Urban/Rural Dichotomy and the Forms-In-Between

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ABSTRACT **The urban/rural classification of spatial units aims to define and connect homogeneous units that have similar characteristics and are at an approximately equal level of development. Nevertheless, reviewed systems for urban/rural classification do not always include the criteria needed for aggregation of spatial units into homogeneous groups. To depict the scope and methodology of existing rural/urban divisions in more detail, this paper applies the latest version of the Eurostat classification approach called 'Degree of Urbanisation' on the example of the Republic of Slovenia. The work reveals some advantages and disadvantages of the tested methodology, mainly regarding local level treatment. Namely, the results show that the identification of urban and rural areas, based only on population or population density data, does not take into account other aspects of urbanity and rurality, and hence does not provide sufficient information for distinction at a local level. Therefore, identified homogenous classes do not fully capture spatial complexity and diversity. At the same time, the boundaries between the city and the countryside are increasingly disappearing because of the urbanisation and suburbanisation phenomena, thus additionally aggravating the delimitation of urban and rural areas. To deepen the understanding of 'blended' environments that are both urban and rural, i.e. that are neither only urban nor only rural, this paper distinguishes between several identified forms that can be categorised between the urban and the rural form: the state of urban rurality; blending processes at the urban edge, including urban-rural continuum; remote urbanity; and rural urbanity, and then unfolds discussion about the causes of their emergence, processes, flows and states occurring in their development, development outlooks, and sustainability potentials.**

KEYWORDS urbanity, rurality, classification, Slovenia, urban-rural blending

1 Introduction

The determination of homogeneous spatial units gives an insight into the state of development of a region or a country, as well as to the further development and adjustment of the policies. Only those spatial strategies that are adapted to specific homogeneous zones address detected spatial problems successfully and use available potentials for achieving the 'territorial cohesion' (Commission of the European Communities, 2008) on different spatial levels. The aim of territorial cohesion is to ensure the harmonious development of all European territories and to enable the citizens to make best use of natural spatial resources. Nevertheless, significantly different characteristics, needs, and opportunities between the regions require upgrading of the universal approaches and the adoption of region-specific attitudes in designing and implementing spatial development policies (EC, 2010). To that end, certain priority areas have been identified at the European level (EEA, 2004, 2006). Rural/urban regions, therefore, represent one of six main European regional typologies (Dijkstra & Poelman, 2013; EC, 2010).

Urban/rural division classifies space according to the development level. Although the boundaries between the city and the countryside have been increasingly disappearing in recent decades (Perpar & Kovačič, 2002; Ravbar, 2005) because of urbanisation and the accompanying suburbanisation, the differences between urban and rural areas are still relevant both in spatial and developmental terms. Different countries use different criteria and methodologies to distinguish between urban and rural areas in accordance with their own circumstances, and a single definition that would be applicable to all countries therefore cannot be made (UN SD, 2017). Among the most relevant criteria that are used for distinguishing urban from rural are: settlement size, population size, population density, socio-economic characteristics, level of infrastructural development, land cover, etc. The divisions on urban/rural, both in highly developed and in developing countries, becomes increasingly complex as the boundaries between these two entities become increasingly blurred in spatial, social, economic, and cultural terms, i.e. in the terms of 'circumstances of living' (UN SD, 2017).

2 The Overview of Urban/Rural Classifications

"... The difference between city and village as physical forms is not nearly as large as in social or functional terms. The concept and the archetype of settlements' organisation is essentially governed by same rules, same guidelines. It seems almost impossible that a onetime man used to build cities by applying criteria different than those used for villages. A city could only be formed at certain level of civilisation development, at the stage of labour division, emergence of property rights, crafts, trade, and ruling class. This aspect of civilization development and the history of city emphasize, in particular, economic and cultural shifts that later conditioned a different way of building, that is, a physical image of settlements" (Drozg, 1995, p. 20).

To explore urban/rural characteristics and to delineate urban and rural areas, different classification systems and approaches have been developed. The overview of urban/rural typologies and approaches to urban/rural classification helps to deepen the understanding of differing characteristics of rural and urban areas in a consistent, transparent way. At the same time, it shows that no single urban/rural typology can be used for all geographies (Pateman, 2011).

The project entitled *Urban-Rural Relations in Europe* (Bengs & Schmidt-Thomé, n.d.) aimed to investigate relations between identified urban and rural areas across the territory of the European Union. Certain identified areas were further studied on the basis of four approaches that were associated with four phases of discussion about urban/rural spatial relations. The first approach, oriented towards development of rural typology, was based on existing literature and empirical analyses. The second approach aimed to define areas as delineated statistical units, by using established indicators. The third approach was based on statistical analyses and calculated an index of rurality, while the fourth represented the neutral determination of rural boundaries on the basis of combining data on population density, population distribution, and accessibility. Correspondingly, a comprehensive set of indicators for urban/rural classification was produced. Although it was initially assumed that derived indicators could depict structures and flows between urban and rural areas in a satisfactory way, the project results were shown separately for each EU country and thus did not have notable comparative value.

Institutions such as the Statistical Office of the European Union (Eurostat) and the Organisation for Economic Co-operation and Development (OECD) also draw attention to the significance of delineating urban and rural areas. Their aim is to establish definitions and criteria according to which the comparable European areas, as a basis for policy-making in the fields of urban and rural development, would be possible to define. Accordingly, both Eurostat and the OECD have developed methods for determining urban and rural areas, based on population density.

The Eurostat's 1991 concept is built on the criteria called 'degree of urbanization'. It recognises three spatial types according to the density criterion:

- densely populated areas;
- intermediate areas; and
- sparsely populated areas (RAMON, n.d.).

The OECD's 1994 concept is based on the classification of territorial units, either according to the population density or to the degree of rurality, but also takes into account the size of urban centres in a region. The OECD method includes a two steps classification, made for two hierarchical spatial levels – local and regional. The method was introduced and defined in detail, in the *Green Paper on Territorial Cohesion* (Commission of the European Communities, 2008).

The OECD classification scheme recognises predominantly urban areas, intermediate zones, and predominantly rural areas.

Since the development of original concepts, both Eurostat (Fig. 2.1) and the OECD methods have been complemented and amended several times, in order to eliminate deficiencies and improve methodology (Dijkstra & Poelman, 2008, 2013, 2014; Regional Statistics Team, 2013; Statistics Explained, 2013).

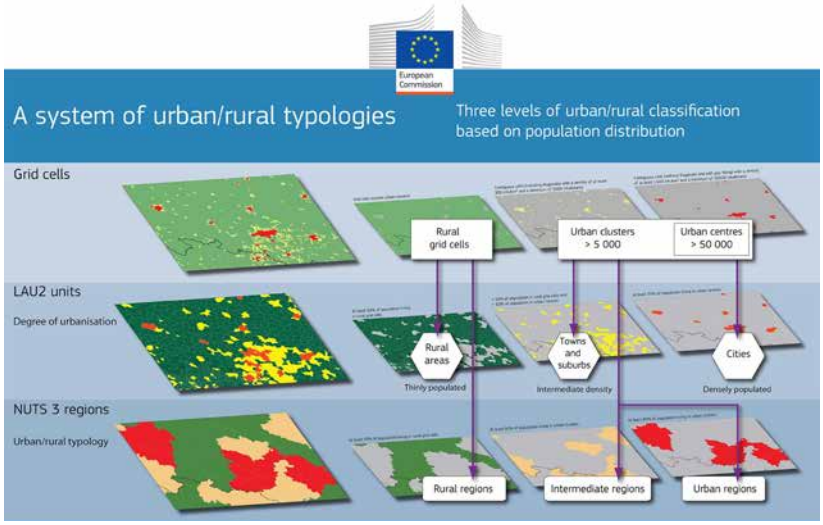

FIG. 2.1 Representation of the three levels of urban/rural, Eurostat classification *(Eurostat, 2012)*

Even though common European classification systems exist, different countries continue to typify urban and rural areas on a national level, because of the particularities found in spatial planning systems, settlement patterns, landscape characteristics, etc. Geographical classifications help to understand better the differences between rural and urban areas, with regard to employment, income, services, and population, on a national level. A detailed overview of current definitions and approaches adopted by countries across the world is presented in the *Inventory of Official National-Level Statistical Definitions for Rural/Urban Areas* prepared by the International Labour Organization (ILO, 2015).

The inventory gives an insight into different national practices. In France, for example, methodology and definitions of zoning in urban areas are provided by the *L'Institut national de la statistique et des études économiques* (National Institute of Statistics and Economic Studies) (INSEE, 2017). Up until October 2011, the INSEE methodology distinguished between predominantly rural areas (including small urban municipalities and rural municipalities) and three types of predominantly urban areas: urban centres, peri-urban rings, and multipolar municipalities. Since October 2011, zoning in urban areas provides only a vision of cities' influences and so it divides a territory into four major types: space comprising large urban areas, space comprising other areas, multipolar municipalities, and isolated municipalities lying beyond the influence of urban centres. Within the types: space comprising large urban areas and space comprising

other areas, centres, and peripheries are additionally distinguished. In Greece and Spain, classification is made only according to the size of the population on municipal and community levels. While the definitions of urban/rural areas vary a little between the two countries, they both use the same threshold values. Urban areas are defined as municipalities with 10,000 or more inhabitants. Semi-urban areas in Greece and intermediate rural areas in Spain are municipalities with 2,000 to 10,000 inhabitants, while rural areas have fewer than 2,000 inhabitants. In Norway, settlement types are determined on population size and the distance between buildings. A hub of buildings is registered as an urban settlement if it is inhabited by at least 200 persons (60 - 70 dwellings) and the distance between the buildings does not exceed 50 metres. A rural settlement is any settlement that is not categorised as urban. Delimitation of urban settlements in Norway is independent of administrative boundaries. *Instituto Nacional de Estadistica* (National Statistics Institute) of Portugal defines predominantly urban areas, medium urban areas, and predominantly rural areas, by classifying administrative districts according to two criteria: population size, and population size relative to district size. According to Scott, Gilbert, and Gelan (2007), there were more than 30 definitions and classifications of urban/rural areas across the UK in 2007. While some classification systems covered only certain areas (for example, the Commission for Rural Communities uplands areas), others encompassed the territory of the whole country but did not exclusively focus on rural and urban issues. Today, there are two main classification types used to divide the UK territory into urban and rural areas. To cover small area data and local authority level data, seven main classification types exist (Pateman, 2011).

3 Application of the Method 'Degree of Urbanisation': Slovenia Case Example

If the territory of the Republic of Slovenia were divided equally between 211 municipalities, then every municipality would be approximately 100 km^2 in area, and if the total population (as recorded in 2012) were evenly distributed over municipalities, then every Slovenian municipality would have just under 10,000 inhabitants, around 800 enterprises, and 4,000 dwellings. This linear (equal) distribution of settlements' characteristics, however, does not occur in real spatial conditions.

A diversified mosaic of statistical and spatial characteristics in Slovenia makes for an interesting study. A relatively small territory of the country is recognisable by large terrain and relief diversity, different types of landscapes, abundant heritage, and species-rich natural systems. Almost 90% of Slovenian territory is at an altitude of over 300m. Although flat contiguous valleys and basins represent only about 20% of its total surface, they are home to nearly 60% of the total population. Divergent, yet relatively unfavourable, natural conditions contribute to the dispersal of settlements, specific structure of land use, and diversity of cultural landscape. According to the number of inhabitants and low

average population density (98 inhabitants/km^2), Slovenia ranks among the least populated EU member states. The typical settlement pattern in flat valleys and basins is compact. In pre-Alpine and Dinaric-karst areas, settlements are sparse, small, and dispersed (MAFF, 2013).

3.1 Slovenian Urban/Rural Classifications and Definitions

One of the first delimitations between urban and rural areas in Slovenia was carried out for census purposes in 1981. On that occasion, the Statistical Office of RS (SORS) defined 224 urban settlements. That number was reduced during the 1991 census when only 182 settlements (3% of the total number of settlements) were defined as urban, according to criteria such as size, morphology, density, and employment. The level of urbanisation in 1991 was 50.5% (this was the percentage of population living in urban settlements). On the other hand, less than 10% of the Slovenian population was labelled as living in agricultural areas. Since 2002, this number has been reduced to below 3%. The data presented demonstrate that Slovenia has one of the highest proportions of deagrarized population in Europe, that is the population living in non-urban (rural) settlements, but employed in industry and services in (nearby) urban centres and who commute to work daily (Pichler-Milanović, Drobne, & Konjar, 2013).

Revised definitions of 'urban settlements' and 'settlements in urban areas' were launched in 2003, yet accompanying classification was used exclusively for statistical surveys and analysis. Criteria for the classification of urban settlements were organised into four groups: number of inhabitants, morphology (population density, built-up areas), functions (number of jobs, daily migrants, transport connections, services), and structural criteria (e.g. number of farms) (Pavlin, Milenkovič, Klasinc, & Grm, 2003). In 2003, 156 Slovenian settlements were defined as urban, of which 104 were urban areas and an additional 52 were defined as settlements in urban areas (i.e. the statistical definition of towns). Additionally, four types of urban settlements were defined: 1) settlements with more than 3000 inhabitants; 2) settlements with 2000-3000 inhabitants, and a surplus of jobs for the number of employed persons; 3) centres of municipalities with at least 1,400 inhabitants and a surplus of jobs for the number of employed persons, and 4) a combination of criteria for determining (sub)urban settlements that form urban areas.

Another classification for settlements in Slovenia is made on the basis of political definitions. The Local Self-government Act (1994) identifies a town as a larger urban settlement that, in terms of population size, economic structure, density, and historical development, differs from other settlements. The minimum population size necessary to qualify a settlement as a town is 3000 inhabitants. Town status is obtained by the decision of the National Assembly of RS (exceptions are those settlements to which the status of the town had been given before the Local Self-government Act, i.e. the historic towns). According

to the political classification, Slovenia currently has 58 urban settlements with town status.

The third type of urban/rural definitions and divisions in Slovenia is administrative. Since 2012, at the administrative level, Slovenian territory has been divided into 212 municipalities of which only 11 are urban (according to the administrative definition of towns).

Slovenian urban/rural characteristics and classifications are explored in different research areas, such as spatial planning, urbanism, economy, etc. Usually, these urban/rural classifications are based on only one characteristic, and so they do not provide an appropriate overview of the complex urban/rural system in the county. To better explain the variety of existing urban/rural typologies and their application in research, some selected methodologies are presented hereinafter.

Perpar, Kastelec, and Udovč (2013) developed a typology based on the economic and developmental performance of Slovenian municipalities, and proposed four classification groups: municipalities with the lowest economic and developmental performance; municipalities with a slightly better economic and developmental situation than the first group of municipalities; sustainability-oriented municipalities (with favourable demographic structure, and economic and environmental status); and municipalities that currently have the best economic and developmental conditions. Despite numerous policies implemented during the last decade, Perpar (2014) has noted that differences in the spatial development of Slovenia are still evident, both between urban and rural areas, and between eastern and western parts of the country. With the goal of ensuring sustainable development, it is necessary to understand the key factors that cause these differences and to prepare effective programmes and development policies for different types of territories (Perpar, 2014).

Although the major part of research on spatial characteristics and classifications deal with urban aspects and levels of urbanity, rural areas are equally important, because of their relation to food security, environmental hazards, cultural landscape preservation, etc. (Fikfak et al., 2017). Kovačič et al. (2000) have derived a classification system of Slovenian rural areas according to their development characteristics and possibilities. The purpose of their research was to determine and delineate different types of rural areas, thus dividing the entire Slovenian territory into developmentally homogeneous areas. In the first phase, three basic typological classes of rural space were identified: suburbs, typical rural settlements, and areas subjected to rapid depopulation. With such spatial delineation, urban areas were intentionally eliminated from further division and determination of types of rural areas. Subsequently, Perpar and Kovačič (2002) carried out a comparative analysis of identified rural areas by using demographic, agricultural, and social indicators. The analyses showed that the differences between the defined types of rural areas are obvious and significant in the planning of rural developments.

Gabrijelčič and Fikfak (2002) proposed another delineation of rural areas based on the degree of responsiveness, the form of phenomena, and the nature of necessary development measures. Accordingly, five types of rural areas were identified: rural areas in the vicinity of densely populated towns, rural tourist areas, rural areas with mixed activities, predominantly agricultural rural areas, and difficult-to-access rural areas.

The European project *Rural Development Statistics,* initiated in 2006, applied the urban/rural typologies of Eurostat and the OECD to the territory of the Republic of Slovenia. The aim of the project was to establish the indicators needed for development planning and monitoring in rural areas (SORS, 2017). The project was carried out by the Statistical Office of the Republic of Slovenia, which delineated and typified urban and rural areas of Slovenia for statistical purposes. Rural areas were determined according to the OECD and Eurostat spatial concepts with the goal of establishing a system of comparable statistics for the whole geographical territory of the European Union (SORS, 2017). While the OECD methodology was used to classify statistical regions (NUTS 3) based on their urban/rural type (Fig. 3.1), the Eurostat methodology 'Degree of urbanisation' was used to classify municipalities according to the population density type (Fig. 3.2).

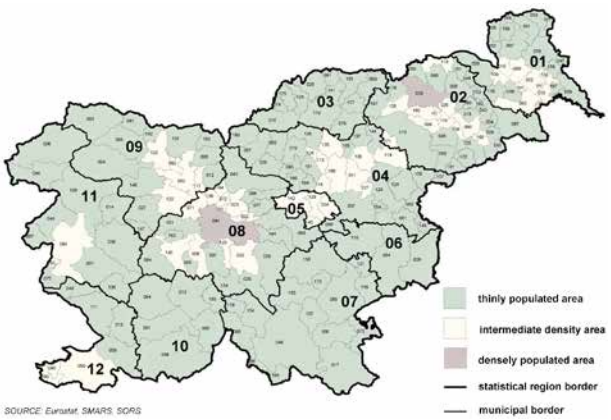

FIG. 3.1 Urban/rural OECD typology, statistical regions (NUTS 3) in Slovenia *(Merc, 2006)*

FIG. 3.2 The Eurostat's 'Degree of urbanisation' typologies, municipalities in Slovenia *(Merc, 2006)*

Since their first application in Slovenia in 2006, the OECD and Eurostat methodologies have been improved several times. Local administrative units (to which population size and population density was previously linked) were replaced by a population grid that is considered a more accurate basis for characterising the areas and regions. In some cases, additional criteria such as accessibility have been added to advance classification detailing.

3.2 Eurostat Methodology Tested on the Example of Slovenia

The Eurostat methodology (RAMON, n.d.; Regional Statistics Team, 2013) is based on population density data and on two additional criteria – the spatial cohesion of units, and the scale of border population. Dijkstra and Poelman (2014) proposed to complement the Eurostat methodology, by which Slovenian municipalities are classified into three groups, based on the degree of urbanisation, along with accessibility criteria. An advanced accessibility model (Drobne, 2003; Drobne & Paliska, 2014) was used for accessibility calculation. The classification of Slovenia was carried out in ESRI ArcGIS software package using raster density of population density data from 2010.

The method is based on the process of combining population density raster cells (size 1 km x 1 km) into the following groups or clusters (Fig. 3.3):

- **urban clusters** – a coherent set of raster cells with a population density of at least 300 inhabitants per km^2 and a minimum of 5,000 people;
- **high-density clusters** – a group of raster cells with a population density of at least 1,500 inhabitants per km^2 and at least 50,000 inhabitants; and
- **rural grid cells** – clusters of cells with population density more then 0, outside the high-density clusters and urban clusters.

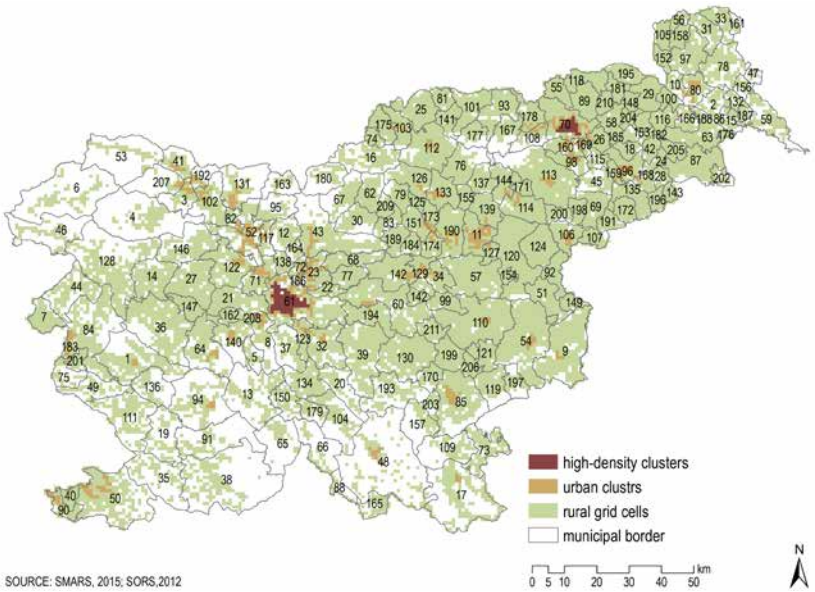

FIG. 3.3 Classification of raster cells based on population density in Slovenia *(Konjar, Zavodnik Lamovšek, & Grigillo, in press)*

The classification of spatial units is then carried out according to the proportion of the population living in identified clusters (Fig. 3.4):

- **densely populated areas** (cities and larger urban areas) – municipalities in which at least 50% of the population lives in high-density clusters;
- **intermediate density areas** (towns and suburbs, small urban areas) – municipalities where fewer than 50% of inhabitants live in rural grid cells and fewer than 50% of inhabitants live in high-density clusters; and

– **thinly populated areas** (rural areas) – municipalities that have more than 50% of inhabitants living in previously defined rural grid cells.

By introducing additional accessibility criteria, a possibility opens for the delimitation of two additional types of municipalities: remote areas with intermediate density, and remote thinly populated areas (Fig. 3.4). Remote areas are delimitated based on the share of the population living in or outside the 45-minute access area to urban centres. The significance of remote areas for the development of Slovenia is recognised in the project *Importance of Small and Medium-Sized Towns* (Prosen, Zavodnik Lamovšek, Žaucer, Drobne, & Soss, 2008). A municipality is classified as remote if more than 50% of its population lives outside the 45-minute access area.

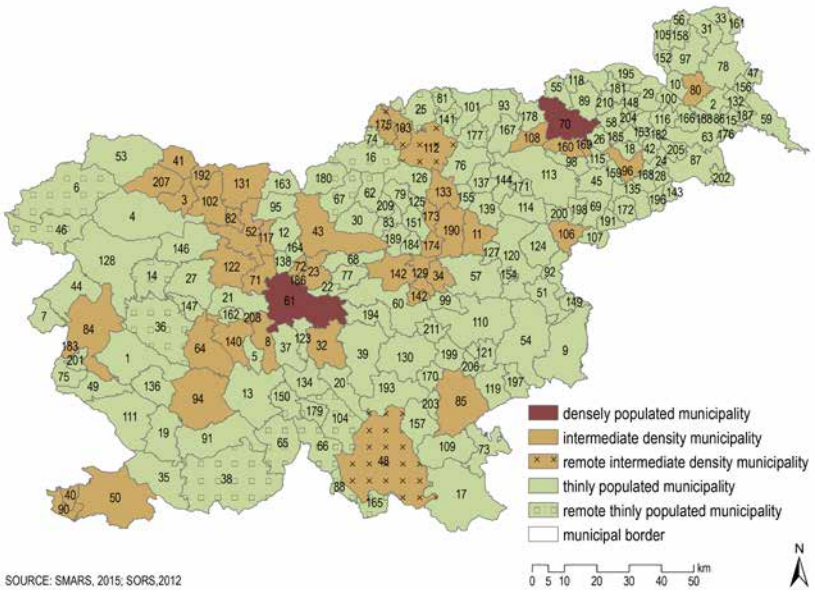

FIG. 3.4 Application of the Eurostat classification methodology. Degree of urbanisation in Slovenia *(Konjar, Zavodnik Lamovšek, & Grigillo, in press)*

3.3 Results Analysis

The implementation process and the analysis of results provide an insight into the strengths and limitations of the applied method. The use of raster data (population grid) has been recognised as a major advantage of the method, which eliminates the influence of spatial units on classification. The basic method (without accessibility criteria) is, however, based on only one type of criteria. The classification thus delimits municipalities in classes only according to the population density data. As it is almost impossible to describe the space by using only one criterion, the methodology fails in recognising some rather small, but important, centres in the Slovenian urban system, with a key function on a regional, or even national, level. At the same time, some of the municipalities are classified as intermediate density municipalities (e.g., Gorje (207), Prevalje (175), Kočevje (48), or Rogaška Slatina (106)) (Fig. 3.4), taking into account only the high percentage of inhabitants living in their rather small municipality centre and neglecting the vast rural hinterland of the municipalities. The reason is the high

concentration of inhabitants only in the major town, which impacts upon the high percentage and thereby on the classification. These examples show the main disadvantage of the tested Eurostat methodology that uses density capita as the only criterion and so does not take into account other aspects, such as the thinly populated rural hinterland of classified spatial units.

INDICATORS	CATEGORY				
	Densely populated area	Intermediate density area	Remote intermediate density area	Thinly populated area	Remote thinly populated area
Number of municipalities	2	41	4	141	22
Population in 2012	392.157	731.232	51.704	792.628	87.775
Population density in the municipality in 2012 (inhabitants/km^2)	928,3	179,9	60,8	65,8	30,3
Total increase of population for the period 2003-2012 (10 years)	14.622	39.360	-417	26.427	-1.324
Total increase per 1000 inhabitants for the period 2003-2012 (10 years)	37,3	53,8	-8,1	33,3	-15,1
Persons in employment by municipalities of residence. Mobility from the municipality.	25.309	145.322	8.381	183.993	16.680
Persons in employment by municipalities of employment. Mobility to the municipality.	137.487	141.057	7.475	88.111	9.646
Number of companies in 2012	46.390	63.529	3.633	53.455	6.298
Public road network density in 2011 (km by km^2)	4,3	2,2	1,1	2,0	1,1
Revenue per capita in 2011	996,1	958,7	1.126,7	1.022,1	1.152,6
Investment per capita of the municipality in 2011	245,1	291,1	474,6	404,5	437,1
Population living in urban areas determined by the Eurostat methodology (in 2012)	370.079,0	523.462,3	31.940,9	79.554,1	0,0
Share of population living in urban areas determined by the Eurostat methodology in 2012 (%)	94,4	71,6	61,8	10,0	0,0
Agricultural area (fields, gardens, permanent plantation, meadows, other agricultural land) per capita in 2012 (m^2/inhabitant)	365,3	1.772,0	3.222,4	5.630,2	6.621,7
Built-up and related areas per capita in 2012 (m^2/inhabitant)	257,6	445,7	497,7	722,1	705,9
Municipality inhabitant average accessibility to cities with at least 10,000 inhabitants (min)	5,4	11,0	39,9	23,1	51,5
Average price per m^2 of unoccupied building land in the municipality (EUR)	123,0	72,2	30,7	30,8	24,0

TABLE 3.1 Indicators by 'Degree of urbanisation' classification categories in Slovenia *(Source: MAFF, 2012; SORS, 2012)*

Additional analyses of the classification were made using a selection of indicators, typical of, or at least strongly connected to, the characteristics of urban area or the level of urbanity. Table 3.1 shows 16 selected indicators that give information about five urban/rural categories defined by the Eurostat classification methodology – 'Degree of urbanisation'.

Notable differences between categories additionally enlarge when compared to the number of municipalities that form each category, especially regarding the total size of the population and the total number of companies per category. Based on the indicators shown, it is possible to observe typical characteristics of each recognised category. This helps to understand the ongoing processes that affect distribution of population and wealth. At the same time, understanding these processes can help to anticipate spatial conflicts that may emerge if identified trends continue. For example, when observing the following indicators, 'total increase of population (10 years)' and 'total increase per 1000 inhabitants', the data demonstrate that the highest increase in population occurs in 'intermediate density areas' (53,8/1000 inhabitants). This finding can be attributed to the scope of the suburbanisation process that happened in the period between 2003 and 2012, as well as to the desire of young Slovenian families and other population structures to live in the countryside and have their own house, possibly with a big garden. Another specificity of Slovenia can be observed when comparing the proportion of the population living in urban areas as determined by the Eurostat methodology in 2012. The share is relatively high in the first three categories that include major regional centres and towns: in 'densely populated areas', it amounts to 94.4%; 71.6% in 'intermediate density areas'; and 61.8% in 'remote intermediate density areas'. The share rapidly drops to 10% in the category of 'thinly populated areas', and even to 0% in 'remote thinly populated areas'. At the same time, these last two categories include 163 of Slovenia's total of 210 municipalities, which shows a large share of the population living in rural areas, according to the used Eurostat indicator. On the other hand, the indicators of 'persons in employment' – by municipalities of residence – point at a large number of mobilities for work in other municipalities. Actually, more than 52% of commuting workers in Slovenia come from 162 municipalities that are classified as 'thinly populated areas' or 'remote thinly populated areas'. Most of them are employed in companies located in 'densely populated' and 'intermediate density areas', as observed by the indicator 'mobility to the municipality' that shows the number of employed persons by municipalities of employment.

4 Discussion

When comparing Eurostat's categories, it seems clear that there are important differences between urban and rural municipalities. Even with these differences, strict spatial division, based on administrative boundaries, does not always portray a real situation (e.g., Fig. 4.1), as

functionality of space is often omitted from classification. Furthermore, strict division based on administrative boundaries neglects that very few units are in fact strictly urban or strictly rural, and that in majority of cases the administrative units actually represent a combination of both types, a 'territory in-between'. In Europe, for example, much of the territory "is neither distinctly urban nor rural but something 'in the middle' or 'in-between'" (Wandl, Nadin, Zonneveld, & Rooij, 2014, p. 50). By utilising classification methodology based on a single criterion (usually the 'resident population density'), an explanatory value is considered as insufficient (OECD, 2011; Scholz, 2009), and the territories-in-between are overlooked (Wandl et al., 2014).

FIG. 4.1 Ljubljana case example: Hrušica (middle) and Bizovik (right) neighbourhoods form parts of Ljubljana urban area, but the situation on the ground points to typical examples of the urban-rural continuum.

Urban/rural classification represents a basis for the definition and implementation of spatial planning policies. Such customised policies define specific processes for each type of area according to the urban/rural dichotomy, in spite of all identified shortcomings. Consequently, the policies do not take into account the real nature of the territories-in-between.

4.1 Urban-Rural Blending

In conditions in which 'urban' and 'rural' terminology has no fundamental defining basis (UK ONS, 2016), it seems even more difficult to grasp the meaning of those areas that are neither rural nor urban, or are both urban and rural. Territories–in–between combine various forms of spatial development, for which planners and researchers use different descriptions, such as urban-rural interface, rurbanisation, suburbanisation, sprawl, urban–rural relations, urban–rural fringe, peri–urbanisation, etc. (Hiner, 2014; Madaleno & Gurovich, 2004; Wandl et al., 2014). To perceive diversity and complexity, and to provide adequate development policies, clearer definitions and redefined methodologies for measurement and comparison of blended territories are needed.

With appropriate planning, blended environments have the potential to capture the most valuable characteristics of both urban and rural contexts. On the other side, urban-rural hybridisation, when overlooked, may result in undesirable conditions. In a constantly transformable, urbanising world, blended territories could become a very frequent

spatial form in future, for which reason the causes of their emergence, processes, flows and states occurring in their development, and the development outlooks, are important to consider. According to these factors, the following forms of urban-rural blending can be identified: the state of urban rurality; blending processes at the urban edge, including the urban-rural continuum; remote urbanity; and rural urbanity.

4.2 The State of Urban Rurality: Rural Space in Transformation

The transformation of rural into urban environment is a well-known process in the history of urban development. Broadly speaking, the whole modern society can be regarded as a "thoroughly transformative environment characterized by rapid, widespread and ongoing reconfiguration affecting all practical-symbolic aspects of human existence" (Dawson, 2016, p. 17).

Under the influence of the global trend towards urbanisation, rural settlements are transforming and acquiring, to a greater or lesser extent, the characteristics of urban settlements. On the other hand, by examining scientific literature and by analysing settlement flows, which help to understand demographic trends, the transformation of social environment, and the urbanisation process, it has been found that the term 'urbanisation' does not only refer to the growth of cities, but to the emptying of remote rural settlements (e.g., across the Western Balkans territory). Therefore, the introduction of urban metabolism (e.g. Levine, Hughes, Mather, & Yanarella, 2007) into a rural environment is a way to prevent its further deterioration and abandonment.

The flows and outcomes of rural transformation into a state of urban rurality are diverse. With the introduction of urban elements into a rural space in the planning process, several sensitive issues emerge, such as the preservation of traditional, cultural, and landscape values, and the application of the principles of sustainability and resilience. Planning process aimed at reaching the state of urban rurality may be considered as particularly crucial for achieving sustainability and resilience of rural communities.

4.3 Blending Processes at the Urban Edge

In suburbanised areas, the most common denomination of the state of spatial development is the 'patterns of transition', representing a result of dynamic dispersing processes flowing from densely populated urban centres towards the countryside. Most authors agree that the phenomenon of suburbanisation may be understood as a spatial expression of societal changes. The manifestations of these changes are reflected not only in urban growth, or the expansion of single-family houses on the outskirts of urban areas (as is the case in Slovenia, for example), but also in the modification of employment structure, both in urban centres and their outskirts.

Another process that provokes spatial changes in peripheral areas is defined as 'de-urbanisation' or 'counter-urbanisation'. These two terms portray the displacement of population from metropolitan to rural areas, or, as described by some authors, the displacement outside the reach of daily migration (Rebernik, 2008). The most common factors that cause counter-urbanisation are: improved road transport network, improved access to rural settlements, ever-longer daily migration, lower costs of rural living, decentralisation of jobs, development of employment opportunities in rural areas, higher incomes and higher living standards, higher share and higher incomes of the retired population, desire to live in a single-family house in a rural setting, rural nostalgia, rejection of the urban environment, etc. (Pacione, 2001; Rebernik, 2008).

Local flows that are related to the changes in societal life (e.g., in the Balkan area from the 1970s) are known as 'urban sprawl'. This phenomenon can be understood as the physical expansion of sites, where the built-up areas of lower densities (including, besides dwellings, the facilities for production and commercial purposes) grow faster than the number of inhabitants. Nonetheless, this process can be considered only as a part of a larger process associated with the much more complex concept of suburbanisation. In fact, sprawl is nothing more than a wasteful land occupation in the suburbs, a consequence of the growth of uncontrolled settlements and the transfer of economic activities from urban to rural areas (Ravbar, 2005, p. 32) (Fig. 4.2).

FIG. 4.2 Sprawling edges of Priština, 2016

The causes of sprawl phenomenon are economic, social, environmental, and legal (Pichler-Milanović, 2007). Types and manifestations of sprawl are to a largely conditioned by the very (primarily social) causes of its emergence. By understanding the causes of urban sprawl formation, the measures for its management can be formulated.

4.4 Remote Urbanity: Non-Rural Forms in Agrarian Landscape

The form of 'remote urbanity' refers to the insertion of distinctive urban and other non-rural elements into typical rural settings, such as remote residential developments (e.g. Kosanović, Popović, & Fikfak, 2016), commercial or production complexes, etc. The difference from other previously defined processes is reflected in the high contrast, and disconnection, between the newly built space and surrounding agricultural landscape (Fig. 4.3). Despite the fact that agricultural land is intensively exploited, inserted urban elements predominate over the agrarian.

FIG. 4.3 Ručetna vas (the name of the settlement includes the word 'village'), municipality of Črnomelj, Slovenia. Visual disconnection between inserted non-rural element and surrounding dispersed rural pattern

Remote urbanity, as a type of urban sprawl, emerged after the Industrial Revolution (e.g. satellite housing settlements as models of Howard's 'garden village'). Further remote urbanisation, in particular housing construction and the related development of supply and service activities, continued after World War II (in the case of the Balkan area). Today, the negative impacts of remote urbanity are brought into relation with the usurpation of fertile agricultural land, pollution generation, alteration of the identity of agrarian landscape, endangerment of rural heritage, and visual intrusion of agrarian landscape. Accordingly, remote urbanity can critically be defined as a habitat fragmentation agent, an instant urbanity with self-organisation and consequent spread of environmental, social, and economic problems.

4.5 Urban-Rural Continuum

In recent decades, the 'rural–urban continuum', characterised by the absence of clear boundaries between rural and urban space, has been accepted as a new form of territory. The intertwining of rural and urban has enabled a greater economic stability of the countryside and a new, richer cultural environment. The idea of rural–urban continuum in society proceeds with the transfer of characteristics and qualities of countryside into urban environment, which is closely related to food

production and self-sufficiency of broader functional urban areas (Fig. 4.4). Nonetheless, accessibility to goods and services in rural-urban areas is generally lower, as mobility and transport options are more modest. This hinders accessibility, both time wise and in physical terms.

The urban-rural continuum is a well-studied phenomenon. Numerous studies on this new form of territory have been undertaken from various disciplinary perspectives, including geography, environmental and spatial planning, and urbanism (Andexlinger et al., 2005; Magnago Lampugnani, Noell, Barman-Krämer, Brandl, & Unruh, 2007; Campi, Bucher, & Zardini, 2000; Couch, Leontidou, & Gerhard, 2007; Woods, 2009; Zonneveld & Stead, 2007). The conducted research has broadened characterisation beyond the population density in order to examine three main spatial qualities: morphology of mixed built and open spaces; connecting and separating role of infrastructure at different scales; and the specific mix of functions on regional level (Wandl et al., 2014).

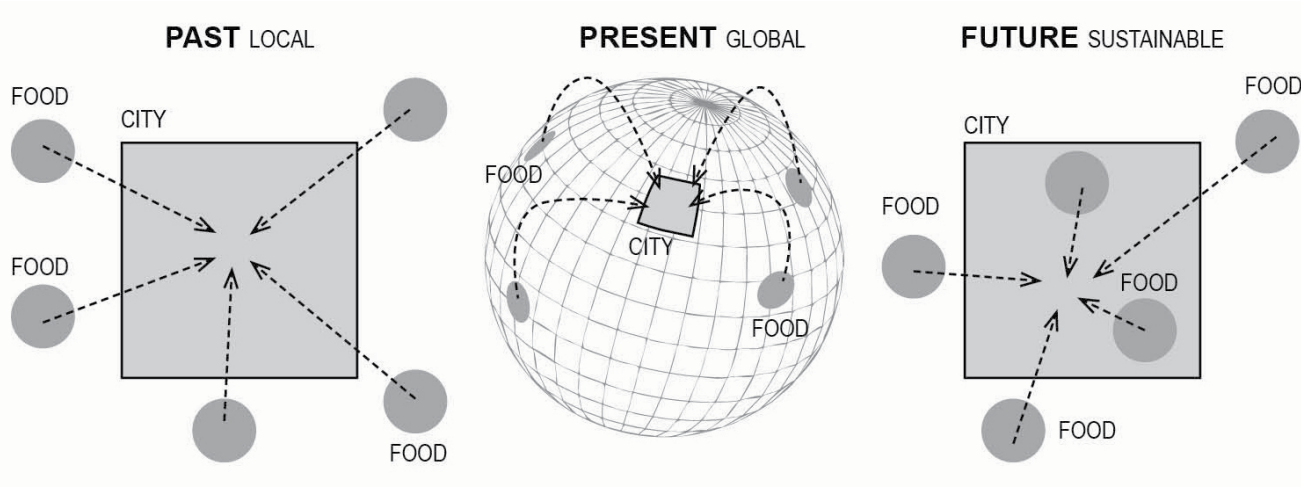

FIG. 4.4 A changing relationship and connectivity between urban and rural *(Fikfak, Mrak, & Zavodnik Lamovšek, 2012)*

4.6 Rural Urbanity

The form of 'rural urbanity' refers to the preservation of existing, or the insertion of new typical rural elements, i.e. the parts of rural heritage into urban matrix, such as vegetable gardening (Fig. 4.5), livestock farms, beekeeping, production of species and herbs, or cultivation of crops. Depending on the origin, rural urbanity could be considered as a process that is integrated into the urban-rural continuum, or as a form inserted among typical urban functions. To that end, Lehmann (2010, p. 103) has noted that "new situations do not necessarily have to be 'designed'; they often emerge and develop by themselves out of the potential of authentic urban places and of what already exists". By inserting rural forms, in line with contemporary urban and architectural design strategies (e.g., Torreggiani, Dall'ala, & Tassinari, 2012), the urban environment seems to nostalgically tend to evoke rural features through sustainability and resilience building measures, in particular through the construction of ecological networks, food supply,

air and water purification, regulation of microclimatic conditions, etc. According to Tzoulas et al. (2007), there is an intricate and inextricable relationship between urban green infrastructure and its impact on human well-being, thus rural urbanity represents a desirable state of an urban environment.

An increase in gardening within urban Western societies in recent years may be seen as an antidote to anxieties and perceived risks associated with changes in lifestyle, including the development of technology, globalisation, and wider environmental degradation (Bhatti & Church, 2004). Recent migrants from rural to urban environments may see the domestic garden primarily as a food resource and not as an aesthetic feature per se (Head, Muir, & Hampel, 2004).

FIG. 4.5 Urban agriculture, Ljubljana, 2017

5 Conclusions

Diverse spatial features offer a variety of opportunities for development, but the development is, from the other side, also influenced by different economic, social, and environmental factors. Recognition and understanding of the differences in space is essential for the smart exploitation of potentials and for the determination of the course of sustainable development. Continuous spatial changes, and the consequent growth in development disparities, represent an additional justification of the need to identify differences among spatial forms.

Despite contemporary criticism, rural/urban classification continues to be used as an elementary territorial division, in line with ongoing spatial transformations and concurrent socio-economic, environmental, and cultural factors. Nonetheless, urban/rural classifications often do not include 'sophisticated' flows, states, and conditions existing in a certain area, especially when urban and rural characteristics are blended or overlapping. The significance of the territories-in-between, the nature

of their metabolism, the impacts they generate, and the course of their development therefore must not be overlooked.

Guidelines for spatial planning should promote non-confrontational interlacing and co-existence of different spatial and cultural patterns and accompanying social structures. Smart urban-rural blending (in spatial, economic, and socio-cultural terms, as presented in this paper) creates a new relationship between natural environment and activities in built space. The interlacing of rural and urban culture in agrarian areas allows for greater economic stability and a richer cultural environment. Equally significant, the introduction of rural urbanity promotes environmental regeneration as an advanced form of urban sustainability.

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