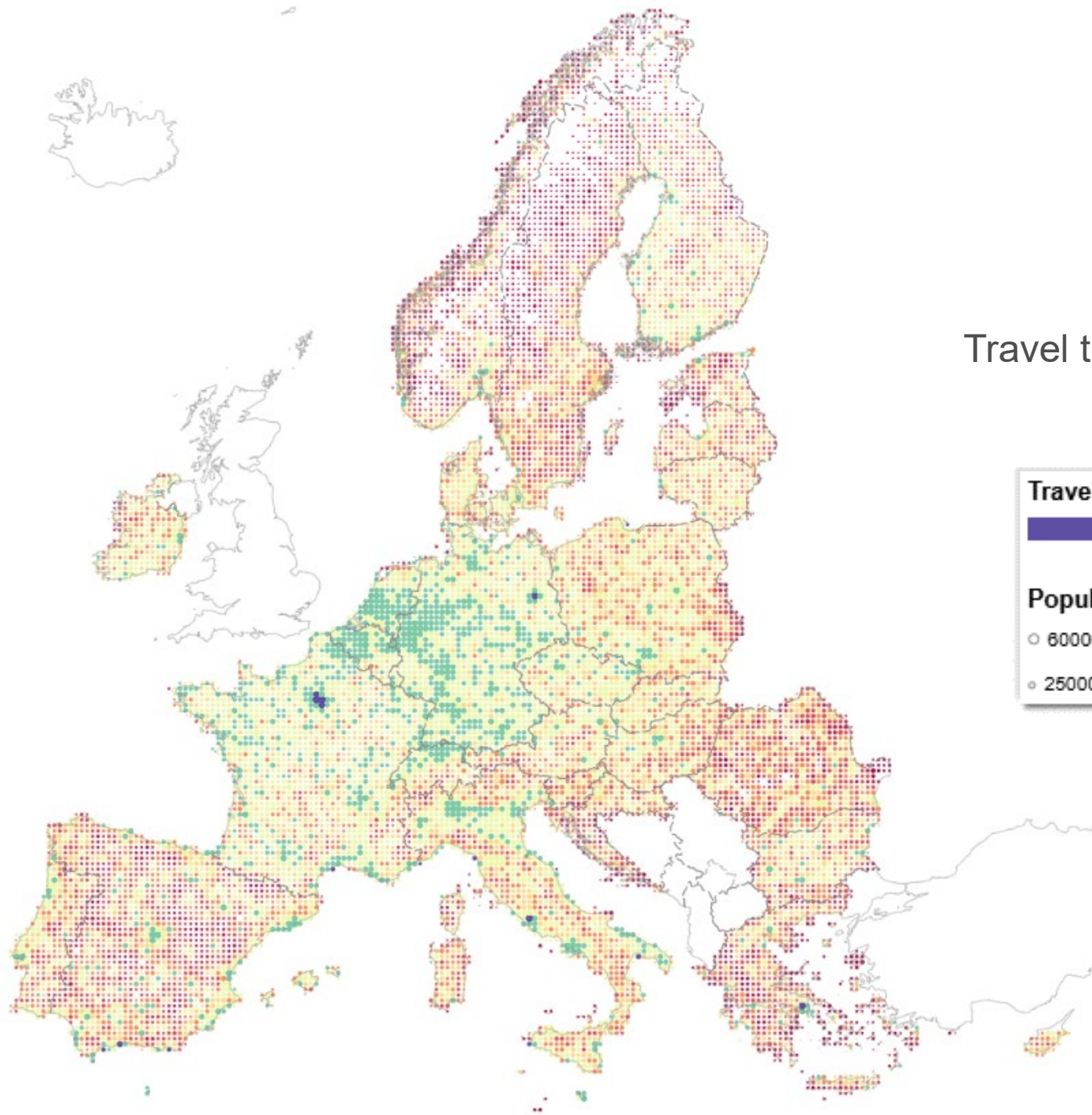
Population living within 15 minutes driving time of a hospital, 2023 (%, by NUTS 3 regions)



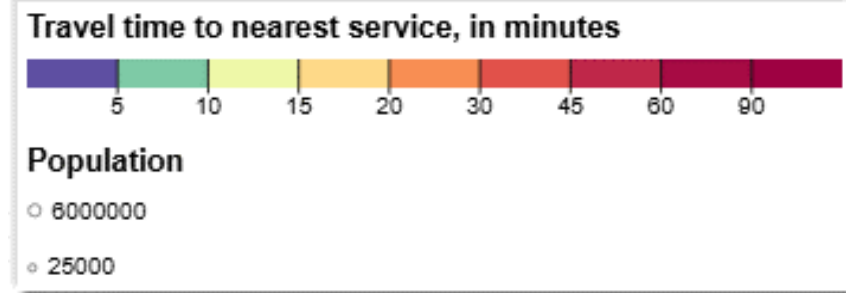
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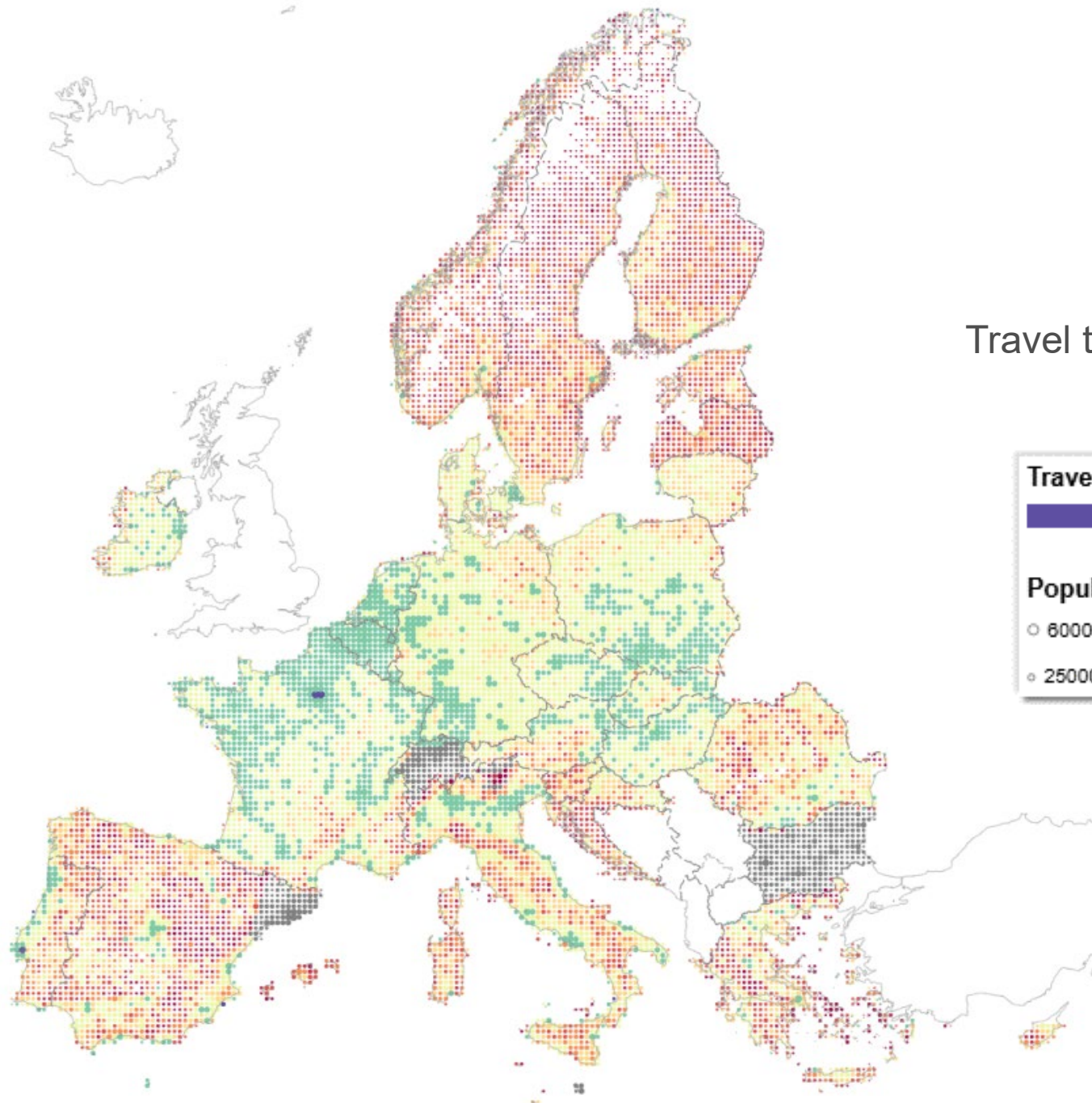
Source: Eurostat calculations based on TomTom Multinet 2022, Geostat population grid 2021, Eurostat-GISCO hospital locations 2023

Administrative boundaries: © EuroGeographics © UN-FAO © Turkstat
Cartography: Eurostat – IMAGE, 04/2025

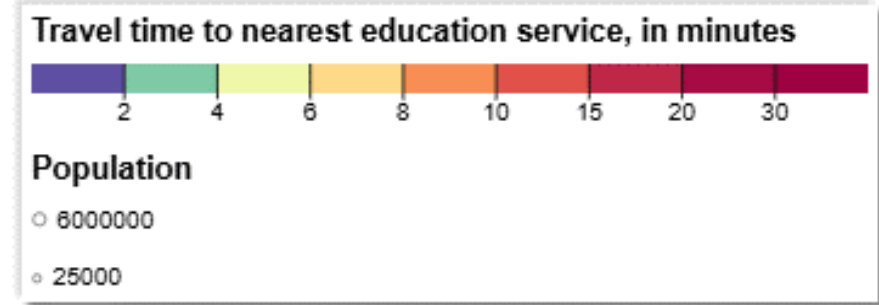


Travel time to nearest healthcare service, 2023

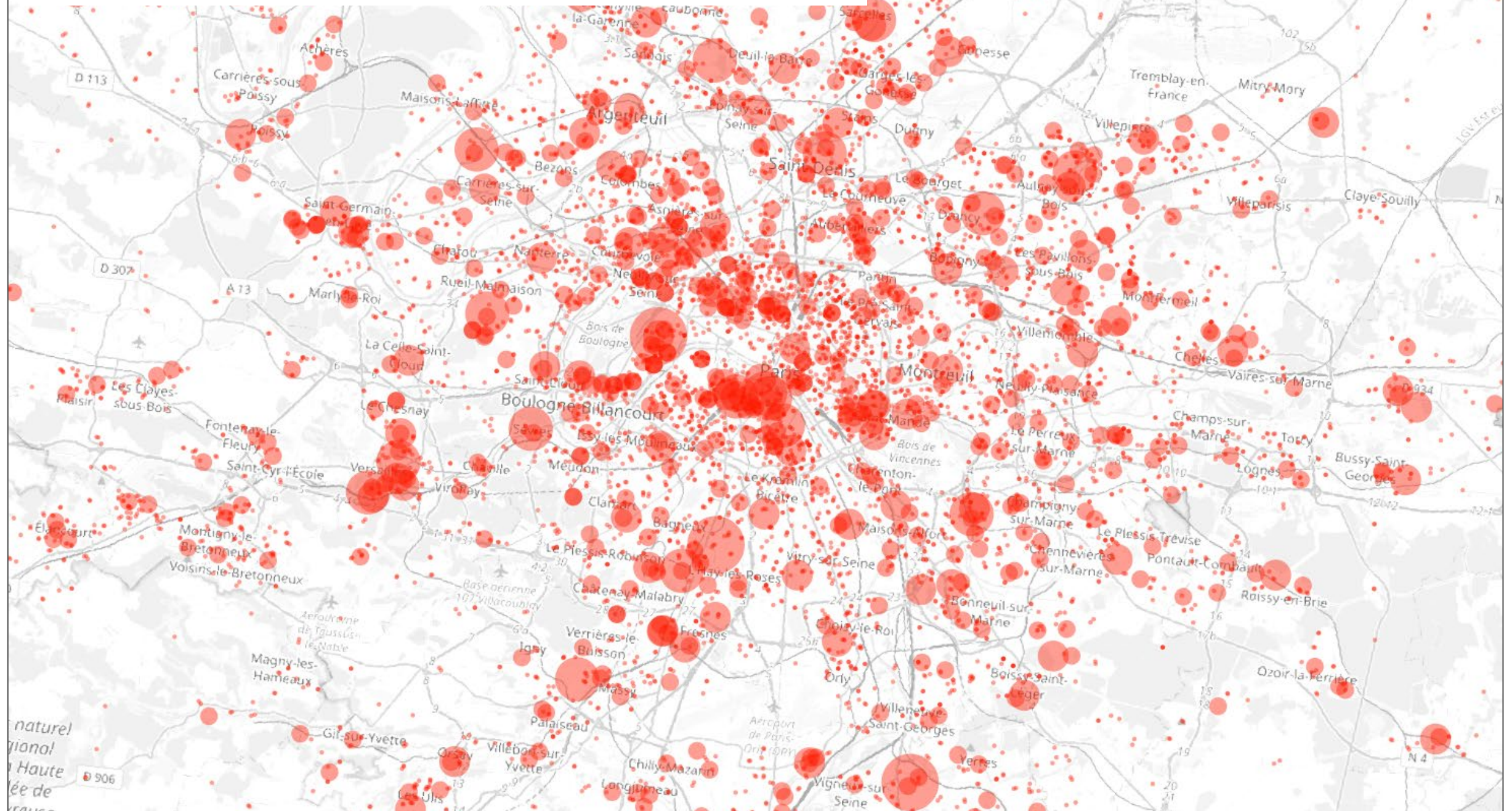




Travel time to nearest education service, 2023

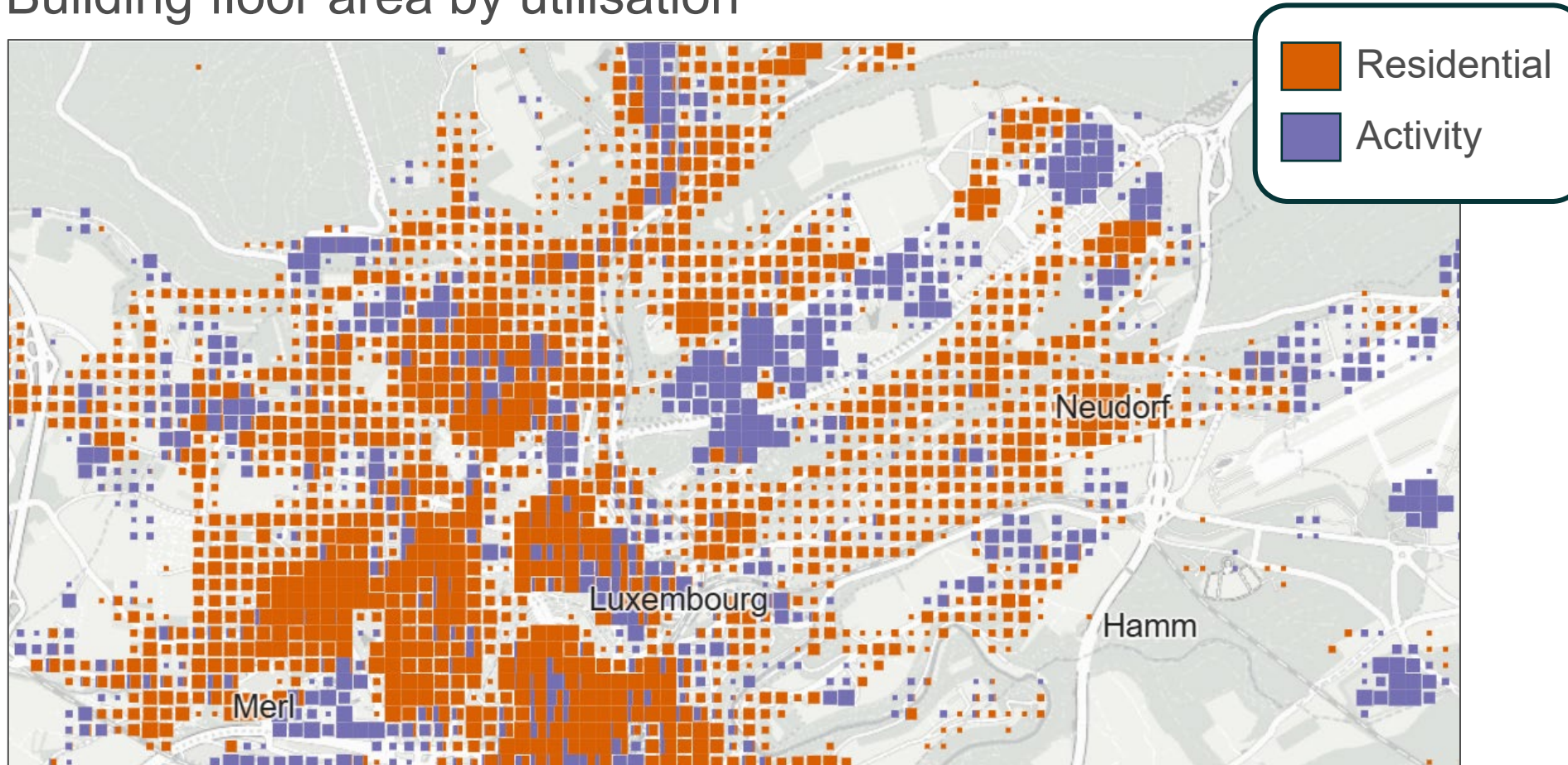


Primary and secondary education services in Paris region



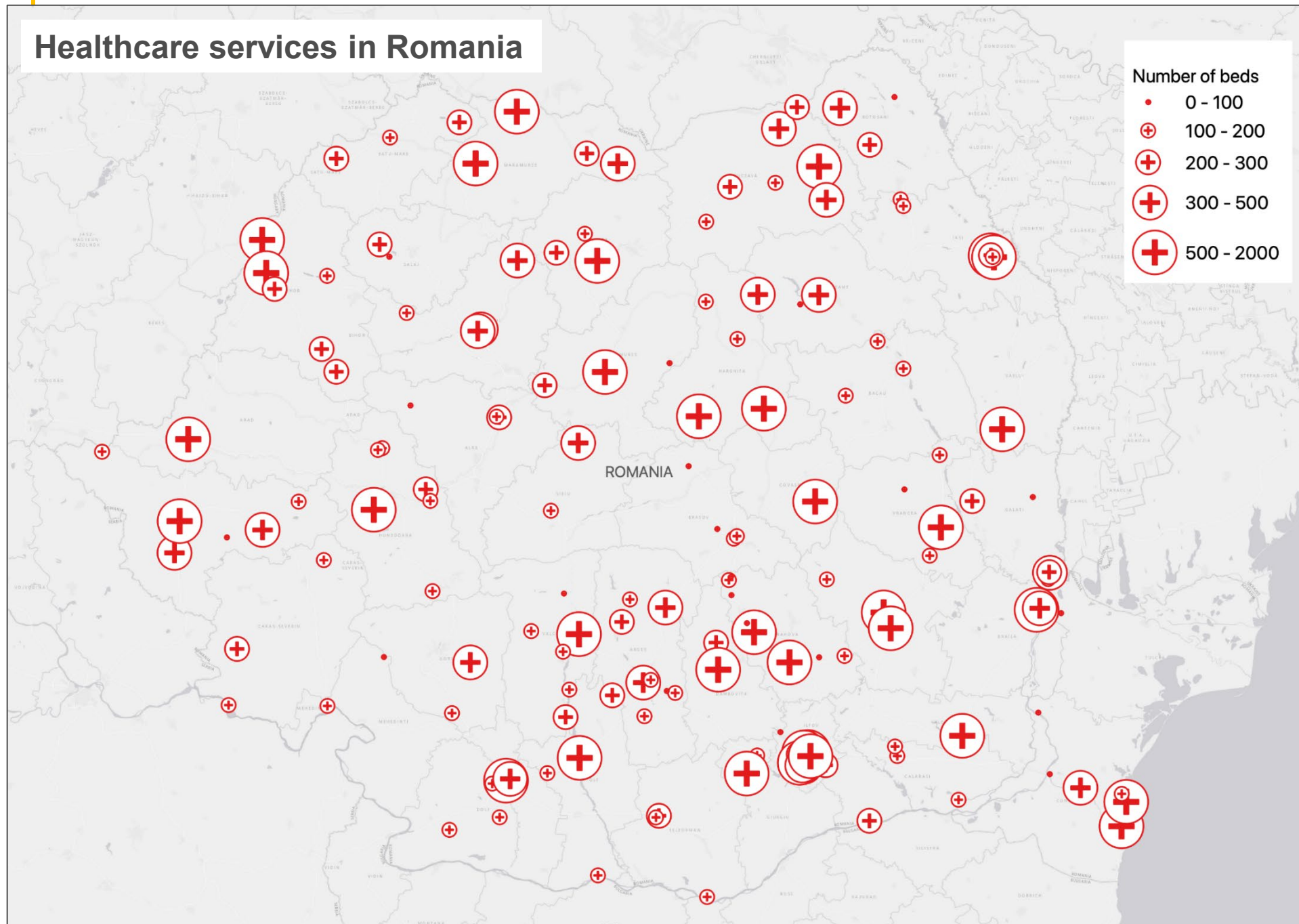
Buildings demography – gridded statistics

Building floor area by utilisation



<https://observablehq.com/@eurostat-ws/building-demography>

Healthcare services in Romania



Road transport performance

- Gridded statistics on road transport performance
- Input data: Population grid + road transport network
- Ratio of the population within 90-min drive time and population living within 120km radius.
- DG REGIO production for 2016, to be industrialised by Eurostat
- Under development



https://ec.europa.eu/regional_policy/sources/work/2019_02_road_transport.pdf

Summary - response to global challenges

- The climate change does not stop at the borders!
- All public services have a role in tackling global challenges
- Necessity and importance of harmonising data across boundaries
- The integration of statistics and spatial data can help fighting the climate crisis
 - Let's work on it together!

Thank you!

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