GRANULAR

SCOPING REPORT ON EUROPEAN RURAL TYPOLOGIES

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D4.6 SCOPING REPORT ON EUROPEAN RURAL TYPOLOGIES

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1. Introduction

This report examines different territorial typologies for classifying rural areas in Europe. The report is part of Task 4.6 (*Characterising rural diversity*) in WP4 (*Development of tools and indicators to characterise rural diversity*) in the GRANULAR project. The overall objective of Task 4.6 is to develop a multi-criteria territorial typology for the EU rural areas that is aligned with key policy priorities. This work is based on the premise that there is a need for a more nuanced understanding of the diversity of rural areas and the interlinkages within the rural-urban continuum in Europe.

The purpose of this report is to provide an inventory of existing territorial typologies and a comparative assessment of these typologies focusing on questions such as: i) how they are used for analytical purposes and for supporting policy work; ii) how they are constructed; and iii) the main strengths and weaknesses of the different typologies and approaches. The focus is on two main types of typologies, namely European-wide typology frameworks for delimiting rural areas, and national, regional, and local typologies that exist in different European countries. This report provides a way forward towards the development of GRANULAR typologies in Task 4.6 based on the different ways of characterizing rural areas in Europe, and what can be learnt from the different examples. Some potential updates with additional typologies will be made to this report during the course of the project. The most recent version of this report can be accessed here.

The report is structured in five parts. Chapter 2 presents an overview of the key approaches used for defining and categorising rural areas in different territorial typologies. Chapter 3 focuses on existing EU-wide typologies for classifying rural areas across Europe. Chapter 4 examines a variety of territorial typologies from different European countries, including those that have full national coverage as well as regional typologies for classifying rural areas in certain specific regions. Chapter 5 includes a summary of the different typologies addressed and a concluding discussion focusing on lessons learned and the key takeaways. Finally, Chapter 6 presents key considerations and the next steps to be taken towards developing the GRANULAR typology.

2. Different approaches for delimiting and classifying rural areas

A variety of approaches have been employed to identify, delimit, and classify rural areas. Early definitions implicitly classified rural areas as anything that is not urban (Copus et al., 2008; Féret et al., 2021). Initially, the distinction between urban and rural areas was based on a single criterion such as population density or the presence of agriculture. However, due to the complexity of rural areas, multiple criteria have been integrated to enable their classification (van Eupen et al., 2012), mainly associated with specific policy objectives. Two types of approaches can be differentiated from the literature *Figure 1*: (i) zoning, to delimit spatial units of rural areas; and (ii) classifying based on predetermined spatial units, to differentiate rural areas based on a selection of factors, such as morphological, functional, structural, locational, or systemic. Importantly, the two approaches (delimitation and classification) can be combined. For instance, some typologies first delimit rural areas and then characterise them.

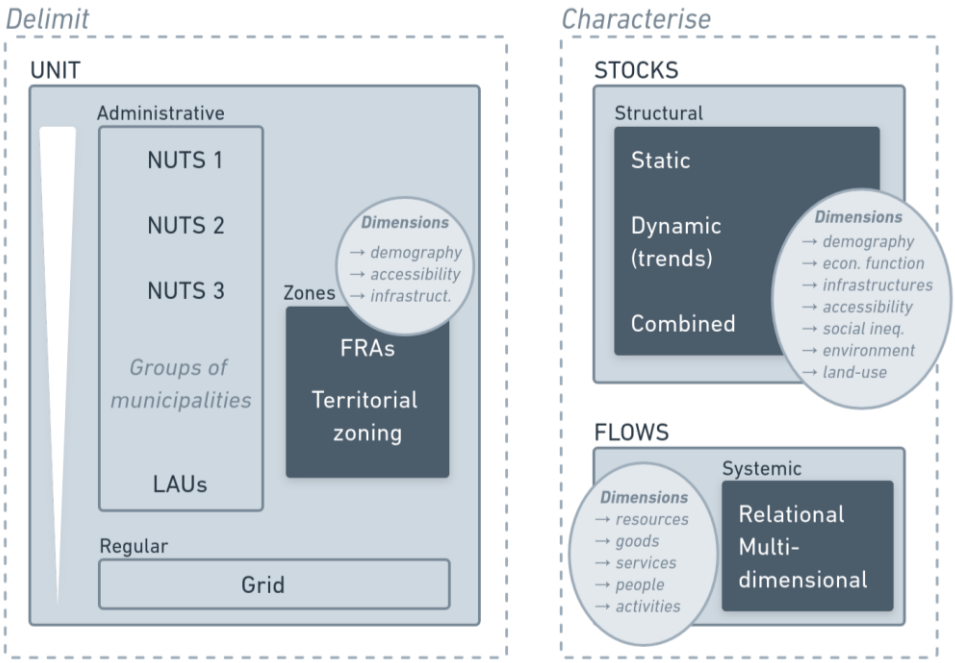

Figure 1: Main approaches to identify and classify rural areas

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In another categorisation identified by Féret et al., 2021, seven types of approaches were identified in the literature: i) the administrative (or statutory) approach, based on legal-administrative character; ii) the morphological (or demographic) approach, based on population criteria such as population density; iii) the locational approach, based on spatial relationships between urban and rural areas; iv) the economic (or structural, and functional) approach, based on criteria such as the share of agricultural GDP or the cost of services; v) the landscape approach, based on land-cover and climatic conditions; and vi) the combined approach, which used a combination of at least two of the previously mentioned approaches.

2.1. Delimitation

The first type of approach aims at identifying rural areas as homogeneous spatial units by identifying catchments defined relative to a location and based upon a number of parameters, such as travel time, distance, population, access to a service, availability of facilities, or demographic flows. For example, the concept of Functional Rural Areas (FRAs) generates spatial units based on a combination of travel time and population. Similarly, Cattaneo et al. (2021) identify catchment areas representing connections between rural areas and urban centres by calculating travel times to cities.

Such approaches are used for the purpose of statistical reporting and for spatial and regional planning as a way to identify territorially homogeneous areas (e.g., to channel investments or allocate resources). For example, the French National Institute of Statistics and Economic Studies (INSEE) delimits “life basins” as the smallest territorial unit in which inhabitants have access to a set of basic facilities and services, highlighting towns’ spheres of influence.

2.2. Classification

The second type of approach aims at classifying rural areas according to their stocks (structural characteristics) or flows (dynamic features). This method typically involves predefining spatial boundaries, such as administrative or catchment areas, and then using a set of criteria to classify the areas within those boundaries. The choice of spatial boundaries is dependent on data availability and most common rural typologies are based on NUTS2 and NUTS3 administrative levels. For example, rural areas could be classified based on stocks (e.g., the type of main economic sector, the presence of natural resources, or demography) or flows (e.g., population dynamics, commuting patterns, and distribution networks).

2.2.1. Structural approaches

Stocks are descriptive variables of a territory, providing information about its population and activities. This approach describes rural areas in relation to their socio-economic and environmental characteristics, to address policy issues related to demographics, housing, attractiveness, employment, amongst others. Variables that are used can be static, in that they capture a snapshot using the available statistical information; or dynamic by taking into account variables related to changes, trends or variations.

Structural typologies can be based on, for example, one or several of the following dimensions:

- rural functions, referring to the economic functions of rural areas, such as productive, environmental, residential and recreational (e.g. Bański & Mazur, 2016; Yin et al., 2021);
- demography, with variables such as population size and density;
- accessibility (or locational) with respect to different services and infrastructures, or to large urban centres (e.g. Berchoux et al., 2019; Pot et al., 2023)
- landscape features (e.g. van Eupen et al., 2012; Berchoux et al., 2019);
- employment characteristics (e.g. Dická et al., 2019);
- morphology of the built environment (e.g. Amcoff, 2000).

The scientific literature does not agree on the classification of these typologies. For example, some authors differentiate demographic features from structural features, the latter referring solely to the physical aspects of rurality (Dická et al., 2019), while others have highlighted that rural structure includes both (Hedlund, 2014; Acadie & Talandier, 2023).

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2.2.2. Systemic approaches

As a response to the critique that typologies based on "stocks" often describe rural areas implicitly (lack of employment, lack of infrastructures or services, poor connectivity, etc.), there is a growing body of literature trying to capture how rural areas contribute to current socio-ecological transitions. Instead of representing stocks (e.g., of population, of jobs, of housing), these systemic or dynamic approaches aim at capturing flows (of people, of goods, of resources, of services). Authors show that rural areas are more diversified than the simplistic view that they only have functions related to agriculture, leisure, and environmental preservation. They claim that rural areas contribute to different sectors of the productive economy, to the tourism economy, to activities and jobs related to the transition, and to the wider human life cycle (Acadie & Talandier, 2023).

Systemic approaches suffer from the lack of availability of flow data, apart from mobility. Most systemic typologies thus rely on proxies that infer flows from stock variables. The main domains for systemic variables are (Acadie & Talandier, 2023):

- space and physical resources, including environmental and food services;
- activities and enterprises, which includes economically productive activities;
- people and life trajectories, covering residence and mobility of people.

3. EU-wide and macro-regional typologies

3.1. OECD typologies

In 1994, the OECD proposed a typology of rural areas based on two primary criteria: population density at the local level to identify rural municipalities, and the percentage of the population residing in rural municipalities at the regional level. The typology (OECD, 1994) consisted of the following categories for Europe.

At the local level, the typology classified municipalities into two classes: rural municipalities with a population density below 150 inhabitants/km², and urban municipalities with a density exceeding 150 inhabitants/km².

At the regional level, the typology classified regions into three classes:

i) predominantly rural regions, where over 50% of the regional population lived in rural municipalities,

ii) relatively rural or intermediate regions, with 15%–50% of the regional population residing in rural municipalities;

iii) predominantly urban regions, with less than 15% of the regional population living in rural municipalities.

The presence and size of urban centres influenced the classification of regions. If a region which is essentially rural contained an urban centre with a population of more than 200,000, accounting for at least 25% of the regional population, it was classified as an intermediate region. Similarly, if an intermediate region included an urban centre with a population of more than 500,000, accounting for at least 25% of the regional population, it was categorized as predominantly urban.

The OECD updated the typology in 2011 by incorporating a model that captured remoteness from urban centres. The rationale behind the inclusion of this model was that remote rural areas revealed significant differences to those in proximity to cities for various variables and indicators, such as population density, per capita GDP, share in GDP, productivity, and value added. To determine the proximity of a region to an urban centre, the criterion was established that at least half of the population should be able to reach an urban centre with a minimum population of 50,000 within 45 minutes. If this condition was met for less than half of the population, the region was classified as remote (Dijkstra & Poelman, 2008). The concept of remoteness was found to be closely associated with what the OECD describes as low-density economy, or rural economy. Such economies often lack diversification and predominantly feature low-skilled jobs (OECD, 2018). However, these areas may offer opportunities for activities that require space, such as server farms supporting digitalization. By integrating this indicator of remoteness with the categories established in the 1994 typology, the updated typology introduced the following classifications (OECD, 2011): i) urban or predominantly urban regions; ii) intermediate regions in close proximity to urban centres; iii) remote intermediate regions; iv) rural or predominantly rural regions near urban centres; and v) remote rural or predominantly rural regions.

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In 2018, the OECD introduced a new typology that enhanced existing typologies by incorporating the concept of "functional urban areas" to better capture the interconnection between rural and urban areas in terms of labour market access, public services, and environmental considerations (OECD, 2018). In this updated typology, a town was defined as one (or more) local unit(s) in which at least 50% of the population resides in an urban centre. A functional urban area (FUA) encompasses a town and its surrounding areas, including less densely populated local units that are still part of the town's labour market due to commuting activities, such as people travelling from their place of residence to work or access services like healthcare, education, culture, and shopping (Dijkstra et al., 2019).

The typology distinguishes three categories of rural regions: i) rural areas within a functional urban area (FUA) that are integral parts of the commuting zone of the urban centre, and their development is closely linked to the overall development of the urban centre; ii) rural regions in proximity to a functional urban area that are not directly part of the urban centre's labour market, but still maintain flows of goods and services, and the development of these rural regions relies on the progress of the corresponding functional urban area; and iii) rural regions located far from a functional urban area, characterized by limited and infrequent interactions with external regions, and their local economy heavily relies on exporting primary sector products.

3.2. Eurostat typologies

Several territorial typologies are used by Eurostat (Figure 2), as described in the methodological manual of territorial typologies (Eurostat, 2018):

1. **Cluster types** (1km² grid), which differentiate each cell into the following categories: urban centres (contiguous grid cells with a density of at least 1,500 inhabitants per km² and a minimum population of 50,000 inhabitants), urban clusters (contiguous grid cells with a density of at least 300 inhabitants per km² and a minimum population of 5,000 inhabitants), and rural grid cells (cells located outside the population grid cells identified as urban centres or clusters).

2. **Degree of urbanisation** (LAU level), which classifies local spatial units based on the share of its population living in cluster types: densely populated areas (at least 50% of the population lives in urban centres), intermediate density areas (<50% of the population lives in rural grid cells and <50% in urban centres), and thinly populated areas (at least 50% of the population lives in rural grid cells).

3. **Urban-rural typology** (NUTS3 level), which classifies regions according to the urbanisation cluster types into the following categories: predominantly urban regions (over 80% of the population living in an urban cluster); intermediate regions (between 50% and 80% of the population living in an urban cluster); predominantly rural regions (less than 50% of the population living in the area corresponding to the part of the population grid not identified as urban centres or urban clusters).

	Geographical level	Basic territorial typologies	Urban typologies	Coastal typology	Border typology	Island typology	Mountain typology
Regional typologies:	NUTS 1 regions NUTS 2 regions NUTS 3 regions	Urban-rural typology: predominantly urban regions; intermediate regions; predominantly rural regions	Metropolitan regions	Coastal regions	Border regions	Island regions	Mountain regions
Local typologies:	Local administrative units (LAU)	Degree of urbanisation (*): cities; towns and suburbs; rural areas	City definitions: cities; functional urban areas (FUA) = cities and their commuting zones	Coastal areas			
Grid typologies:	Grid cells (1 km²)	Cluster types: urban centre; urban clusters; rural grid cells	Urban clusters and urban centres				

Key:
- Individual codes and labels (based on geographical entity)
- Three categories per country (aggregated)
- Combination of individual codes and aggregation
- Two categories per country (aggregated)
- Technical level
- As defined in Regulation (EC) No 1059/2003 on the establishment of a common classification of territorial units for statistics (NUTS).

(*) Within the degree of urbanisation typology the aggregation of cities with towns and suburbs is referred to as urban areas.
Source: Eurostat, Regulation (EC) No 1059/2003

Figure 2. Eurostat territorial typologies.

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The transition from grid cells to municipalities (LAU2) based on the degree of urbanisation typology, and then to rural-urban typology (NUTS3 level), results in significant variations in the area and population considered rural (Table 1). Across these three levels of granularity, there are notable differences in the extent of land classified as 'rural'. In the EU-27, rural 1km² grid cells cover 96.5% of the land, rural (LAU) areas cover 83% of the land, and predominantly rural regions account for only 44.6% of the land. The impact on population is also significant, though to a lesser extent. The proportion of the EU-27 population residing in rural grid cells is 30.3%, while it increases to 30.6% in rural areas and decreases to 20.9% in predominantly rural regions.

Table 1: Share of land area and population in EU for each Eurostat typology (LTVRA, 2021).

Share of land area and population	Type of cluster (contiguous grid cells of 1km²)			Degree of urbanisation (LAU areas)			Urban-rural typology (NUTS3 level regions)		
	Urban centres	Urban clusters	Rural grid cells	Cities	Towns and suburbs	Rural areas	Predominantly urban regions	Intermediate regions	Predominantly rural regions
% of land area	0.7	3.5	96.5	3.4	13.6	83.0	9.7	45.7	44.6
% of population	34.3	69.7	30.3	37.6	31.9	30.6	40.2	38.9	20.9

In July 2018, DG REGIO launched a refined version of the degree of urbanisation of European countries that captures the full settlement hierarchy. The degree of urbanisation is applied in a two-step process: First the grid cells are defined based on density, contiguity and population size. Subsequently small spatial units are defined based on the type of grid cells most of their population resides in. The dataset is based on 2011 population grid of GEOSTAT and the European Settlement Map 2012 from Copernicus, identifies six classes: 1) cities, 2) towns, 3) suburbs, 4) villages, 5) dispersed rural areas and 6) mostly uninhabited areas. The grid dataset is currently available from the EEA.

Other Eurostat territorial typologies include:

- **Coastal areas**: local administrative units adjacent to, or near, a coastline where land and water meet, which are classified at two levels: local administrative units (LAUs) and NUTS3 regions. At the LAU level, two types of areas are identified: coastal areas (LAUs that either border the coastline or have at least 50% of their surface area within a 10 km distance from the coastline) and non-coastal areas (LAUs that do not border the coastline and have less than 50% of their surface area within a 10 km distance from the coastline). At the NUTS3 level, two types of regions are distinguished: regions with a maritime border and regions where over half of the population resides within 50 km from the coastline.

- **Mountain regions**: regions where over 50% of the surface area is characterised by mountainous topography, and/or where over 50% of the population resides in areas with mountainous topography. Regions with an altitude above 2,500m are automatically considered mountainous. For areas below 2,500m, the criteria include altitude, slope, and slope radius. In specific cases such as mountain regions in Scotland, Norway, and along the Mediterranean coast, topography below an altitude of 300m may also be included.

3.3. ESPON typologies

3.3.1. Typology of development opportunities

As part of the ESPON 2013 Programme, the EDORA (European Development Opportunities for Rural Areas) project developed a typology of intermediate and predominantly rural areas at NUTS3 level based on the mean and standard deviation for "non-urban" regions in the EU27 (predominantly urban regions were excluded from the analysis) and converting indicators into Z scores. A total of 18 indicators were used, grouped in 4 categories: agrarian indicators (primary sector); consumption indicators (tourism capacity and intensity, access to natural areas, peri-productivist agriculture); new rural economy (secondary sector, market services); and accumulating-depleting.

Four structural types were identified:

- Agrarian Regions: i.e., where all three agrarian indicators were above the "rural mean" (Z scores > 0).
- Consumption Countryside: The 8 indicators related to consumption countryside were condensed into three composite indicators. Regions with at least two composite indicators above the "rural" average were classified as consumption countryside.

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- Diversified: The remaining regions were classified as diversified. Two subcategories were identified:
    - Diversified - Strong Secondary Sector: Regions with a relatively important secondary sector.
    - Diversified - Strong Market Services: Regions where the market services sector has developed prominently.

Agrarian regions were concentrated in Eastern and Southern EU, while consumption countryside regions were often closely associated with agrarian regions. Diversified regions with a strong secondary sector were found in specific areas, and diversified regions with a strong market services sector were prominent in different regions, including those near national capitals in the new member states (i.e., EU enlargement in 2004; Romania and Bulgaria joining in 2007). Overall, this classification revealed a general association of the first two types with peripheral or less accessible regions, while the diversified types were more commonly found in central regions.

3.3.2. Typology of land use patterns

As part of the ESPON 2013 Programme, the LUPA project attempted to assess land use changes in Europe at a regional level by looking at land cover status and changes in Europe, with an analysis of their relationship with socio-economic dimensions. They found that Europe's land use is predominantly rural, strongly tied to agricultural activity, with urban areas concentrated in high-density regions such as Belgium, the Netherlands, certain parts of Germany, and major cities such as Paris and London. Moreover, they highlighted a north-south gradient, evident in climate and vegetation patterns but also in land use intensity. Southern Europe showcases specific land cover classes like sclerophyllous vegetation, vineyards, rice fields, and olive groves, while land use intensity is highest in North-West Europe. In Scandinavia, land use intensities are lower due to the dominance of forests, water bodies, and semi-natural areas. They developed a typology of land use change based on changes during the 1990–2000–2006 time periods (data from Corine Land Cover), further categorised into nine land cover flows: urban land management, urban residential sprawl, sprawl of economic sites and infrastructures, agriculture internal conversions, conversion from forested and natural land to agriculture, withdrawal of farming, forests creation and management, water bodies creation and management, and changes of land cover due to natural and multiple causes. These enabled the authors to differentiate 7 types of land use changes at NUTS3 level by using clustering (Figure 3):

- very high intensification, where land changes are primarily associated with the development of artificial surfaces, particularly the expansion onto previously natural land;
- high intensification, where the dominant process is land take and urbanisation, including surrounding functional urban areas exhibiting urban sprawl and regions where land change processes are predominantly driven by a growing tourist economy;
- moderate/high intensification, which are very diverse, mostly with established urban activities and sprawl of housing , economic sites and infrastructures is located around them;
- moderate intensification, where regions primarily exhibit rural land functions, but with an increasing importance of urban changes;
- moderate/low intensification, with regions that have less urban land changes, but more agricultural conversions and forest creation and management, indicating regions that can be characterised as rural from a socio-economic perspective;
- low intensification, with regions that have a neutral level of land use intensification, mostly related to forest and agricultural conversions, although drivers can be quite diverse (urban development, population loss, etc.);
- extensification, representing areas where cumulative land use changes have led to an expansion of socio-economic activities, primarily driven by the reduction of agricultural activities.

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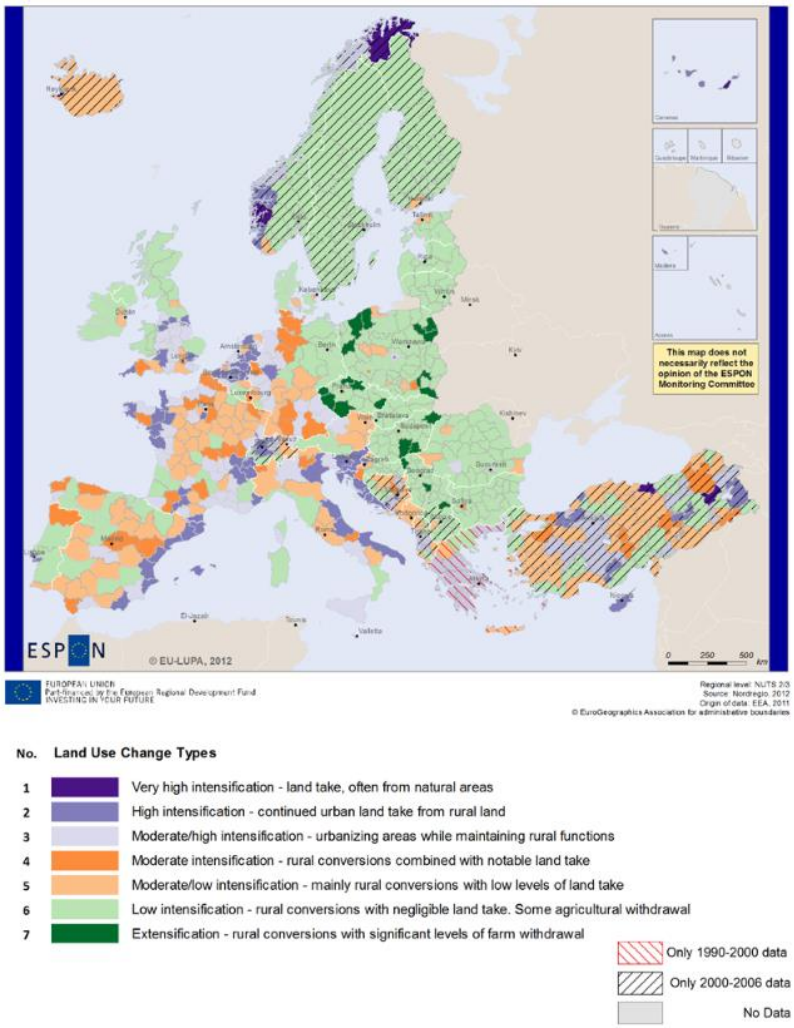

Figure 3: Map of the EU-LUPA land use change typology (ESPON, 2013)

3.3.3. Typology of demographic status

The DEMIFER typology was based on demographic data from 2005 (population by age and sex) and short-term trends (natural population increase, net migration rate) from 2001 to 2005, providing a snapshot of demographic, labour market, and migratory trends at NUTS2 level. Overall, they identified seven types of regions:

- Euro standard, showing positive population development (mostly 35–55 years), above-average total fertility rate, average life expectancy and positive net migration rates.
- Challenge of labour force, with a high share of young people but losing population (negative natural population balance and out-migration).
- Family potentials, with a strong population growth with a balance between younger and older age groups.
- Challenge of ageing, with a positive population development (positive net migration rate) but an over-representation of older age groups.
- Challenge of decline, with a negative population development (low fertility rates, negative net migration).
- Young potentials, with a young age structure and positive population development (positive net migration).
- Overseas.

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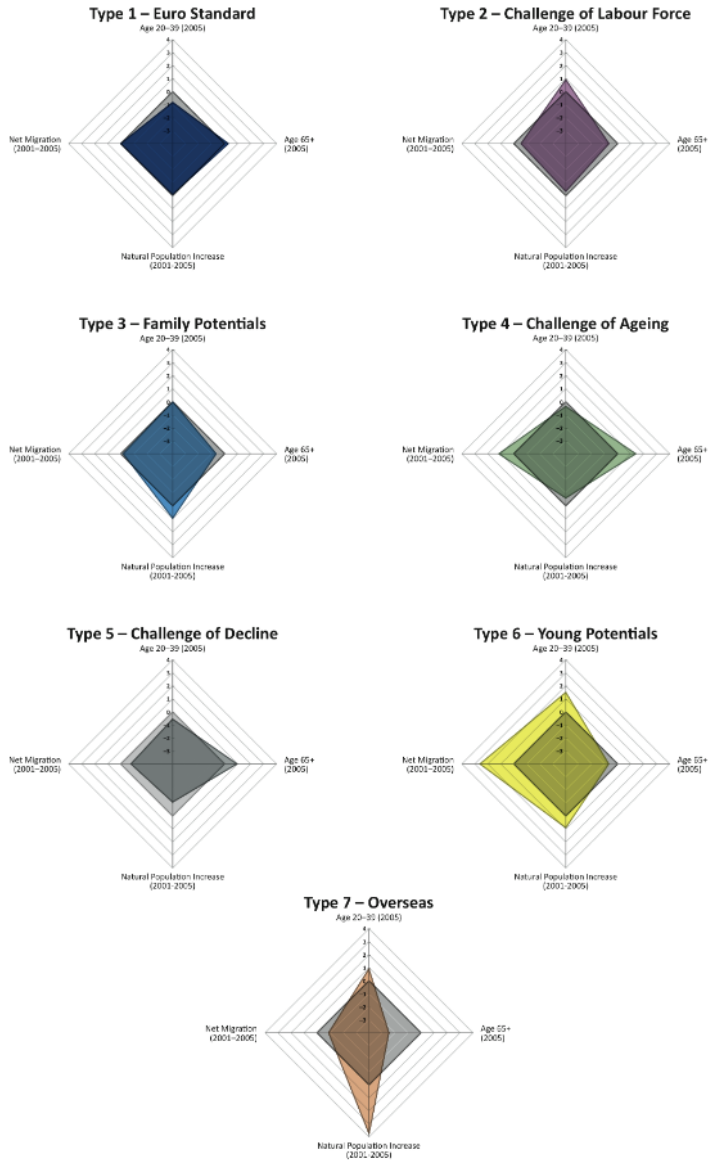

Figure 5: Cluster profiles from the DEMIFER typology (ESPON, 2013)

3.4. Other typologies for policy

3.4.1. Foresight analysis

The FARO project, conducted under the EU's FP6 Programme, aimed to overcome the limitations of existing European rural typologies by introducing a new typology that addresses emerging policy needs. This typology incorporated two dimensions derived from statistical analysis of geographical and socioeconomic data, specifically focusing on the territorial variation of European rural land. High-resolution raster data at a resolution of 1 km² was used in the analysis, such as environmental zones, accessibility per km², and economic density per km². The result of the typology was the creation of nine divisions, which were then summarised into three overarching rural classes: peri-urban (high accessibility and high economic density), rural (average to high accessibility and economic density), and deep rural (low or average accessibility combined with low or average economic density).

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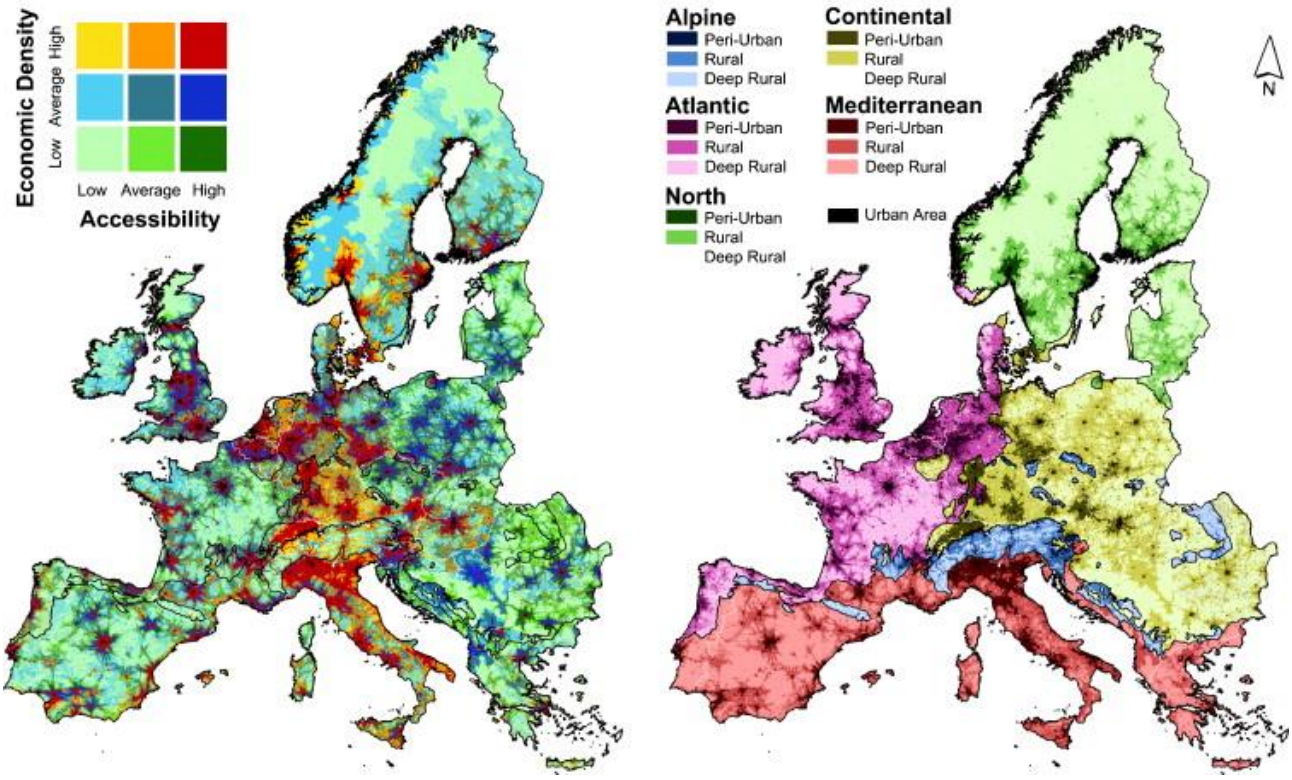

Figure 6: Map of the FARO typology with nine rurality classes based on Economic Density and Accessibility, further classified into peri-urban, rural, and deep rural (van Eupen et al., 2012)

3.4.2. Disadvantaged areas

Some typologies that are not included in the EUROSTAT territorial typologies have been used within the framework of the Common Agricultural Policy (CAP). Disadvantaged areas are characterised by natural constraints that impact agricultural production, such as lower yields and higher costs. Since 1975, the EU has provided compensatory allowances for natural handicaps (CANH) to farmers in disadvantaged areas to combat depopulation, maintain agricultural activity, and protect the environment. These allowances are divided into three groups: mountain areas, areas subject to natural constraints, and areas subject to specific constraints. Member States are required to redefine areas subject to natural constraints based on biophysical criteria. The typology accounts for both biophysical and technical-economic constraints, including standard output per hectare, livestock density per hectare of forage area, and average yield of soft wheat per department.

4. National and regional typologies

This Chapter discusses territorial typologies that exist in European countries for delimiting and characterising rural areas and that are of relevance in different policy contexts. The examples included in this review have been identified through a scoping exercise where partners in the GRANULAR project have provided key information about various national and regional typologies from across Europe. The purpose was to gain a broad coverage of different typologies from a wide range of European countries. This work was coordinated by Nordregio who prepared and sent out a template to all of the GRANULAR partners for filling in key information about the different typologies. This template included questions concerning technical aspects (construction and approach, data, territorial level), the broader background and policy context (purpose, definition of rurality, areas of use, actors) and assessment (strengths, weaknesses, updates) of the typologies (see template in Annex 1). The Nordregio researchers were then also responsible for compiling and synthesising the information from across the different examples presented in this chapter.

Through this scoping of existing territorial typologies, a total of 51 typologies from 27 countries were identified. These typologies and their key characteristics are listed in Table 2, while the geographic coverage and the countries covered by these typologies is presented in Figure 7. More detailed information about these typologies is presented in the tables in Annex 2 (Technical aspects), Annex 3 (Background and policy context) and Annex 4 (Assessment).

One of the columns in Table 2 and Annex 2 provides information about the different approaches used for constructing the typologies examined in the section of the report. The categorisation here corresponds to the six types of

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approaches that were identified by Féret et al., 2021. In the previously mentioned study, the following types of approaches were identified in the literature: i) the administrative (or statutory) approach, based on legal-administrative character; ii) the morphological (or demographic) approach, based on population criteria such as population density; iii) the locational approach, based on spatial relationships between urban and rural areas; iv) the economic (or structural, and functional) approach, based on criteria such as the share of agricultural GDP or the cost of services; v) the landscape approach, based on land-cover and climatic conditions; and vi) the combined approach, which used a combination of at least two of the previously mentioned approaches.

Right after Table 2, Section 4.1 presents and discusses a selection of different typologies that rely on novel approaches for delimiting and characterising rural territories. Following this, various national and regional typologies from across Europe are discussed and analysed on a more general level from different perspectives. In Section 4.2. these typologies are examined from a technical point of view, focusing on aspects such as the key approaches used for constructing the typologies, the geographical scale of the typologies, data and variables used, and categories and principles of the different classifications. Section 4.3 presents the policy contexts in which the typologies were developed, including the key purposes and different uses, and actors involved. Section 4.4 discusses the different typologies, focusing on assessing their main strengths and weaknesses.

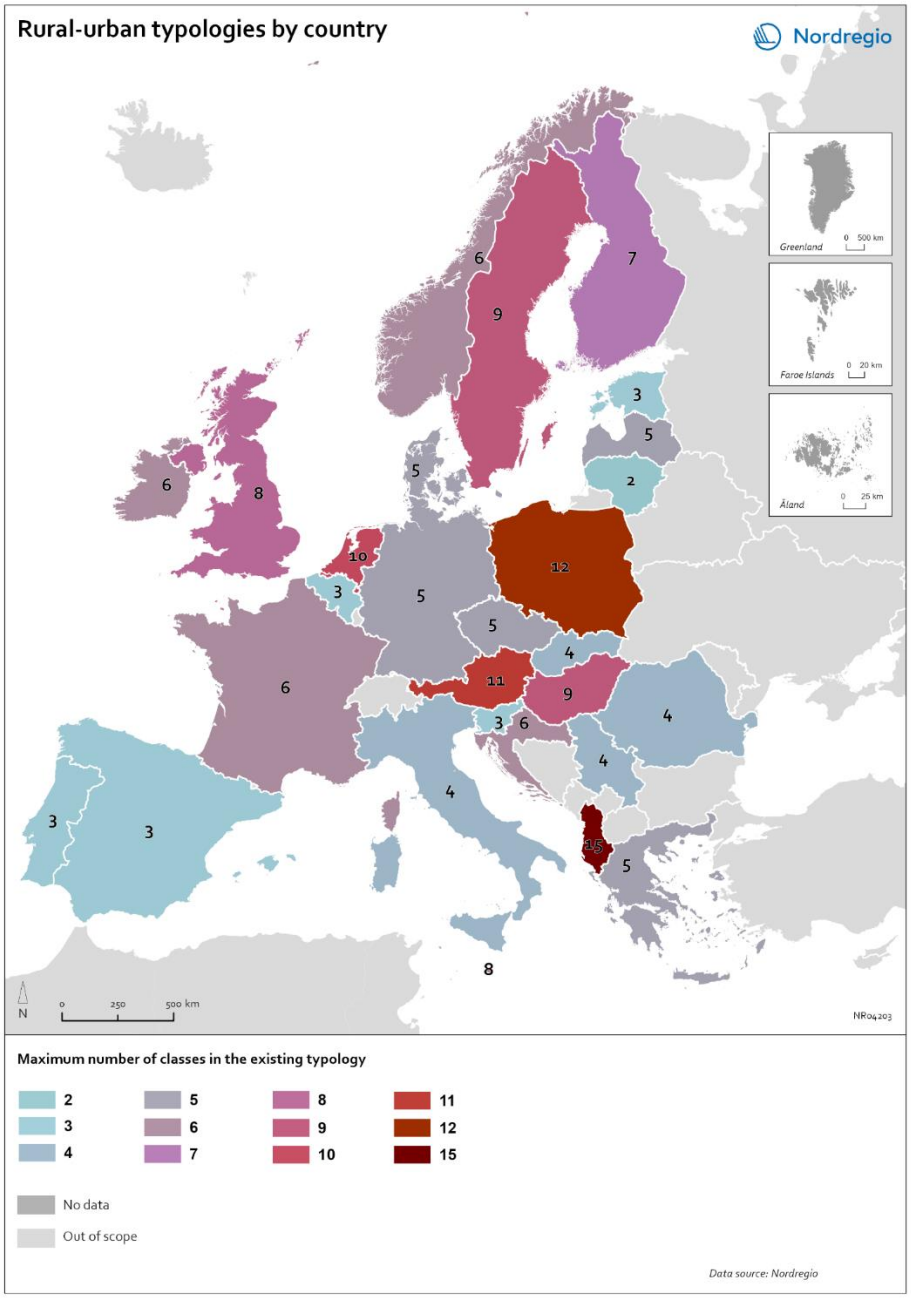

Figure 7: The maximum number of classes in the different national and regional typologies covered in this section.

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Table 2. Key characteristics of the different national and regional typologies

Country and spatial level	Name of typology	Approach	Number and names of classes
Albania (National)	New urban-rural classification of Albanian population	Combined (morphological, landscape)	3 classes (1. Densely populated areas, 2. Intermediate density areas, 3. Thinly populated areas (rural areas)
Albania (National)	Typology of communes and municipalities	Combined (administrative)	15 classes (Urban: 1. Capital city, 2. Centres with national importance, 3. Regional centres of agglomeration, 4. Local centres, 5. Suburban Metropolitan with high status, 6. Suburban Metropolitan with low status, 7. Suburban with low status, 8. Suburban with high status; Rural: 9. Non-urban communes with mining/energy orientation, 10. Services and industrial communes, 11. Non-urban communes with touristic orientation, 12. Local mixed lowland agricultural units, 13. Local mixed mountain agricultural units, 14. Local lowland agricultural units, 15. Local mountain agricultural units)
Albania (National)	Commuting from home to work	Combined (morphological, locational)	6 classes (1. Big/peripheral, 2. Small/peripheral, 3. Medium/semi-central, 4. Small/central, 5. Medium/central, 6. Small/central)
Austria (National)	Urban-Rural-Typology	Combined (morphological, locational)	11 classes (3 urban classes: large, medium, small; 2 regional centre classes: central, intermediary; 3 peri-urban classes (rural areas surrounding centres): central, intermediary, peripheral; 3 rural classes: central, intermediary, peripheral) (note that the design document lists the regional centres as “rural”.
Belgium (Regional: Wallonia)	Degree of rurality of Walloon municipalities	Combined (morphological, landscape)	3 main classes (rural, semi-rural, non-rural), which are synthesised from 7 classes.
Belgium (Regional: Wallonia)	Indicator of rurality	Combined (morphological, landscape)	3 classes (rural, semi-rural, non-rural)
Belgium (Regional: Flanders)	VVSG selection	Combined (morphological, landscape, economic)	2 classes (rural areas with limited resources, others)
Belgium Regional (Flanders)	Typology for 2nd Flemish rural development programme	Combined (morphological, landscape)	3 classes (urban areas, non-rural countryside, countryside)
Croatia (National)	Typology of rural and urbanized settlements in Croatia	Combined (morphological, landscape, economic)	6 classes (1) Dynamic, structurally stronger rural and urbanised settlements, 2) Accessible, commuting-dependent rural and urbanised settlements, 3) Market-oriented agricultural rural and urbanised settlements, 4) Economically diversified, mainly tourist rural and urbanised settlements, 5) Rural and urbanised settlements of extensive agriculture and weaker demographic structure, 6) Rural periphery)
Czech Republic (National)	Typology of non-metropolitan areas (Rural development concept 2021–2027)	Combined (morphological, economic)	5 classes (1. Developed type, 2. Socially disadvantaged type, 3. Locationally and socially disadvantaged type, 4. Locationally disadvantaged type, 5. Undefined type)
Denmark (National)	Municipality groups	Combined (Morphological, locational)	5 classes (Capital city region, Bigger city municipality, Urban centers in rural regions, Rural municipality, Remote rural municipality)

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Estonia (National)	Settlement classification of Estonia	Morphological	3 classes (urban, small urban, rural)
Finland (National)	Urban-rural classification	Combined (morphological, locational, landscape)	7 classes (inner urban area, outer urban area, peri-urban area, local centres in rural areas, rural areas close to urban areas, rural heartland areas, sparsely populated rural areas).
France (National)	Typology of French rural areas (DATAR-INRAE)	Combined (morphological, locational, economic, landscape)	"Typology for French rural areas" has 4 classes (Rural near to cities, coasts, and urbanized valleys; Agricultural and industrial rural areas; Rural areas with ageing and very low-density; Urban units with over 10,000 jobs). “Typology for employment and economic activities" has 4 classes, and “Landscape typology has 10 classes.
France (National)	Rural typology based on services/levels of centrality (ANCT-INRAE)	Economic	5 classes (major centres, structuring centres, intermediate centres, local centres, non-centres)
France (National)	Urban-rural zoning	Combined (morphological, locational)	6 classes (4 rural classes: Autonomous rural with very low density; Autonomous rural with low density; Rural under weak influence of an urban centre; Rural under strong influence of an urban centre; 2 urban classes: dense urban, urban with medium density)
France (National)	Life basins	Combined (morphological, locational)	In the latest version (2022) there were 1,707 life basins in France. In 2012, there were 1,666 life basins, 1,287 of which were defined as rural (low population densities).
France (National)	Typology of French rural areas (ANCT-ACADIE)	Combined (morphological, locational, economic)	The intermediary typologies include 6 different sub-typologies, structural typologies include 5 different sub-typologies, and systemic typologies include 8 different sub-typologies, all consisting of several different classes.
Germany (National)	Population-structure-based Counties	Morphological	4 classes (Independent cities, urban county, rural county with some urbanization tendency, sparsely populated rural counties.)
Germany (National)	Urban and municipality types in Germany	Combined approach (administrative, morphological locational)	4 classes (large city, mid-sized town, small town, rural municipality)
Germany (National)	Urban and Rural Areas	Combined approach (administrative, morphological locational, economical)	No classes, rather a division into functional areas
Germany (National)	Thünen Typology of rural areas	Combined (morphological, landscape)	5 classes (1. Very rural, not so good socio-economic situation, 2. Very rural, good socio-economic situation, 3. Rather rural, good socio-economic situation, 4. Rather rural, not so good socio-economic situation, 5. Not rural)
Greece	Panagiotopoulos & Kaliampakos (2018). Accessibility and spatial inequalities in Greece.	Locational	5 classes (1. Highly accessible, 2. Accessible, 3. Moderately Accessible, 4. Remote, 5. Very remote)

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Hungary	Perger et al. (2016) Delimitation and classification of rural areas	Combined (Morphological, economical)	9 classes (1. Urban districts, 2. Lagging-stagnant region, non agrar-dependant, 3. Lagging-stagnant region, non agrar dependent, with natural resources, 4. Agrar-dependent lagging-stagnant region, 5. Agrar-dependent lagging-stagnant region with natural resources, 6. Developing non agrar-dependent region, 7. Developing non agrar-dependent region with natural resources, 8. Agrar-dependent developing region. 9. Agrar-dependent developing region with natural resources)
Ireland (National)	Typology for the Urban and Rural Life in Ireland 2019 study	Combined (morphological, locational)	6 classes (A) Urban areas: 1) Cities, 2) Satellite urban towns, 3) Independent urban towns; B) Rural areas: 4) Rural areas with high urban influence, 5) Rural areas with moderate urban influence, 6) Highly rural/remote areas)
Italy (National)	Typology National Strategic Plan	Combined (morphological, locational)	4 classes (1. Urban poles, 2. Rural areas specialized in intensive agriculture, 3. Intermediate rural areas, 4 Rural areas with development problems
Italy (National)	Inner Areas	Combined (morphological locational)	3 classes (1. Intermediate areas, 2. Remote areas, 3. Ultra-remote areas)
Latvia (National)	Spatial Structure of Latvia	Combined (administrative, morphological, locational, economic)	5 classes (1..Rural Areas near Baltic sea coast, 2. Rural Areas near Eastern border, 3. Rural Areas of Riga metropolis areal, 4. Rural Areas with space of natural protection, landscape and cultural and historical territories, 5. Rural development spaces)
Lithuania (National)	Classification used in the Population of Lithuania (2022) report	Combined (morphological, economic)	2 classes (urban and rural areas)
Malta (National)	Strategic Plan for Environment and Development	Combined (morphological, landscape, economic)	8 classes (A) Urban classes: Principal urban area, Regional urban settlements, Small urban settlements, B) Rural classes: Strategic areas for recreation, Areas of high landscape protection, Areas of landscape protection, C) Coastal: Predominantly urban coast, Predominantly rural coast)
Netherlands (National)	Typology of Dutch municipalities based on degree of urbanization and geographical location	Combined (morphological, locational,	7 classes (larger cities, other cities, non-urban, urban intermediary, non-urban intermediary, urban periphery, non-urban periphery)
Netherlands (National)	Dutch territorial typology of shrinking and anticipation regions	Combined (morphological, economic)	2 classes (shrinking regions, anticipating regions).
Netherlands (National)	Dutch typology based on differentiating wellbeing performances	Combined (morphological, administrative, economic)	10 classes (under two categories: 1) Randstad urban conglomerate, 2) low-density urban areas. Category 1 includes five classes: first, second and third order suburban areas, big cities, rural areas. Category 2 also includes five classes: first and second order residential areas, mid-sized urban centres, and first and second order rural areas).
Netherlands (National)	Dutch Agricultural development zoning	Landscape	Different categorisation attempts have been made. E.g., the zoning of agricultural areas (*Zonering agrarisch gebied*) includes three main classes (intensive land-based agriculture, extensive land-based agriculture, intensive non-land-based agriculture).
Norway (National)	Centrality index	Combined (morphological, locational, economical)	Six classes (1. Most central municipalities; 2. Second most central municipalities; 3. Medium central municipalities 1; 4. Medium central municipalities 2; 5. Second least central municipalities. 6. Least central municipalities)

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Poland (National)	Typology of rural areas in Poland based on socio-economic development and location	Combined (morphological, locational, economic)	Six classes of rural areas (1. with a high level of development and location rent, 2. with a quite high and medium level of development and an average level of location rent, 3. with an average level of development and a very high level of non-natural conditions of location rent, 4. with an average level of development and a very high level of natural conditions of location rent, 5.with an average level of development and a low level of location rent, 6. with a fairly low level of development and location rent)
Poland (Regional: West Pomeranian Voivoedeship)	Functional typology of rural areas in the West Pomeranian Voivodeship	Combined (morphological, economic)	Six classes of rural areas (1. well-developed functionally diversified rural areas, 2. well-developed rural areas dominated by the tourist functions, 3. moderately developed rural areas with a predominance of agricultural function, 4. moderately developed rural areas with a diversified structure, 5. poorly developed rural areas with a predominance of forest function, 6. poorly developed rural areas without a dominant function)
Poland (National)	Typology of rural areas	Combined (locational, economic)	Seven classes of rural areas (1. Domination of traditional agriculture, 2. Dominance of large-area agriculture, 3 Predominance of non-agricultural function, intermediate, 4 Multi-income fragmented agriculture, 5. Multifunctional, sector balance, 6. Urbanized, reduction of agricultural function, 7. Highly urbanized)
Poland (National)	Rural functional areas (two versions)	Economic	2 classes: (1. Rural areas participating in development processes; 2. Rural areas not participating in development processes)
Poland (National)	Rural functional areas (two versions)	Combined (dynamic, locational, economic/ structural)	12 classes (1) well-accessible rural areas with consumption functions, participating in development processes; 2) well-accessible rural areas with production functions, participating in development processes; 3) well-accessible rural areas with mixed functions, participating in development processes; 4) peripheral rural areas with consumption functions, participating in development processes; 5) peripheral rural areas with production functions, participating in development processes; 6) peripheral rural areas with mixed functions, participating in development processes; 7) well-accessible rural areas with production functions, requiring support for development processes; 8) well-accessible rural areas with consumption functions, requiring support for development processes; 9) well-accessible rural areas with mixed functions, requiring support for development processes; 10) peripheral rural areas with production functions, requiring support for development processes; 11) peripheral rural areas, with consumption functions, demanding support for development processes; 12) peripheral rural areas with mixed functions, requiring support for development processes.
Portugal (National)	Mainly rural occupied territory	morphological	3 classes (1.Urban space: Statistical subsection that complies with one of the following requirements: A) classified as "urban soil" according to planning criteria of the Municipal Spatial and Land-use plans (PMOT); B) it is part of a statistical section with a population density above 500 inhabitants per km2; C) it belongs to a locality with a population of 5 000 or more inhabitants. 2.Semi-urban space: Statistical subsection classified as "non-urban soil" according to planning criteria of the Municipal Spatial and Land-use plans (PMOT) and that has not been previously included in the "urban space". 3.Predominantly rural space)
Romania (Regional)	Rusu (2015) A typology of Rural Areas in Danube Region	Combined (Landscape, Economical, morphological)	4 classes (clusters) (no names)
Serbia (National)	Typology of rural areas in Serbia	Combined (morphological, landscape, economic, administrative)	4 classes (1. Highly productive agriculture and integrated economy, 2. Small urban economies with labour intensive agriculture, 3. Natural resources-oriented economies mostly mountainous, 4. High tourism capacities and poorly developed agriculture

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Slovakia	Rurality index by Dická et al (2019)	Combined (Morphological, economic, locational, landscape)	4 classes (extreme rural, intermediate rural, intermediate non-rural, extreme non-rural)
Slovenia	Typology and development characteristics of rural areas in Slovenia	Combined (Morphological, economic)	3 main classes (Suburban areas, Typical rural areas, Depopulation areas)
Spain (National)	Law 45/2007, of 13 December, for the sustainable development of the rural environment.	Combined (morphological, locational)	3 classes (1. Rural areas to be revitalized, 2. Intermediate rural areas, 3. Peri-urban rural areas)
Sweden (National)	Urban-rural classification	Combined (morphological, locational)	6 classes (Bigger Urban Areas, Dense areas close to a city, dense areas with remote location, rural areas close a city, rural areas remotely located, rural areas very remote.
Sweden (National)	Municipality grouping	Combined (morphological, economic, locational)	The typology consists of two levels First level: 3 classes: (1. Cities and municipalities close to cities; 2. Bigger towns and municipalities close to bigger towns. 3. Smaller towns/buil-up areas and rural municipalities) 9 classes (1. Cities, 2. Commuting municipality close to city, 3. Bigger town, 4. Commuting municipality close to bigger town, 5.low commuting municipality close to bigger town, 6. Smaller town/built-up-area, 7. Commuting municipality close to smaller town, 8. Rural municipality, 9. Rural municipality with tourism
UK (Regional: Scotland)	Scotland's Sparsely Populated Areas (SPAs)	Combined (morphological, locational)	The whole of Scotland is classified into a) sparsely populated areas, b) not in sparsely populated areas (Outside mainly urban council areas), c) not in sparsely populated areas (Mainly urban council areas). There are nine subregions within the SPAs, and 16 covering all areas outside the SPAs (categories b) and c) noted above).
UK (Regional: (Scotland)	Scottish Govenment Urban Rural Classification 2020	Combined (morphological, locational)	Three-fold version (1. Accessible, 2. Remote, 3. Very Remote) Six-fold version (1. Large Urban Areas, 2. Other Urban Areas, 3. Accessible Small Towns, 4. Remote Small Towns, 5. Accessible Rural Areas, 6. Remote Rural Areas) Eight-fold version (1. Large Urban Areas, 2. Other Urban, 3. Accessible Small Towns, 4. Remote Small Towns, 5. Very Remote Small Towns, 6. Accessible Rural Areas, 7. Remote Rural Areas, 8. Very Remote Rural Areas)

4.1 An outlook on different national and regional typology frameworks

The section provides an outlook on a selection of typologies from different European countries, which are presented and discussed more in-depth. The purpose is to provide an outlook of these different typologies that (i) are representative of the different approaches towards typology compilation and (ii) rely on and illustrate novel approaches for delimiting and characterising rural territories.

Urban-rural classification (Finland)

In Finland, information on regional development had traditionally relied on data bound to different administrative units, but in the early 2010s, national authorities saw a need for a classification that better recognizes the continuity between urban and rural areas and the characteristics of different areas. Hence, the Finnish Urban-rural classification which is a grid-based typology for classifying Finnish territories independent of administrative

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boundaries was created to replace a former municipality-based classification of urban and rural areas (see Figure 8). The development of this new classification was initiated by the Ministry of Economic Affairs and Employment and the Ministry of Agriculture and Forestry, and the development itself was mainly carried out by the Finnish Environment Institute (SYKE). The typology was originally published in 2013, revised in 2020 and it has been widely used to support regional and rural policy in Finland and for different research purposes. This typology divides Finland into the following seven classes: inner urban area, outer urban area, peri-urban area, local centres in rural areas, rural areas close to urban areas, rural heartland areas, sparsely populated rural areas.

The typology uses various register-based data at the grid level (250 x 250 metres), with indicators on population, labour force, commuting, buildings, road network, and CORINE land cover data. These data have been used to calculate different measures of quantity, density, accessibility, intensity, and versatility to describe the degree to which different areas are 'urban' and 'rural' (SYKE, 2021). On this basis, all Finnish territories have then been classified into seven different classes (three urban and four rural classes). The basic methodology is similar for the different classes, but each class has its own criteria and variables. The classification of rural areas is based on the focal analysis method where areas are counted around the grid cells according to a 5 km radius.

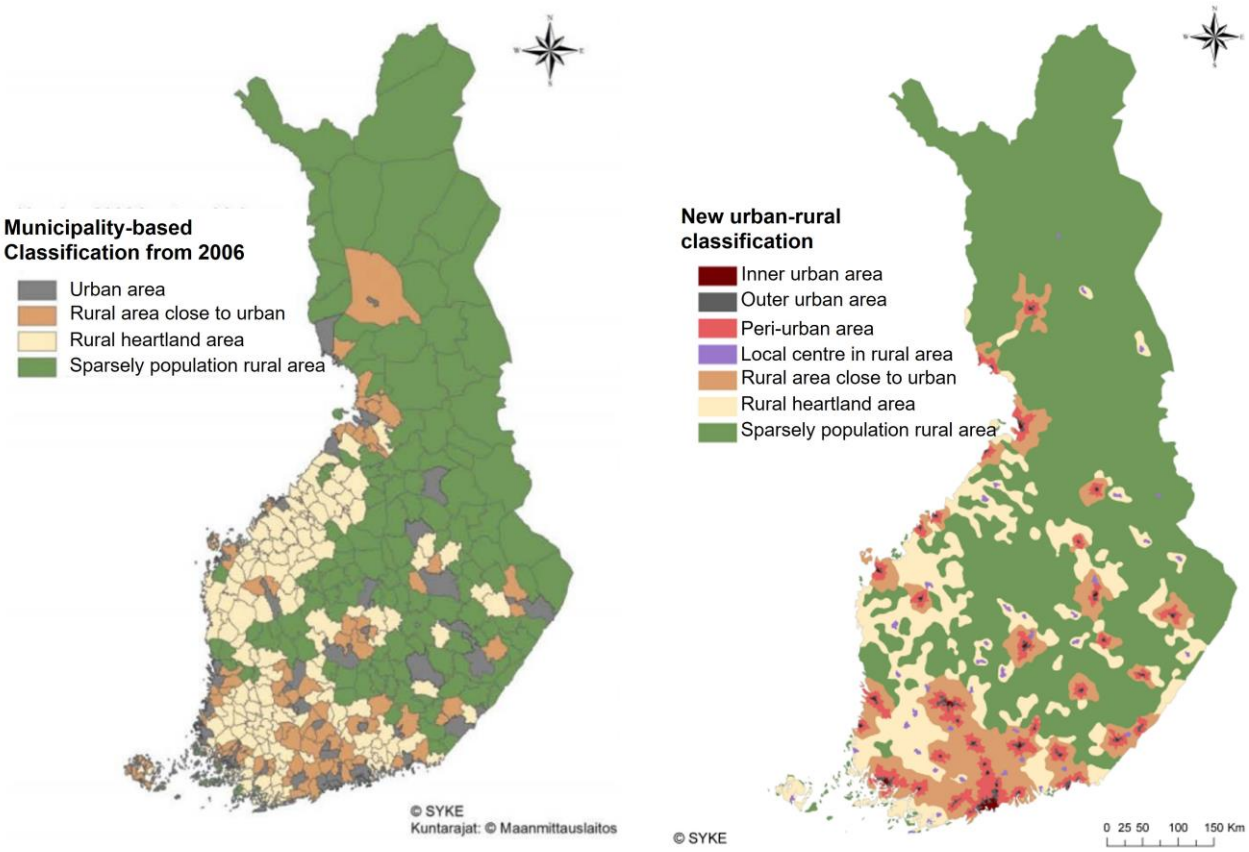

Figure 8. The former municipality-based classification from 2006 and the newer grid-based urban-rural classification published in 2014 and updated in 2020 (adapted from Helminen et al., 2014)

The classification has been used in various ways to support regional and rural development and policy in Finland. For instance, it has been used in several strategies and policy documents at national, regional, and municipal level, and also for distributing development funds, within the framework of LEADER and for distributing public support for businesses in rural settings and shops in sparsely populated rural areas. It has also been widely used as an analytical framework in research for analysing different spatial phenomena and for describing differences between different types of urban and rural areas.

The typology uses fine grained data, and it allows much more spatially detailed analysis than previous administratively based territorial classifications. It is best suited for examining larger areas, and it allows to identify different development trends especially at the national and regional level. The boundaries of the classes have been generalised so that the typology is less suitable for analyses at a more local level, as the classification mainly describes larger area entities rather than the specific characteristics of a particular place.

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Urban-rural zoning (France)

The French Urban-rural zoning developed by the National Institute of Statistics and Economic Studies (INSEE) is a further elaboration of the European Degree of Urbanisation (DEGURBA) typology (see chapter 3.2). Until 2020, INSEE defined rural areas in France as municipalities not belonging to an urban area, based on a morphological definition of population density. This urban-rural zoning was created as a response to the French government's call for a new rural classification, which is less dependent on classical urban-rural approaches, in conjunction to the rural agenda in 2019 and published in 2021. The purpose was to create a classification that goes beyond population density and also considers how rural areas are influenced by urban centres. The intention was thus to provide a more nuanced outlook on rural areas by identifying different sub-categories of rural areas based on functional criteria.

In this typology, rural areas are defined as sparsely populated municipalities, according to population density (at grid level), while functional criteria and commuting data are used for distinguishing how dependent different categories of rural areas are on urban centres in terms of employment. The starting point of the methodological approach is largely similar as in the DEGURBA typology, but in this specific typology, the calculation of a degree of rurality is added as well as a functional approach to characterise the proportion of the active population working in an employment centre with more than 50,000 inhabitants in each rural area. The typology uses data on population size/density (1 km x 1 km grid), commuting (matrix) and employment (LAU level). The classification consists of six classes, of which two classes are urban (dense urban, urban with medium density) and four rural (autonomous rural with very low density, autonomous rural with low density, rural under weak influence of an urban centre, rural under strong influence of an urban centre).

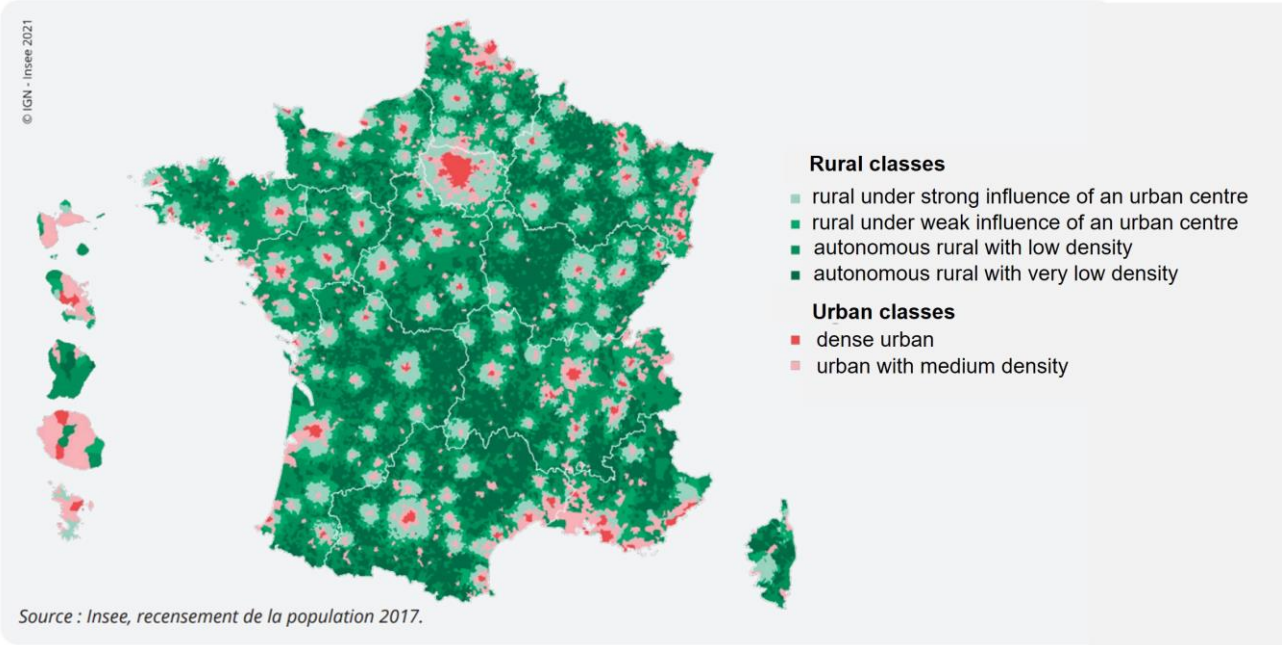

Figure 9. French urban-rural zoning developed by INSEE (adapted from D'Alessandro et al., 2021).

The typology has been developed and it is maintained by INSEE, with support of a working group bringing together various actors, such as statisticians, academics, and elected officials. The typology was developed to support policy development, and it used particularly to identify and prioritize support measures for the development of rural territories, in order to strengthen a more balanced territorial development. INSEE also publish analysis and statistics relating to these different rural sub-categories, for instance concerning employment by sector, tourism, income level, population age structure, population development trends, migration, and land use (see e.g., D'Alessandro et al., 2021). One of the strengths of this typology could be that it is based on relatively simple criteria, which makes updating the typology relatively straightforward. Another aspect is that it also corresponds to the European typology, which may facilitate European comparisons and allow for a uniform definition for the distribution of EU funds. On the other hand, one of the limitations of the typology could be that the methodology is not so well adapted for classifying rural areas at higher territorial scales.

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Typologies of French rural areas (ANCT-ACADIE 2023)

In 2023, a set of new territorial typologies and sub-typologies were published in France building on previous rural typologies by DATAR (Interministerial Delegation of Land Planning and Regional Attractiveness). In the context of the French rural agenda and its action plan, the purpose of these typologies and sub-typologies is to provide a richer understanding of the diversity of French rural areas from a variety of perspectives and to support policymaking at the national level. The development of these new typologies was led by the French National Agency for the Cohesion of Territories (ANCT) and the National Institute of Statistics and Economic Studies (INSEE), with support from Acadie cooperative, a steering committee consisting of public administration, and a scientific committee.

These typologies are at LAU level, and they include three main types of typologies: intermediary ones (focusing on aspects such as demography, economic functions, and housing), structural ones (aggregated from the intermediary sub-typologies) and systemic ones (describing flows of people, goods, and resources) (see table x). The different typologies rely on a variety of data concerning e.g., demographic, and socio-economic characteristics, economy and employment, accessibility and centrality, and housing. The intermediary typologies include 6 different sub-typologies, while the structural typologies include 5 different sub-typologies, and the systemic typologies include 8 different sub-typologies.

Table 3. Different sub-typologies according to type included in the ANCT-ACADIE French rural typologies published in 2023.

Intermediate typologies	Structural typologies	Systemic typologies
Different sub-typologies: • Demography of rural areas • Economic functions of rural areas • Accessibility, attractivity and centrality of rural areas • Social dynamics of rural areas • Socio-economic profile of rural populations • Housing in rural areas	Different sub-typologies: • Aggregated structural typology • Residential ruralities • Small polarities • Productive ruralities • Touristic ruralities	Different sub-typologies: • Contribution of rural areas to environmental, energy and food services • Contributions of rural areas to the productive economy • Contribution of rural areas to hosting and mobility • Aggregated systemic typology • Agroecological transitions • Agro-industrial transitions • Agro-metropolitan transitions • Agro-technical transitions

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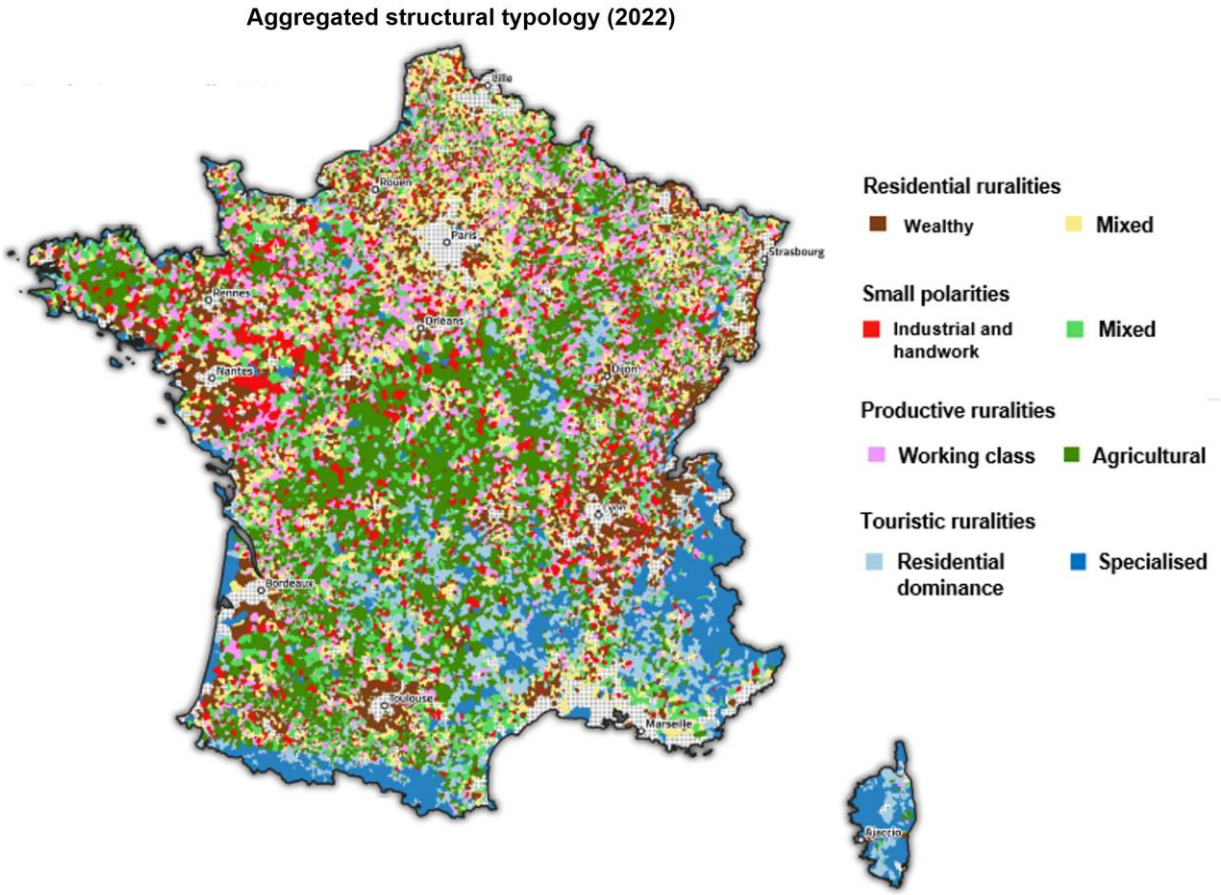

Figure 10. Aggregated structural sub-typology included in the ANCT-ACADIE French rural typologies published in 2023 (adapted from Acadie and Magali Talandier, 2023).

These different typologies are intended especially for national policy design and identifying territories in need of specific interventions. At regional and local levels, they can help policymakers to better understand changes and trends affecting rural areas and that have implications for spatial planning, as well as stimulate policy dialogue around e.g., challenges related to land transitions in rural areas. One of the main strengths of these typologies, especially the structural ones, is that they reveal multifaceted changes and trends affecting various thematic areas, while also allowing to identify differentiated features and trends even within a single rural LAU. They also offer a contribution to the characterization of functional rural areas. Especially the systemic typologies can also help highlight tensions among different dimensions, such as land use, production of goods and services, hosting capacities and residential trajectories in different territories. As these typologies are designed for France, there is uncertainty to whether these structural and systemic typologies are transferable into a wider European context, due to specificities of the French context, and data availability.

Typology for the Urban and Rural Life (Ireland)

This typology was developed for the Urban and Rural Life in Ireland 2019 study (CSO, 2019). The purpose was to provide a more nuanced understanding of differences between different types of urban and rural areas compared to previous typologies in Ireland. The typology was developed by the Irish Central Statistics Office (CSO) for analytical purposes and especially for examining themes such as income, housing, health, education, and commuting patterns across different types of urban and rural areas in the previously mentioned study. One of the rationales for creating this typology was that the CSO publishes a range of studies which often include simple divisions into urban and rural areas, which however does not address the underlying characteristics separating one rural area from another. This typology thus seeks to better distinguish between different types of urban and rural areas.

This typology includes six territorial classes, including three urban classes (cities, satellite urban towns, independent urban towns) and three rural classes (rural areas with high urban influence, rural areas with moderate urban influence, highly rural/remote areas). The Irish census (2016) definition of urban areas is used as a starting point, where urban areas are defined as towns with a total population of 1,500 or more, while rural areas are defined as having fewer than 1,500 persons. Rural areas are then further divided into three sub-categories, based on their

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dependence on urban areas in terms of employment. This allocation into the rural classes is based on a weighted percentage of rural residents employed in three standard categories of urban areas.

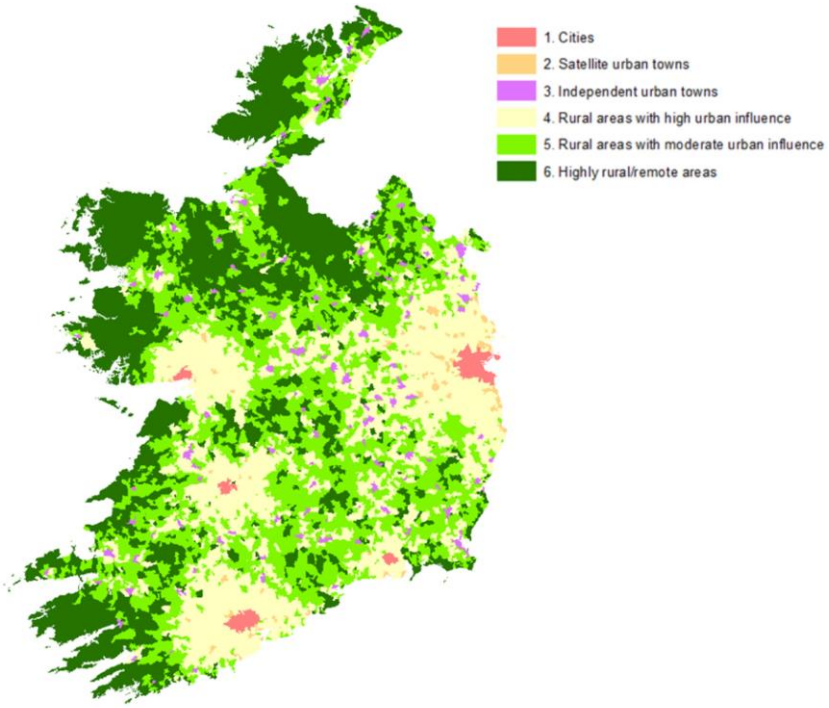

Figure 11. Irish typology for urban and rural life (2019) (adapted from CSO, 2019).

The typology was created for the study "Urban and Rural Life in Ireland" as part of the CSO's initiative to develop a National Data Infrastructure (NDI), which aims to provide new and improved statistical products for the benefit of policymakers and citizens. In the previously mentioned report, a variety of datasets have been linked to the typology including: the Irish censuses (2011 and 2016), EU Statistics on Income and Living Conditions (SILC 2017), labour force survey (2018–2019), distance to services (2019), new dwelling completions (2011–2018), residential property prices (2010–2018), and geographical profiles of income in Ireland (2016). The report then presents different analysis based on these different thematic areas (CSO, 2019). The typology is also available as an interactive web map.

Centrality index (Norway)

This Norwegian typology focuses on the concept of centrality, measured as access to jobs and services. This has for a long time been the main way of looking at the urban-rural continuum in Norway from a policy perspective. This typology from 2017, therefore, builds on the concepts from a typology that was developed in the 1970s, but is operationalised in a new way. The reason that centrality is in focus is that this is the main policy challenge from a regional development perspective. The index is therefore used to identify municipalities that need different forms of support related to remoteness and lack of access to services and jobs.

The typology uses a combination of morphological, locational, and (to some extent) economical approaches. It is built on three main data sources: (i) Population data on a coordinate level (later summarised so that every basic statistical unit has a coordinate for the average population), (ii) employment per sector (100 sectors) at coordinate level, (iii) Data over the road network, including speeds. Then the centrality is calculated based on the number of jobs and services (based on the employment data) that can be reached within a certain time (a shorter time gives a higher value; 45 minutes of travel time is set as a threshold). The access to jobs and the access to services are combined into an index where the highest centrality (Oslo) is set at 1000. The index consists of six classes, that are hierarchical from the highest centrality to the lowest. The maps below shows the change between the old classification from the 1970s and the new classification from 2017. It was an objective that the new typology should have more classes so that it could show a more nuanced picture of centrality.

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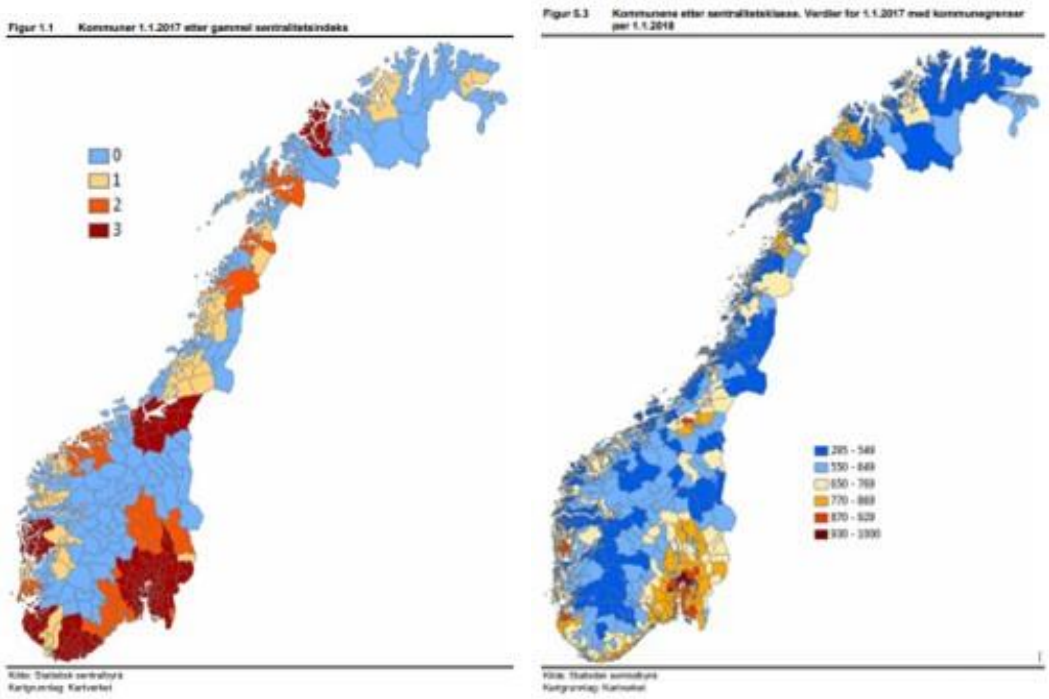

Figure 12. Data for 2017 according to the old typology (left) compared to the new typology (right). The scale goes from blue to red, where red means a higher degree of centrality (Høydahl, 2017).

The new typology was initiated by the Ministry of Local Government and Regional Development (KDD) who wanted to use centrality as one aspect of another index (distriktsindex) that is used for identifying municipalities that are entitled to certain types of support. Since it was supposed to be used for this purpose it was important that the methodology was anchored and accepted. Statistic Norway was therefore given a lot of freedom in how to operationalise the concept of centrality into an index. Other actors were able to give feedback through a reference group.

Thünen Typology of rural areas (Germany)

This is a typology of the German NUTS 3 regions that was developed by the Thünen-Institute in 2016. The typology consists of two steps: 1. Degree of rurality and 2. Socio-economic situation. The first step is about demarcating urban from rural and characterizing the rural areas based on population density, land use (share of agriculture and forestry), the proportion of detached and semi-detached houses, and accessibility to large centres. The degree of rurality is available also at LAU level and can be used by itself. The second step of the index adds a socio-economic layer to the typology and includes indicators such as unemployment rate, wages, tax power of local authorities, net migration of young people, number of non-occupied flats/houses, life expectancy, and number of school leavers without a basic certificate. These indicators are combined using principal component analysis and the result is an index of rurality.

The result is a division of NUTS 3 regions into five classes: (i) Very rural, not so good socio-economic situation; (ii) Very rural, good socio-economic situation; (iii) Rather rural, good socio-economic situation; (iv) Rather rural, not so good socio-economic situation; (v) Not rural. The result of the typology can be seen in figure 13.

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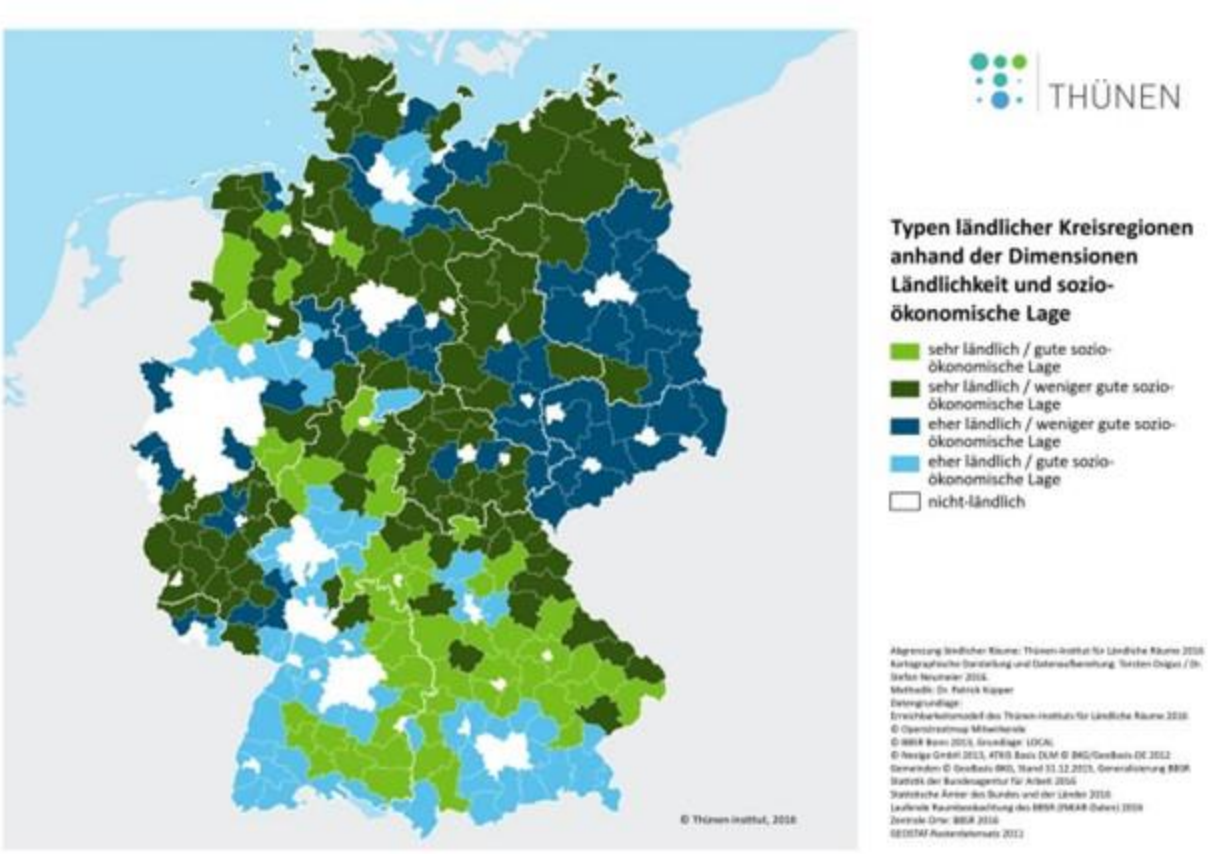

Figure 13. Thünen typology of rural areas. "Types of rural districts based on the dimensions of rurality and socio-economic situation" (Küpper, 2016). The classes are: (i) Very rural, not so good socio-economic situation; (ii) Very rural, good socio-economic situation; (iii) Rather rural, good socio-economic situation; (iv) Rather rural, not so good socio-economic situation; (v) Not rural.

The typology was initiated by the Thünen Institute of Rural Studies with the aim of monitoring the living conditions in rural areas. Various criteria were set up when the typology was constructed. These included that the typology should depict characteristics that are associated with rural areas in the theoretical discussion, that there should be a uniform classification of urban-rural for the whole of Germany, that there should not be too many classes, that it should follow administrative borders so that it is possible to link it with statistical data, that it should be stable over time, and that the description of rural areas should be in line with the scientific literature.

The typology has been very popular in policy circles and used by authorities such as the Government Department of Agriculture. There has, however, been a critique from the scientific community. The main critique has been that it is of limited useability since the indicators that are included in the typology collinear with the indicators that they want to study or explain. The typology is planned to be updated in 2022 when the new census data becomes available.

Spanish typology of rural areas (law 45/2007 for sustainable development of the rural environment)

In Spain there is a general law with delimitations and classifications at the National level. This law establishes the basic lines for each 17 Spanish Regional Governments (Autonomous Communities) to establish their regional rules. In relation to this law, they made an urban-rural classification that was meant to provide a modern dimension of rurality, integrating urban centres as dynamic and functional elements necessary for rural development, and establishing a typology of areas that recognizes the existing rural diversity and the need for differentiated attention. This classification was made at the municipal level and based on a combined approach, with morphological, landscape, economic and locality approaches, and indicators. Indicators include population size, population density, share of population that live in sparsely populated areas, income, share of agrarian activity and accessibility to urban centres with more than 30,000 inhabitants.

These indicators are combined to create the typology, the result is a classification consisting of three definitions and three classes. The definitions are 1) Rural environment: the geographical space formed by the aggregation of municipalities or smaller local entities defined by the competent administrations that have a population of less than 30,000 inhabitants and a density of less than 100 inhabitants per km². (Exceptionally, the delimitation may include

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municipalities that do not meet any of the conditions set forth this article a) when the homogeneity and functionality of the area so require), 2) Rural area: scope of application of the measures derived from the Sustainable Rural Development Program regulated by this Law, regional or sub-provincial in scope, delimited and qualified by the competent Autonomous Community and 3) Small rural municipality: has a resident population of less than 5,000 inhabitants and is integrated into the rural environment.

In order to promote a balanced application of this Law and its development instruments, the Spanish Council for the Rural Environment adopts common criteria for the qualification of rural areas. 1) Rural areas to be revitalized: those with low population density, high significance of agricultural activity, low-income levels and significant geographical isolation or territorial structuring difficulties. 2) Intermediate rural areas: those with low or medium population density, with diversified employment between the primary, secondary, and tertiary sectors, low- or medium-income levels and distant from the direct area of influence of large urban centres. 3) Peri-urban rural areas: those with a growing population, with a predominance of employment in the tertiary sector, medium or high-income levels and located in the surroundings of urban areas or densely populated areas.

The typology is used for identifying areas that are entitled to support and the law gave rise to a Sustainable Rural Development Program. The typology has been criticised for being too standard/traditional and too simplistic and there have been attempts by researchers to make a completer and more detailed typology of rural areas. These researchers have criticised the typology for not including measures on soil coverage and access to cities. It has also been criticised for not taking the urban-rural continuum into consideration. Another strand of critique focus on the process, that they mean has not been participatory.

Scottish Government Urban Rural Classification 2020

The urban-rural typology "Scottish Government Urban Rural Classification" is a typology that aims to distinguish between urban and rural areas and improve the understanding of life in rural Scotland." (Scottish Government, 2022). The classification exists in different versions including 2, 3, 6 and 8 classes, respectively. The Scottish Government (SG) wants to ensure that decision-makers consider differences in local peculiarities within urban and rural areas and that efforts are targeted to achieve sustainable economic growth for all, regardless of where they live. The need for a consistent classification system was a prerequisite for developing a better understanding of the circumstances and needs of urban, small-town, rural, and remote areas. Issues such as transport, education and access to healthcare are named as central issues for the rural areas. With the help of the typology, the aim is to identify the degree of rurality of the areas.

The typology was developed by the Scottish government in its first version in 2000, when it was called the "Scottish Household Survey Urban Rural Classification". The typology was then revised in 2016 and in 2020 and renamed the "Scottish Government Urban Rural Classification". The typology is based on the two main criteria: (i) population and (ii) accessibility. Accessibility is calculated on the driving time between central and peripheral parts of Scotland. The definitions of urban and rural areas underlying the classification are unchanged from the first version. Settlements with less than 3,000 people are defined as "rural". "Remote areas" are defined based on driving times from settlements with 10,000 or more people.

The population data comes from the National Records of Scotland (NRS) which is available at postcode level. The degree of urbanization is defined based on clusters of densely populated postcodes.

1. Clusters with more than 125,000 inhabitants are defined as "large urban areas"
2. Clusters with between 10,000 and 125,000 inhabitants as "other urban areas"
3. Clusters with between 3,000 and 10,000 inhabitants as "small towns"
4. Clusters with less than 3,000 inhabitants as "rural areas".

Accessibility is defined based on driving time to an urban area. This is done by calculating the driving time to the population-weighted centroid point in the clusters in the urban areas ("large urban areas" and "other urban areas"). Accessibility has three classes:

1. "Accessible" - areas with less than 30 minutes driving time to an urban area with at least 10,000 inhabitants (6-category classification), or areas that have a driving time between 30 and 60 minutes (8-category classification) from a settlement with a population of at least 10,000.
2. “Remote” – areas with more than 30 minutes driving time to an urban centre.
3. "Very remote" - areas with more than 60 minutes driving time (only for 8-category classification).

The urban-rural classification for Scotland is based on combining both the degree of urbanization and the accessibility measures.

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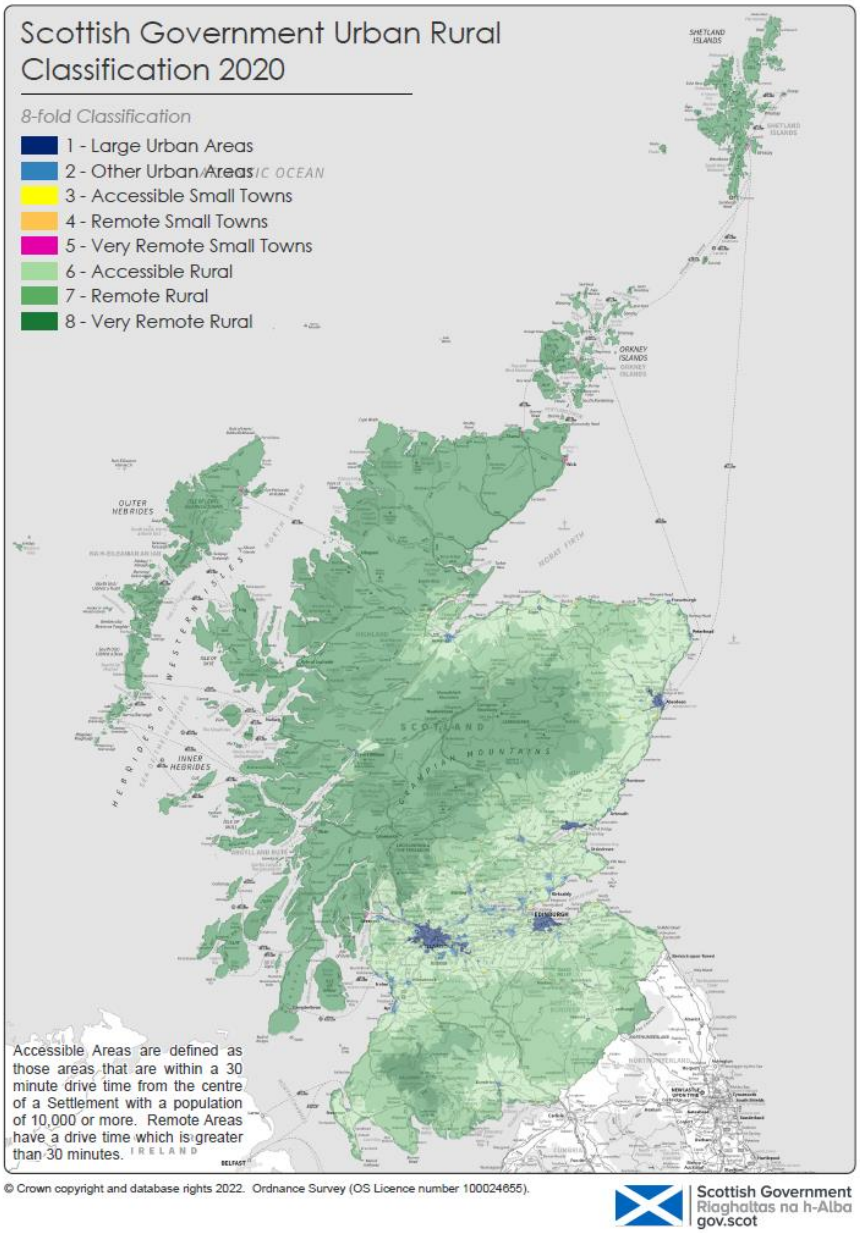

Figure 14. Scottish Government Urban-rural typology; classification with 8 classes (Scottish Government, 2020).

4.2. Technical aspects of the typologies

This section focuses on the technical aspects of the national and regional typologies identified through a typology scoping carried out together with partners in the GRANULAR project. The focus is on aspects such as the key approaches used for constructing the typologies, the geographical scale and territorial coverage of the typologies, data and variables used, the categories and principles of the different classifications and the definitions of rurality in the different examples. More detailed information regarding various technical aspects of these typologies can be found in Annex Table 2.

Territorial coverage

All of the typologies examined in this section focus on delimiting and/or characterising rural areas. Amongst these typologies, there are examples that are more general territorial typologies, where the purpose is to distinguish between different types of rural, intermediate, and urban areas in their respective countries. In addition, there are

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typologies that have a solely rural focus, and that seek to provide a more nuanced picture of different categories of rurality while not including non-rural areas in the classification. Typologies falling under the first category include, for instance, the Albanian New urban-rural classification, the Austrian Urban-rural typology, the Irish Typology for urban and rural life, the Norwegian Centrality index, and the Finnish grid-based typology, which all divide the territories in their respective countries into different classes based on different measures of urbanity and rurality. The second category includes, for example, the Czech Typology of non-metropolitan areas, the Dutch Agricultural development zoning, the French typologies of rural areas, and the German Thünen Typology of rural areas, which only cover those territories previously defined as rural.

Concerning territorial coverage, the typologies included here are primarily at the national level, meaning that they cover the entirety of the countries for which they have been developed. There are, however, also a few regional typologies that do not cover their whole national territory, such as the Belgian typologies, which cover either the Flemish or Walloon regions of Belgium. The Polish Functional typology of rural areas in the West Pomeranian Voivodeship and the Romanian typology of Rural Areas in Danube Region only cover specific regions. The Scottish Sparsely populated areas typology and the Scottish Government urban rural classification are other examples of regional typologies that cover the Scottish territory.

The different examples examined here include typologies at different territorial scales. Most commonly, these typologies are at a LAU (Local Administrative Unit) level, meaning that they classify municipalities and communes within a particular country into different classes of urbanity and rurality. A few examples are at higher, more general territorial scales, such as the German Population-structure-based counties typology and the Dutch territorial typology of shrinking and anticipation regions which are at NUTS 3 level. There are also several examples of typologies at more detailed territorial levels, where the spatial units used are at the sub-municipal level. For instance, the Polish typologies examined are at the community level, the Scotland's Sparsely Populated Area typology is based on Scottish data zones, and the Irish typology for Urban and Rural Life is based on so-called small areas, which is the lowest level of geography for the compilation of statistics in Ireland. Of all the typologies examined, the Finnish urban-rural classification is the example which is constructed at the most spatially detailed level (250 × 250 m grid level). Although there are several typologies that rely at least partly on grid-level data, for instance for calculating population density, the Finnish urban-rural classification is the only example where the typology itself and the different classes are at this fine-grained scale.

Approaches and definitions of rurality

Most of the typologies studied are based on a combined approach where rural areas are classified according to multiple dimensions. There are only a few typologies where the classification is based on one main dimension. These include the Estonian settlement classification, which relies on a purely morphological approach for classifying Estonian territories into three classes (urban, small urban, rural) based on population density at the grid level (500 m x 500 m). The French typology based on levels of centrality, which classifies municipalities solely based on diversity of facilities and different types of public and private services. The Dutch agricultural development zoning again purely relies on a landscape approach and data concerning land use intensity and other agricultural features relating to different agri-environmental problems and related policy challenges.

As shown in Table 2 and Annex Table 2, the majority of typologies rely on a combined approach, where there is a morphological component, which is usually based on population size or density within a given territorial unit, combined with other dimensions which form the basis for the classification. There are a few examples where there is a combination of a morphological and a locational approach. For instance, in the Austrian urban-rural typology, for rural areas, accessibility to an urban or regional centre is considered based on motorised individual transport. In the French urban-rural zoning, functional criteria are used for distinguishing between different rural categories, regarding their degree of dependence on employment centres, according to commuting statistics. Similarly, the Irish typology uses population density along with data on the proportion of people working in rural areas to divide rural areas into three sub-categories, based on their dependence on urban areas in terms of employment. The Dutch Typology of municipalities based on the degree of urbanization and geographical location, categorises municipalities based on their degree of urbanization and spatial positioning in relation to major urban areas.

There are examples of typologies where a combination of morphological and landscape approaches are used. For instance, in the Belgian Degree of rurality of Walloon municipalities, the classification is based on the proportion of the land surface of the municipalities that is made up of rural territories, which are defined based on population density and land cover. Here, "rural" municipalities are those where this percentage is over 85%, "semi-rural" refers to areas where this percentage is 60–85%, and "non-rural" municipalities are those for which the percentage is under 60%. In the Belgian Typology for the 2nd Flemish rural development programme, rural areas are defined as areas where the population is under 300 per km² and the built-up area under 15%. Another example of a combined approach is the Hungarian delimitation and classification of rural areas where population density along with economic criteria, such as the share of agriculture, are used to demarcate and characterise different types of rural areas.

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Several typologies rely on a variety of different datasets combination of at least three different approaches. The Finnish Urban-rural classification is an example that uses population data, along with road network data and Corine landcover data to classify Finnish territories according to a combined morphological, landscape and locational approach. The Norwegian Centrality index is based on population density, employment by sector, as well as accessibility based on a road network and utilises a combined morphological, economic, and locational approach and defines rurality as a lack of centrality. The Serbian Typology of rural areas and the Slovakian Rurality index are examples of national typologies that have been constructed using multivariate methods applied on a wide range of data covering aspects such as demographic, economic, service, land use and infrastructure, for identifying rural areas of different sizes and types.

While the different typologies have different purposes and rely on a variety of different approaches, as previously noted, almost all of the examples discussed here use some kind of morphological criteria for demarcating urban from rural areas. Usually this is done through population size or population density. Another observation that can be drawn is that it is also quite common to use accessibility (locational approach) as a criterion for determining how remote an area is. Most commonly, accessibility is measured either to a bigger urban agglomeration or to jobs or services. In these examples, the morphological and locational approaches are mainly used to demarcate urban from rural although both population size/density and the degree of remoteness can also be used for distinguishing between different types of rural areas. Some of the typologies are built in stages, where the first step involves demarcating urban from rural, followed by then characterizing rural areas in different ways. The German Thünen typology of rural areas is for example explicitly made up of two stages, where the first stage can be used separately, similarly as the Hungarian Delimitation and classification of rural areas, which follows a similar approach.

For characterizing rural areas some typologies are based on numerous indicators and statistical methods which have been used to classify areas according to certain similarities. This type of approach can provide valuable insights on the diversity of rural areas. However, a potential risk with using complex statistical models is that it can make it difficult to communicate and replicate the typologies, particularly when the modelling steps are not well documented or when the data used are not widely available.

4.3 Background and policy context

This section addresses the background and broader policy context of the different national and regional typologies. The focus is on the purpose of the typologies and why they have been developed, how they are used, and what types of actors have been involved in the development of the typologies and currently use them. The typologies examined in this section have been developed for two main purposes. Firstly, to provide support for policy and planning. Most of these typologies are to a varying degree used as an aid to policy development and implementation, either directly or more indirectly. The second main purpose is analysis. In many cases, these typologies have been developed as analytical tools that can help provide deeper insights on various rural and territorial development issues. However, while some typologies are primarily used for analytical purposes, and others that more explicitly are policy support tools, it is noteworthy that these two purposes are not mutually exclusive, and many of the typologies are tools for both analysis and policy support.

Supporting policy and planning

The typologies examined here include examples that have been developed to guide policy development more generally, for evaluation purposes, and those used more specifically for distributing funds or identifying areas that are considered to be in need of specific interventions. The Albanian Typology of communes and municipalities is an example of a typology that is used as a more general policy support tool which is used in connection to the General National Spatial Plan, the overarching framework for spatial planning in Albania. The Czech Typology of non-metropolitan areas was produced to support the development of strategic and specific objectives of rural development, that reflect context-specific problems of different areas. In terms of providing support for the evaluation and guidance of rural polices, the Croatian Typology of rural and urbanized settlements and the Polish Typology of rural areas based on socio-economic development and location are examples of typologies where these are the key uses. The Spanish typology was constructed as part of a law for sustainable development of the rural environment. The law required a consistent definition of rural areas, and the typology was created for that reason.

Several typologies, such as the Belgian typologies, the Italian typology for the National strategic plan, and the Finnish urban-rural classification are used for identifying territories that are lagging behind or placed in a disadvantaged position, and for allocating financial resources and rural development funding. For instance, the Finnish typology has been used to distribute development funds within the framework of LEADER as well as for providing financial aid to grocery stores in sparsely populated rural areas.

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Some typologies have a more specific thematic focus and thus also are mainly used to support policy actions within a specific area. For example, the French Rural typology based on services/levels of centrality is used to support policy actions relating to e.g., accessibility to services and the optimization of public service locations. In many cases, the typologies have been initiated by national level authorities, primarily to support policymaking at the national level. In some cases, the typologies are also used at other territorial levels. For example, the French typology of rural areas is primarily used for national policy design, and identifying territories in need of specific interventions, while also helping policymakers at the regional and local levels to better understand changes and trends affecting rural areas and that have implications for spatial planning.

Analytical purposes

There are certain distinctions that can be made concerning the exact role that the different typologies serve when used for analytical purposes. Some of the typologies have been developed for territorial analysis in the broader sense, while in other cases the analytical purpose is more specifically defined. For example, the Estonian settlement classification was developed for analytical purposes more generally, and as a basis for the Population and Housing Census which makes use of this classification. Another example is the Danish Municipality groups typology which was produced for enabling further analysis of various phenomena, considering the urban-rural dimension.

Examples of typologies of which the purpose is more explicitly defined include those of Germany, such as the Thünen Typology of rural areas which was developed for monitoring living conditions in rural areas. Scotland's typology for Sparsely Populated Areas was developed as a means of studying demographic change and forecasts of future population levels and structures in remote areas. Several of the typologies are widely used as an analytical tool to which other data can be incorporated. For instance, while the Finnish urban-rural classification has been widely used in connection to policies and strategies at the national, regional, and municipal level, it has also been widely used as an analytical framework in research for analysing different spatial phenomena. The possibility of incorporating other spatial datasets to the grid-based typology classes meant it has been used in various studies related to aspects such as health and wellbeing, population ageing, urbanisation, carbon emissions related to urban structure, household consumption and car use (Saastamoinen et al., 2022).

Grasping rural diversity

A common characteristic of most of the typologies examined in this section is that they have been developed to provide a better understanding of territorial differences and to better grasp rural diversity. This is based on the notion that rural areas are heterogeneous in nature. In some cases, this has meant going from more aggregated territorial scales to more fine-grained typologies that better capture local differences and characteristics. For example, in Estonia, different territories were historically divided according to administrative units, but since a recent administrative reform this approach was no longer regarded as sufficient, and a new typology was developed using grid-based data as one of the core datasets. In Finland, a grid-based urban-rural classification was developed to replace a former municipality-based classification of urban and rural areas, which was deemed to be too general as many municipalities had grown so large in size due to municipal mergers.

In an attempt to better grasp rural diversity, the purpose of many typologies has been to identify different sub-categories of rural areas. There are several examples where this has been done by adding new dimensions and indicators to previous typologies, to better capture this diversity. For example, the Slovakian Rurality index, using a variety of different data and multivariate techniques, was developed to provide a more sophisticated picture of the contemporary nature of rural communities which is not reflected in typologies that are solely based on population density. The French urban-rural zoning is another example of a typology which was developed in response to the French government's call for a new rural classification as part of the rural agenda in 2019, where the objectives was to identify sub-categories of rural areas based on functional criteria.

Actors involved

In many cases key initiators of the national typologies have been the central government and ministries who are responsible for rural and territorial development issues in the different countries. This is in line with the notion that the typologies have in many cases been developed for supporting policymaking and planning at the national level. In some cases, typologies have been developed as part of a specific national policy or programme. For instance, the French urban-rural zoning was development in connection to the French government's call for a new rural classification as part of the rural agenda in 2019. The Spanish typology was developed to provide new delimitations and classifications of rural areas in connection to the general law of sustainable development of the rural environment. The new urban-rural classification of Albanian population was also initiated as part a new law on territorial planning and development related to the administrative planning reform initiated in 2009. In several of the regional typologies, such as the Belgian and the Scottish examples, regional authorities responsible for rural and territorial development issues have often been centrally involved. In some cases, there has also been collaboration between different governance levels, such as in the Dutch territorial typology of shrinking and anticipation regions,

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which was developed by the Ministry of Internal Affairs, in close collaboration with provincial governments and research partners.

Another category of typologies are those that have been initiated and developed by the National Statistics Institutes (NSIs) of the different countries. In several examples, the NSIs are also responsible for maintaining and updating, or making new version of the typologies. For instance, the Estonian settlement classification was developed by Statistics Estonia for analytical purposes and as a basis for the Estonian Population and Housing Census, while the Irish Central Statistics Office developed a typology for a specific study examining urban and rural life in Ireland. The Austrian urban-rural typology was developed by Statistics Austria for statistical purposes and to complement existing international typologies. Similarly, the Danish municipality grouping was initiated and produced by Statistics Denmark to allow for various analysis on territorial issues from both an urban and rural perspective. In France, the National Statistics Institute (INSEE) has been centrally involved in several of the French typologies. The Dutch typology of municipalities based on degree of urbanization and geographical location is an example of a typology, was developed by the Dutch National Statistical Institute (CBS), in collaboration with other research institutes. When a typology has been initiated by the central government, it is often the case that the NSIs have been centrally involved in the development of the typology as part of the role as official entities for producing, harmonising and dissemination statistics in the different countries, and in some cases in conducting analysis to support national policymaking and planning.

A distinct category of typologies is those which were developed by research institutes and other public institutions, often specialising in regional development issues. The Finnish urban-rural classification is an example of a typology that was mainly developed by the Finnish Environment Institute (SYKE), commissioned by the Ministry of Economic Affairs and Employment and Ministry of Agriculture and Forestry. In Sweden, the urban-rural classification has been developed by the Swedish Agency for Growth Policy Analysis (Tillväxtanalys), while the Swedish municipality grouping has been created by the Swedish Association of local authorities and Regions (SKR), which has a long history of making municipality grouping, spanning back to the 1980s. In Germany, three of the typologies included in this analysis were developed by the Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR), while another one was developed by the Thünen Institute of Rural studies. A further example is that of Scotland's Sparsely Populated Areas classification which was initiated and developed by the James Hutton Institute under the Scottish Government Strategic Research Programme (2016–2022). There are a few examples of typologies that have been development by researchers at universities as part of different research projects, such as the Croatian Typology of rural and urbanized settlements, the Slovakian Rurality index, and some of the Polish typologies.

Regardless of who initiated and developed the typologies, a common characteristic of many of the examples is some form of steering committee or expert group involved in overseeing the development work, or being consulted at different stages. These steering groups have often included experts from different fields of policy and science and other actors with expertise in rural and territorial development. For example, the Norwegian typology was initiated by the Ministry of Local Government and Regional Development (KDD) and developed by Statistics Norway, but there were also several other institutions and agencies that were involved as a reference group. Similarly, the development of the Finnish typology was also supported by a steering group, including members with expertise in rural and urban development issues and experts from different universities and research institutes.

4.4 Assessment of the typologies

The focus in this section is on the main strengths and weaknesses or limitations of the different national and regional typologies. The assessment of typologies carried out here is based on various source materials, including formal evaluations or assessments where available. There are other examples where no such public evaluations exist, but where partners from the GRANULAR consortium have been able to provide some reflections on some of the main strengths and weaknesses of the typologies. In addition, several typologies are examined in this section for which an assessment of strengths and weaknesses of these typologies could not be made at this stage. In some cases, the perspectives of different user groups have not been made publicly available, and there are also some typologies which are so recent that it is not yet feasible to fully assess the typologies. Thus, this section does not provide a fully comprehensive assessment of all the different national and regional typologies, rather a general overview of some of the main strengths and weaknesses that can be observed in the different national and regional typologies identified through the typology scoping. A more detailed portrayal of the different typologies, their strengths, and weaknesses, as well as information about if any formal evaluations, or updates have been made can found in Annex Table 4.

One of the main strengths of many of these national and regional typologies is that they contribute to a better understanding of rural areas and rural diversity in their respective countries compared to previously existing territorial classifications. This is often related to the notion that the newer typologies are often more sophisticated than previous ones. In many cases this means that new types of data and dimensions have been added to former typologies to

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provide new insights and perspectives, while in other examples, more spatially detailed data have been incorporated to make the typologies more granular. As a result, many of these typologies which are typically used as tools for analysis and to support policy and planning help shed light on different place-specific challenges and on the need for differentiated policy attention in different territorial contexts.

Many of the typologies examined here only focus on one main dimension of rurality and do thus not fully characterize rural diversity. For instance, the New urban-rural classification of the Albanian population only relies on demographic data, while the Norwegian Centrality index only focuses on a lack of services, meaning that there are many other aspects such as land use, attractiveness, etc. that are not considered in these classifications. At the same time, it should be acknowledged that for some typologies the purpose has deliberately been to focus on specific aspects and in these cases the typologies can be highly useful for providing a deeper outlook on these specific issues. On the other hand, there are examples (e.g., the French typology of rural areas) which rely on several approaches for identifying various dimensions simultaneously, and thus contributes to a wider and more comprehensive understanding of various and interconnected policy challenges.

These different typologies are diverse in many aspects, including the variety and types of data that they use. Some typologies rely on relatively few variables, which can be an advantage from the perspective of having an easily comprehensible and replicable methodology which is straightforward to update. For instance, the Danish Municipality grouping is only based on three variables, and it is regarded as relatively easy to calculate and update. Similarly, the Norwegian Centrality index is also viewed as straightforward to update as the data comes from Statistics Norway which developed the typology. In general, there is a clear advantage to have recurring and reliable data sources, which can help ensure better continuity when it comes to updating the typologies. While using a variety of indicators can help to better grasp different important dimensions of rural development, the selection of indicators should be made with close consideration to the key aspects to be measured. For example, one of the main critiques of the Thünen Typology of rural areas is that the typology has been of limited use because the indicators included in the typology collinear with the indicators that the typology aims to analyse and explain.

A further observation that can be drawn from the examples examined is that when seeking to develop more complex typologies it can be advantageous to build them in two (or more) stages so that the urban-rural demarcation can be used separately. For instance, the Swedish urban-rural classification is built on DEGURBA and is at the first level comparable to DEGURBA, making international comparisons possible. In a second step, accessibility is added to the classification which makes it possible to characterize rural areas based on their remoteness.

Deciding on the territorial scale of the typology is also an important consideration. One of strengths in many of the typologies is that they rely on data at the sub-municipal level, allowing greater detail in characterization. For example, the Finnish typology uses fine grained data, and it allows much more spatially detailed analysis than previous administratively based territorial classifications. One of the advantages of having a typology constructed on data which is not based on administrative borders is that it enables better representation of the urban rural continuum. This Finnish typology is best suited for examining larger areas, and for identifying different development trends especially at the national and regional level, but the boundaries of the classes have been generalised so that the typology is less suitable for analyses at more local levels. It is thus important to acknowledge these types of limitations regarding changing the scale of analysis and to consider at which territorial levels the classification is best suited.

5. Lessons learned

Based on the different typologies examined in this report, it should be stressed that typologies are always simplifications of reality, and no territorial classification can fully grasp the complexity that they seek to capture. When developing a typology, it is important to acknowledge certain key aspects. Firstly, it is important to consider exactly what one wants to measure and to develop and use the typology for that specific purpose. For instance, whether the purpose is to separate urban from rural, characterise different types of rural areas from a specific perspective, or measure access to jobs or services, are important considerations to take into account when deciding on aspects such as the approach, territorial level, and data and variables to be used in the typology. From a user perspective, it is also important to communicate about what the typology is primarily intended and its possible limitations. Another aspect to consider is to reflect on how rurality and its different classes are defined, as typologies might be used in ways that further re-enforce certain stereotypes. For examples, if a typology only focuses on a specific issue, such as centrality, there is a risk of overlooking other qualities of rural areas that may be highly relevant.

From the perspective of developing an EU-wide multi-criteria typology for the GRANULAR project to better grasp and characterise rural diversity, the starting point would be to relate this typology to the DEGURBA classification, which is the most established typology at the European level. Based on the typologies examined in this report, there are also arguments for using a relatively simple and easily understood method. If the ambition is to create a typology

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which builds on an index or a more complex model, it is preferable to apply statistical methods rather than determining thresholds based on ad hoc approach to creating the desired classes. An aim of a typology should be to ensure it remains relevant, for which there is a need for it to be updated regularly. From this perspective, it is advantageous that the data sources are freely and easily available.

The spatial level of the typology should also be clearly stated. Key considerations include what advantages there may be of presenting it at the level of administrative units (e.g., LAU), even if some of the data would be more fine-grained. For example, these units are well-known and established, which means that the results may also be easier to communicate, and that, often, there are other statistical data produced at this level which could be incorporated into the typology. From the perspective of providing a more nuanced understanding of rural diversity, there are arguments for presenting the typology at a more fine-grained grid-level, however a potential limitation is that there may be less available data at this detailed level that could be used in an EU-wide typology.

In the development of any typology, it is important to strive to be as transparent and impartial as possible. Many of the typologies examined in this report have been developed with the support of different expert groups, which has proved to be valuable for getting different perspective from a research, policy, and practice point-of-view, to be considered in the typology development. From this perspective, it is important that the GRANULAR typology is anchored with partners in project consortium, including from the perspective of the Living Labs and Replication Labs.

All considered, territorial typologies rely on a range of assumptions, approaches and methods that can be discussed and even disputed on different grounds. There is no single method or approach that makes a given typology more "right" or "accurate" than others. The collection of rural typologies presented here illustrate how the relevance of the different typologies increases as alignment between the pre-defined research or policy goals and the actual methods and governance processes that are applied is maximised. Alignment and responsiveness to specific research needs or policy demands is what makes typologies more genuinely "useful" for decision making. To a large extent, the analytical steps and governance processes involved in the production of the typologies cannot be singled-out from their outcome, namely the resulting typology. The different strategic goals, methodological choices, and steering processes in place lead to different outcomes in terms of how rural areas are delimited and classified, more than the actual manifestation of different ruralities. This is what makes the selection of these processes strategically important. Different approaches will lead to different outcomes and depending on the expected use of the typology in a policy setting, this can have very relevant practical implications for rural communities.

6. Way forward towards the GRANULAR typology

The GRANULAR project aims at capturing the diversity of rural areas in terms of their structural and dynamic characteristics. The goal is to depict and characterise the different ruralities that co-exist in Europe today, contributing to more targeted rural policies under the Long-Term Vision for Rural Areas (LTVRA). The emphasis is hence on the classification challenge, trying to work pragmatically and incrementally in relation to the delimitation aspect.

Against this framework, those typologies that are aligned, harmonised or built on the EU-wide DEGURBA can provide valuable inspiration for the GRANULAR typology to be developed in Task 4.6. The DEGURBA classification will be used as the starting point for demarcating rural from urban areas, and the project focus will be on the areas that are defined as rural according to this classification. One of the arguments for using DEGURBA is that it is a well-established classification that is used worldwide. Hence, it would not be sensible nor useful to develop a competing approach for this purpose. Moreover, DEGURBA is flexible since it works both on grid (1 km²) and LAU level. While DEGURBA is most commonly presented in three classes, there is also a more detailed version that is presented in six classes (see Section 3.2).

Similarly, those typologies examined in this report that can be upscaled to a broader European level look especially relevant for our work. Scalability in this context means, that the approach should be feasible in terms of data availability and methodological feasibility[1]. At the same time, scalability also implies that the approach should be flexible enough to capture the diversity of aspects covered in the GRANULAR project. In particular, the future GRANULAR typology shall build on the definitions and conceptual framing developed in WP2, while some of the data and indicators made available by WP3 and WP4 will most likely be utilised.

While a number of decisions regarding the actual number of classes included in the typology and the method used to build it are still under discussion, the intention is to deliver a grid-based typology using the rural cluster types

[1] Some of the national and regional typologies examined here are based on data or methodologies that would be difficult or even impossible to collect or apply at the EU level.

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defined in the Refined degree of urbanisation in Europe, DEGURBA level 2 (mostly uninhabited, dispersed rural areas, villages, suburbs, towns and urban centres). Using this classification as a starting point, rural areas could be further characterised based on aspects such as population size and density, accessibility, and land use at grid level, among others. This classification would help provide a more nuanced picture and understanding of rural diversity across Europe. The typology could potentially also be scaled up to LAU level and then used for other further analysis, for instance including additional economic variables.

This scoping report is the first operational step towards the construction of such typology that will be developed in Task 4.6. The next step will be to take the learnings from this report and jointly in the consortium discuss the way forward. This will result in a detailed work plan where the analytical steps, data investigation, and feasibility will be considered. After discussing the method, spatial level, data, and other key considerations in the consortium, such work plan will be validated with all partners in Q4 2024. Following, the analytical steps towards the typology will begin. The GRANULAR typology will be presented in Q3 2026.

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Annex 1. Template for scoping of national and regional typologies

Nordregio

GRANULAR Task 4.6

Template for scoping of territorial typologies for delimiting rural areas

Background and purpose of this template
This template is part of the work carried out in GRANULAR Task 4.6. concerning a scoping of European territorial typologies for delimiting rural areas. In this template, we ask GRANULAR partners to fill in information about existing (national/local) territorial typologies from different European countries.

Please fill in the information below about any relevant territorial typologies from your specific country and send it to Task 4.6. leaders (mats.stjernberg@nordregio.org, gustaf.norlen@nordregio.org) by January 31 at the latest. In case there are several existing typologies in the specific country, please use separate documents for providing information about these typologies.

Typology name	
Country	
Name of the typology (in original language)	
Name of the typology (in English)	
Description of typology (technical aspects)	
Please provide a brief description of the typology	
At what spatial level is the typology (e.g., EU, national, region)	
At what geographical level is the typology and the data that it is built on? (e.g., grid, LAU, NUTS3, or other geographies such as districts, postal code, etc.,)	
What data and variables are used in the typology? (Please list data according to category: e.g., demography, land-use, economy, accessibility, etc.,)	
From what year is the typology? From what year/years are the data sources?	
How many categories (territorial classes) are there in the typology? Which classes are there? (Please provide a short description)	
How is the typology constructed? (Methodology behind the typology, e.g., how are the different variables combined, what steps have been taken, etc.?)	
Background and policy context	
Actors involved: - Who is behind the typology? Who initiated it?	

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- Who has been responsible for the development and operating of the typology? - Other actors involved?	
What is the purpose of the typology?	
What is the underlying definition of rurality that forms the basis for the typology?	
How is the typology used? (e.g., for analysis, as a tool for identifying regions that need support, etc.?)	
Assessment of the typology	
Has the typology been assessed/evaluated either internally or externally? Are there any other assessments or critiques concerning the typology e.g., in academic literature? If so, what are the main strengths and weaknesses identified?	
Have there been recent revisions or planned revisions to the typology? If so, why?	
Other information	
Please provide any relevant links or documents relating to the typology	
If known, please provide the contact details to relevant contact persons	
Any other relevant information	
Feel free to provide any other information that may be relevant	

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Annex 2. Technical aspects of the national and regional typologies

Country	Name of typology	Approach	Definition of rurality and construction	Data and variables	Number and names of classes
Albania (National)	New urban-rural classification of Albanian population	Combined (morphological, landscape)	Demographic approach to the rural, solely based on population density: more than 50 % of the population lives in rural grid cells Thinly populated areas (rural areas): more than 50 % of the population lives in rural grid cells. Identification of rural/urban cells: • Grid cells of 1 km² inhabited by at least 300 people (population density); • Grouped grid cells identified as above comprised by at least 5,000 people.	Population density	3 classes: 1. Densely-populated areas 2. Intermediate density areas 3. Thinly populated areas (rural areas)
Albania (National)	Typology of communes and municipalities	Combined (administrative)	Urban centres defined from Administrative documents Urban areas based on previous typology and also indicators: • continuity of built up area • population density • urban dynamics (pop increase) • functional criterion (commuting) • structural criterion (economic activity) • educated population (distinction within suburban types) Non-urban dominance of agriculture or of a mixed service and industrial structure • Non-agricultural rural local unit, distinction between three types: (i) mining and energy have a relatively dominant position; (ii) mixed economy; and (iii) tourism is important. • Agricultural local units are separated into two groups, distinguished first by a category with a more or less exclusive presence of this sector and another by different type of agriculture (plain vs. mountain).	Functional/structural approach to the rural, based on resources and main economical orientation and not on the rural dwellers. Population density, land cover/land use, commuting, other demographic, Buildt environment, housing, Economic structure	15 classes: URBAN 1. Capital city 2. Centres with national importance 3. Regional centres of agglomeration 4. Local centres 5. Suburban Metropolitan with high status 6. Suburban Metropolitan with low status 7. Suburban with low status 8. Suburban with high status RURAL 9. Non-urban communes with mining/energy orientation 10. Serives and industrial communes 11. Non-urban communes with touristic orientation 12. Local mixed lowland agricultural units 13. Local mixed mountain agricultural units 14. Local lowland agricultural units 15. Local mountain agricultural units

Albania (National)	Commuting from home to work	morphological, locational)	Mobility approach to the rural, based on commuting patterns. No clear mention of ”rural” per se.	Population size, Access to jobs/services, commuting (X number of commuters), Socio-economic	6 classes: 1. Big/peripheral 2. Small/peripheral 3. Medium/semi-central 4. Small/central (Prey) 5. Medium/central (semi predators) 6. Small/central (predators)
Austria (National)	Urban-Rural-Typology	Combined (morphological, locational)	The typology separates territories according to three main types: urban centres, regional centres, rural areas. It is based on a raster map of population density. Large and dense clusters are defined as core urban centres, then municipalities are classified based on this raster. For the three rural classes (central, intermediary, peripheral) accessibility to an urban or regional centre is considered.	Demography: population potential per km² (residents + 0.14 * second homes + commuters); accessibility via motorized individual transport; education, health care; labour and commuting; number of tourism nights spent	11 classes (3 urban classes: large, medium, small; 2 regional centre classes: central, intermediary; 3 peri-urban classes (rural areas surrounding centres): central, intermediary, peripheral; 3 rural classes: central, intermediary, peripheral) Note: the design document lists the regional centres as ”rural”.
Belgium (Regional: Wallonia)	Degree of rurality of Walloon municipalities	Combined (morphological, landscape)	Municipalities (LAU) are classified based on the percentage of their land surface which is made up of rural territories (defined according to population density and land cover). In “rural” municipalities this percentage is over 85%, in “semi-rural” 60-85%, and in “non-rural” under 60%.	Population density, land cover/land use at the level of “Statistical sectors” (Belgian sub-division of municipalities) and grid level (land use)	3 main classes (rural, semi-rural, non-rural), which are synthesised from 7 classes.
Belgium (Regional: Wallonia)	Indicator of rurality	Combined (morphological, landscape)	Municipalities (LAU) are classified based on the percentage of their land surface which is made up of rural territories (defined according to population density and land cover). In “rural” municipalities this percentage is over 85%, in “semi-rural” 60-85%, and in “non-rural” under 60%.	Population density, land cover/land use at the level of “Statistical sectors” (Belgian sub-division of municipalities) and a grid level land use map.	3 classes (rural, semi-rural, non-rural)
Belgium (Regional: Flanders)	VVSG selection	Combined (morphological, landscape, economic)	Purpose to identify rural municipalities (LAU) with limited resources based on various economic indicators. Municipalities are ordered according to various criteria, and the ones scoring the lowest on a minimum of two criteria are selected.	Population size and density, land cover, economic structure	2 classes (rural areas with limited resources, others)

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Belgium Regional (Flanders)	Typology for 2nd Flemish rural development programme	Combined (morphological, landscape)	For distinguishing between urban and rural areas. Rural areas (countryside) are defined as those with a population of ≤300 per km² and a built-up area of ≤15%.	Data on population and land use at the sub-municipal (plot) level.	3 classes (urban areas, non-rural countryside, countryside)
Croatia (National)	Typology of rural and urbanized settlements in Croatia	Combined (morphological, landscape, economic)	Typology for characterising different types of rural areas, developed at a very local administrative boundary level (statistical settlements), and following a place-based approach (Lukić 2012). Based on a structural approach to the rural, based on natural resources and main economical orientation. A hierarchical cluster analysis was used to identify the main clusters of rural areas.	Population density, economic activity, land use, social structure	6 classes (1) Dynamic, structurally stronger rural and urbanised settlements, 2) Accessible, commuting-dependent rural and urbanised settlements, 3) Market-oriented agricultural rural and urbanised settlements, 4) Economically diversified, mainly tourist rural and urbanised settlements, 5) Rural and urbanised settlements of extensive agriculture and weaker demographic structure, 6) Rural periphery)
Czech Republic (National)	Typology of non-metropolitan areas (Rural development concept 2021 – 2027)	Combined (morphological, economic)	Rural areas are territorial districts and municipalities that are not centers. Rural areas are those municipalities that do not have a more important position in the residential system and do not fulfill central functions, or only to a small extent.	The typology is based on a quantitative analysis of 32 mutually independent socioeconomic variables. Data on demography, infrastructure (services, utilities, transportation), and economy.	5 classes (1. Developed type, 2. Socially disadvantaged type, 3. Locationally and socially disadvantaged type, 4. Locationally disadvantaged type, 5. Undefined type)
Denmark (National)	Municipality groups	Combined (Morphological, locational)	The typology is built on two main dimensions, population size in urban settlements and accessibility to jobs (for each municipality). In this typology, rurality is very much tied to lack of access to jobs and services. It is rather defined by what it lacks rather than what it has. There are two criteria: number of inhabitants in the municipalities biggest settlement and accessibility to jobs/service	(i) Population by settlement (ii) Data over employed (day and night population) at sub-municipal level) (iii) road network with speeds (to calculate accessibility)	5 classes (Capital city region, Bigger city municipality, Urban centers in rural regions, Rural municipality, Remote rural municipality)
Estonia (National)	Settlement classification of Estonia	Morphological	The typology is based on overlaying Estonia with a population grid. These grid cells form clusters, which are divided based on population size and density according to the EHAK classification where Estonia is divided	Population data at grid (500 x 500 m) level	3 classes (urban, small urban, rural)

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			into 15 counties, 79 municipalities, and 4,692 settlement units. Three classes are formed based on population density (urban: ≥ 1000 people/km², small urban: 201–999 people/km², Rural: ≤ 200 people/km²).		
Finland (National)	Urban-rural classification	Combined (morphological, locational, landscape)	A classification of Finnish areas independent of municipality boundaries using grid level data. Rural areas are classified into four classes, one at a time. The basic methodology is similar for the different classes, but each class has its own criteria and variables. The classification of rural areas is based on the focal analysis method where areas are counted around the grid cells according to a 5 km radius.	Various register-based data at grid level (250 x 250 metres). Data sources include: population, labour force, commuting, buildings, road network data from the Digiroad database and Corine land use data.	7 classes (inner urban area, outer urban area, peri-urban area, local centres in rural areas, rural areas close to urban areas, rural heartland areas, sparsely populated rural areas.
France (National)	Typology of French rural areas (DATAR-INRAE)	Combined (morphological, locational, economic, landscape)	A set of three typologies at LAU level, typologies for: 1) French rural areas, 2) Employment and economic activities, 3) Landscape). Indicators are grouped in several thematic fields. The statistical processing is the same for the three typologies (using multiple correspondence analysis (MCA) and hierarchical clustering (HCA).	A wide range of data, e.g., population size, density, and other demographic and socio-economic variables; access to services and employment; labour market and economic structure; land use and topography.	"Typology for French rural areas" has 4 classes (Rural near to cities, coasts, and urbanized valleys; Agricultural and industrial rural areas; Rural areas with ageing and very low-density; Urban units with over 10,000 jobs). “Typology for employment and economic activites" has 4 classes, and “Landscape typology has 10 classes.
France (National)	Rural typology based on services/levels of centrality (ANCT-INRAE)	Economic	Municipalities (LAU) are classified and hierarchised according to their level of centrality based on the diversity of facilities and services. Three methods have been tested for identifying centralities: 1) segmentation by binary decision tree, 2) local spatial autocorrelations, 3) automated classification, combining dynamic and hierarchical clustering. The third method resulted in the most appropriate outputs.	Data on a variety of public and private services.	5 classes (major centres, structuring centres, intermediate centres, local centres, non-centres)
France (National)	Urban-rural zoning	Combined (morphological, locational)	Until 2020, INSEE defined rural areas in France as municipalities not belonging to an urban area (based on a morphological built-up area). In this typology, rural areas are defined as sparsely populated municipalities based on population density (at grid level) along with	Population size and density (1 km grid), commuting (matrix) and employment (LAU).	6 classes (4 rural classes: Autonomous rural with very low density; Autonomous rural with low density; Rural under weak influence of an urban centre; Rural under strong influence of an urban centre; 2 urban classes: dense urban, urban with medium density)

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			functional criteria for distinguishing between different rural categories (regarding their degree of dependence on employment centres, based on commuting statistics).		
France (National)	Life basins	Combined (morphological, locational)	Life basins are the smallest territories where inhabitants have access to common services. Life basins are built according to two main steps. 1) A pole of services is defined as a LAU with a certain number of different service types. 2) The area of influence of this pole is defied by selecting the closest LAUs according to travel time by road.	Data on services and proximity.	In the latest version (2022) there were 1,707 life basins in France. In 2012, there were 1,666 life basins, 1,287 of which were defined as rural (low population densities).
France (National)	Typology of French rural areas (ANCT Aheld inCADIE)	Combined (morphological, locational, economic)	A set of typologies and sub-typologies at LAU level published in 2023 based on previous typologies by DATAR. They include new aspects such as access to broadband, housing, and urban sprawl. These include intermediary typologies (providing an outlook on e.g., demography, housing, and employment), structural ones (aggregated from the intermediary sub-typologies) and systemic ones (describing flows of people, goods, and resources).	The different typologies rely on different variables relating to demographic and socio-economic characteristics, economy and employment, accessibility and centrality, and housing.	The intermediary typologies include 6 different sub-typologies, structural typologies include 5 different sub-typologies, and systemic typologies include 8 different sub-typologies, all consisting of several different classes.
Germany (National)	Population-structure-based Counties	Morphological	The typology builds solely on population density data. There are two rural categories – the rural is defined as sparsely populated.	Population density	4 classes (Independent cities, urban county, rural county with some urbanization tendency, sparsely populated rural counties.)
Germany (National)	Urban and municipality types in Germany	Combined approach (administrative, morphological locational)	The typology categorizes the LAUs according to population size, with different criteria based on the population of LAU or groups of LAU that together constitute a functional area.	In a first step functional areas are demarcated based on data on workplace centrality, commuting patterns, accessibility. Then population size is used to characterize these functional areas	4 classes (large city, mid-sized town, small town, rural municipality)
Gernamy (National)	Urban and Rural Areas	Combined approach (administrative, morphological	Based on the same data as the typology above but this typology tries to identify functional areas, based on day population, commuting patterns, etc.	See above	No clasess, rather a division into functional areas

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		locational, economical)			
Germany (National)	Thünen Typology of rural areas	Combined (morphological, landscape)	Combines the indicator "degree of rurality", which has three categories running from [1] very rural, [2] predominantly rural, [3] not rural, with the indicator "socio-economic situation", which has two categories [1] good socio-economic situation, [2] not so good socio-economic situation. The economic situation is not assessed for non-rural areas. Principal component analysis to construct an index of rurality; three categories built on the basis of frequency distribution.	The typology consists of two parts. (i) Degree of rurality, based on population density, proportion of agricultural and forestry land and accessibility to large centres. (ii) the second part of the typology describes the socio-economic situation, e.g. unemployment rate, average wages, youth migration , vacant dwellings, life expectancy etc.	5 (i. Very rural, not so good scocio-economic situation, ii. Very rural, good socio-economic situation, iii. Rather rural, good socio-economic situation, iv. Rather rurar, not so good socio economic situation, v. Not rural)
Greece	Panagiotopoulos & Kaliampakos (2018). Accessibility and spatial inequalities in Greece	Combined (Morphological, locational)	The classification of settlements into service centres categories has been per-formed in three steps – identifying urban areas, examining correlations between population size and services, and clustering by population size. Urban areas have been partially excluded from the index.	-Population -Settlement size -Acces to health care -Access to education	5 classes (1. Highly accessible, 2. Acessible, 3. Moderate Accesible, 4. Remote, 5. Very remote)
Hungary	Perger et al. (2016) Delimitation and classification of rural areas	Combined (Morphological, economical)	The typology has two steps: 1. Demarcating urban from rural 2. Characterising rural areas. In the first step criteria on population and population density are applied to LAU areas. In the second step methods such as factor analysis are used on aspects such as ennironmental condition, social capacity, state of the economy Role of agriculture	- Population - Population density - economy - share of agriculture - environmental conditions	9 classes (1. Urban districts, 2. Lagging-stagnant region, non agrar-dependant, 3. Laggin-stagnant region, non agrar dependent, with natural resources, 4. Agrar-dependent lagging-stagnant region, 5. Agrar-dependent lagging-stagnant region with natural resources, 6. Developing non agrar-dependent region, 7. Developing non agrar-dependent region with natural resources, 8. Agrar-dependent developing region. 9. Agrar-dependent developing region with natural resources)
Ireland (National)	Typology for the Urban and Rural Life in Ireland 2019 study	Combined (morphological, locational)	In this six-way typology rural areas are sub-divided based on the proportion of residents working in urban areas. Rural areas have a population of less than 1,500 persons. Rural areas are further divided into three sub-categories, based on their dependence on	Various data applied to Census Small Areas (level 4), including: censuses, EU SILC, labour force survey, distance to services, dwelling completions, residential	6 classes (A) Urban areas: 1) Cities, 2) Satellite urban towns, 3) Independent urban towns; B) Rural areas: 4) Rural areas with high urban influence, 5) Rural areas with moderate urban influence, 6) Highly rural/remote areas)

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			urban areas in terms of employment. The allocation is based on a weighted percentage of rural resident employed in three standard categories of urban areas.	property prices, geographical profiles of income. Classification based on population and employment data.	
Italy (National)	Typology National Strategic Plan	Combined (morphological, locational)	The typology combines a criteria with population density on LAU level with altitude and share of employment in the agricultural sector to characterize different types of rural areas.	Data on LAU level including data on population, economic sectors, altitude	4 classes (i. Urban poles, ii. Rural areas specialized in intensive agriculture, iii. Intermediate rural areas, iv Rural areas with development problems
Italy (National)	Inner Areas	Locational	This typology focuses very much on access to services, such as secondary schools, hospitals. The accessibility is calculated as travel times to municipalities that contains the defined services.	The main data is on different service points plus data over the road network	3 classes (i. Intermediate areas, ii. Remote areas, iii. Ultra-remote areas)
Latvia (National)	Spatial Structure of Latvia	Combined (administrative, morphological, locational, economic)	This typology is created for long-term development of Latvia and mean to be used for development of national policy	Data on population, land cover/ land use and economic structure	5 classes 1.Rural Areas near Baltic sea coast, 2. Rural Areas near Eastern border, 3. Rural Areas of Riga metropolis areal, 4. Rural Areas with space of natural protection, landscape and cultural and historical territories, 5. Rural development spaces
Lithuania (National)	Classification used in the Population of Lithuania (2022) report	Combined (morphological, economic)	Rural areas are classified as those other than urban areas. Urban areas are defined as densely built-up residential areas with a population over 3,000, of whom more than two-thirds are involved in industry, business, manufacturing, and social infrastructure.	Data on population and labour and employment	2 classes (urban and rural areas)
Malta (National)	Strategic Plan for Environment and Development	Combined (morphological, landscape, economic)	Typology of communes and municipalities reflecting the physical characteristics and economic functions of each area. Relies on a functional/structural approach to the rural, based on natural resources and main economic orientation.	Data on population, buildings and built-up area, land-use	8 classes (A) Urban classes: Principal urban area, Regional urban settlements, Small urban settlements, B) Rural classes: Strategic areas for recreation, Areas of high landscape protection, Areas of landscape protection, C) Coastal: Predominantly urban coast, Predominantly rural coast)
Netherlands (National)	Typology of Dutch municipalities based on	Combined (morphological, locational,	The typology categorises Dutch municipalities based on their degree of urbanization and spatial positioning in relation to major urban areas.	A broad range of micro-data at grid level are used (e.g., population size and other demographic variables).	7 classes (larger cities, other cities, non-urban, urban intermediary, non-urban intermediary, urban periphery, non-urban periphery)

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	degree of urbanization and geographical location				
Netherlands (National)	Dutch territorial typology of shrinking and anticipation regions	Combined (morphological, economic)	Typology of shrinking regions, primarily based on different demographic and socio-economic data as well as demographic prognosis.	Population size, other demographic and socio-economic data.	2 classes (shrinking regions, anticipating regions).
Netherlands (National)	Dutch typology based on differentiating wellbeing performances	Combined (morphological, administrative, economic)	Dutch municipalities are classified based on three dimensions of wellbeing ('wellbeing here and now', 'wellbeing from elsewhere', 'wellbeing later') and eight wellbeing components (subjective wellbeing, health, consumption and income, education and training, spatial cohesion and equality, economic capital, natural capital, and social capital).	A wide range of wellbeing datasets across three dimensions and eight different components of wellbeing.	10 classes (under two categories: 1) Randstad urban conglomerate, 2) low-density urban areas. Category 1 includes five classes: first, second and third order suburban areas, big cities, rural areas. Category 2 also includes five classes: first and second order residential areas, mid-sized urban centres, and first and second order rural areas).
Netherlands (National)	Dutch Agricultural development zoning	Landscape	Different typologies at regional level, but with fluid boundaries. They rely on data concerning land use intensity and other agricultural features relating to agri-environmental problems and related policy challenges.	Land use and other agricultural features.	Different categorisation attempts have been made. E.g., the zoning of agricultural areas (*Zonering agrarisch gebied*) includes three main classes (intensive land-based agriculture, extensive land-based agriculture, intensive non-land-based agriculture).
Norway (National)	Centrality index	Combined (morphological, locational, economical)	The typology builds on the concept of centrality, measured as access to jobs and services. The typology is constructed for being used at LAU level, but uses data on coordinate level for population and employment by sector. Road network data with speeds is used to make the accessibility analysis. Rurality is defined as lack of centrality	The typology uses i. Population on coordinate level (a central point is calculated for every "grunnkrets (a level below LAU") ii. employment per sector (100 sectors) on coordinate level (iiii). Road network with speeds – to make accessibility calculations	Six classes (1. Most central municipalities; 2. Second most central municipalities; 3. Medium central municipalities 1; 4. Medium central municipalities 2; 5. Second least central municipalities. 6. Least central municipalities)

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Poland (National)	Typology of rural areas in Poland based on socio-economic development and location	Combined (morphological, locational, economic)	The economic aspect covers the issue of the level of socio-economic development, while the geographical aspect - the issue of location and its impact on development. Rurality is defined by the Central Statistical Office - an area located outside the administrative borders of cities. In practice, these are rural communes and urban-rural communes, excluding cities . Typology construction: Stage I. Selection of indicators and normalization of indicators - based on the literature on the subject and the availability of data from the Central Statistical Office and on statistical analysis. Stage II. Synthetic indicators were used to determine the levels of demographic conditions, social and technical infrastructure, financial condition, labor market and entrepreneurship, natural and non-natural conditions of location rent. Stage III.Typology of .Cluster analysis was used to determine the types of rural areas, using previously determined synthetic indicators	-Population density -Access to jobs/services -Land cover/ land use -Socio-economic -Other demographic -Services	Six classes of rural areas: I – with a high level of development and location rent II - with a quite high and medium level of development and an average level of location rent III - with an average level of development and a very high level of non-natural conditions of location rent IV - with an average level of development and a very high level of natural conditions of location rent V – with an average level of development and a low level of location rent VI - with a fairly low level of development and location rent
Poland (Regional : West Pomeranian Voivoedeship)	Functional typology of rural areas in the West Pomeranian Voivodeship	Combined (morphological, economic)	The typology considers the socio-economic development and economic functions of the areas Definition of the Central Statistical Office - an area located outside the administrative borders of cities. In practice, these are rural communes and urban-rural communes, excluding cities . Stage I. Selection of indicators and normalization of indicators - based on the literature on the subject and the availability of data from the Central Statistical Office and on statistical analysis.	-Population density -Access to jobs/services -Socio-economic -Other demographic -Economic structure	Six classes of rural areas: Group I. well-developed functionally diversified rural areas Group II.well-developed rural areas dominated by the tourist function Group III.moderately developed rural areas with a predominance of agricultural function Group IV.moderately developed rural areas with a diversified structure Group V. poorly developed rural areas with a predominance of forest function Group VI.poorly developed rural areas without a dominant function

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			Stage II. Synthetic indicators were used to determine the levels of demographic conditions, social and technical infrastructure, financial condition, labor market and entrepreneurship, natural and non-natural conditions of location rent. Stage III.Typology of .Cluster analysis was used to determine the types of rural areas, using previously determined synthetic indicators		
Poland (National)	Typology of rural areas	Combined (locational, economic)	The typology is carried out under the Monitoring of Rural Areas long-term study and based on the components of the level of socio-economic development of rural areas in Poland. Definition of the Central Statistical Office - an area located outside the administrative borders of cities. In practice, these are rural communes and urban-rural communes, excluding cities . Stage I. Selection and normalization of indicators. Stage II. Basic synthetic measures - indicators were given weights (spatial accessibility, deagrarization, agricultural function, non-agricultural functions, local public finance, demography) Stage III. Typology based on the optimization method of a given clustering (Diday's dynamic clouds clustering)	-Commuting -Access to jobs/services -Socio-economic -Other demographic -Economic structure	Seven classes of rural areas: Type 1. Domination of traditional agriculture Type 2. Dominance of large-area agriculture Type 3. Predominance of non-agricultural function, intermediate Type 4. Multi-income fragmented agriculture Type 5. Multifunctional, sector balance Type 6. Urbanized, reduction of agricultural function Type 7. Highly urbanized
Poland (National)	Rural functional areas (two versions)	Economic	The typology is referring to functional types in the Polish Concept of Spatial Development and identifies two categories of rural areas: participating in development processes and requiring support for development processes. Rural areas include rural communes, rural areas of urban-rural communes with a city of more than 5,000 inhabitants, cities of less	-Access to jobs/services -Socio-economic -Buildt environment, housing -Economic structure	2 classes: 1. Rural areas participating in development processes 2. Rural areas not participating in development processes

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			than 5,000 inhabitants and urban-rural communes with cities of less than 5,000 inhabitants Stage I. Selection of territorial units meeting the criteria of rural areas. Stage II. Selection of diagnostic indicators. Stage III. Elimination of communes belonging to the functional areas of urban centers from the analyses Stage IV. Determination of the indicator: 1. analysis of changes in value; 2. calculation of the sum of partial values; 3. determining the rank of the indicator: 1 (above-average values of the phenomenon) or rank 0 (average or below-average values of the phenomenon); 4. synthesis.		
Poland (National)	Rural functional areas (two versions)	Combined (dynamic, locational, economic/ structural)	In the dynamic approach, rural areas participating in development and rural areas requiring support for development processes are identified, in the location approach - cities, functional urban areas, accessible rural areas and peripheral rural areas, and in the structural approach - rural areas with consumption functions, production functions and mixed functions. Rural areas include rural communes, rural areas of urban-rural communes with a city of more than 5,000 inhabitants, cities of less than 5,000 inhabitants and urban-rural communes with cities of less than 5,000 inhabitants Stage I. Dynamic approach - analysis of variability in two-year intervals in the period 2002-2012 of partial indicators of socio-economic development of communes Stage II.Analysis of the location of the commune and its communication accessibility to development cores on a regional,	-Access to jobs/services -Socio-economic -Buildt environment, housing -Economic structure	12 classes: 1) well-accessible rural areas with consumption functions, participating in development processes; 2) well-accessible rural areas with production functions, participating in development processes; 3) well-accessible rural areas with mixed functions, participating in development processes; 4) peripheral rural areas with consumption functions, participating in development processes; 5) peripheral rural areas with production functions, participating in development processes; 6) peripheral rural areas with mixed functions, participating in development processes; 7) well-accessible rural areas with production functions, requiring support for development processes; 8) well-accessible rural areas with consumption functions, requiring support for development processes; 9) well-accessible rural areas with mixed functions, requiring support for development processes; 10) peripheral rural areas with production functions, requiring support for development processes; 11) peripheral rural areas, with consumption functions, demanding support for development processes;

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			subregional and poviat scale (Urban Functional Areas and cities over 5,000 inhabitants were excluded from further analysis). Stage III.Division of rural areas into three functional categories: – areas with a predominance of consumption functions (services, tourism, housing, communication, nature conservation); – areas with a predominance of production functions (agriculture, forestry, industry); – areas with mixed functions (even share of consumption functions and production). Stage IV.Identification of rural functional areas.Spatial aggregation of communes was carried out using the moving reference field method		12) peripheral rural areas with mixed functions, requiring support for development processes.
Portugal (National)	Mainly rural occupied territory	morphological	Rurality is based on 2 key elements: • Inhabitants and population densities (classical elements). • Territorial planning (municipal plans) The methodological approach was based on the 2011 Census statistical section and subsection levels and it followed steps: 1- The first step focused on the analysis of morphological criteria on the basis of effective land use through population density (at the statistical section level) and of locality belonging (at the statistical subsection level); 2- The second step focused on the analysis of the territory by taking into consideration the information of the Municipal Spatial and Land-use Plans (PMOT), which enabled the classification of statistical subsections in two categories: urban soil (statistical concept 3102) and non-urban soil. This information is based on harmonized information available for	?	3 classes: 1.Urban space: Statistical subsection that complies with one of the following requirements: 1) classified as "urban soil" according to planning criteria of the Municipal Spatial and Land-use plans (PMOT); 2) it is part of a statistical section with a population density above 500 inhabitants per km2; 3) it belongs to a locality with a population of 5 000 or more inhabitants. 2.Semi-urban space: Statistical subsection classified as "non-urban soil" according to planning criteria of the Municipal Spatial and Land-use plans (PMOT) and that has not been previously included in the "urban space". 3.Predominantly rural space

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			Continental Portugal in the Map of the Land Use Regime (CRUS) or, directly, on the classes of space and/or urban perimeters of PMOT for the autonomous regions; 3- The third step was based on the conjugation of results from the application of the morphological criteria (first step) and from the application of the planning criteria (second step)		
Romania (Regional)	Rusu (2015) A typology of Rural Areas in Danube Region	Combined (Landscape, Economical, morphological)	This is a regional typology focusing on the Danube region. It is not a typology that tries to demarcate urban from rural, but rather trying to characterise the different regions in the Danube region based on factors such as vulnerability to climate events and the adaptive capacity Calculation through cluster analysis	Climate events, population density, land use, economic support, social capital, human capital, financial capital, physical capital	4 classes (clusters) (no names)
Serbia (National)	Typology of rural areas in Serbia	Combined (morphological, landscape, economic, administrative)	Initially, the OECD rurality criterion was applied to define rural areas in Serbia. Subsequently, various (over 40) indicators were selected and used to define and distinguish similar types of rural regions, based on correlation analysis, factor analysis, and cluster analysis. The Cluster analysis revealed six types of regions of different sizes and characteristics, which were then reduced to four types based on practical considerations.	Demographic (e.g., population density, change, migration), geographic characteristics (e.g., land use), economic (by sector), employment (e.g., employment rate, and by sector), human capital (educational level), agricultural (e.g., sizes and types of farms), tourism (hotel beds) and infrastructure (e.g., roads, number of doctors)	4 classes (1. Highly productive agriculture and integrated economy, 2. Small urban economies with labour intensive agriculture, 3. Natural resources-oriented economies mostly mountainous, 4. High tourism capacities and poorly developed agriculture)
Slovakia	Rurality index by Dická et al (2019)	Combined (Morphological, economic, locational, landscape)	Rurality is defined as a complex and multidimensional concept based on population, economy, land use, facilities, services, and accessibility. The rurality index is calculated using multivariate methods, including 14 variables comprising important demographic elements. The model of a rural-urban continuum provides the conceptual	Sociodemographic variables (population density, age, seniors, ageing, fertility, migration, unemployment, work trips, occupancy, new building-up, family houses, hospital, cities with population over 50,000.	4 classes (extreme rural, intermediate rural, intermediate non-rural, extreme non-rural)

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			framework within which rurality indices have been developed.		
Slovenia	Typology and development characteristics of rural areas in Slovenia	Combined (Morphological, economic)	The aim of the typology was to: - distinguish between urban and rural functions of the society and space management, - to define a line between urban and rural spaces, - to recognize and to consider development interdependence of urban and rural areas, - to define and to consider the role of urban and rural characteristics interweaving in the areas, - to recognize and to consider a specific phenomena, processes and development possibilities in different rural areas.		3 main classes (Suburban areas, Typucal rural areas, Depopulation areas)
Spain (National)	Law 45/2007, of 13 December, for the sustainable development of the rural environment.	Combined (morphological, locational)	The typology distinguishes between different types of rural areas. Rural areas are first distinguished using population size and density as criteria. To characterize different types of rural areas criterias such as agricultural activity, income levels and geographical isolation	- Demography: Number of inhabitants, Population density - Land-use: Dispersed population (% of population of the municipality that lives in singular entities distinct from the main nucleus and with a population of less than 1000 inhabitants), - Economy: Income per capita, Relevance of the agrarian activity - Accesibility: Access time to the nearest urban center with more than 30,000 inhabitants, Territorial isolation	3 classes (1. Rural areas to be revitalized, 2. Intermediate rural areas, 3. Peri-urban rural areas)
Sweden (National)	Urban-rural classification (Tillväxtanalys)	Combined (morphological, locational)	The typology is built to be presented on LAU level. The reason for this is because most statistical data is available at this level which makes it possible to study many aspects from a urban-rural perspective. The typology works	- Population on grid level - Accessibility through the road network	6 classes (Bigger Urban Areas; Dense areas close to a city, dense areas with remote location, rural areas close a city, rural areas remotely located, rural areas very remote.)

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			on two levels where the first one is directly comparable to DEGURBA and is based on population on grid level. In a second level accessibility to a city is added. The municipality is considered to be close if it is within 45 minutes travel time by car and a city is defined as an agglomeration of at least 50 000 inhabitants		
Sweden (National)	Municipality grouping (SKR)	Combined (morphological, economic, locational)	The typology is built on two levels. The first level is built three main groups based on population size and commuting pattern In the more detailed version some data on tourism is added to be able to characterize different types of rural municipalities	Data on LAU level - Population - Population in built up area - Out commuting as share of night pop - Out commuting to city as share of night pop - biggest out commuting municipality - In commuting as share of day population - number of overnight stays - turnover in trade -turnover in hotel etc. - turnover restaurants	The typology consists of two levels First level: 3 classes: (1. Cities and municipalities close to cities; 2. Bigger towns and municipalities close to bigger towns. 3. Smaller towns/buil-up areas and rural municipalities) 9 classes (1. Cities, 2. Commuting municipality close to city, 3. Bigger town, 4. Commuting municipality close to bigger town, 5.low commuting municipality close to bigger town, 6. Smaller town/built-up-area, 7. Commuting municipality close to smaller town, 8. Rural municipality, 9. Rural municipality with tourism
UK (Regional (Scotland)	Scotland's Sparsely Populated Areas (SPAs)	Combined (morphological, locational)	Rurality is defined on the population size and travel time to urban centres. 1. A transport network was created using publicly available and/or reusable data on roads and ferries within Scotland and northern England, which includes estimated travel times for road segments and ferries. For roads, these estimated times were based on road type, urban or rural location, and road segment lengths. 2. Population totals and locations were sourced from 2011 Census data at the Output Area level (Lower Layer Super Output Areas in England and Wales). 3. Areas 'accessible' to Data Zone centroids (for Data Zones outside of large settlements)	- Population - Accessibility through the road network	The whole of Scotland is classified into a) sparsely populated areas, b) not in sparsely populated areas (Outside mainly urban council areas), c) not in sparsely populated areas (Mainly urban council areas). There are nine subregions within the SPAs, and 16 covering all areas outside the SPAs (categories b) and c) noted above).

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			were calculated using GIS analysis as service layer polygons. These used an estimated 30 minute travel time as a threshold of accessibility, corresponding with that used in the Scottish Government's Urban Rural Classification. 4. Spatial joins between granular population data (described above) and service areas were used to calculate the accessible population for each Data Zone, and identify whether or not each was sparsely populated (e.g. less than 10,000 people within the accessible area) 5. Subregions were created for all Data Zones in Scotland using the definition of sparsely populated areas, local authorities in Scotland (i.e. 32 administrative areas) and travel to work areas		
UK (Regional) (Scotland)	Scottish Government Urban Rural Classification 2020	Combined (morphological, locational)	The classification is based upon two main criteria: (i) population and (ii) accessibility to population centres, which is based on drive time analysis to differentiate between accessible and remote areas in Scotland. Rural Areas are defined as the settlement with less than 3 000 people. The population criteria is derived from the Settlements dataset produced by National Records of Scotland, which defines areas of contiguous high density postcodes that make up a Settlement. The classification is available in 2-fold , 3-fold , 6-fold classification which distinguishes between urban, rural, and remote areas, and an 8-fold classification which further distinguishes between remote and very remote regions.	- Population - Accessibility through the road network	**1.Three-fold version** 1. Accessible - Areas within a 30 minute drive time from Settlements of 10,000 or more 2. Remote - Areas that are more than a 30 minute drive time (6-fold classification), or areas that have a drive time between 30 and 60 minutes (8-fold classification) from a Settlement of 10,000 or more 3. Very Remote - Areas that are more than a 60 minute drive time from a Settlement of 10,000 or more (8-fold only): 2.**Six-fold version** 1. Large Urban Areas - Settlements of 125,000 people or more 2. Other Urban Areas - Settlements of 10,000 to 124,999 people 3. Accessible Small Towns - Settlements of 3,000 to 9,999 people, and within a 30 minute drive time of a Settlement of 10,000 or more 4. Remote Small Towns - Settlements of 3,000 to 9,999 people, and with a drive time of over 30 minutes to a Settlement of 10,000 or more 5. Accessible Rural Areas – Areas with a population of less than 3,000 people, and within a 30 minute drive time of a Settlement of 10,000 or more

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					6. Remote Rural Areas - Areas with a population of less than 3,000 people, and with a drive time of over 30 minutes to a Settlement of 10,000 or more **3.Eight-fold version** 1. Large Urban Areas - Settlements of 125,000 people and over 2.Other Urban Areas - Settlements of 10,000 to 124,999 people 3. Accessible Small Towns - Settlements of 3,000 to 9,999 people, and within a 30 minute drive time of a Settlement of 10,000 or more 4. Remote Small Towns - Settlements of 3,000 to 9,999 people, and with a drive time of over 30 minutes but less than or equal to 60 minutes to a Settlement of 10,000 or more 5. Very Remote Small Towns - Settlements of 3,000 to 9,999 people, and with a drive time of over 60 minutes to a Settlement of 10,000 or more 6. Accessible Rural Areas - Areas with a population of less than 3,000 people, and within a drive time of 30 minutes to a Settlement of 10,000 or more 7. Remote Rural Areas - Areas with a population of less than 3,000 people, and with a drive time of over 30 minutes but less than or equal to 60 minutes to a Settlement of 10,000 or more 8. Very Remote Rural Areas - Areas with a population of less than 3,000 people, and with a drive time of over 60 minutes to a Settlement of 10,000 or more.

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Annex 3. Background and policy context of the national and regional typologies

Country	Name of typology	Background/purpose	Areas of use	Actors involved
Albania	New urban-rural classification of Albanian population	Typology is used for statistics and policy orientations (official urban-rural classification used)	Mostly as an entry point for planning sectoral development in the country	Collaboration INSTAT/EC. This was initiated by the central government following the approval and entry into force of the Law no. 107/2014 “On territorial planning and development”, as part of the administrative planning reform initiated in 2009, and in the perspective of unified statistical collaction at EU level
Albania	Typology of communes and municipalities	This is used in the General National Spatial Plan, which is the overarching framework for spatial planning in Albania. The typology is used for planning, in addition to the rural-urban typology (developed following EU degurba methodology).	Mostly as an entry point for planning sectoral development in the country	INSTAT is behind the typology following the publication of the results from the Census 2011. This was initiated by the central government following the approval and entry into force of the Law no. 107/2014 “On territorial planning and development”, as part of the administrative planning reform initiated in 2009
Albania	Commuting from home to work	This is used in the General National Spatial Plan, which is the overarching framework for spatial planning in Albania. The typology is used for planning, in addition to the rural-urban typology.	Mostly as an entry point for planning sectoral development in the country	INSTAT is behind the typology following the publication of the results from the Census 2011. This was initiated by the central government following the approval and entry into force of the Law no. 107/2014 “On territorial planning and development”, as part of the administrative planning reform initiated in 2009
Austria	Urban-rural typology	The typology was developed exclusively for statistical purposes, and as addition to existing international typologies. The purpose is to show the diversity of rural areas and their relations to urban areas by classifying urban and rural areas based on structural (economic, population) and functional characteristics.	The typology is only intended for statistical purposes (e.g., showing rural-urban migration flows) but it is also used by e.g.., the parliament to discuss decentralisation, labour, climate, energy, infrastructure, and development issues. It has also been used for distributing subsidies to different territories, where rural areas have received higher subsidies.	The national statistics office (Statistics Austria)
Belgium	Degree of rurality of Walloon municipalities	Typology for identifying territories eligible for rural development programme funding.	Identifying municipalities eligible for rural development funding under different programmes.	Regional authorities responsible for rural development polies in Wallonia (Direction du Développement rural” (SPW ARNE-DDRCB-DDR) are the initiators and main users.

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Belgium	Indicator of rurality	Tool for identifying territories (municipalities) that are eligible for rural development programme funding (e.g., LAGs).	In use since 2013 for identifying municipalities eligible for support within the Belgium RDP for the period 2014-2020.	Regional authorities responsible for rural development polies in Wallonia (Direction du Développement rural" (SPW ARNE-DDRCB-DDR) are the initiators and main users.
Belgium	VVSDG-selection	Typology for identifying municipalities with less resources to determine which ones are eligible for funding based on various economic indicators and criteria.	For identifying municipalities with less resources that are eligible for funding from the "Rural Areas Fund".	The Association of Flemish Cities and Municipalities
Belgium	Typology for 2nd Flemish rural development programme	Typology for distinguishing between urban and rural areas for determining which territories are eligible for rural development funding.	Used for determining which territories are eligible for funding and participating in different development projects.	Created for the 2nd Flemish Programme for countryside development (PDPO II)
Croatia (National)	Typology of rural and urbanized settlements in Croatia	Typology for characterising different types of rural areas, based on the notion that rural is not a single homogenous entity, and supporting policy interventions.	Used for evaluation and guidance of rural development.	Aleksandar Lukić, from the University of Zagreb with funding/project came from the Croatian Science Foundation.
Czech Republic	Typology of non-metropolitan areas (Rural development concept 2021 – 2027)	The typology is produced for strategic and specific objectives planning of the rural development as they reflect identified problems of the region and link them with the principles of regional development.	Used for identifying regions for measures/ support and characterize different rural areas The Ministry uses the typology for coordinating its development initiatives. The Ministry also uses a geographical delimitation of regional development themes such as the following: metropolitan areas, agglomerations, regional centres and their rural hinterlands, structurally affected regions, and economically and socially vulnerable areas.	Ministry of Regional Development of the Czech Republic (Ministry), Department of Regional Policy
Denmark	Municipality groups	The typology was produced to make it possible to make meaningful analysis on the urban-rural dimension.	For analysis	An own initiative from Denmark Statistics

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Estonia	Settlement classification of Estonia	Historically, different territories in Estonia were divided according to administrative units, but since the administrative reform of 2017, this approach was no longer regarded as sufficient. The new classification methodology used in the population census and by Statistics Estonia divides Estonia into settlement units.	For analytical purposes and also as basis for the Population and Housing Census, which gives a picture of life in Estonia at one moment in time. This helps support decision making and planning at the national and municipality levels.	Developed by Statistics Estonia.
Finland	Urban-rural classification	Information on regional development traditionally relied on data bound to different administrative units. In the early 2010s, national authorities saw a need for a classification that better recognizes the continuity between urban and rural areas and the characteristics of different areas. Hence, a grid-based classification was developed to replace a former municipality-based classification of urban and rural areas.	Used in various ways to support regional and rural development and policy in Finland. It has been used in several strategies and policy documents at national, regional, and municipal level, and also for distributing development funds (e.g., Leader and for grocery stores in sparsely populated rural areas). Also, widely used as an analytical framework in research.	The development has mainly been carried out by the Finnish Environment Institute (SYKE) on commission by the Ministry of Economic Affairs and Employment and Ministry of Agriculture and Forestry.
France	Typology of French rural areas (DATAR-INRAE)	To acquire a more nuanced understanding of rural areas, new indicators were added to an earlier typology. The purpose of this typology was to better capture specific challenges of different areas, and characterise rural areas in several domains (climatology, land use, demography, economics).	Used for analytical purposes to support policy development. E.g., for analysing the productive functions of rural areas and access to services and employment In different rural areas.	Based on a DATAR (national spatial planning agency) study, which was coordinated by researchers (INRA, Cemagref). Supported by an advisory board with several institutional actors: e.g., DATAR, Ministry of Agriculture, regional representatives, OECD, Ministry of oversea territories, Natural regional parks federation.
France	Rural typology based on services/levels of centrality (ANCT-INRAE)	To support policymaking, this typology for identifying municipalities with centrality functions based on a variety of (public and private) services was developed.	Supporting policy actions e.g., regarding accessibility to services, the optimization of public service locations, and other territorial projects.	Based on a study launched by ANCT and realised by INRAE-CAESAER.
France	Urban-rural zoning	Developed in response to the French government's call for a new rural classification as part of the rural agenda in 2019. The typology considers how rural areas are influenced by urban centres, and	To identify and prioritize support measures for the development of rural territories, in order to ensure balanced territorial development.	Developed and maintained by INSEE with support of a working group bringing together various actors: public statisticians, academics, association of elected officials.

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		one of the objectives was to identify sub-categories of rural areas based on functional criteria.		
France	Life basins	Developed to better understand the organisation of French rural areas Life basins are the smallest territories where people have access to common services. Designed first for villages and small towns but also created for larger urban areas, life basins now cover all of France. Life basins perimeters are updated approximately every 10 years (2003, 2012, 2022)	Often used by local authorities and academic studies for analytical purposes and statistical observation of rural areas, from local to national scale.	This zoning method has been created and is maintained by INSEE. The initial 2003 version was based on collaborative efforts between INSEE, DATAR (cross-ministerial delegation for territorial planning) and INRA (National Institute for Agronomic Research). The 2022 revision has been driven by a cross ministerial working group around INSEE, including a wide range of organisations.
France	Typology of French rural areas (ANCT ACADIE)	The main purpose is to enrich knowledge of rural areas by better considering their diversity, to support national policymaking, especially in relation to the French rural agenda and its action plan.	Used for national policy design, and identifying territories in need of specific interventions. At regional/local levels, they can help policymakers to better understand changes trends affecting rural areas and have implications for spatial planning.	The National agency of territories cohesion (ANCT) is the responsible state agency coordinating this work with INSEE, Acadie cooperative and members of a steering committee consisting of public administration as well as a scientific committee.
Germany	Population-structure-based Counties	The typology was developed to monitor the living conditions in Germany.	The typology is used to monitor living conditions in Germany, but also to study urban-rural areas in general	Bundesinstitut für Bau-, Stadt- und Raumordnung (BBSR); Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR)
Germany	Urban and municipality types in Germany	The typology was developed to monitor the living conditions in Germany. Since this typology is build on LAU data the monitoring can be done at a low geographica scale.		Bundesintitut für Bau-, Stadt- und Raumforschung (BBSR); Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR)
Germany	Urban and Rural Areas	The typology was developed to monitor the living conditions in Germany.		Bundesintitut für Bau-, Stadt- und Raumforschung (BBSR); Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR)
Germany	Thünen Typology of rural areas	The typology was developed by Thünen Institute of Rural Studies with the aim of monitoring living conditions in rural areas. The idea was to make a national typology that both could distinguish urban from rural and characterize different rural areas and lay as a basis for analysis.	Analysis by researchers and policy makers	Developed by Thünen Institute of Rural studies

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Greece	Panagiotopoulos & Kaliampakos (2018). Accessibility and spatial inequalities in Greece	The typology comes from a research paper from 2018 focusing on the aspect of accessibility and spatial inequalities in Greece.	It was developed for analytical purposes	Developed by researchers
Hungary	Perger et al. (2016) Delimitation and classification of rural areas	The typology was developed in a cooperation between the Polish Academy of Science and the Hungarian National Rural Network. The typology was developed to make it possible to talk about rural areas in a more meaningful way and to be able to compare them with each other.	It was developed for analytical purposes, to be able to compare different rural areas.	The typology was developed in a cooperation between the Polish Academy of Science and the Hungarian National Rural Network.
Ireland (National)	Typology for the Urban and Rural Life in Ireland 2019 study	The Central Statistics Office publishes a range of publications which often include simple divisions into urban and rural areas. This does not address the underlying characteristics separating one rural area from another. This typology seeks to better distinguish between different types of urban areas.	For analytical purposes and examining themes such as income, housing, health, education and commuting patterns in the Typology for the Urban and Rural Life in Ireland 2019 study. .	Central Statistics Office (CSO) Ireland
Italy	Typology National Strategic Plan	The typology has been made as a part of a national strategic plan 2007-2013. The idea was to give a more differentiated view of rural areas that coud be used to allocate financial resources to territories that were lagging behind in certain aspects.	For identifying areas lagging in certain development aspects to allocate financial resources to them. But also for analysis in general	The typology was developed by the national government.
Italy	Inner Areas	The typology has been developed by the Governments of Monti, Letta and Renzi, first ordered by Monti's Minister for Cohesion Policy in order to make actions in favor of municipalities losing population.	The typology is used to identify inner periphery areas with bad access to service to target measures towards them. The NIAS definition of rurality has been used in Italy to identify peripheral and ultra-peripheral areas, and to focus on specific interventions to promote local development and provision of essential services in these areas.	•The Strategy is negotiated between State, Regions, (Provinces) and Municipalities (June 2013); introduction in the Partnership Agreement (Horizontal Strategy, demography action) with the European Commission; •First Financial Allocation within the National Financial law (Legge di Stabilità) 2014 •It becomes one of the relevant actions of the Nation Plan of Reform (2014; 2015 and 2016)
Latvia	Spatial Structure of Latvia	This typology is created for Longterm Development of Latvia and mean to be	Identify regions for measures/ support	Interdepartmental Coordination Center of Latvia

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		used for development of National Policy- Mostly EU policies.		
Malta (National)	Strategic Plan for Environment and Development	To delimit strategic planning areas for the purpose of developing specific programmes and policies.	As an entry point for planning sectoral development in Malta.	Malta Environment and Planning Authority (dissolved in 2016), later divided into the Planning Authority and the Environment and Resources Authority.
Lithuania (National)	Classification used in the Population of Lithuania (2022) report	Developed by Statistics Lithuania for analysis for the Population of Lithuania (2022) study.	Used at least for analytical purposes and comparing the demographic characteristics of the urban and rural populations in Lithuania.	Statistics Lithuania
Netherlands	Typology of Dutch municipalities based on degree of urbanization and geographical location	To help better understand socio-economic dynamics across the rural-urban continuum, to support policy development and implementation.	Used for analytical purposes and for supporting policy interventions and monitoring.	The Dutch National Statistical Institute (CBS), in collaboration with other research institutes.
Netherlands	Dutch territorial typology of shrinking and anticipation regions	To help better understand issues related to socio-economic vitality and quality of life at the regional scale, in connection to particular rural issues and concerns.	Supporting policymaking and for identifying regions in need of support based on socio-economic problems caused by demographic changes (e.g., closure of schools, housing vacancies).	Ministry of Internal Affairs, in close collaboration with provincial governments and research partners specialised in prognosis.
Netherlands	Dutch typology based on differentiating wellbeing performances	Providing deeper understanding of wellbeing differences across various wellbeing dimensions and components among Dutch municipalities.	Supporting policy development and implementation by providing better insights on wellbeing aspects of Dutch municipalities that goes beyond GDP.	Netherlands Environmental Assessment Agency (PBL).
Netherlands	Dutch Agricultural development zoning	Categorising different types of rural areas based on land-use and identifying various agricultural development pathways and opportunities related to land use features, regional development prospects and specific sustainability concerns.	Supporting policy interventions and spatial planning. The typology is primarily used for advocacy purposes of specific stakeholder configurations in the planning of rural functions.	Public and private stakeholders with specific interest in the role of farming in wider rural development processes.
Norway	Centrality Index	The typology was initiated by the Ministry of Local Government and Regional Development (KDD) since they needed a	The typology is used as a part of KDDs District index that is an index that is used to identify municipalities in need of measures and support.	The typology was initiated by the Ministry of Local Government and Regional Development (KDD) but carried through by Statistics Norway. There were also other

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		more robust way of categorising the municipalities according to centrality so that they could identify municipalities in need of support and measures.	The typology is also used for analyses that has an urban-rural component. It is used by both authorities and academics.	institutions and agencies that were involved in a reference group.
Poland	Typology of rural areas in Poland based on socio-economic development and location	Evaluation of the differentiation of rural areas in Poland due to the level of socio-economic development and location rent	For scientific analysis	Luiza Ossowska, Poznań University of Life Sciences, Poland (2008-2012), currently: Koszalin University of technology Prof. Walenty Poczta, Poznań University of Life Sciences, Poland
Poland	Functional typology of rural areas in the West Pomeranian Voivodeship	indication of functional types of rural areas of the West Pomeranian Voivodeship - taking into account their socio-economic condition and functions performed	Typology is not only for scientific analysis. The typology was used in the regional document "Outline of the study on the development of rural areas and agriculture in the Zachodniopomorskie Voivodeship until 2030."developed by the Team for the analysis of opportunities and threats as well as potential directions of development of rural areas until 2030 in the Zachodniopomorskie Voivodship.The team was appointed by the West Pomeranian Voivode in 2017	Luiza Ossowska, Koszalin University of Technology Dorota Janiszewska, Koszalin University of Technology
Poland	Typology of rural areas	formulating conclusions and recommendations from the point of view of economic policy and practice, but above all, it is of analytical importance.	For economic policy and practice	European Fund for the Development of Polish Villages Institute of Rural and Agricultural Development, Polish Academy of Sciences dr hab. Monika Stanny, prof. IRWiR PAN prof. dr hab. Andrzej Rosner
Poland	Rural functional areas (two versions)	Cognitive objectives: indicating the distribution of two categories of rural areas: 1. Participating in the development processes and 2. Requiring support for development processes	as a tool for identifying regions that need support as sicentific publication	Ministry of Regional Development Prof. dr hab. Jerzy Bański, Institute of Geography and Spatial Organization of the Polish Academy of Sciences
Poland	Rural functional areas (two versions)	An attempt to develop a proposal for a new, comprehensive approach to the designation of rural functional areas, taking into account various criteria for their classification	as a tool for identifying regions that need support as scientific publication	Ministry of Regional Development Prof. dr hab. Jerzy Bański, Institute of Geography and Spatial Organization of the Polish Academy of Sciences
Portugal	Mainly rural occupied territory	Create a classification system for urban and rural areas and then categorise municipalities. That is, based on this	For statistical purposes and to classify the smaller local units (Freguesías). They are a legal entity inferior to the municipality but with legal	developed within the scope of the Standing Section on Territorial Base Statistics of the Statistical Council competence, in a working group involving Statistics

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		classification, 3 types of municipality (Fregesias) are created. See section Any other relevant information	personality. This territorial division influences the type of development funds applicable.	Portugal (INE), the Ministry of Agriculture and Sea (MAM), the Directorate-General of Territorial Development (DGT), the Directorate-General of Local Authorities (DGAL), the Financial Institute for Regional Development (IFDR, currently integrated in the Cohesion and Development Agency), the five Regional Coordination and Development Commissions (CCDR), the Regional Statistical Office of Azores (SREA), the Regional Directorate of Statistics of Madeira (DREM), the National Association of Portuguese Municipalities (ANMP) and the National Association of Parishes (ANAFRE)
Serbia	Typology of rural areas in Serbia	There were previously no official definitions of rural areas in Serbia. E.g., in the 2002 census, settlements were still classified as urban or other, based on the decisions of local authorities, and which areas they considered to be urban. Settlements not declared as urban were defined as rural. This typology of Serbian municipalities was developed within the EU project to better characterize and grasp the diversity of Serbian rural areas.	Primarily for analytical purposes	Developed within the EU project "Support to Rural Development Programming and Payment System for the Republic of Serbia and Montenegro. Development of the typology has been led by researchers at the University of Belgrade.
Slovakia	Rurality index by Dická et al (2019)	To provide a more sophisticated picture of the contemporary nature of rural communities, which is not reflected in typologies that are solely based on population density.	Typology developed for a scientific article published in 2019. Other uses are not known.	Authors of the article, Pavol Jozef Šafárik, Alena Gesser and Ivo Sninčák.
Spain	Law 45/2007, of 13 December, for the sustainable development of the rural environment.	In Spain they have a general law with delimitations and classiffications at National level. This law is about sustainable development of the rural environment. This requires a definition of different kinds of rural areas. Two main purposes: a) to give a general criterion to the regional administrations. These regional	The typology was designed to be used as a support of the law. It is used as a general criterion for the distribution of funds. But it has also been used for analysis by different actors	The typology was initiated by the Spanish Ministry of Agriculture, Fisheries and Food. Today is the Ministerio para la Transición Ecológica y el Reto Demográfico (Ministry for Ecological Transition and the Demographic Challenge) that is in charge of this typology. This law gives rise to a Sustainable Rural Development Program. The Program is the main instrument for the application of the Law, since it will specify the rural policy measures, the procedures and the means to carry them out.

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		governments have to classify the rural areas in each territory; b) to create a common criterion for all Spanish regions to distribute the funds and to create different types of rural areas depending on the needs.		Other actors: Local entities, regional governments, Consejo para el Medio Rural (Council for the Rural Environment) and Mesa de Asociaciones de Desarrollo Rural (Board of Rural Development Associations, which is the Participation, information and consultation body of associative entities related to the rural environment at National level). The law also encourages the cooperation between Public Administrations.
Sweden (National)	Urban-rural classification	Tillväxtanalys (Swedish Growth Agency) were assigned by the government to develop a typology that could define urban and rural. They felt that there was a need for an official definition that could be used in policy and analysis	The typology is used for defining urban and rural in policy and for analysis – both by authorities and researchers	The main actor involved where Tillväxtanalys (Swedish Growth Agency) but also other authorieis like the agriculture were involved.
Sweden (National)	Municipality grouping	This typology is carried out by SKR (the Swedish Association of local authorities and Regions.) The first version was produced in 2017 but already since the 1980s SKR have been making municipality groupings. The new version is from 2023	The typology is used for analysis of different aspects of urban and rurality and to be able to compare similar municipalities with each other	SKR are the main actor. Some data work was assigned to Statistics Sweden
UK	Scotland's Sparsely Populated Areas (SPAs)	The classification was developed as a means of studying demographic change and forecasts of future population levels and structures in remote areas. Subregions were created in order to identify more spatially detailed patterns.	The typology is used in the analysis and intepretation of demographic change and socio-economic development in Scotland. Population projections and modelling (Copus and Hopkins, 2018; Hopkins et al., 2022). Use in reports for the Scottish Government on population change (Expert Advisory Group on Migration and Population, 2022) and informing the development of planning policy (Dalglish et al., 2020) A reference for government strategy in relation to migration (Scottish Government, 2020) and population (Scottish Government, 2022).	The classification was initated and developed by the James Hutton Institute under the Scottish Government Strategic Research Programme (2016-2022) as part of research on demographic change in remote areas. It is an extension of a classification defined at Nordregio by Gløersen et al. (2005) and has been developed in Scotland by Jonathan Hopkins and Andrew Copus.
UK	Scottish Government	The classification aids in the development of understanding of the issues facing	The classification has different types of users:	The classification was initated by the then Scottish Executive and first published in 2000.

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	Urban Rural Classification 2020	urban, rural and remote Scotland (e.g. fields of human health, education, transport, equalities).	1.Academic research, e.g. human health and activity levels (McCrorie et al., 2020), deprivation (Clelland and Hill, 2019), provision of doctors in rural areas (Maclaren et al., 2022). 2.Policy support, e.g. population distribution and change by class; property ownership or residency by class; derivation of Sparsely Populated Areas. Practice at local authority level (e.g. applications for funding).	Its purpose was to support " the commitment and develops our understanding of the issues facing urban, rural and remote Scotland." It was designed to provide a standard basis for assessing characteristics of Sotland (land and people) to "... ensure that rural and remote communities have their distinct needs reflected across the range of government policy and initiatives." The classification was developed by the Office of the Chief Statistician of the Scottish Executive. Responsibility for its updating has been with relevant teams of analysts through to the current group in the Scottish Government. Other actors involved in development of the classification included data providers (e.g. Ordnance Survey, public bodies of the Scottish Executive), academia (e.g. U. St Andrews, Macaulay Land Use Research Institute), and prospective users (e.g. departments of Scottish Government or equivalents, academia, NGOs).

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Annex 4. Assessment of the national and regional typologies

Country	Name of typology	Assessments or evaluations	Strengths and weaknesses	Updates
Albania	New urban-rural classification of Albanian population	Not known	Strengths: The typology is harmonised with EU-wide DEGURBA. Weaknesses: it only consists of demographic data.	Not known
Albania	Typology of communes and municipalities	Not known	Weaknesses: the methodology is difficult to apply at EU level, as the approaches to characterise each group differs from each other. No generic transversal approach. Moreover, it only considers economic orientation and does not include access to services. It is a national development perspective rather than a tool that can help supporting areas in need.	Not known
Albania	Commuting from home to work	Not known	Weaknesses: it only considers commuting patterns and only relies on data collected during censuses (every 10 years), while commuting is a very dynamic phenomenon.	Not known
Austria	Urban-rural typology	No rigorous scientific evaluation, but some criticism from stakeholders.	Weaknesses: some criticism that accessibility is solely focused on motorized individual transport and not considering public transport. There are typologies for public transport availability and methods to combine these with the urban-rural typology.	Due to criticisms, methods are being developed to combine public transport to this typology. If and when these are actually integrated into the typology is unknown.
Belgium	Degree of rurality of Walloon municipalities	No formal evaluation but some comparisons with DEGURBA have been made.	Strengths: it builds on continuous quantitative variables that can be discretized; it relies on recurring data sources; the data is at sub-municipal level, allowing greater detail in characterization. Weaknesses: it is based on geographical units with varying forms and the environment of these areas is not considered; MAUP; based on percentage of rural areas rather than population or e.g., proximity to services.	Updated in 2021 based on 2018 data (new land cover and land use data). First version from 2013, based on 2008 data.
Belgium	Indicator of rurality	Not known	Same as previous	In use since 2013.The most recent update (2021) makes use of a new land use map using grid data (established within the 'WALOUS project') in replacement of so-called cadastral parcel units.
Belgium	VVSG selection	Not known	Weaknesses: population size and population density at municipality level are not considered robust indicators	Has been updated but it is not clear what has changed in the updated version.

Belgium	Typology for 2nd Flemish rural development programme	Not known	Weaknesses: green areas and open areas in urban areas fall under the category of “rural areas”.	There should be, but difficulty in finding update versions.
Croatia (National)	Typology of rural and urbanized settlements in Croatia	No evaluation yet, but as data is quite old, it is currently underway.	Not known	Not known if and when a possible update will be made, but it will potentially consider trends instead of relying on a static approach as previously.
Czech Republic	Typology of non-metropolitan areas (Rural development concept 2021–2027)	Not known	Not known	Not known
Denmark	Municipality groups	The typology is currently being evaluated	Strengths: it is only based on three variables and therefore quite easy to calculate and update. Measures centrality in a quite good way. Weaknesses: does not characterize rural areas, and rural is defined based on a lack of services and population.	The typology is planned to be update every 5 years. The first version came in 2018, a new version is therefore envisaged this year
Estonia	Settlement classification of Estonia	Not known	Not known	Not known
Finland	Urban-rural classification	Scientific article by authors at SYKE assessing the classification and its strengths and weaknesses (Saastamoinen et al., 2022).	Strengths: the typology uses fine grained data, and it allows much more spatially detailed analysis than previous administratively based territorial classifications. It is best suited for examining larger areas, and it allows to identify different development trends especially at the national and regional level. Weaknesses: The boundaries of the classes have been generalised so that the typology is less suitable for analyses at a more local levels, as the classification mainly describes larger area entities rather than the specific characteristics of a particular place.	Originally published in 2013 with data from 2010. Updated in 2020 with data from 2018. A possible future update has not yet been decided on, however, it could be around five years from the most recent version.
France	Typology of French rural areas (DATAR-INRAE)	Not known	Strengths: includes several approaches for identifying various challenges simultaneously including morphological, landscape and functional aspects; attempts to add a policy dimension for each category of the typology; many indicators included.	A first reference typology was realised in 2003, and this was later updated in 2011. In the previous update, new dimensions were added. A new update of this typology was underway in 2022.

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			Weaknesses: difficult to extend in a European context (data is specific for French LAU, context of the rural agenda in France).	
France	Rural typology based on services/levels of centrality (ANCT-INRAE	Not known	Strengths: it provides a good outlook on service accessibility and disparities regarding that factor. Weaknesses: difficult to extend in a European context as the areal units used only exist in France. OpenStreetMap could be used, but it lacks many service points, especially in rural areas.	The development of the typology was initiated in 2019 and it builds on data from 2017. No future updates are known.
France	Urban-rural zoning	Not known	Strengths: it is based on simple criteria of density, making updates straightforward; corresponds to European definition, which will facilitate European comparisons and allows for a uniform definition for distributing EU funds. Weaknesses: the methodology is not adapted for classifying rural areas at higher territorial scales.	Published in 2021, based on a need to develop a new rural classification which is less dependent on classical urban-rural approaches. No future updates are known.
France	Life basins	Not known	Strengths: it provides a coherent and simplified vision of rural territorial divisions which are connected to the local lives of inhabitants. Weaknesses: difficult to extend to a European context since the areal units (*Base Permanente des Equipements*) only exists in France.	Life basins perimeters are updated approximately every 10 years. Itr was first created in 2003, revised in 2012 and then again in 2022.
France	Typology of French rural areas (ANCT ACADIE)	Not known	Strengths: these typologies reveal multifaceted changes and trends affecting various thematic areas. They also enable the identification of differentiated features and trends even within a single rural LAU. Weaknesses: it is uncertain whether these structural and systemic typologies are transferable in a wider European context due to specificities of the French context and data availability.	Published in 2023, these typologies and sub-typologies are based on an update of former DATAR typologies (2003 and 2011).
Germany	Population-structure-based Counties	Not known	Strengths: since it is only based on one indicator it is a fairly simple model that is easy to apply and update Weaknesses: the typology in principle only reveals how densely populated a region is and is not well suited for characterizing different types of rural areas.	Not known
Germany	Urban and municipality types in Germany	Not known	Strengths: since the typology is based on LAU level data it makes it possible to classify urban-rural on a relatively fine-grained scale. Weaknesses: the typology works to demarcate urban from rural but doesn't characterize different types of rural areas.	Not known

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Germany	Urban and Rural Areas	Not known	Strengths: the typology provides a solid attempt at demarcating functional areas and demonstrate how urban and rural areas are connected Weaknesses: this example is not a typology as such it, thus making it less relevant for the GRANULAR project and the work to be carried out in Task 4.6.	Not known
Germany	Thünen Typology of rural areas	The typology has not been considered so useful in scientific circles since the typology includes many factors that users would want explained. It has been popular in policy circles, e.g., ministry of agriculture.	Strengths: It is a quite ambitious attempt at demarking and characterizing the rural areas. It is also good that the two modules can be used separately. Weaknesses: it includes many different indicators, and indicators that users woudl expect to be more fully explained .	Will be updated when the new 2022 census becomes available
Greece	Panagiotopoulos & Kaliampakos (2018). Accessibility and spatial inequalities in Greece	Not known	Strengths: It is published in a peer reviewed scientific article and the method is scientifically valid Weakness: The focus is on accessibility, other aspects of rural diversity is not in focus	Not known
Hungary	Perger et al. (2016) Delimitation and classification of rural areas	The typology has been quoted and used in scientific articles	Strengths: demarcates and tries to characterize different urban areas. Uses LAU level which makes it quite granular. Weaknesses: the characterization of rural areas is built on quite a complex method and different kinds of data which makes it somewhat non-transparent.	Developed for a specific study in 2016. Any potential updates are not known.
Ireland (National)	Typology for the Urban and Rural Life in Ireland 2019 study	Not known	Strengths: provides a more nuanced understanding of differences between different types of urban and rural areas compared to previous typologies in Ireland.	Developed for a specific study in 2019. Any potential updates are not known.
Italy	Typology National Strategic Plan	The typology has been evaluated by the regional governments. Something that was highlighted was that the typology doesn't help in understanding the profound differences in terms of access to key services in different regions. Hence, a new method was proposed for the Inner Areas Strategy.	Strengths: the typology is on a relatively detailed geographical level (LAU) and that it not only differentiates urban from rural, but also tries to characterize different types of rurality Weaknesses: the main weakness that was identified when the typology was updated was that it didn't catch aspects like accessibility to services and jobs.	The typology was first developed in 2007. For the 2014-2020 programming period, the Italian Government continued with a fine-tuned model. Since the typology is also used to identify areas that are eligible to get support this process has included bilateral negotiations with local administrations

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Italy	Inner peripheries	The strategy that the typology is part of is being evaluated continuously, but no particular updates to the typology	It is a model to calculate accessibility to service. As such it is a simple typology.	Not known
Latvia	Spatial Structure of Latvia	Not known	Not known	Not known
Lithuania (National)	Classification used in the Population of Lithuania (2022) report	Not known	Weaknesses: the main weakness is that the typology only includes two classes, and it does not provide a very nuanced outlook on different types of areas.	Not known
Malta (National)	Strategic Plan for Environment and Development	Not known	Weaknesses: the methodology is difficult to apply at EU level, as the approach is strongly linked to the specificity of Maltese policies. It does also not rely on any generic transversal approach. It provides a national development perspective rather than a tool that can help prioritise or support areas in need.	No known potential revisions
Netherlands	Typology of Dutch municipalities based on degree of urbanization and geographical location	Not known	Not known	Not known
Netherlands	Dutch territorial typology of shrinking and anticipation regions	Not known	Not known	Not known
Netherlands	Dutch typology based on diverging wellbeing performances	Not known	Strengths: novel approach that aims to surpass GDP doctrines by assessing and comparing wider wellbeing performances. Weaknesses: the current approach does still not fully cover the specificity of rural wellbeing concerns, especially concerning urban-rural linkages.	Not known
Netherlands	Dutch Agricultural development zoning	Not known	Not known	Not specifically known, but agricultural zoning typologies appear to be high on the agenda.
Norway	Centrality index	The development of the new index in 2017 started with an evaluation of an old index from the mid-1970s. There was also an	Strengths: it is a fairly easy model to update. The data comes from Statistics Norway who also developed the typology. It measures what it is meant to measure, i.e., how central a municipality is. The classification is hierarchical,	The typology will be updated regularly, but no big revisions to the model are envisaged.

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		evaluation and revision in 2020, which was mainly about correcting mistakes and updating the index according to the municipal reform.	and the names are kept neutral. This can be important since the names of the categories can be a sensitive issue. Weaknesses: the typology only looks at one dimension of rurality, i.e. lack of services. Hence other aspects, such as land use, attractivness, etc. are not considered.	
Poland	Typology of rural areas in Poland based on socio-economic development and location	Reviewed as part of a scientific study	Not known	In the second version of the typology instead of the location rent, the main economic functions of rural area in the Zachodniopomorskie Voivodeship were analyzed.
Poland	Functional typology of rural areas in the West Pomeranian Voivodeship	The typology has been reviewed as a scientific publication	Not known	Not known
Poland	Typology of rural areas	The typology has been reviewed as part of a scientific publication	Not known	Not known
Poland	Rural functional areas (two versions)	The typology has been reviewed as part of a scientific publication	Not known	An update has been made.
Poland	Rural functional areas (two versions)'	The typology has been reviewed as part of a scientific publication	Not known	Not known
Portugal	Mainly rural occupied territory	Not known	Weaknesses: the classification of rurality is developed within a system of classification of urban territory. In other words, what is not urban is understood as rural. Also, the indicators used are very classical, as it is based on criteria such as population density and number of inhabitants. Municipal plans have an impact on the classification of rurality. This is a risk as these plans do not have to follow the same methodology in defining what is urban or not.	There has been a revision since its initial implementation (2009), but the definitions have remained the same.

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Serbia	Typology of rural areas in Serbia	Not known	Strengths: before this typology, there was not even a standard definition of rural areas in Serbia. This typology has contributed to enrichening the understanding of different types of rural areas in Serbia.	Not known
Slovakia	Rurality index by Dická et al. (2019)	Not known	Strengths: it uses a multitude of different socio-demographic variables, thus providing a more nuanced picture of the characteristics rural areas compared to previously existing ones relying on solely on population density.	Not known
Spain	Law 45/2007, of 13 December, for the sustainable development of the rural environment.	The law from which the typology comes is from 2007. It has been assessed several times since, both internally and externally.	Strengths: it is harmonised with European policies. It promotes development in rural areas and, as a priority, in those that suffer a greater degree of relative backwardness, regardless of their location within Spain. It also aims to establish minimum criteria for regional governments. It is compiled with a gender perspective, and all measures contained must respect the principle of equal treatment and opportunities between women and men in rural areas. It also represents a good effort of establishing cooperation criteria between Public Administrations, and provides for the adoption of Territorial Strategic Guidelines for Rural Planning and Plans for different rural areas It is a Law of territorial orientation, which implies that it will be applied taking into consideration criteria and guidelines of territorial planning. Weaknesses: the Law intends to offer a current and modern dimension of rurality, integrating urban centres as dynamic and functional elements necessary for rural development, and establishing a typology of areas that recognizes the existing rural diversity and the need for differentiated attention. However, the final results are standard, traditional, not up to date and simplistic. Also, each regional government can use their own methodologies and criteria, and these methodologies are not clear nor public, in most cases. It is based on traditional criteria, which grant a decisive importance to population density as a differentiating dimension. It does also not reflect the urban-rural continuum and does not offer a definition that is nationally relevant or internationally comparable .	The classification text is from 2007. It has been updated in 2009 with no apparent changes to the criteria.
Sweden	Urban rural classification	The typology was developed in 2014 and is currently under evaluation. The evaluation included an assignment to compare urban-rural typologies from the neighbouring countries	Strengths: the typology is built on DEGURBA and is at the first level comparable to DEGURBA. This makes international comparisons feasible. In the second step accessibility is added which makes it possible to characterize rural areas based on their remoteness.	The typology is currently under evaluation.

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			Weaknesses: the only factor that is used to characterize different types of rural areas is distance.	
Sweden	Municipality grouping	The current version is from 2023 and is built on an evaluation of the 2017 model. But the first version was from the 1980s and every update has been based on an evaluation	Strengths: it's a typology of two versions – one with three classes and one with nine. This make it possible to use the typology in different ways. The version with nine classes distinguishes between different types of rural areas, by population and location criteria and also on, for example , how attractive the municipality is for tourists. Weaknesses: it includes many indicators which might make it less useful as an urban-rural typology depending on the topic that is analysed.	The typology was evaluated the last years and a new version was released in 2023
UK	Scotland's Sparsely Populated Areas (SPAs)	The classification has been used by Scottish Government analysts in developing papers relating to demographic change and migration. No external critique has been published at this time.	Not known	The classification has not been updated. New granular population data will be published following processing of the data from the 2022 Census in Scotland.
UK	Scottish Government Urban Rural Classification 2020	The classification has been revised at regular intervals, the latest of which was published in 2020.	Not known	The classification has been updated at regular intervals, with 9 versions published, the first of which was in 2001 and details of versions of which follow: • 2020 Scottish Government Urban Rural Classification • 2016 Scottish Government Urban Rural Classification • 2013-2014 Scottish Government Urban Rural Classification • 2011-2012 Scottish Government Urban Rural Classification • 2009-2010 Scottish Government Urban Rural Classification • 2007-2008 Scottish Government Urban Rural Classification • 2005-2006 Scottish Executive Urban Rural Classification • 2003-2004 Scottish Executive Urban Rural Classification • 2001 Scottish Household Survey Urban Rural Classification (6-fold only)

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