GRANULAR

TYPOLOGY FICHE

A Novel Territorial Typology for EU Rural Areas



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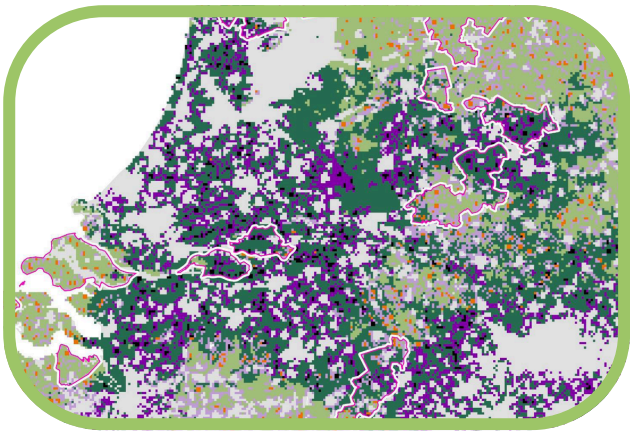
GRANULAR

GRANULAR Rural Typology

Nordregio

WHAT IS IT ABOUT?



Objectives

Support researchers, rural actors and policy makers by providing a **novel territorial typology for European rural areas** that enables to:

1. Contribute to **classify and analyse rural areas across the EU** with a richer and more nuanced understanding of rural diversity
2. Support **land-use planning, environmental management, rural development and territorial policy**, while remaining compatible with established European classification systems

Methodology

Developed using a data-driven approach, the **GRANULAR Rural Typology** classifies European 1 km² grid cells into typology categories using unsupervised machine learning. The dataset works within the DEGURBA Level 2 framework and produces **six complementary typology codes that distinguish rural areas by their topography, landscape modification, demographic change, built environment, and functional connectivity**.

👉 The minority peri-rural clusters identified provide a useful lens for understanding **how low-density territories can remain functionally connected to surrounding urban and peri-urban areas**

👉 Instead of treating rural areas as a single residual category, this tool highlights the **diversity within rural Europe** and makes it possible to distinguish different types of low-density territories, not only by how many people live there, but also by how rural areas relate to nearby towns and cities, landscapes, settlement patterns and demographic change

HOW TO ACCESS AND READ THIS DATASET

- Analysis and methodology
- Dataset and accompanying Jupyter notebook

Data

Class: Spatial Grid Data
Type: Vector (GeoParquet file)
License: CC BY-SA 4.0
DOI: 10.5281/zenodo.21098954

Spatial

Resolution: 1 X 1 km
Extent: EU27+EFTA+UK, excluding Iceland
Coordinate System: ETRS89-LAEA

Temporal

One-off static layer published in July 2026
Extent: 2011–2021

SKILLS & DATA MANAGEMENT

Infrastructure needed / Data storage: Any raster capable GIS software for data use. Python for reproducibility.

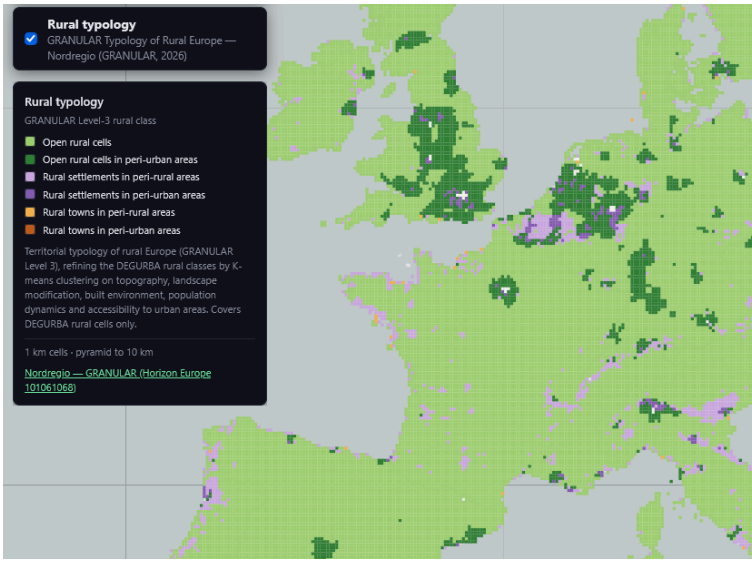
Skills: Its use requires a certain expertise in the world of GIS and spatial analysis. Skills in Python programming and unsupervised machine learning will be needed to run the pipeline with the Jupyter notebook. The availability of visualisation tools helps make the results accessible to a wider audience.

Implementation in GRANULAR

The results show a broad and coherent gradient across rural Europe. As rural settlement becomes denser, built structures, landscape modification and accessibility generally increase, while elevation tends to decline.

High significance of low-density territories. The typology highlights peri-rural clusters that remain formally low-density but are functionally connected to nearby urban systems, making them distinct from remote or physically constrained rural areas.

In countries and regions such as England and Wales, the Benelux countries, western Germany and northern Italy, rural areas may be strongly shaped by greater accessibility to urban centres.



Check out the visual analysis via the GRANULAR Viewer!

This confirms that rural Europe is not a homogeneous category but a **differentiated territorial system** in which low population density is produced and sustained through different combinations of physical geography, demographic performance, landscape modification, built-environment, and proximity to urban systems.

POLICY IMPLICATIONS

The GRANULAR typology offers an analytical tool that recognises **different expressions of rurality across Europe**, contributing to European territorial classification by showing how density, accessibility, built form, landscape modification, and demographic change interact across rural space.

A basis for more precise analysis and better targeted policies for Europe's changing rural landscapes

Rurality is not always defined by remoteness or decline. Remote rural territories, village-based rural settlements and low-density areas close to major urban centres may require different responses, even when they fall within the same broad rural classification.

Proximity to urban centres can significantly shape rural characteristics, including in territories formally classified as low-density. This recognition is essential for policymakers as they strive to maintain the unique characteristics of low-density territories while leveraging their potential for enhanced connectivity with urban areas. **Rural policy therefore needs to consider both settlement density and functional integration.**

How to cite

- Inges Stark, M., Dzhavatova, K., & Tapia, C. (2026). GRANULAR Rural Typology: A Novel Territorial Typology for EU Rural Areas. GRANULAR. https://doi.org/10.5281/zenodo.21875036
-Tapia, C., Inges Stark, M., & Dzhavatova, K. (2026). GRANULAR Rural Typology Classifier: K-Means-based sub-classification of European rural grid cells (DEGURBA Level 2) (Version 1) [Dataset]. GRANULAR. https://doi.org/10.5281/zenodo.21098954