Data for rural areas: the Rural Observatory and new metrics on innovation and entrepreneurship

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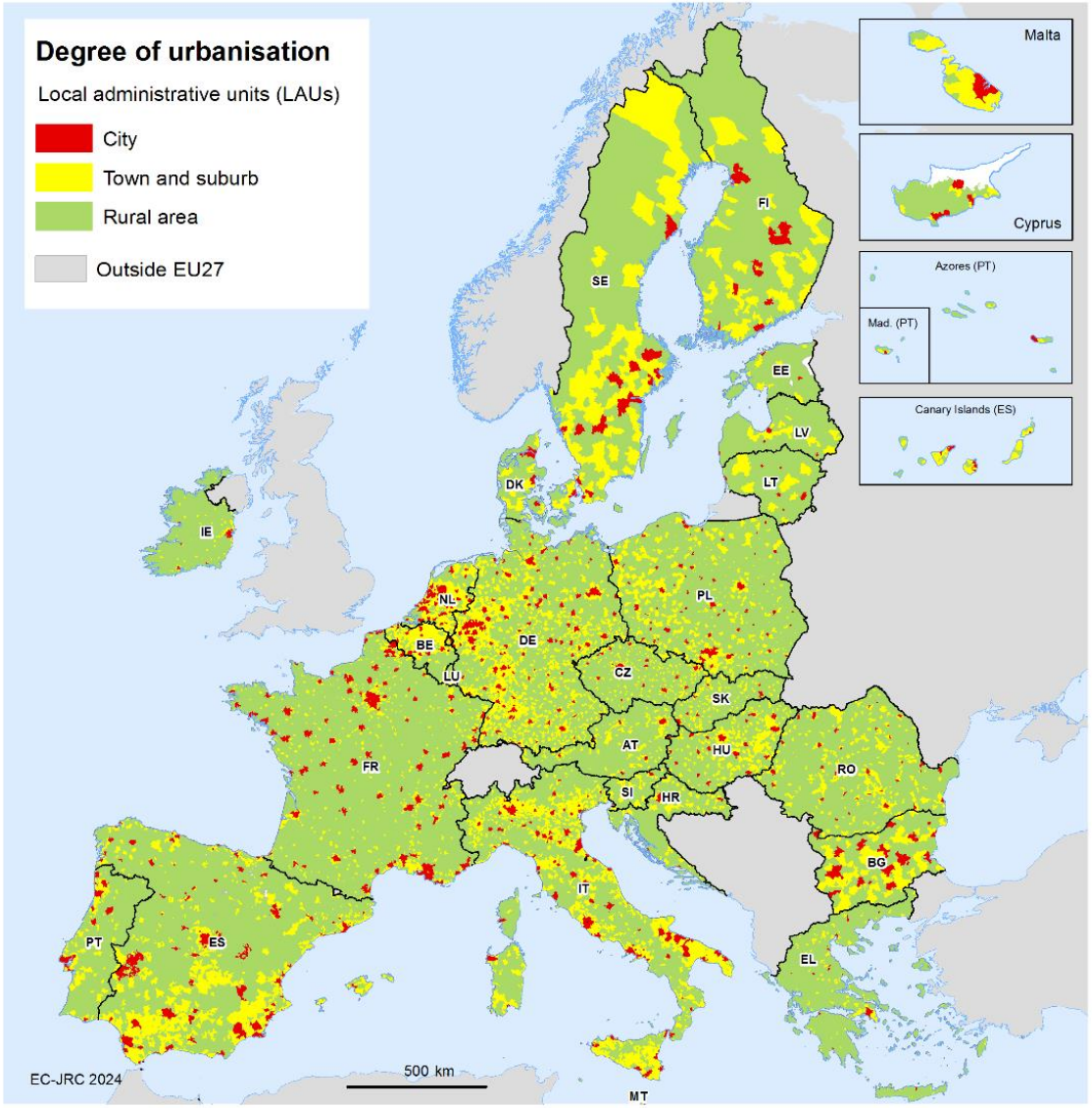
European Commission

European rural areas

- Rural areas comprise over **76% of the EU's territory** and over 25% of its population
- **Challenging demographic trends** and urban-rural gaps
- → geographies of discontent

- **Long-Term Vision for EU's Rural Areas**
- **New European Innovation Agenda**

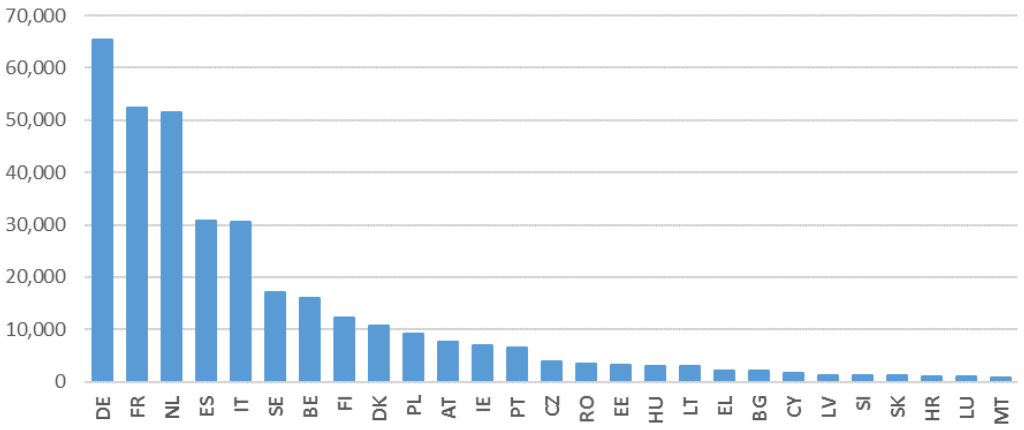
- **Startup Village Forum initiative**



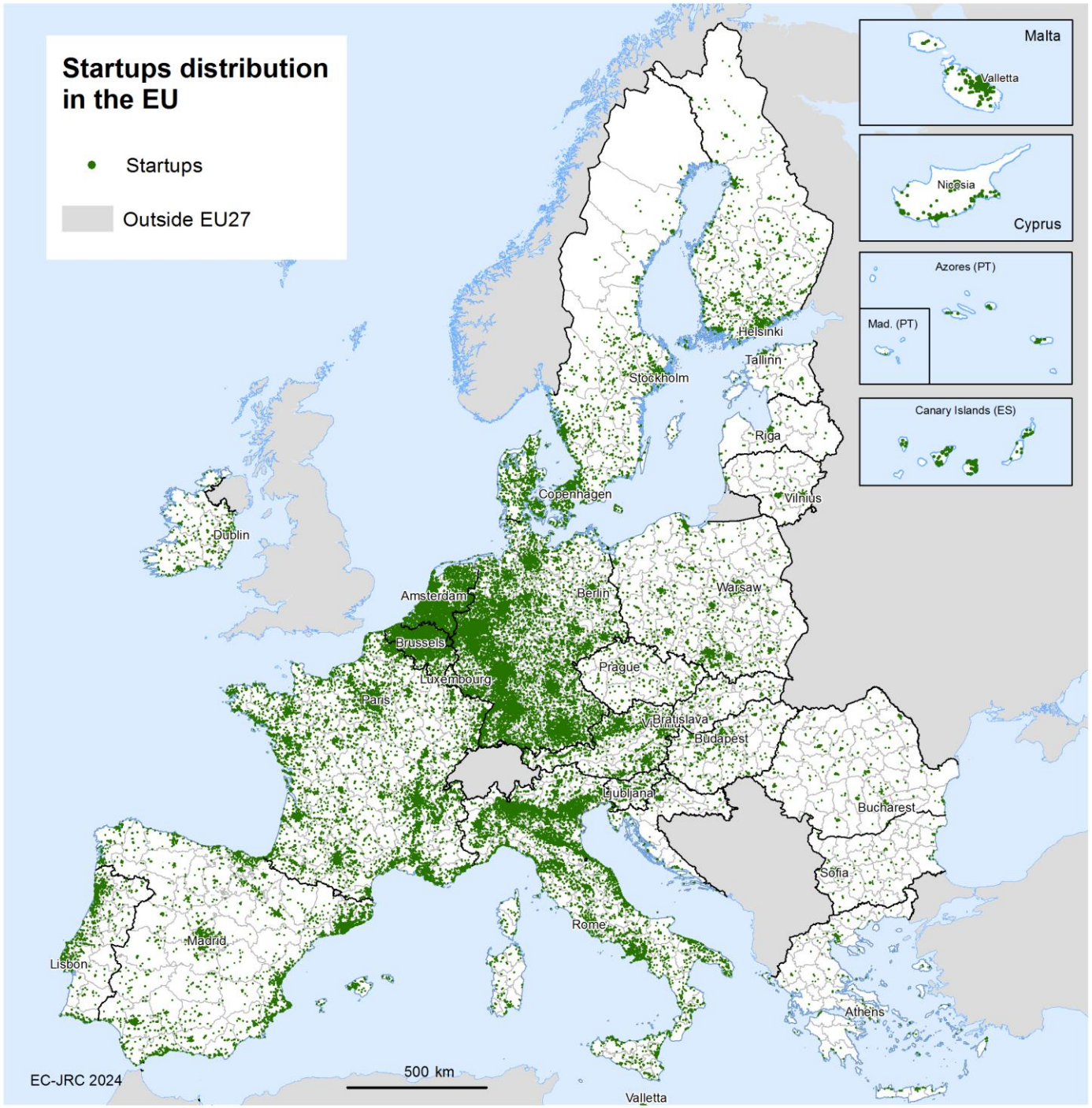
Source: European Commission - JRC, 2024

Startups in the EU

Number of startups in EU countries, 2024

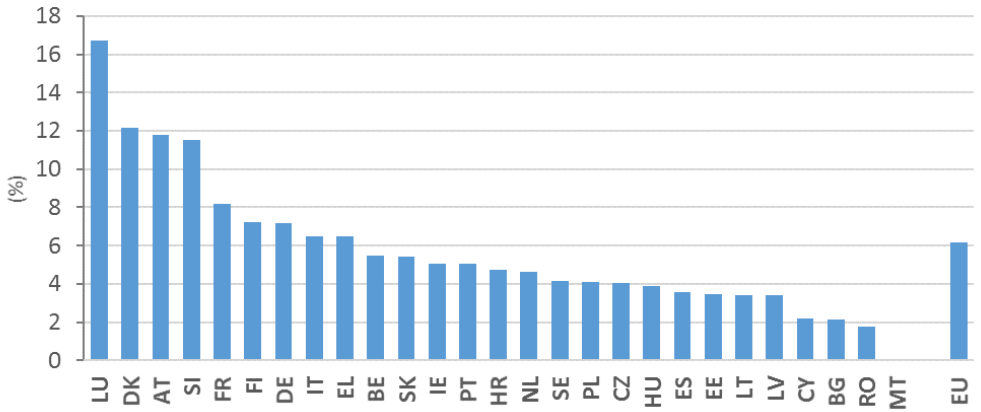


Source: EC-JRC, based on Dealroom.co data



Rural startup density

Share of startups in rural areas, 2024



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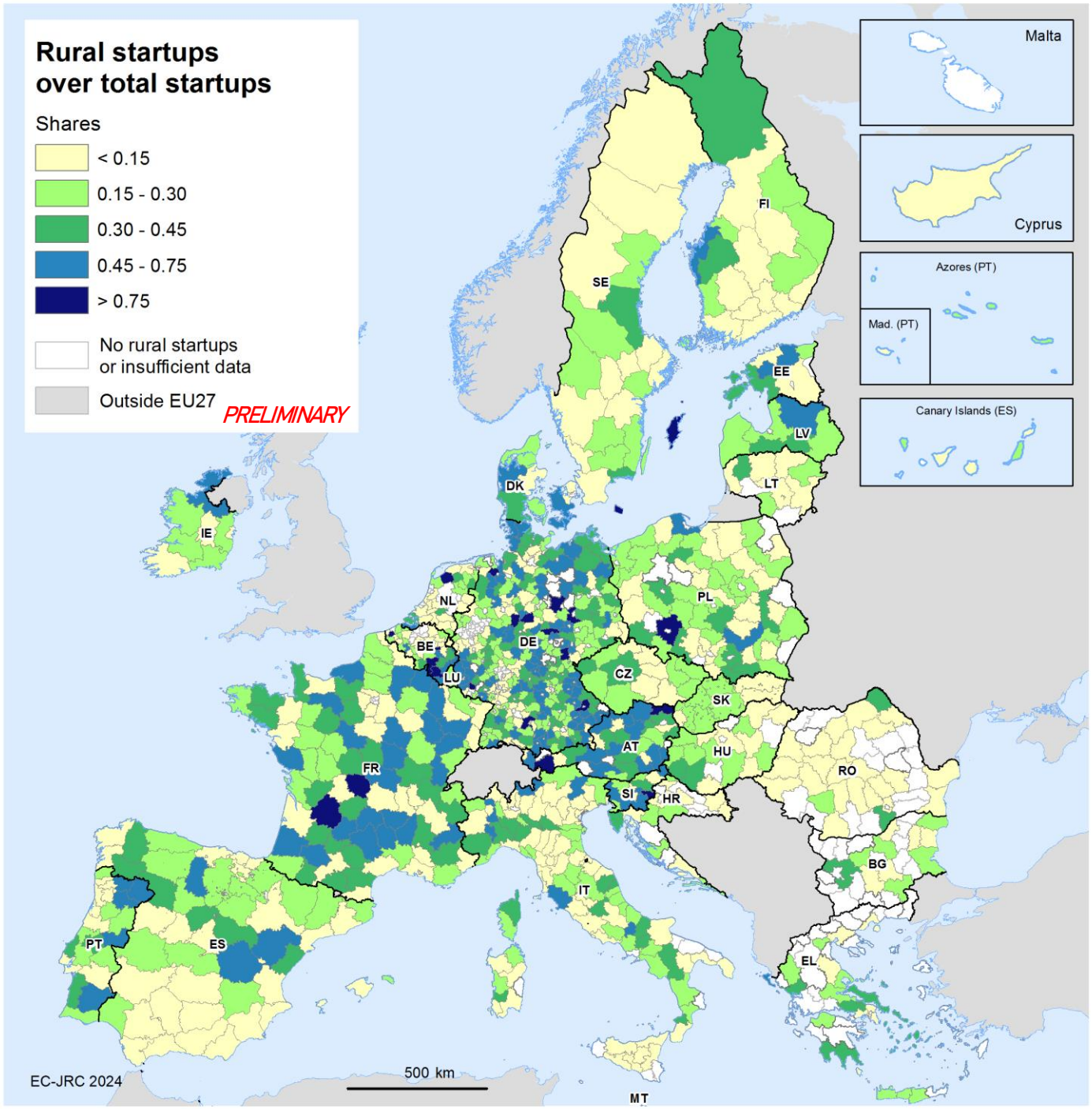
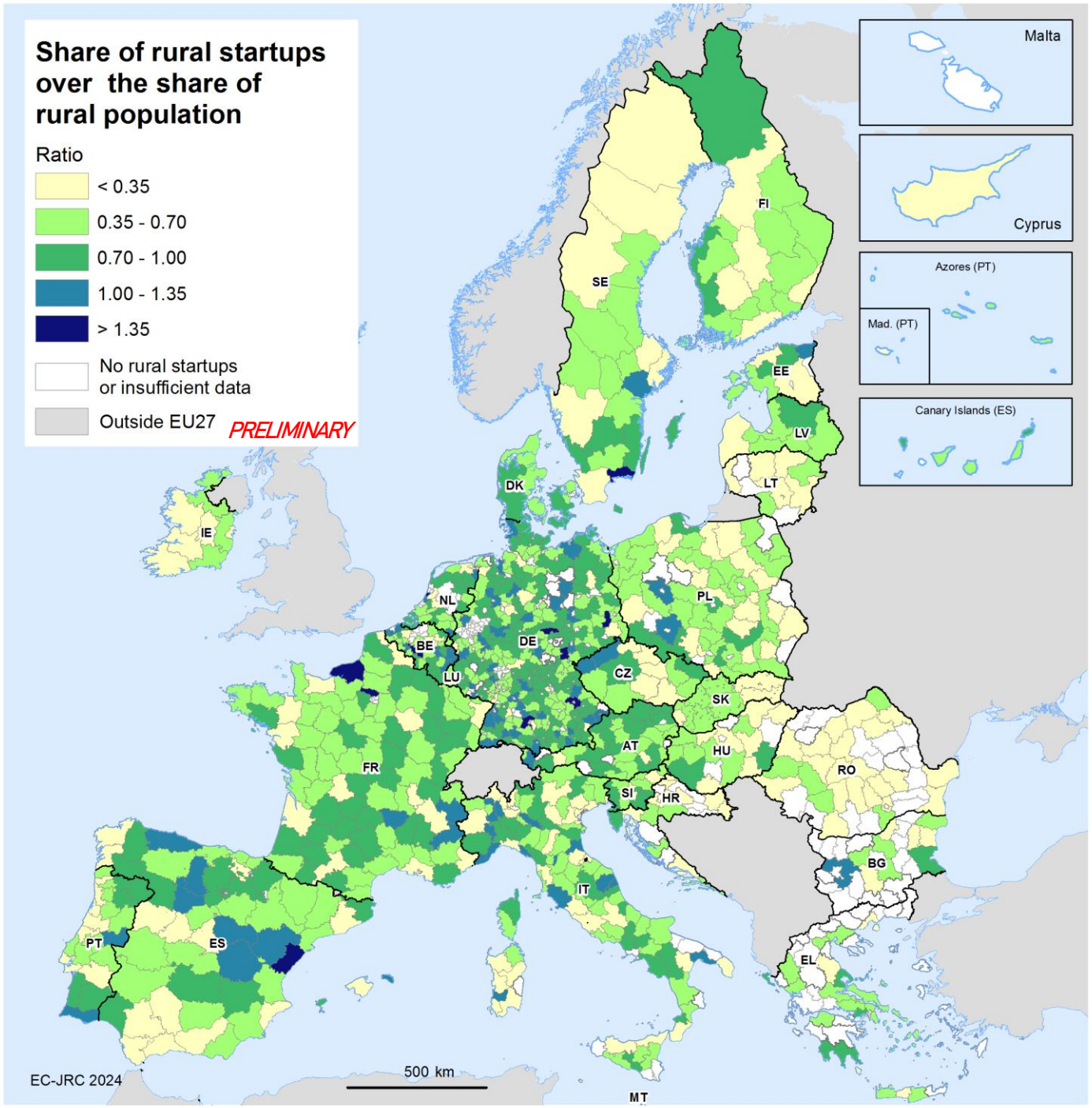


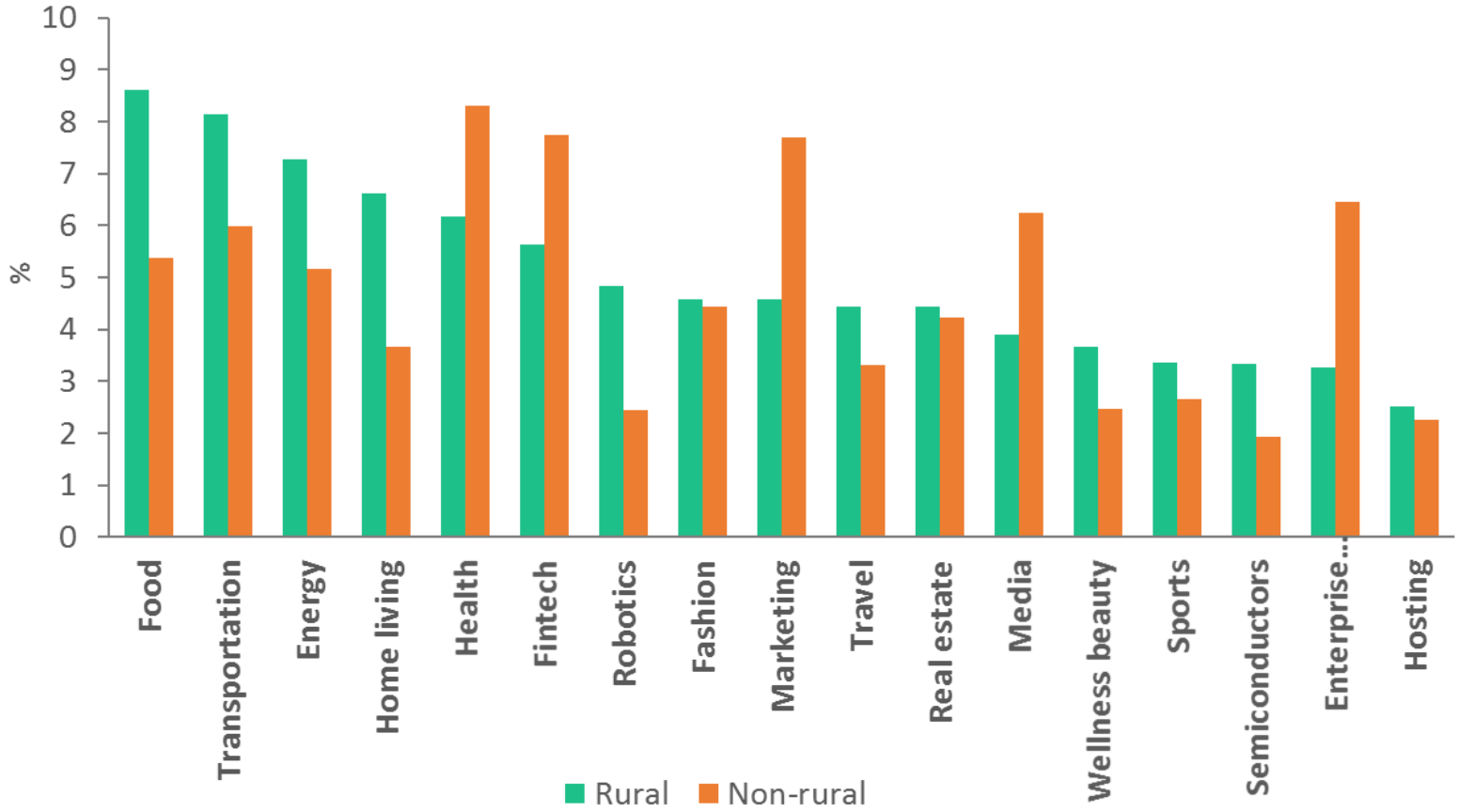
Density of rural startups to rural population

Country	Rural startups over total startups	Rural population over total population	Ratio
LU	16.7%	32.5%	0.51
NL	4.6%	10.3%	0.45
BE	5.5%	13.5%	0.41
IT	6.5%	17.2%	0.38
DK	12.2%	33.0%	0.37
DE	7.2%	22.7%	0.32
AT	11.8%	38.0%	0.31
ES	3.6%	13.3%	0.27
FI	7.2%	27.3%	0.26
SI	11.5%	44.7%	0.26
FR	8.2%	32.9%	0.25
EU27	6.2%	25.7%	0.24
SE	4.2%	19.5%	0.21
EL	6.5%	31.7%	0.20
PT	5.0%	24.6%	0.20
HR	4.7%	35.2%	0.13
SK	5.4%	42.0%	0.13
HU	3.9%	30.6%	0.13
CY	2.2%	18.8%	0.12
CZ	4.1%	35.6%	0.11
IE	5.1%	44.3%	0.11
PL	4.1%	35.9%	0.11
LV	3.4%	34.3%	0.10
EE	3.5%	36.0%	0.10
BG	2.1%	22.7%	0.09
LT	3.4%	41.7%	0.08
RO	1.8%	38.9%	0.05
MT	0.0%	2.5%	0.00

Source: EC-JRC, based on Dealroom.co and Eurostat data



Startups distribution by sector



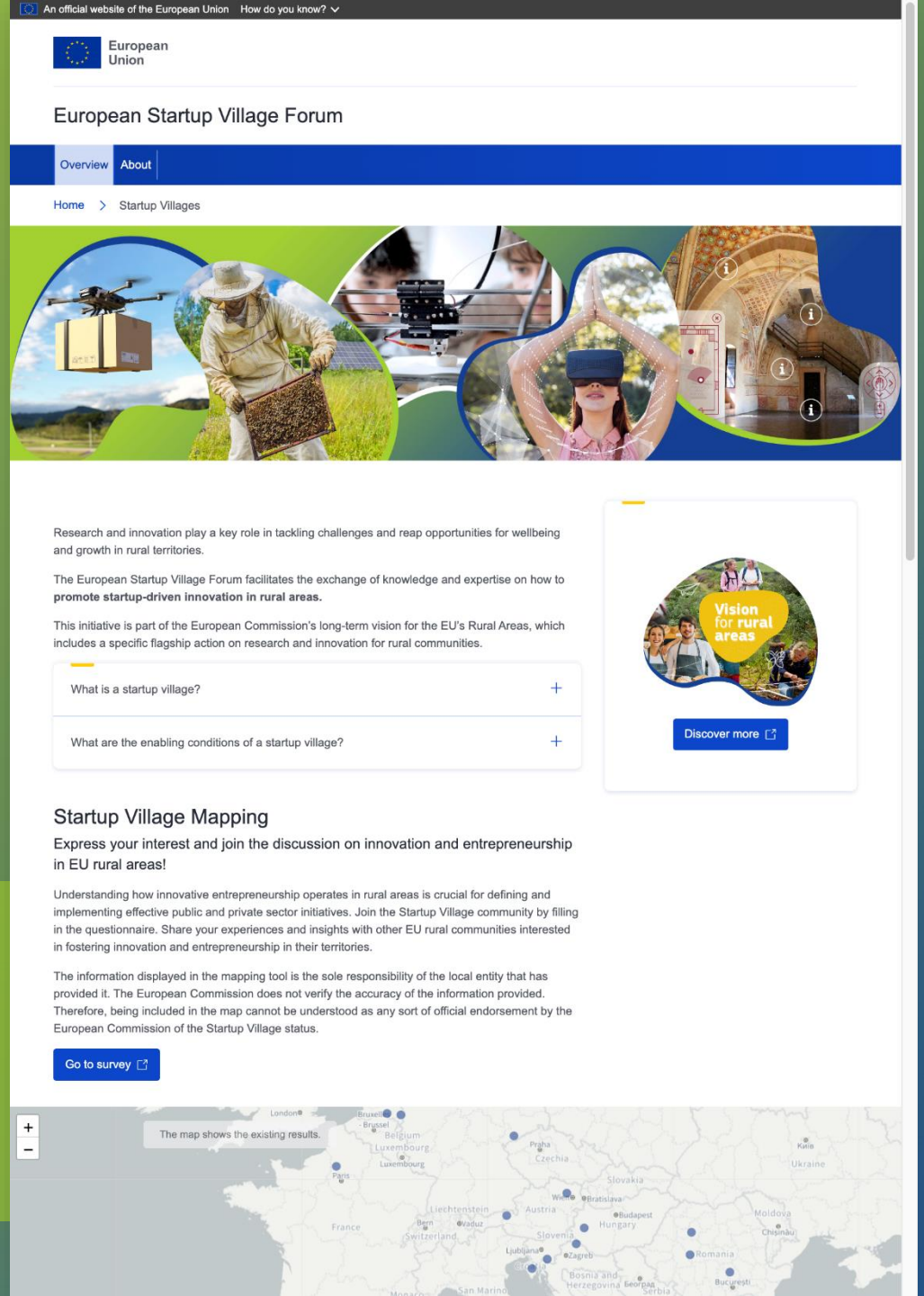
Source: EC-JRC, based on Dealroom.co data

What's next?

- Development of a **survey to map business innovation** patterns and characteristics in rural vs urban areas in selected MS
- Conceptualization and downscaling of **indicators to measure rural innovation** and entrepreneurship
- Study on the relationship between **regional specialisation and startup emergence** in rural areas
- Study on the **geography and impact of venture capital** on entrepreneurial performance in rural areas
- Analysis of the **role of crowdfunding in rural businesses** and complementarities with traditional investment channels
- Analysis of regional **skill portfolios, industrial dynamics and growth potential** in rural areas

Stay tuned!

https://startup-forum.rural-vision.europa.eu



https://observatory.rural-vision.europa.eu/

Rural focus

'Rural focus' shows how areas that are classified as 'rural' in each country compare with those classified as 'urban' or 'intermediate'. Where available, data take into account also the concept of remoteness, defined as the driving time to an urban centre exceeding 45 minutes.

Total population (on 1st January) | Go

- Degurba (+remote)
- URT (+remote)

My place

'My place' offers a 360 degrees overview of any place, be it a region, sub-region, district or municipality. Select your place of interest and discover how it compares to other places in the EU (please note that the widest range of indicators is available at the regional - NUTS2 - level).

Search for a place... | Go

- LAU
- NUTS3 and above

Map view

'Map view' offers an easy way to compare, for a specific indicator, all areas in Europe at a specific level of granularity (regions, sub-regions, municipalities) by displaying it in a map view. Changes overtime (trends) are also provided and, for some experimental indicators, future projections are made available.

Total population (on 1st January) | Go

- LAU
- NUTS3 and above

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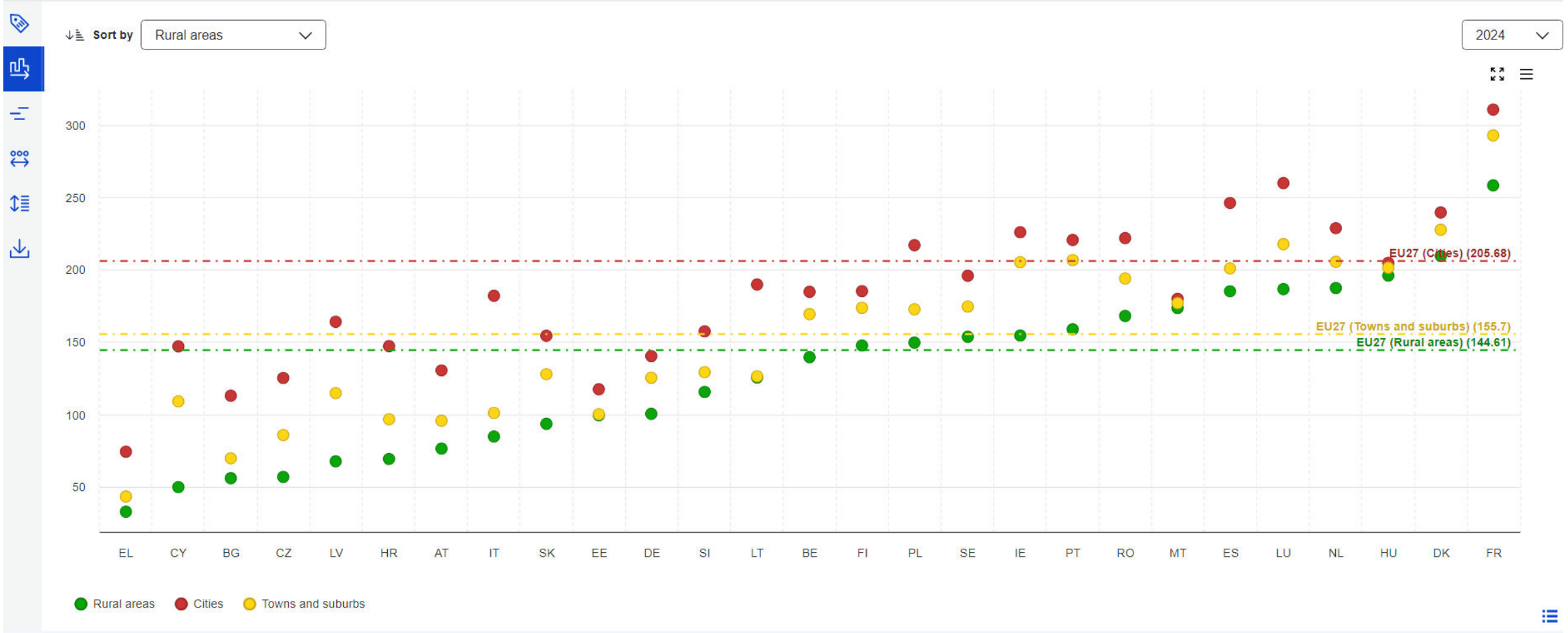
Example: Rural focus

Home > Rural Observatory > Rural focus > Infrastructure & Accessibility > Broadband speed (fixed networks)

Broadband speed (fixed networks) | by Degree of Urbanisation

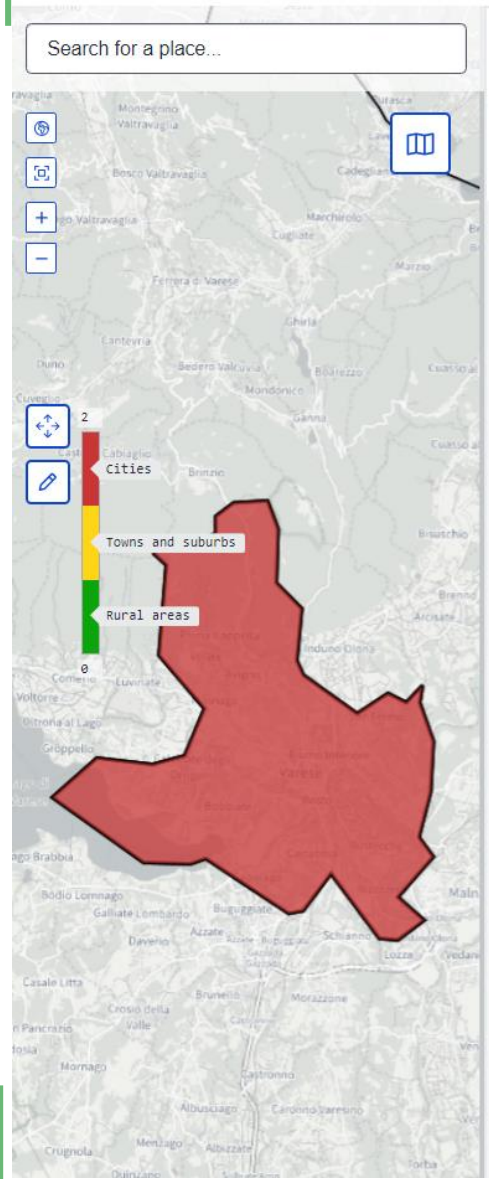
Broadband speed (fixed networks) (Mb/s)

Search and compare...



Example: My place

Home > Rural Observatory > My place > Italy > Nord-Ovest > Lombardia > Varese > Varese > Energy & Climate



Energy & Climate

Varese

Search and compare...

Solar Photovoltaics (PV) | Onshore wind | Hydropower

Solar PV production (MWh)

2.25k

(2023)

Solar PV technical potential (MWh/year)

97.14k

(2023)

Hydropower production (MWh)

0

(2023)

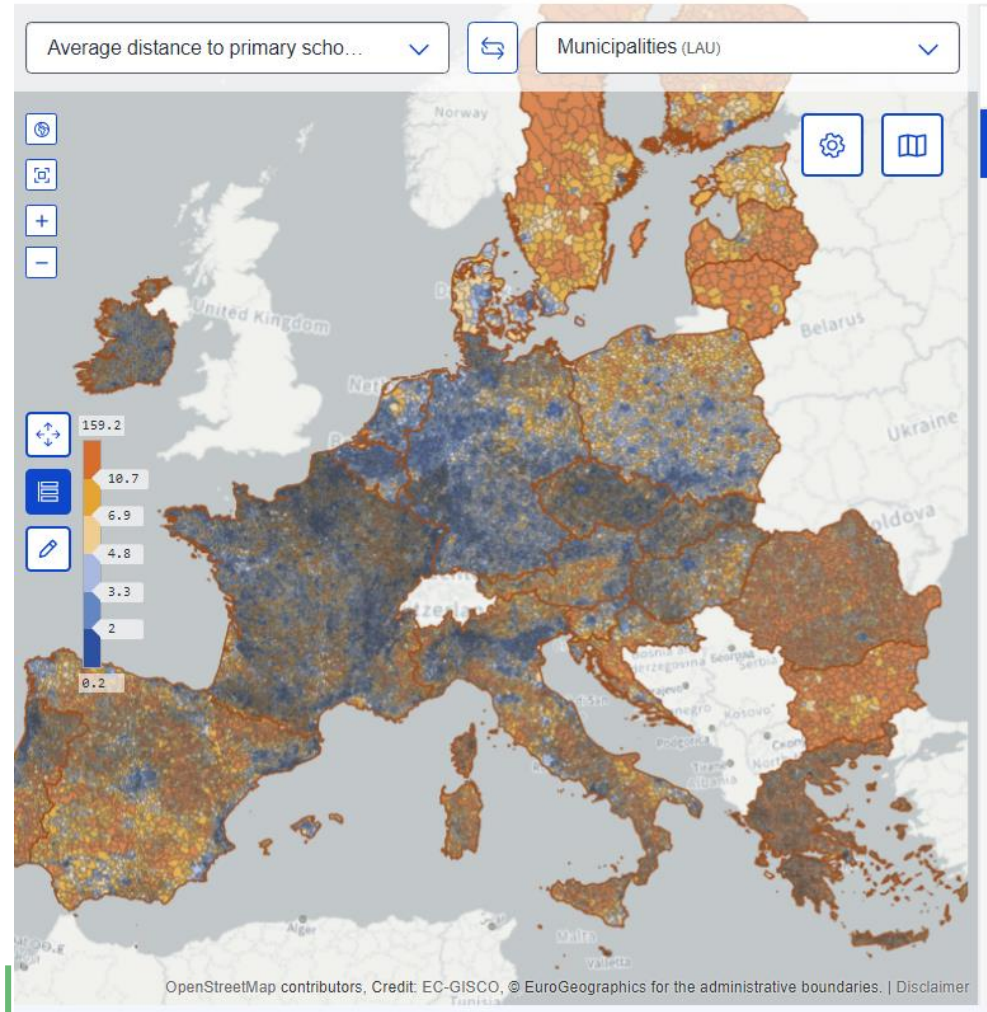
Hydropower untapped potential (MWh/year)

2.13k

(2023)

Example: Map view

Home > Rural Observatory > Map view > Infrastructure & Accessibility > Average distance to primary schools



Average distance to primary schools (Km)

Access to Services

Average road distance per person to the nearest service (primary school, secondary school, cinema, train station), in kilometers.

Completeness: Primary schools: 100% (EU-27); Secondary schools: Data is not available for Greece. The other 26 EU countries are complete.; Train stations: No train stations or data for Cyprus and Malta. The other 25 EU countries are complete.; Cinemas: 100% (EU-27)

Methodology: Average road distance per person to the nearest service, in kilometers. It is computed based on the JRC-GEOSTAT (2018) population grid at 1 square-km spatial resolution and TELEATLAS road network. The facility locations come from the ESPON PROFECY Project (2017), which are mostly based on OpenStreetMap (for primary schools, secondary schools and cinemas), and from DG REGIO (2021) for train stations. Aggregated results (LAU2 or per degree of urbanisation) are based on population-weighted averages.

Temporal coverage: 2018 - 2018

Source: JRC-GEOSTAT population grid 2018, for population; TELEATLAS road network; for road based distances; DG REGIO (2021); ESPON PROFECY Project (2017) and OpenStreetMap for facility locations.

Organisation: European Commission

Experimental indicators: current content

Highest granularity (based on grid) → LAU, DEGURBA:

- **Land use**
- **Internet speed** (fixed and mobile networks)
- **Renewable Energy production and potential** (solar PV, onshore wind, hydro)
- **Average distance** to schools / train stations / healthcare facilities / cinemas
- **Tourism capacity**

Less granular → NUTS3, Urban/Rural Typology:

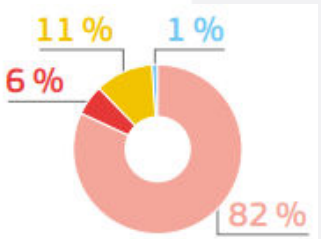
- **ARDECO** (demography, economy, employment)

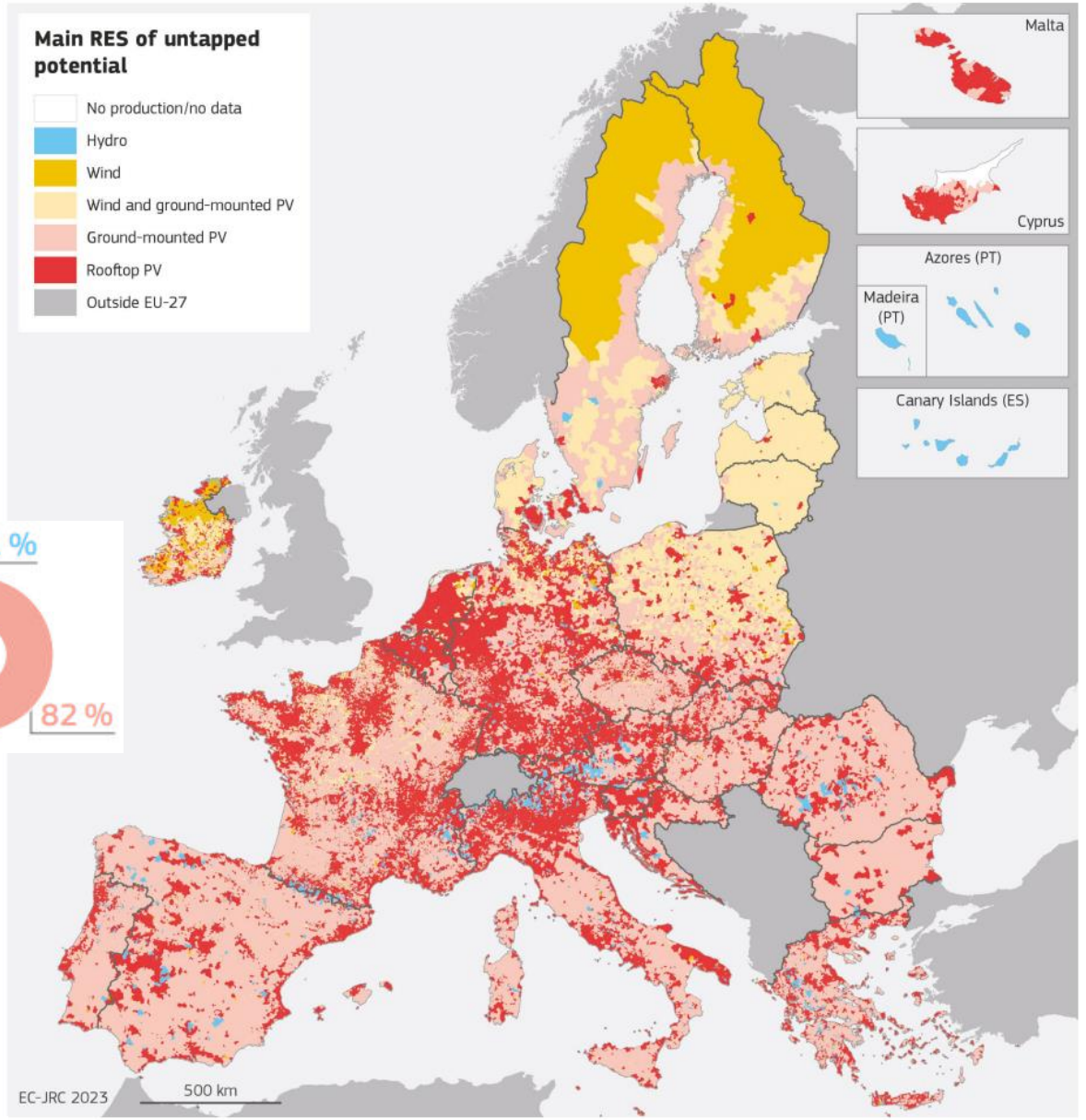
RENEWABLE POTENTIAL IN THE EU

Maximum **untapped potential with sustainable land-use**:

- 12 500 TWh/year -> more than the total EU energy consumption
- 78% in rural areas
- 3 – 4% of EU land

- Ground-mounted PV (10 300 TWh/year): leading source of potential
- Rooftop PV (700 TWh/year): key in cities (and areas with low available land)
- Onshore wind (1 400 TWh/year): opportunities in northern Europe
- Hydropower (130 TWh/year): main source of potential in 1.4% of municipalities





Experimental indicators: ongoing work

Energy expenditure and energy poverty in EU households – *by degree of urbanisation*

- Household expenditure on energy*
- Arrears in utility bills
- Inability to keep home adequately warm
- Dwellings with a leaking roof, damp walls, floors or foundation, or rot in window frames or floor
- Main energy source*
- Renovations improving energy efficiency*

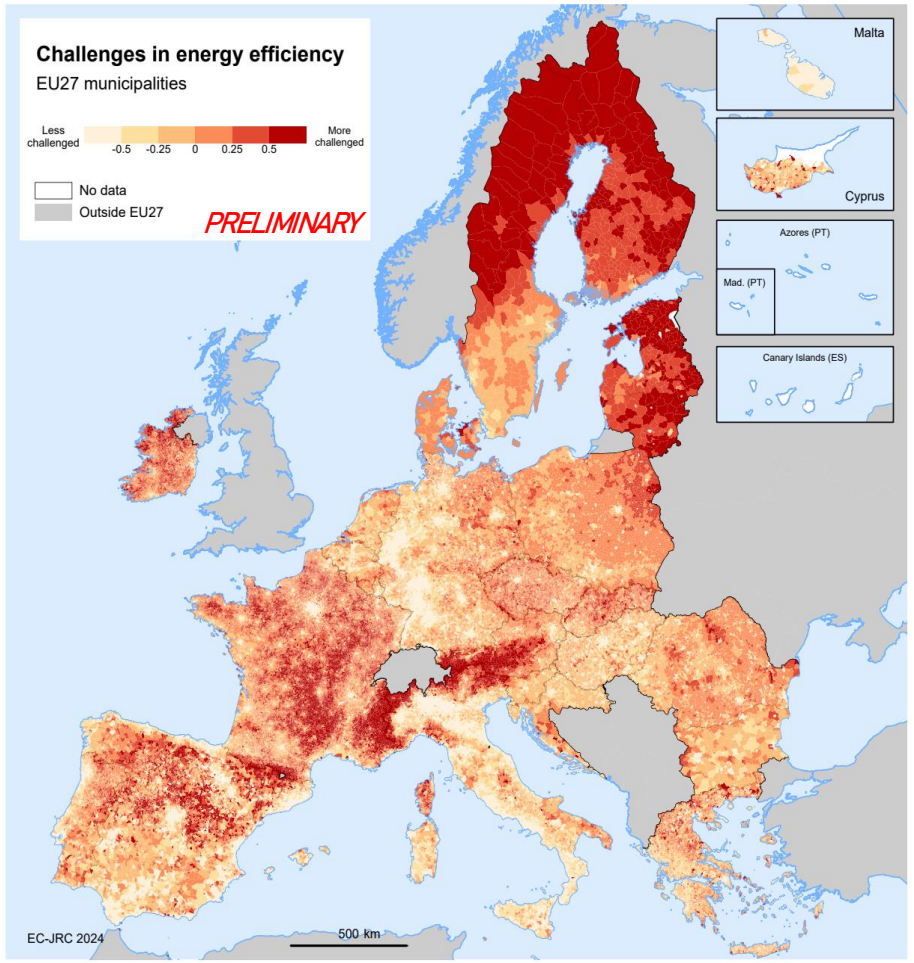
(*) from Eurostat

Energy efficiency and consumption patterns of the EU building stock – *by municipalities (LAU)*

- Building volume per inhabitant
- Building compactness
- Heating and cooling degree days
- Rooftop PV production and potential per inhabitant
- Building construction epoch
- Challenges in energy efficiency (composite indicator)

Housing and energy efficiency in the EU

Goal	Identify **local patterns** in energy efficiency and consumption in the EU and **challenges faced by urban and rural areas**
Methodology	High-resolution proxy indicators describing • The **EU's building stock** • **Climatic conditions** • Implementation of **renewables**
Results *preliminary*	• Larger, less compact rural buildings → more challenges in energy efficiency • Higher rural ownership (78%), larger roof area/inhabitant → advantages for implementation of self-consumption rooftop PV
Limitations	Lack of local, EU-wide information on renovation rates, energy consumption, Energy Performance Certificates



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Trust in different levels of government (by *degree of urbanisation*)

- Trust in the EU
- Trust in national government
- Trust in regional and local authorities

Demographic and economic projections (NUTS3 and URT)

- Demographic and economic projections at the **NUTS3 level** in the EU until **2040**:
  - DELi (Demography-Economy-Land use interaction) model, identifying the drivers of net migration by age-group
  - Analysis, by urban-rural typology, with remoteness of:
    - Total population change, net migration and natural change
    - Age structure
    - Economic convergence (GDP per capita, employment structure by sector)
- Main results:
  - Drivers of **net migration** are **age specific** (mostly young attracted by urban regions)
  - **Negative** (and declining) **natural change**, **positive** (and increasing) **net migration** in all typologies
  - **Population increases** only in **urban regions**, due to net migration.
  - **Convergence** in **GDP per capita** in intermediate and rural regions close to cities.
  - **Population ageing** and **declining population in working age** in all typologies, faster in rural regions.

Population by age groups

Work on demography in ARDECO (NUTS3, URT)

- long time-series by broad age group, 5-years age classes and sex
- births and deaths
- net migration

Thank you

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