

TOWN

Small and medium sized towns in their functional territorial context

Applied Research 2013/1/23

Case Study Report | *Slovenia*
Version 05/09/2013



This report presents the interim results of an Applied Research Project conducted within the framework of the ESPON 2013 Programme, partly financed by the European Regional Development Fund.

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1 NATIONAL CONTEXT

1.1 National definitions of SMSTs

Slovenia is a small Central European state with a total surface area of 20,273 km² and only 2 mil. inhabitants, and borders with Italy (232 km), Austria (330 km), Hungary (102 km) and Croatia (670 km), and the Adriatic Sea (43 km). Geographically, Slovenia is located at the cross roads of Alpine, Pannonian and Mediterranean areas. In 1991 Slovenia gained the independence from the former Yugoslav Federation, and became a fully-fledged member of the European Union (EU) in May 2004. In January 2007 Slovenia was accepted in EURO monetary zone and from January 2008 in »Schengen« visa regime countries. In June 2010 Slovenia has become a member of the OECD (see Pichler-Milanović, Kreitmayer McKenzie, 2008, Zavodnik Lamovšek, Pichler-Milanović, 2010).

With the average density of 99.7 inhabitants per km², Slovenia is amongs relatively dense countries in Central Europe but the differences within Slovenia are notable. The most densely populated (more than 250 inhabitants per km²) areas are visible in urban areas especially in the capital city of Ljubljana (more than 750 inhabitants per km²) and in Maribor, the second largest city in east Slovenia. In other urban areas the population densities are lower. The lowest population density can be observed in rural areas (up to 10 inhabitants per km²) and in less populated mountain and forest areas (Alps, Dinarics) of Slovenia.

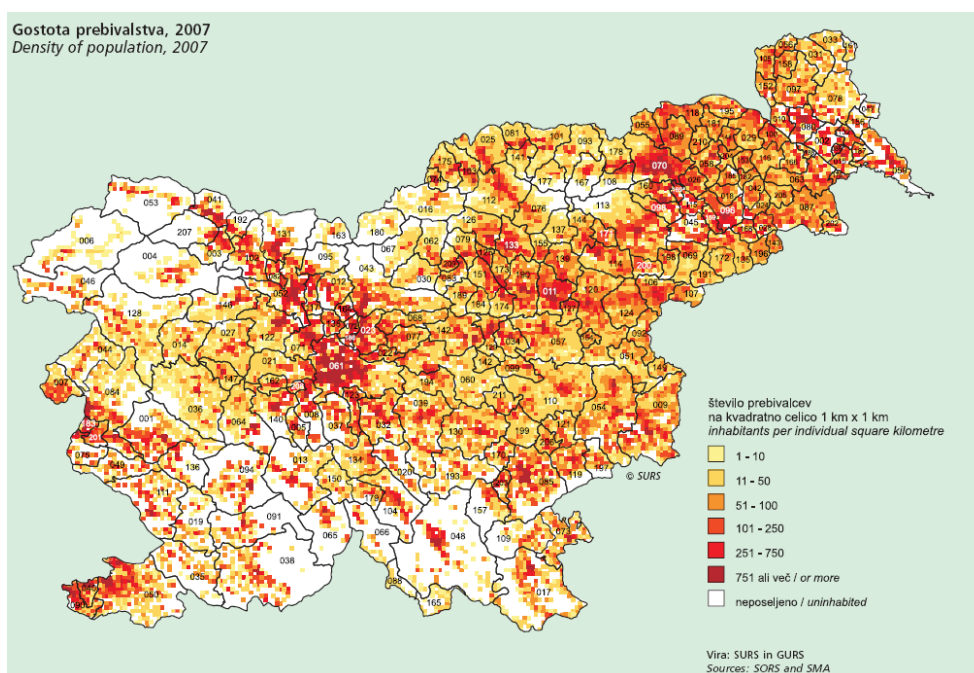


Figure 1.1. Population density (2007) in Slovenia (inhabitants per km²; Source: Statistical Office of Republic of Slovenia (SORS); The Surveying and Mapping Authority of the Republic of Slovenia).

In Slovenia there were **6031 settlements** (LAU 7) in year 2012 of which 48.5% of settlements have less than 100 inhabitants. In these settlements live less than 7% of Slovenian inhabitants. In addition there are 20 towns with 5,000 – 10,000 inhabitants and 10 towns with 10,000 – 20,000 inhabitants. In seven towns with more than 20,000 inhabitants – Ljubljana (272,140), Maribor (94,318), Celje (37,554), Kranj (37,062), Velenje (25,481), Koper (24,923) and Novo mesto (23,350) live 25% of Slovenian inhabitants (SORS, 2012).

Table 1.1. Population of the largest towns in Slovenia (Source: Pichler-Milanović, 2005; SORS (various years).*

Census years	1900	1931	1948	1953	1961	1971	1981	1991	2002**	2012
Total urban pop. (%) in Slovenia	17.5	22.7	26.9	29.1	33.2	38.7	48.9	50.5	50.8 (49.0)	49.8
Ljubljana	45,017	79,391	98,914	113,666	135,806	173,853	224,817	267,008	258,873	272,140
Maribor	31,337	46,251	62,677	70,815	82,560	96,895	106,113	103,961	92,284	94,318
Celje	9,471	13,576	16,083	18,549	22,424	31,305	33,033	40,710	37,547	37,554
Kranj	5,220	8,308	15,981	17,827	21,477	27,211	33,520	36,456	35,237	37,062
Koper	8,230	8,035	7,381	6,666	10,512	17,116	23,581	24,704	23,285	24,923
Novo mesto	2,750	4,173	4,218	5,134	6,885	9,668	19,741	22,333	22,368	23,350
Velenje	TBC	TBC	1,863	2,794	6,309	11,751	25,944	30,287	26,742	25,378

* Population of urban settlements;

** Rate of urbanisation (49%) in year 2002 as based on calculations of population in 182 urban settlements (as in year 1991) and not on 156 urban settlements (50.8% as in year 2002).

For the purposes of Census 1981 the Statistical Office of RS (SORS) had defined 224 urban settlements. For the Census 1991 only 182 settlements (3 percent of the total number of settlements) were defined as urban settlements based on their size, morphology, density and employment, comprising half of all inhabitants in Slovenia. In 1991 the official level of urbanisation was 50.5 percent (i.e. population living in urban settlements). According to the Census 2002 data, and the same number of urban settlements as in year 1991 (182), the urbanisation rate declined to 49.0 percent, as a consequence of the suburbanisation process. (Pavlin et al. 2003; Pichler-Milanović et al, 2008).¹

Rather low rate of urbanisation in Slovenia need to be taken in comparison with the low number of agriculture population. In 1991 less than 10 percent of inhabitants in Slovenia were employed in agriculture. Since year 2002 this number has been even less than three percent. The difference means that Slovenia is a country with one of the highest proportion of *deagrarised* population in Europe - i.e. population living in non-urban (rural) settlements but employed in industry and services in (near-by) urban (employment) centres and daily commuting to work.

The number of urban settlements (182) between 1991 – 2002 censuses did not take into account suburban settlements of larger (urban) settlements. The criteria according to which suburban settlements could be defined as urban settlements were not known. In order to prepare the new list of urban settlements the Statistical Office of RS decided to use the method that is entirely based on statistical data. The new list of i.e. »urban settlements« and »settlements in urban areas« was prepared in year 2003 and used exclusively for statistical surveys and analysis. The indicators for determining urban settlements were joined into four groups of criteria: *number of inhabitants*, *morphology* (population density, built-up areas), *functions* (number of jobs, daily migrants, transport connections, services), *structural* (e.g. number of farms) (Pavlin et al., 2003; Ravbar, 1993; Vrišer, 1995). Therefore only 156 settlements in Slovenia are defined by the Statistical Office of RS (2003) as »urban

¹ In settlements with less than 500 inhabitants (92 percent of all settlements) live 34 percent while in 15 settlements (towns) with more than 10,000 inhabitants live 32 percent respectively of all inhabitants in Slovenia.

settlements« of which 104 are »urban areas« and additional 52 are defined as »settlements in urban areas« (i.e. **statistical definition of towns**).

Table 1.2. Number of inhabitants in the largest towns in Slovenia (2003; Source: SORS, 2003).

Town	Urban settlement	Urban area
Ljubljana	247,772	249,442
Maribor	91,540	106,258
Celje	36,576	36,639
Kranj	34,330	38,661
Velenje	25,481	25,481
Koper	22,766	25,768
Novo mesto	21,359	21,359

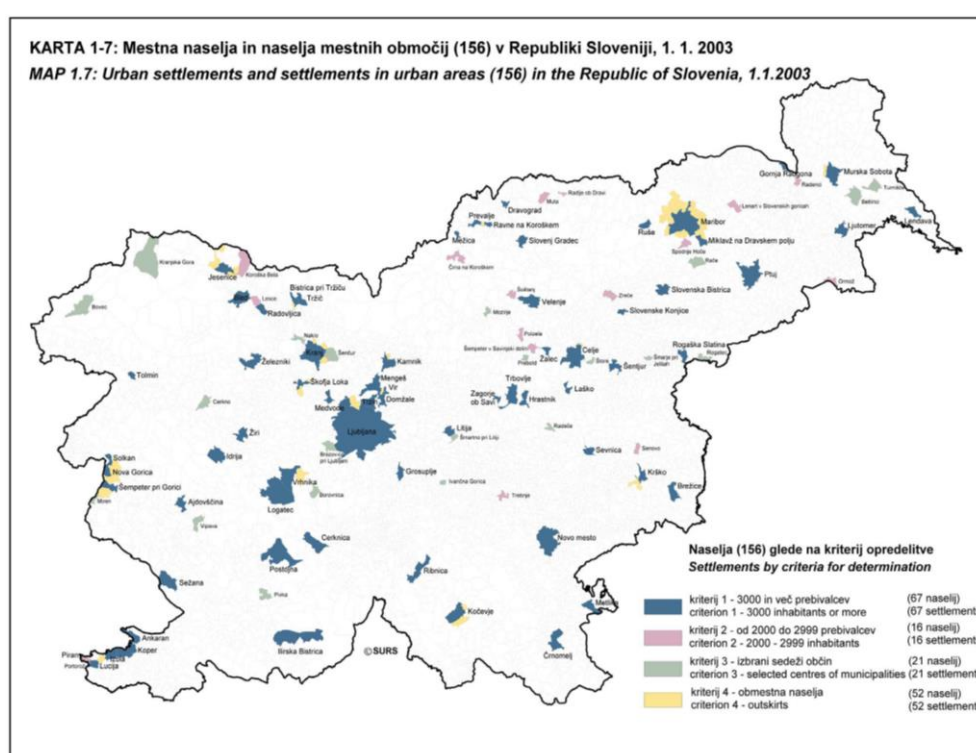


Figure 1.2. Urban settlements in Slovenia (Source: SORS, 2003).

»Urban area« represents the central urban settlement that gives urban areas its name, including all neighbouring (suburban) settlements that are gradually becoming part of it in spatial terms. These suburban settlements are connected with the central urban settlement by built up areas, roads, public parks, and other elements of urban structure. Therefore four types of urban settlements were defined: (i) *settlements with more than 3000 inhabitants* (67 settlements); (ii) *settlements between 2000-3000 inhabitants, and a surplus of jobs over the number of employed persons* (16 settlements); (iii) *centres of municipalities with at least 1,400 inhabitants and a surplus of jobs over the number of employed persons* (21 settlements), and (iv) *a combination of criteria for determining (sub)urban settlements that form urban areas* (52 settlements). Therefore the list of »urban settlements« with »settlements in urban areas« thus includes total of **156 urban settlements and 104 urban areas**. Urban areas only come to exist around urban settlements with over 5000 inhabitants.

According to this new classification of urban settlements, the urbanisation rate in Slovenia in year 2002 was 50.8%, showing the importance of small (non)urban settlements, effected by intensive suburbanisation process in 1990s (Pavlin et al., 2003; Pichler-Milanović et al., 2007).²

According to the Local Self-government Act (1994) a »**town** is a larger urban settlement that in terms of population size, economic structure, density and historical development differs from other settlements«. A town has a population of more than 3000 inhabitants. A settlement obtains town status by decision of the National Assembly of RS. As regards settlements that have already been given a »town« status in accordance with regulation valid when the status was given, the National Assembly can only confirmed their status (e.g. "historic towns"). Therefore according to the *Official Journal of Republic of Slovenia* (no. 22/00 and no. 122/05) there are **50 towns** in Slovenia. Some municipal councils declared another **7 towns**. There are also some (urban) settlements with no status of »towns« despite fulfilment of criteria defined by the *Local Self-government Act* (Kušar, Pichler-Milanović, 2010; Pichler-Milanović et al, 2008). Therefore there are **58 urban settlements in Slovenia with the status of »towns«** (i.e. political definition of towns).

At the administrative level Slovenia is divided into 212 *municipalities* (NUTS 5 / LAU 2) in year 2012 of which only **11** are **urban municipalities** (i.e. administrative definition of towns).

1.2 Literature overview of studies of national/regional settlement systems and SMSTs

1.2.1 Research on central places in Slovenia

First studies of **central places** in Slovenia date in late 1960s, when Igor Vrišer and Vladimir Kokole defined central places in Slovenia, their hierarchy and gravitation influence. In 1971 V. Kokole prepared a new and more detailed research on central places in Slovenia. The next important milestone in analysing central places in Slovenia was in 1987, when I. Vrišer prepared a new categorisation of central places in Slovenia using almost the same indicators as in his previous research. He defined 600 central places in seven (7) hierarchical levels. Vrišer prepared the new analysis of central places also in year 1994 using the same methodology as in 1987. He defined 612 central places (Černe et al, 2007).

In 2005 there were 554 central places in Slovenia (or less than 10% of the total number of settlements) of which the largest towns – the capital city Ljubljana and Maribor were defined as »macro-regional centres«, 6 towns were defined as »regional centres«, while additional 9 towns were »subregional centres«. The other centres are defined as »(inter)municipal (47), rural and industrial (132) and local centres (358) (Černe et al, 2007).

² From the original list of 224 urban settlements (1981), the current list of 156 urban settlements does not include 46 settlements, while not taking into account 58 settlements that have merged with central urban settlements because of the administrative changes in 1980s in order to form 182 urban settlements (1991). The new list of 156 urban settlements (2003) includes 40 settlements that were not determined for the Census 1991.

Table 1.3. Central places in Slovenia (1987, 1994, 2005; Source: Kušar and Pichler-Milanović, 2010).

Degree of centrality	1987	1994	2005
I Local centres	392	384	358
II Rural and industrial centres	151	168	132
III Municipal and (inter)municipal centres	42	47	47
IV (Sub)regional centres	7	9	9
V Regional centres	6	6	6
VI Macro-regional centre (Maribor)	1	1	1
VII National centre (Ljubljana)	1	1	1
Total	600	612	554

Table 1.4. Research on central places in Slovenia and position of Ljubljana (Source: Černe et al, 2007; Kušar and Pichler-Milanović, 2010).

Author	Hierarchy of central places	Position of Ljubljana
V. Kokole (1968)	8 levels (urban centres only; separate ranks for industrial and rural centres)	the highest position
I. Vrišer (1968)	7 levels (265 central places): - local centres - municipal centres - county centres - district centres - sub-regional centres - regional centres - national centres	6 th level (regional centre), but the highest in Slovenia (classification was prepared for the territory of Yugoslav Federaton)
V. Kokole (1971)	9 levels (534 central places): - sub-central village - central village - rural centre - 7 hierarchical levels of towns	the highest position (9 th level)
I. Vrišer (1987)	7 levels (600 central places): - local centres - rural and industrial centres - communal centres - county centres - district centres - provincial centre - republican centre	the highest position (7 th – republican centre in Yugoslav Federation)
I. Vrišer (1994)	7 levels (612 central places): - local centres - rural and industrial centres - ex-communal centres - county centres - district centres - provincial centre - republican centre	the highest position (7 th – the capital city of Republic of Slovenia)

The latest research on central places in Slovenia was conducted by Dejan Cigale (2002) and Monika Benkovič-Krašovec (2005). Cigale had prepared the central-place study in year 1999 on the basis of questionnaires and statistical data about provision of central functions with different services. He distinguished two »macro-regional« centres (Ljubljana, Maribor), 17 »mezo-regional« centres and 79 »micro-regional« centres. Besides that there were also numerous smaller, less important centres on the lower hierarchical levels. When comparing his results with central-place hierarchy of I. Vrišer from 1987, Cigale pointed out numerous changes in the central-place relationship, especially on the *micro-regional level*, where due to the growing importance of some smaller centres the network of micro-regional central places has become denser. The importance of smaller settlements, which are municipal centres now, has been enlarged. Cigale did not highlight the role of Ljubljana as the capital city of independent state, and as a centre of inter-national importance in the cross-border

and European context. Cigale (2002) discussed only the role of central places of higher ranks, while M. Benkovič-Krašovec prepared a thorough study of central places at lower levels. According to presence of selected services in settlements she had defined 358 central places of the first level and 132 settlements of the second level (Černe et al, 2007).

A comparison of different categorisation of central places in Slovenia shows that in the system of approx. 6,000 settlements only 10% of settlements have some role from the aspect of distribution of central place activities. Ljubljana has the highest position in the central place hierarchy, because it is the largest (urban) settlement in Slovenia with many socio-economic and cultural functions. Ljubljana is also the capital city of Slovenia since the independence of Slovenia in year 1991 from the former Yugoslav Federation.

1.2.2 Polycentric urban development concepts in spatial development strategies of Slovenia

In the *polycentric spatial development concepts* from 1980s, the most important urban centres in Slovenia (e.g. *regional centres*) with their gravitation areas (*»planning regions«*) were already highlighted. The **polycentricity** has been the basic development concept of Slovenia for more than 40 years, through the allocation of jobs, services and investments in “regional centres” (medium-size towns) and “local centres” (small towns) according to the adopted hierarchy of central places important for social and economic development of their gravitation (catchment) areas, and as a regional policy instrument for development of less populated and less socio-economically developed areas. The adopted system of central places (urban system) with different population size and functions, and the gravitation areas of larger urban centres (e.g. *planning regions*) were implemented in 1980s in the comprehensive **Long-term Development Plan of Slovenia 1986-2000**. This strategic spatial document was emphasising the most important *12 regional (urban) centres* (Ljubljana, Maribor, Celje, Kranj, Novo mesto, Koper, Nova Gorica, Murska Sobota, Postojna, Trbovje, Krško, Ravne na Koroškem) and *3 sub-regional centres* (Velenje, Ptuj, Jesenice) including five city conurbations (Koper–Izola–Piran; Trbovlje–Zagorje–Hrastnik; Slovenj Gradec–Ravne na Koroškem–Dravograd, Krško–Brežice; Jesenice–Radovljica), and more than 40 local (municipal) centres (small towns) - as the largest and functionally most important towns (urban settlements) with jobs, socio-economic activities and services in Slovenia.

Table 1.5. »Regional centres« in different polycentric concepts (1974-2004; Source: Drozg, 2005; SPRS, 2004).

	1. concept (1974) <i>13 centres</i>	2. concept (1986) <i>12 centres</i>	3. concept (2004) <i>15 centres</i>
Higher rank	Ljubljana, Maribor, Celje, Novo mesto, Koper	Ljubljana, Maribor, Celje, Novo mesto, Koper, Nova Gorica	Ljubljana, Maribor, Koper-Izola-Piran
Lower rank	Nova Gorica, Kranj, Murska Sobota, Ptuj, Slovenj Gradec, Zagorje-Trbovje-Hrastnik, Krško-Brežice, Jesenice-Radovljica-Bled	Kranj, Murska Sobota, Ptuj, Slovenj Gradec-Ravne na Koroškem-Dravograd, Zagorje-Trbovje-Hrastnik, Jesenice-Radovljica-Bled	Celje, Novo mesto, Nova Gorica, Murska Sobota, Velenje, Postojna, Ptuj, Slovenj Gradec-Ravne na Koroškem-Dravograd, Kranj, Jesenice-Radovljica-(Bled), Zagorje-Trbovje-Hrastnik, Krško-Brežice-Sevnica

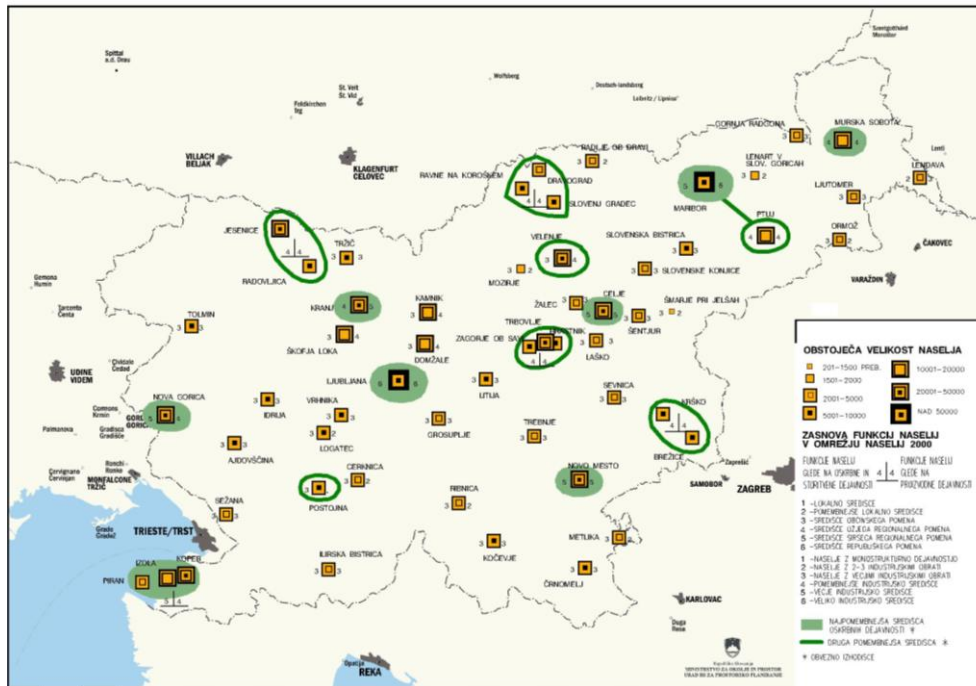


Figure 1.3. Concept of polycentric urban system in 1980s in Slovenia: regional and local urban centres (58) with city conurbations (Source: Long Term Development Plan of Republic of Slovenia 1986-2000. Ministry of Environment and Spatial Planning of RS).

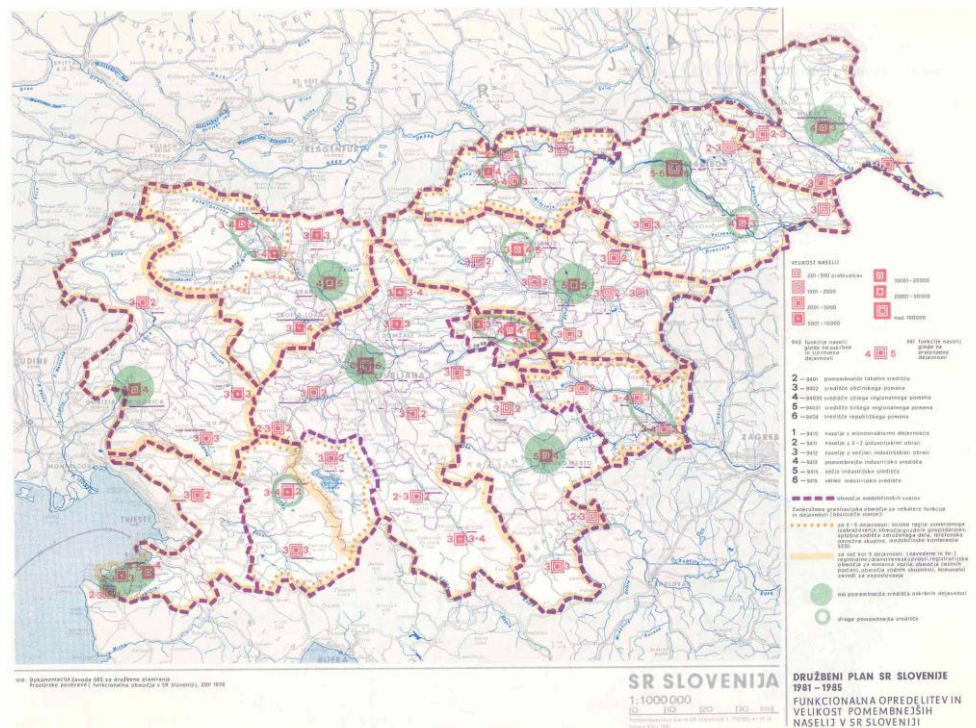


Figure 1.4. Concept of polycentric urban system: »regional centres« (8+3+1) with 12 »planning regions« in 1980s in Slovenia (Source: Long Term Development Plan of Republic of Slovenia 1986-2000. Ministry of Environment and Spatial Planning of RS).

The independence of Slovenia (1991) and the local government reforms taking place since year 1994 has brought transformation of former communes (62) to new (NUTS 5 / LAU 2) municipalities. The gravitation areas of 12 regional centres (e.g. catchment areas of schools, health and employment services, courts of justice, management of forests, roads, telephone

network, inter-municipal cooperation, travel-to-work areas, etc) - known in 1970s and 1980s as »planning regions« became in mid-1990s 12 “statistical” NUTS 3 regions.

The urban hierarchy has been also slightly transformed in the new *Spatial Development Strategy of Slovenia* (2004) - defining »centres of (inter)national, regional, inter-municipal importance« - together **50 »urban centres« with 64 towns and other urban settlements**, taking into consideration also city conurbations at all levels (*i.e. policy definition of towns*).

The most important *regional centres* (or the »centres of national importance«) in SPRS (2004) are: Ljubljana, Maribor, city conurbation Koper-Izola-Piran, Celje, Kranj, Novo mesto, Nova Gorica, Murska Sobota, Velenje, Postojna, Ptuj, and city conurbations: *Slovenj Gradec-Ravne na Koroškem-Dravograd*, *Jesenice-Radovljica-(Bled)*, *Zagorje-Trbovlje-Hrastnik*, *Krško-Brežice-(Sevnica)* with their (15) gravitation zones (i.e. functional urban areas) that are not territorially specified, and overlap between each other. Ljubljana, Maribor and conurbation Koper-Izola-Piran are also named as »centres of international importance« due to their population size, status of the capital city of Ljubljana, the importance of port of Koper for Central Europe, and geographical location of city conurbation Koper-Izola-Piran near the borders with Italy and Croatia, and the second largest city of Maribor near the borders with Austria, Hungary and Croatia.

The new polycentric development concept (as before) emphasise the improved (equal) accessibility to public goods – administration, jobs, services and knowledge, that are located in urban centres which are also important transportation nodes in Slovenia, and in Central Europe. Therefore polycentric development of *urban centres* - (inter)national, regional and local (3 + 12 + 15 + 20 centres) corresponds to the *balanced regional development* concept and infrastructure development along main European corridors V and X. The importance of urban agglomerations, city clusters and their morphological and functional urban areas are being envisaged by the experts and policy makers, with potentials for cross-border cooperation taking in consideration improved cross-border mobility, accessibility, new institutional links and networks, and enhanced cross-border, inter-regional and trans-national cooperation, with Slovenia’s accession to the EU in year 2004.



Figure 1.5. Polycentric urban network in Slovenia (Source: *Spatial Development Strategy of Slovenia* (SPRS, 2004), Ministry of Environment and Spatial Planning of RS).

Figures 1.5 and 1.6 show:

- **50 »urban centres«** = 42 towns + 8 conurbations (with 21 towns and other urban settlements) = **62 towns and other urban settlements**; classified as:
 - **3 »centres of international importance«**: Ljubljana, Maribor, conurbation Koper-Izola-Piran;
 - **12 »centres of national importance«**: 8 towns (Murska Sobota, Ptuj, Celje, Velenje, Kranj, Novo mesto, Postojna, Nova Gorica) + 4 conurbations (*Jesenice-Radovljica (Bled)*; *Zagorje-Trbovlje-Hrastnik*; *Slovenj Gradec-Ravne-Dravograd*; *Brežice-Krško-Sevnica*);
 - **15 »centres of regional importance«**: 13 towns + 3 conurbations (*Domžale-Kamnik*; *Šmarje pri Jelšah-Rogaška Slatina*; *Tržič-Bistrica*);
 - **20 »centres of inter-municipal importance«**: small towns and other urban settlements.



Figure 1.6. Polycentric regional urban network and their wider (functional) urban areas in Slovenia (SPRS, 2004; Source: Ministry of Environment and Spatial Planning of RS).

Figure 1.6 shows **15 urban »centres of (inter)national importance« with their potential functional urban areas.**

Despite different specifications of urban settlements and towns - there is still no official policy definition(s) of small and medium size towns in Slovenia. The recent study of small and medium size towns in Slovenia (Prosen et al., 2008) with quantitative and qualitative analyses of urban network of Slovenia was methodologically based on several other (inter)national comparative studies of urban systems. From 104 *urban settlements* (or *urban areas*) as defined by SORS (2003) the analysis has shown that only 10 urban settlements can be considered as **medium-size towns** (> 20,000 inhabitants) while 94 urban settlements are **small towns** (> 1,000 inhabitants). The *Spatial Development Strategy of Slovenia* (SPRS, 2004) defines **15 »centres of (inter)national importance«** (including five city conurbations) of which only 10 urban centres are actually medium-sized towns (Prosen et al., 2008). The only largest city is the capital city of Ljubljana, defined by SPRS (2004) (only) - as one of the three

»centres of international importance«, together with the second largest city Maribor in east Slovenia, and city conurbation Koper-Izola-Piran at the Adriatic coast.

Small towns that are defined by SPRS (2004) as »(sub)regional« or »inter-municipal centres« have not developed all the necessary functions, services and economic activities needed to become regional centres, and they are also facing structural problems. Deferred development of small towns in some cases can be found in their proximity to larger urban centres (e.g. medium-size towns) that can be an obstacle to their development (Pichler-Milanović and Kreitmayer McKenzie, 2008; Pichler-Milanović et al., 2008).

Therefore the polycentric urban network in Slovenia is mainly based on **small towns** that in most cases are urban centres of local importance. They are not strong or large enough to become development poles of wider areas. Some (urban) municipalities are establishing inter-municipal links in order to become i.e. functioning urban agglomerations or city conurbations at the national, regional or inter-municipal level. This type of inter-municipal cooperation occurs mainly at the informal level of cooperation or if municipalities are involved in joint development projects (i.e. public transport, environmental protection, tourist infrastructure, etc). Such examples are city conurbations of national importance Koper-Izola-Piran (Obalno-kraška region), Trbovlje-Hrasnik-Zagorje (Zasavska region), Brežice-Krško-Sevnica (Posavska region), Slovenj Gradec-Ravne na Koroškem-Dravograd (Koroška region).

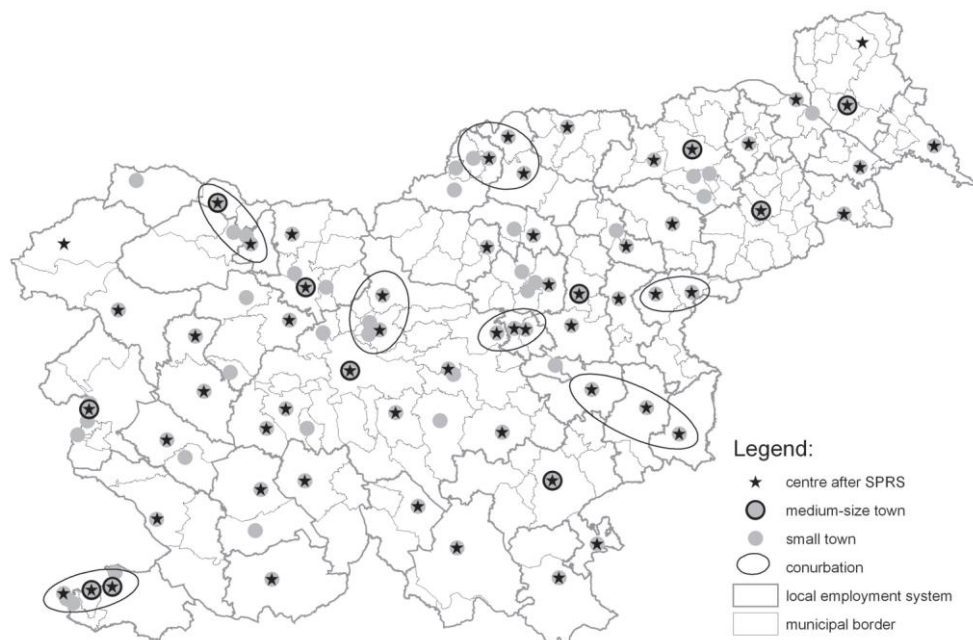


Figure 1.7. Medium size and small towns (Prosen et al, 2008) in comparison with the definition of urban centres (SPRS, 2004) and local labour systems (RePUS, 2007; Source: Prosen et al. 2008; Zavodnik Lamovšek et al. 2008).

Therefore despite different definitions of “towns” - there are no official definitions as yet for medium-size or small towns in Slovenia.

1.2.3 Functional urban areas in Slovenia

The most significant spatial processes in Slovenia in the past 20 years, such as ageing of population, intensive suburbanisation and urban sprawl, property market development, different spatial distribution of jobs in public and private sectors, intensive mobility, etc.,

have all had important effects on transformation of traditional settlement patterns and landscape areas with establishment of different agglomerations and wider urban areas.

During the preparation of the revised polycentric urban network concept as part of the new *Spatial Development Strategy of Slovenia* (2004), the importance of wider urban areas such as urban agglomerations, urban conurbations and their morphological and prospective functional urban areas, with enhancement of cross-border links, are being envisaged by research and planning experts, taking in consideration Slovenia's membership of EU (2004), improved cross-border mobility and accessibility, and institutional cooperation in the transnational programmes of the EU. During the past 10 years several research projects at the national and EU level were trying to define these **functional urban areas** in Slovenia implementing different concepts and criteria, as basic units for implementation of territorial cohesion policies - through participation of academic, research and administrative institutions in different European projects such as: ESPON 1.1.1 (2004), ESPON 1.1.3 (2004), ESPON 1.4.1 SMESTO (2006), INTERREG III B CADSES: CONSPACE (2006), RePUS (2007), PlaNet CenSE (2006), and EU Framework Programmes.

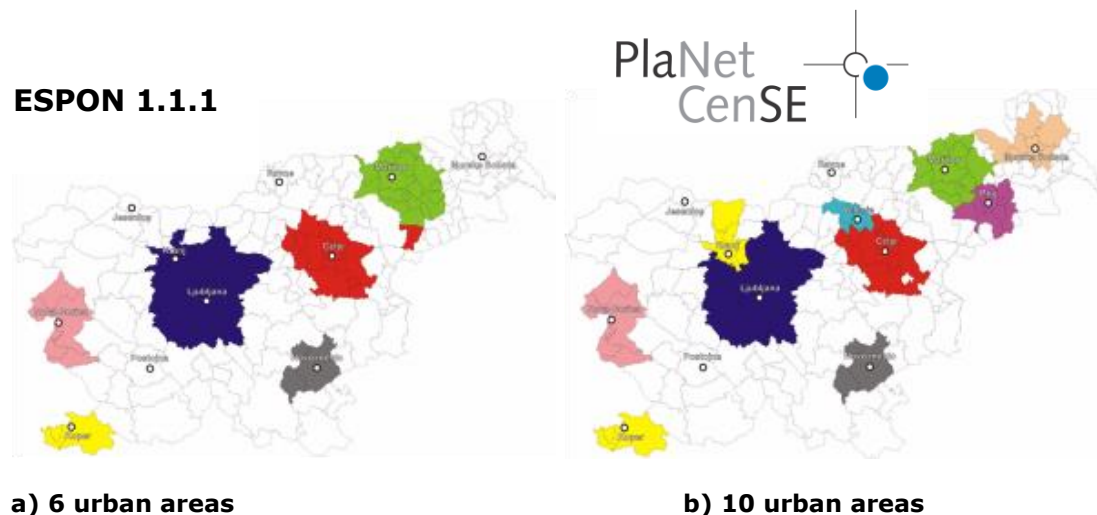
Most jobs and economic activities in Slovenia are concentrated in wider urban areas of Ljubljana, Maribor, Celje, Coastal conurbation Koper-Izola-Piran, followed by Kranj, Novo mesto, Velenje, Nova Gorica. Therefore travel-to-work mobility are the most intensive towards these urban centres. Most intensive daily commuting occurs in the gravitation areas of the largest employment (*regional*) centres such as Ljubljana, Kranj, Maribor, Celje, Velenje, Krško-Brežice, Koper-Izola-Piran, Novo mesto, Nova Gorica, Ptuj, Slovenj Gradec-Ravne na Koroškem, Murska Sobota. Therefore the *Strategy of Spatial Development of Slovenia* (2004) promotes these **15 »centres of national importance«** (e.g. *regional centres*), including five city conurbations, and their gravitation areas (i.e. commuting zones) as potential functional urban areas, even though they are not territorially defined. Twelve of these 15 »centres of national importance« are also »urban centres« of current 12 NUTS 3 (statistical / development) regions.

The project ESPON 1.1.1 (2004): *Potentials for polycentric development in Europe* was taking in consideration *functional urban areas* (FUA), as travel-to-work areas of the main urban centres according to the common criteria implemented for approximately 1600 FUA in 29 European countries. The FUA consists of an urban core and the surrounding area that is economically integrated with the centre, and represents the (sub)regional labour market area.³ The analysis of FUA in Slovenia was prepared firstly according to the proposed methodology without any special modifications. As a result six FUA of European importance were selected: Ljubljana (with Kranj), Maribor (with Ptuj), Celje (with Velenje), Novo mesto, Koper-Izola-Piran and Nova Gorica. According to the weighted results of ESPON 1.1.1 indicators, Ljubljana FUA is the only one urban area in Slovenia with the status of "weak" MEGA (Metropolitan European Growth Area) as one of 76 MEGAs in Europe. Due to the sea port function of international importance Koper-Izola-Piran FUA was given the status of transnational/national FUA while four FUA Maribor-Ptuj, Celje-Velenje, Novo mesto, Nova Gorica were identified as regional/local FUA.

For Slovenia it is important to remain focused on small and middle-sized towns. For the purpose of implementation of the INTERREG IIIB CADSES project *PLANET SENCE*, the Ministry of Environment and Spatial Planning of RS (re)defined **10** FUA in year 2006 showing the most

³ The quantitative criteria are described in the following way: "In countries with more than 10 million inhabitants, a FUA is defined as having an urban core of at least 15,000 inhabitants and over 50,000 in total population. For smaller countries, a FUA should have an urban core of at least 15,000 inhabitants and more than 0.5% of the national population, as well as having functions of national or regional importance (ESPON 1.1.1, 2004).

important *regional centres* in Slovenia – Ljubljana, Maribor, Koper-Izola-Piran, Celje, Kranj, Velenje, Novo mesto, Nova Gorica, Ptuj, Murska Sobota. Despite lower criteria (than in ESPON 1.1.1) necessary for identification of other (smaller) urban centers, the *PLANET SENCE* project did not take in consideration four city conurbations of national importance (as one urban centre) defined by SPRS (2004) with their travel-to-work and gravitation areas. Therefore it is more likely to talk about 15 FUA of European importance in Slovenia, including MEGA Ljubljana that are also important urban nodes in a polycentric and balanced development of Slovenia.



Figures 1.8 (a) -1.9 (b). Functional urban areas in Slovenia (Source: Pichler-Milanović et al. 2011; ESPON 1.1.1, 2004; INTERREG III B CADSES PlaNNet CenSE, 2006).

Recently, several other approaches and methodologies were tested to define functional regions in Slovenia. Drobne et al (2009a, 2009b, 2010) explored labour market approach (OECD, 2002) to define the functional regions in Slovenia and compared them to the most actual three proposals of prospective (e.g. three, six or eight) administrative regions (provinces) in Slovenia. The results show that the proposal for six administrative regions (provinces) was the most accordant with functional regions.

Drobne et al (2010) also determined the functional regions in the heterogeneous area of Slovenia defined by integrated urban system at the (inter)national level. The notion of polycentric urban development was taken from the local and regional perspective based on the principle of proximity, where co-operation, exchanges and networks among towns / urban centres could contribute to the development of integrated urban systems to overcome the legacy of the inherited urban structures. Delineation of Slovenia into functional regions was based on labour market approach, where daily labour commuting had been considered as the main factor, which determines connectivity/relation between pre-defined local urban centres and municipalities in these functional regions. The urban *centres of national and international importance* in Slovenia had been determined mainly according to the number of inhabitants and their role in the polycentric urban system of Slovenia according to the *Spatial Development Strategy of Slovenia* (SPRS, 2004) (see also Figure 1.10).

Zavodnik Lamovšek et al (2009) discussed the accessibility to public services as one of the tools to achieve polycentric regional development. The research results show that the accessibility to regional centres is better when considering regionalisation into a larger number of prospective administrative regions (provinces). Therefore, we estimate accessibility as a strong qualitative criterion in achieving a balanced and polycentric regional

development. But it is also necessary to consider qualitative criteria to shape a balanced regionalisation, which can address the conflicts of goals for achieving polycentric regional development.

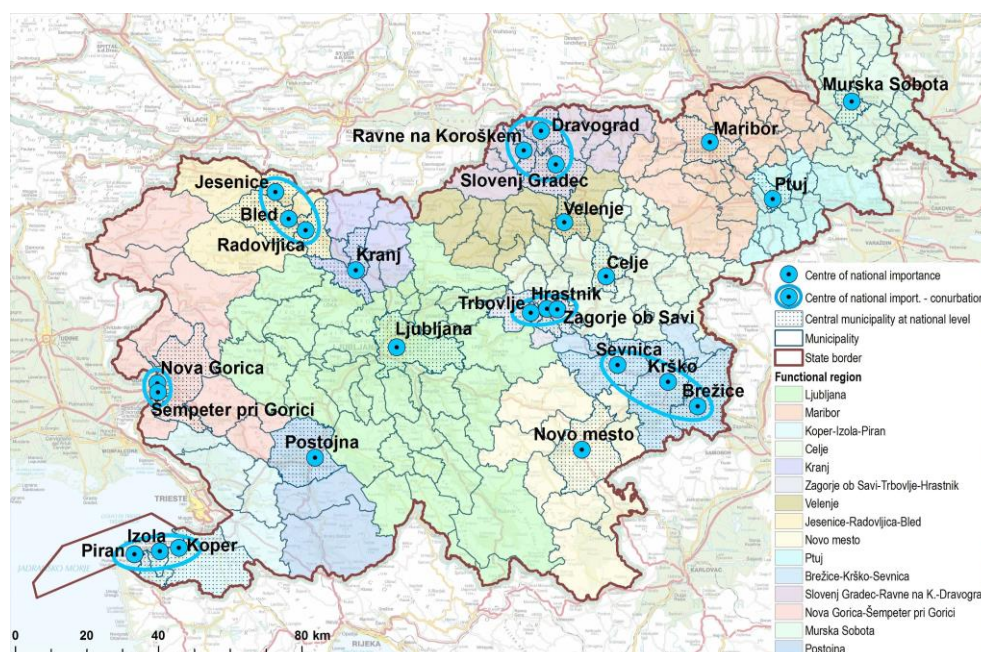
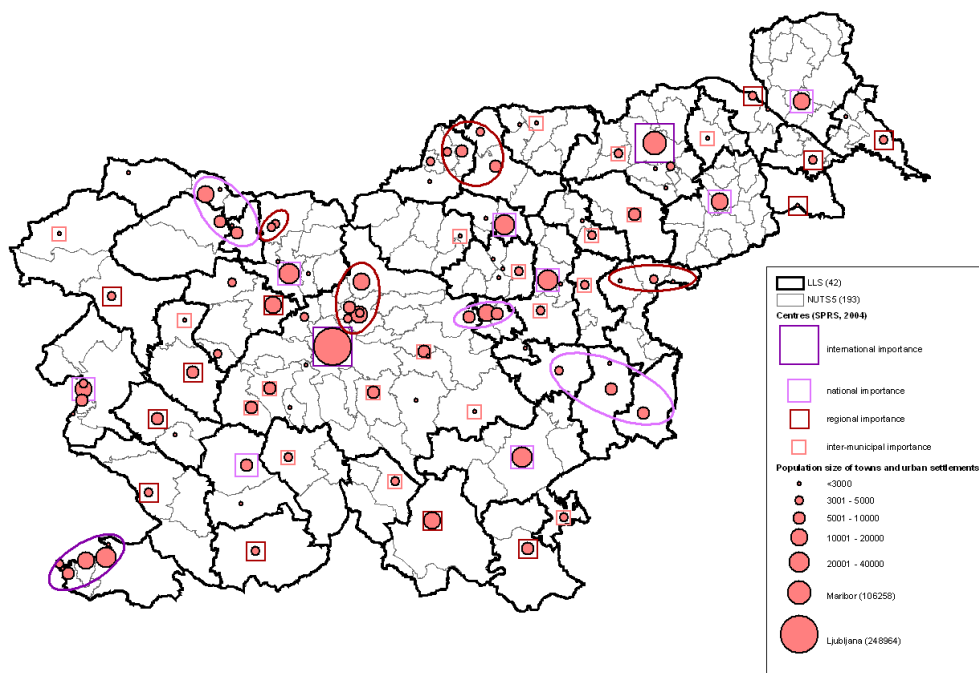


Figure 1.10. Functional regions defined by urban »centres of (inter)national importance« (SPRS, 2004) in Slovenia (Source: Drobne et al. 2010).

The study implemented under the framework of INTERREG IIIB CADES **RePUS »Strategy for Regional Polycentric Urban System in Central-Eastern Europe Economic Integration Zone«** project (2007) addressed the problems of a more balanced, sustainable and polycentric urban system of middle-sized and small towns, that could contribute to strengthening of emerging *Potential Economic Integrating Zone (PEIZ)* in Central and Eastern Europe. According to the RePUS methodology implemented in Austria, Italy, Hungary, Czech Republic, Hungary and Slovenia, 42 *local* functional urban areas (defined as e.g. local labour systems) and 17 *regional* functional urban areas (as e.g. regional labour systems) were identified in Slovenia. According to the RePUS indicators the *urban hierarchy* in Slovenia is dominated by the position and role of the capital city region of Ljubljana, followed by wider urban areas of the middle-size towns of Maribor, Celje, Kranj, city conurbation Koper-Izola-Piran, Velenje, Nova Gorica, Novo mesto. Accordig to this results Ljubljana FUA is even larger than Central Slovenia (Osrednjeslovenska) NUTS 3 (statistical / developing region) – known since year 2002 as Ljubljana Urban Region.



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Figure 1.11. Local functional urban areas with urban network in Slovenia (RePUS, 2007): distribution of *urban settlements* (SORS, 2003), *towns* (2010) and *centres of (inter)national importance* (SPRS, 2004): *statistical, administrative, political and policy classification of "towns" and their local labour market areas* (Source: Pichler-Milanović et al. 2008).

The comprehensive national research study *"The Analysis of Development Resources and Scenarios for Modelling of Functional Regions"* (2008-2010) in Slovenia has shown different types of these regions while taking in consideration various available indicators and data, criteria, and methodology to define the optimum number and spatial levels of functional regions in Slovenia – that could be institutionalised for different purposes or - transformed in prospective administrative NUTS 3 regions (provinces) with political representations. According to the complex inter-disciplinary and in-depth analysis and modelling with implementation of the evaluation system, the optimum number of functional regions in Slovenia was found between 3 and 7 (Drobne and Bogataj, 2012a,b; Pogačnik et al. 2009; Pogačnik et al., 2010; Zavodnik Lamovšek, 2011). The aim of this research project is to understand development potentials of Slovenia focusing on potentials and comparative advantages of functional regions. In order to understand them better from the perspective of (inter)national competitiveness and effectiveness of development activities, the functional regions are the instrument for implementation of national policy recommendations for sustainable spatial and balanced regional development as well as the establishment of prospective administrative regions in the future. While modelling the functional regions in Slovenia, the research team has not focused only on the study of labour markets or employment systems, and transport accessibility, but also according to demographic projections, accessibility to public services, different functions of urban centres, tourist potentials, environmental protection, importance of current and future national development projects and their (potential) role in the cross-border and trans-national areas. The research project emphasises various functional regions as a result of links and networks between different functions and spatial areas. The prospective development of functional regions has been evaluated through modelling of development scenarios and formulation of potential development strategies.

Division of Slovenia into three (3) and seven (7) functional regions and travel-to-work area of daily migrants to largest urban centres.

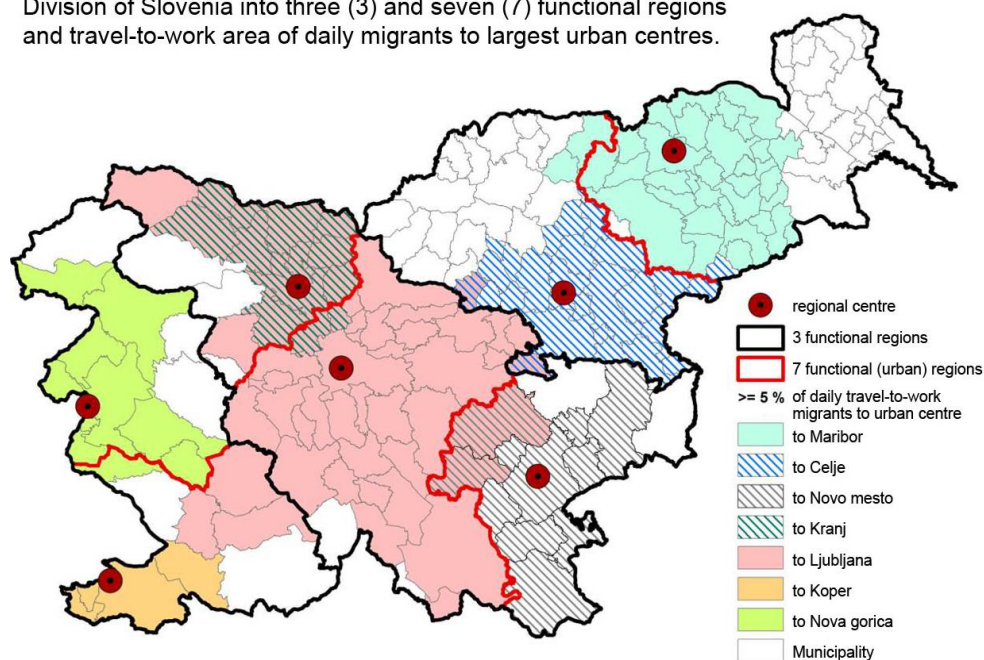


Figure 1.12. Potential functional (urban) regions in Slovenia (2011; Source: Pogačnik et al., 2010; Zavodnik Lamovšek, 2011).

The most important results of this research project are the following proposals for functional (urban) regions in Slovenia:

- a) **three (3) cross-border larger and stronger (macro) functional regions** with significant strengths and important territorial capital that could be involved in territorial competition and international cooperation: West Slovenia, Central Slovenia, East Slovenia functional region.
- b) **seven (7) functional (urban) regions** that could easier respond to rapid development challenges and needs, that are even more flexible with national top-level functions (Ljubljana, Maribor, Celje, Novo mesto, Kranj, Koper, Nova Gorica);

1.3 Territorial organisation of local government system

At the administrative level Slovenia is divided into **212 municipalities** (NUTS 5 / LAU 2) in year 2012 of which only **11 are urban municipalities**. There are also **58 local administrative districts** (NUTS 4 / LAU 1) equivalent to former 62 communes (before local government reforms in year 1994), with the exception of the capital city Ljubljana (or former five communes) that became one NUTS 4 / LAU 1 administrative districts after year 1994. Administrative districts are part of decentralised state administration functions at the local level and support the polycentric urban system of Slovenia.

There are **no administrative regions (provinces)** as yet in Slovenia due to long-going professional and political debate about the number and size of provinces. Since 1995 for data collection and analytical purposes **12 "statistical" NUTS 3 regions** have been used in Slovenia. From year 2002 these NUTS 3 (statistical) regions are also used in regional policy and programming documents known as **"development" NUTS 3 regions** - until the establishment of administrative regions (provinces) in the future.

ADMINISTRATIVE DIVISION OF SLOVENIA (2012)

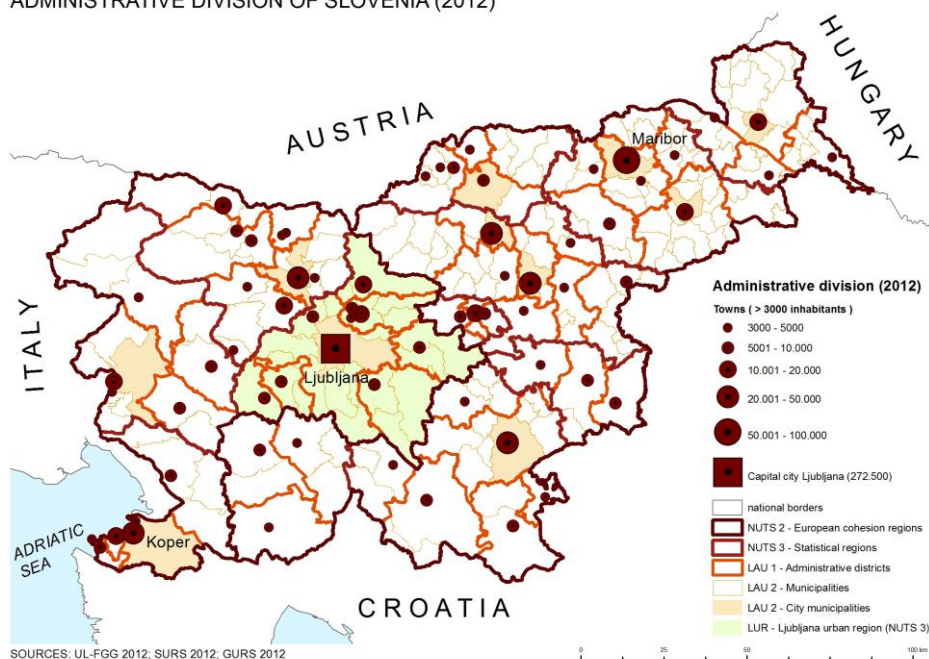


Figure 1.13. Administrative and territorial division of Slovenia (2012; Source: Zavodnik Lamovšek, Pichler-Milanović, 2010; own updates, June 2013).

According to the *Local Self-government Act* (1994) the number of municipalities (NUTS 5 / LAU 2) has been constantly increasing from 62 communes to 147 municipalities in year 1994 to 212 municipalities in year 2012. This process of i.e. *state decentralisation* has not been completed as yet. The *Local Self-government Act* defines also »**urban municipality**« as: *densely populated settlement(s) of a unique territory inter-linked with daily migrations of population*. The town is granted a status of urban municipality with at least 20.000 inhabitants and 15.000 jobs of which more than half are in the service sectors and represent geographic, economic and cultural centre of the wider (functional) urban area. The status of *urban municipality* was confirmed by the National Assembly of RS after local (municipal) referendum (Pichler-Milanović et al, 2008). Therefore among **212** municipalities (2012) in Slovenia, only **11** municipalities have the status of *urban municipalities*: **Ljubljana, Maribor, Celje, Kranj, Koper, Murska Sobota, Nova Gorica, Novo mesto, Ptuj, Slovenj Gradec, and Velenje**. Ljubljana is the largest urban municipality in Slovenia with. It is also worth mentioning that half of the new municipalities (106 of 212) in Slovenia have no »urban settlements« (SORS, 2003) as their municipal centres.

Local government reforms in year 1994 also transformed the capital city of Ljubljana **administratively and spatially**. The official city territory of Ljubljana was reduced from 902 sq.km to 272 sq.km. The administrative division of Ljubljana agglomeration into five communes was abolished with establishment of the City Municipality of Ljubljana and 9 surrounding municipalities. Therefore in year 1995 the **City Municipality of Ljubljana** became the largest local authority in Slovenia. The City Municipality of Ljubljana is divided in 17 local city districts with directly elected Mayor and several deputy mayors (appointed by the Mayor), the City Council (45 directly elected local politicians), City Management Authority (with more than 20 different departments and offices), 17 local city districts, and other legislative, management or advisory bodies (Pichler-Milanović, 2010).

Table 1.6. Administrative division of the “city” of Ljubljana (Source: Pichler-Milanović, 2005; Pichler-Milanović et al. 2007).

Characteristics of administrative city of Ljubljana	Ljubljana agglomeration (NUTS 4 / LAU 1)*						City Municipality of Ljubljana (NUTS 5 / LAU 2)
	Total	Center	Bežigrad	Šiška	Moste-Polje	Vič-Rudnik	
Area (sq.km) (1993)	902	5	46	156	152	544	272
Population (1991)	321,607	28,351	58,150	82,845	72,081	80,180	272,637
Density (pop/sq.km)	357	5,670	1,264	531	474	147	1,002
Number of settlements (NUTS 7)	292	1	8	54	38	189	38

* Ljubljana agglomeration (1955-1994): former 5 communes; Ljubljana City Municipality (>1994).

NUTS 4: Administrative districts

In Slovenia there are also 58 territorial administrative units (NUTS 4) that serve as outposts of the state administration. These NUTS 4 areas are equivalent to former larger communes with the exception of Ljubljana (with former five communes) that became one NUTS 4 after year 1994. Between years 1955-1995 former communes (or current NUTS 4 areas) in Slovenia represented *basic local units* for implementation of polycentric development policies (spatial and regional) from 1970s onwards. Today NUTS 4 areas are still important as local labour system, and therefore they can be considered as »micro-regions«. These administrative units perform tasks for all ministries. With respect to organisation, the employees of these administrative districts report to the ministry responsible for administration, while the other ministries monitor the operations of administrative districts, each for their own field of work. The NUTS 4 Ljubljana is the largest administrative districts in Slovenia with 323,200 inhabitants covering the territory of 902 km² (Pichler-Milanović, Kreitmayer McKenzie, 2008).



Figure 1.14. Administrative districts (NUTS 4 / LAU1) with municipalities (NUTS 5 / LAU 2) (Source: The Surveying and Mapping Authority of Republic of Slovenia).

NUTS 3: »statistical« and »development« regions

Until year 2013 no regional NUTS 3 administrative level - as the second level of local self-government has been established in Slovenia, due to long political negotiations about their number and size. However, Slovenia has been using **12 »statistical« regions** as NUTS 3 spatial division of the national territory. The basis for determination of statistical NUTS 3 regions was i.e. *12 areas of inter-municipal cooperation* which originated from academic findings in 1970s⁴. Statistical NUTS 3 regions in Slovenia are incorporated into the European Union law through the European system of NUTS regions (Kušar, Pichler-Milanović, 2010).

The capital city of Ljubljana is the regional centre of Osrednjeslovenska (Central Slovenian) statistical NUTS 3 region. Osrednjeslovenska statistical NUTS 3 region is the largest region in Slovenia by population size with approx. 500,000 inhabitants (2012) or 25% of total Slovenian population but not by the size of its territory (12.6% of Slovenian territory). Osrednjeslovenska statistical region has been known as *Ljubljana Urban Region* since establishment of the Regional Development Agency of Ljubljana Urban Region in year 2002. The city of Ljubljana (NUTS 7) contributes 53% of the population of LUR.

Although current 12 NUTS 3 *statistical* regions in Slovenia are originally used mainly for collection and analysis of statistical data, they are far more important as they are also used as **»development« NUTS 3 regions** in which instruments of regional policy at the national and EU levels are being implemented. However, Ljubljana and Central Slovenian NUTS 3 region do not enjoy any special position in the framework of Slovenian regional policy and planning.

There had been intensive power put into the transformation of the NUTS 3 (*statistical or development*) regions into *pokrajine* (provinces), as the second level of the local self-government. In year 2007 the Government of the Republic of Slovenia proposed 14 new administrative regions (provinces). This proposal was a result of intensive scientific efforts taking place already in 1990s, public discussions and political bargaining process. The proposed map of new provinces was partly similar to current statistical (or development) NUTS 3 regions, but with some important modifications. New Central Slovenian NUTS 3 province would be composed of the Central Slovenian statistical region and Zasavska statistical region together with north-eastern part of Notranjsko-kraška statistical region and western part of statistical region Jugovzhodna Slovenija (e.g. Kočevsko and Ribniško area). The City Municipality of Ljubljana (NUTS 5 / LAU 2) would be at the same time NUTS 3 province, as the only urban municipality in Slovenia having also the status of the administrative region (province). This proposal was evaluated by the citizens of Slovenia on the referendum in June 2008. Referendum was successful in most parts of Slovenia except in Obalno-kraška statistical region and in Central Slovenian statistical (Ljubljana) region. On the basis of the referendum results and additional scientific and public evaluation, the Government of RS prepared new proposal with 13 NUTS 3 provinces. The proposed Central Slovenian NUTS 3 province was divided into two parts with the urban municipality of Ljubljana as a separate province. Unfortunately, there was no political will at the time to complete the process of regionalisation. Therefore Slovenia has not introduced the administrative NUTS 3 regions (provinces) as the second level of self-government (Kušar, Pichler-Milanović, 2010).

⁴ The basis for creation of 12 areas of »inter-municipal cooperation« was Vrišer's classification of 12 "planning (functional) regions" (Vrišer, 1995).

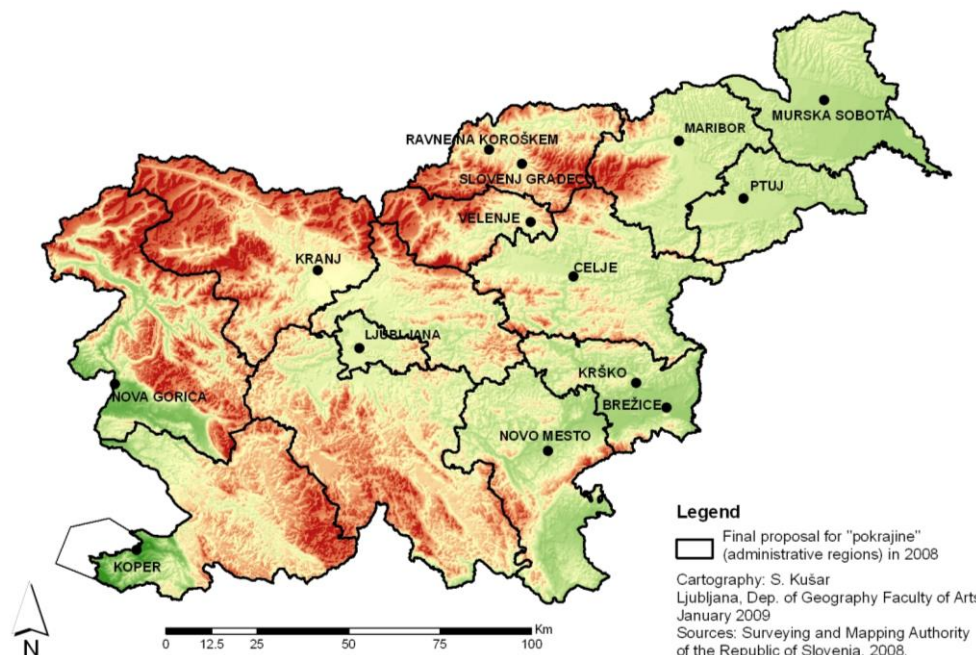


Figure 1.15. The proposal for administrative NUTS 3 regions (provinces) in Slovenia (June 2008; Source: Kušar and Pichler-Milanović, 2010).

NUTS 2: European “Cohesion” regions

NUTS 2 macro-regions are very important in the EU regional policy, because they are territorial units for which financial aid in the framework of Cohesion policy can be received. Until year 2008 the whole Slovenia was considered as one NUTS 2 (European) region. From January 2008 there are two NUTS 2 European (or »cohesion«) regions: WEST SLOVENIA (consisting of 4 more developed NUTS 3 statistical/development regions: *Osrednjeslovenska* region with Ljubljana, *Gorenjska*, *Obalno-kraška* and *Goriška* regions) and EAST SLOVENIA (consisting of 8 less developed NUTS 3 statistical / development regions: *Jugovzhodna Slovenija*, *Zasavska*, *Spodnjeposavska*, *Savinjska*, *Koroška*, *Podravska*, *Pomurska* and *Notranjsko-kraška* regions respectively). However, this has not influenced the implementation of the cohesion policy in Slovenia during the 2007-2013 programming period, because Slovenia is eligible for the status of “convergent region” in the EU until 2013. Later two cohesion NUTS 2 macro-regions will be more important, because it is expected that the more developed WEST SLOVENIA NUTS 2 region will not be eligible for special financial assistance from the EU Structural Funds anymore. Therefore, two NUTS 2 macro-regions in Slovenia (see Figure 1.13) are now important mainly for European reasons, but they are without political or administrative representations (Kušar, Pichler-Milanović, 2010; Zavodnik Lamovšek, Pichler-Milanović, 2010).

Therefore Table 1.7. represents a summary of these different (official) definitions of “towns” in Slovenia: statistical, political, administrative, policy definitions. There are also some other - professional (especially geographer’s) classifications of urban areas, but they are mainly used for research purposes – even though there is a strong link between research results and official classifications of urban areas.

Table 1.7. Overview of different definitions of “towns” in Slovenia.

Statistical	Definition	Criteria	Number of towns
<p>Statistical Office of Republic of Slovenia (2003)</p>	<p>»Urban area« (104) represents the <u>central urban settlement</u> (104) that gives urban areas its name, including all <i>neighbouring (suburban) settlements</i> (52) that are gradually becoming part of it in spatial terms. These suburban settlements are connected with the central urban settlement by built up areas, roads, public parks, and other elements of urban structure.</p> <p>Urban areas only exist around <i>urban settlements</i> with over 5000 inhabitants.</p> <p>In 2012 there were 6031 settlements in Slovenia.</p>	<p>(A) settlements with more than <u>3000 inhabitants</u> (67 settlements);</p> <p>(B) settlements between <u>2000-3000 inhabitants</u>, and a surplus of jobs over the number of <i>employed persons</i> (16 settlements);</p> <p>(C) centres of municipalities with at least <u>1,400 inhabitants</u> and a surplus of jobs over the <i>number of employed persons</i> (21 settlements),</p> <p>(D) combination of criteria for determining (<i>sub</i>)urban settlements that form <u>urban areas</u> (52 settlements).</p>	<p>156 urban settlements (SORS, 2003) defined as 104 proper »urban settlements« and 52 settlements (suburbs) as »settlements in urban areas«. Therefore 104 urban settlements with settlements in urban areas are defined as »urban areas« (agglomerations.)</p>
Political	Definition	Criteria	Number of towns
<p>National Assembly of Republic of Slovenia and municipal councils (> year 2000)</p>	<p><i>Local Self-government Act</i> (1994, 2005): »town is a larger urban settlement that in terms of population size, economic structure, density and historical development differs from other settlements«. A town has a population of more than 3000 inhabitants. A settlement obtains town status by decision of the <i>National Assembly of RS and municipal councils</i>. As regards settlements that have already been given a »town« status in accordance with regulation valid when the status was given, the National Assembly can only confirmed their status (e.g. “historic towns”).</p>	<ul style="list-style-type: none"> - number of inhabitants (> 3000 inhabitants in urban settlement /town); - density (> 50 inh. per ha); - <i>morphological, economic, functional</i> (complex set of quantitative and qualitative criteria); - <i>historic status of a town</i> (administrative / legal); - <i>political</i> status (by the National Assembly of RS 2000 / 2005 or municipal councils). 	<p>According to the <i>Official Journal of RS</i> (no. 22/00 and no. 122/05) there are 51 “towns” in Slovenia. Some municipal councils also declared another 7 “towns”. Therefore there are 58 urban settlements in Slovenia with the (political) status of »towns«.</p>
Political / administrative	Definition	Criteria	Number of towns
<p>National Assembly of RS (and local referendums), 1995.</p>	<p>At the administrative level Slovenia is divided (year 2012) into 212 municipalities (LAU 2) of which only 11 are <u>urban municipalities</u>.</p> <p>Urban municipality is a dense settlement or several settlements inter-connected in a specific spatial area</p>	<ul style="list-style-type: none"> - number of inhabitants (> 20.000 inhabitants in urban settlement /town); - economic (> 15.000 jobs in urban settlement /town); - <i>morphological and functional</i> (complex set of quantitative and qualitative criteria); - <i>administrative and legal status of a town, municipality,</i> 	<p>11 urban municipalities in Slovenia are: <i>Ljubljana, Maribor, Celje, Kranj, Koper, Murska Sobota, Nova Gorica, Novo mesto, Ptuj, Slovenj Gradec, and Velenje</i>.</p>

	<p>together with neighbouring environment and catchment area of daily migration of population. LAU 2 municipality with the town is given a status of "urban municipality" with at least of 20.000 inhabitants and 15.000 jobs of which half are in producer and consumer services, and it serves as geographical, economic and cultural centre of the wider gravitation area. "Urban municipalities" were established by the <i>National Assembly of RS</i> law after local referendums in years 1994-1995.</p>	<p><i>administrative district (LAU 1);</i> - <i>political</i> status (by the National Assembly of RS and local referendums).</p>	
Policy	Definition	Criteria	Number of towns
<p><i>National Assembly of RS and Ministry of Environment and Spatial Planning (2004)</i></p>	<p>Spatial Development Strategy of Slovenia (SPRS, 2004) defines 50 »urban centres« (together 61 towns and other urban settlements) as the most important urban nodes located on transport corridors according to polycentric spatial concepts and balanced regional development of Slovenia. SPRS (2004) also defines i.e. (potential) <i>functional (urban) areas</i> as gravitation areas of 15 »urban centres« of national importance that are not territorially specified.</p> <p>SPRS (2004) is based on <i>polycentric spatial development concepts</i> of Slovenia from 1980s as part of comprehensive Long-term Development Plan of Slovenia 1986-2000., defining the most important "urban centres" (e.g. 12 regional and 3 subregional centres including city conurbations) and the gravitation areas (»planning regions«) of 12 "regional centres".</p>	<p>- <i>number of inhabitants;</i> - <i>economic</i> (number of jobs, daily commuters, transport connections, services); - (urban) <i>settlement system hierarchy*</i>; - <i>administrative status;</i> - <i>political and policy decision</i> (by the National Assembly of RS and Ministry of Environment and Spatial Planning of RS).</p> <p>SPRS (2004) is based on modified theory of <i>central places</i> by Slovenian geographers: Kokole / Vrišer, 1968, Kokole, 1971, Vrišer, 1987, 1994 (612 settlements) according to the hierarchy / ranks (1-7.) of selected settlements.</p> <p>SPRS (2004) is based on I – IV categories of "urban centres" following the hierarchy of central places by Vrišer (1994).</p> <p>New studies of "central places" in Slovenia are: Cigale, 2002, Benkovič-Krašovec, 2005, Černe, 2007.</p>	<p>SPRS (2004):</p> <p>Regional centres: - 3 "centres of international importance": Ljubljana + Maribor + urban conurbation Koper-Izola-Piran; - 12 "centres of national importance": Celje, Kranj, Novo mesto, Nova Gorica, Murska Sobota, Velenje, Postojna, Ptuj + 4 urban conurbations: i) <i>Slovenj Gradec-Ravne na Koroškem-Dravograd</i>, ii) <i>Jesenice-Radovljica-(Bled)</i>, iii) <i>Zagorje-Trbovlje-Hrastnik</i>, iv) <i>Krško-Brežice-Sevnica</i>;</p> <p>Local centres: - 15 "centres of regional importance" (13 towns + 2 urban conurbations); - 20 "centres of inter-municipal importance" (20 towns and other urban settlements).</p> <p>According to SPRS (2004) there are 50 "urban centres" in Slovenia with 61 towns and other urban settlements.</p>

2 Territorial identification of SMSTs in Slovenia

2.1 Verification of the morphological/geomatic identification of SMSTs and administrative identification of SMSTs

The method used to identify SMST follows the procedure implemented by DG Regio in the document *'The New Degree of Urbanisation'*. The polygons are to be identified in their spatial extent on the basis of the 1 km² population density grids using criteria of density, contiguity and population size. At the same time the associated population and density data are used also as the criteria for the interpretation of the degree of urbanization. Three degrees of urbanization have been identified by DG Regio:

- **High-density cluster** (city or large urban area): contiguous grid cells of 1 km² with a density of at least 1500 inhabitants per km² and a minimum population of 50,000.
- **Intermediate density area** (towns and suburbs or small urban area): clusters of contiguous grid cells of 1 km² with a density of at least 300 inhabitants per km² and a minimum population of 5000.
- **Thinly populated area** (rural area): grid cells outside urban clusters.

As input data for our verification in Slovenia we received (from Tarragona team in December 2012) a number of polygons divided into three groups based on population and density data: **HDUC, SMST, VST**.

- **HDUC** are high density urban clusters or i.e. "urban areas". This type of polygons consists of contiguous grid cells with a total population of more than 50,000 inhabitants and a total density of more than 1500 inhabitants per km².

- **SMST** Polygons represent "Small and Medium Sized Towns". In this project, the SMSTs Polygons are identified with the urban clusters that DG Regio's work addresses as intermediate density area. This group includes polygons covering contiguous grid cells with following characteristics:

- **Polygons with a total density** (average density of all cells included) **between 300 and 1500 inhabitants per km² and a population between 5000 and 50,000 inhabitants;**
- **Polygons with a total density of more than 1500 inhabitants/km² but a total population of less than 50,000;**
- **Polygons with a total population of more than 50,000 inhabitants but a total density of less than 1500 inhabitants per km².**

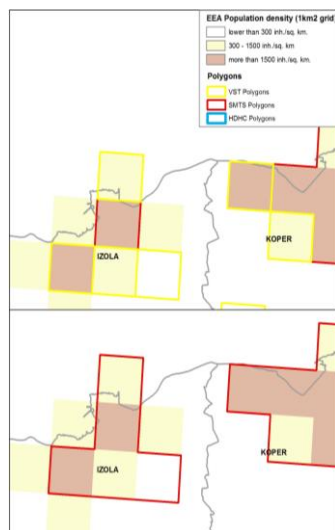
- **VST** Polygons are covering "Very Small Towns". Separate grid cells with a density more than 300 inhabitants/km² but a population inferior to 5000.

The verification of the received dataset of the identified polygons consisted of checking all the polygons for possible errors, mismatching between the polygons and the reality. After the first check of the received Polygons the TOWN team in Slovenia decided NOT to use Google Earth as a main tool for the verification, but to transform all the data and to do the verification of the polygons in **ESRI ArcGis** software which allowed us to combine different data and layers (e.g. built up areas, population density grid and administrative borders on different levels). Transformed data allowed us to precisely check all the HDUC, SMT and part of the VST Polygons. Also with the transformed data the verification still did not go smoothly. We still experienced quite some problems with the verification, as we had to modify almost every polygon in the received dataset.

The received polygons data included several types of errors which have been already determined by the RA2 team. The errors encountered are the following:

- 1 - The polygon should include other contiguous grid cells
- 2 - The polygon should not include some grid cells
- 3 - The polygon should be joined with other polygon(s) of the same or different class
- 4 - The polygon should be split in different polygons
- 5 - Wrong classification
- 6 - Other

We noticed also some general errors that in our opinion should be fixed already during the identification process of the polygons.



Some of the VST polygons coincide, overlap with other types of polygons. In the case of Slovenia we encountered 11 cases when VST Polygons cover the same area that is covered also with a SMT Polygon (See Fig. 2.1). In this case we suggested deleting the VST polygon. We noted this into the verification sheet under the Code 6: Other types of errors.

Figure 2.1. Overlapping of the polygons.

While checking some of the VST and SMTS polygons, we noticed that some of the polygons are indented, moved for one grid cell east and so they often do not cover the urban area as they should.

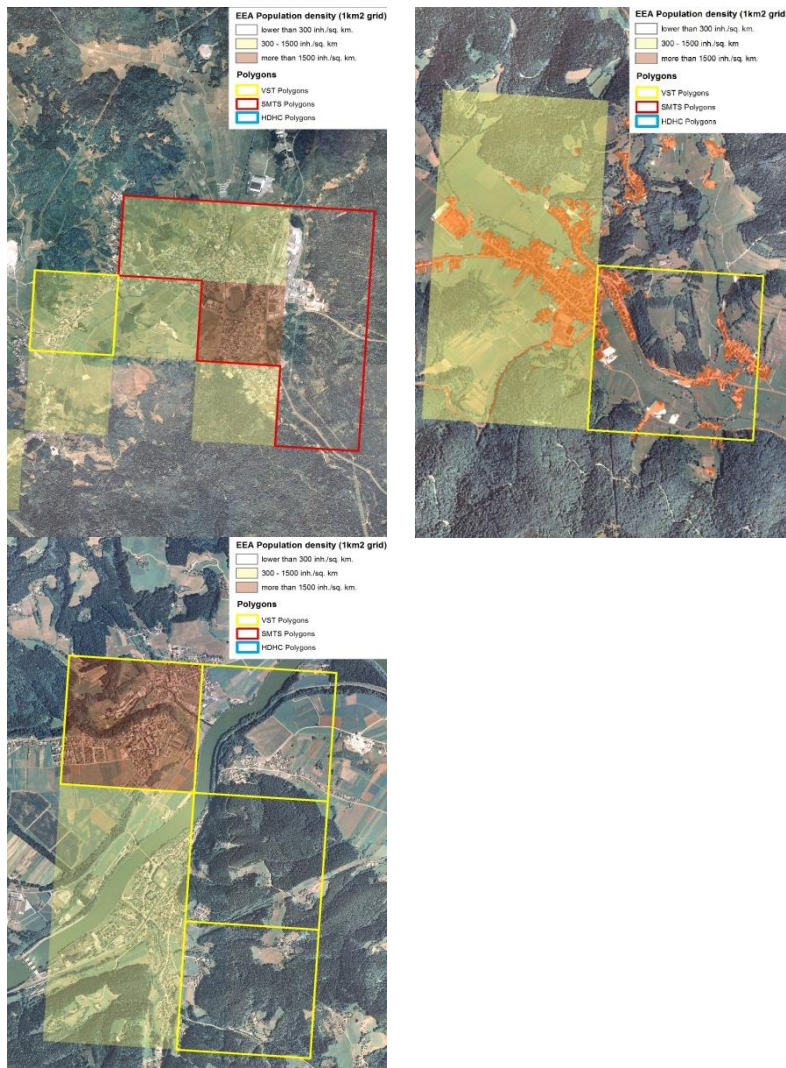


Figure 2.2. Displacement of polygons.

One of the problems was also that we did not know the exact methodology used to create and define the polygons. Especially because we have obtained the EEA grid population density data from which, if correctly interpreted - the polygons were created, but we encountered quite some differences between the population density and the polygons grid.

The verification for all the defined polygons was done for each polygon separately. We did not do the verification for the polygons included in the dataset that were located outside the Slovenian borders. In the verification process we also suggested to split all the polygons by the national boarder, because this would facilitate any further analysis and data acquisition for the specific polygon.

The verification was done for **4 HDUC** polygons, **43 SMTS** polygons and part of **VST** polygons. The VST polygons checked were: a) the polygons that were overlapping with SMTS polygons, b) the VST polygons that should be added to other HDUC and SMTS polygons and c) the VST polygons that should be merged and form a new SMTS polygon. In the verification sheet we included also a list of all polygons that are outside of the Slovenian national borders and a list of VST polygons that do not coincide with any statistically determined type of **urban settlement** in Slovenia which was defined by the Statistical Office of the Republic of Slovenia (SORS, 2003) (see Appendix 1).

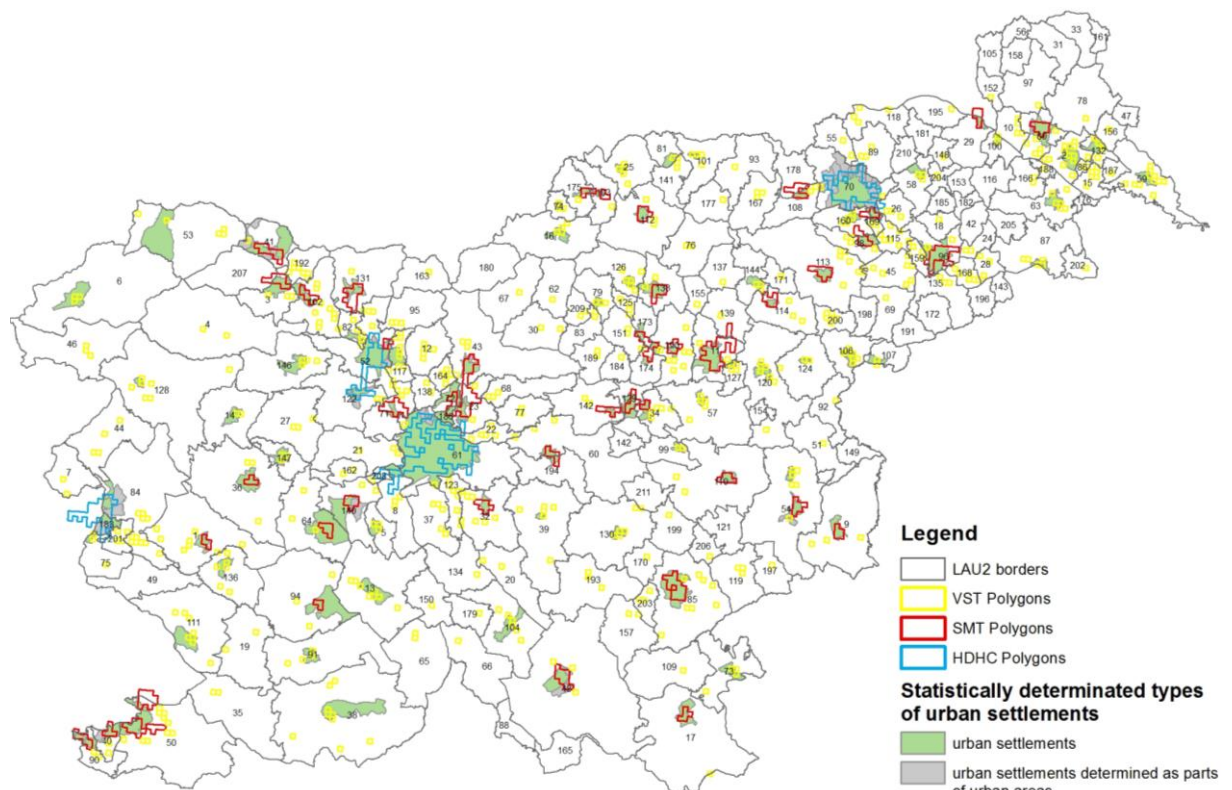


Figure 2.3. Correlation of RA2 Polygons (version 3_12_2012) with the SORS (2003) definition of urban settlements (104 + 52) in Slovenia (for municipal coding see Appendix 1).

As there were quite some corrections of SMT and HDUC polygons to be done we decided to include some visualization, e.g. (satellite) pictures of almost all corrected polygons. The pictures mostly represent the “errors coded 1 and 2”. The verification sheet includes links to different corrections being made. The reason to do that is that we thought that these steps would help the revision of our work and the identifications of the suggested corrections. The example of a corrected polygon whit the legend of these corrections is shown in Figure 2.4. Part of the final verification sheet of the SMTS polygons is shown on Figure 2.5.



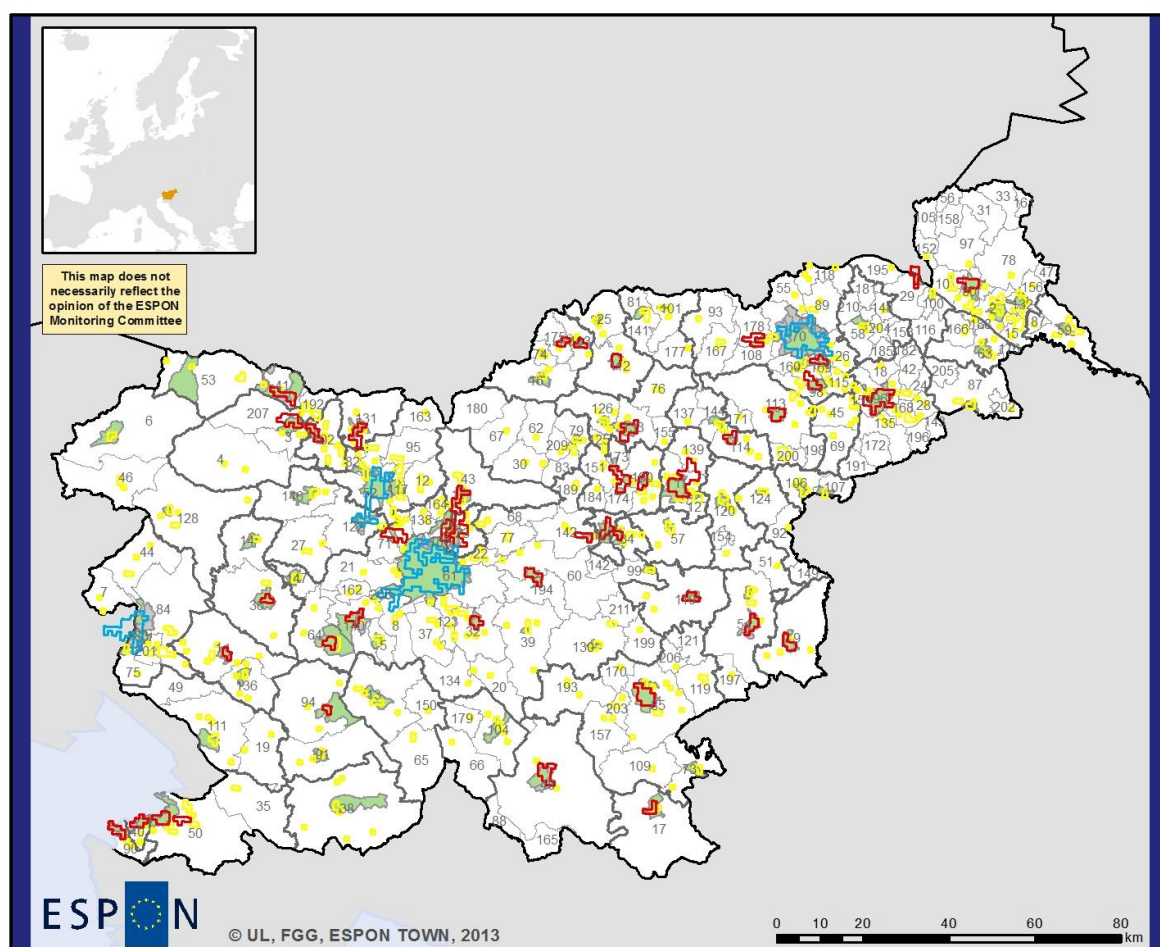
Figure 2.4. Example of the visualization of errors.

SMST polygons revision sheet			
Case study: SLOVENIA		NUTS1/2: SLOVENIA	
ERROR	1	The polygon should include other contiguous grid cells (indicate which ones in the field on the left)	
	2	The polygon should <u>not</u> include some grid cells (indicate which ones in the field on the left)	
	3	The polygon should be joined with other polygon(s) of the same or different class (indicate code of other polygon(s) in the field on the left)	
	4	The polygon should be split in different polygons (indicate criteria for separation in the field on the left)	
	5	Wrong classification (indicate correct classification within basic typology 1, based on real population and density data for built-up area - quote source)	
	6	Other (provide details in the field on the left)	
CODE N. OF POLYGON (FID code readable by clicking on the polygon on Google Earth)	MAIN URBAN AREA INCLUDED IN IT (name of municipality or LAUZ)	ERROR CODE (see list of error codes above and examples in other worksheets)	NOTES
0	Piran, Portorož	1	SMT_0.jpg
1	Izola	1	
1	Izola	2	See SMT_1.jpg
2	Prade	5	Polygon includes several very small towns, with less than 5000 inhabitants. Should be reclassified into VST.
2	Prade	2	Polygon should not include the grid cell in the S - See SMT_2.jpg
3	Koper	1	
3	Koper	2	See SMT_3.jpg
4	Ankaran/Muggia	4	The polygon is going over the state border and so combines Ankaran and Muggia. Because of the further analysis and data acquisition the polygon should be split into the Slovenian and Italian part. The dark red in the picture SMT_4.jpg is the border line.
4	Ankaran	1	
4	Ankaran	2	See SMT_4.jpg
5	Črnomelj	1	
5	Črnomelj	2	See SMT_5.jpg
7	Kočevje	1	
7	Kočevje	2	See SMT_7.jpg
7	Kočevje	3	Polygon should include polygon VST FID 540 in the NE
9	Postojna	1	See SMT_9.jpg
12	Novo Mesto	1	
12	Novo Mesto	2	See SMT_12.jpg
12	Novo Mesto	3	Polygon should include polygon VST FID 833 in the NE
13	Ajdovščina	1	Polygon should include the grid cell in the W
14	Logatec	1	
14	Logatec	2	See SMT_14.jpg
14	Logatec	3	Polygon should include polygon VST FID 339 in the W
18	Vrhnika	1	
18	Vrhnika	2	See SMT_18.jpg
19	Grosuplje	2	Polygon should not include the grid in the E
20	Brežice	1	
20	Brežice	2	See SMT_20.jpg
21	Idrija	2	Polygon should not include the grid in the E
•	•	•	•
•	•	•	•
42	Velenje	1	See SMT_42.jpg
42	Velenje	3	Polygon should include polygons VST FID 562, 569, 570, 573 and 578 in the W
43	Slovenske Konjice	2	Polygon should not include the grid cell in the NW
44	Jesenice	1	
44	Jesenice	2	See SMT_44.jpg
44	Jesenice	3	Polygon should include polygon VST FID 273 NW
45	Slovenska Bistrica	1	
45	Slovenska Bistrica	2	See SMT_45.jpg
46	Ptuj	1	
46	Ptuj	2	See SMT_46.jpg
46	Ptuj	3	Polygon should include polygon VST FID 805 W
47	Rače, Silivnica	OK	
48	Slovenj Gradec	2	Polygon should not include the grid cell in the E - see SMT_48.jpg
48	Prevalje	3	joined to SMT FID 50
50	Ravne na Koroškem	3	Polygon should include polygons SMT FID 49 in the W
49, 50	Ravne na Koroškem, Prevalje	1	See SMT_50.jpg
51	Miklavž na Dravskem polju	3	joined to HDHC FID 7
52	Ruše	4	The polygon consists of several very small towns and the town Ruše. The polygon should be split into SMT polygon Ruše south and several VST polygons in the N. The purple line marks the split. See SMT_52.jpg
52	Ruše	1	See SMT_52.jpg
54	Murska Sobota	1	
54	Murska Sobota	2	See SMT_54.jpg
55	Gornja Radgona	4	The polygon is going over the state border and so combines Gornja Radgona and Bad Radkersburg. Because of the further analysis and data acquisition the polygon should be split into the Slovenian and Austrian part. The purple line is the state border.
55	Gornja Radgona	1	
55	Gornja Radgona	2	See SMT_55.jpg
Some new SMT created by joining VST. Check VST polygons revision worksheet.			
6, 8, 10, 11, 15, 16, 17, 24, 26, 29, 30, 34, 53, 56, 57, 58, 59, 60, 61		6	Outside of Slovenia

Figure 2.5. Verification sheet of SMTS polygons in Slovenia.

Based on the proposals from the different groups the revision and correction of the SMT polygons took place. Several corrections have been considered to be necessary and others not to be so, according to the established criteria with the revision of the Catalan case study (ES5). From 116 proposed corrections for VST, SMT and HDUC polygons only those referred to SMT were considered. At the end 58 corrections were made. The final version of the SMST is shown in Figure 2.6.

RA2 Polygons with SORS (2003) definition of urban settlements



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Local level: LAU 2
Source: TOWN, 2013
Origin of data: GURS, 2012; SORS, 2012
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Types of Polygons (version 20_5_2013)

- VST Polygon
- SMT Polygon
- HDUC Polygon
- LAU 2 border
- micro-regional (MR) border
- NUTS 0 / NUTS 1 border

Statistically determined types of urban settlements

- urban settlement
- urban settlement determined as part of urban area

Figure 2.6. Corrected RA2 Polygons (final version 20_5_2013) with the SORS (2003) definition of urban settlements (104 + 52) and micro-regions (MR) 2011 (50) in Slovenia (for municipal coding see Appendix 1).

2.2 Functional analysis of settlement systems: identification of SMSTs, their related urban regions and territorial arrangements

Statistical Office of the Republic of Slovenia (SORS) provides a wide range of commuting data obtained with the same methodology for all municipalities – LAU 2 units – in Slovenia. The commuting flow database includes all travel-to-work (job-commuting) flows within the national borders between the years 2000 - 2011. LAU 2 is the basic spatial unit used for the functional analysis. Despite the fact that Slovenian LAU 2 units are quite small compared to LAU 2 units in some other European countries, there are still some important differences between them. The number of LAU 2 municipalities has been changing since 1994 - first from 62 former communes (1955 – 1994) to 147 municipalities (1994), and to current 212 municipalities (2012). Therefore extra caution is needed when defining functional areas. The suggested methodology includes a basic database and GIS operations, focusing on daily interactions in the labour market. This is considered by many researchers (i.e. Cörvers et al., 2009; Drobne et al., 2009b; Karlsson and Olsson, 2006; Konjar et al., 2010; etc.) as a good approximation for delimitation of functional regions. The functional analyses are performed for two reference years: 2001 and 2011. In order to compare the results from two reference years we had to adjust the commuting and population data to the same territorial “geographies” (number of municipalities) as in 2001. We have decided to recalculate data from 2011 to 2001 geography that would provide more rigorous insights in data comparisons.

2.2.1 Methodology

The functional analyses are based on job commuting data and population data in LAU 2 municipalities. The LAU 2 - LAU 2 commuting matrix acquired from the SORS was used for calculation of all the other data needed for these analyses. The matrix include flows from each LAU 2 directed out of the municipality to other LAU 2 units, as well as flows of economically active population (EAP) commuting inside the municipal borders or working at “home” (e.g. settlement of residency and work). The commuting flows in this way include all EAP in Slovenia. Joining the commuting data we have calculated the number of jobs in each LAU 2, the EAP living in LAU 2, and the total flow of job commuters in and out of the municipality. Population data for LAU 2 municipalities are acquired from SORS for the year 2001 and 2011. We have adjusted the commuting data and the population data to the 2001 municipal geography.

IDENTIFICATION OF “JOB CENTERS” (JC)

“Job center” is defined as LAU 2 municipality with at least 1000 jobs.

Results for Slovenia: Based on 2001 data 104 (out of 192) Slovenian LAU 2 municipalities fulfilled the criterion for minimum of 1000 jobs. In 2011 there were 107 LAU 2 municipalities with more than 1000 jobs (out of 192 municipalities from 2001) in Slovenia.

IDENTIFICATION OF “URBAN CENTERS” (UC)

Not every “job center” is strong enough to form its own “micro-region”. The second criterion is that the “job center” is also one of the main commuting destinations for at least one other LAU 2. If the “job center” is the destination of a **significant** commuting flow from at least one other LAU 2 – than this “job center” qualifies as “urban center”. The **significant** flows, i.e. the flows important for the source center, are the main flows from every LAU2 municipality, that

were identified with two steps procedure described also by Van Nueffel (2007). First we identified 5 highest outgoing flows for each LAU2 municipality. Each flow was represented in a relative way, as a share of the total sum of all 5 highest flows from the LAU 2. With the comparison of the 5 highest flows with five ideal types of distribution (see Tab. 1) we have determined the number of significant outgoing flows. The highest correlation between the calculated real distribution of flows for each LAU 2 and the five ideal types of distribution, gives us the answer, which flows to consider as significant.

Table 2.1. Ideal types of real distribution of flows from MRCs.

flows	ideal types				
	1 sign. flow	2 sign. flows	3 sign. flows	4 sign. flows	5 sign. flows
flow1	100	50	33	25	20
flow2	0	50	33	25	20
flow3	0	0	33	25	20
flow4	0	0	0	25	20
flow5	0	0	0	0	20
flow	0	0	0	0	0

The second step is to delete the flows that are relatively small. As the significant flow has to be important in relation to economically active population (EAP) of the “source” LAU 2 municipality, we have calculated the share of out-commuting population on economically active population (EAP) living in the “source” LAU 2 and we have eliminated all flows that accounted for less than 5% of EAP. In this way we have come to a list of significant flows that can be used in the identification of “urban centers”.

Because of a large diversity between Slovenian municipalities in the size, accessibility, self-sufficiency, we have introduced the extra step in the process of the identification of urban centres, which allowed us to identify remote (border), self-sufficient “urban centers” with high inner commuting and high population size. To qualify as “urban center” these remote LAU 2 municipalities have to offer at least 3000 jobs with at least 10.000 inhabitants. This extra step contributes towards the identification of three new urban centers in 2001 and 2011: Ilirska Bistrica (code 38), Ormož (code 87) and Tržič (code 131) (see Figure 2.7a and Figure 2.7b).

Results for Slovenia: Based on data from year 2001 we have identified 68 “urban centers” that fulfil both criteria of minimum 1000 jobs and at the same time they are the main destination for important commuting flows from another LAU 2 municipality. For year 2011 we have identified 59 “urban centers”.

DELIMITATION OF “PROTO MICRO-REGIONS” (PMR)

The next step is the delimitation of i.e. “proto micro-regions” around their identified respective “urban centers”. The “proto micro-regions” are delimited by integrating the LAU 2 municipalities around the “urban centers” according to direction of the main travel-to-work (commuting) flow from each LAU 2. In this way every LAU 2 municipality is assigned to one “urban center” and the “proto micro-regions” are then created. In the situation when the largest commuting flow from LAU 2 is not directed to one of these identified “urban centers”, then the LAU 2 municipality is linked to a center indirectly, forming a chain of municipalities linked to the principal “urban center”.

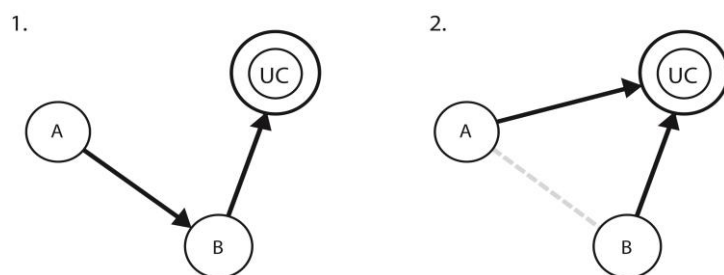


Figure 2.6. Assignment of LAU 2 to “urban centers”.

Results for Slovenia: If we consider that around 25% of all Slovenian municipalities qualify as “urban centers” and that the City Municipality of Ljubljana is the main “urban center” for around 15% of all municipalities in Slovenia - it is clear that almost all LAU 2 municipalities are connected to the “urban center” directly. In both reference years (2001 and 2011) there are just four cases forming chains of municipalities while all the others are connected directly to these “urban centers”.

For the delimitation of “proto micro-regions” around the “urban centers” we used a computer developed program named ReGIS (developed by Konjar, 2009) which connects every LAU 2 municipality to its “urban center” depending on the main flow from this municipality. The program allows the selection of central municipalities and the maximum number of connections, when connecting municipalities indirectly. The program creates an output dbf file that includes information about each municipality, how the municipality is connected (directly or indirectly) and to which predefined center. The file includes also the representation of the created chains.

DELIMITATION OF MICROREGIONS (MR)

Delimited “proto micro-regions” with their “urban centers” give us a preliminary representation of “micro-regional” pattern in the analyzed area. However final “micro-regions” should fulfill two more criteria, the one of territorial integrity and the other criterion of minimal population size. The last two criteria provide us with the means to re-check all the “proto micro-regions”, to dissolve small “proto micro-regions” and to consolidate the ones that are fragmented.

Territorial consolidation of PMRs: It can happen that the territories of PMRs are spatially fragmented. In this case they have to be consolidated into spatially continuous territories. The first step is to analyse these remote and distant LAU 2 municipalities. If the municipality is large by the territorial size and population (at least 10,000 inhabitants), and at the same time fulfills the criteria of at least 3000 jobs, the municipality can be classified into a new “micro-regional center”. This could happen in the case of a large, remote municipality that has never been divided into smaller municipalities. Such municipality represents a unique separated unit that forms its own functional area. The rest of separated LAU 2 municipalities, that do not fulfill these conditions, have to be re-assigned to other “urban centers” to ensure continuous and not fragmented territories of final “micro-regions”. When doing that we take into account the second important flow. If the LAU 2 municipality does not have a second important flow we take into account the summary of flows into neighbouring PMR.

Results for Slovenia: In the case of Slovenia from the year 2001 we had to re-assign three municipalities to different “urban centers” to achieve the territorial consolidation of all PMRs. In the case of PMRs from year 2011 we had six cases of spatially fragmented PMRs. Six municipalities have been spatially separated from the assigned PMR (see Figure 2.7a and Figure 2.7b).



Figure 2.7a. Corrections of “proto micro-regions” due to the criteria of minimal population size and territorial integrity for year 2001 (for municipal coding see Appendix 1).



Figure 2.7b. Corrections of “proto micro-regions” due to the criteria of minimal population size and territorial integrity for 2011 data recalculated on the 2001 geography (for municipal coding see Appendix 1).

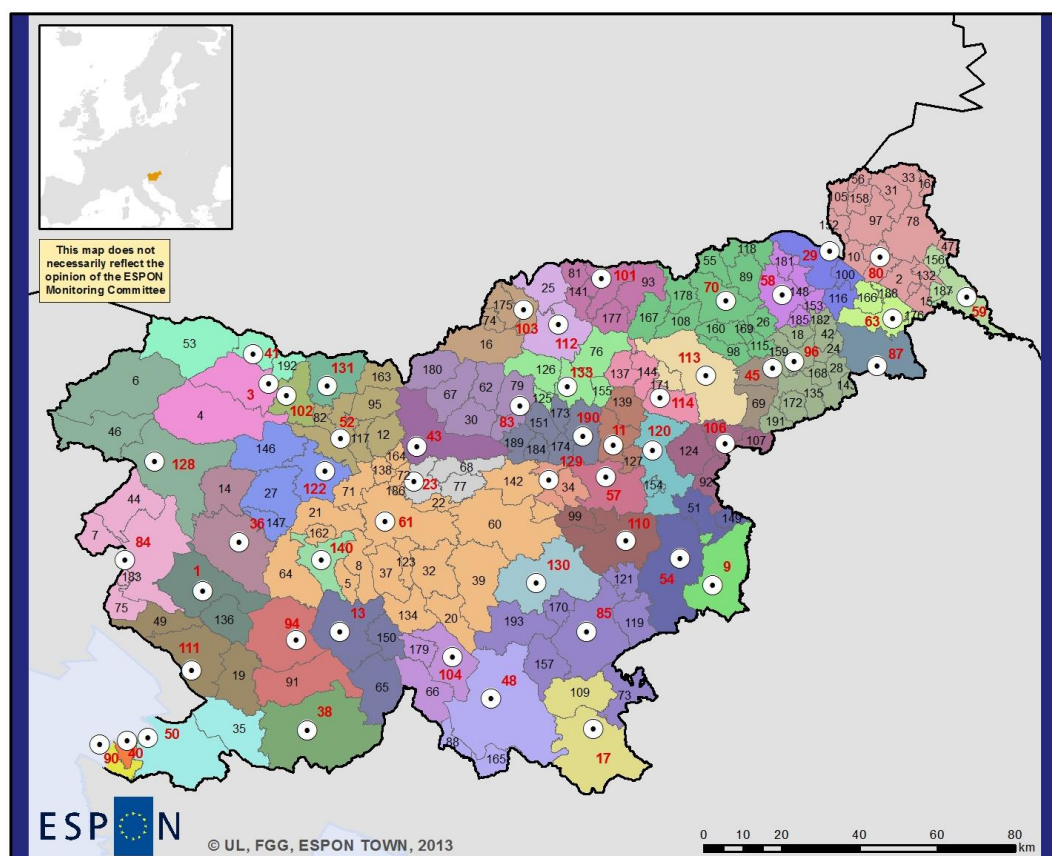
Population threshold value: After a series of calculation and several conducted frequency analysis we did not find any clear solution that would represent an appropriate population threshold value for MR. If we use the suggested histogram (frequency) analysis, and the threshold value that is defined by the highest column in the histogram, than the value would need to be set around 19,000 inhabitants for the year 2011. The situation in the year 2001 is even more complicated as we do not have one main peak in the histogram (but five), set a different values from 8000 till 20,000 inhabitants. As we wanted to use the same methodology in both reference years (2001 and 2011) we decided to use another approach. As a *population threshold value* we applied the average number of inhabitants calculated for Slovenian municipalities in both years. For the year 2001 the threshold value was set on **10,386** inhabitants. For the 2011 analyses (recalculated data to 192 municipalities from 2001) we used the threshold value of **10.705** inhabitants. Applying this threshold value of minimum population size to our selection of PMRs shows us that some “proto micro-

regions” are too small. In this case the PMR is dissolved and spread over to other neighboring PMR. When attaching these “dissolved” municipalities to new (larger) “urban centers” we take into account several aspects, such as commuting directions of their original “urban center” and other significant commuting flows from these LAU 2 municipalities. When dissolving these PMR that fall under this defined population threshold value, we have to be careful about how the new distribution of LAU 2 municipalities between the neighbouring “urban centers” will affect the population size of their PMR. That is why we repeat the process of dissolving small PMR step-by-step, from the smallest PMR and each time re-calculating the population.

Results for Slovenia: For year 2001 we have identified 19 PMR that do not fulfil the criteria of the minimum population size (i.e. approx. 10,000 inhabitants). For year 2011 we have identified 11 PMRs (see Figure 2.7a and Figure 2.7b).

When the population threshold value is applied to the Slovenian datasets, we got the final delimitation of micro regions (MR) (Figure 2.8a and Figure 2.8b). The methodology resulted in the identification of 51 MR in 2001 and 50 MR in 2011 recalculated to 2001 geography.

Functional Analyses: Micro-regions (2001)



Micro-regional centers 2001 (51)

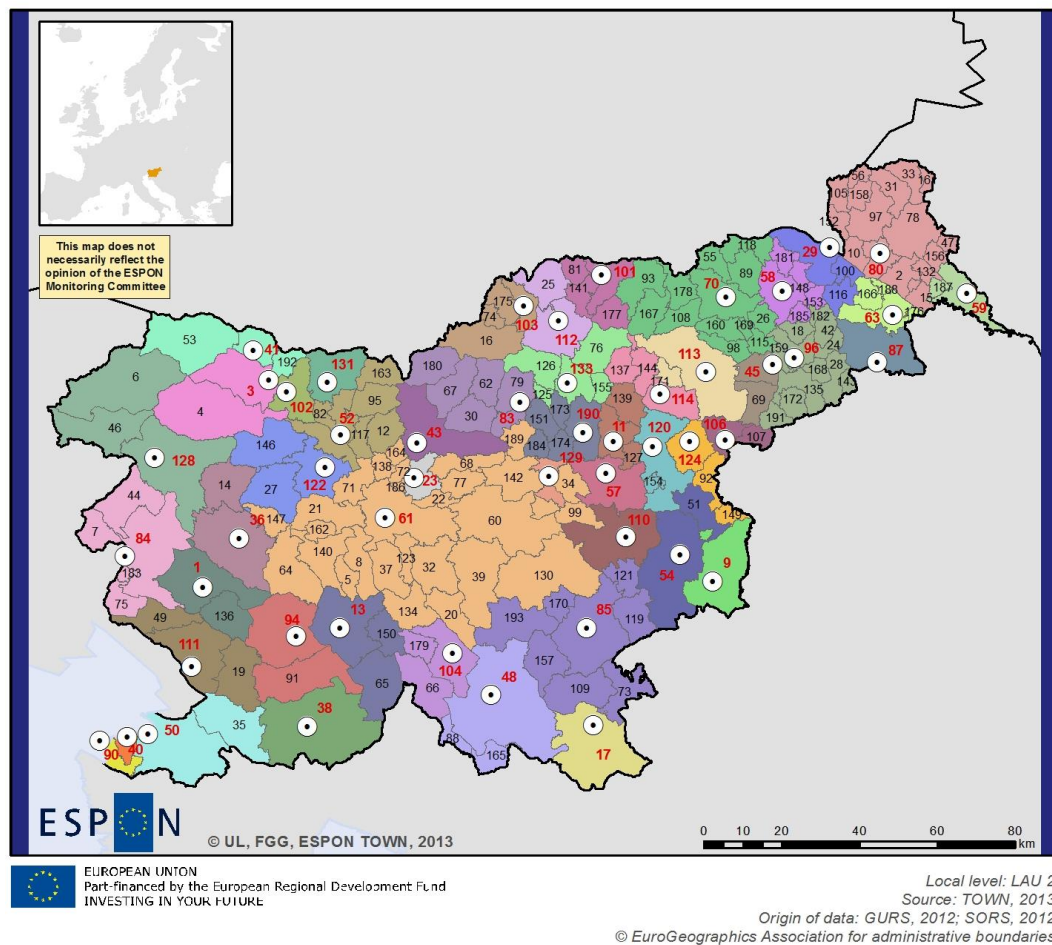
- Micro-regional center - municipal center
- NUTS 0 / NUTS 1 border
- LAU 2 border

LAU 2 - Municipalities 2001 (192)

- 38 LAU 2 Micro-regional centre
- 91 LAU 2 identification number (Appendix 1)

Figure 2.8a. “Micro-regions” and their associated “micro-regional centers” for year 2001 (for municipal coding see Appendix 1).

Functional Analyses: Micro-regions (2011*)



Micro-regional centers 2011 (50)

- Micro-regional center - municipal center
- ▬ NUTS 0 / NUTS 1 border
- ▬ LAU 2 border

LAU 2 - Municipalities 2001 (192)

- 38 LAU 2 Micro-regional centre
- 91 LAU 2 identification number (Appendix 1)
- * data for 2011 recalculated on the 2001 geography

Figure 2.8b. "Micro-regions" and their associated "micro-regional centers" for 2011 data recalculated on the 2001 geography (for municipal coding see Appendix 1).

RECOGNITION OF FINAL "MICRO-REGIONAL CENTERS" (MRC)

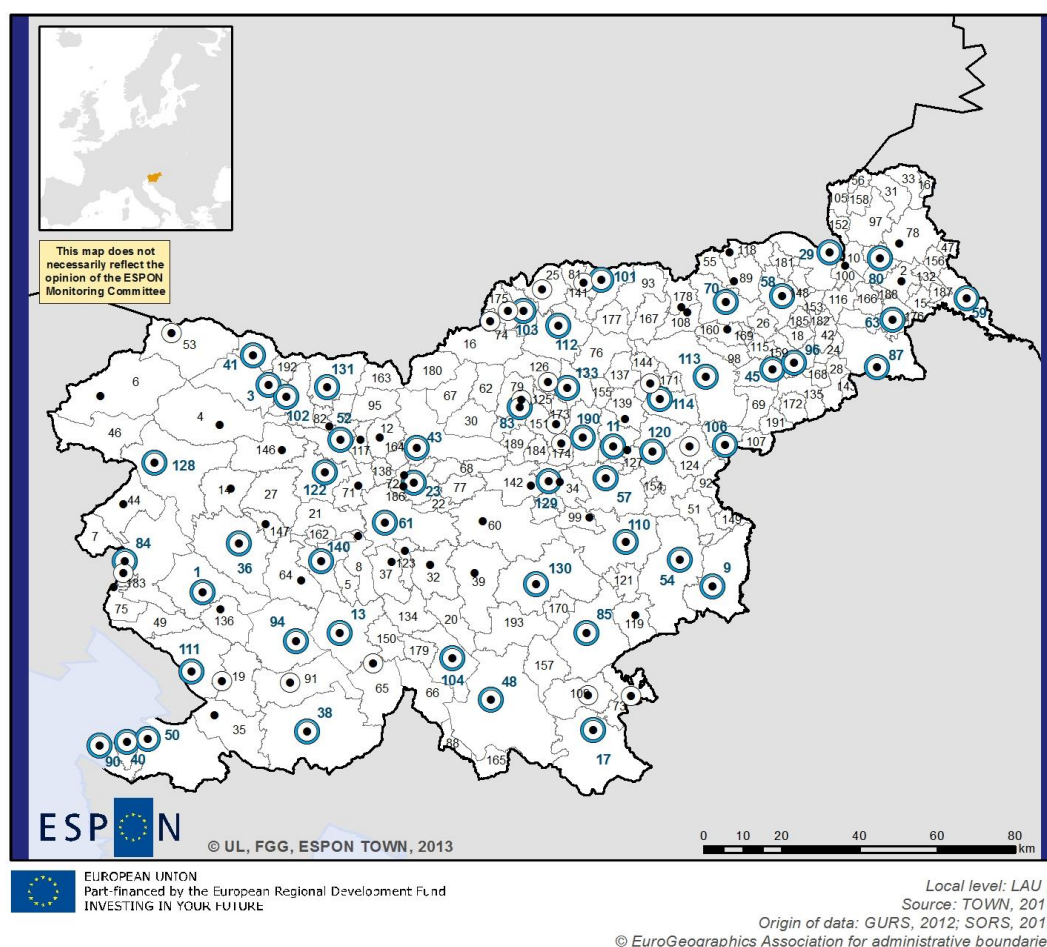
The final dataset of modified "proto micro-regions" represents the final result. These corrected and territorially coherent PMRs can be now called "**micro-regions**". Each of "micro-regions" is organised around its main "urban center" which can be called "**micro-regional center**" (MRC). "Micro-regional centers" represent the urban nodes with certain levels of job centrality that is reflected in the size of respective "micro-region". One of the final results is the set of LAU 2 municipalities assigned to territorially coherent "micro-regions".

In the next step we have calculated all job commuting flows between the newly formed "micro-regions" in Slovenia for both years 2001 and 2011.

Results for Slovenia: Based on year **2001** data we have delimited **51 MR**. The result for the year **2011** is **50 MR**. The difference between “micro-regional centers” defined in 2001 and 2011 is that the municipality of Trebnje (code 130) and Vrhnika (code 140) had qualified as “micro-regional centers” in year 2001 while in year 2011 they did not. At the same time in year 2011 there is one additional municipality that have fulfilled the criteria, and hence qualified as “micro-regional center”: Šmarje pri Jelšah (code 124).

In Figure 2.9a and 2.9b we can see different types of centers defined in the process of identification of the MR. Step by step, from job to urban and to micro-regional center, we identified the status, the hierarchy and the territorial relationship between municipalities’ center towns in Slovenia.

Functional Analyses: Job, Urban, Micro-regional centers (2001)



Functional centres 2001

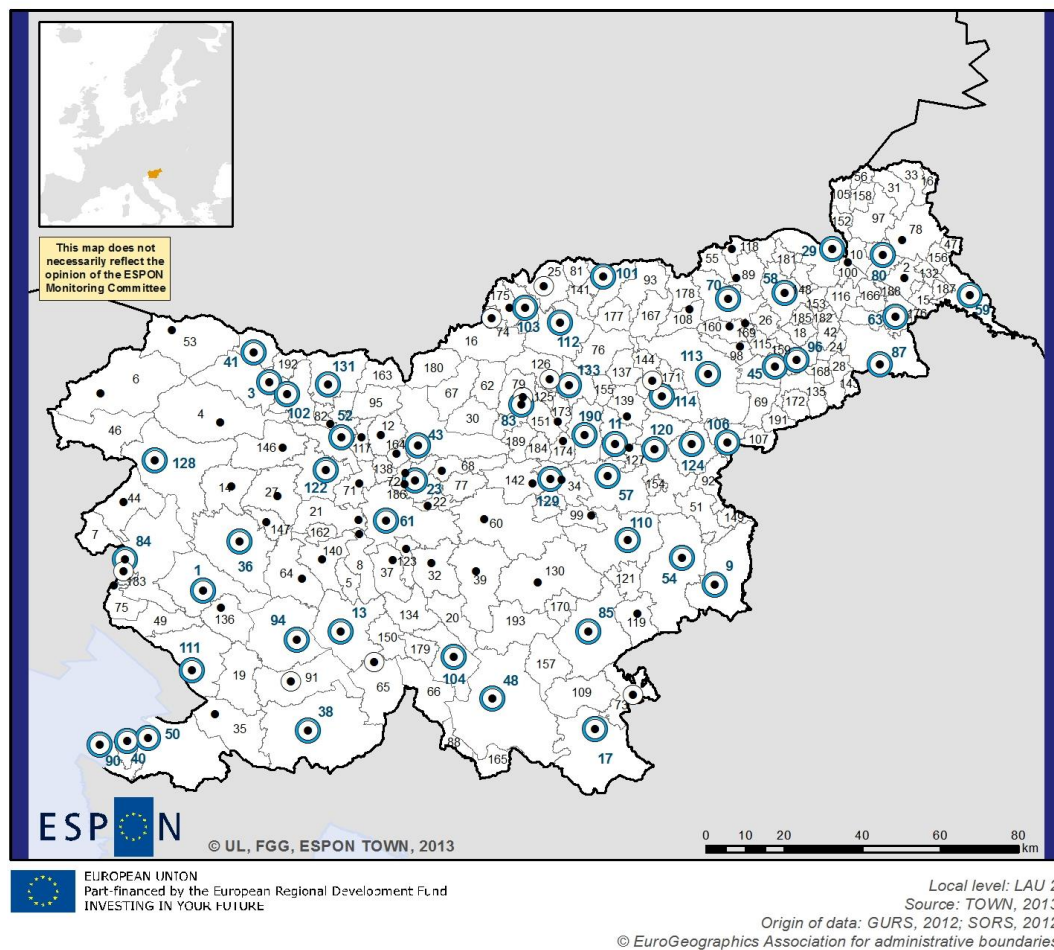
- Job centers (104)
- ◉ Urban centers (68)
- ◉ Micro-regional centers (51)
- ▭ NUTS 0 / NUTS 1 border

LAU 2 - Municipalities 2001 (192)

- 38 LAU 2 Micro-regional centre
- 91 LAU 2 identification number (Appendix 1)
- ▭ LAU 2 border

Figure 2.9a. Distinction between defined centers by methodological steps: “job”, “urban”, “micro-regional” centers for year 2001 (for municipal coding see Appendix 1).

Functional Analyses: Job, Urban, Micro-regional centers (2011*)



Functional centres 2011

- Job centers (107)
- ◉ Urban centers (59)
- ◉ Micro-regional centers (50)
- ▭ NUTS 0 / NUTS 1 border

LAU 2 - Municipalities 2001 (192)

- 38 LAU 2 Micro-regional centre
- 91 LAU 2 identification number (Appendix 1)
- ▭ LAU 2 border

* data for 2011 recalculated on the 2001 geography

Figure 2.9b. Distinction between defined centers by methodological steps: “job”, “urban”, “micro-regional” centers for 2011 data recalculated on the 2001 geography (for municipal coding see Appendix 1).

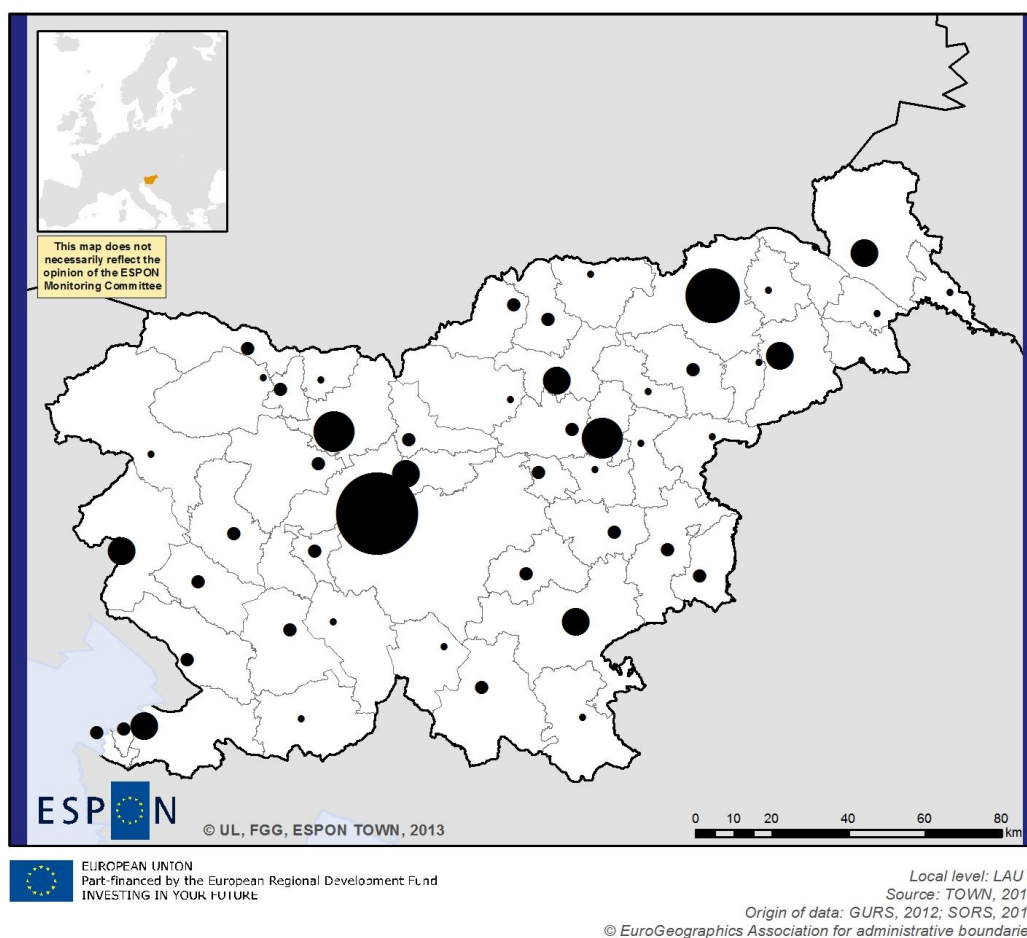
2.2.2 Outputs of the 1st stage of functional analyses (January – February 2013)

The final result is the set of “job centers”, “urban centers” and “micro-regional centers” with their “micro-regions” (MR) and the associated data. These are the main outputs of the first stage of functional analyses. Figure 2.10a and Figure 2.10b illustrate part of the results from the first stage of the functional analyses. For each representative year (2001 and 2011) we prepared the following datasets and shape files:

1. The dataset and shape file of “job centers”, “urban centers” and “micro-regional centers” with appropriate data about population, economically active population (EAP) living in the “center” (i.e. LAU 2 municipality), EAP working in the “center” and total flows of job commuters out-going from and in-coming to the “center”.

2. The dataset where the set of “job centers”, “urban centers” and “micro-regional centers” is confronted with RA2 SMT polygons database. As we still did not receive the corrected polygons we used the first set of polygons to which we included all the suggestions.
3. The dataset and shape file of “micro-regions” (MR). The dataset consist of LAU 2 municipalities with indicated assignment to particular “micro-regional center” (MRC). For each LAU 2 we added data of population, EAP living in the LAU 2, EAP working in the LAU 2 and the total flows of job commuters going-out and coming-in the LAU 2 municipality. For the final MR we calculated and added the same dataset as for the LAU 2 municipalities (population, EAP, number of jobs, etc.). We added also a dataset with all job commuting flows between MR.
4. The matrix and table containing all the flows between LAU 2 municipalities in Slovenia.

Micro-regions and their centers (2001)



Jobs in micro-regional center (MRC)

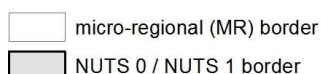
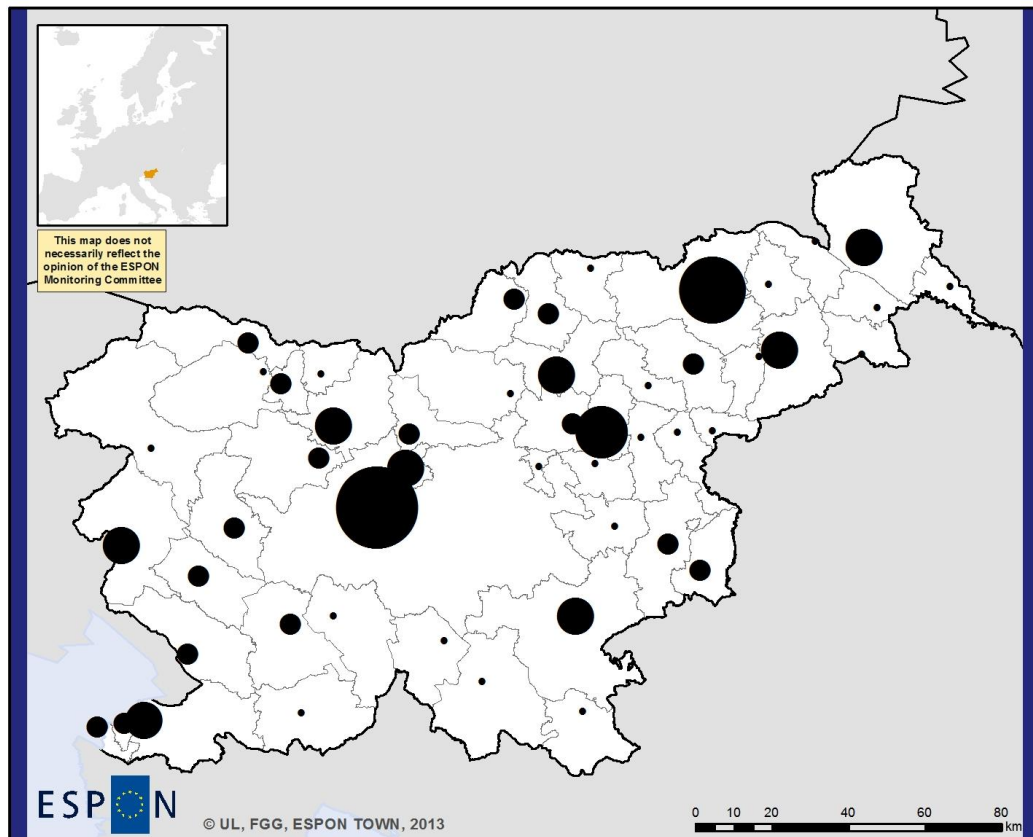


Figure 2.10a. Micro-regions (MR) and their micro-regional centers (MRC) for year 2001.

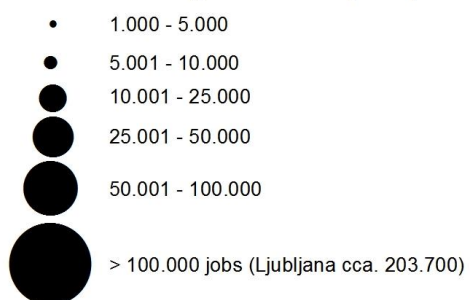
Micro-regions and their centers (2011*)



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Local level: LAU 2
Source: TOWN, 2013
Origin of data: GURS, 2012; SORS, 2012
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Jobs in micro-regional center (MRC)



□ micro-regional (MR) border

■ NUTS 0 / NUTS 1 border

* data for 2011 recalculated on the 2001 geography

Figure 2.10b. Micro-regions (MR) and their micro-regional centers (MRC) for 2011 data recalculated on the 2001 geography.

2.3 Identification of SMSTs territorial arrangements - autonomous, networked, agglomerated in large city regions

The final result of the first stage of functional analysis is the set of “micro-regional centres” (MRC) with their appropriate hinterland, which is formed by connected LAU 2 municipalities. These corrected and territorially coherent areas are called “micro-regions” (MR). Each of these “micro-regions” is organized around its main “urban centre” that represents the urban node with certain levels of job centrality, what is reflected in the size of respective “micro-region”. One of the final results is the set of LAU 2 municipalities assigned to territorially coherent “micro-regions”. The analysis has been performed taking in consideration the municipal geography from 2001 for both 2001 and 2011 reference years.

The outputs from the first stage of analysis help us to set up further analytical steps of the second stage. Our goal is to identify significant flows between particular types of centres and to define a hierarchical scale for different types of “micro-regional centres” with the analyses and transformation of the flows patterns. Such an analysis will enable us to distinguish between lower and upper tiers of urban hierarchy and to make it possible to identify SMSTs territorial arrangements from delimited “micro-regional centres” (i.e. autonomous, networked and agglomerated).

2.3.1 Methodology

The functional analysis is based on the previously used job commuting data and population data in LAU 2 municipalities. From the original LAU 2 - LAU 2 commuting matrix acquired from the SORS we selected only commuting flows between “micro-regional centres” (MRC). The rest of the data needed has been calculated from the new MRC – MRC commuting matrix such as: the number of jobs in each MRC, the EAP living in MRC, and the total flow of job commuters in and out of the MRC. Population data for MRC unites was acquired from SORS for the year 2001 and 2011. The commuting and the population data for the year 2011 was adjusted to the same municipal geography being used for 2001 data.

The input data for the first part of the analysis is the matrix of flows between LAU 2 delimited as “micro-regional centres”.

Results for Slovenia: The commuting matrix for the year 2001 includes 1584 flows between 51 MRC while for the year 2011 about 1747 flows were identified between 50 MRC.

IDENTIFICATION OF “SIGNIFICANT FLOWS”

For the analysis and the definition of hierarchical structure of urban network in Slovenia we have to consider the strong functional connections between MRCs. The spatial connection between previously defined MRC can be defined and calculated from significant flows between MRCs. By significant we understand that the flow is important for the “source” urban centre, for the “destination” urban centre and also for the urban system as a whole. We identify the “significant flows” with two steps procedure described by Van Nueffel (2007). First we identified 5 highest outgoing flows for each LAU 2 municipality. Each flow was represented in a relative way as a share of the total sum of all the 5 highest flows from the MRC. With the comparison of the 5 highest flows with five ideal types of distribution (see Tab. 2.1 in Chapter 2.2) we have determined the number of significant outgoing flows. The highest correlation between the calculated real distributions of flows for each LAU 2

with the five “ideal” types of distribution, help us to define which flows to consider as significant. In the case the correlation was rather similar (up to the difference of 1 %) for two ideal types, we have chosen the correlation with the higher number of “significant flows”.

The second step is to delete the flows that are relatively small. The ESPON TOWN methodology suggests that the importance of the flows between MRCs is evaluated according to economically active population (EAP) of “source” MRC and according to the number of jobs in “destination” MRC.

First the commuting flow has to be important in relation to economically active population (EAP) of the “source” MRC. We calculated the share of out-commuting population on EAP living in the “source” LAU 2, and we have eliminated all flows that accounted for less than 5% of EAP. In this way we came to a final list of significant flows that can be used in further analysis.

When deleting the flows with less than 5 % of EAP leaving from “micro-regional centre” to work in another centre, we could encounter centres that do not have any significant outgoing flow or any incoming flow. Those centres would qualify as “autonomous”. In the case of Slovenia, we did not find any autonomous MRC. All the MRC had at least one outgoing or one incoming flow. More often we encountered centres with 3, 4 or more significant flows.

Results for Slovenia: As the first step we have selected 84 significant commuting flows for the year 2001 and 98 significant commuting flows in year 2011. Figure 2.11a shows significant flows between 51 micro regional centres (MRC) in 2001. The significant flows between 50 MRC in 2011 are shown in Figure 2.11b.

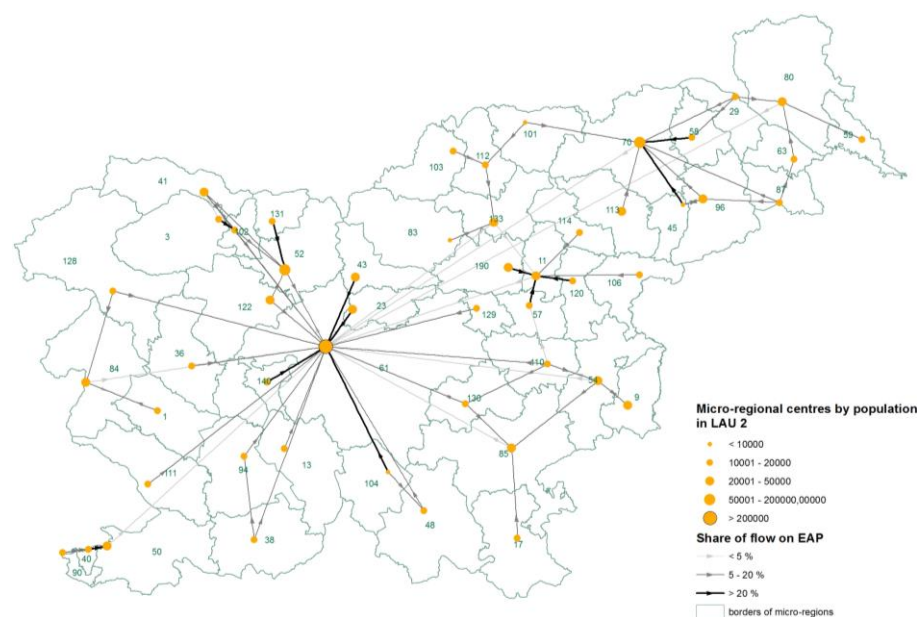


Figure 2.11a. Significant commuting flows between micro regional centres (MRC) in Slovenia in 2001: Step 1 (for MRC coding see Appendix 1).

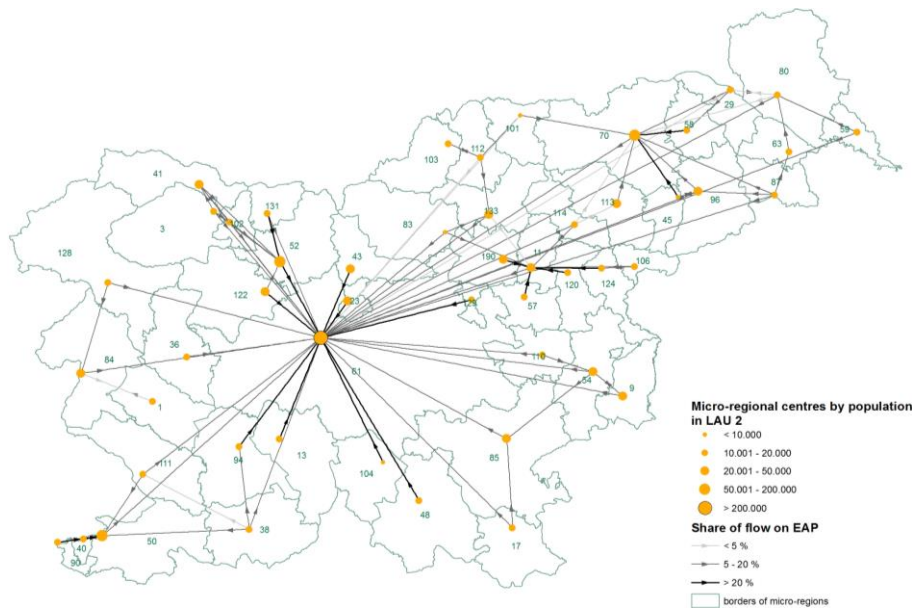


Figure 2.11b. Significant commuting flows between micro regional centres (MRC) in Slovenia in 2011 recalculated on 2001 geography: Step 1 (for MRC coding see Appendix 1).

The second criterion for the comparison of the importance of these commuting flows is the share of out-commuting population according to the number of jobs in the “destination” MRC. This criterion is used to distinguish which significant flow is important for the “destination” MRC and which flow only for the “source” MRC. For Slovenia, we have decided that all flows with 1 % (or more) share of the number of jobs in “destination” MRC are already playing rather significant, and sometimes very significant role in the labour market also in the “destination” MRC.

Results for Slovenia: Figure 2.12a and Figure 2.12b show all significant commuting flows and their importance as connections between micro regional centres (MRC) in Slovenia for years 2001 and 2011.

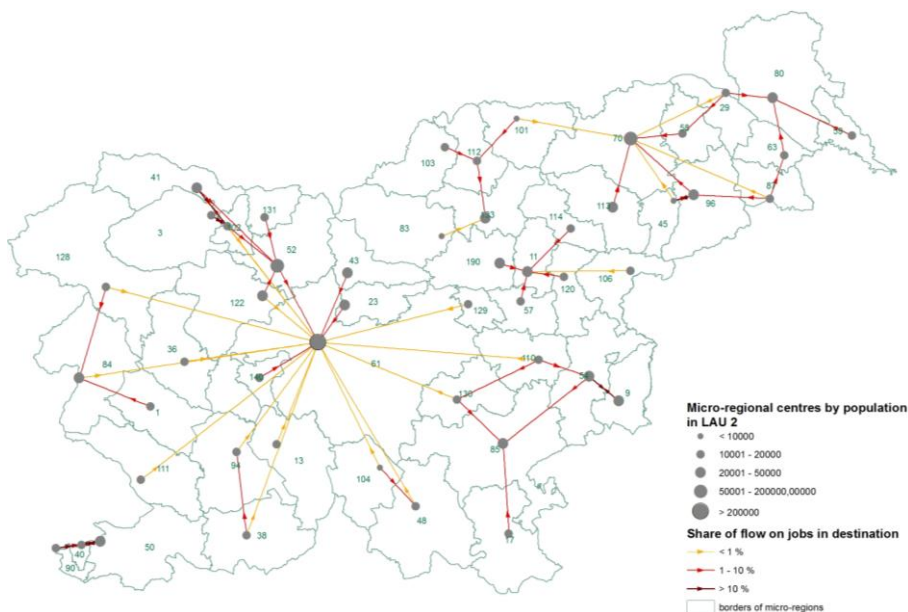


Figure 2.12a. Significant flows between micro regional centres (MRC) in Slovenia in 2001: Step 2 (for MRC coding see Appendix 1).

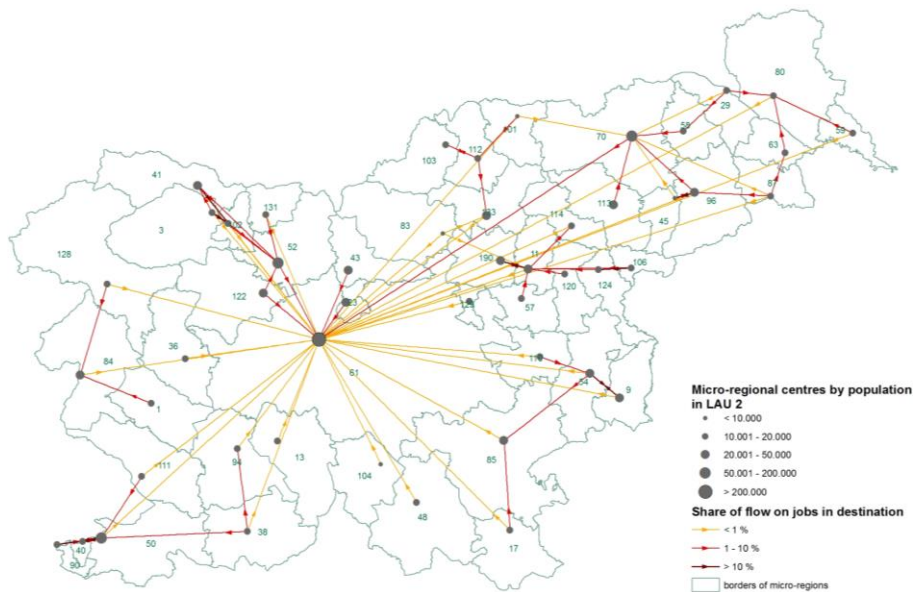


Figure 2.12b. Significant flows between micro regional centres (MRC) in Slovenia in 2011 recalculated on 2001 geography: Step 2 (for MRC coding see Appendix 1).

The flows are divided into three groups according to their importance for the “destination” MRC. The criterion is the share of out-commuting population according to the number of jobs in the “destination” MRC. At the same time the red flows, with the share of 1 % and more connect networked systems of urban centres while yellow flows with the share of less than 1 % connect agglomerated urban systems.

IDENTIFICATION OF SMALL AND MEDIUM SIZED TOWNS (SMST) AND LARGE CITIES (LC)

“Micro-regional centres” (MRC) are of different size, centrality and position within the urban hierarchy/network. They include both small and medium sized towns (SMST) as well as large cities (LC). In ESPON TOWN project, we differentiate between SMST and LC and the project would implicitly prefer to work with SMST (pre)defined as settlements with population size from 5000 to 50,000 inhabitants. However, the real quantitative “thresholds” differ between national (and even regional) settlement systems. Medium size town / large city are not only larger (from small towns) in population terms, but they also have more important territorial influence.

They concentrate diverse functions and services that are used not only by population and firms in the own “micro-region”, but also by firms and population from other “micro-regions”. Consequently, the capital city plays in certain aspects the role of the national centre. But, between national (macro-regional) and local (micro-regional) level, there is (are) other mezzo-regional territorial level(s).

One option is to identify and analyse different levels by using data about the size and concentration of particular functions in urban centres of Slovenia. However, in the functional analysis of the ESPON TOWN project we have concentrated and analysed the relations between different urban centres.

The relations between “urban centres” (as MRC) in Slovenia are analysed using the matrix of significant commuting flows between the analysed SMSTs. We have identified the number of incoming and outgoing flows for each MRC. The MRC that are recognised as “destination” centres for more commuting flows from other MRC were considered as “urban centres” of higher functional significance.

The criterion for the functional significance was calculated as a sum of values representing the importance of the incoming flow. Each “source” MRC could contribute the value of 1 to the “destination” MRCs. This value was divided between all the outgoing flows. For example, if there was only one outgoing flow it carried the value of 1. If there were 4 significant outgoing flows, each of them would carry the value of 0.25. In this way all flows from each MRC were given an appropriate value in accordance to the number of significant outgoing flows. Each flow then contributed this value to the “destination” MRC. To each MRC we have added either the value 1 for the centre from which this was the only destination, or a proportional share of value 1 (0,50; 0,33; 0,25; 0,20) in the cases with two or more outgoing flows. The sum of all these values gave us the functional position of particular MRC in the urban system.

According to the ESPON TOWN methodology, the LCs are settlements with high value of functional position and population size. The threshold values were set on 50,000 inhabitants and the value of functional position in urban system equal or more than 2. These threshold values are appropriate also in the case of Slovenia.

Results for Slovenia: Micro-regional centre (MRC) is considered as a “large city” in Slovenia, with the population size over 50,000 inhabitants, and at the same time the value of functional position in the urban system is over 2. For the year 2001, we have directly identified 3 MRC to be considered as LC (Ljubljana, Maribor and Kranj). However, there were also 3 other MRCs, with the high value of functional position over 2, and the population size below 50,000 inhabitants. From these LC the population size of Murska Sobota was far below 50,000 (exactly 20,152 inhabitants) while the population size of Novo Mesto was 41,131 inhabitants - so we have not considered them as a “large city”. But we have also included Celje as a LC, due to the population size of 49,246 inhabitants and the value of functional position of 5, as the second highest value after Ljubljana. In 2001, out of selected 51 MRCs in Slovenia, we have identified 4 LC: Ljubljana (code 61), Maribor (code 70), Celje (code 11) and Kranj (code 52) (see Figure 2.13a).

For the year 2011, 4 MRC were directly defined as LC with the population size of more than 50,000 inhabitants and with the value of functional position over 2. Those LC are Ljubljana (code 61), Maribor (code 70), Kranj (code 52) and Koper (code 50). The situation with Celje is similar to year 2001 - the population size is still lower than 50,000 but because of the high functional position value, Celje was again qualified as a “large city” (LC). The value of the functional position of Koper has increased from 1,5 (2001) to 2,83 (2011). This has changed the role of Koper from NETW-SMST-D to LC (see Figure 2.13b).

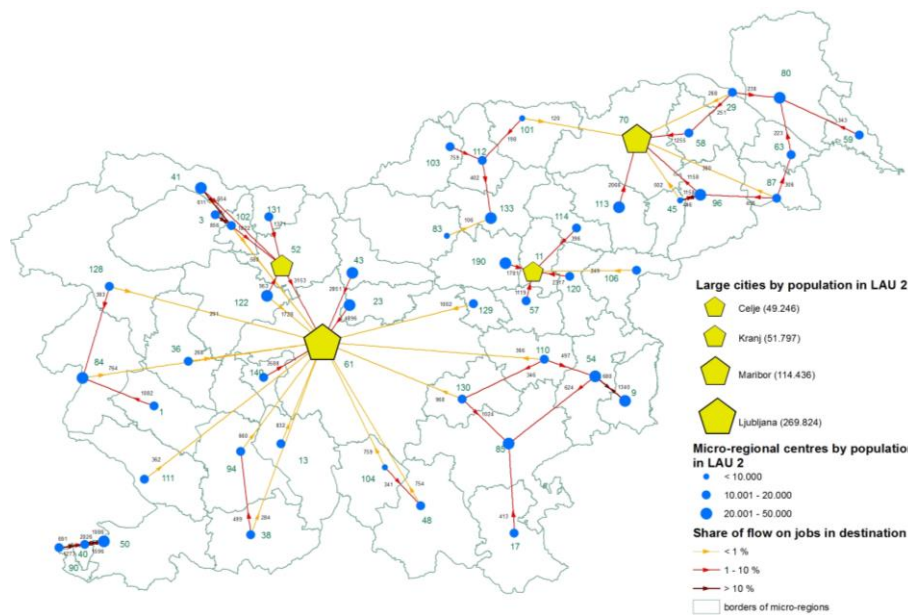


Figure 2.13a. Hierarchical levels of micro regional urban centres (MRC) in Slovenia in 2001 (for MRC coding see Appendix 1).

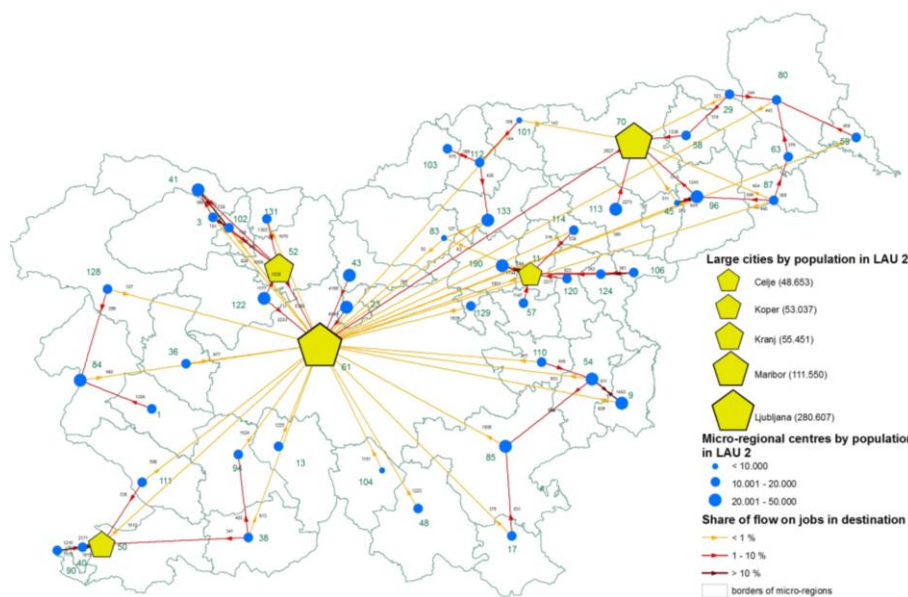
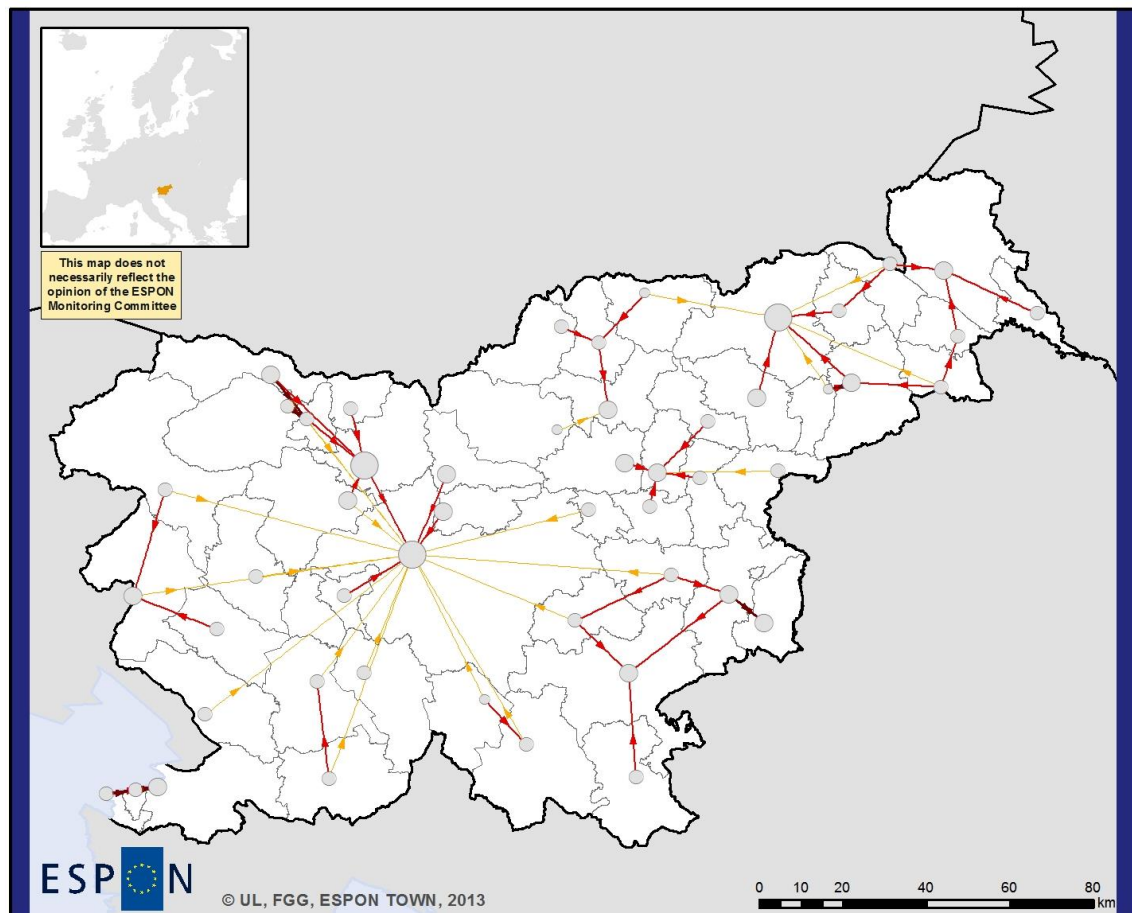


Figure 2.13b. Hierarchical levels of micro regional urban centres (MRC) in Slovenia in 2011 recalculated on 2001 geography (for MRC coding see Appendix 1).

Connections between micro-regional centres by significant flows of job commuter are represented in Figure 2.14a for the year 2001 and in the Figure 2.14b for the year 2011 recalculated on 2001 geography.

Significant Flows between micro-regional centers (2001)



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Population of micro-regional center (MRC) Share of flow on jobs in destination

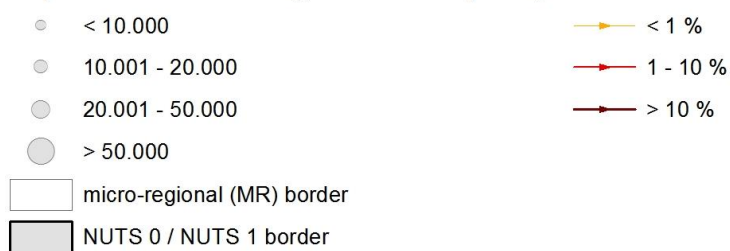
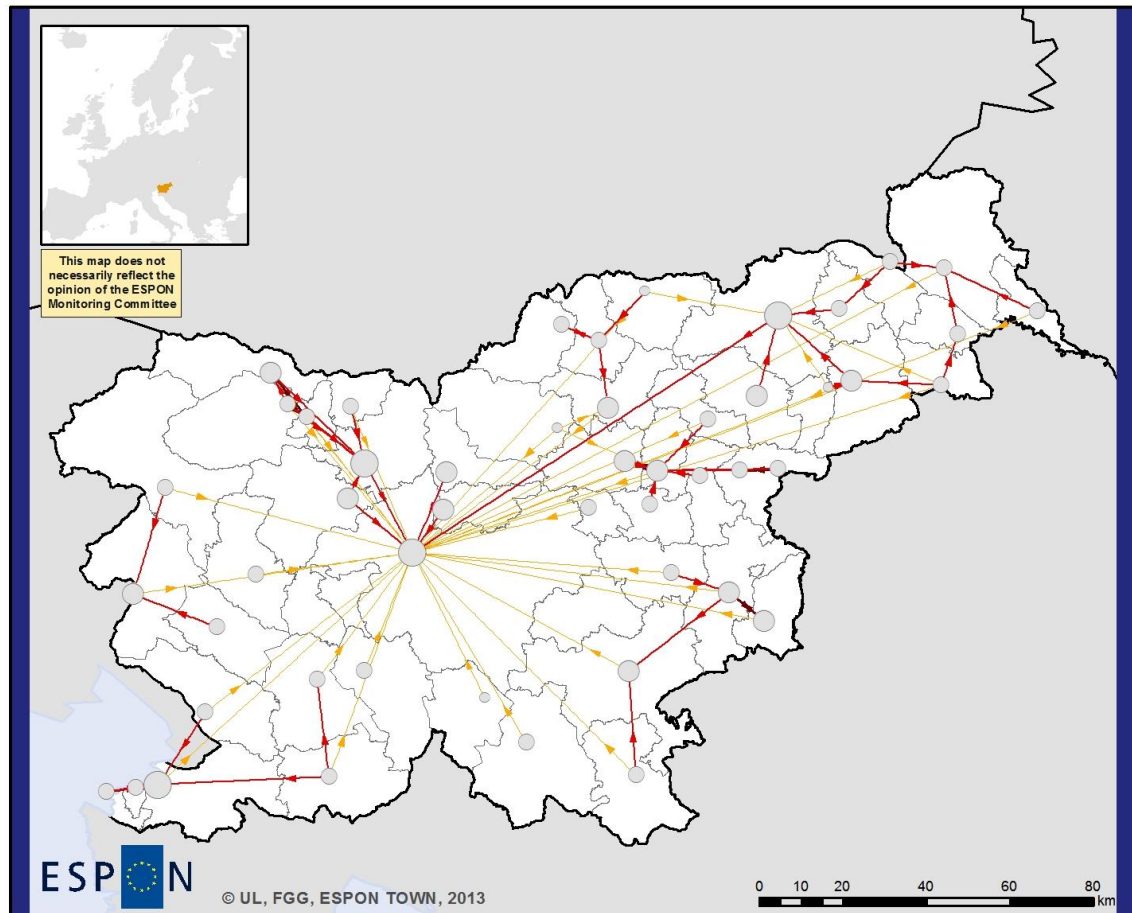


Figure 2.14a. Significant Flows between micro-regional centres in 2001.

Significant Flows between micro-regional centers (2011*)



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Population of micro-regional center (MRC)

- < 10.000
- 10.001 - 20.000
- 20.001 - 50.000
- > 50.000

□ micro-regional (MR) border

■ NUTS 0 / NUTS 1 border

Share of flow on jobs in destination

- < 1 %
- 1 - 10 %
- > 10 %

* data for 2011 recalculated on the 2001 geography

Figure 2.14b. Significant Flows between micro-regional centres in 2011 recalculated on 2001 geography.

IDENTIFICATION OF AUTONOMOUS, AGGLOMERATED AND NETWORKED SMALL AND MEDIUM SIZED TOWNS

In the final step of functional positional analysis, we have identified autonomous, agglomerated and networked SMST. They are also classified in accordance to the type of MRC they are connected to – either to the LC or to SMSTs, and as a “destination” or a “source” of commuting flows. Therefore we have identified in Slovenia:

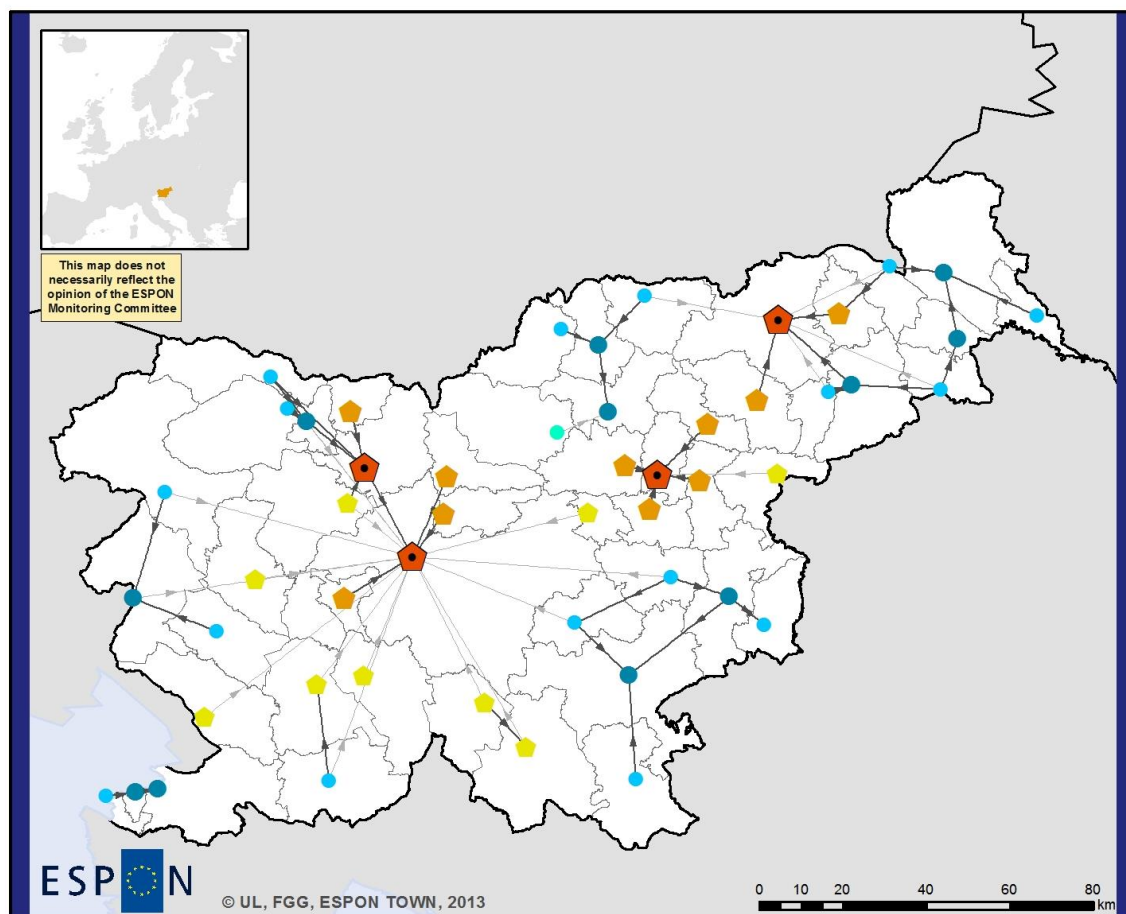
- **(AUTO)** Autonomous MRC that have no outgoing or incoming significant commuting flows – according to the results there were no “autonomous urban centres” in Slovenia in years 2001 and 2011;
- **(AGLO-LC)** Towns with significant outgoing flows only for themselves (significant share of EA population in the “source” MRC) and links to “large cities” (LC); they are agglomerated to the LC;
- **(AGLO-SMST)** Towns with significant outgoing flows only for themselves (significant share of EA population in the “source MRC) and linked to another SMST; they are agglomerated to SMSTs;
- **(NETW-LC)** Towns with significant outgoing flows also for “destination MRC” (with significant share in its number of jobs) and linked to the “large city” (LC); they are networked with LC;
- **(NETW-SMST-S)** Towns with significant outgoing flows also for “destination MRC” (with significant share in its number of jobs) and linked to this destination SMST; they are networked with SMST as a “source” MRC;
- **(NETW-SMST-D)** Towns with significant incoming flows from other SMST (both yellow and red as shown in Figures 2.14a and 2.14b) are networked with SMST as a “destination MRC”;
- Towns with two or more outgoing flows of different character (both yellow and red), and/or to two “destination” MRC of which one is the LC and the other SMST; and sorted by the volume of flows.

Results for Slovenia: The results for Slovenia are shown in Figure 2.15a for year 2001 and in Figure 2.15b for year 2011.

From Figure 2.15a and 2.15b we can see that networking and agglomeration can occur with the LC (large urban centre) or just with the SMSTs or between SMSTs. There are urban systems organized around the LC in which SMSTs are usually networked, while some of them are agglomerated. However, they are also important urban systems of SMSTs where most of them are *networked* and only one SMST is *agglomerated* – Nazarje (code 83).

During the classification of MRC we have encountered also several situations when we had to deal with multiple connections of incoming or outgoing commuting flows. For example in year 2001 the MRC Radovljica (code 102) had four (4) outgoing flows and two (2) strong incoming significant flows. At the same time these outgoing flows (4) were directed to two different LC (Kranj and Ljubljana) as well as to two SMSTs (Jesenice and Bled). For more details see also Figure 2.16.

Types of micro-regional centers (2001)



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Type of micro-regional center (MRC)

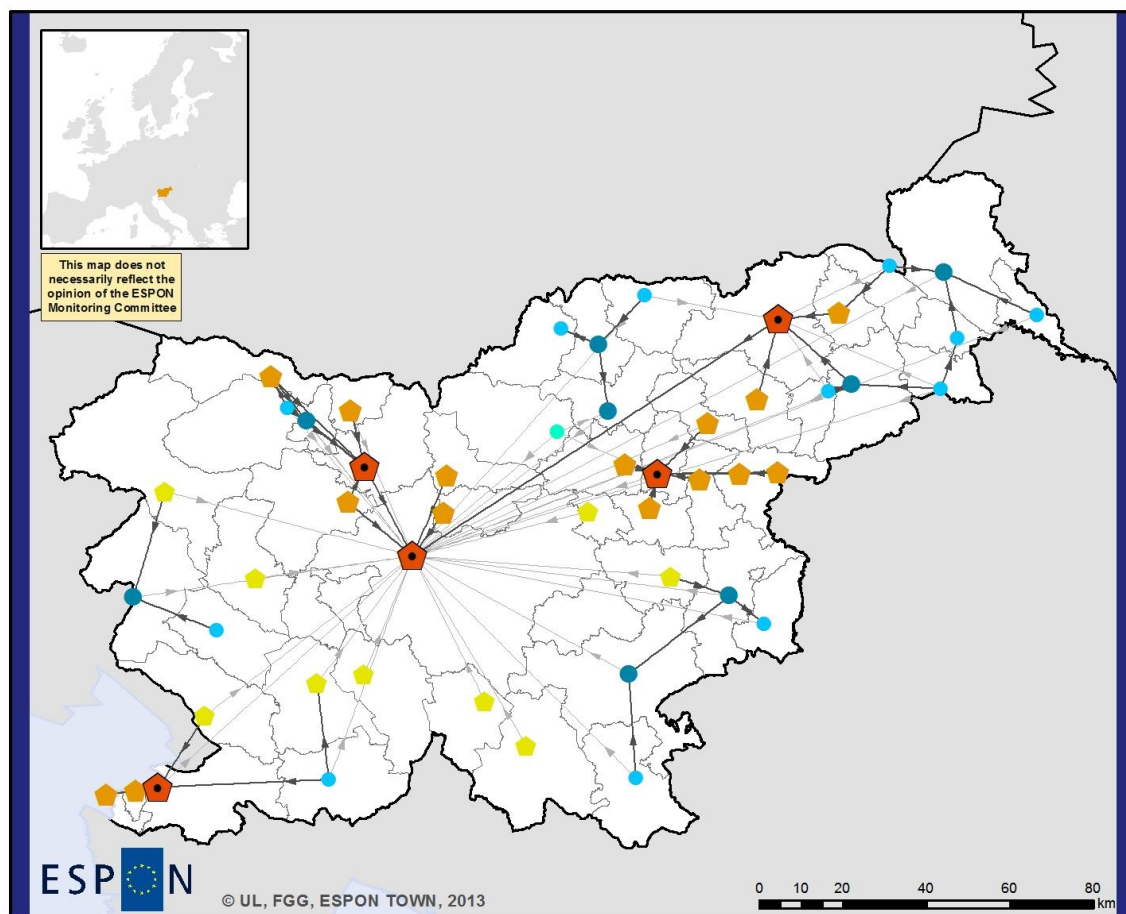
- LC
- NETW-LC
- AGLO-LC
- NETW-SMST-D
- NETW-SMST-S
- AGLO-SMST

Share of flow on jobs in destination

- < 1 %
- > 1 %
- micro-regional border
- NUTS 0 / NUTS 1 border

Figure 2.15a. Types of "micro regional centres" MRC according to territorial arrangements (autonomous, networked, agglomerated) in Slovenia in year 2001.

Types of micro-regional centers (2011*)



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Type of micro-regional center (MRC)

- LC
- NETW-LC
- AGLO-LC
- NETW-SMST-D
- NETW-SMST-S
- AGLO-SMST

Share of flow on jobs in destination

- < 1 %
- > 1 %
- micro-regional border
- NUTS 0 / NUTS 1 border

* data for 2011 recalculated on the 2001 geography

Figure 2.15b. Types of "micro urban centres" according to territorial arrangements (autonomous, networked, agglomerated) in Slovenia in year 2011 recalculated on 2001 geography.

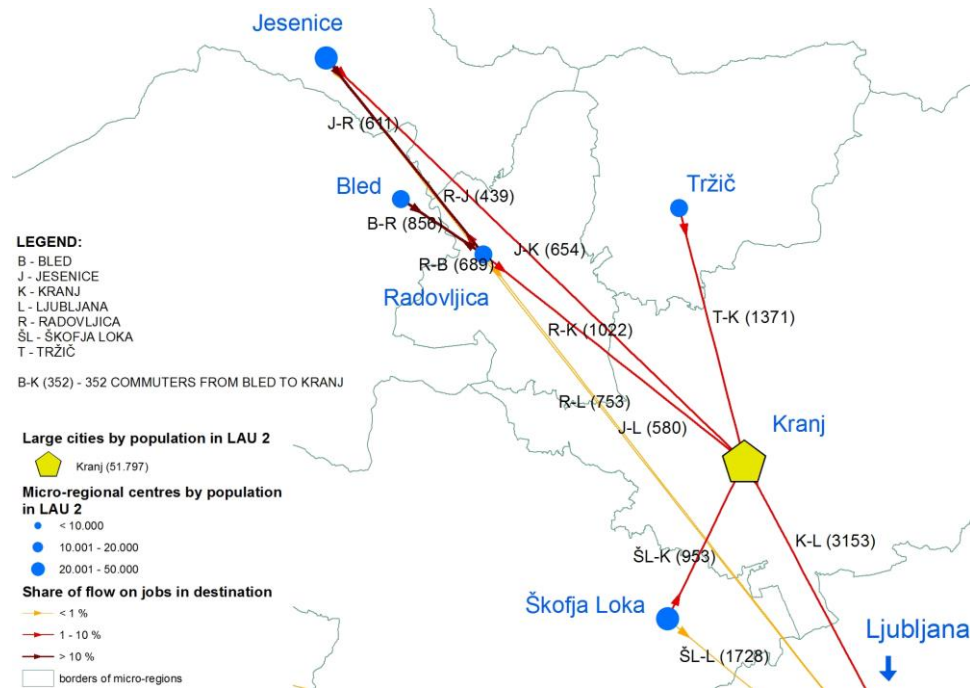


Figure 2.16. Examples of commuting flows between MRC in Gorenjska (NUTS 3) region in Slovenia.

This case presented here as an example is just one of the situations where we introduced a set of criteria to better understand and classify such well connected MRCs. The criteria used here differentiated between the situations with different number of flows connecting the MRC into the urban system. Firstly, when classifying MRC with only two significant flows, we have decided to consider only the stronger one of the two flows. This criterion could not be applied when dealing with more incoming and outgoing commuting flows, directed to LC and to other SMSTs, as we could lose important information about local connections.

In Slovenia almost every MRC is strongly connected to the capital city – LC Ljubljana. The flows to Ljubljana are often the highest or one of the highest from different MRCs. If we would consider only the strongest flow we would connect all these MRCs to Ljubljana, even if there are several incoming flows to such a MRC. In this way we would lose the data about local connections and the importance of such a centre in the local area, for the neighbouring MRC. That is the reason why we took in consideration several other aspects when classifying MRC with multiple flow connections. Firstly, we have calculated the mutual connections between MRCs. The connection is stronger if it goes both ways. Secondly, we classify the MRC as a NETW-SMST-D if there are two or more incoming (red) flows into the MRC and if the value of functional position is higher than 0,5. Thirdly, we take into account the summarized values of all incoming and outgoing flows to LCs and outgoing flows to SMSTs. With this set of rules we have classified all the MRC in Slovenia.

Results for Slovenia: Table 2.2 shows the number and the characteristics of different types of MRCs classified for Slovenia in years 2001 and 2011. From Table 2.2 we can see that the average population size of LC is of different level in comparison with the average population size of different types of SMSTs. Among the SMSTs types, SMST networked with other SMSTs as “destination” centres (NETW-SMST-D) has the largest average population size. They were followed by SMSTs networked with the large city (NETW-LC), SMSTs agglomerated to the large city (AGLO-LC) and SMSTs networked to other SMSTs as a “source” centre (NETW-SMST-S). The smallest value was found for SMST agglomerated to other SMSTs (AGLO-SMST).

Table 2.2. Characteristics of Slovenian micro-regional center types in years 2001 and 2011.

Type	Number of MRC (2001)	Population (2001)	EAP (2001)	Number of jobs (2001)	Average population in SMST (2001)	Average no. of EAP in SMST (2001)	Average no. of jobs in SMST (2001)
LC	4	485,303	191,296	284,589	121,325.8	47,824.0	71,147.3
NETW-LC	10	197,162	76,416	60,644	19,716.2	7,641.6	6,064.4
AGLO-LC	9	126,311	50,046	48,893	14,034.6	5,560.7	5,432.6
NETW-SMST-D	11	294,334	116,586	139,864	26,757.6	10,598.7	12,714.9
NETW-SMST-S	16	237,929	86,277	78,694	14,870.6	5,392.3	4,918.4
AGLO-SMST	1	2,724	1,053	2,414	2,724.0	1,053.0	2,414.0
AUTO	0	0	0	0	0	0	0
SUM	51	1,343,763	521,674	615,098	26,348.3	10,228.9	12,060.7
Type	Number of MRC (2011)	Population (2011)	EAP (2011)	Number of jobs (2011)	Average population in SMST (2011)	Average no. of EAP in SMST (2011)	Average no. of jobs in SMST (2011)
LC	5	549,298	209,796	335,112	109,859.6	41,959.2	67,022.4
NETW-LC	15	290,365	112,340	86,629	19,357.7	7,489.3	5,775.3
AGLO-LC	9	124,130	47,482	39,951	13,792.2	5,275.8	4,439.0
NETW-SMST-D	8	219,540	83,541	101,730	27,442.5	10,442.6	12,716.3
NETW-SMST-S	12	159,290	56,831	49,596	13,274.2	4,735.9	4,133.0
AGLO-SMST	1	2,604	1,047	1,862	2,604.0	1,047.0	1,862.0
AUTO	0	0	0	0	0	0	0
SUM	50	1,345,227	511,037	614,880	26,904.5	10,220.7	12,297.6

The last step in the territorial identification of polygons in Slovenia was to recognize all the VST Polygons that represent a micro-regional center (MRC) from the functional analysis of the settlement systems (See Table 2.3a and Table 2.3b). The analyses showed that 16 MRCs are in fact VST Polygons in both reference years: 2001 and 2011. Table 2.3a and Table 2.3b also combines the results from the territorial identification of SMSTs and from the functional analysis of settlement systems in Slovenia. For the two reference years (2001 and 2011) it shows how and which polygons coincide with MRCs.

Table 2.3a. Comparison of population polygons and MRC in 2001.

MRC_ID	MRC	MRC TYPE	POLYGON TYPE	CODE N. OF POLYGON	URBAN AREA INCLUDED IN THE POLYGON
1	Ajdovščina	NETW-SMST-S	SMST	2591	Ajdovščina
3	Bled	NETW-SMST-S	SMST	8342	Bled
9	Brežice	NETW-SMST-S	SMST	8332	Brežice
11	Celje	LC	SMST	8340	Celje
13	Cerknica	AGLO-LC	VST	19617	Cerknica
17	Črnomelj	NETW-SMST-S	SMST	8327	Črnomelj
23	Domžale	NETW-LC	SMST	8336	Domžale, Kamnik
29	Gornja Radgona	NETW-SMST-S	SMST	8349	Gornja Radgona (Si) - Bad Radkersburg (Au)
36	Idrija	AGLO-LC	SMST	2653	Idrija
38	Ilirska Bistrica	NETW-SMST-S	VST	18666	Ilirska Bistrica
40	Izola	NETW-SMST-D	SMST	8326	Izola
41	Jesenice	NETW-SMST-S	SMST	2795	Jesenice

MRC_ID	MRC	MRC TYPE	POLYGON TYPE	CODE N. OF POLYGON	URBAN AREA INCLUDED IN THE POLYGON
43	Kamnik	NETW-LC	SMST	8336	Domžale, Kamnik
45	Kidričevo	NETW-SMST-S	VST	22648	Kidričevo
48	Kočevje	AGLO-LC	SMST	8328	Kočevje
50	Koper	NETW-SMST-D	SMST	5	Prade
			SMST	2411	Koper
52	Kranj	LC	HDUC	849	Kranj, Škofja Loka
54	Krško	NETW-SMST-D	SMST	8333	Krško
57	Laško	NETW-LC	VST	21610	Laško
58	Lenart	NETW-LC	VST	23333	Lenart
59	Lendava	NETW-SMST-S	VST	23558	Lendava
61	Ljubljana	LC	HDUC	264	Ljubljana
63	Ljutomer	NETW-SMST-D	VST	23200	Ljutomer
70	Maribor	LC	HDUC	281	Maribor
80	Murska Sobota	NETW-SMST-D	SMST	8348	Murska Sobota
83	Nazarje	AGLO-SMST	VST	22222	Nazarje
84	Nova Gorica	NETW-SMST-D	HDUC	257	Nova Gorica (Si) - Gorizia (It)
85	Novo mesto	NETW-SMST-D	SMST	8329	Novo Mesto
87	Ormož	NETW-SMST-S	VST	22764	Ormož
90	Piran	NETW-SMST-S	SMST	8325	Piran, Portorož
94	Postojna	AGLO-LC	SMST	2548	Postojna
96	Ptuj	NETW-SMST-D	SMST	8345	Ptuj
101	Radlje ob Dravi	NETW-SMST-S	VST	23378	Radlje ob Dravi
102	Radovljica	NETW-SMST-D	SMST	8341	Radovljica
103	Ravne na Koroškem	NETW-SMST-S	SMST	8346	Ravne na Koroškem
104	Ribnica	AGLO-LC	VST	19385, 19466, 19504	Ribnica
106	Rogaška Slatina	AGLO-LC	VST	22078	Rogaška Slatina
110	Sevnica	NETW-SMST-S	SMST	2675	Sevnica
111	Sežana	AGLO-LC	VST	19183	Sežana
112	Slovenj Gradec	NETW-SMST-D	SMST	2821	Slovenj Gradec
113	Slovenska Bistrica	NETW-LC	SMST	8344	Slovenska Bistrica
114	Slovenske Konjice	NETW-LC	SMST	2788	Slovenske Konjice
120	Šentjur	NETW-LC	VST	21924	Šentjur
122	Škofja Loka	AGLO-LC	HDUC	849	Škofja Loka, Kranj
128	Tolmin	NETW-SMST-S	VST	21442	Tolmin
129	Trbovlje	AGLO-LC	SMST	2734	Trbovlje
130	Trebnje	NETW-SMST-S	VST	20346	Trebnje
131	Tržič	NETW-LC	SMST	2779	Tržič
133	Velenje	NETW-SMST-D	SMST	8343	Velenje
140	Vrhnika	NETW-LC	SMST	8331	Vrhnika
190	Žalec	NETW-LC	SMST	8338	Žalec

Table 2.3b. Comparison of population polygons and MRC in 2011.

MRC_ID	MRC	MRC TYPE	POLYGON TYPE	CODE N. OF POLYGON	URBAN AREA INCLUDED IN THE POLYGON
1	Ajdovščina	NETW-SMST-S	SMST	2591	Ajdovščina
3	Bled	NETW-SMST-S	SMST	8342	Bled
9	Brežice	NETW-SMST-S	SMST	8332	Brežice
11	Celje	LC	SMST	8340	Celje
13	Cerknica	AGLO-LC	VST	19617	Cerknica
17	Črnomelj	NETW-SMST-S	SMST	8327	Črnomelj
23	Domžale	NETW-LC	SMST	8336	Domžale, Kamnik
29	Gornja Radgona	NETW-SMST-S	SMST	8349	Gornja Radgona (Si) - Bad Radkersburg (Au)
36	Idrija	AGLO-LC	SMST	2653	Idrija
38	Ilirska Bistrica	NETW-SMST-S	VST	18666	Ilirska Bistrica
40	Izola/Isola	NETW-LC	SMST	8326	Izola
41	Jesenice	NETW-LC	SMST	2795	Jesenice
43	Kamnik	NETW-LC	SMST	8336	Domžale, Kamnik
45	Kidričevo	NETW-SMST-S	VST	22648	Kidričevo
48	Kočevje	AGLO-LC	SMST	8328	Kočevje
50	Koper	LC	SMST	5	Prade
			SMST	2411	Koper
52	Kranj	LC	HDUC	849	Kranj, Škofja Loka
54	Krško	NETW-SMST-D	SMST	8333	Krško
57	Laško	NETW-LC	VST	21610	Laško
58	Lenart	NETW-LC	VST	23333	Lenart
59	Lendava/Lendva	NETW-SMST-S	VST	23558	Lendava
61	Ljubljana	LC	HDUC	264	Ljubljana
63	Ljutomer	NETW-SMST-S	VST	23200	Ljutomer
70	Maribor	LC	HDUC	281	Maribor
80	Murska Sobota	NETW-SMST-D	SMST	8348	Murska Sobota
83	Nazarje	AGLO-SMST	VST	22222	Nazarje
84	Nova Gorica	NETW-SMST-D	HDUC	257	Nova Gorica (Si) - Gorizia (It)
85	Novo mesto	NETW-SMST-D	SMST	8329	Novo Mesto
87	Ormož	NETW-SMST-S	VST	22764	Ormož
90	Piran/Pirano	NETW-LC	SMST	8325	Piran, Portorož
94	Postojna	AGLO-LC	SMST	2548	Postojna
96	Ptuj	NETW-SMST-D	SMST	8345	Ptuj
101	Radlje ob Dravi	NETW-SMST-S	VST	23378	Radlje ob Dravi
102	Radovljica	NETW-SMST-D	SMST	8341	Radovljica
103	Ravne na Koroškem	NETW-SMST-S	SMST	8346	Ravne na Koroškem
104	Ribnica	AGLO-LC	VST	19385, 19466, 19504	Ribnica
106	Rogaška Slatina	NETW-LC	VST	22078	Rogaška Slatina
110	Sevnica	AGLO-LC	SMST	2675	Sevnica
111	Sežana	AGLO-LC	VST	19183	Sežana
112	Slovenj Gradec	NETW-SMST-D	SMST	2821	Slovenj Gradec
113	Slovenska Bistrica	NETW-LC	SMST	8344	Slovenska Bistrica
114	Slovenske Konjice	NETW-LC	SMST	2788	Slovenske Konjice

MRC_ID	MRC	MRC TYPE	POLYGON TYPE	CODE N. OF POLYGON	URBAN AREA INCLUDED IN THE POLYGON
120	Šentjur	NETW-LC	VST	21924	Šentjur
122	Škofja Loka	NETW-LC	HDUC	849	Škofja Loka, Kranj
124	Šmarje pri Jelšah	NETW-LC	VST	21962	Šmarje pri Jelšah
128	Tolmin	AGLO-LC	VST	21442	Tolmin
129	Trbovlje	AGLO-LC	SMST	2734	Trbovlje
131	Tržič	NETW-LC	SMST	2779	Tržič
133	Velenje	NETW-SMST-D	SMST	8343	Velenje
190	Žalec	NETW-LC	SMST	8338	Žalec

2.3.2 Specificities of the functional analysis in Slovenia

The Slovenian team adopted some small changes in the methodology suggested for the functional analyses due to some specifics about the Slovenian municipalities. We introduced two new steps into the methodology and adopted several changes in the threshold value that will better represent the situation in Slovenia.

Despite the fact that Slovenian LAU 2 units are quite small compared to LAU 2 units in some other European countries, there are still some important differences between them. Because of a large diversity between Slovenian municipalities in the size, accessibility, self-sufficiency, we have introduced the extra step in the process of the identification of urban centres, which allowed us to identify remote (border), self-sufficient “urban centres” with high inner commuting and high population size. To qualify as “urban centre” these remote LAU 2 municipalities has to offer at least 3000 jobs with at least 10.000 inhabitants. The second important information for the functional analyses in Slovenia is the fact that the number of LAU 2 municipalities has been changing since 1994 - first from 62 former communes (1955 – 1994) to 147 municipalities (1994), and to current 212 municipalities (2012). As the functional analyses are performed for two reference years: 2001, 2011 and in order to compare the results, we had to adjust the commuting and population data to the same territorial “geographies” (number of municipalities).

The well-developed polycentric system in Slovenia is the cause that we encountered many cases when we could not identify only one important flow from LAU 2 municipality. Because of that we adopted the methodology of significant flows which consisted of two steps procedure. First we identified significant flows for the source municipality and then we applied a threshold of significance for the out-going flows on the number of economically active population of 5%. In this way we have come to a list of significant flows that can be used in the identification of “urban centres”.

For the delimitation of “proto micro-regions” around the “urban centres” we used a computer developed program which connects every LAU 2 municipality to its “urban centre” depending on the main flow from this municipality.

The identification of micro-regions was based on the two conditions: minimal population size and territorial integrity. After a series of calculation and several conducted frequency analysis we did not find any clear solution that would represent an appropriate population threshold value for MR. At the end we applied the population threshold value that was calculated as the average number of inhabitants for Slovenian municipalities in both reference years. For both years the threshold value is set on app. 10,000 inhabitants.

3 Territorial performance of SMSTs

In the quantitative analysis, socio-economic characteristics of the case study SMSTs': a) Radovljica (municipal code 102), b) Postojna (code 94) and c) Domžale (code 23), are analysed by the indicators like - population, education, foreign citizens, immigrants, employed, self-employed and unemployed persons, number of jobs by NACE 2 classification and budget per capita in two analysed years (2001 or 2002 and 2011).⁵ The position of these three SMSTs and their performance are analysed at the local and national level. At the local level, the characteristics, position and performance of SMSTs (LAU 2 municipalities) were measured in relation to the NUTS 3 regions to which these SMSTs belong, in relation to their micro-regions (MR), and in the case of Domžale and Radovljica in relation to their position in their respective city conurbation(s): Jesenice-Radovljica-Bled, Domžale-Kamnik. At the national level, we analysed SMSTs' characteristics, position and performance in relation to the national level and in relation to other urban centres in the national system of urban centres - as presented in the *Spatial Development Strategy of Slovenia* (SPRS, 2004).

3.1 Socio-economic characteristics, position and performance of SMSTs

At the local level, towns / municipalities of Radovljica, Postojna and Domžale are compared in relation to:

- a) other municipalities in the NUTS 3 region (Radovljica to Gorenjska region, Postojna to Notranjsko-kraška region, and Domžale to Osrednjeslovenska region),
- b) other municipalities in the micro-regions (MR) defined in the ESPON TOWN functional analysis of settlement systems in Slovenia (chapter 2.2),
- c) other municipalities in town conurbations (for Radovljica and Domžale).

It is worth mentioning that **Domžale** was a micro-regional centre (MRC) for two other municipalities (i.e. Lukovica (code 68) and Moravče (code 77) in years 2001/2002, but in year 2011, Domžale formed its own MR - as municipalities Lukovica and Moravče became functionally linked to the near by capital city of Ljubljana. **Radovljica** formed its own MR in 2001 and the end of the analysed period in year 2011. **Postojna** was the MRC only for one other municipality - Pivka (code 91) in year 2001 as well as in 2011. At the local level, comparison of analysed SMSTs to other municipalities in the conurbation was possible only for Domžale and Radovljica, while Postojna does not constitute the conurbation. In this overview - Domžale is compared to near-by Kamnik (code 43), and Radovljica is compared to Jesenice (code 41) and Bled (code 3).

Considering the **population** data, including **aging cohorts** (see Table 3.1), Domžale has the highest number of inhabitants despite the fact that it is defined in SPRS (2004) as the "national urban centre of regional importance" - at the lower level than the other two urban centres (Postojna, Radovljica). Close proximity of Domžale to Ljubljana could be the most important reason for that. In 10 years time, the population has increased mostly in Domžale

⁵ To test the territorial performance of SMSTs, we collected some data for municipalities (LAUS 2) in Slovenia. The data were collected for year 2001 (or 2002 if no data were available for 2001), for year 2007 (with the 2001 LAU 2 municipal geography), and for year 2011. The source for most of these collected data was the Statistical Office of the Republic of Slovenia (SORS), except for data on the municipal budget that were obtained from the Ministry of Finance of the Republic of Slovenia. In the Excel file, where all data are organised and presented, there are also web links to these sources as shown in the legend. For the list of collected and delivered data see Appendix 2.

(for 15%), but the least in Radovljica (only for 4%). Looking at the aging cohorts, the population with 65 years and more increased in all analysed SMSTs, but mostly in Domžale (for 44%), although the increase of elderly population in Radovljica was also significant (30%). The only class of aging cohorts that population decreased is younger population (0-14 years old) in Radovljica where the number decreased for 8% (see Table 3.2 and Figure 3.1).

One of the most important result that was obtained while comparing absolute and relative values is that despite the absolute increase of population between 15-64 years (see Table 3.2), the relative shares, in relation to all population, has decreased in all three case study towns, mostly in Radovljica (for 2%), and slightly in Postojna (for 0.3%) (see also Figure 3.1).

Table 3.1. Population in SMSTs (MRC) in years 2001 and 2011.

Code	SMST / MRC	Population		Population (0-14 years)		Population (15-64 years)		Population (65 and more)	
		2001	2011	2001	2011	2001	2011	2001	2011
23	Domžale	29,608	33,936	5,347	5,650	20,871	23,420	3,390	4,866
94	Postojna	14,536	15,709	2,204	2,322	10,316	11,108	2,016	2,279
102	Radovljica	18,173	18,858	2,894	2,661	12,581	12,687	2,698	3,510

Table 3.2. Population growth rate 2011/2001 in SMSTs (MRC).

Code	SMST / MRC	Growth rate 2011/2001			
		Population	Population (0-14 years)	Population (15-64 years)	Population (65 and more)
23	Domžale	15%	6%	12%	44%
94	Postojna	8%	5%	8%	13%
102	Radovljica	4%	-8%	1%	30%

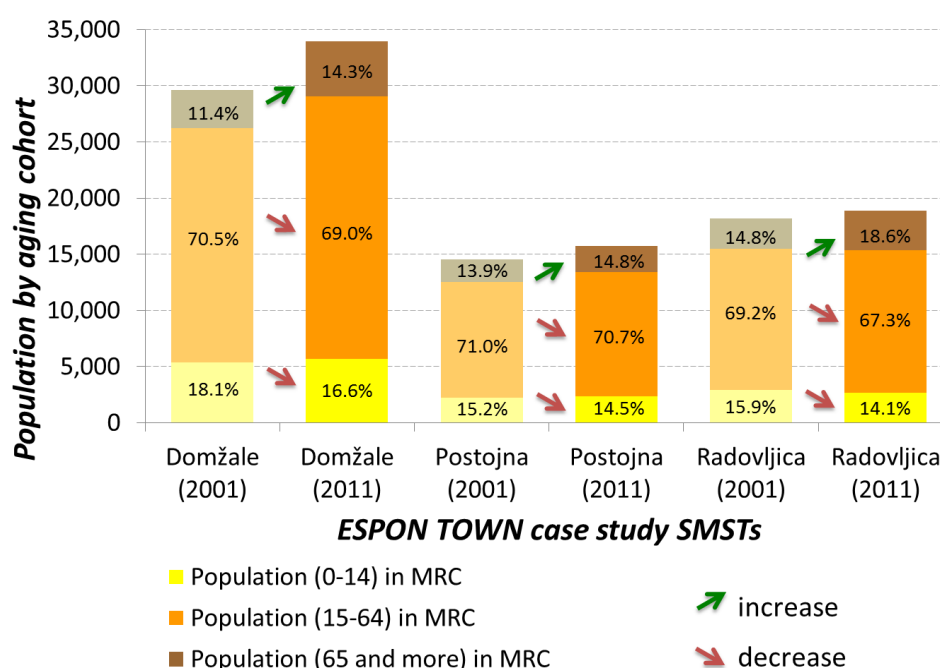


Figure 3.1. Population by aging cohorts in SMSTs (MRC) in years 2001 and 2011.

In relation to NUTS 3 regions (see Table 3.3), town of Postojna has the most important share of the population in the region, followed by Radovljica and Domžale. The share of population in relation to NUTS 3 regions respectively increased in all three case study SMSTs in 10 years, mostly in Postojna (for 1.3%), and slightly in Radovljica (0.1%). The share of aging cohorts increased in all three towns as well – however it remains the same for population between

15-64 years old in Radovljica. The last results show that population - according to all aging groups in relation to NUTS 3 region - is concentrated mostly in Postojna and Domžale, except those of 15 – 64 years in Gorenjska region that are distributed more uniformly also in other towns in Gorenjska region.

It is not easily possible to compare the population in Radovljica and Domžale to their MRs respectively because the transformation of MRs between 2001-2011 was not stable. In Postojna's MR the population in year 2011 was more concentrated in MRC than in 2001 – mostly for younger (0-14) and older inhabitants (> 65), but less for population between 15-64 years of age (see Table 3.4).

Domžale constitutes the **town conurbation** together with Kamnik (Domžale-Kamnik), while Radovljica with Jesenice and Bled (Jesenice-Radovljica-Bled). The results of the population analyses in relation to other municipalities in these town conurbations are adequate: slightly more than 50% for Domžale and 33% for Radovljica respectively (see Table 3.5). In both case study towns, the population has increased for approx. 1% in relation to town conurbation, the most noticeable increase was in the share of older people (65 years and more) in Domžale (3.3%) and in Radovljica (2%).

Table 3.3. Population in SMSTs (MRC) in years 2001 and 2011 in relation to NUTS 3 region.

Code	SMST / MRC	Population		Population (0-14 years)		Population (15-64 years)		Population (65 and more)	
		2001	2011	2001	2011	2001	2011	2001	2011
23	Domžale	6.0%	6.4%	6.9%	7.1%	6.1%	6.3%	5.0%	5.8%
94	Postojna	28.7%	30.0%	28.3%	31.4%	29.6%	30.8%	25.5%	25.7%
102	Radovljica	9.2%	9.3%	8.8%	8.6%	9.2%	9.2%	10.0%	10.4%

Table 3.4. Population in SMSTs (MRC) in 2001 and 2011 in relation to micro region (MR).

Code	SMST / MRC	Population		Population (0-14 years)		Population (15-64 years)		Population (65 and more)	
		2001	2011	2001	2011	2001	2011	2001	2011
23	Domžale	76.2%	100.0%	73.9%	100.0%	76.9%	100.0%	75.5%	100.0%
94	Postojna	70.9%	72.5%	70.4%	72.4%	71.5%	72.7%	68.5%	71.4%
102	Radovljica	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 3.5. Population in SMSTs (MRC) in 2001 and 2011 in relation to other municipalities in town conurbations.

Code	SMST / MRC	Population		Population (0-14 years)		Population (15-64 years)		Population (65 and more)	
		2001	2011	2001	2011	2001	2011	2001	2011
23	Domžale	52.9%	53.9%	54.1%	54.6%	53.1%	53.8%	50.0%	53.3%
94	Postojna	-	-	-	-	-	-	-	-
102	Radovljica	35.5%	36.6%	36.0%	36.7%	35.0%	36.0%	36.9%	38.9%

In the analysed period, the number of **foreign citizens** decreased in all three towns, mostly in Radovljica (for 69%), followed by Postojna (44%), and the least in Domžale (only for 17%) (see Table 3.6). But, in spite of the fact that the number of foreign citizens decreased mostly in Radovljica, their share remained the same in relation to NUTS 3 regions. In Domžale the share of foreign citizens increased in relation to NUTS 3 region for 1.2% despite of the fact that the absolute number of foreign citizens decreased for 17%. This shows that foreign citizens were concentrated mostly in Domžale (see also Table 3.8). Even more, comparing Domžale with the town conurbation Domžale-Kamnik, foreign citizens were concentrated more in Domžale than in Kamnik - the share increased for 8.5%. Similarly, foreign citizens were concentrated more in Radovljica – in relation to town conurbation Jesenice-Radovljica-Bled – their share increased for 7.4%.

The number of *immigrants* increased noticeably in all case study towns (see Table 3.7): mostly in Postojna (for 329%) and Radovljica (for 294%) and less – but also significantly – in Domžale (for 220%). In the same order one can find the share of immigrants in Radovljica, Postojna and Domžale in relation to NUTS 3 regions respectively (see Table 3.8).

Table 3.6. Foreign citizens in SMSTs (MRC) in 2002 and 2011 and their growth rate (%).

Code	SMST / MRC	Foreign citizens		
		2002	2011	Growth rate
23	Domžale	1,622	1,342	- 17%
94	Postojna	1,936	1,085	- 44%
102	Radovljica	919	377	- 59%

Table 3.7. Immigrants in SMSTs (MRC) in 2001 and 2011 and their growth rate (%).

Code	SMST / MRC	Immigrants		
		2001	2011	Growth rate
23	Domžale	530	1,695	220%
94	Postojna	187	797	326%
102	Radovljica	224	882	294%

Table 3.8. Foreign citizens and immigrants in SMSTs (MRC) in 2002 and 2011 in relation to NUTS 3 regions.

Code	SMST / MRC	Foreign citizens		Immigrants	
		2001	2011	2001	2011
23	Domžale	3.6%	4.8%	6.0%	5.7%
94	Postojna	54.4%	42.6%	32.7%	35.4%
102	Radovljica	5.1%	5.1%	9.0%	10.6%

Table 3.9. Foreign citizens and immigrants in SMSTs (MRC) in 2002 and 2011 in relation to micro regions (MR).

Code	SMST / MRC	Foreign citizens		Immigrants	
		2001	2011	2001	2011
23	Domžale	90.5%	100.0%	72.0%	100.0%
94	Postojna	80.3%	82.3%	71.6%	76.3%
102	Radovljica	100.0%	100.0%	100.0%	100.0%

Table 3.10. Foreign citizens and immigrants in SMSTs (MRC) in 2002 and 2011 in relation to other municipalities in the town conurbations.

Code	SMST / MRC	Foreign citizens		Immigrants	
		2001	2011	2001	2011
23	Domžale	46.6%	55.1%	54.4%	60.2%
94	Postojna	-	-	-	-
102	Radovljica	12.8%	20.2%	36.0%	38.7%

Education level in town/municipality defines also territorial performance of case study towns. Data on education are considered as defined in the Regulation (EC) No. 763/2008 of the European Parliament and the Council on Population and Housing Census (EC, 2008). From 2002 to 2011, the number of inhabitants with no education or incomplete basic education decreased in all three analysed case study towns: mostly in Domžale (for 37%), and for 33% in Radovljica and Postojna respectively (see Table 3.11). The number of other groups according to education level increased in all three analysed towns, except persons with elementary education in Radovljica that decreased for 3%. The most noticeable increase was observed at the population with the 1st and the 3rd cycle of higher education – especially with the 3rd cycle in Postojna (for 84%) and with with the 1st cycle in Domžale (for 80%). The population with with the 1st cycle of higher education has also increased (for 63%) in Radovljica.

Table 3.11. Education level in SMSTs (MRC) in 2001 and 2011

Code	SMST / MRC	No education or incomplete basic education		Elementary education		Secondary education		1st cycle of higher education		2nd cycle of higher education		3rd cycle of higher education	
		2002	2011	2002	2011	2002	2011	2002	2011	2002	2011	2002	2011
23	Domžale	1,189	748	5,748	6,277	14,173	15,552	1,428	2,568	1,823	2,622	296	519
94	Postojna	885	589	3,190	3,422	6,677	6,830	725	1,233	856	1,138	95	175
102	Radovljica	946	638	3,475	3,357	8,660	8,968	867	1,412	1,266	1,577	187	245

Table 3.12. Education level growth rate 2011/2002 in SMSTs (MRC).

Code	SMST / MRC	No education or incomplete basic education	Elementary education	Secondary education	1st cycle of higher education	2nd cycle of higher education	3rd cycle of higher education
23	Domžale	- 37%	9%	10%	80%	44%	75%
94	Postojna	- 33%	7%	2%	70%	33%	84%
102	Radovljica	- 33%	- 3%	4%	63%	25%	31%

Comparative analysis of education levels in Radovljica, Postojna and Domžale **in relation to NUTS 3 regions**, has shown the following results (see also Table 3.13): the share of population with no education or incomplete basic education increased mostly in Postojna. However, in Domžale, the shares of all groups of population according to their education level in relation to NUTS 3 region has increased – except for those with no education or incomplete basic education that has slightly decreased. The highest (for 1.2%) increase in the share of population with the 3rd cycle of higher education was observed in Domžale in relation to the NUTS 3 region. In Postojna, the increase in the shares of population with elementary education and those with no education or incomplete basic education was observed, but the shares of all other groups decreased in relation to NUTS 3 region. So, despite the fact that the absolute numbers of population with the 3rd cycle of higher education increased for 84% in Postojna, its relative position in NUTS 3 region decreased for 1,5% (see Tables 3.12 and 3.13). In Radovljica, the most important population change according to the education level in relation to NUTS 3 region was recorded for population with the 3rd cycle of higher education whose relative position decreased for 1.1%.

Table 3.13. Education in SMSTs (MRC) in 2002 and 2011 in relation to NUTS 3 regions.

Code	SMST / MRC	No education or incomplete basic education		Elementary education		Secondary education		1st cycle of higher education		2nd cycle of higher education		3rd cycle of higher education	
		2002	2011	2002	2011	2002	2011	2002	2011	2002	2011	2002	2011
23	Domžale	6.1%	5.8%	6.5%	6.5%	6.2%	6.5%	5.8%	6.5%	4.1%	4.8%	3.4%	4.6%
94	Postojna	21.5%	23.0%	26.8%	29.1%	30.2%	29.3%	34.6%	32.5%	37.5%	36.8%	49.2%	47.7%
102	Radovljica	8.4%	8.6%	8.5%	8.4%	9.6%	9.5%	10.2%	9.8%	10.9%	11.0%	13.2%	12.0%

Table 3.14. Education in SMSTs (MRC) in 2002 and 2011 in relation to micro region (MR).

Code	SMST / MRC	No education or incomplete basic education		Elementary education		Secondary education		1st cycle of higher education		2nd cycle of higher education		3rd cycle of higher education	
		2002	2011	2002	2011	2002	2011	2002	2011	2002	2011	2002	2011
23	Domžale	60.2%	100%	71.3%	100%	78.3%	100%	87.3%	100%	87.4%	100%	91.6%	100%
94	Postojna	61.4%	60.0%	66.4%	70.7%	73.1%	72.7%	77.6%	74.5%	81.7%	81.3%	93.1%	90.7%
102	Radovljica	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

The analysis of the change (2002-2011) of relative position of education level of population in Radovljica and Domžale **in relation to their town conurbations** (see Table 3.15) has shown the most significant change in Radovljica for the 2nd cycle of higher educated population which increased for 2.6% (in relation to Jesenice and Bled). In Domžale, the share of elementary educated population increased the most (for 1.5%), but the share of the 1st cycle of higher educated population decreased for 1.3% in relation to Kamnik.

Table 3.15. Education in SMSTs (MRC) in 2002 and 2011 in relation to other municipalities in town conurbations.

Code	SMST / MRC	No education or incomplete basic education		Elementary education		Secondary education		1st cycle of higher education		2nd cycle of higher education		3rd cycle of higher education	
		2002	2011	2002	2011	2002	2011	2002	2011	2002	2011	2002	2011
23	Domžale	41.3%	41.2%	48.7%	50.2%	54.8%	54.8%	57.7%	56.4%	56.5%	57.3%	62.8%	62.8%
94	Postojna	-	-	-	-	-	-	-	-	-	-	-	-
102	Radovljica	32.4%	32.6%	33.6%	33.1%	35.2%	35.9%	41.4%	41.4%	45.0%	47.6%	51.4%	51.6%

Housing conditions define somehow the quality of life. In our analysis we also studied **number of dwellings** in town/municipality and the changes in time. Table 3.16 shows the number of dwellings, dwellings for seasonal (occasional) use and unoccupied dwellings-Table 3.17 shows dwellings growth rate 2011/2002 in analysed MRC. The total number of dwellings mostly increased in Domžale (for 16%) and Postojna (for 15%), and slightly (only for 2%) in Radovljica. But in Radovljica, dwellings for seasonal use decreased the most (-23%). Number of dwellings for seasonal use decreased least (-2%) in Domžale, where a lot of unoccupied dwellings increased in nine years (+158%). This was the result of the prosperous construction sector until 2008 when the economic crises arised.

Table 3.16. Dwellings in SMSTs (MRC) in years 2002 and 2011.

Code	SMST / MRC	Dwellings		Dwellings for seasonal use		Unoccupied dwellings	
		2002	2011	2002	2011	2002	2011
23	Domžale	10,514	12,237	53	52	733	1,890
94	Postojna	5,709	6,592	78	65	731	1,181
102	Radovljica	6,928	7,096	160	123	512	1,021

Table 3.17. Dwellings growth rate 2011/2002 in SMSTs (MRC).

Code	SMST / MRC	Growth rate 2011/2002		
		Dwellings	Dwellings for seasonal use	Unoccupied dwellings
23	Domžale	16%	-2%	158%
94	Postojna	15%	-17%	62%
102	Radovljica	2%	-23%	99%

Comparing dwellings in MRC in relation to NUTS 3 region (Table 3.18), we can observe the change in the share of unoccupied dwellings in all three analysed SMSTs from 2002 to 2011: in Postojna decrease for 6%, in Radovljica (-2.6%), while in Domžale increase for 1%. In general, share of dwellings in relation to NUTS 3 region increased in Domžale (+0.2%) and Postojna (+0.9%), but decreased in Radovljica for 0.3%. Share of dwellings in relation to other municipalities in town conurbations Domžale-Kamnik and Jesenice-Radovljica-Bled (see Table 3.20) increased in almost all case study SMSTs (Domžale and Radovljica) – except the share of unoccupied dwellings in Radovljica that decreased from 2002 to 2011.

Table 3.18. Dwellings in SMSTs (MRC) in 2002 and 2011 in relation to NUTS 3 region.

Code	SMST / MRC	Dwellings		Dwellings for seasonal use		Unoccupied Dwellings	
		2002	2011	2002	2011	2002	2011
23	Domžale	5.4%	5.6%	1.4%	1.8%	3.6%	4.6%
94	Postojna	28.2%	29.1%	13.9%	13.4%	29.2%	23.2%
102	Radovljica	9.3%	9.0%	4.3%	3.6%	9.8%	7.2%

Table 3.19. Dwellings in SMSTs (MRC) in 2002 and 2011 in relation to micro region (MR).

Code	SMST / MRC	Dwellings		Dwellings for seasonal use		Unoccupied Dwellings	
		2002	2011	2002	2011	2002	2011
23	Domžale	76.8%	100.0%	18.6%	100.0%	73.9%	100.0%
94	Postojna	70.6%	70.6%	69.0%	64.4%	69.8%	62.0%
102	Radovljica	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Table 3.20. Dwellings in SMSTs (MRC) in 2002 and 2011 in relation to other municipalities in town conurbations.

Code	SMST / MRC	Dwellings		Dwellings for seasonal use		Unoccupied dwellings	
		2002	2011	2002	2011	2002	2011
23	Domžale	52.5%	54.0%	17.0%	21.9%	48.9%	54.2%
94	Postojna	-	-	-	-	-	-
102	Radovljica	34.4%	34.8%	20.3%	21.1%	35.8%	33.3%

Comparative analyses of population growth and dwellings growth in the three case study towns has shown their position and dynamics in the NUTS 3 regions. Looking at Figures 3.2, 3.3 and 3.4, showing the change of population in relation to the change of the number of dwellings in municipalities in NUTS 3 regions: Domžale in Osrednjeslovenska region, Radovljica in Gorenjska region, and Postojna in Notranjsko-kraška region. Looking at the charts of the case study towns - Domžale, Radovljica and Postojna - as shown by red colour, regional centre(s) of NUTS 3 regions (light blue colour), municipalities in town conurbations (purple), and municipalities with extreme values and/or municipalities in town conurbations in grey colour.

From Figure 3.2 and Table 3.21, we can observe that dwellings growth in **Domžale** (+16%) followed population growth (+15%) very correctly. It was very similar situation in Kamnik (the other town in conurbation). Comparing the capital city Ljubljana in the close proximity to Domžale, it is very easy to observe that dwellings growth in Ljubljana has been almost three times larger than population growth. From Figure 3.2 and Table 3.21 it is also evident that the population growth and dwellings growth was positive in all municipalities in Osrednjeslovenska region – except in Borovnica - where only five new dwelling appeared in nine years.

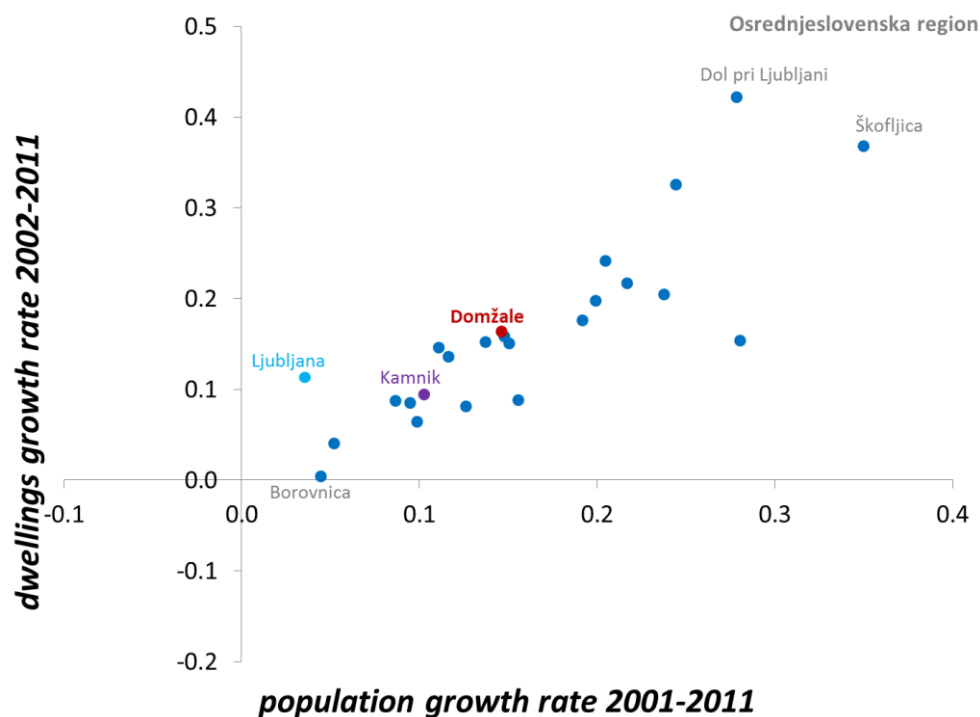


Figure 3.2. Population (2001-2011) and dwellings (2002-2011) growth rates of Domžale in Osrednjeslovenska region (note: **Domžale** - case study town (red colour), **Ljubljana** - centre of NUTS 3 region (light blue), **Kamnik** - town in the town conurbation (purple), municipalities with extrem value(s) in NUTS 3 region (grey)).

Table 3.21. Population (2001-2011) and dwellings (2002-2011) growth rates in Domžale and Osrednjeslovenska NUTS 3 region.

Code	Municipality	Population growth rate 2011/2001	Dwellings growth rate 2011/2002
5	Borovnica	0.04	0.00
8	Brezovica	0.22	0.22
20	Dobrepolje	0.10	0.06
21	Dobrova - Polhov Gradec	0.13	0.08
22	Dol pri Ljubljani	0.28	0.42
23	Domžale	0.15	0.16
32	Grosuplje	0.24	0.20
162	Horjul	0.09	0.09
37	Ig	0.28	0.15
39	Ivančna Gorica	0.15	0.15
43	Kamnik	0.10	0.09
164	Komenda	0.24	0.33
60	Litija	0.05	0.04
61	Ljubljana	0.04	0.11
64	Logatec	0.19	0.18
68	Lukovica	0.12	0.14
71	Medvode	0.09	0.09
72	Mengeš	0.11	0.15
77	Moravče	0.15	0.16
123	Škofljica	0.35	0.37
186	Trzin	0.20	0.24
134	Velike Lašče	0.14	0.15
138	Vodice	0.20	0.20
140	Vrhnika	0.16	0.09

In 10 years (2001-2011), population of **Radovljica** increased for 4% but number of dwellings increased only for 2%. In the town conurbation Jesenice-Radovljica-Bled, Radovljica is the only town where both growth rates were positive. In Bled, there was no significant growth of population, and in Jesenice, the number of population decreased for 2%. Comparing Radovljica to Kranj, centre of Gorenjska NUTS 3 region, the number of dwellings increased more than four-times in the regional centre Kranj.

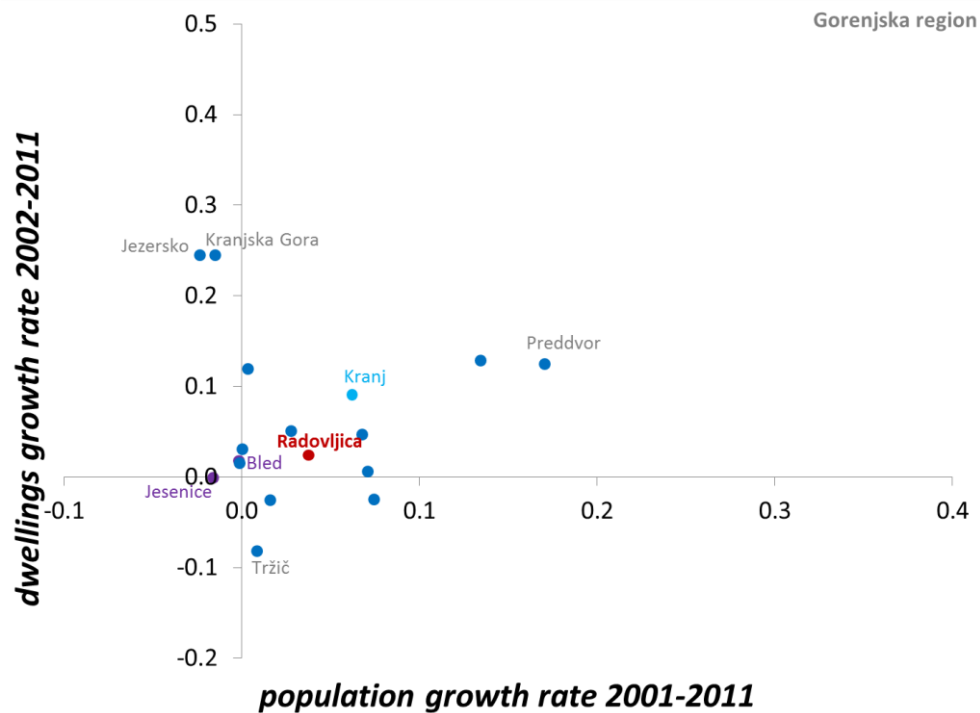


Figure 3.3. Population (2001-2011) and dwellings (2002-2011) growth rates of Radovljica in Gorenjska NUTS 3 region (**Radovljica – case study town (red colour)**, **Kranj – centre of NUTS 3 region (light blue)**, **Jesenice and Bled - towns in conurbation (purple)**, municipalities with extrem value(s) in NUTS 3 region (grey)).

Table 3.22. Population (2001-2011) and dwellings (2002-2011) growth rates of Radovljica and Gorenjska NUTS 3 region.

Code	Municipality	Population growth rate 2011/2001	Dwellings growth rate 2011/2002
3	Bled	0.00	0.02
4	Bohinj	0.00	0.12
12	Cerklje na Gorenjskem	0.13	0.13
27	Gorenja vas - Poljane	0.07	0.05
41	Jesenice	-0.02	0.00
163	Jezerško	-0.02	0.24
52	Kranj	0.06	0.09
53	Kranjska Gora	-0.01	0.25
82	Naklo	0.07	-0.02
95	Preddvor	0.17	0.12
102	Radovljica	0.04	0.02
117	Šenčur	0.02	-0.03
122	Škofja Loka	0.03	0.05
131	Tržič	0.00	0.03
146	Železniki	0.00	0.02
147	Žiri	0.01	-0.08
192	Žirovnica	0.07	0.01

Postojna is not only a case study town, but it is also a centre of Notranjsko-kraška NUTS 3 region. In relation to other municipalities in this region, the number of dwellings increased the most in Postojna, for 15%, despite the fact that the population increase only of 8%.

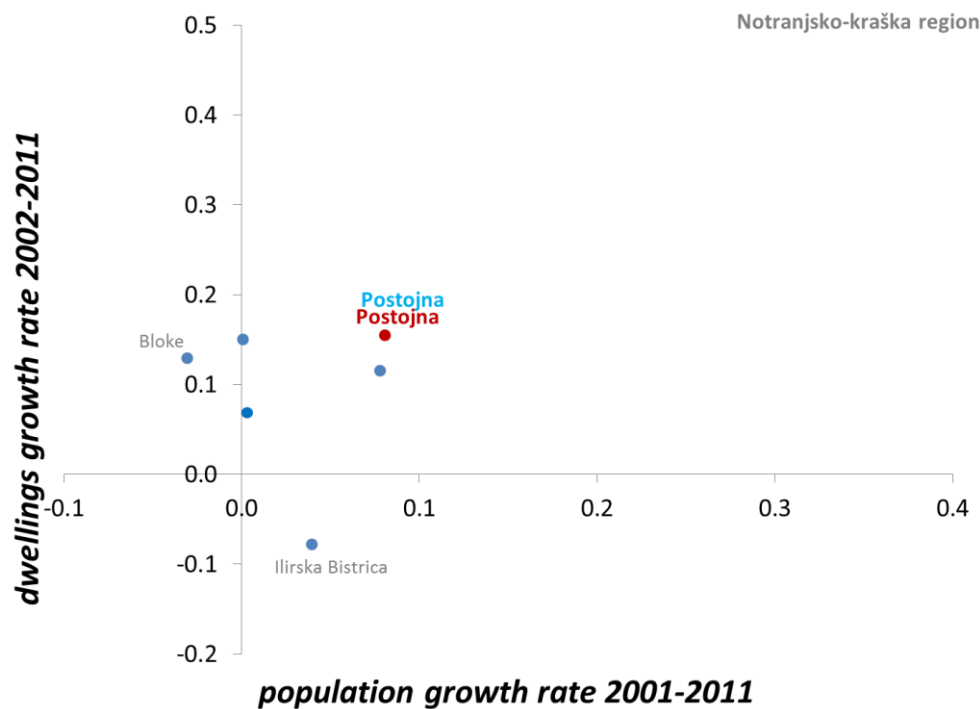


Figure 3.4: Population (2001-2011) and dwellings (2002-2011) growth rates of Postojna and Notranjsko-kraška NUTS 3 region (note: **Postojna** – case study town (red colour), **Postojna** is also centre of NUTS 3 region, municipality with extreme value(s) in NUTS 3 region (grey)).

Table 3.23. Population (2001-2011) and dwellings (2002-2011) growth rates of Postojna and Notranjsko-kraška NUTS 3 region.

Code	Municipality	Population growth rate 2011/2001	Jobs growth rate 2011/2001
150	Bloke	0.00	0.07
13	Cerknica	0.08	0.12
38	Ilirska Bistrica	-0.03	0.13
65	Loška dolina	0.04	-0.08
91	Pivka	0.00	0.15
94	Postojna	0.08	0.15

Focusing at the **economic** characteristics, position and performance of Radovljica, Postojna and Domžale were measured through groups of labour forces (i.e. employed, self-employed and unemployed population), jobs according to e.g. “typical” profiles (*productive, residential and creative*) according to Demazière, Banovac and Hamdouch (2013), and to municipal budget per capita.

In the analysed period (2002-2011), the number of **employed** population increased mostly in Domžale (for 10%), followed by Postojna (for 8%), but in Radovljica the number of employed has decreased for 2%. Number of **self-employed** inhabitants increased mostly (for 21%) in Postojna, followed by Radovljica (for 12%) and Domžale (11%). The number of **unemployed** inhabitants has increased in Domžale (for 12%), but decreased in Postojna and Radovljica (for 33%) respectively (see also Tables 3.24 and 3.25).

Comparative analysis of the labour force in MRC and in **NUTS 3 regions** respectively has shown the increase of the labour force in Postojna in relation to NUTS 3 region, followed by Radovljica and Domžale. From 2002 to 2011, the employment rate in relation to NUTS 3 region increased in Postojna (for 0.6%) and in Domžale (0.4%), but decreased slightly (for 0.2%) in Radovljica. Self-employment rate has decreased mostly in Postojna (approx. for 2%), and in Domžale (for 0.8%). Unemployment rate has increased mostly in Postojna (for 3%) and slightly (only 0.8%) in Domžale, but it has decreased in Radovljica for 0.4%. So, the most visible changes were observed in Postojna (in relation to NUTS 3 region), where unemployment rate increased for 3% and self-employment rate decreased for almost 2% (see Table 3.26).

Table 3.24. Employed, self-employed and unemployed population in SMSTs (MRC) in 2002 and 2011.

Code	SMST / MRC	Employed		Self-employed		Unemployed	
		2002	2011	2002	2011	2002	2011
23	Domžale	13,345	14,707	1,222	1,353	1,223	1,372
94	Postojna	6,448	6,966	477	579	778	751
102	Radovljica	7,570	7,451	689	773	931	717

Table 3.25. Employed, self-employed and unemployed population growth rate 2011/2002 in SMSTs (MRC).

Code	SMST / MRC	Growth rate 2011/2002		
		Employed	Self-employed	Unemployed
23	Domžale	10%	11%	12%
94	Postojna	8%	21%	- 3%
102	Radovljica	- 2%	12%	- 23%

Table 3.26. Employed, self-employed and unemployed population in SMSTs (MRC) in 2002 and 2011 in relation to NUTS 3 region.

Code	SMST / MRC	Employed		Self-employed		Unemployed	
		2002	2011	2002	2011	2002	2011
23	Domžale	6.3%	6.6%	7.1%	6.2%	5.0%	5.8%
94	Postojna	30.6%	31.2%	28.8%	26.8%	29.2%	32.2%
102	Radovljica	9.1%	8.9%	9.9%	9.9%	9.1%	8.7%

Table 3.27. Employed, self-employed and unemployed population in SMSTs (MRC) in 2002 and 2011 in relation to micro region (MR).

Code	SMST / MRC	Employed		Self-employed		Unemployed	
		2002	2011	2002	2011	2002	2011
23	Domžale	76.6%	100.0%	74.8%	100.0%	75.4%	100.0%
94	Postojna	71.7%	73.3%	66.4%	73.4%	72.1%	75.0%
102	Radovljica	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Comparing Domžale and Radovljica **to other towns in their town conurbations** respectively, one can notice that the most active changes occurred in Domžale where self-employment rate decreased for 4% and unemployment increased for 6.6%. Similarly, unemployment rate has increased for 7% in Radovljica.

Table 3.28. Employed, self-employed and unemployed persons in SMSTs (MRC) in 2002 and 2011 in relation to other municipalities in town conurbations.

Code	SMST / MRC	Employed		Self-employed		Unemployed	
		2002	2011	2002	2011	2002	2011
23	Domžale	53.7%	54.5%	55.5%	51.4%	48.4%	55.0%
94	Postojna	-	-	-	-	-	-
102	Radovljica	35.7%	35.7%	43.2%	42.6%	28.2%	35.1%

Regarding the local economic dynamics, Demazière, Banovac and Hamdouch (2013) proposed to explore three main perspectives in the case study towns: (a) the **“residential economy”** that comprises the activities addressing mainly local demand of the population, (b) the **“productive economy”** is about manufacturing and tertiary productions that can be exported, and (c) the **“creative economy”** that can become a lever for creation and development of new local potentials. A town is specialised when a significant share of its labour force is involved in specific economic activities. In this way, significant share of “residential economy” describes the town economy that mostly relies on local activities that meet the needs of population in an area, both residents and tourists. *Residential* economy favours activities in domains such as: retail trade, hotels and catering, construction, financial services, domestic and passenger transport, education, health, welfare, government services. The second foundation of town’s development is the “productive economy”, based on production of goods and services to be mainly consumed out of the area. Such economy is oriented towards activities in agriculture, wholesale trade, manufacturing, research, energy sector, etc. According to Demazière and Wilson (1996), towns which host such industrial concentration of activities are at risk of entering in crisis (i.e. as it has happened in Slovenia since 2008). But, on the other side, knowledge and innovation constitute a long-term opportunity for towns. Knowledge, innovation, learning and competences are considered to be the key factors that determine economic growth and competitiveness at all territorial levels (Hamdouch and Moulaert, 2006).

To analyse the economic profil of towns, we have aggregated the number of jobs by NACE Ver. 2 at the municipal level of three case study towns into three suggested groups. The profiles of selected three case study towns in 2001 and 2011 are presented in Table 3.29 and in Figure 3.5, while the change of these profiles are presented in Table 3.30 and Figure 3.5.

In general, Domžale offers the highest number of jobs (10,999 jobs in year 2001 and 10.575 jobs in 2011) followed by Postojna in year 2001 (7,074 jobs in 2001, 5,381 jobs in 2011), but in 2011 replaced by Radovljica (6,151 jobs in 2001, 6,404 jobs in 2011). Hence, the number of jobs has decreased mostly in Postojna (for approx. 25%), but only slightly in Domžale (for 4%), while in Radovljica jobs have increased between 2001-2011 (4%) (see Table 3.29).

From Table 3.29 and Figure 3.5, we can observe that Postojna is the most **residentially** oriented town among three case studies. This is most probably due to location of Postojna cave and all touristic activities that accompany approx. 1 mio. tourists per year. Domžale and Radovljica had have very similar profile in 2001 (i.e. similar shares of approx. 43% of *productive* and *residential* profiles and approx. 14% for *creative* profile). The analysis of the absolute changes in number of jobs has shown that number of jobs in the **productive** profile for all three towns has decreased from 13% (Radovljica) and 17% (Postojna) to 24% in Domžale. The number of jobs in the *residential* profile has decreased for only 1% in Domžale but significantly (36%) in Postojna, while it has increased in Radovljica (for 13%). Number of jobs in the **creative** profile in all three towns has increased for 24% in Postojna and 33% in Radovljica to 49% in Domžale (see Table 3.30). However, the analysis of changes of absolute values can give wrong figure on the structure – especially in the time of economic crisis when the unemployment rate has increased. For better understanding the situation and changes in these case study profiles, we analysed the relative values of the number of jobs in town profile. In this way, it should be emphasised that there are some specific issues for the analysed three case study towns in Slovenia.

First, in spite of the fact that the growth rate for *productive* profile is lower than 1% for all three MRC, the share of *productive* jobs in the profile of Postojna increased for approx. 3% from 2001 to 2011. The share of *creative* jobs increased for 6.6% in Postojna. These were the reasons why the share of *residential* jobs decreased for 9.4%. Postojna is no more a very *residentially* oriented town. Secondly, Domžale shows decrease in absolute number of

residential jobs, but the share of *residential jobs* in Domžale profile increased only slightly (for 1.3%).

In short, in all three case study towns in Slovenia, the share of *creative jobs* increased from 2001 to 2011, mostly in Domžale (7.5%) and in Postojna (6.6%) followed by Radovljica (for 3.7%). The share of *productive jobs* decreased in Domžale (for 8.8%) and in Radovljica (7.3%), but increased in Postojna (for 2.9%). We explain the increase of *productive* profile in Postojna with decrease of *residential jobs* between 2001-2011 (see Figure 3.5).

Table 3.29. Number of jobs by NACE 2 classification in SMSTs (MRC) in 2001 and 2011.

Code	SMST / MRC	Jobs (total)		Productive profile		Residential profile		Creative profile	
		2001	2011	2001	2011	2001	2011	2001	2011
23	Domžale	10,999	10,575	4,711	3,592	4,763	4,718	1,525	2,265
94	Postojna	7,074	5,381	2,162	1,800	4,182	2,674	730	907
102	Radovljica	6,151	6,404	2,692	2,340	2,619	2,947	840	1,117

Table 3.30. Jobs by NACE 2 classification growth rate 2011/2001 in SMSTs (MRC).

Code	SMST / MRC	Growth rate 2011/2001			
		Jobs - total	Productive profile	Residential profile	Creative profile
23	Domžale	- 4%	- 24%	- 1%	49%
94	Postojna	24%	- 17%	- 36%	24%
102	Radovljica	4%	- 13%	13%	33%

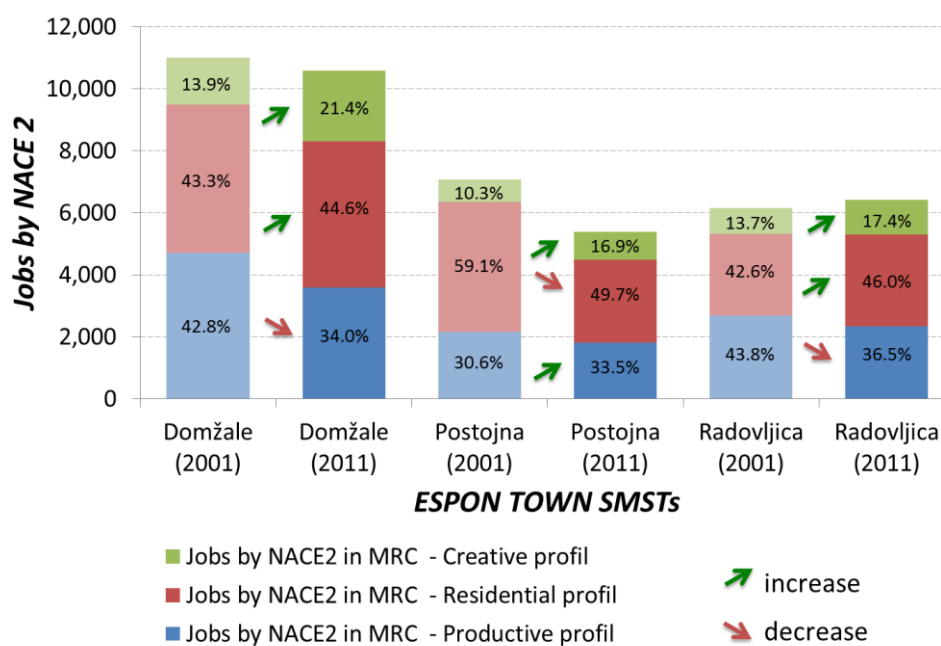


Figure 3.5. Profiles of jobs by NACE 2 classification in SMSTs (MRC) in 2001 and 2011.

Comparing the economical profiles for analysed SMSTs in relation to **NUTS 3 region** (see Table 3.31) one can notice that most changes have occurred in the share of *residential* profile in Postojna in relation to NUTS 3 region from 2001 and 2011 (i.e. decrease for 13.6%). Other changes are not very significant, except the share of *creative* profile in Postojna that decreased for 4.3% in relation to NUTS 3 region. However, comparing the changes of profiles in Postojna in relation to NUTS 3 region (Table 3.31) to the changes in relation to MR (Table 3.32) we can observe that the most changes in *residential* profile happened in relation to the rest of NUTS 3 region (and not in the MR).

Table 3.31. Jobs by NACE 2 classification in SMSTs (MRC) in 2001 and 2011 in relation to NUTS 3 region.

Code	SMST / MRC	Productive profile		Residential profile		Creative profile	
		2001	2011	2001	2011	2001	2011
23	Domžale	8.2%	6.8%	3.7%	3.1%	3.1%	3.6%
94	Postojna	26.4%	25.9%	53.1%	39.5%	44.4%	40.1%
102	Radovljica	8.3%	8.7%	8.7%	10.1%	9.8%	9.7%

Table 3.32. Jobs by NACE 2 classification in SMSTs (MRC) in 2001 and 2011 in relation to micro region (MR).

Code	SMST / MRC	Productive profile		Residential profile		Creative profile	
		2001	2011	2001	2011	2001	2011
23	Domžale	91.2%	100.0%	90.4%	100.0%	91.8%	100.0%
94	Postojna	64.0%	64.1%	88.3%	84.1%	85.3%	83.1%
102	Radovljica	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

The analysis of the change (2001-2011) of the relative position of economic profiles of Radovljica and Domžale in relation to their town conurbations (see Table 3.33) showed an important increase (for 6.3%) of the share of *productive* jobs for Domžale in relation to other town in this conurbation (Kamnik), and two important increases for Radovljica in relation to Jesenice and Bled, namely for the shares of *residential* jobs (for 6%) and *creative* jobs (for 5.6%).

Table 3.33. Jobs by NACE 2 classification in SMSTs (MRC) in 2001 and 2011 in relation to other municipalities in town conurbations.

Code	SMST / MRC	Productive profile		Residential profile		Creative profile	
		2001	2011	2001	2011	2001	2011
23	Domžale	53.5%	59.8%	62.7%	61.1%	55.1%	57.5%
94	Postojna	-	-	-	-	-	-
102	Radovljica	37.8%	38.9%	32.0%	38.0%	33.7%	39.3%

Comparative analyses of population growth and jobs growth of three case study towns has shown the position and dynamics of the analysed towns in the NUTS 3 regions. Looking at Figures 3.6, 3.7 and 3.8, showing the change of population in relation to the change of jobs in municipalities of NUTS 3 region: Domžale in Osrednjeslovenska region, Radovljica in Gorenjska region, and Postojna in Notranjsko-kraška region. Looking at the charts of the case study towns - Domžale, Radovljica and Postojna - as shown by red colour, regional centre of NUTS 3 regions (light blue colour), and municipalities with extrem values and/or municipalities in town conurbations (grey colour).

From Figure 3.6 and Table 3.34, we can observe that in spite of population growth in Domžale for 15%, number of jobs did not follow the population dynamics as the total number of jobs decreased for 4%. Looking at other towns (municipalities) located in the proximity of Domžale (Kamnik, Komenda, Mengeš, Trzin, Ljubljana, Dol pri Ljubljani, Moravče, and Lukovica), the highest increase of population (for 24%) as well as number of jobs (for 124%) occurred in Komenda, where a new commercial zone (i.e. business park) has been recently established. In Kamnik, as part of town conurbation Domžale-Kamnik, the population increased for 10%, but the number of jobs decreased for 12%. However, Domžale is located in the larger urban agglomeration together with Ljubljana, which is the capital city and the centre of NUTS 3 region (Osrednjeslovenska region or Ljubljana Urban Region), where the population increased for 4% (for 9.634 inhabitants) while jobs increased for 16% (for 28.525 jobs). From Figure 3.6 and Table 3.34 it is also evident that the population growth was positive in all municipalities in Osrednjeslovenska region, but jobs growth rate was negative in Kamnik, Litija, Mengeš, Vrhnika and Domžale.

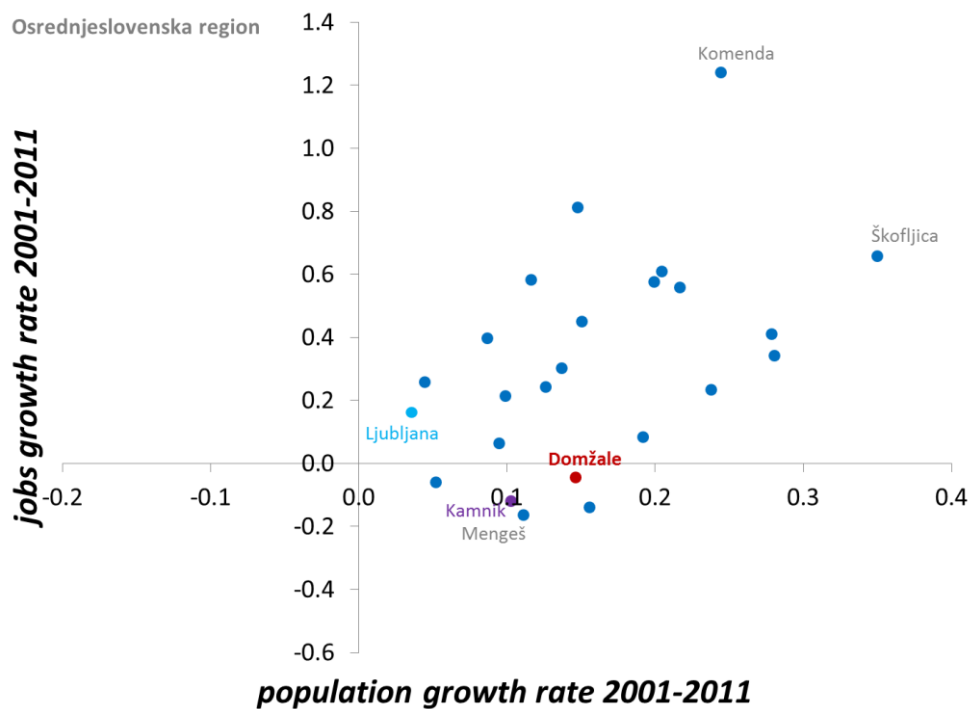


Figure 3.6. Population and jobs growth rates 2001-2011 in Domžale in Osrednjeslovenska region (note: **Domžale** - case study town (red colour), **Ljubljana** - centre of NUTS 3 region (light blue), **Kamnik** - town in the town conurbation (purple), municipalities with extrem value(s) in NUTS 3 region (grey)).

Table 3.34. Population and jobs growth rates 2001-2011 in Domžale and Osrednjeslovenska NUTS 3 region.

Code	Municipality	Population growth rate 2011/2001	Jobs growth rate 2011/2001
5	Borovnica	0.04	0.26
8	Brezovica	0.22	0.56
20	Dobrepolje	0.10	0.21
21	Dobrova - Polhov Gradec	0.13	0.24
22	Dol pri Ljubljani	0.28	0.41
23	Domžale	0.15	-0.04
32	Grosuplje	0.24	0.23
162	Horjul	0.09	0.40
37	Ig	0.28	0.34
39	Ivančna Gorica	0.15	0.45
43	Kamnik	0.10	-0.12
164	Komenda	0.24	1.24
60	Litija	0.05	-0.06
61	Ljubljana	0.04	0.16
64	Logatec	0.19	0.08
68	Lukovica	0.12	0.58
71	Medvode	0.09	0.06
72	Mengeš	0.11	-0.16
77	Moravče	0.15	0.81
123	Škofljica	0.35	0.66
186	Trzin	0.20	0.61
134	Velike Lašče	0.14	0.30
138	Vodice	0.20	0.58
140	Vrhnika	0.16	-0.14

In 10 years (2001-2011), population of Radovljica increased for 4% and number of jobs also increased for 3%. In the town conurbation Jesenice-Radovljica-Bled, Radovljica is the only town where both growth rates were positive. Comparing Radovljica to Kranj, centre of Gorenjska NUTS 3 region, it is evident that the supply jobs in Radovljica has been higher than in Kranj with 9% jobs loss.

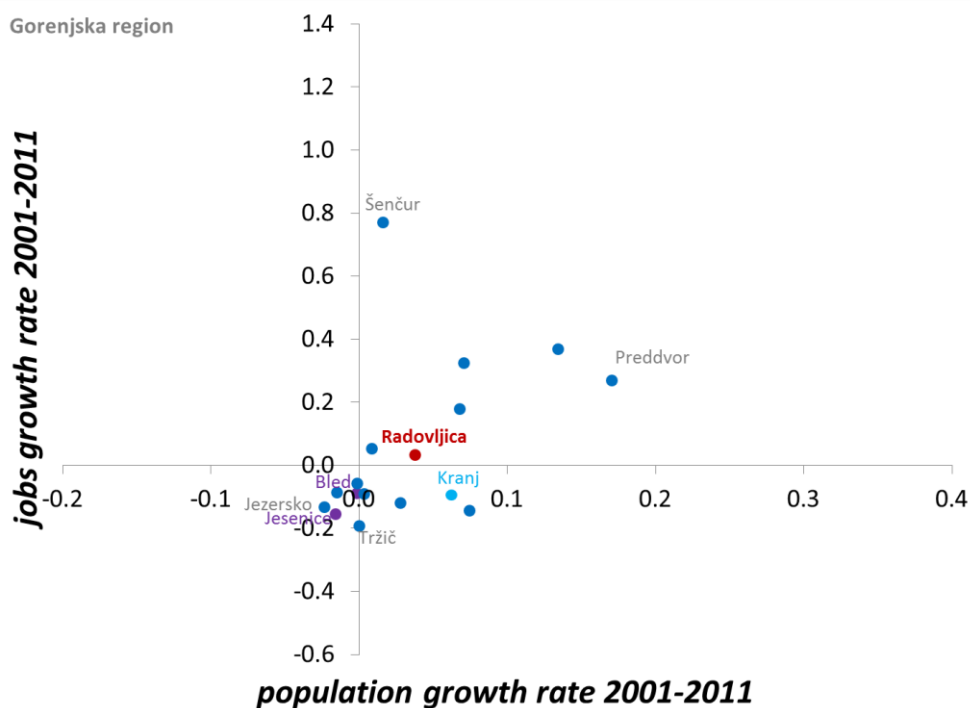


Figure 3.7. Population and jobs growth rate 2001-2011 of Radovljica in Gorenjska NUTS 3 region (Radovljica – case study town (red colour), Kranj – centre of NUTS 3 region (light blue), Jesenice and Bled - towns in the town conurbation (purple), municipalities with extrem value(s) in NUTS 3 region (grey)).

Table 3.35. Population growth and jobs growth rate 2001 / 2011 in Radovljica and Gorenjska NUTS 3 region.

Code	Municipality	Population growth rate 2011/2001	Jobs growth rate 2011/2001
3	Bled	0.00	-0.09
4	Bohinj	0.00	-0.09
12	Cerklje na Gorenjskem	0.13	0.37
27	Gorenja vas - Poljane	0.07	0.18
41	Jesenice	-0.02	-0.16
163	Jezersko	-0.02	-0.13
52	Kranj	0.06	-0.09
53	Kranjska Gora	-0.01	-0.09
82	Naklo	0.07	-0.14
95	Preddvor	0.17	0.27
102	Radovljica	0.04	0.03
117	Šenčur	0.02	0.77
122	Škofja Loka	0.03	-0.12
131	Tržič	0.00	-0.19
146	Železniki	0.00	-0.06
147	Žiri	0.01	0.05
192	Žirovnica	0.07	0.32

Postojna is a case study town and also a centre of Notranjsko-kraška NUTS 3 region. In relation to other municipalities in this region, the number of jobs decreased mostly in Postojna (for 25%), despite the population increase of 8%.

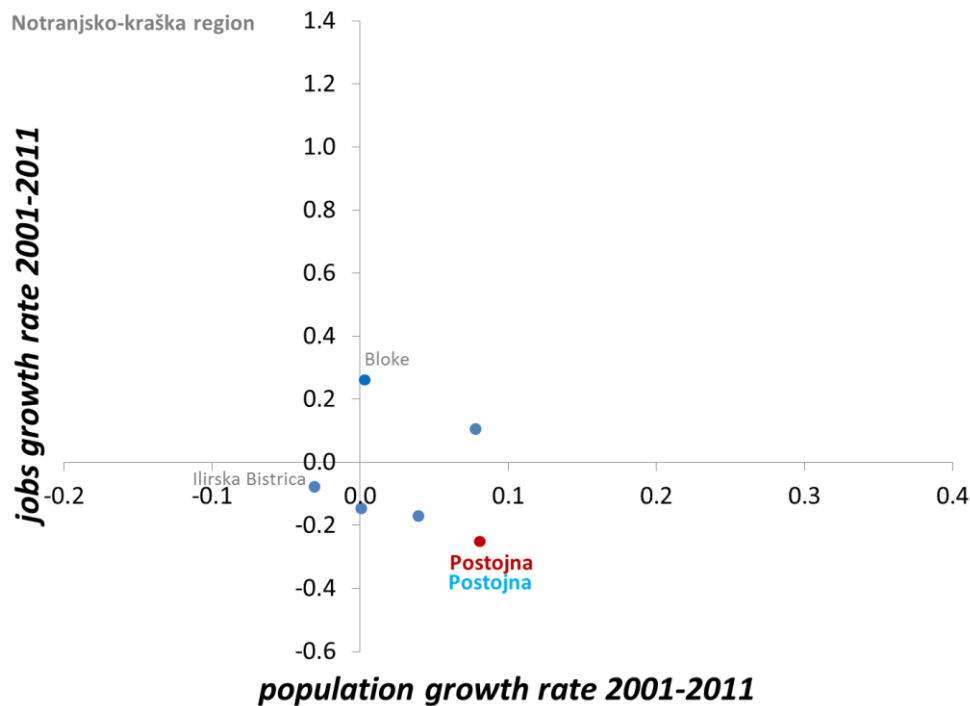


Figure 3.8. Population and jobs growth rates 2001-2011 in Postojna and Notranjsko-kraška NUTS 3 region (note: Postojna – case study town (red colour), Postojna is also centre of NUTS 3 region, municipality with extrem value(s) in NUTS 3 region (grey)).

Table 3.36. Population and jobs growth rates 2001 / 2011 in Postojna and Notranjsko-kraška NUTS 3 region.

Code	Municipality	Population growth rate 2011/2001	Jobs growth rate 2011/2001
150	Bloke	0.00	0.26
13	Cerknica	0.08	0.11
38	Ilirska Bistrica	-0.03	-0.08
65	Loška dolina	0.04	-0.17
91	Pivka	0.00	-0.15
94	Postojna	0.08	-0.25

Economic position can be expressed also in the term of **municipal budget per capita**. Table 3.37 shows that the highest municipal budget per capita in 2001 was in Radovljica, followed by Postojna and Domžale. The differences between the case study towns are not high. But in 2011 the highest budget per capita was recorded in Postojna with the increase of 138% followed by Radovljica (93%) and Domžale (85%) – that is also an important change between 2001-2011.

Table 3.37. SMSTs' (MRCs) budget per capita in 2001 and 2011 and growth rate 2001/2011.

Code	SMST / MRC	Budget per capita		
		2001	2011	Growth rate
23	Domžale	421.84 €	780.08 €	85%
94	Postojna	441.01 €	1,051.50 €	138%
102	Radovljica	450.26 €	871.22 €	93%

3.2 Socio-economic characteristics of SMSTs and their position in national/sub-national settlement system

At the national level, socio-economic characteristics of *Radovljica*, *Postojna* and *Domžale* are compared in relation:

- to the state (Slovenia),
- to other urban centres in the national system of urban centres (SPRS, 2004).

The position of *Radovljica* and *Postojna* in the national system of urban centres was analysed in relation to other »centres of national importance«, namely, in relation to 8 urban centres (Celje, Kranj, Murska Sobota, Nova Gorica, Novo mesto, Postojna, Ptuj, Velenje) and 4 town conurbations (Jesenice-Radovljica; Zagorje-Trbovlje-Hrastnik; Slovenj Gradec-Ravne-Dravograd; Brežice-Krško-Sevnica). But, the position of *Domžale* was analysed in the relation to other »urban centres of regional importance« - 15 centres of regional importance in Slovenia: 13 urban centres (Ajdovščina, Črnomelj, Gornja Radgona, Idrija, Ilirska Bistrica, Kočevje, Lendava/Lendva, Ljutomer, Ormož, Sežana, Škofja Loka, Tolmin, Tržič) and 2 town conurbations (Domžale-Kamnik; Šmarje pri Jelšah-Rogaška Slatina).

Analysing the share of population (by *aging cohorts*) in *Radovljica*, *Postojna* and *Domžale* in relation to Slovenia and the population change from 2001 to 2011 (see Table 3.38), we can notice that the share has increased for 0.2% in *Domžale* – for all analysed aging cohorts. This means that Domžale became relatively more attractive for all groups of population in 2011 in comparison with 2001. In *Postojna*, there was relatively more young population (0-14 years) in 2011 than in 2001. The share in relation to Slovenia has increased for 0.1% in *Radovljica*, but population became relatively older in 2011 than in 2001. There was no significant change in other two aging cohorts.

Table 3.38. Population in SMSTs (MRC) in 2001 and 2011 in relation to Slovenia.

Code	SMST / MRC	Population		Population (0-14 years)		Population (15-64 years)		Population (65 and more)	
		2001	2011	2001	2011	2001	2011	2001	2011
23	Domžale	1.5%	1.7%	1.7%	1.9%	1.5%	1.6%	1.2%	1.4%
94	Postojna	0.7%	0.8%	0.7%	0.8%	0.7%	0.8%	0.7%	0.7%
102	Radovljica	0.9%	0.9%	0.9%	0.9%	0.9%	0.9%	1.0%	1.0%

Analysis of the relative attraction of three SMSTs for population (by aging cohorts) in relation to the urban centres at the same level in the national urban system (see Table 3.39) have shown that the relative change of the attraction for the whole population changed mostly in *Domžale* (increase for 1.7%), but the relative attraction of *Radovljica* and *Postojna* in relation to other urban centres of national importance increased only for 0.3%. In relation to other urban centres of regional importance, *Domžale* became relatively more attractive especially for younger (0-14) as older (65 and more) population. Postojna became slightly more attractive for young population, while Radovljica for older population.

Table 3.39. Population in SMSTs (MRC) in 2001 and 2011 in relation to urban centres at the same level according to the SPRS (2004).

Code	SMST / MRC	Population		Population (0-14 years)		Population (15-64 years)		Population (65 and more)	
		2001	2011	2001	2011	2001	2011	2001	2011
23	Domžale	11.0%	12.7%	12.2%	14.5%	11.2%	12.7%	9.0%	11.1%
94	Postojna	3.1%	3.5%	3.0%	3.7%	3.1%	3.5%	3.2%	3.0%
102	Radovljica	3.9%	4.2%	4.0%	4.2%	3.8%	4.0%	4.3%	4.7%

Domžale was the most attractive for *foreign citizens* and *immigrants in relation to Slovenia* in both years 2001 and 2011 (see Table 3.40). The relative attraction of case study towns in both years has changed as well. Share of foreign citizens in **Domžale** increased for 0.4%, while the share of immigrants in Domžale has decreased for 0.2%. In other two case study towns (Radovljica and Postojna), the change of relative attraction in relation to Slovenia was the opposite as **Postojna** and **Radovljica** become less attractive for foreign citizens, while more attractive for immigrants in relation to Slovenia.

Table 3.40. Foreign citizens and immigrants in SMSTs (MRC) in 2002 and 2011 in relation to Slovenia.

Code	SMST / MRC	Foreign citizens		Immigrants	
		2001	2011	2001	2011
23	Domžale	1.2%	1.6%	1.9%	1.7%
94	Postojna	1.4%	1.3%	0.7%	0.8%
102	Radovljica	0.7%	0.5%	0.8%	0.9%

Comparative analysis of the attractiveness of Radovljica, Postojna and Domžale in comparison **to other urban centres in the national urban system** has shown that Radovljica was not attractive for foreign citizens in 2001, and the attractiveness was even lower in 2011. The most attractive for foreign citizens was the SMST of Domžale, attracting almost 9% of all foreign citizens in urban centres of national importance, and its attractiveness almost doubled (from 8.8% to 14.5%) in the past 10 years. However, the number of immigrants into Domžale decreased slightly between 2001-2011, while increasing in Radovljica and Postojna respectively (see also Table 3.41).

Table 3.41. Foreign citizens and immigrants in SMSTs (MRC) in 2002 and 2011 in relation to national urban centres at the same level according to the SPRS (2004).

Code	SMST / MRC	Foreign citizens		Immigrants	
		2001	2011	2001	2011
23	Domžale	8.8%	14.5%	17.8%	15.4%
94	Postojna	4.9%	5.1%	3.4%	4.0%
102	Radovljica	2.3%	1.8%	4.1%	4.4%

Comparing the share of *education levels* in three case study towns **in relation to Slovenia** (see Table 3.42), we can observe that the the most significant changes in relation to Slovenia occurred in Domžale, where the share of the 3rd cycle of higher educated persons increased for 0.5% and the share of the 2nd cycle of higher educated persons increased for 0.2%, while the share of persons without the education or with incomplete basic education decreased for 0.1%. As a result **Domžale** became more attractive for highly educated persons. However, the share of the 2nd cycle of higher educated persons in **Postojna** increased for 0.2% as well. The very similar situation was found **in relation to other national urban centres at the same level** according to SPRS (2004) (see Table 3.43).

Table 3.42. Education level in SMSTs (MRC) in 2002 and 2011 in relation to Slovenia.

Code	SMST / MRC	No education or incomplete basic education		Elementary education		Secondary education		1st cycle of higher education		2nd cycle of higher education		3rd cycle of higher education	
		2002	2011	2002	2011	2002	2011	2002	2011	2002	2011	2002	2011
23	Domžale	1.0%	1.0%	1.3%	1.4%	1.6%	1.7%	1.7%	1.8%	1.6%	1.8%	1.8%	2.3%
94	Postojna	0.8%	0.8%	0.7%	0.8%	0.7%	0.7%	0.9%	0.9%	0.7%	0.8%	0.6%	0.8%
102	Radovljica	0.8%	0.8%	0.8%	0.8%	1.0%	1.0%	1.0%	1.0%	1.1%	1.1%	1.1%	1.1%

Table 3.43. Education level in SMSTs (MRC) in 2002 / 2011 in relation to other national urban centres at the same level according to the SPRS (2004).

Code	SMST / MRC	No education or incomplete basic education		Elementary education		Secondary education		1st cycle of higher education		2nd cycle of higher education		3rd cycle of higher education	
		2002	2011	2002	2011	2002	2011	2002	2011	2002	2011	2002	2011
23	Domžale	6.7%	6.6%	8.8%	10.2%	12.1%	13.0%	14.2%	14.6%	15.1%	16.8%	23.1%	25.1%
94	Postojna	3.3%	3.3%	3.2%	3.6%	3.1%	3.3%	3.5%	3.7%	3.3%	3.7%	3.2%	4.6%
102	Radovljica	3.6%	3.6%	3.5%	3.5%	4.0%	4.3%	4.2%	4.2%	4.8%	5.2%	6.3%	6.4%

Analysing the share of dwellings in Radovljica, Postojna and Domžale **in relation to Slovenia** (see Table 3.44), we can observe that the share of total dwellings increased for 0.1% in Postojna, but decreased for the same percentage in Radovljica. In Domžale, the share of dwellings did not change significantly from 2002 to 2011. Share of unoccupied dwellings decreased in Postojna and Radovljica, but increased in Domžale.

In relation to the national urban centres at the same level according to the SPRS (2004), the share of dwellings has mostly changed in Domžale. In general, all shares of dwellings increased, only share of unoccupied dwellings in Postojna decreased according to other urban centres of national importance in Slovenia (see table 3.45).

Table 3.44. Dwellings in SMSTs (MRC) in 2002 and 2011 in relation to Slovenia.

Code	SMST / MRC	Dwellings		Dwellings for seasonal use		Unoccupied dwellings	
		2002	2011	2002	2011	2002	2011
23	Domžale	1.4%	1.4%	0.2%	0.3%	0.9%	1.1%
94	Postojna	0.7%	0.8%	0.2%	0.3%	0.9%	0.7%
102	Radovljica	0.9%	0.8%	0.5%	0.6%	0.7%	0.6%

Table 3.45. Dwellings in SMSTs (MRC) in 2002 and 2011 in relation to national urban centres at the same level according to the SPRS (2004).

Code	SMST / MRC	Dwellings		Dwellings for seasonal use		Unoccupied dwellings	
		2002	2011	2002	2011	2002	2011
23	Domžale	10.3%	11.6%	1.1%	2.4%	7.2%	8.9%
94	Postojna	3.2%	3.7%	1.3%	2.2%	4.7%	4.2%
102	Radovljica	3.9%	3.9%	2.6%	4.3%	3.3%	3.7%

Comparing **labour force** in our three case study SMSTs to the national and subnational levels (see Tables 3.46 and 3.47), we can observed in **Domžale** almost twice as more employed and self-employed persons in relation to Slovenia than in **Radovljica** and **Postojna** - despite the fact that Domžale belongs to the lower level of urban centres in the national urban systems than Postojna or Radovljica. This is also the case for unemployed persons in Domžale in year 2011, while in 2001 the level of unemployment was very similar in all three case study towns. Results for Domžale in relation to other urban centres at the same level are very similar. There are more employed and self-employed persons in Radovljica than in Postojna. Even more, in Postojna number of unemployed persons has increased while in Radovljica decreased in relation to other national urban centres in the past 10 years.

Table 3.46. Employed, self-employed and unemployed persons in SMSTs (MRC) in 2002 and 2011 in relation to Slovenia.

Code	SMST / MRC	Employed		Self-employed		Unemployed	
		2002	2011	2002	2011	2002	2011
23	Domžale	1.6%	1.8%	1.5%	1.4%	0.9%	1.3%
94	Postojna	0.8%	0.8%	0.6%	0.6%	0.6%	0.7%
102	Radovljica	0.9%	0.9%	0.9%	0.8%	0.7%	0.7%

Table 3.47. Employed, self-employed and unemployed persons in SMSTs (MRC) in 2002 / 2011 in relation to urban centres at the same national level according to the SPRS (2004).

Code	SMST / MRC	Employed		Self-employed		Unemployed	
		2002	2011	2002	2011	2002	2011
23	Domžale	12.0%	13.5%	10.9%	11.1%	7.4%	9.7%
94	Postojna	3.4%	3.8%	3.1%	3.2%	2.5%	2.9%
102	Radovljica	4.0%	4.0%	4.4%	4.3%	3.0%	2.8%

Analysing the economic profile of the case study towns in relation to Slovenia (Tables 3.48 and 3.39), we obtained some interesting results. In Postojna, where growth rates of jobs between 2001 - 2011 was 0.76% (approx. 25% of jobs were abolished), the main change in relation to the macro-level has occurred in the *residential* profile of jobs. In relation to Slovenia, 0.4% less jobs were offered in Postojna in 2011, but in relation to other urban centres of national importance, 1.3% less jobs were offered in Postojna. In Domžale, the share of *creative* jobs has increased in relation to Slovenia (for 0.2%), while in relation to urban centres of regional importance for 1.7%. In relation to other urban centres of national importance according to SPRS (2004), the share of *residential* jobs (for 0.6%) and the share for *productive* jobs (for 0.5%) has mostly increased in **Radovljica**.

Table 3.48. Jobs by NACE 2 classification in SMSTs (MRC) in 2001 / 2011 in relation to Slovenia.

Code	SMST / MRC	Productive profile		Residential profile		Creative profile	
		2001	2011	2001	2011	2001	2011
23	Domžale	1.6%	1.5%	1.3%	1.2%	1.3%	1.5%
94	Postojna	0.8%	0.8%	1.1%	0.7%	0.6%	0.6%
102	Radovljica	0.9%	1.0%	0.7%	0.7%	0.7%	0.7%

Table 3.49. Jobs by NACE 2 classification in SMSTs (MRC) in 2001 / 2011 in relation to the national urban centres at the same level according to the SPRS (2004).

Code	SMST / MRC	Productive profile		Residential profile		Creative profile	
		2001	2011	2001	2011	2001	2011
23	Domžale	10.8%	11.3%	12.4%	13.1%	14.9%	16.6%
94	Postojna	2.4%	2.7%	4.2%	2.9%	2.7%	2.8%
102	Radovljica	3.0%	3.5%	2.6%	3.2%	3.2%	3.5%

3.3 Performance of SMSTs: Conclusions

In Chapter 3 we have evaluated change of population (number of inhabitants, immigrants, foreign citizens), level of education, housing (number of dwellings), employment structure (employed, self-employed and unemployed) and number of jobs in the selected case study SMSTs in Slovenia from year 2001(or 2002) to 2011. Changes are estimated for: (a) MRC, (b) MRC in relation to MR, and (c) MRC in relation to the summary of higher territorial levels such as: NUTS 3 region, urban centres at the same hierarchy level according to SPRS (2004), and Slovenia (NUTS 0/1). Signs in Table 3.50 have been estimated from the results presented in this Chapter 3 as well as from the original data. We have evaluated the change of these attributes as: *significant change* (++) or (--), *change* (+ or -), and/or *insignificant (minor) change* (o).

From Table 3.50 we can make some general conclusions. Population has increased in Domžale and Postojna while the level of education, housing, and employment have been improved as well. Population has increased mostly in Domžale. Number of jobs has decreased mostly in Postojna, followed by Domžale, but the number of jobs has increased in Radovljica. In spite of jobs increase in Radovljica, there has been no significant change of population as well as of employment structure in the past ten years.

In relation to MR, Domžale MRC has performed the best in terms of population and education level, but not looking at employment structure and the number of jobs. Number of dwellings in relation to MRs has increased in all analysed case study towns. Radovljica, where the share of jobs has been (slightly) increased between 2001 - 2011, has performed better than Domžale and Postojna, where the shares of jobs have decreased. In Postojna, the educational level of population in relation to MR has improved in general.

Table 3.50. Evaluation of change of analysed attributes in the case study SMSTs (MRC) in Slovenia from 2001/2002 to 2011.

	Domžale			Postojna			Radovljica		
	MRC	MR ¹	SI	MRC	MR	SI	MRC	MR	SI
Population	++	++	+	+	+	o	o	o	o
Education	++	++	+	++	+	-	+	+	o
Housing	++	+	+	++	+	+	+	+	-
Employment	+	-	+	++	+	o	o	o	o
Jobs	-	-	-	--	-	-	+	+	+

Legend:

MRC in micro-regional centre (MRC)

MR in relation to micro-region (MR)

SI in relation to: NUTS 3 region, urban centres at the same level (SPRS, 2004), and NUTS 1/0 (Slovenia)

++ high increase/growth

+ increase/growth

o no significant change

- decrease/decline

-- high decrease/decline

Note: ¹ In years 2001/2002 Domžale was a micro-regional centre (MRC) for two other municipalities - Lukovica and Moravče. But in year 2011 Domžale formed its own MR as municipalities Lukovica and Moravče became functionally linked to the nearby capital city of Ljubljana. For the purpose of this evaluation, Domžale MR in 2011 has been territorially considered as in 2001 (together with Lukovica and Moravče).

In relation to higher levels of territorial observation, Domžale has performed well in terms of population, education, housing and employment levels. But, there has been a decrease in the share of jobs in Domžale, while in Radovljica, the share of jobs has increased. Postojna has not performed well among three analysed case study towns, due to decline of education level and a number of jobs in relation to higher levels of territorial observation.

From Table 3.50, we can also observe a very interesting change of employment structure and number of jobs in MRC Domžale and MRC Postojna. In spite of the fact that employment structure has been improved, the number of jobs has been decreased. This phenomena can be explained with the results from the functional analysis (see Chapter 2). Domžale and Postojna have become more functionally connected to the capital city Ljubljana - with the increase in commuting flows towards Ljubljana. This is a consequence of the growth and diversity of jobs in Ljubljana, accessibility by motorways, and differences between housing and labour markets (i.e. higher property prices) in Ljubljana than in other areas in Slovenia.

4 Policy dimension of SMSTs

4.1 Introduction: Selection of case study towns in Slovenia

Towns of *Postojna, Radovljica and Domžale* have been chosen as a case study SMSTs from Slovenia due to their position and role in the national urban system, geo-strategic location vis-à-vis the capital city Ljubljana and morphological and functional characteristics. These three case study urban areas show many similarities but also differences in their size, demographic and socio-economic development as well as in policy orientation.

Table 4.1. Definitions of “towns” in Slovenia and the position of case study SMSTs (*Postojna, Radovljica, Domžale*).

Definitions of towns in Slovenia	TOWN Case study SMSTs in Slovenia
<p>Statistical: Statistical Office of Republic of Slovenia (2003)</p>	<ul style="list-style-type: none"> - Postojna: urban settlement (A criteria); - Radovljica: urban settlement (A criteria) + Lesce urban settlement (B criteria); - Domžale: urban settlement (A criteria) + 3 settlements in urban areas (suburbs) Rodica + Srednje Jarše + Spodnje Jarše (all D criteria) = Domžale urban area + Vir urban settlement (A criteria)
<p>Political: National Assembly of RS and municipal councils (> year 2000)</p>	<p>Postojna, Radovljica, Domžale are all defined as “towns” by National Assembly of RS (year 2000).</p>
<p>Political /administrative: National Assembly of RS (and local referendums), 1995.</p>	<p>Postojna, Radovljica, Domžale are NOT “urban municipalities”.</p>
<p>Policy definitions: National Assembly of RS and Ministry of Environment and Spatial Planning (2004): Spatial Development Strategy of Slovenia (SPRS, 2004)</p>	<p>SPRS (2004):</p> <ul style="list-style-type: none"> - Postojna: “urban centre of national importance”; - Radovljica: “urban centre of national importance” – conurbation Jesenice-Radovljica – (Bled); - Domžale: urban centre of regional importance – conurbation Domžale-Kamnik.

Postojna, Radovljica and Domžale are all (statistically) defined as “urban settlements” and (politically) as “towns” – but due to their (smaller size) they are not defined as “urban municipalities”. According to the SPRS (2004), **Postojna** is defined as one of 15 *urban centres of national importance*, as well as the town conurbation Jesenice – **Radovljica** – (Bled), while town conurbation **Domžale** - Kamnik is defined as the *urban centre of regional importance*. Postojna is also a regional centre of Notranjsko-kraška NUTS 3 region, while conurbation

Jesenice-Radovljica is the centre of Upper Gorenjska sub-region (as part of Gorenjska NUTS 3 region), and conurbation Domžale-Kamnik as one of several subcentres in Central Slovenian NUTS 3 region (or Ljubljana Urban Region). Towns Postojna, Radovljica and Domžale are the municipal centres of their LAU 2 municipalities as well as the centres of LAU 1 administrative units (districts) (see Tables 4.1 and 4.2).

Table 4.2. Territorial divisions in Slovenia and the position of case study SMSTs (Postojna, Radovljica, Domžale).

Territorial divisions in Slovenia	TOWN Case study SMSTs in Slovenia
12 NUTS 3 (statistical / developing) regions	<ul style="list-style-type: none"> - Town of Postojna is the regional centre of Notranjsko-kraška NUTS 3 region. - Urban conurbation Jesenice - Radovljica -(Bled) is located in Upper Gorenjska subregion as part of Gorenjska NUTS 3 region. - Urban conurbation Domžale-Kamnik is part of Central Slovenian NUTS 3 region – known as Ljubljana Urban Region.
2 NUTS 2 Cohesion regions	<ul style="list-style-type: none"> - Postojna as part of Notranjsko-kraška NUTS 3 region belongs to NUTS 2 South-East Slovenia - Radovljica as part of Gorenjska NUTS 3 region and Domžale as part of Central Slovenian NUTS 3 region belong to NUTS 2 West Slovenia region.
212 LAU 2 : <u>Municipality</u>	<i>Towns Postojna, Radovljica and Domžale are centres of LAU 2 municipalities – Postojna, Radovljica and Domžale respectively.</i>
58 LAU 1: Administrative units	<ul style="list-style-type: none"> - Radovljica is the centre of LAU 1 administrative district Radovljica (LAU 2 municipalities: Radovljica, Bled, Bohinj, Gorje); - Postojna is the centre of LAU 1 administrative district Postojna (LAU 2 municipalities Postojna and Pivka); - Domžale is the centre of LAU 1 administrative district Domžale (LAU 2 municipalities Domžale, Lukovica, Moravče, Mengeš, Trzin).

According to the TOWN morphological analysis all three case study towns in Slovenia are defined as SMSTs (e.g. red polygons) even though there are also different number of VST polygons (e.g. yellow polygons) located in the MRC area (LAU 2 municipality) or MR area (several LAU 2 municipalities). Morphologically **Postojna** MRC is less dense than Radovljica or Domžale SMSTs – as a town in predominantly rural area, including Postojna MR (Postojna and Pivka LAU 2). Town of **Radovljica** with near-by urban settlement Lesce (and Hraše settlement) represent an urban agglomeration (SMST) and together with other 8 VST (covering approx. 16 settlements) a rather densely populated part of MRC Radovljica alongside the motorway Ljubljana – Jesenice. **Domžale** was the most densely populated case study MRC in year 2011. Town of Domžale with near-by urban settlements - Rodica, Srednje Jarše, Spodnje Jarše, Vir (located alongside the regional road Domžale-Kamnik), with other 14 settlements form a large SMST (28 sq.km). At the territory of Domžale MRC another SMST (7 sq.km) covers large settlement Depala vas (and other smaller settlements) as well as several VSTs covering 7 settlements. Three settlements (*Dragomelj, Pšata, Šentpavel pri Domžalah*) from the southern part of Domžale MRC (LAU 2 municipality) are part of Ljubljana HDUC (high density urban area of Ljubljana agglomeration) (see Table 4.3; Figures 4.1 and 4.2).

Table 4.3. TOWN morphological definitions and the position of case study SMSTs in Slovenia (*Postojna, Radovljica, Domžale*) in 2011.

TOWN morphological definitions	TOWN Case study SMSTs in Slovenia
<p>Morphological analysis: HDUC /SMST / VST polygons</p>	<p><u>POSTOJNA (MRC):</u></p> <ul style="list-style-type: none"> - SMST (3 sq.km): Town of Postojna (urban settlement) - 3 VST (3 settlements: <i>Hrašle, Planina, Prestranek</i>) <p>POSTOJNA (MR): POSTOJNA (MRC) + PIVKA (3 VST: 6 settlements)</p> <p><u>RADOVLJICA (MRC / MR):</u></p> <ul style="list-style-type: none"> - SMST (7 sq.km): Town of Radovljica + Lesce (urban settlement) + <i>Hraše</i> - 8 VST (16 settlements) <p><u>DOMŽALE (MRC / MR):</u></p> <ul style="list-style-type: none"> - HDUC Ljubljana (3 settlements are part of Domžale MRC: <i>Dragomelj, Pšata, Šentpavel pri Domžalah</i>) - SMST A (28 sq.km): Town of Domžale + Rodica + Srednje Jarše + Spodnje Jarše + Vir (all urban settlements) + 14 settlements - SMST B (7 sq.km): <i>Depala Vas</i> - 4 VST: 7 settlements

Figure 4.1 shows the morphological structure of the selected case study SMSTs in Slovenia: *Postojna, Radovljica, Domžale*, while Figure 4.2 shows also their position in the urban network as type of MRC / MR defined by TOWN functional analysis.

Slovenia Town Case Studies: Population Polygons

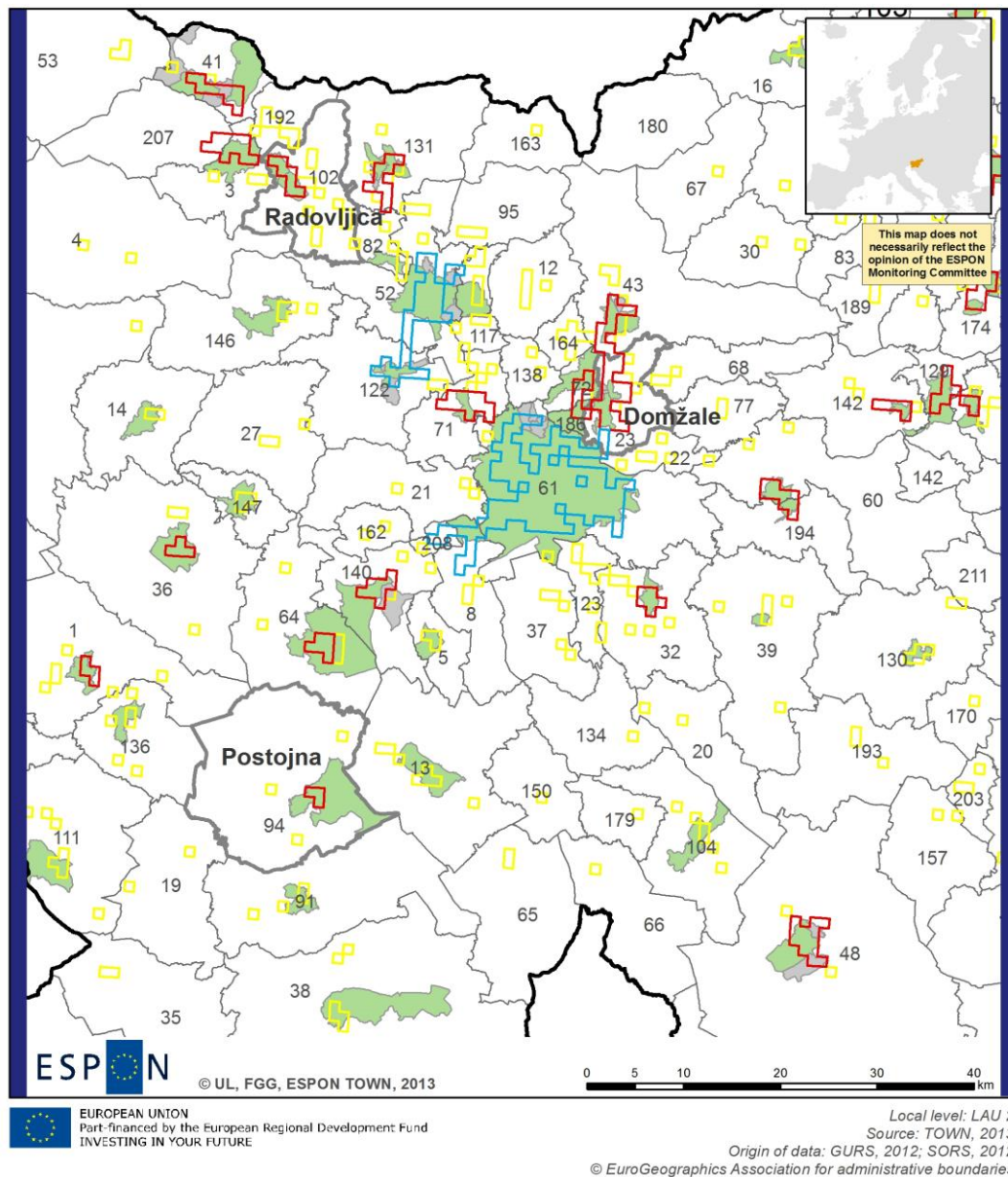
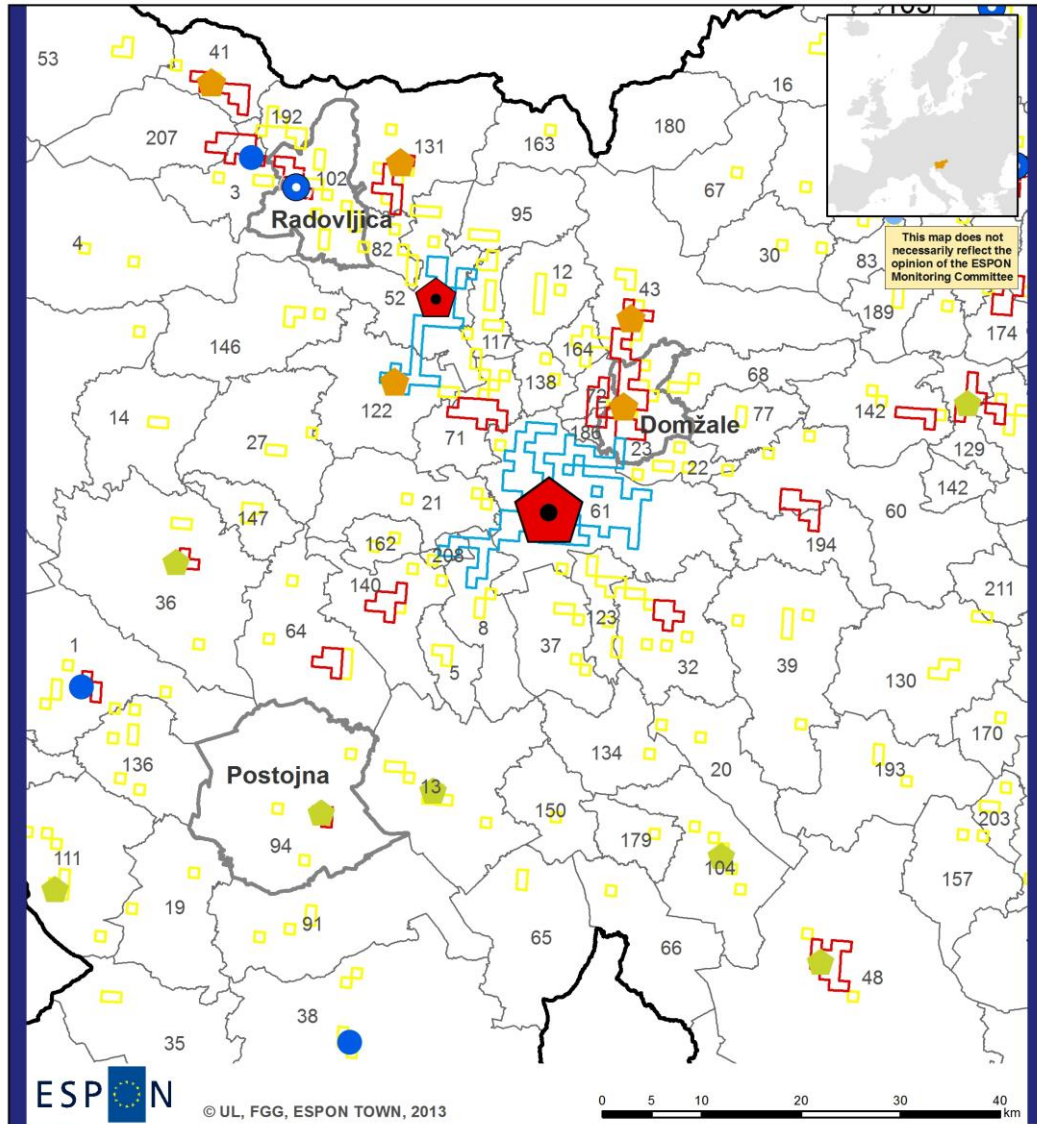


Figure 4.1. Morphological structure of case study SMSTs in Slovenia (Postojna, Radovljica, Domžale).

Slovenia Town Case Studies: Polygons and Types of MRC (2011*)



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Local level: LAU 2
 Source: TOWN, 2013
 Origin of data: GURS, 2012; SORS, 2012
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Polygons (version 20_5_2013)

- VST
- SMT
- HDUC
- LAU 2 border
- case study LAU 2 - municipality
- national border

Types of micro-regional center (MRC)

- ◆ LC
- ◆ NETW-LC
- ◆ AGLO-LC
- NETW-SMST-D
- NETW-SMST-S

* data for 2011 recalculated on the 2001 geography

Figure 4.2. Morphological and functional analysis of the case study SMSTs in Slovenia (Postojna, Radovljica, Domžale).

TOWN functional analysis of the three selected case studies SMSTs in Slovenia (*Domžale, Postojna Radovljica*) have shown important information on the territorial structure between the neighbouring municipalities, and the hierarchical position of the selected case study SMSTs. At the same time the analyses enabled us to distinguish between lower and upper tiers of urban hierarchy in order to identify SMSTs territorial arrangements (i.e. *autonomous, networked, agglomerated...*) taking in consideration the municipal geography from the year 2001 for both 2001 and 2011 reference years respectively.

Table 4.4. TOWN functional definitions and the position of case study SMSTs in Slovenia (*Postojna, Radovljica, Domžale*) in 2011.

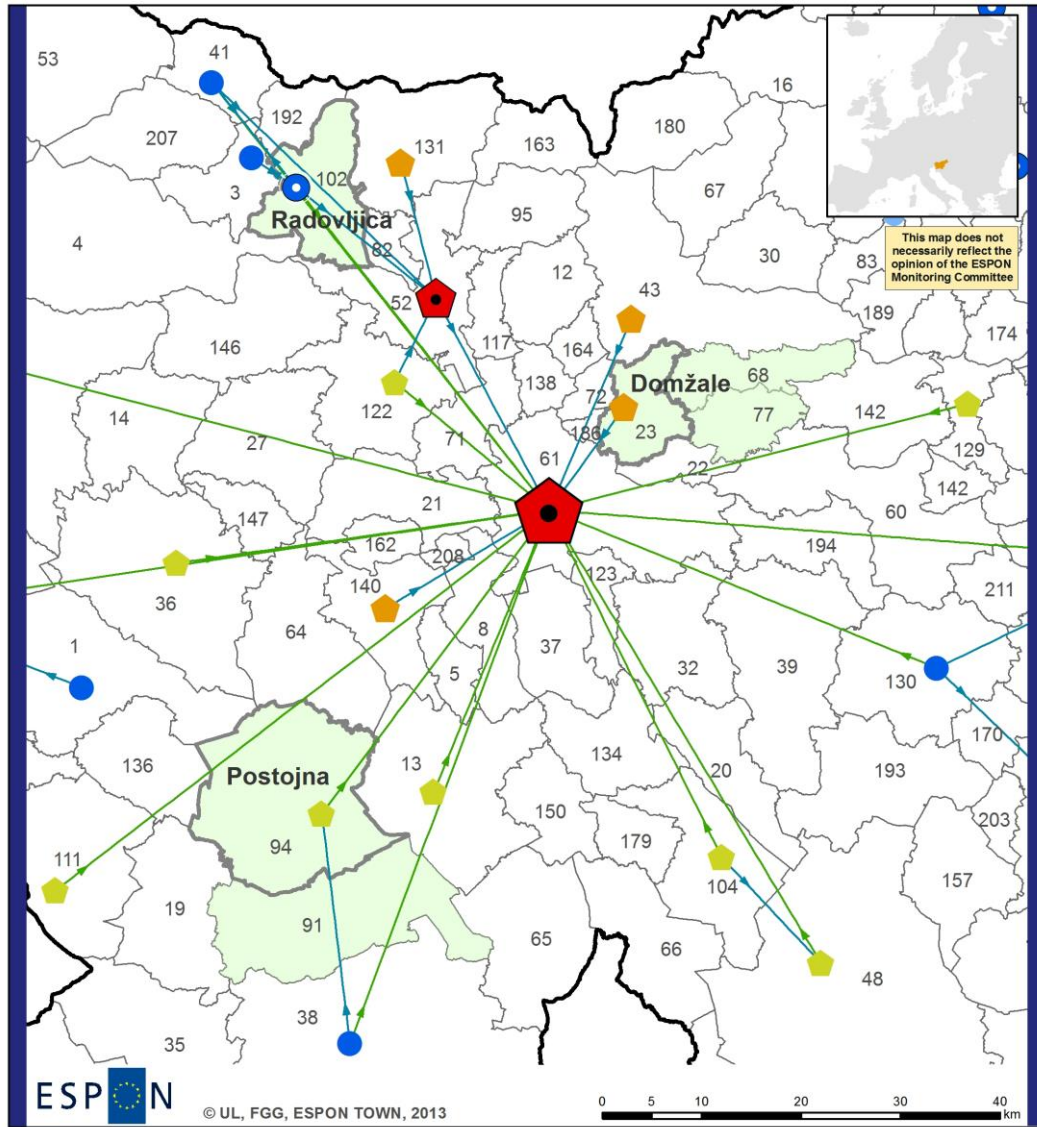
TOWN functional definitions	TOWN Case study SMSTs in Slovenia
Functional analysis:	POSTOJNA: "agglomerated to large city" (AGLO-LC)
- Micro-regional centres (MRC)	- MRC: <i>Postojna</i>
- Micro-regions (MR)	- MR: <i>Postojna + Pivka (2001 / 2011)</i>
	RADOVLJICA: „networked with other SMSTs“- D (NETW-SMST-D)
- Type of territorial networks	- MRC / MR: <i>Radovljica 2001 / 2011</i>
	DOMŽALE: "networked to large city" (NETW-LC)
	- MRC: <i>Domžale</i>
	- MR: <i>Domžale + Lukovica + Moravče (2001)</i>
	- MRC / MR: <i>Domžale (2011)</i>

The municipality of **Postojna** (code 94) or MRC - with the municipality of Pivka (code 91) forms the MR of Postojna. Postojna MRC has been connected to Ljubljana with a strong outgoing commuting flow. The delimitation of MR and the status of Postojna in the territorial hierarchy did not change between 2001-2011. Postojna is classified as **"agglomerated to large city (LC)"**. Postojna is a town located between two urban *centres of (inter)national importance* in Slovenia (SPRS, 2004): Ljubljana and the conurbation Koper-Izola-Piran at the Adriatic coast. The influence of these two LC has grown a lot in the past 20 years, but Postojna somehow kept a strategic role in this area, as a centre of Notranjsko-kraška NUTS 3 region.

The MRC / MR **Radovljica** consists of one (larger) LAU 2 municipality in both 2001 and 2011. On the other hand Radovljica MRC is surrounded and well connected with several neighbouring MRCs in a town conurbation Jesenice-Radovljica-Bled as well as with two MRCs classified as LC: Kranj (code 52) and Ljubljana (code 61). In both reference years Radovljica was considered as a town with significant outgoing and incoming flows from other SMSTs. In year 2001 four significant outgoing flows and two strong incoming flows were determined from Bled and Jesenice. At the same time these multiple connections were also directed towards LC - Kranj and Ljubljana. Therefore Radovljica is classified as **"networked with SMST as destination"** - as one of the well-connected urban centres in Zgornja Gorenjska subregion, and in Slovenia.

In 2001 **Domžale** MR consisted of three LAU 2 municipalities: *MRC Domžale* (code 23), *Lukovica* (code 68) and *Moravče* (code 77), as Domžale MRC was connected with two strong outgoing commuting flows to them. Between 2001-2011 the influence of the capital city Ljubljana has expanded due to jobs growth. The main commuting flows in Domžale MR has changed towards Ljubljana. As a consequence, in year 2011 Domžale MR consisted only of MRC Domžale, which still attracts many commuters, but less than Ljubljana MRC. At the same time the number of commuters from Domžale to Ljubljana has increased for 35% (or 1700 commuters). In both reference years Domžale MRC is classified as SMST **"networked with LC"**.

Slovenia Town Case Studies: MRC Types and Significant Flows (2001)



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Local level: LAU 2
Source: TOWN, 2013
Origin of data: GURS, 2012; SORS, 2012
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Share of flow on jobs in destination

— < 1 % (not important for the destination MRC)

— > 1 % (important for the destination MRC)

□ LAU 2 border

■ case study LAU 2 - municipality

■ case study MR 2001

□ national border

Types of micro-regional center (MRC)

■ LC

■ NETW-LC

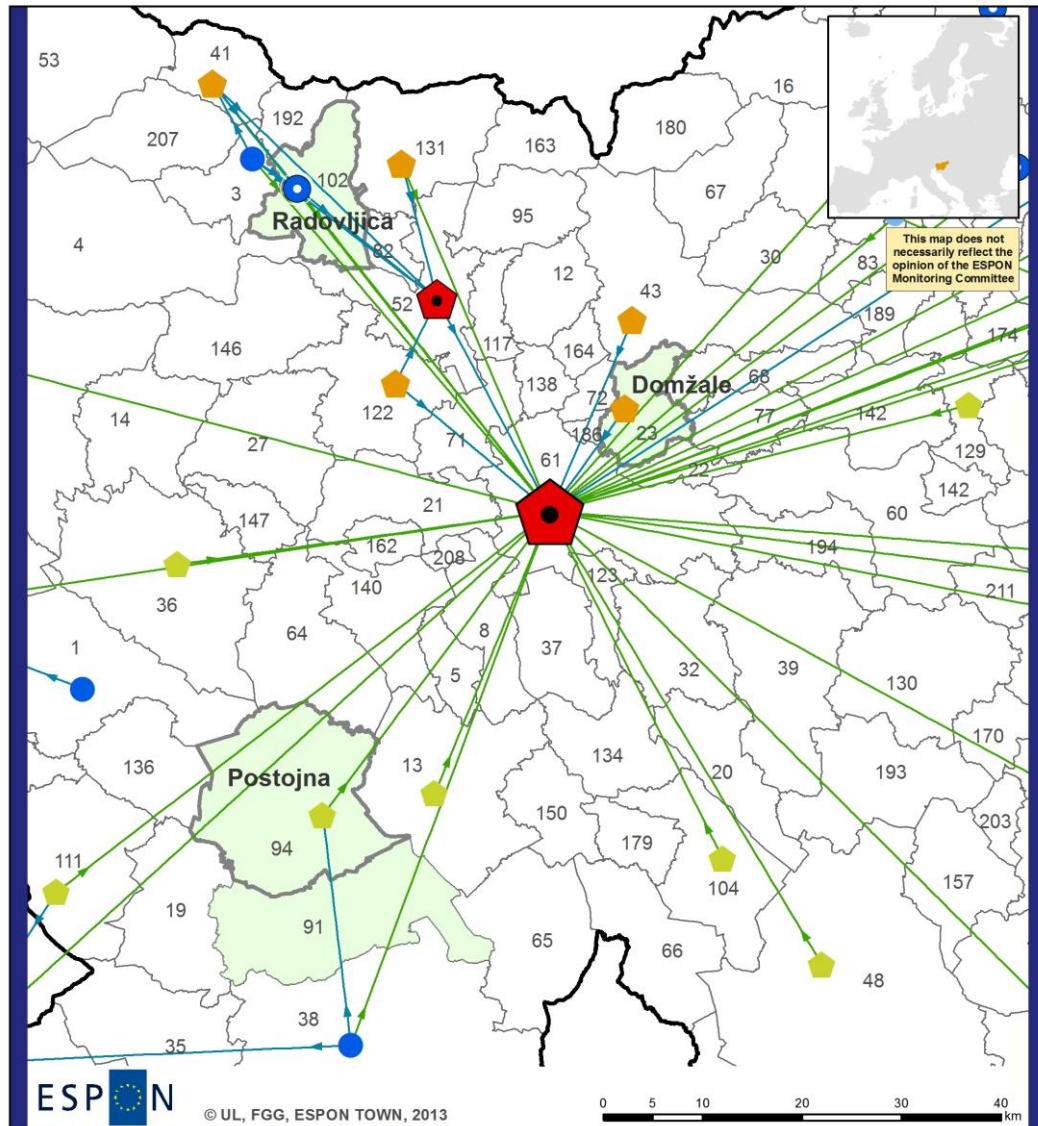
■ AGLO-LC

● NETW-SMST-D

● NETW-SMST-S

Figure 4.3a. Functional analysis of the case study SMSTs in Slovenia (*Postojna, Radovljica, Domžale*) in 2001.

Slovenia Town Case Studies: MRC Types and Significant Flows (2011*)



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Local level: LAU 2
 Source: TOWN, 2013
 Origin of data: GURS, 2012; SORS, 2012
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Share of flow on jobs in destination

- < 1% (not important for the destination MRC)
- > 1% (important for the destination MRC)

- LAU 2 border
- case study LAU 2 - municipality
- case study MR 2011*
- national border

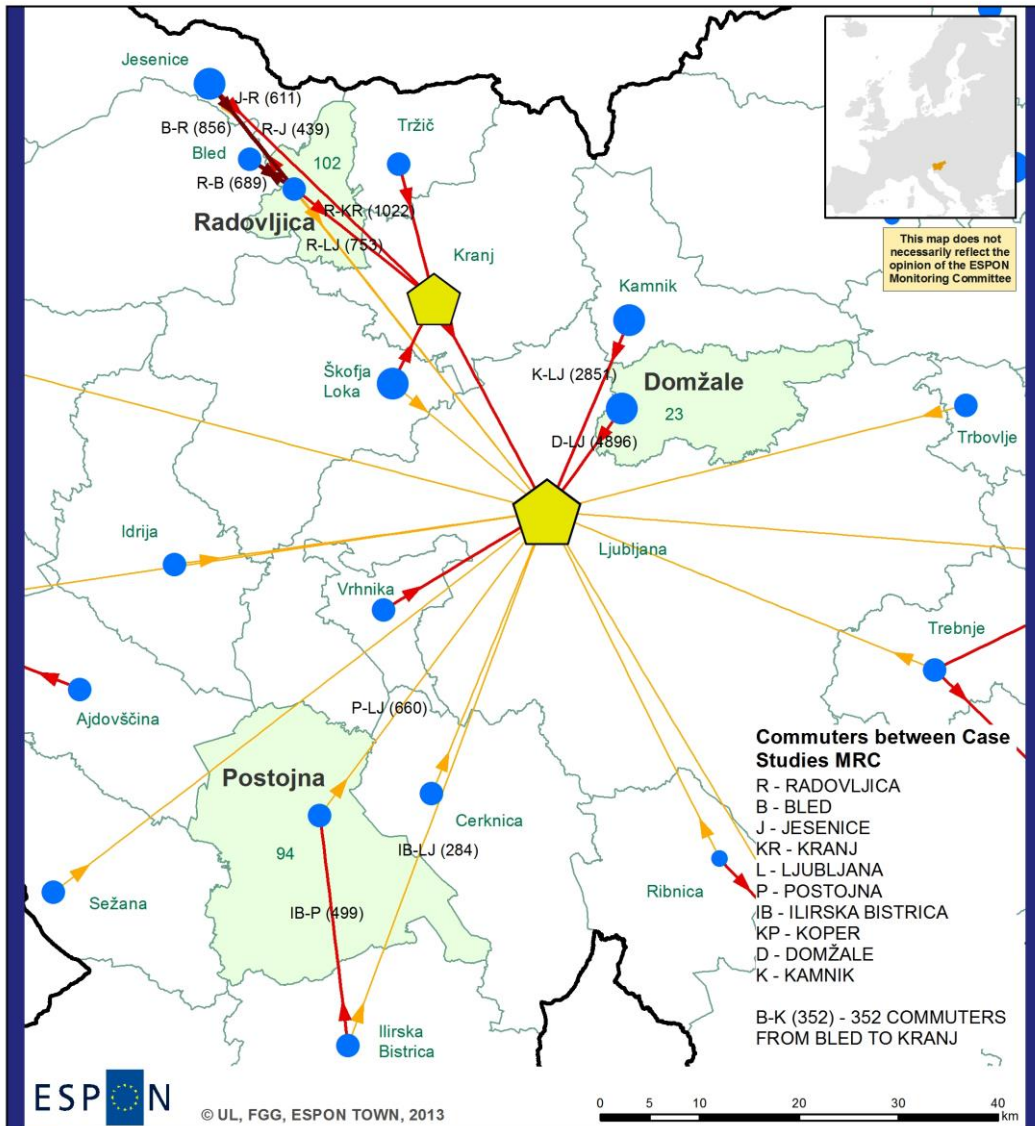
Types of micro-regional center (MRC)

- LC
- NETW-LC
- AGLO-LC
- NETW-SMST-D
- NETW-SMST-S

* data for 2011 recalculated on the 2001 geography

Figure 4.3b. Functional analysis of the case study SMSTs in Slovenia (*Postojna, Radovljica, Domžale*) in 2011.

Slovenia Town Case Studies: Large cities and Significant Flows (2001)



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Large cities by population in LAU 2

Kranj (51.797)

Ljubljana (269.824)

Micro-regional centres by population

< 10.000

10.001 - 20.000

20.001 - 50.000

Share of flow on jobs in destination

< 1 %

1 - 10 %

> 10 %

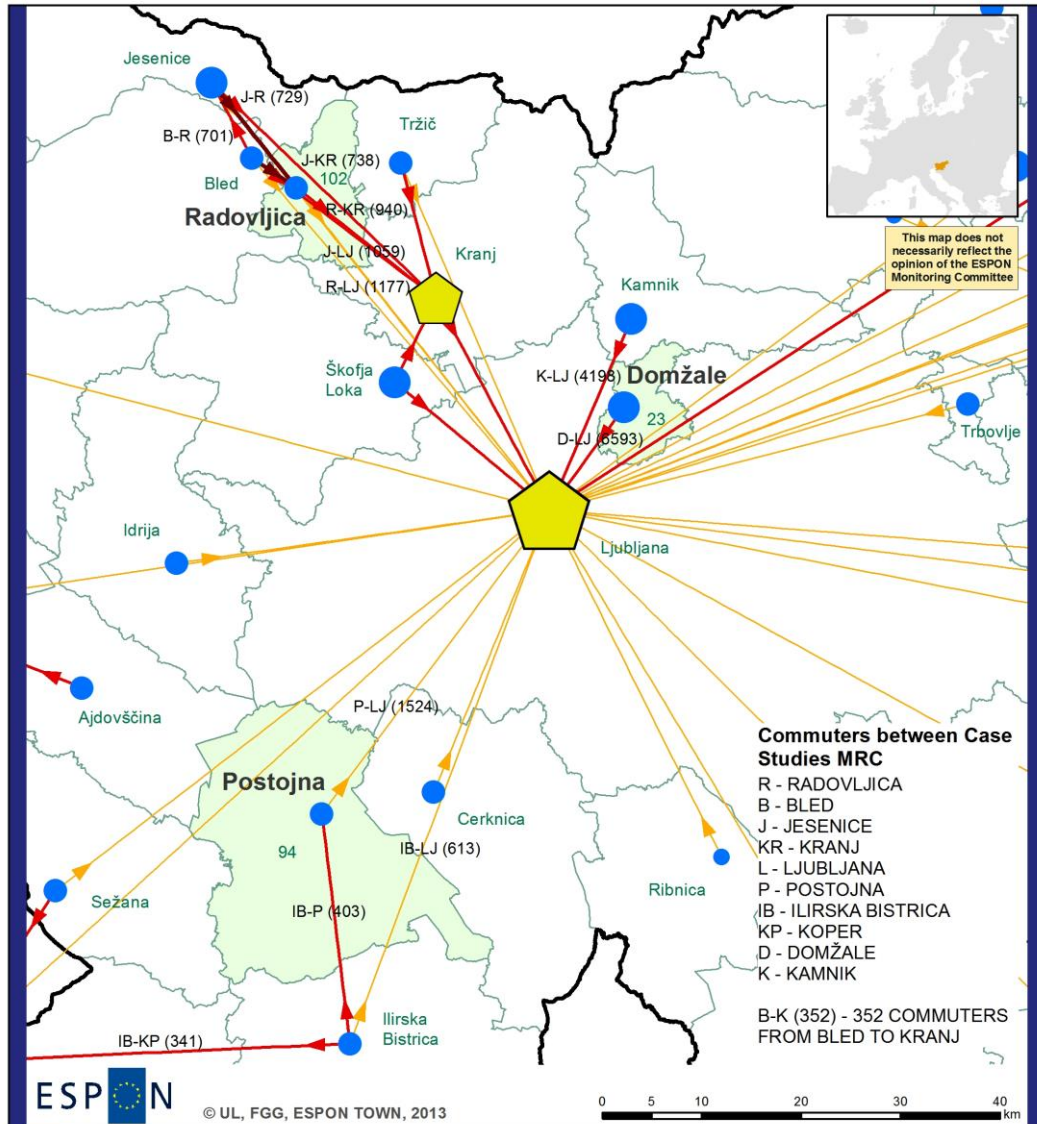
micro-region (MR) border

case study MR 2001

national border

Figure 4.4a. Functional analysis of the case study SMSTs in Slovenia (Postojna, Radovljica, Domžale) in 2001: Types of significant flows and “large cities”.

Slovenia Town Case Studies: Large cities and Significant Flows (2011*)



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Local level: LAU 2
Source: TOWN, 2013
Origin of data: GURS, 2012; SORS, 2012
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Large cities by population in LAU 2

- Kranj (55.451)
- Ljubljana (280.607)

Micro-regional centres by population

- < 10.000
- 10.001 - 20.000
- 20.001 - 50.000

Share of flow on jobs in destination

- < 1 %
- 1 - 10 %
- > 10 %

- micro-region (MR) border
- case study MR 2011*
- national border

* data for 2011 recalculated on the 2001 geography

Figure 4.4b. Functional analysis of the case study SMSTs in Slovenia (Postojna, Radovljica, Domžale) in 2011: Types of significant flows and “large cities”.

4.2 Description of TOWN Case Study SMSTs: Postojna, Radovljica, Domžale

4.2.1 Postojna



Town in rural areas

The former i.e. communal (municipal) system in Slovenia that were developed in 1960s and 1970s is now more or less represented as LAU 1 administrative units / districts, which are not bottom-up local self-government units but top-down representation of the state administration. But most former communal centres still function today as centres of »micro-regions« (MR).



(source: http://www.slovenia.info/?_ctg_kraji=2669&lng=1)

The town of **Postojna** is the centre of LAU 2 (municipality) and LAU 1 (administrative unit) of Postojna, and the centre of Notranjsko-kraška (*Inner Karst*) NUTS 3 region. Municipality of Postojna has 15,709 inhabitants (2011), covering the territory of 270 sq. km and 40 settlements - including the town of Postojna (approx. 8000 inhabitants). Postojna is an administrative and service town located in the southwestern part of Slovenia where the coast meets the interior. Being situated at the crossroad of important traffic links and because of its strategic position between the capital city Ljubljana, urban conurbation Koper-Izola-Piran and town of Nova Gorica in Slovenia, Trieste and Gorizia (Italy) and Rijeka (Croatia), Postojna became an important administrative and business centre of the Notranjsko-kraška region. Municipality of Postojna has borders with municipalities of Cerknica and Pivka (Notranjsko-kraška region), Divača (Obalno-kraška region), Ajdovščina and Vipava (Goriška region) and Logatec (Central Slovenian region known also as Ljubljana Urban Region).

Postojna was first officially mentioned in 1226 and it was referred to as the Postojna village (villa de Arnesperch) in 1262. The Slovene name Postojna appeared in 1369. Postojna was won by the Habsburgs in 1371, during their advancement towards the Adriatic Sea. The village of Postojna was located near the important commercial route between Ljubljana, Trieste and Rijeka. The »Emperor Road« from Ljubljana, through Vrhnika and Planina to Postojna and from Postojna to Rijeka or through Razdrto and Senožeče to Trieste on the one hand, and the heavy traffic on the other hand raised the Postojna village to the borough and to the town in the next four hundred years. Due to this very road which was replaced by the railway in 1857 and the famous Postojna Cave, Postojna was awarded the honourable title of the town in 1909. Postojna has been the seat of administrative and other offices since 1748 when became the seat of the Notranjska district. Between the two wars Postojna was a frontier town in Italy. Postojna was not only an administrative but also cultural and educational centre as well as medical one. In 1906 the secondary boys' school was established, the first school with the Slovene language in the Austro-Hungarian monarchy.

After the discovery of the inner parts of the Postojna Cave, Postojna became a world famous tourist town and the starting point for visiting other points of interest in the Karst. As soon as the southern railway Vienna – Ljubljana – Trieste was built in the 19th century the number of visitors of the cave increased and the first hotels were built in Postojna. The period immediately following the Second World War saw a dramatic rise in the number of visitors who came to explore the cave and the town. New hotels and motels were built and shortly afterwards a campsite, and Postojna could offer over one thousand beds to the visitors which number rose to almost one million per year. Today the number of visitors grew is over 500,000 tourists a year.

Administrative structure

In Slovenia most of the new LAU 2 municipalities are of small in size while LAU 1 administrative units / districts are only the administrative branches of the state administration. The 12 NUTS 3 regions in Slovenia are i.e. statistical / developing regions and not administrative regions (provinces) with political representation. Before local government reforms in year 1994 there were only three larger communes in Notranjsko-kraška NUTS 3 region – ***Postojna, Ilirska Bistrica and Cerknica***. In 1990s a new system of local government administration was put in place, with the main aim to be more democratic and more bottom-up. In year 1995 from the former commune of ***Postojna*** two new LAU 2 municipalities Postojna and Pivka were formed while from the former commune of Cerknica three new LAU 2 municipalities - Cerknica, Loška dolina, Bloke (separated from Loška dolina in 1998) were formed.

The territory of Notranjsko-kraška region is divided in three LAU 1 administrative units / districts – ***Postojna, Ilirska Bistrica and Cerknica*** that cover the same territory as former communes before local government reforms in 1994. Today LAU 1 Postojna is composed of two LAU 2 municipalities: Postojna and Pivka, LAU 1 Cerknica is composed of three municipalities of Cerknica, Loška dolina and Bloke, while LAU 1 Ilirska Bistrica covers the territory of LAU 2 municipality Ilirska Bistrica.

Population structure

Notranjsko-kraška region encompasses the municipalities of Bloke, Cerknica, Ilirska Bistrica, Loška dolina, Pivka and Postojna, with a total surface area of 1,456km² (7.2% of the area of Slovenia) as one of the smaller regions in Slovenia. It is also the most sparsely populated

region in Slovenia (35/km²) – or just one fifth of the most densely populated region – the Central Slovenian region with the capital city of Ljubljana. Municipality of Postojna covers the territory of 270 sq. km with 15,709 inh. (2011) in 40 settlements. Postojna "micro region" (R) with municipalities of Postojna and Pivka has 21,675 inh. The town of Postojna has approx. 8,000 inh. Postojna is located 50 km south-west of Ljubljana and it is a centre of Notranjsko-kraška region. The higher population growth rate in the municipality of Postojna, especially due to immigration (and suburbanisation of Ljubljana), has been contributing to the increase in population density in the last 10 years. Aging of population is also a problem in Postojna as in other municipalities of Notranjsko-kraška region. Higher education structure is below the national average in all municipalities in Notranjsko-kraška region.

Number of dwellings has also increased in Postojna from 2001-2011 due to intensive construction activities, lower property prices than in Ljubljana, and consequently some suburbanization of younger people from Ljubljana to Postojna.

Geographical typology

Town of Postojna is located at the hills above the bottom of the eastern part of Spodnja Pivka river, at the southern part of Postojnska vrata (*Postojna gate*) (612m), as a natural passage from Central Europe towards the Adriatic sea, with a regional road, motorway, and railway. Notranjsko-kraška region is distinctive for unique natural and cultural landscape. Almost 70% of the municipal territory of Postojna is covered by forests which is also a natural habitat for the brown bears. It is also known for characteristic karst phenomena: intermittent lakes, fields, valleys, sinkholes, etc. The environmentally protected area is a habitat to many endangered animal and plant species - 54% of the area is protected under the NATURA 2000 regime. There are several protected areas by law such as Notranjski regional park and regional park Snežnik. The town of Postojna is also only 7 km away from the well know Postojnska cave and Predjamski castle, and many smaller caves as well as to natural and recreational areas in the Alpine and Dinaric mountains (Cerkniško and Planinsko karst fields, Snežnik castle, etc.).

Morphological profile

Morphologically, town of Postojna is recognised as a rather small SMST (3sq.km), surrounded by rural settlements and only few VSTs (*Hrašle, Planina, Prestranek*) – as a town in predominantly rural area.

Important local centres are settlements of Planina and Prestranek, followed by Hruševje, Studeno, Bukovje and Hrašle. Other rural settlements are small and dispersed and they are located in highlands in the gravitation areas of Postojna and other local centres. Most rural settlements are enclosed in NATURA 2000 area, and are stagnating due to demographic decline. Suburbanisation process has had a strong impact on spatial fusion of the urban settlement area of Postojna with near by settlements Veliki Otok, Stara vas, and Zalog.

In urban architecture local and regional styles from Slovenia (Notransjka, Primorska) are mixed with some Italian influences (e.g. public buildings, villas, avenues, gardens, etc.) as a heritage of the period between the two world wars, when Postojna was a border town between Italy and Yugoslavia. The railway station building and the site are important by their size due to geo-strategic position and transport role of Postojna. The modern architecture is characterised by new projects such as hotel Jama, education centre at Kremenica, health centres, new bus station, cemetery. Town is also the important industrial centre with several large enterprise zones. There are also large military barracks in Postojna as well as several

military training areas in municipality of national importance (approx. 20sq. km) that are used by all Slovenian Army corpsis.

Functional role

The municipality of **Postojna** (code 94) or MRC - with the municipality of Pivka (code 91) forms the MR of Postojna. Postojna MRC has been connected to Ljubljana with a strong outgoing commuting flow. The delimitation of MR and the status of Postojna in the territorial hierarchy did not change between 2001-2011. Postojna is classified as **“agglomerated to large city (LC)”**. Postojna is a town located between two urban *centres of (inter)national importance* in Slovenia (SPRS, 2004): Ljubljana and the conurbation Koper-Izola-Piran at the Adriatic coast. The influence of these two large cities (LC) has grown a lot in the past 20 years, but Postojna somehow kept a strategic role in this area, as a centre of Notranjsko-kraška region.

Postojna is strategically located and well connected and accessible with railway and motorway network and regional roads. It is also located at the daily commuting distance to the capital city of Ljubljana (48 km). There is also a small (sport) airport locted south of the town of Postojna.

Socio-economic characteristics

More than 70% of the municipality of Postojna is covered by forests as a consequence of natural conditions and forestation of abandoned pastures in the higher altitudes due to demographic decline in these areas. Most agriculture land (28%) in municipality of Postojna are pastures (90%) with some arable land (8%) in lowlands, as a good precondition for livestock. Only about 5% of municipal land is built-up land. Approximately 3500 ha of agricultural land are cultivated by 526 farms with the average size of 6,6 ha – i.e. most are small farms owning many land plots. Only 8% of people are employed in agriculture.

As there are many forests in Postojna and Notranjsko-kraška region, wood processing and furniture manufacturing has been well developed, as well as food production. Most people are employed in manufacturing industry (cc 70%) - wood processing and metalworking, important are also electronics and production of construction (isolation) material. Most of these companies are located in several larger and smaller enterprise zones in Postojna. The economy is viable and export-oriented, and the population is professionally trained. Postojna is also recognised as a tourist centre of national importance with Postojnska cave, Predjamski castle, Pivka cave, etc., and prospective new touristic sites such as Epicentre, European Museum of Karst, Haasberg castle, Erazem hotel, Planinsko karst field, with the emphasis on eco-tourism and eco-farming emphasizing well-preserved natural and cultural heritage in Postojna and other municipalities of Notranjsko-kraška region.

In terms of economy, Notranjsko-kraška region is one of the weakest in Slovenia, as contributes only 2% to the GDP of Slovenia. On average, the companies in the region have 5 employees, placing them amongst the smallest in the country. Most companies are in service sector (60%) and less than one third are manufacturing. For improvement of economic development more is needed in improving the productivity and value-added of products.

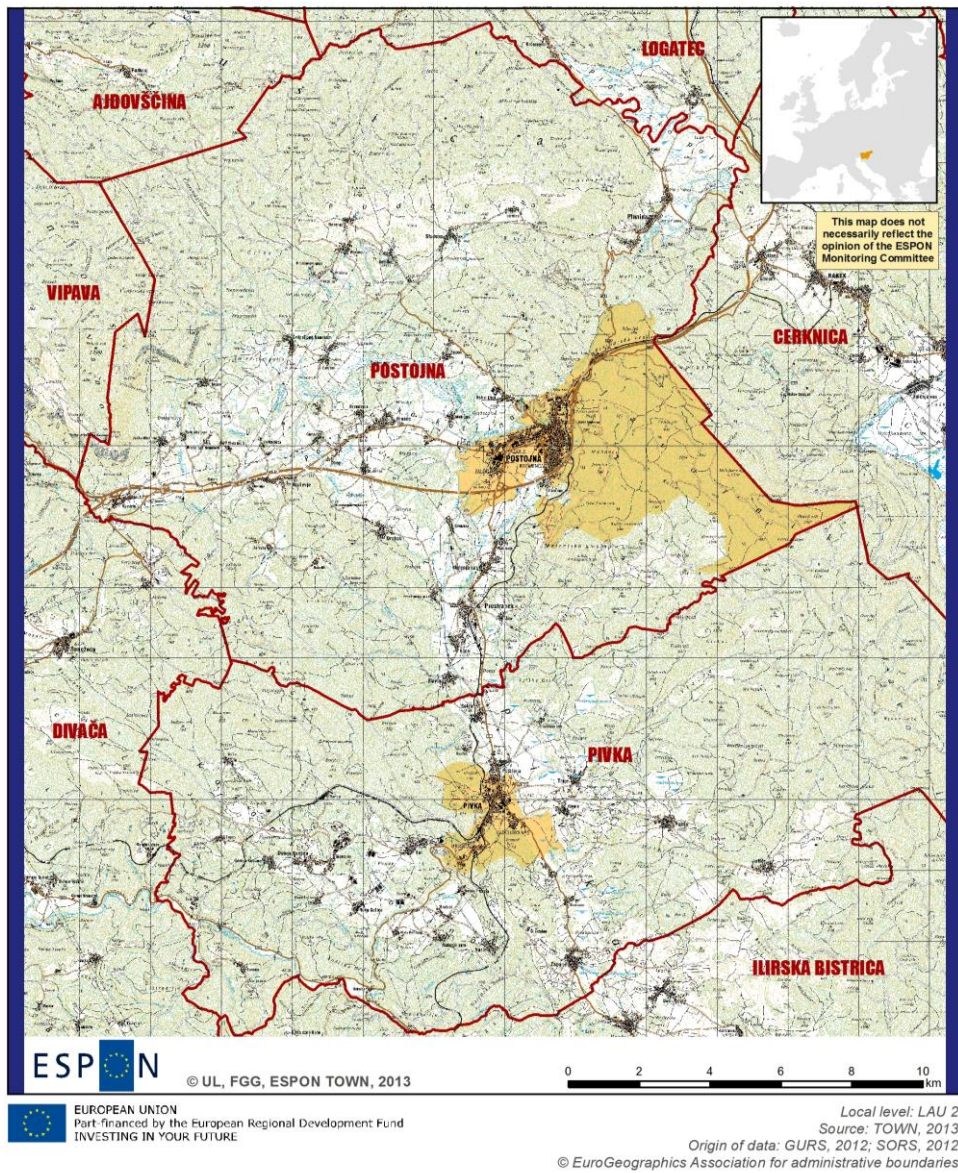
From data in Chapter 3 we can observe a very interesting change of employment structure and number of jobs in Postojna. In spite of the fact that employment structure has been improved, the number of jobs has decreased from 2001-2011. This phenomena can be explained with the results from the functional analysis (see Chapter 2). Postojna has become

more functionally connected to the capital city Ljubljana - with the increase of commuting flows towards Ljubljana. This is a consequence of the growth and diversity of jobs in Ljubljana, accessibility by motorway, and differences between housing and labour markets (i.e. higher property prices and salaries in Ljubljana) between Ljubljana and Postojna.

Although the employment activity rate in Notranjsko-kraška region is the highest in Slovenia, a large number of the inhabitants commute to work to the neighbouring regions, especially Central Slovenian region (Ljubljana) and Obalno-kraška region (Koper-Izola-Piran) and the economic strength of the population is thus relatively high. In municipality of Postojna are also employed workers from other municipalities such as Ajdovščina, Cerknica, Divača, Idrija, Ilirska Bistrica, Koper, Ljubljana, Logatec, Pivka, Sežana and Vrhnika. The national and regional road network is relatively well developed and enables good accessibility inside and outside the region, especially in the direction towards Ljubljana, Koper and Rijeka.

Town of Postojna is also the centre of administrative district (LAU 1) that comprises of LAU 2 municipalities Postojna and Pivka with administrative and other services. Some (state) institutions have their district offices in Postojna such as: tax, land surveying, employment, health security offices, craft chamber as well as courts of justice, police station, notary, parish church. In Postojna there are several kindergartens, elementary and secondary schools, higher education college, music school, post office, library, cinema, theatre, health centre, pharmacy, two elderly homes, several banks, local infrastructure company, tourist centre and tourist agencies, and many shops and service offices. The Institute for research of karst as part of the Slovenian Academy of Science and Art is also located in Postojna.

BUILT UP AREAS IN THE CASE STUDY AREA OF POSTOJNA (SI)



Statistically determined types of urban settlements - SORS (2003)

- urban settlements (104)
- settlements in urban areas (suburbs) (52)
- LAU 2 - municipalities 2012 (211)
- built up area
- motorway

Figure 4.5. Built up areas in municipalities Postojna and Pivka (Postojna MR).

Policy interests

Postojna is recognised as one of the 15 "centres of national importance" by the *Spatial Development Strategy of Slovenia* (SPRS, 2004) - but due to the (smaller) population size of the town and municipal economy, it is a rather "weak" urban centre.

From the state level development of Postojna (LAU 1 / LAU 2) is also guided by other sectoral policies as well as European directives and programmes administered by different ministries. Development of Postojna is guided by the new *Municipal spatial plan (2010)* adopted by the municipal council and approved by the Ministry of Infrastructure and Spatial Planning of RS, as well as and *Regional Development Programme of Notranjsko-kraška NUTS 3 region 2007-2013*. Strategic development goals in the municipality of Postojna are the following:

- a) development of the town of Postojna as a regional centre of national importance with further development of research and education activities and public services (culture and health);
- b) support for economic development taking in consideration geo-strategic location and transport links;
- c) establishment of high quality technology park for better educated labour force.
- d) further development of tourism with preservation of natural and cultural heritage
- e) spatial and infrastructure development of local centres

Municipality of Postojna supports policentric development in order to achieve balanced development of the territory, coordinated transport network, and visibility of natural and cultural features.

Stakeholders' assessments

According to stakeholders opinions the most important problems in Postojna at the moment are economic decline and stagnation of companies due to lack of adequate (political) support, and insufficient investment capital as a consequence of financial crisis, and lack of highly educated labour force. Companies are less competitive, with low productivity and lack of innovative activities. This is also a result of brain drain of educated (local) people. Postojnska cave is the most important touristic site of (inter)national importance that is visited annually by 500.000 people. Preservation of the environment with specific natural (karst) and cultural heritage is the other municipal priority with development of high quality and diverse tourist infrastructure for local population, visitors and tourists. Town of Postojna also needs to enhance its role and position in the national urban network with further development of education, research and medical activities.

4.2.2 Radovljica

Town in urban conurbation in mountain areas



The town of **Radovljica** is the centre of LAU 2 (municipality) and LAU 1 (administrative unit) of Radovljica, located in Zgornja Gorenjska (Upper Carniola) subregion, as part of Gorenjska NUTS 3 region. Municipality of Radovljica has 18,858 inhabitants (2011), covering the territory of 118.71 sq. km and 52 settlements - including the town of Radovljica (approx. 6,000 inhabitants) and (near-by) urban settlement Lesce (i.e. Radovljica-Lesce agglomeration). Radovljica is an old administrative and service town located on the high alluvial terrace above the confluence of rivers Sava and Sava Bohinjka in the upper part of Ljubljana basin in the Alps near the border with Austria. Municipality of Radovljica has borders with 6 other municipalities: Žirovnica, Bled, Bohinj, Kranj, Naklo and Tržič (all in Gorenjska region).



(source: <http://www.radolca.si/radovljica/>)

Radovljica is the only town in Zgornja Gorenjska subregion of medieval origin with also preserved Old Town as one of the best preserved medieval town structures in Slovenia. Development of the town of Radovljica began in the 13th century, reaching the peak in the 16th century. The former design of the town, with administrative buildings on one side of the square and crafts and trade buildings on the other, can still be seen today. During the passage from the 15th to the 16th century, Radovljica's walls featured as many as 16 defence towers and a moat. The town's moat, which was subsequently partly narrowed and built over, is the only preserved town moat in Slovenia.

Administrative structure

Before year 1994 there were only two larger communes in Zgornja Gorenjska subregion - **Radovljica** and **Jesenice**. In 1990s a new system of local government administration was put in place, with the main aim to be more democratic and more bottom-up. In year 1995 from the former commune of **Radovljica** three new LAU 2 municipalities (Radovljica, Bled and Bohinj) were formed while from the former commune of Jesenice two new LAU 2

municipalities (Jesenice and Kranjska Gora) were formed. In 1999 LAU 2 municipality of Žirovnica separated from the municipality of Jesenice. Recently, in the wave of local government reforms in 2006, the LAU 2 municipality of Gorje split from the municipality of Bled.

The territory of Zgornja Gorenjska subregion is divided in two LAU 1 administrative units / districts - **Jesenice** and **Radovljica** that cover the same territory as former communes of Jesenice and Radovljica before local government reforms in 1994. Today LAU 1 Jesenice is composed of three LAU 2 municipalities at the local level: Jesenice, Žirovnica, Kranjska Gora, and LAU 1 Radovljica of LAU 2 municipalities of Radovljica, Bled, Gorje and Bohinj.

Population structure

Number of inhabitants in the Zgornja Gorenjska subregion rose from 15.245 in year 1869 to more than 45,000 inhabitants in year 2011. At the same time the population increase in Slovenia was more moderate. The most important population growth occurred in the town of **Jesenice**, where the iron industry attracted large number of workers from the end of the 19th century until 1980s. In the current area of the municipality of Jesenice there were only 2,611 inhabitants in year 1869. The number had grown to 10,000 (1931), 20,000 (1971) and further to 21,791 inhabitants (2002). During the same time all other municipalities of the Zgornja Gorenjska subregion including **Radovljica** experienced population growth below the national average, the lowest being in the municipality of Bohinj (only 17%). **Radovljica** is the only town in Zgornja Gorenjska subregion of medieval origin. Town of **Bled** and urban settlement of **Kranjska Gora** developed primarily as the tourist resorts, while town of **Jesenice** has grown with the heavy industry. The (rural) settlement of **Bohinjska Bistrica** developed as the centre of Bohinj area with the construction of the railway in 19th century, but it has not obtained the status of urban settlement. Some local centres such as settlements of **Žirovnica** (near Jesenice) and **Gorje** (near Bled), developed from rural villages in the 20th century to new municipal centres (after year 1995), with some industry and services, but are still predominantly dependant on larger towns in the area such as **Jesenice**, **Radovljica**, **Bled**. Therefore the population is largely concentrated in large number of small settlements along the upper Sava valley and partly on the south slopes of Karavanke mountains.

One of obvious characteristic of Zgornja Gorenjska subregion is its overall low population density (50 inhabitants per sq. km) or half the Slovenia's average (97 inh./sq.km). The above average population density is only visible in the municipality of Jesenice (285 inh./sq.km) and rather dense population is found also in the municipality of **Radovljica** (153 inh./sq.km), especially in an area with many small villages, where population is slightly growing due to suburbanisation and urban sprawl. In all other municipalities the population density is very low, ranging from 16 inh./sq.km in the municipality of **Bohinj** and 20 inh./sq.km. in the municipality of **Kranjska Gora**, and up to 58 inh./sq.km in the municipality of Bled.

Geographical typology

Most obvious geographical characteristic of this region is the Alpine character with three main mountain ranges as the Julian Alps, Kamnik Alps and Karavanke ridge. The altitude in the region is from 350m to 2864m (Mt. Triglav, the highest peak in Slovenia) above sea level. Due to its mountainous character, Gorenjska region has limited number of transport and socio-economic links to surrounding regions in Slovenia, Austria and Italy. The region is well connected to Ljubljana and Austria (Villach-Klagenfurt, Salzburg) with the highway and railway line. The upper part of Ljubljana basin and the valleys of upper Sava and Bohinj are

more or less equally connected to town of Kranj, the centre of Gorenjska region, and to the capital city of Ljubljana. The urban centres of Zgornja Gorenjska subregion – *Jesenice*, *Radovljica*, *Bled* are located at distance of less than 10 km from each other, which makes them morphologically close to each other. Urban conurbation ***Radovljica – Jesenice - Bled*** is defined in SPRS (2004) as a »*conurbation of national importance*«. Towns of Radovljica and Bled are three relatively small towns located at a very short distance from each other, and to town of Jesenice but they differ functionally, morphologically, and in their historical development.

Radovljica is well connected and accessible with railway and motorway network and located close to the international airport "Jože Pučnik" and sport airport at Lesce, renowned for its excellent flying conditions. Radovljica is also close to well know tourist and other recreational areas around the lakes of Bled and Bohinj, ski resort in Kranjska Gora, and other recreational areas in the Alps. Radovljica is also located at the daily commuting distance to the capital city of Ljubljana (45 km or 30 min by car). Transit through the area is important as it connects Ljubljana and Kranj with Austria and Germany. Internal roads (and even more rail) connections within the Gorenjska region are less optimal, generally there are almost no connections between the valleys. The only road connection between the lake of Bohinj and upper river Sava valleys are through towns of Bled and Jesenice. In terms of transport infrastructure *Jesenice* is the most important node, connected via railway and highway lines and tunnels under Karavanke mountains to Carinthia region in Austria, and the city of Villach in Austria. Upper part of the valley is less important for transit, though there are three important links from Kranjska Gora via Korensko Sedlo mountain pass to towns of Villach (Austria) and to Tarvisio (Italy), as well as to Soča valley in Primorska region via Vršič mountain pass to towns Bovec and Nova Gorica.

Morphological profile

The Zgornja Gorenjska subregion is dominated by forests, especially in the latitudes between rocky high mountains (timberline is approx. at 1600 - 1900 m above sea level) and fertile valley at 400 - 600 m above sea level. Agriculture and urban land use prevail in the lower areas while forests and rocks prevail in the higher mountain areas. The central geographic part of Zgornja Gorenjska subregion is the upper part of Ljubljana basin, the wide low fertile agricultural area between eastern part of Karavanke range and Julian Alps. The area is traditionally a cultivated landscape with many small settlements of rural (agricultural) origin at the foot of the mountains and along main roads. Town of ***Radovljica*** with the near-by urban settlement of ***Lesce*** are located in the centre of this area, close to confluence of Sava and Sava Bohinjka. Other important places are towns of ***Jesenice*** and ***Bled*** and settlements of *Žirovnica*, *Gorje*, *Begunje*, *Kropa*, all located at the foot of the mountains. In the municipality of Radovljica forest land cover 63% and pastures 18% of land.

In the TOWN morphological analysis, as already mentioned, the urban conurbation ***Jesenice – Radovljica - Bled*** has been identified as three (3) separate SMST (red) »polygons« representing i.e. *intermediate density area* covering contiguous grid cells (polygons) with a total density (average density of all cells included) between 300 - 1500 inhabitants per km² and a population between 5,000 and 50,000 inhabitants. Town of ***Radovljica*** is recognised as a small high density SMSTs (together with near-by urban settlement Lesce), surrounded by several other small rural settlements (VSTs) in municipality of Radovljica. In the last two decades the suburbanisation and sprawling processes are very strong in Zgornja Gorenjska subregion with the threat of forming continuous linear built-up area along main roads between towns of ***Jesenica – Radovljica - Bled***.

BUILT UP AREAS IN THE CASE STUDY AREA OF RADOVLJICA (SI)

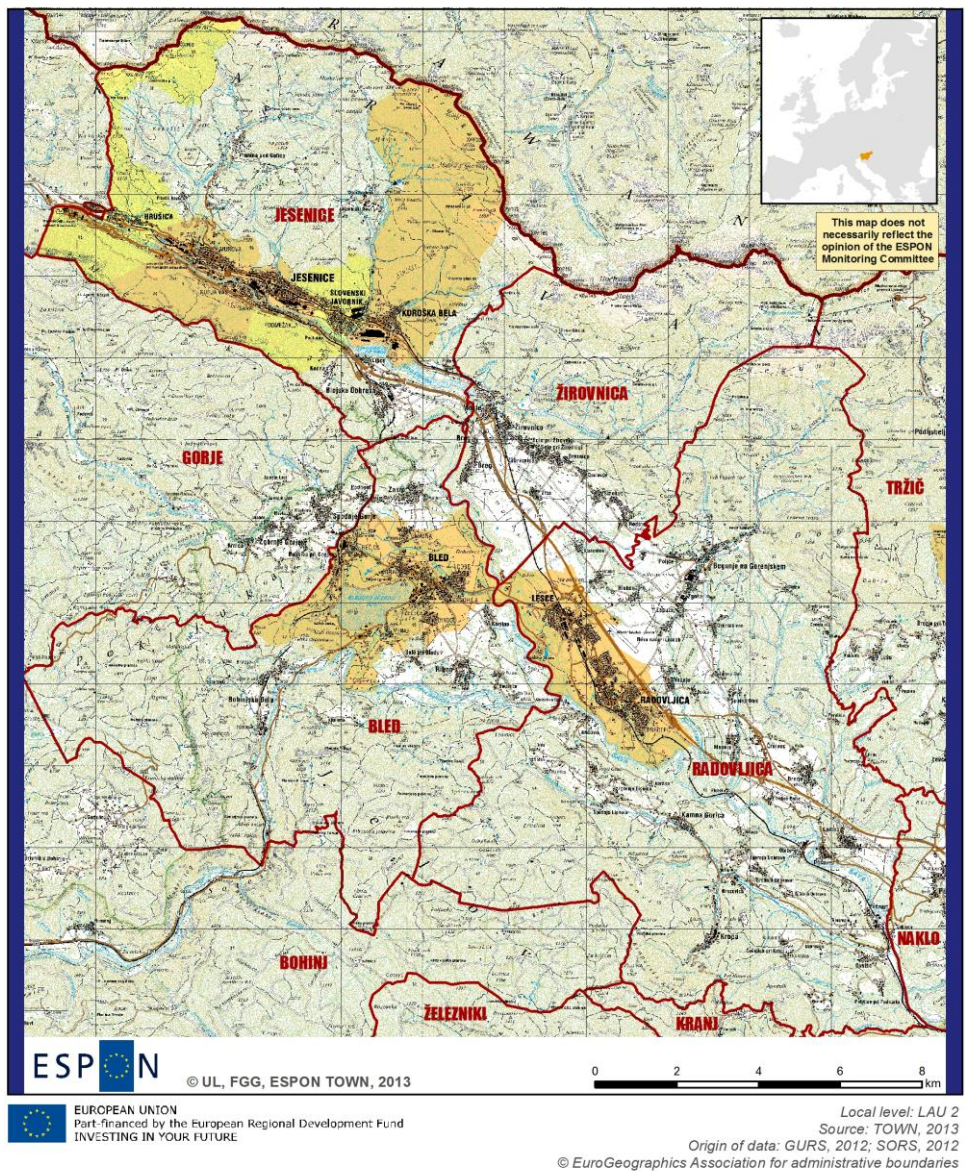


Figure 4.6. Build up areas in Upper Gorenjska subregion: municipalities Jesenice, Žirovnica, Gorje, Bled, Radovljica.

Functional role

According to the TOWN functional analysis the MRC / MR **Radovljica** consists of only one (larger) LAU 2 municipality in both 2001 and 2011 reference years. On the other hand Radovljica MRC is surrounded and well connected with several neighbouring MRCs in urban conurbation Jesenice – Radovljica - Bled as well as with two MRCs classified as large city (LC): Kranj and Ljubljana. In both reference years Radovljica has been considered as a town with significant outgoing and incoming flows from other SMSTs. In year 2001 four significant outgoing flows and two strong incoming flows were determined from Bled and Jesenice. At the same time these multiple connections were also directed towards Kranj and Ljubljana. Therefore Radovljica is classified as “**networked with SMST as destination**” - as one of the well-connected urban centres in Zgornja Gorenjska subregion, and in Slovenia.

In Slovenia almost every MRC is strongly connected to the capital city **Ljubljana** - especially according to the data for year 2011. The flows to Ljubljana are often the highest or one of the highest from different MRCs in Slovenia. Taking in consideration commuting data and types of MRCs (*Jesenice, Radovljica and Bled*) - some important changes have occurred due to increase in commuting flows between 2001-2011 towards the capital city of Ljubljana, as a consequence of higher concentration and diversity of (better paid) jobs in both public and private sectors in Ljubljana, and intensive suburbanisation process due to imbalances in the labour and housing markets between Ljubljana and the rest of Slovenia.

The urban centres of Zgornja Gorenjska subregion – **Jesenice – Radovljica - Bled** are located at distance of less than 10 km from each other, which makes them morphologically close to each other. The gravitation areas of these urban centres represent some kind of a *regional labour system* with good potentials for inter-municipal cooperation, which is missing from day-to-day practice and municipal planning documents. These urban centres form three MRs – and even though they share some functions in Zgornja Gorenjska subregion, they are very different from each other. But each town is too weak (even Jesenice) to represent an urban centre on its own at the (sub)regional level. Therefore towns of *Jesenice-Radovljica-Bled* represent more a city cluster - than a (potential functional) urban conurbation, despite being recognised as one of the 15 urban »centres of national importance« by the *Spatial Development Strategy of Slovenia* (SPRS, 2004).

Socio-economic characteristics

From the data analysis presented in Chapter 3 the number of jobs has slightly increased in **Radovljica** from 2001–2011, but there has been no significant demographic change as well as the change in employment structure in the past ten years. Radovljica has performed better than the other two TOWN cases studies (Domžale and Postojna), where the shares of jobs decreased. In relation to higher levels of territorial observation (NUTS 3, Slovenia, and urban centres of national importance (according to SRPR, 2004), the share of jobs has increased Radovljica. Number of companies has grown for more than 5% (e.g that is the national average) in all municipalities in Zgornja Gorenjska, except in Bohinj municipality. Some of this job growth in Radovljica is caused by moving companies closer to main infrastructure from touristic Bled to the new business zone in Radovljica municipality. Most of the jobs are located in the manufacturing industry such as furniture, recycling, production of electricity and optical equipment, production of vehicles, skis, followed by trade and construction industry (until year 2009). In the municipality of Radovljica the industry is not located only in the municipal centre – town of Radovljica, but also in other smaller

settlements within the municipality of Radovljica, like Begunje known for sports industry (e.g. ELAN skies), Kropa with metallurgic and electric apparel manufacturing and, especially in urban settlement Lesce with metallurgic and food industries (Gorenjka chocolates).

In Zgornja Gorenjska subregion unemployment rate is relatively high in municipality of Jesenice and the lowest in municipality of Bohinj. This fact can be explained with the problems of de-industrialisation of the heavy metallurgic industry in near-by Jesenice, which has been under restructuring during the last two decades. The subregion as a whole has approx. 20% less jobs comparing to the number of active working population – including Radovljica. This is due to relatively good links and accessibility between towns and other settlements in the subregion, as well as to regional and national centres such as Kranj and Ljubljana, but with higher impacts on travel-to-work mobility of active population resident in Zgornja Gorenjska subregion.

In Radovljica there are less than 500 family farms, 63% are smaller than 5 ha, and more than 60% of owners are older than 55 years of age. The area has natural conditions for livestock and fruit production. It has long been known for its rich beekeeping tradition and a home to the Museum of Apiculture and a modern beekeeping education centre in Lesce.

Number of dwellings in Radovljica has increased as in other municipalities in Zgornja Gorenjska subregion. The average size of dwellings is 79 sq.m. (average for Slovenia is 75 sq.m). Almost 70% of dwellings were built until 1980s. The largest number of dwellings was built from 1971-1980 (more than 20%).

The importance of the town of **Radovljica** has diminished since 1960s with the rise of (heavy) industrial development in the town of Jesenice and traditional tourism activities of the town of Bled at the lake of Bled. Town of Radovljica is also the centre of administrative district (LAU 1) that comprises of LAU 2 municipalities Radovljica, Bled, Bohinj and Gorje with some services such as education, sport facilities, health and social care, museum, cultural centre, etc. Town of Radovljica functions as a »twin town« with the neighbouring urban settlement of Lesce known for food (chocolate) and metallurgic industry. A lot of (state) institutions have their district offices in Radovljica such as: tax, land surveying, employment, health security offices, craft chamber as well as courts of justice, police station, notary. In Radovljica there is an elementary school, two secondary schools, kindergardens (public and private), music school, post office, library, cinema, theatre, health centre, pharmacy, elderly home, several banks, local infrastructure company, turist centre and tourist agencies, and many shops and service officies.

Policy interests

Radovljica is part of a urban conurbation **Jesenice – Radovljica – (Bled)**, one of the 15 *centres of national importance* according to the *Spatial Development Strategy of Slovenia* (SPRS, 2004) and part of continuous built-up agglomeration in Zgornja Gorenjska subregion between larger urban agglomerations Ljubljana - Kranj (SI) and Villach-Klagenfurt (A). Jesenice - Radovljica – (Bled) urban conurbation is not performing well as the functioning (urban) area due to inadequate cooperation between municipalities in Zgornja Gorenjska subregion.

From the state level development of Radovljica (LAU 1 / LAU 2) is also guided by other sectoral polices as well as European directives and programmes administrated by different ministries. Development of the municipality of Radovljica is guided by the new *Municipal spatial strategy and Municipal planning order* recently adopted by the municipal council (2011-2012) and approved by the Ministry of Infrastructure and Spatial Planning of RS, as well as the *Development program of Radovljica 2020* and *Regional Development Programme*

of Gorenjska NUTS 3 region 2007-2013 and the new programming period 2014-2020 (under preparation). Strategic development goals in the municipality of Radovljica are the following:

- a) spatial and infrastructure development and management
- b) support for entrepreneurial development and tourism
- c) improving the quality of life
- d) enhancement of the role of Radovljica as a regional centre
- e) enhancement of municipal cooperation in the region

Stakeholders' assessments

According to stakeholders too many development projects at the moment are financially demanding for Radovljica's municipal budget due to economic and financial crisis in Slovenia and a shift of financial responsibilities from the national to municipal level and local communities. The preservation of the medieval town centre surrounded by green (and unbuild) areas according to the cultural heritage rules is important urban development priority as well as upgrading and revitalisation of some inner-city areas are with villas and multi-dwelling buildings constructed between 1920-1940. Some other development constraints that are mentioned by stakeholders can be seen in high land and property prices, aging of population, individualism, (traditional) rivalry between towns of Jesenice, Radovljica and Bled, and inefficient cooperation between towns and municipalities in Zgornja Gorenjska subregion (and in Gorenjska NUTS 3 region). Cross-border cooperation with towns in Italy and Austria is not sufficient.

4.2.3 Domžale

Town in metropolitan area



The town of **Domžale** is the centre of LAU 2 (municipality) and LAU 1 (administrative unit) of Domžale, located 15km north-east from the capital city of Ljubljana, as part of Central Slovenian NUTS 3 region, known also as Ljubljana Urban Region (LUR). Municipality of Domžale has 33,936 inhabitants (2011), covering the territory of 72,3 sq. km and 50 settlements - including the town of Domžale (approx. 13,000 inhabitants) and near-by urban settlements of Vir with »settlements in urban areas« (suburbs) of Rodica, Srednje Jarše, Spodnje Jarše. They are located alongside the road Domžale-Kamnik with other smaller (rural) settlements that form a large built-up agglomeration spreading in northern part of Ljubljana basin. Therefore due to good geo-strategic location and transport links as well as the accessibility to the capital city of Ljubljana, the town of Domžale with neighbouring settlements are one of the most attractive residential areas. As a consequence municipality of Domžale is one of the most populated in Slovenia with population density of 469 inh./sq.km (average for Slovenia is 101 inh./sq.km).

Municipality of Domžale is one of 26 LAU 2 municipalities in Central Slovenian NUTS 3 region (or LUR) and according to the number of population Domžale is the largest municipality in LUR after the City Municipality of Ljubljana. Urban conurbation **Domžale-Kamnik** is recognised as one of the 15 "centres of regional importance" by the *Spatial Development Strategy of Slovenia* (SPRS, 2004).

Domžale was firstly mentioned in official documents dating back to the 12th century. Between 13-18th century several castles and churches were built at the territory of Domžale including Krumperk as the best known castle built in 16th century. Since Middle Ages development of mills and saws on water power and some ironworks were also important for the area. Economic development of Domžale accelerated in the 19th century with the industrialisation of the local craft of plaiting straw. In year 1857 the first straw factory was built in Stob settlement followed by many others until the First World War. The straw is embedded today in the municipal coat of arms and the flag. Water power of Kamniška Bistrica river with mills, good location of Domžale near Ljubljana alongside the main transport roads (west-east), and since the end of 19th century the railway line Kamnik - Ljubljana had enforced the development of other crafts and manufacturing industry in Domžale area. In year 1925 from (rural) settlements of Zgornje (upper) and Spodnje (lower) Domžale with Goričica, Stoba and Štude - Domžale market town was established. In 1952 Domžale became a new »town« in Slovenia. In 1980s Domžale was one of the most economically developed commune not only in Slovenia but also in the former Yugoslavia known for crafts and entrepreneurial activities.

Administrative structure

In 1995 a new local government reform has transformed a larger commune of Domžale in four new LAU 2 municipalities Domžale, Lukovica, Moravče, and Mengeš. In 1998 new LAU 2 municipality of Trzin separated from the municipality of Domžale.

Today LAU 1 administrative unit (district) Domžale covers the same territory (239,7 sq.km) as the former commune of Domžale before local government reforms in 1990s with 55.609 inhabitants and is composed of five LAU 2 municipalities: Domžale, Lukovica, Moravče, Mengeš and Trzin. Municipality of Domžale is one of 26 LAU 2 municipalities in Central Slovenian NUTS 3 region (or LUR).



(source: <http://www.domzale.si/index.php?S=1&Article=4439>)

Population structure

Municipality of **Domžale** covers the territory of 72.3 sq. km with 33,936 inhabitants (2011) in 50 settlements, while its "micro region" (MR) with municipalities of Domžale, Lukovica, Moravče has 38,850 inhabitants. The town of Domžale has approx. 13,000 inhabitants, located 15 km north-east from the capital city of Ljubljana in north-eastern part of Ljubljana Urban Region.

Municipality of Domžale is known for one of the highest population growth in LUR and in Slovenia. Since 1991 the population has increased for more than 10% (in Slovenia for 3%). The higher population growth rate in the municipality of Domžale, due to immigration from other municipalities in Slovenia and suburbanisation from Ljubljana, has been contributing to the population increase in the past 20 years. This has impact on positive birth rates in Domžale and lower immigration of foreign citizens. Higher education structure is better than the national average, and aging of population is not a problem as in other municipalities in Slovenia due to immigration of young families with children. Number of dwellings has also increased in Domžale from 2001-2011 due to intensive construction activities, lower property prices in comparison to Ljubljana, and consequently suburbanization of younger people from Ljubljana and immigration from other municipalities in Slovenia.

Geographical typology

Domžale is an administrative and service town strategically situated at the north-east part of Ljubljana basin, between the capital city of Ljubljana in the south, town of Kamnik in the north, urban settlements of Mengeš and Trzin in the west, and the town of Kranj, regional centre of Gorenjska region in north-west part of Ljubljana basin. Domžale is located near the foothills of the Kamnik Alps and is crossed by the Kamniška Bistrica river, which originates in these mountains near the border with Austria. The Kamniška Bistrica – known as the most »urbanised« river in Slovenia flows north to south through agglomeration Kamnik-Domžale, into the river Sava in Dol, about 10 km east of Ljubljana. Municipal landscape is characterised by forested hills in north-east and southeastern part and agricultural plains in the west made by Kamniška Bistrica river and its largest tributaries Pšata and Rača, producing fertile arable land of the best quality – but also attractive locations for settlements development and urbanisation. The altitudes in municipality of Ljubljana are between 280-642m.

Domžale is strategically located and well connected and accessible by railway and motorway network and only 15km away from the international airport "Jože Pučnik". With completion of the motorway Ljubljana-Celje-Maribor near Domžale most of transport flows has been diverted from the regional road to the motorway, but traffic is still one of the major problems with lot of private vehicles and daily commuting activities that also cause noise and air pollutions in the area.

Morphological profile

Domžale is the most densely populated case study SMST from Slovenia in both reference years 2001 and 2011. Town of Domžale with near-by urban settlements - Rodica, Srednje Jarše, Spodnje Jarše, Vir (located alongside the road Domžale-Kamnik), with other 14 settlements form a large SMST (28 sq.km). At the territory of Domžale another SMST (7 sq.km) covers large settlement Depala vas with other smaller near-by settlements as well as several VSTs covering 7 settlements. Three settlements (*Dragomelj, Pšata, Šentpavel*) located at the southern part of Domžale municipality are part of Ljubljana HDUC (high density urban area of Ljubljana agglomeration).

The urbanisation trends and urban sprawl since 1960s has changed the typology of settlements in Domžale municipality transforming them from small rural into suburban settlements located near the town of Domžale or as part of larger built-up agglomeration alongside main roads from Kamnik – Domžale - Ljubljana (north-south), and Trzin – Domžale – Vir - Dob (west-east) (see Figure 4.7). This area was intensively urbanised in the past 40 years, most notably in the past 20 years due to suburbanisation trends in Ljubljana agglomeration.

Functional role

In 2001 Domžale MR consisted of three LAU 2 municipalities: *MRC Domžale* (code 23), Lukovica (code 68) and Moravče (code 77), as Domžale MRC was connected with two strong outgoing commuting flows to them. Between 2001-2011 the influence of the capital city Ljubljana has expanded due to jobs growth. The main commuting flows in Domžale MR has changed towards Ljubljana. As a consequence, in year 2011 Domžale MR consisted only of MRC Domžale, which still attracts many commuters, but less than Ljubljana MRC. At the same time the number of commuters from Domžale to Ljubljana has increased for 35% (or 1700 commuters). In both reference years Domžale MRC is classified as SMST **“networked with LC”**.

Between reference years 2001 – 2011 Domžale municipality has shown significant population growth and daily commuting patters towards Ljubljana, but the number of jobs has been declining and changing the employment character and enterpreneurial trends. Therefore municipality of Domžale is nowadays under strong gravitaion influence of Ljubljana agglomeration.

Socio-economic characteristics

More than 33% of the municipality of Domžale is covered by (fragmented) forests while 20% of the territory is urbanized and almost half of land use is agriculture (arable) land of the best quality that is also protected by law. Most of the small farms have mixed crops and livestock, while some larger farms are engaged with intensive grain and corn production, livestock feed, orchards, gardening, poultry and pig production. Some farms are also involved in beekeeping, vegetable production and tourism. In Ihan settlement there is a large pig and poultry farms that are now in the phase of closing down. Almost half of the forest land in Domžale municipality is also protected. Less than 1% of people are employed in agriculture, the average size of farms is small.

In Domžale municipality manufacturing has been traditionally well developed, as well as small crafts and entrepreneurial firms. Most people are employed in manufacturing industry (55%) - textiles, leather, chemicals, sanitary, paper and pulp, furniture and metalwork production, as well as in trade activities, construction and other business services. Since 2001 the number of employees has increased in consumer services (quaterly sector). Most of these companies are located in several larger and smaller industrial and enterprise zones in Domžale and other local centres (Radomlje, Ihan, Dragomlje). The new entrepreneurial zone Želodnik (61 ha) of regional importance is planned to be the backbone of future economic development in Domžale.

Education structure of population is above the national average and there is also a positive trend of increase of higher (university) educated inhabitants, especially due to new younger immigrants to municipality of Domžale. Activity rate of population is higher than the number of jobs that is also one of the reasons for commuting to near-by Ljubljana. In municipality of Domžale are also employed workers from other municipalities in northern part of LUR such

as Kamnik, Komenda, Trzin, Mengeš, Lukovica, Moravče, Dol, as well as other municipalities in LUR (Litija, Šmarje), Zasavje region (Zagorje) as well as from Gorenjska region (Vodice, Cerklje). The national and regional road network is relatively well developed and enables good accessibility of Domžale inside and outside the region, especially in the direction towards Ljubljana, Kranj and Celje.

BUILT UP AREAS IN THE CASE STUDY AREA OF DOMŽALE (SI)

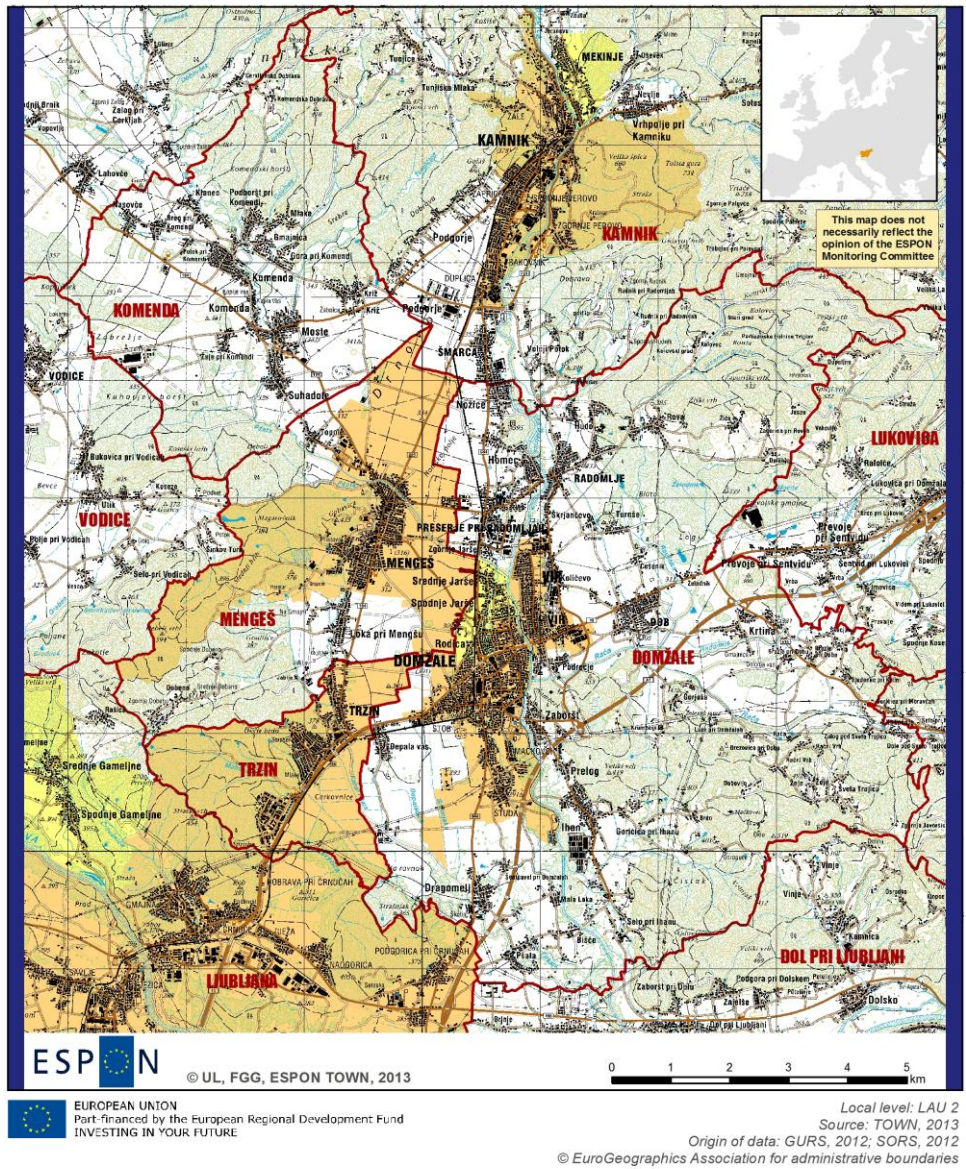


Figure 4.7. Build up areas in the northern part of Central Slovenian NUTS 3 region (Ljubljana Urban Region): municipalities Kamnik, Komenda, Domžale, Mengeš, Trzin, Vodice.

From data in Chapter 3 we can observe a very interesting change of employment structure and number of jobs in Domžale. In spite of the fact that employment structure has been improved, the number of jobs has decreased from 2001-2011. This can be explained with the results from the functional analysis (see Chapter 2). Domžale has become more functionally connected to the capital city Ljubljana - with the increase of commuting flows towards Ljubljana. This is a consequence of the growth and diversity of jobs in Ljubljana, improved accessibility, and differences between housing and labour markets - i.e. higher property prices and salaries in Ljubljana than in near-by Domžale.

Municipality of Domžale is not recognised as a tourist centre per se, but they are some attractive touristic sites such as Arboretum public park and botanic garden (65 ha) in Volčji potok with 3500 types of plants. Arboretum is already well specialised in exhibitions, organisation of public and private events and performances. Park Arboretum is located near the golf course opened in year 1998. Krumperk castle (and other smaller castles) with medieval gothic churches and old homestead farms are also part of cultural heritage and tourist attractiveness of Domžale municipality. Due to good location of Domžale in LUR and economic potential for development of commercial, congress and educational tourism in connection with sustainable economy, mobility, green countryside, etc., the area Domžale-Kamnik is also attractive for weekend and recreational tourism (cycling, fishing, golf, walking), taking in consideration also rather well developed sport facilities in the Sports Park in Domžale as well as in Vir, Radomlje, Ihan, Dob, etc.

Town of Domžale is also the centre of administrative district (LAU 1) with administrative and other services. Some (state) institutions have their district offices in Domžale such as: tax, land surveying, employment, health security offices, craft chamber as well as courts of justice, police station, notary, etc. In Domžale municipality there are 15 (public and private) kindergartens and 9 elementary schools, three secondary schools, high school, Biotechnical faculty (livestock department) of University of Ljubljana, music school, post offices, library, cinema, theatre, health centre, pharmacies, elderly homes, several banks, local infrastructure company, tourist centre and tourist agencies, cultural societies, and many shops and service offices.

Policy interests

Urban conurbation ***Domžale-Kamnik*** is recognised as one of the 15 "centres of regional importance" by the *Spatial Development Strategy of Slovenia* (2004). From the state level development of Domžale (LAU 1 / LAU 2) is also guided by other sectoral policies as well as European directives and programmes administrated by different ministries. Development of municipality of Domžale is guided by *Municipal development programme 2012-2025* and *Regional Development Programme of Ljubljana Urban Region 2007-2013* and new programming period 2014-2020 (under preparation). The draft of the new *Municipal spatial plan* (strategic part) of Domžale was approved in May 2013, the implementation part is in the last stage of preparation and both documents will need to be approved by the municipal councils and *Ministry of Infrastructure and Spatial Planning of RS*.

Development programme of municipality of Domžale 2012-2025 is an »umbrella« document for other strategic projects such as municipal budget, development programmes and projects, and municipal spatial plan. Strategic development goals of the municipality of Domžale are the following:

- to become development pole of Kamniško-zasavska (sub)region and urban municipality with enhancement of employment opportunities, improvement of local infrastructure and services;

- improving the quality of life for local population
- urban revitalisation
- improving mobility and public transport facilities
- sustainable management of urban sprawl
- development of urban conurbation Domžale-Kamnik as a centre of regional importance that will be competitive with centres of national importance (SPRS, 2004);
- enhancement of inter-municipal cooperation in the field of tourism, education, spatial planning and management.

At the moment there is more competition between municipalities in northern part of Ljubljana Urban Region than cooperation. Inter-municipal cooperation with neighbouring municipalities need to be improved. Several joint projects have been developed within the regional development project »Entrepreneurial region«, landscape project Volčji potok with municipalities of Ljubljana and Lukovica, and plans for regulation of Kamniška Bistrica river. Cooperation is especially needed with municipality of Kamnik, even though there is a need for more intensive cooperation in order to implement many inter-municipal projects in the field of sustainable mobility, tourism, education, policentric urban system, flood protection, and other spatial development and management projects.

Stakeholders' assessments

All the interviewed stakeholders agree that municipality of Domžale has been intensively transforming for many decades. The town of Domžale is one of the largest “new” towns in Slovenia. Due to geo-strategic location on west – east and north – south corridors the area was always interesting for urbanisation. Domžale has developed spontaneously without consistent urban planning efforts – as unplanned or “wild” agglomeration north of Ljubljana – with many single family houses of different styles, service and retail shops, and mixed land use. Despite rather wealthy population, successful industrial companies and many services, the town of Domžale looks like a suburban, peripheral built-up settlement without a specific urbanity. This is actually one of the most important development problems in Domžale municipality and Domžale – Kamnik agglomeration. Urban revitalisation of Domžale is needed with town square, urban park, re-allocation of old industrial buildings to other locations, as well as the upgrading of local infrastructure in settlements of Domžale – Kamnik agglomeration. Today Domžale is becoming more like a large suburb of the capital city Ljubljana – despite the large size of Domžale-Kamnik agglomeration, due to multiple links with Ljubljana, especially transport mobility and commuting patterns, decline of jobs in municipality of Domžale and growth of jobs in Ljubljana – until economic crisis since year 2008. The stakeholders’ opinion is also that Domžale municipality needs to improve provision and quality of services, local infrastructure, and supply of diverse jobs especially for highly educated inhabitants in order to become a modern town. The ambition of some local politicians in Domžale (as in Radovljica) is to become an urban municipality and a centre of (sub)region together with a nearby town of Kamnik. Therefore the challenge today is to transform this large urban agglomeration and provide some urbanity with own identity with the help of local population.

5 Policy orientation in case study SMSTs in Slovenia

There is no explicit urban policy in Slovenia. It has been part of national spatial and regional development policies since 1960s onwards or urban (land use and urban design) planning at the local level (e.g. intra-city or settlement level). Regional policy and spatial planning in Slovenia have their origins in polycentric urban development concept based on (adopted) »central place theory« (or hierarchy of central places by Christaller) and »development poles« by Perroux, and their gravitation areas known as *planning regions*. The original polycentric urban development concept formulated in 1960s was never fully implemented, firstly due to introduction of the *communal system* in 1970s in the former Yugoslav Federation, when local communes in individual republics were given more power and responsibility over local development and planning, and than in 1990s with the change of the political system, market economy and institutional reforms. Therefore the concept of **polycentrism** has been the basic development concept of Slovenia, through the allocation of jobs and services by sectoral policies in regional centres (middle-size towns) that are important for social and economic development of their *gravitation areas* and as a tool for development of *less developed areas*.

Before 1991 spatial planning was part of the regional (economic) planning taking in consideration that Slovenia was a “macro-region” (republic) in the former Yugoslav Federation while urban planning was focused on land use and urban design regulations. Regional policies were focused on distribution of financial subsidies to less developed areas, while sectoral policies were responsible for public finance investments in jobs and services – i.e. construction of industrial zones, housing estates, provision of education, health and other social services, especially in small and medium size towns - according to the national polycentric concept and urban hierarchy.

After independence of Slovenia (1991) from the former Yugoslav Federation, the Government of Republic of Slovenia divided in 1993 *regional planning* to regional (economic) development and spatial planning. Macro-economic development is in the hands of the *Office for Macro-economic Analysis and Development of RS. Government Office for Local Self-Government and Regional Development of RS* was (until February 2012, now part of the *Ministry of Economic Development and Technology of RS*) responsible for regional policies while spatial planning policies have been under jurisdiction of the *Ministry of Environment and Spatial Planning of RS* (until February 2012 - now part of the *Ministry of Infrastructure and Spatial Planning*).

The first strategic development document at the national level became the *Strategy for the Economic Development of Slovenia: Approaching Europe - Growth, Competitiveness and Integration* (1995), as a strategic national document that sets out the factors of economic development, long-term goals, development scenarios, and the main guidelines for the state activities in particular areas. The strategy took into account social, spatial, environmental, regional, sectoral and other potentials, limitations and conditions. It defined long-term objectives of economic development and accession to EU, and the role of regional policy for successful implementation of sustainable development. Between 1995-2010 new sectoral development policies, programmes and strategies were adopted with different impact on regional and local development in Slovenia. *National Development Programme of Republic of Slovenia* (NDP) was adopted in 2001 together with the new *Strategy of Economic Development of RS and the Strategy of Regional Development of RS*. In the pre-accession period the NDP was an annex to the National Programme for the Adoption of the *Acquis Communautaire*, and a programme basis drawing financial resources from different forms of pre-accession aids in accordance with the priorities of *Accession Partnership* between

Slovenia and the EU. By participating in the EU pre-accession structural instruments (PHARE, ISPA and SAPARD) Slovenia was preparing to enter the system of the *Structural and Cohesion Funds* after accession to the EU in year 2004. In June 2005 the new *National Development Strategy of the Republic of Slovenia*, as an umbrella document embracing all sectoral development strategies, was adopted by the Government of Slovenia as the principle strategic development policy of Slovenia, the new EU member state, followed by the ***National Development Programme 2007-2013*** with ***National Strategic Reference Framework 2007-2013*** and three ***Operational programmes*** approved by the EU.

5.1 Regional development policies

For several decades the overall goal of the national regional policies in Slovenia has been to strengthen economic and social cohesion and environmental quality of municipalities and local communities in less developed areas within the paradigm of balanced and sustainable (regional) development. The national urban policy in Slovenia has been part of spatial planning and regional policies through »polycentric development concept(s)« and implementation of different sectoral policies at the local level. The overall goal of this (implicit) urban policy was to strengthen polycentric (equal) development of urban centres of »(inter)national, regional and inter-municipal importance«, and urban-rural partnerships in functional (urban) areas (SPRS, 2004). Since Slovenia's independence (1991) and due to political, economic, institutional and administrative reforms, public-private investments, completion of motorways and suburbanisation, as well as the process of European integration, the urban system in Slovenia has been under transformation, especially urban areas of small and middle size towns, and most notably the metropolitan area of the capital city Ljubljana.

Regional policy in Slovenia has been traditionally targeted towards less developed areas in east Slovenia and towards areas with population decline, high unemployment, structural problems, border areas with Italian and Hungarian ethnic minorities, and Roma population, etc. Until now (July 2013) no regional administrative level (provinces) has been established as yet in Slovenia, due to long-term professional and political negotiations about the number and determination of administrative regions. For analytical purposes 12 statistical NUTS 3 regions (known in 1980s as *planning regions*) have been used for statistical and analytical purposes as well as in the regional policy documents known as *developing* regions.

From year 2005 regional policy documents brought new identifications of less developed areas – that are now defined inside existing 12 NUTS 3 regions and not at the national level as before. Each of current 12 NUTS 3 regions need to prepare ***regional development programmes*** and most of them have prepared regional spatial development concepts as a way of inter-municipal cooperation. Slovenia is geographically very diverse and inter-regional disparities will exist in future, therefore effective regional policy is needed to diminish the gap between more developed and less developed regions, and represent a *compromise* between municipalities, regional development agencies, the state and the EU institutions for the purpose of using the EU Cohesion and Structural Funds.

The most important strategic regional policy documents taking in consideration development of 12 NUTS 3 regions in Slovenia are: (i) ***Balanced Regional Development Act of Slovenia*** (1999, 2001, 2006, 2011) with (ii) ***National Strategic Reference Framework 2007-2013*** and ***three strategic (national) operational programmes: human resources, environment and infrastructure, regional development***, and (iii) ***Regional Development Programmes*** 2002-2006 and 2007-2013 with the operational programmes and the list of strategic projects of regional importance eligible for EU funds.

In 2007-2013 programming period the towns and municipalities in Slovenia have benefited in different ways from tools and initiatives of the *European Cohesion Policy*. Urban development has been integrated into national and regional programmes financed by the Structural Funds and the Cohesion Fund. Also the *European Territorial Cooperation* (ETC) policy has also involved different municipalities and stakeholders in developing and implementing joint projects on various topics, with the aim of promoting the balanced and sustainable development in cross-border, transnational and inter-regional cooperation. During 2007-2013 programming period Slovenian partners (from eligible areas) have been participation in 12 ETC programmes: cross-border (with Austria, Italy, Hungary, Croatia, IPA Adriatic), transnational (Alpine Space, Central Europe, South-East Europe, Mediterranean), inter-regional (INTERREG IV C, INTERACT II, ESPON II, URBACT II).

5.2 Spatial planning and land use policies

During transition reforms in 1990s spatial management and land use planning was in »flux« while directions from the spatial planning documents approved in 1980s were officially extended until recently. Only several amendments were added to the existing articles of the spatial planning legislation (i.e. *Spatial Planning Act in Transition*, 1993, 2000; *Settlement Planning Act*, 1993, 1997; *Building Land Act*, 1997; *Construction Act*, 1999, 2000). In 2002 the National Assembly of the Republic of Slovenia adopted the new ***Spatial Management and Planning Act*** and ***Construction Act*** with ***Spatial Management Policy***, and two years later the ***Spatial Development Strategy with Spatial Order of Slovenia*** (2004). These documents were the first new spatial planning documents after Slovenia's independence (1991) introducing a new legal system and market economy rules but also the sustainable development paradigm. The *Spatial Management and Planning Act* (2002) determines the responsibilities and procedures in spatial planning, and defines the types and contents of spatial documents at the national and local level. The law also introduces a new document, the *Regional Spatial Development Concept*. With this document, the municipalities and other local communities have had an opportunity to coordinate their strategic development issues at the regional level. This is an *optional* document, filling the gap between national and local spatial planning level due to lack of administrative regions (provinces) in Slovenia. In April 2007 the *National Assembly* adopted the new *Spatial Planning Act* with new hierarchy and content of spatial planning documents (e.g. bringing spatial plans and detailed land use plans back to the legislative agenda) at the national and local levels (but not regional).

Therefore since year 2003 all municipalities in Slovenia have been obliged by the new spatial planning legislation to formulate new and/or adopt existing long-term spatial development strategies, municipal land use plans with detailed site plans, and environmental impact assessments. The spatial development plans adopted in 1980s for larger communes were mainly in use until recently, with only minor changes to accommodate some *ad-hoc* projects that were not in accordance with the original land use plans (i.e. new commercial, recreation or housing areas). After adoption of the *Spatial Management and Planning Act* (2002) and new *Spatial Planning Act* (2007) as well as *Spatial Development Strategy and Spatial Order of RS* (2004) all municipalities are now obliged by the law to prepare the new generation of municipal spatial plans while up-dating and revising the existing land-use and site plans. Until the end of June 2013 only approximately 55 municipal spatial plans (out of 212 municipalities in Slovenia) were approved.

The new spatial planning document at the national level – *Act Regarding the Sitting of Spatial Arrangements of National Importance in Physical Space* has been adopted in 2010 (with amendments in 2012) for larger infrastructure and transport projects and environmental protection areas of national importance. The state (instead of individual municipalities) is directly responsible for preparation and these spatial planning documents

at the local level. Preparation of the regional spatial concepts and plans are the responsibility of municipalities that have been more occupied in the past 10 years with preparation of their new municipal spatial plans to satisfy the complicated legislative requirements and procedures. The lack of explicit urban strategy on a national level is also reflected on the regional scale, which has also shown lack of policies aimed at urban governance.

5.3 Postojna

Postojna is recognised as one of the 15 "*centres of national importance*" by the *Spatial Development Strategy of Slovenia* (SPRS, 2004) - but due to (smaller) population size of the town and municipal economy, it is a rather "weak" urban centre. From the state level development of Postojna (LAU 1 / LAU 2) is guided by sectoral policies as well as European policies and programmes – especially Cohesion Policy - administered by different ministries. Development of Postojna has been also guided by the new *Municipal spatial plan* (2010) and previous *Long Term Plan of Postojna commune 1986-2000* with *Middle-term social plan for Postojna commune 1986-1990* (with amendments), as well as by the *Regional Development Programme of Notranjsko-kraška NUTS 3 region for 2003-2006 and 2007-2013 programming period*.

Table 5.1. SWOT analysis of Notranjsko-kraška region.

Strengths	Weaknesses
<ul style="list-style-type: none"> - export oriented economy; - development of innovative sectors (electrical, electronics, chemical industry); - good intra-regional transport links; - preserved environment (NATURA 2000), natural (karst, caves) and cultural heritage (castles) for development of tourism; - existing renewable energy potential (wind, biomass, water....). 	<ul style="list-style-type: none"> - economic dependency on large companies and low share of service industry; - old fashioned tourist infrastructure, seasonal tourism, lack of marketing knowledge and skills; - aging of population, emigration of young people, lack of jobs for educated inhabitants; - poor quality of local roads and public transport; - low level of services in rural settlements; - insufficient cooperation in rural areas
Opportunities	Threats:
<ul style="list-style-type: none"> - support infrastructure and services for development of small businesses; - establishment of technology centre for support of woodworking and metalworking industry, and recycling activities; - establishment of high-tech consultancy firms; - environmental & technology synergy networks; - training of decision and policy makers in region; - development of new tourist infrastructure and services, (cycling lanes, walking paths, new camp sites, speleotherapy), new destinations, touristic points, and accommodation capacities. 	<ul style="list-style-type: none"> - deindustrialisation, stagnation of companies due to lack of support infrastructure, personnel, development institutions, knowledge infrastructure; - unemployment growth and social exclusion - climate change and natural disasters, environmental pollution of (karst) land.

Notranjsko-kraška (or *Inner-Karst*) statistical / developing NUTS 3 region encompasses the municipalities of ***Bloke, Cerknica, Ilirska Bistrica, Loška dolina, Pivka and Postojna***, with a total surface area of 1,456 sq.km (7.2% of Slovenia) and 51,483 inhabitants. Notranjsko-kraška is one of the smallest regions in Slovenia by territorial size and also the most sparsely populated region in Slovenia (35 per sq.km). The higher population growth rate, due to immigration, was contributing to population density increase in the last 10 years. In terms of

economy, the Notranjsko-kraška region is one of the weakest in Slovenia, as contributes only 1.9% to the national GDP. A large share of companies in the secondary and tertiary sectors is small businesses especially of woodworking and metalworking. On average, the companies in the region have 5 employees, placing them amongst the smallest in the country. The economy was export-oriented, and the population is skilled and professionally trained. A large number of inhabitants of Notranjsko-kraška region commute to work to neighbouring regions – especially to the capital city Ljubljana. The national and regional road network is relatively well developed and enables good accessibility inside and outside the region, especially in the direction towards Ljubljana, Koper and Rijeka (Croatia).

Regional Development Programme (RDP) of Notranjsko-kraška region

The *vision* of Notranjsko-kraška region as explicitly written in the RDP of Notranjsko-kraška region 2007-2013 is to “*become visible, economically stable, environmentally oriented region which will motivate own development through the use of natural, cultural and human resources – in order to become known for healthy way of living and a well-known tourist destination*”.

Development priorities of Notranjsko-kraška RDP 2007-2013:

Priority 1: Eco development

Equal development of the economy, human resources, environment and rural areas is needed. Investments will need to be targeted taking in consideration the needs of the natural environment and the quality of life in order to become attractive regional »brand« for domestic and foreign tourists.

Priority 2: Knowledge for enhancement of global competitiveness

Knowledge - based on individual and social development - is targeted towards acquiring new skills, knowledge and technology for the needs of SMSs as a support element of regional economy.

Priority 3: Accessible and supportive infrastructure

Despite accessibility and connectivity of the region, the local roads network and infrastructure are not enough. There is a need to improve municipal roads in order to develop technological and logistics areas, and modern tourist infrastructure for visitors and local population.

These three priorities are developed through several *programmes* (with specific actions and projects): *Economy, Tourism, Human resources, Rural areas, Infrastructure, Environment and spatial development*. Total costs of these projects listed in Notranjsko-kraška RDP 2007-2013 were estimated on 222 mil. EUR - of which 52% are expected from the EU and national funds while 48% from regional and local funds.

The most important projects of Notranjsko-kraška region were already defined in the first regional development programme for 2003-2006 period. The implementation of these projects was linked to available financial, organisational and human resources from the public and private sectors. Due to small financial resources from the programme *Co-funding of regional development programmes 2003-2004* (approx. 940.000 EUR) and their use for small local projects, they did not have much influence on improving of the regional development (indicators) as such. At the same time local communities were not successful in absorbing of direct regional incentives. They did not have strong lobbying capacity, interest

and knowledge for preparation of projects of regional interest due to demanding application procedures.

From 2007-2012 several projects were implemented in municipality of Postojna co-funded from the European Cohesion Policy, priority orientation »Regional development programmes« within Operational programme »Strengthening regional development potentials 2007-2013«, development priority »Development of regions«. The most important project in this programming period was the **construction of open broadband telecommunications network in rural areas** (2008-2010). Total costs of the project were 8.8 mil. EUR (without VAT) funded from the state budget and EU **Cohesion funds** (5.9 EUR) and private funds (2.9 EUR).

Implementation plan of RDP Notransko-kraška region was divided in two parts - for the period 2007-2009 and 2010-2012. The objective of implementation plans is the operationalisation of RDP as a list of (well prepared) projects for achieving the goals of RDP according to the legislation, national development programme with three operational programmes, and financial programming at the national, regional and local levels. During 2007-2009 most of these projects in Notranjsko-kraška region were co-financed from public tenders under OP »Development of Regions« and »Development of border areas with Croatia« national development priorities directed to projects in line with the third development priority of Notranjsko-kraška region: »Accessible and supportive infrastructure« that was continued in the second period 2010-2012 with other projects from the first regional priority »Eco development of region«. Therefore a list of 21 regional projects was put up for (potential) implementation during 2007-2013 of which 16 projects have been implemented, 2 projects were cancelled, and 3 projects have been in the process of revision. Most projects are related with improvement of transport infrastructure (quality of local roads) environmental infrastructure (water supply / sewage systems / drinking water quality).

In Postojna municipality the following regional projects have been implemented with the support of *European Regional Development Fund* (ERDF):

- **Improvement of the road Hruševje - Orehek - Prestranek with the new section of road Prestranek** (2007-2008) (total costs 676.601 EUR / ERDF: 417.928 EUR);
- **Improvements of Reška road, Tržaška and Kosovelova streets in town of Postojna** (2008-2009) (2.748.239 EUR /ERDF: 1.107.209 EUR);
- **Notranjski museum Postojna – Phase I** (2008-2009) (978.666 EUR / ERDF: 541.084 EUR)
- **Notranjski museum Postojna - Phase II** (2010) (596.228 EUR: ERDF: 504.790 EUR.)
- **Revitalisation of the town centre of Postojna** (2008-2010) (793.733 EUR / ERDF: 465.082 EUR)
- **Revitalisation of the old town area Majlont in Postojna** (2011-2012) (1.329.630 EUR / ERDF: 955.206 EUR).

The funds were also reserved for preparation of the project documentation for »Drainage and purification of wastewater and rain water for settlements Slavina, Razdrto, Studeno, Dilce, Hrašče, Gorice, Hrenovice in Orehek«, and for project documentation covering the whole municipality of Postojna (150.000,00 EUR). The other project to be implemented in Postojna during 2007-2013 programming period is the "improvement of tourist infrastructure – thematic road along river Pivka" (approx. 660.000,00 EUR). The other larger regional projects that are under implementation are a) new infrastructure network at the enterprise zone Veliki Otok (built in year 2006) in Postojna, and b) the project for drainage

and purification of wastewaters in Ljubljanica river basin in cooperation with several municipalities – that will also apply for the Cohesion funds for project implementation.

Regional development agency of Notranjsko-kraška region

Notranjsko-kraška Regional Development Agency (RDA) is a non-profit organisation, established in year 2000 in accordance with the national regional legislation and performs the functions in the municipalities of Bloke, Cerknica, Loška dolina, Ilirska Bistrica, Pivka, Postojna, and Logatec (municipality in south-west of Central Slovenian region). The RDA represents an operating structure which offers development, organisational and technical and professional support for the development of Notranjsko-kraška region through the following services: a) creating, implementing and monitoring projects, b) training the public and private sectors to access national and European funds, c) co-ordination between all the subjects responsible for regional development, d) consulting and education, information, communication and regional promotion. Main activities of the Notranjsko-kraška RDA is to perform tasks from the regional development programme (RDP) within the following wider development areas such as: *Green Karst, Regional development, Economy, Human resources, Environment and Nature protection, Cultural heritage, Tourism, Rural areas*. The RDA works through projects and also obtains other funds for consultancy and advisory services, training, promotion, marketing, and other business services. As the co-ordinator of regional interest at the local and national levels, the RDA represents an important partner in dialogues between ministries, government organisations, municipalities, companies and other national and regional institutions. RDA has participated as a partner in international projects (e.g. within the INTERREG III A, INTERREG III B and Objective 3 MEDITERRANEAN programmes) even as a lead partner. As a regional institution RDA promotes the principles of sustainable development in implementation of cross-border, transnational and interregional projects, with a special emphasis on environmental protection.

Municipal spatial planning and development

In year 1986 *Long Term Plan of Postojna commune 1986-2000* as well as *Middle-term social plan for Postojna commune 1986-1990* were adopted. These two planning documents were changed several times (10) between 1986-2004 but they were legally valid until adoption of the new municipal spatial plan of Postojna in year 2010. The most important changes occurred in 1994 with fragmentation of Postojna commune into new LAU 2 municipalities of Postojna and Pivka, and changes of land use in Postojna municipality for new housing, commercial zones, motorway, waste landfill plants (i.e. urban sprawl). The new *Municipal spatial plan* of Postojna was prepared according to the *Spatial Planning Act* (2007) and approved by the *Ministry of Infrastructure and Spatial Planning of RS*, and adopted by the municipal council in year 2010. The municipal spatial plan includes also environmental impact assessment as well as urban plan for the town of Postojna including settlement areas of Stara vas, Zalog, Veliki otok.

Municipality of Postojna supports polycentric development in order to achieve balanced development of the whole municipal territory, manage transport networks, improve local infrastructure and services in urban – rural areas with efficient use of building land, and protection of natural and cultural heritage in municipality. The most important strategic development goals of Postojna are focusing on development of the town of Postojna as a regional “*centre of national importance*” with further development of research and education activities and public services (culture and health) establishment of high quality technology park in support of economic development, taking in consideration geo-strategic location, transport links and educated labour force. The other important strategic goals are

spatial and infrastructure development of local settlement centres in rural areas and further development of tourism with preservation of natural and cultural heritage.

Municipality of Postojna supports densification of empty and unused urban land in settlements and revitalisation and upgrading of abandoned land and buildings, conversion of unused built up land into green areas (i.e. urban parks, sport and recreation areas, flood protected areas, etc.), development of new attractive tourist locations and eco-tourism, protection of the best quality agricultural land and sustainable land use of military training areas. Projects of municipal importance are supported from the local funds (public and private), with subsidies from the state budget for local authorities towards particular projects during 2007-2012 such as:

- municipal spatial plans and other documentation
- construction or renovation / upgrading of elementary schools
- upgrading of public library in Postojna
- upgrading of the town market in Postojna
- improvement of the town square in Postojna
- upgrading of the bus station in Postojna
- new parking area in Postojna
- heating of public buildings with wood biomass
- new public lighting in Postojna
- upgrading of the road Postojna – Postojnska jama

5.4 Radovljica

Radovljica is recognised as one of the 15 "*centres of national importance*" by the *Spatial Development Strategy of Slovenia* (SPRS, 2004) – together with near-by town of Jesenice as a conurbation Jesenice – Radovljica – (Bled) in Zgornja Gorenjska (Upper Carniola) subregion in Gorenjska NUTS 3 region. Radovljica is also the urban centre of LAU 2 (municipality) and LAU 1 (administrative unit) with the same name. From the state level development of Radovljica is guided by sectoral policies as well as European policies and programmes – especially Cohesion Policy - administrated by different ministries. Development of the municipality of Radovljica is guided by the new *Municipal spatial strategy and Municipal spatial order* adopted by the municipal council (2011-2012), and approved by the *Ministry of Infrastructure and Spatial Planning of RS*, as well as *Development program of municipality of Radovljica until 2020* and *Regional Development Programme of Gorenjska NUTS 3 region 2007-2013*.

Gorenjska NUTS 3 region

The north-western part of Slovenia is of Alpine character and is known as Gorenjska. For many times Gorenjska has been one of the most developed Slovenian regions, with the longest tradition in tourism. Several towns with beautiful historic centres, such as Škofja Loka, Radovljica, Kranj, Kamnik and Tržič are located in Gorenjska region that is also a synonymous for winter sports. Numerous ski resorts and the world-famous ski-jumping hills at Planica are all essential elements of the region's winter image. Kranjska Gora ski resort with lakes of Bled and Bohinj have been among the most popular Slovenian tourist destinations. Gorenjska is an Alpine region with diverse mountainous landscape covering 2,137 sq. km (10.5 % of the Slovenia's total surface) and 204,057 inhabitants (2012). Population density is under national average. The middle-size town and regional centre of Kranj is the industrial and business centre of Gorenjska, and the seat of many well-known

companies. Gorenjska borders with Kärnten (Carinthia) province in Austria, and Friuli-Venezia Giulia province (Italy) as well as with the NUTS 3 regions in Slovenia: Goriška, Savinjska and Central Slovenian region. Gorenjska is crossed by the European motorway and railway corridor no. 10, and hosts the Slovenia's international airport Jože Pucnik (known as Ljubljana airport). All this contributes to favourable geo-strategic position and good accessibility of Gorenjska. About 60% of regional surface area is covered by forests, and 44% of the area is incorporated into NATURA 2000, while 40% of the region lies more than 1,000 metres above sea level.

Zgornja Gorenjska subregion

Zgornja Gorenjska subregion consists of three natural geographic systems. Most of the territory is covered by mountains, with Karavanke range on the border with Austria and the Julian Alps, but also important are the more densely populated upper part of Ljubljana basin and the Alpine valleys. The Alpine part of the subregion is important for tourism and forestry, but sparsely inhabited. The major part of the Julian Alps is protected under *Triglav National Park*. One of the characteristics of Zgornja Gorenjska subregion is low population density (50 inhabitants per sq. km) or half the Slovenia's average. The above average population density is only visible in the municipality of Jesenice (285 inh./sq.km) and in the municipality of **Radovljica** (153 inh./sq.km), especially in the morphological area between Radovljica – Jesenice with many small villages, where population is growing due to suburbanisation and urban sprawl. In all other municipalities the population density is very low, ranging from 16 inh./sq.km in the municipality of Bohinj and 20 inh./sq.km. in the municipality of **Kranjska Gora**. Territory of Zgornja Gorenjska subregion is divided in two administrative units / districts (LAU 1) - Jesenice and Radovljica that were former communes before local government reforms in 1994. LAU 1 Jesenice is composed of three LAU 2 municipalities: Jesenice, Žirovnica, Kranjska Gora, while LAU 1 Radovljica of LAU 2 municipalities Radovljica, Bled, Gorje and Bohinj.

Table 5.2. SWOT analysis of Zgornja Gorenjska subregion.

<p>Strengths:</p> <ul style="list-style-type: none"> - relatively good accessibility by air, road, rail; - relatively good economic situation of the (sub)region with small, flexible companies (except in Jesenice), high number of educated young people; - preserved environment and natural and cultural heritage with Triglav National Park; - internationally known sport and tourist resorts (Bled, Bohinj, Kranjska Gora) 	<p>Weaknesses:</p> <ul style="list-style-type: none"> - tourism depending on summer and winter seasons; - low innovation, new products and services, and lack of labour force in some professions; - trends of municipal fragmentations; - low level of inter-municipal cooperation, lack of common development plans and programmes; - development gaps in comparison with cross-border regions in Austria, Italy.
<p>Opportunities:</p> <ul style="list-style-type: none"> - better cooperation and marketing of tourist resorts in Bled, Bohinj, Kranjska Gora; - better cooperation between Bled-Jesenice-Radovljica (urban conurbation) in “functional region” of Zgornja Gorenjska; - improvement of public transport services due to short distances and high densities in central area of subregion; - new investments in tourist capacities, improvements of existing infrastructure for 	<p>Threats:</p> <ul style="list-style-type: none"> - increasing share of active working population in Zgornja Gorenjska travelling to work to Ljubljana and Kranj; - aging of population. - (traditional) rivalry between towns of Jesenice, Bled and Radovljica and trend of formation of new municipalities with little inter-municipal cooperation; - uncertainty of tourism according to climate change.

<p>high quality tourism;</p> <ul style="list-style-type: none"> - investments in all year round tourist attractions and activities to improve employment prospects and income level; - better cross-border cooperation with neighbouring areas in Austria and Italy. 	
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Figure 5.1. Municipalities (LAU 2) in Gorenjska NUTS 3 region (Source: RDP Gorenjska 2007 – 2013).

Gorenjska RDP 2007–2013 covers the area of Gorenjska NUTS 3 region and incorporates 18 municipalities: Bled, Bohinj, Cerklje na Gorenjskem, Gorenja vas – Poljane, Gorje, Jesenice, Jezersko, Kranj, Kranjska Gora, Naklo, Predvor, Radvljica, Šenčur, Škofja Loka, Tržič, Železniki, Žiri and Žirovnica.

The Regional Development Programme (RDP) of Gorenjska region for the period 2007–2013 is the fundamental programme document on the regional level. It was drawn up based on partnership cooperation between the economic, public and non-governmental sectors. More than 300 individuals from various areas of expertise and from 94 institutions and companies participated in different committees and taskforce groups operating within the Gorenjska Regional Development Council. The document consists of three sections: analysis, strategies and programme /project tasks. Its implementation covers *four developmental priorities, 10 programmes, 31 actions and more than 200 projects*. The financial perspective for the period 2007–2013 will show whether Gorenjska can transform from an industrial region into a region participating in the creation of innovative developmental trends. The potential to achieve this vision certainly exists. Gorenjska wants to become one of the most dynamic regions in the Alpine area based on partnership, entrepreneurship, knowledge, innovativeness, and openness.

Vision of Regional Development Programme of Gorenjska region 2007 – 2013: “Gorenjska Is Going Up”

.....We are building Gorenjska as a community which, with its healthy Alpine environment, enables us to work, live and entertain ourselves, as well as fully unleash our creativity and ambitious ideas. We are merging our human, natural, cultural and developmental potential to join the company of the most successful Alpine regions.....

Strategic objectives and development priorities of Gorenjska RDP 2007-2013:

Gorenjska RDP 2007 – 2013 was confirmed in year 2006, with different proposed projects in value of 1.66 bil. EUR. The goals of this program are presented in the "4 X T" scheme:

Technology-Talents-Tolerance-Tourism within the paradigm of sustainable development. An overview of the proposals for economy, technology and tourism reveals the logic of specialisation. Concentration of tourist facilities in Zgornja Gorenjska subregion is stronger than in the rest of Gorenjska region, while technology is more concentrated in the regional centre of Kranj.

Priority 1: Technological development, entrepreneurship, innovation

- to create an economically dynamic region based on know-how, cutting-edge industries (ICT, telecommunications, state-of-the-art technologies in the metallurgical industry, healthcare, etc.) and tourism, building developmental networks and identifying excellent market niches, to achieve global competitiveness.

Priority 2: Talents and tolerance

- to support highly qualified and creative people, focused on innovation, entrepreneurship and industries that will open up opportunities for the regional economy, self-employment and the creation of good jobs – in order to become a region with competencies and entrepreneurial skills.

Priority 3: Tourism

- to preserve the Alpine natural landscape, and to ensure healthy, high-quality living conditions in an interwoven social community to become a region with a high quality of life, natural diversity, and variety of lifestyles.

Priority 4: Sustainable development

(environment, energy, conservation of nature and living countryside, villages and towns)

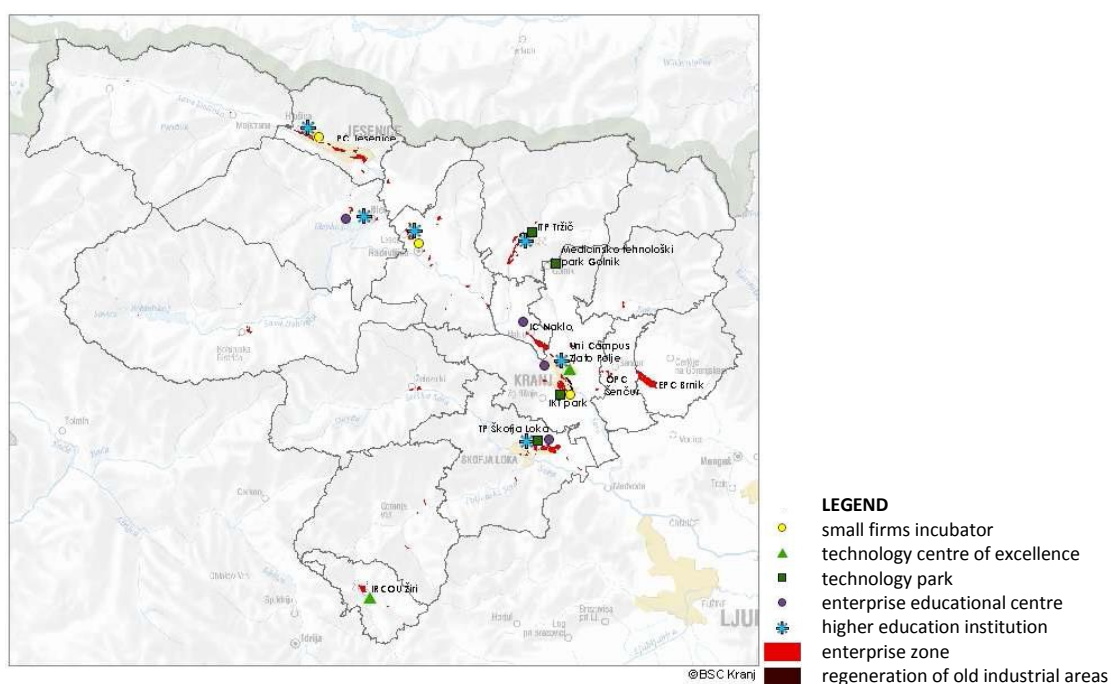


Figure 5.2. Gorenjska region as the economic and technological centre (Source: RDP Gorenjska 2007 – 2013).

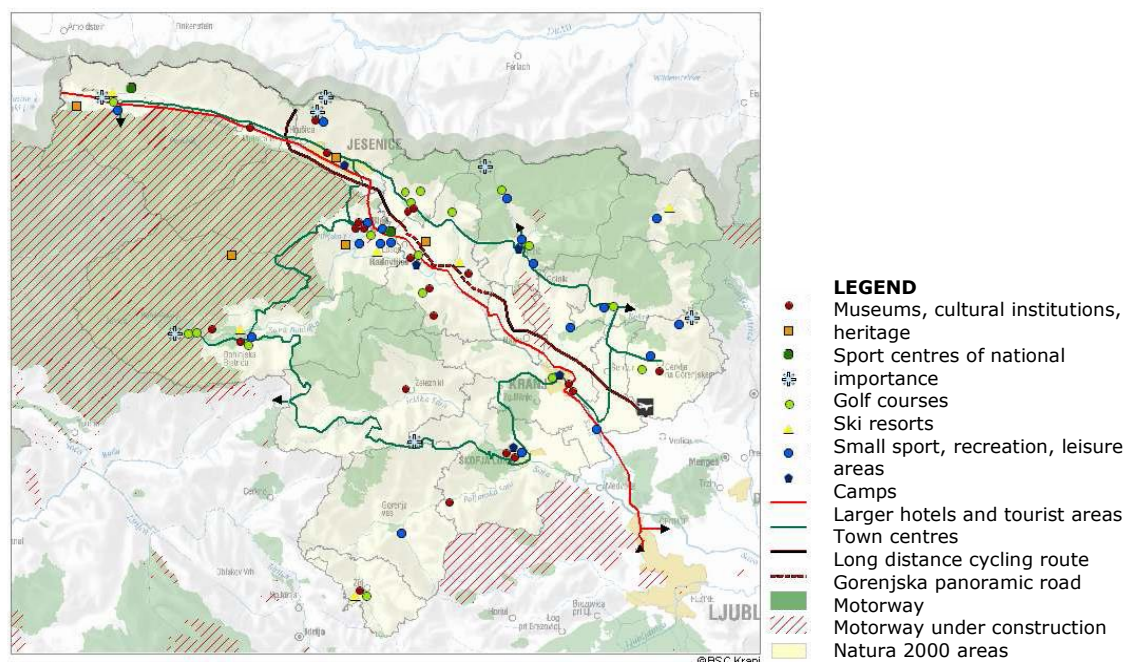


Figure 5.3. Strategy for tourism in Gorenjska region (Source: RDP Gorenjska 2007 – 2013).

Regional development agencies

In Gorenjska region there are three regional development agencies (RDP) responsible for formulation and implementation of RDP and other regional development activities and services. These RDA – BSC, SORA and RAGOR cooperate since 2001 based on contractual agreement. BSC is a regional development agency located in Kranj as a regional support institution for entrepreneurial economic development of Gorenjska region. Since 1995, BSC plays the role of a link among entrepreneurs, chambers, municipalities, institutes, ministries, and other institutions in the following fields of work: multidisciplinary projects of regional, local and cross-border cooperation, entrepreneurship, competitiveness, technological development and ICT, promotion of investments, human resource development, development of tourism, spatial development, rural development, technical assistance and cooperation with partners from the EU and other countries. SORA is a subregional development agency covering the municipalities of Škofja Loka, Gorenja vas – Poljane, Železniki and Žiri. RAGOR is a subregional development agency of Zgornja Gorenjska region located in Jesenice covering the municipalities of Bohinj, Jesenice, Kranjska Gora, Radovljica and Žirovnica (but not Bled and Gorje). RAGOR is responsible for economic development of this subregion, formulation and implementation of RDP Gorenjska and development projects. In the field of tourism, *Triglav National Park* is a cohesion factor of Zgornja Gorenjska subregion as well.

Implementation plan of RDP Gorenjska and regional projects

Implementation plan of RDP Gorenjska has been divided in three parts - for the period 2007-2009, 2008-2010 and 2012-2014. The objective of implementation plans is the operationalisation of RDP as a list of projects for achieving the goals of RDP according to the legislation, national development programme with three operational programmes, and financial programming at the national, regional and local levels. During 2007-2013 most of these projects in Gorenjska region were co-financed from public tenders under OP 2007-2013 »Strengthening regions development potentials«, development priority »Development of Regions«, priority orientation Regional development programmes, and national

development priorities directed to projects in line mainly with the “4xT” development priorities of Gorenjska region. For the needs of the third public tender for investments, the second implementation plan was formulated (2008-2010) including projects covering approx. 13,5 mil. from the EU funds. The third Implementation plan 2012-2014 was prepared in July 2012 covering 18 project proposals applying for 14,2 mil. EUR from the EU funds (from approx. 60 mil. EUR available for 2007-2013 period) focusing on: a) *economic and education infrastructure (regional commercial zones)*, b) *environmental infrastructure and strengthening of tourism*, and c) *development of urban settlements and social infrastructure*.

In Radovljica municipality some of the following regional projects have been implemented with the support of *European Regional Development Fund* (ERDF):

- **Construction of water supply systems – Podgora** (2008-2009) (total costs 633.016 EUR / ERDF 429.248 EUR) ;
- **Reconstruction of the road Svoboda for accessibility to the old town centre of Radovljica:** phase 2 – 3 / 2007-2008 (1.500.000 EUR / ERDF: 1.275.000 EUR), phase 3. – 4. / 2008-2010 (2.550.048 EUR / ERDF 1.742.367 EUR);
- **Tourist infrastructure for air sports at the airport Lesce** (total estimated costs 6 mil. EUR) (2008-2009: 300.000 EUR);
- **Commercial zone Lesce south** (provision of local infrastructure) (2008) (2.800.000 EUR / ERDF: 2.380.000 EUR);
- **Entrepreneurship incubator Radovljica** (part of *Gorenjska economic centres*) - for new small service and innovative companies (2009-2012) (approx. 1.750.000 EUR);
- **Reconstruction of Radovljica castle** - phase 2. (2007-2009) (2.155.000 EUR / ERDF: 1.831.000 EUR);
- **New public library A.T Linhart in Radovljica** (2008) (330.000 EUR / ERDF: 280.500 EUR);
- **Apiculture and beekeeping education and training centre of Gorenjska in Lesce** (2010-2013) (total costs: 1.2 mil. EUR / ERDF: 1 mil. EUR).

From 2007-2013 several projects were implemented in municipality of Radovljica co-funded from the *European Cohesion Policy*, priority orientation »Regional development programmes« within OP »Strengthening regional development potentials 2007-2013«, development priority »Development of regions«. The most important project in this programming period is the **construction and upgrading of the (primary) water supply and sewage systems with wastewater treatment plants** in Gorenjska, in the river basin of upper Sava river and Sora. The secondary water supply and sewage system are constructed from the ERDF funds, and national and municipal budgets. Total estimated costs for implementation of these projects in Gorenjska region are 29 mil. EUR (ECF / ERDF: 14 mil. EUR). In municipality of Radovljica estimated costs for implementation of these projects are 4 mil. EUR / ERDF 2 mil EUR. Another larger investments with the support of EU funding are for **comprehensive energy efficiency renovation of public buildings – such at the school in Begunje and Lesce** (2013-2015) (1.095.000 / ECF – 930.000 EUR or 85% of total investment costs without VAT).

Some other projects co-funded from the EU cohesion and structural funds for 2007-2013 are given to regional development agencies in Gorenjska (BSC, SORA and RAGOR) for implementation of projects of regional interests according to the contracts with other institutions and municipalities in the region – for training, promotion, marketing, information services, etc., that are also implemented for the benefits of Radovljica.

Municipal spatial planning and development of Radovljica

Municipalities in Zgornja Gorenjska subregion have their own development programmes and they are also preparing spatial development strategies and plans. Local development of the municipality of Radovljica is guided by the *Development programme of municipality of Radovljica until 2020 (2010)* and new *Municipal spatial strategy and Municipal spatial order (2011-2012)*. Strategic development goals of Radovljica municipality are focusing on spatial and infrastructure development and management, support for entrepreneurial development and tourism, improving the quality of life, enhancement of the role of Radovljica as a regional centre and inter-municipal cooperation in Gorenjska region.

Development programme of municipality of Radovljica 2020 is the fundamental municipal development programme and a comprehensive document based on updated municipal development programme 2007-2013 and new 2014-2020 programming period. The document is prepared according to the RDP Gorenjska region and National Development Programme of RS adopted until year 2013 taking in consideration regional and municipal investment priorities and other municipal strategic documents such as: spatial development strategy, tourism, sport, transport, housing strategy, infrastructure and environment, energy efficiency concept, rural development programme of Zgornja Gorenjska, municipal spatial plan, subsidy rules for preservation of agriculture, forestry and countryside in the municipality, rules of state aid for promotion of economic development. This development programme is the basis for preparation of particular implementation programmes. The programme is a result of cooperation between municipal council boards, administration authority and development boards, and regional development agency BSC Kranj, according to the public finance regulations and by-laws for municipal borrowing.

Municipal development programme 2006-2013 as well as municipal programme until 2020 of Radovljica are focusing on economic investments, subsidies for entrepreneurs, enhancement of tourism, adoption of spatial development strategy, preparation of detailed site plans for housing, commercial and tourist areas, investments in local infrastructure and gas supply network, (re)construction of roads, street pavements, parking spaces, cycling lanes, renovation of school, sports and children playgrounds, sports park in Radovljica, university scholarships, new housing strategy, provision of non-profit housing and elderly homes, improvement of health services, provision of new thematic roads, support to beekeeping activities and construction of the new Gorenjska Apiculture Centre, renewal of Radovljica and other castles, as well as other cultural heritage objects and collections.

According to *Spatial Planning and Management Act (2002)* and *Spatial Planning Act (2007)* and the statut of municipality of Radovljica, the municipal council has approved in June 2011 the *Spatial development strategy of municipality of Radovljica with urban design plan for Radovljica-Lesce*. In February 2012 the municipal council approved also the *Spatial order* of municipality of Radovljica, as a base for preparation of municipal detailed spatial plans – OPPN - (detailed land use plans). In June 2012 the municipal council has approved the compliance of (former) spatial planning (implementation) documents prepared under previous spatial planning legislation in Slovenia with the new *Spatial development strategy and Spatial order* – or the new *Municipal spatial plan of Radovljica*. With adaption of the new municipal spatial planning documents there will be a need in future for preparation of the municipal detailed spatial plans as necessary requirements for spatial development and management of activities in planned location in urban and rural areas (i.e. industry, commercial, housing, etc). Municipal spatial order and detailed land use plans are also the base for issuing of construction permits, and the way for solving individual needs, and most notably municipal development projects in Radovljica.

Vision of Radovljica: *“Sustainable development and good quality of life in Radovljica to attract creative people, enhance touristic and economic development and protect natural and cultural heritage”.* Radovljica needs to improve its role as a regional centre in the national context. The municipal territory will be developed in a polycentric way with investments in economic, social, and demographic potentials, with the provision of high quality conditions for living and working.

The list of local projects of regional importance with the time frame and estimated costs as well as potential sources of funding are listed in the development programme of municipality of Radovljica. Some of these projects are shown in Table 5.3 linked with municipal development priorities (1-4) and goals.

Table 5.3. Municipal development priorities, goals and local projects of regional interest in Radovljica.

<p>1. Spatial and infrastructure management:</p> <ul style="list-style-type: none"> - provide sustainable spatial development - provide efficient infrastructure - provide protection of natural and cultural heritage 	<p>Local projects of inter-municipal and regional interests:</p> <ul style="list-style-type: none"> - Spatial development strategy of Radovljica; - Regional recycling centre - CERO Gorenjska; - Regional project GORKI: upper river Sava basin (water supply and sewage systems); - Improvement of regional and important local roads and street pavements; - Long distance cycling routes
<p>2. Enhancement of tourism:</p> <ul style="list-style-type: none"> - organise efficient promotion and marketing - promote development of touristic infrastructure - develop touristic products, locations and attractions - offer touristic programmes and products out of season 	<ul style="list-style-type: none"> - Linking local tourist organisations at the regional level: »Management of tourist destination Gorenjska«; - Apiculture and beekeeping education and development centre; - Cultural events, festivals, etc.
<p>3. Support for entrepreneurial development:</p> <ul style="list-style-type: none"> - promote entrepreneurial economy - provide commercial locations - use natural and cultural resources for development of competitive services, agriculture, forestry and the countryside 	<ul style="list-style-type: none"> - Regional scheme for incentives for investments promotion, employment and entrepreneurs; - Regional scholarship scheme for occupations in demand; - Commercial zones in Gorenjska; - Joint development, management, promotion of companies; - Strategy LEADER
<p>4. Improve quality of life:</p> <ul style="list-style-type: none"> - ensure conditions for education and training - ensure appropriate health and housing policies - special attention to youth, elderly, disabled and other less advantaged people - provide options for cultural, sport and other social events for citizens - care for conservation of the tradition and renovation of cultural heritage - enhance the position and role of municipality - provide conditions for citizens information, support organisations and development of protection and rescue services 	<ul style="list-style-type: none"> - Planned High School for banking and finance as part of (new) University of Gorenjska; - Network of social and education companies of Gorenjska; - »Fair was alive« project (support for traditional crafts and cultural heritage of Gorenjska); - Renovation of old towns in Gorenjska; - Renovation of kindergardens, schools, health centres, public libraries, museums in towns and other local centres in Gorenjska.

During programming period 2007 – 2013 development projects implemented in Radovljica municipality and Gorenjska region are eligible for funding from the European **Cohesion Fund** and **Structural Funds** (ERDF, European social fund, European agricultural guidance and guarantee fund, direct incentives), **Leader** (rural areas), **ETC** (European territorial cooperation), **Swiss contribution and Norwegian financial mechanism**, as well as from the national budget of responsible ministries (including Municipal Finance Act of RS (Article 23 – national subsidies for municipal development of local infrastructure), municipal budgets, public-private partnerships, other grants, donations, etc.

Regional development agencies, municipalities, public and private companies, and other partners have been actively participating since 1998 in cross-border, transnational, inter-regional programmes and other EU cooperation programmes, such as PHARE CBS, Alpine Space, INTERREG III A-B-C (2000-2006). Participation is also active in projects implemented within ETC programmes 2007-2013: cross-border Slovenia-Austria and Italy-Slovenia, Interreg IVC, Central Europe, South-East Europe, MED programmes. Partners from Gorenjska are also participating in other EU projects focusing on networking and exchange of experience from the following programmes: European Social Fund, Erasmus for young entrepreneurs, Leonardo da Vinci, European Network of mentors for women entrepreneurs, as well projects funded by the Swiss Contribution and Norwegian Financial Mechanism, and bilateral programme Slovenia – Macedonia.

According to the stakeholders opinion, Radovljica municipality would like to maintain and protect natural and cultural heritage between mountains of Karavanke and Jelovica, and take care of sustainable development of its territory with implementation of the spatial strategy. Radovljica would like to strengthen accessibility and connectivity with Ljubljana, and other neighbouring towns and regions with development of better public transport services on the motorway network, railway, and cycling lanes. Promotion of tourism, sport and recreation facilities with specific themes of local development are important in the town of Radovljica, settlements of Begunje, Brezje, Kropa, Lesce, and in other places. At the same time the municipality would like to provide quality supply of services for children, young people, disabled and elderly citizens. Provision of sufficient commercial land and housing areas as well as development of agglomeration Radovljica-Lesce are equally important. Polycentric development of municipal territory needs to be strengthened with more emphasis (economic, social and spatial) in settlements Radovljica-Lesce, Begunje, Kropa, Brezje – Črničev, Kamna Gorica, Podnart, Ljubno – Posavec. The stakeholders think that too many projects and investment priorities cannot be implemented from the limited municipal budget due to economic crisis in Slovenia, and the shift of some financial responsibilities from the state to local communities. There is as a lack of public resources for renewal of objects of cultural and historic heritage and maintenance of public infrastructure objects. The realisation of municipal projects depends on development priorities and calls by responsible ministries for EU funds. High land costs in Radovljica are also constraint for development of commercial activities and housing for young people. There is also too much individualism and lack of cooperation culture in Gorenjska region. Municipality of Radovljica would like to become an »urban municipality« as well as the regional centre of Zgornja Gorenjska (in competition with Jesenice) – instead of strengthening cooperation between within urban conurbation Jesenice – Radovljica – (Bled), and with other municipalities in Zgornja Gorenjska subregion, and Gorenjska NUTS 3 region.

5.5 Domžale

Domžale is recognised as one of the 15 "*centres of regional importance*" by the *Spatial Development Strategy of Slovenia* (SPRS, 2004) – together with near-by town of Kamnik as a conurbation Domžale-Kamnik in the northern part of Central Slovenia NUTS 3 region, known also as Ljubljana Urban Region (LUR). Domžale is the centre of LAU 2 (municipality) and LAU 1 (administrative unit) located 15 km north-east from the capital city of Ljubljana. Therefore due to good geo-strategic location and transport links and accessibility to Ljubljana, Domžale has been one of the most residentially attractive and the most dense municipality in Slovenia (469 inh./sq.km in comparison with Slovenian average of 101 inh./sq.km). Municipality of Domžale is one of 26 LAU 2 municipalities in Central Slovenian NUTS 3 region (or LUR). According to the number of population Domžale is the largest municipality in LUR after the City Municipality of Ljubljana. From the state level, development of Domžale is guided by sectoral policies administrated by different ministries, as well as by European policies and programmes – especially Cohesion Policy. Development of the municipality of Domžale is guided by the *Development program of municipality of Domžale 2012 - 2025* and *Regional Development Programme of LUR region 2007-2013*. The draft of the new *Municipal spatial plan* (strategic part) of Domžale was submitted in May 2013, the implementation part is in the last stage of preparation and both need to be approved by the municipal council and the *Ministry of Infrastructure and Spatial Planning of RS*.

Central Slovenian NUTS 3 region (Ljubljana Urban Region)

Central Slovenian NUTS 3 region is the largest region in Slovenia by population size (approx. 500.000 inhabitants) or 25% of total Slovenian population and 12.6% of country's territory comprising of the City Municipality of Ljubljana (capital city) and other 25 smaller LAU 2 municipalities. The City Municipality of Ljubljana and Central Slovenian region have been the most important locations of economic activities in Slovenia, while at the same time preserving the environmental quality with the quality of living for local inhabitants. Central Slovenian region is also called Ljubljana Urban Region (LUR), especially after establishment of the Regional Development Agency of Ljubljana Urban Region (RDA LUR) in year 2001-2002. Ljubljana Urban Region (LUR) represents the most important location of economic activities that generates 35% of Slovenia's GDP – and the large concentration of human resources, knowledge, and entrepreneurship as well as opportunities, whether in capital or in the creative environment. Most of these activities are concentrated in the City Municipality of Ljubljana – the central and the largest LUR municipality. Since 2008 due to economic crisis the unemployment rate in LUR increased (from 5,6% to 10,0%), the productivity and other economic indicators have decreased but they are still above the national average. The City of Ljubljana and LUR are located at the intersection of European-wide infrastructure corridors (TEN), especially corridors V and X, near the international airport "Jože Pučnik" and close to the port of Koper at the Adriatic coast.

Most of the towns in LUR are located in Ljubljana valley (Ljubljana, Domžale, Kamnik and Vrhnika). Litija is located in Sava valley, Grosuplje and Logatec are located on Karst fields in the southern part of the region. The city of Ljubljana, which is also the economic, cultural, educational, health, judicial and administrative centre of Slovenia is the largest *town* in Slovenia (approx. 260.000 inhabitants) with only about 15% of the total Slovenian population. This relatively low primacy rate of Ljubljana is directly related with the specific urban and settlement system (small and medium size towns) and *polycentric development policies* in Slovenia since 1960s onwards - not favouring the growth of Ljubljana, but also other urban centres in Slovenia. LUR is (with Gorenjska region), the only region with the positive natural increase, but the region is aging every day. LUR density index is the highest among all Slovenia's regions. The highest density is in central part of the region in municipalities Ljubljana, Mengeš, Trzin and Domžale) and the lowest in the southern part in municipalities Dobrepolje and Velike Lašče.

Table: 5.4. SWOT analysis of Ljubljana Urban Region.

<p>Strengths:</p> <ul style="list-style-type: none"> - good accessibility by air, road, rail; - good economic situation with large companies, SMEs, manufacturing, producer and consumer services; - large number of different educational institutions, and high number of educated and skilled people; - well preserved natural environment; - well developed cultural infrastructure and heritage and cultural life. 	<p>Weaknesses:</p> <ul style="list-style-type: none"> - weak connections between education and economy, competition, and lower innovation in new products and services; - rigid education system does not correspond to market needs; - trends of municipal fragmentations and low level of inter-municipal cooperation; - suburbanisation, urban sprawl, commuting, - poor public transport, traffic congestion, air and noise pollution; - unequal development of local infrastructure and services in the countryside.
<p>Opportunities:</p> <ul style="list-style-type: none"> - better cooperation between cultural 	<p>Threats:</p> <ul style="list-style-type: none"> - economic and financial crisis and lack of

<p>institutions and services that can support the integration of the region and development of its identity;</p> <ul style="list-style-type: none"> - improvement of public transport services due to short distances and high densities; - partnerships and cooperation between municipalities in spatial development for improving the urban and rural environment in the region; - investments in new technologies and services; - activities to improve employment prospects for young people. 	<p>investment capital for development projects of regional interests;</p> <ul style="list-style-type: none"> - loss of competitive advantages of the local economy and brain-drain of educated and skilled people; - rivalry and insufficient inter-municipal cooperation; - threat of environmental pollution (air, water) due to urban sprawl and commuting patterns.
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Figure 5.4. Ljubljana Urban Region (NUTS 3) with 26 LAU 2 municipalities (Source: www.rralur.si).

LUR covers the area of Central Slovenian NUTS 3 region and incorporates 26 municipalities including the City Municipality of Ljubljana, the capital city of Slovenia.

Regional development programmes of Ljubljana Urban Region (RDP LUR)

The first RDP LUR was accepted in year 2003 with implementation plan. During the preparation of the first RDP LUR 2001-2003, a proposal of the vision and strategies along with the objectives of the regional development was prepared. The strategic part of the RDP involved common development programmes of two i.e. *interest subregions* - south of the capital city of Ljubljana, and the i.e. »Entrepreneurial Region« (north of the city of Ljubljana) as well as numerous municipal development programmes, including some projects supported from European structural funds. Compared to other regions, LUR has several competitive advantages which ought to be used more efficiently in future as pillars of the regional competitiveness: ***cooperation, accessibility, education, and environment***. The first RDP LUR has had 17 sub-programmes encompassing development of wider urban areas, the creativity of people and successful companies, and the global visibility.

The (second) RDP LUR 2007-2013 was approved in April 2007. This is the fundamental development document on the regional level. RDP LUR defines the advantages of all LUR

municipalities, sets the objectives and regional development priorities and partnerships, and suggests the measures and activities to be taken for their realisation. This document was formulated under the guidance of the RDA LUR while more than 200 stakeholders from the public, private, and civil society spheres defined their vision of regional development, objectives, and the principal measures to achieve the goals. The **vision** of RDP LUR 2007 – 2013 is the following: *“Ljubljana Urban Region is a conurbation, intertwined with nature. The region will achieve high level of global competitiveness and high-quality of life through encouraging creativity and co-operation. The entire region will benefit from Ljubljana being “a European metropolis”.*

RDP LUR 2007-2013 objectives:

- *Functioning conurbation* – more than 80% of people will have access to public areas and public transport within 300 metres of air distance by 2013;
- *Creative people and successful companies* – the added value per employee in the region will increase by 10% by the end of 2013.
- A region with a European capital city and high quality of life

To achieve this vision, the specific goals and activities of the RDP LUR are: *accessibility for quality of life, preserved heritage, efficient high-quality spatial planning, efficient municipal utility services, equal opportunities – contribution to the region's competitiveness, culture – competitive advantage of the region, e-administration, supportive entrepreneurial environment.* These goals can be achieved by development of relationships between the public and private sector at the local, regional, national and international levels in order to promote development initiatives and enhance coherent regional development, planning and implementation of regional and other development programmes with acquisition of domestic and foreign financial support. The implementation of the whole RDP LUR 2007-2013 was estimated to 836 mil. EUR taking in consideration 384 mil. EUR from private sources, as well from the national and municipal budgets and EU funds.

Regional development agency of LUR

Regional Development Agency of Ljubljana Urban Region (RDA LUR) was established in year 2001-2002. The main task of RDA LUR has been the preparation of the *Regional Development Programme of Ljubljana Urban Region (RDP LUR)* for the programming periods 2002-2006, 2007-2013 and the new 2014-2020 programming period - in cooperation with municipalities, the state, sectors and other public and private actors and stakeholders, together with formulation and implementation of operational programmes with the key development projects of regional or (inter) municipal importance eligible for different EU funds (especially cohesion and structural funds). The RDA LUR is a development agency, supporting economic, social and cultural activities, access to public services while at the same time trying to preserve the natural and cultural heritage in all LUR municipalities. RDA LUR provides opportunities for implementation of effective regional development projects with the provision of necessary information to municipalities and other stakeholders for their implementation. The RDA LUR prepares programmes and projects for development of the entire region with harmonisation of regional and structural policies. At the same time RDA strives to become an internationally recognised and competitive development agency that will successfully contribute to the regional development of LUR and Slovenia.

Implementation plan of RDP LUR 2007-2013

The RDP LUR was prepared according to the national legislation and regional policy documents in Slovenia. The implementation of RDP LUR is based on the approved *Implementation Plans* for a three year period: 2007-2009, 2010-2012, 2012-2014. RDP LUR 2007-2013 with *Implementation Plan(s)* and other policy documents adopted at the national level, such as the *Operational Programmes*, represent the implementation of the EU Cohesion policy at the regional level in Slovenia. The implementation of RDP LUR 2007-2013 was planned to be financed from multiple sources: approx. 105 mil. EUR from the state budget, 87 mil. EUR (municipal budgets), 20 mil. EUR (ERDF), 11 mil. EUR (ESF), 215 mil. EUR (Cohesion Fund), 10 mil. EUR (Rural Development Fund), 3. mil EUR (other programmes), and 385 mil EUR from the private capital. The distribution of (programmed) resources shows the perceived importance of the EU cohesion funds in regional development. For the implementation of RDP LUR, the LUR Council adopted the first ***Implementation Plan 2007 – 2009*** in July 2007, which was amended and supplemented twice (25 October 2007 and 23 April 2008). In 2009, the RDA LUR prepared the second *Implementation Plan* for the period 2010 – 2012. The method of preparation of the *Implementation Plans* are legally defined and harmonised with the RDP LUR 2007-2013. It includes a selection of project proposals with (potential) contribution to the realisation of regional development goals for 2007-2013 that are eligible to be financed from different EU sources. The third *Implementation Plan 2012-2014* was approved in July 2012.

The objective of implementation plans is the operationalisation of RDP LUR as a list of projects for achieving the goals of RDP according to the legislation, national development programme with three operational programmes, and financial programming at the national, regional and local levels. During 2007-2013 most of these projects were co-financed from public tenders under OP 2007-2013 »*Strengthening regions development potentials*«, development priority »*Development of Regions*«, priority orientation *Regional development programmes*, and national development priorities. The most important *regional development projects* in LUR are: new waste collection and recycling plant (RCERO), integrative public transport, flood protection measures, establishment of (natural) public parks (i.e. Landscape Park Ljubljana Barje (Marshland), logistics centre, and enterprise zones with technology parks. The *Implementation Plan(s)* includes all regional projects, and particularly those which LUR submitted for financing through public tenders within the framework of the OP *Strengthening Regional Development Potential 2007-2013*, and large projects listed in the *Resolutions on National Development Projects 2007-2023*, eligible for financial support from the *Cohesion and Structural Funds*.

At the beginning of the implementation of RDP LUR (2007), 372 project proposals were submitted from municipalities and other eligible bodies in LUR, of which 29 projects were selected and put on the priority list for (potential) funding during 2007-2009 period. Total value of these projects was estimated on 79 mil. EUR of which priority projects were estimated to 33 mil. EUR (without DDV). About 21 projects were approved for funding in 2007-2009 period – but without any project to be implemented in ***Domžale municipality***.

For 2007-2009 period approx. 151 mil. EUR from EU funds were assigned for implementation of RDP LUR projects (of 256 mil. EUR for 2007-2013 programming period mostly for projects implemented under OP *Development of environment and transport infrastructure* (77,5 mil. EUR), followed by the OP *Strengthening regional development potentials* (39,3 mil. EUR), OP *Human resources* (from European Social Fund - 32,3 mil. EUR), LEADER (1.7 mil. EUR). Most funds were approved for projects under development priority “efficient local services”, including RCERO - new waste collection plant of regional importance (i.e. as the most expensive *cohesion* project in Slovenia).

For 2010-2012 implementation period RDA LUR received 86 projects proposals (from 19 municipalities in LUR) and 17 projects were put on the list as eligible to apply for funding. Two projects were selected for funding in **Domžale municipality**: construction of the sewage system in Ihan settlement area and upgrading of the area along Kamniška Bistrica river. For 2012-2014 implementation period 16 priority projects were selected with total (estimated) value of 16,2 mil. EUR that will be also financed with 9,5 mil EUR (59%) from regional (municipal) sources. RDA LUR implements two regional projects, while the other 14 projects are implemented by LUR municipalities (including **Domžale**).

During 2007-2013 there were 5 public calls for funding of projects under operational programmes and most structural and cohesion funds were used in LUR for projects related to improvement of environmental infrastructure and tourism (not many for development of infrastructure for commercial zones). During 2007-2013 programming period only approx. 16 mil. EUR (or 2,6% from total of 586 mil. EUR) were designed for LUR at the national level as eligible funds available from ERDF for implementation of projects listed in RDP LUR under OP *Strengthening regional development potentials* 2007-2013 priority orientation *Regional development programmes*, within development priority *Development of regions* – due to higher level of LUR development in comparison to other NUTS 3 regions in Slovenia.

Types of regional projects implemented by RDA LUR co-funded by European Cohesion and Structural Funds with participation of LUR municipalities

The RDP LUR highlights the advantages of all LUR municipalities, sets targets and development priorities for the region and the regional development partnership, and suggests measures and actions for their implementation. During 2008-2010 as part of the *Implementation Plan* of the RDP LUR 2007-2009, the RDA LUR coordinated a preparation of the first **Regional Spatial Development Concept of LUR** according to the new spatial planning policies and regulations (adopted since 2002) in Slovenia as a joint venture between the City Municipality of Ljubljana together with other municipalities and stakeholders in LUR. At the same time the project **Expert Basis for Managing Public Transportation in LUR** was prepared in connection with the *Regional Spatial Development Concept*. These two study documents together with RDP LUR represent an important step towards preparation of the prospective (first) *Regional Spatial Development Plan of Ljubljana Urban Region* in the future. The availability of national and EU funds with public-private investments for particular regional projects have been important impetus for local authorities for implementation of official municipal spatial and land use plans in future. The **Spatial Development Concept of LUR** was co-financed from the ERDF (360.000 EUR) through the OP *Strengthening Regional Development Potentials 2007-2013* with additional contributions (175.000 EUR) from 22 municipalities in LUR. The main goal of the project was preparation of comprehensive territorial analysis of LUR with different spatial development scenarios. The project also took in consideration the functional urban region of Ljubljana (metropolitan area) taking in consideration the regional development programmes of the neighbouring NUTS 3 regions in Slovenia as well as near-by regions in Italy and Austria. The study officially entitled **'Expert guidelines for the regulation of regional public transport'** presents expert guidelines for the regulation and establishment of quality public transport in LUR by year 2027. It comprises six interim reports and a joint final report, which was submitted to the RDA LUR in October 2009. The result has been a proposal for a public transport system designed on the basis of the vision allowing all users the convenient opportunity to choose a transport service which is attractive in terms of time and cost. The common goal of the new public transport regulation is to improve the quality of life according to the paradigm of sustainable mobility. The RDA LUR also implemented this project within the framework of the OP *Strengthening Regional Development Potential 2007*

– 2013 with co-financing from the ERDF (440.000 EUR) while the rest of funds were provided by 24 municipalities of LUR with the City Municipality of Ljubljana contributing 227.552 EUR. The value of the entire project was 863.000 EUR.

Some other projects of regional interest implemented by RDA LUR are co-funded from the EU Cohesion and Structural funds for 2007-2013 – for education and training, promotion, marketing, provision of information services, sustainable mobility, tourism, protection of natural and cultural heritage, such as:

- **Professional assessments for navigability of Ljubljana river** (RDA LUR with municipalities of Ljubljana, Borovnica, Brezovica, Vrhnika / ERDF) 2011-2013;
- **Network of Park and Ride (P+R) centres in LUR** (RDA LUR in cooperation with 13 municipalities / ERDF) 2011-2013;
- **Enterprising in the world of entrepreneurship** (Ministry of Labour, Family and Social Works in cooperation with RDA in Slovenia) funded from the European Social Fund 2010-2013;
- **Regional Scholarship Scheme for Ljubljana Urban Region**, European Social Fund, 2008-2016;
- **Let us go: Internet guide for cycling, walking and jogging paths in the nature** (from September 2012) <http://www.gremonapot.si/> is funded from the ERDF in cooperation with LUR municipalities: Ljubljana, Domžale, Grosuplje, Medvode, Mengeš, Moravče, Škofljica and Trzin.

In order to achieve some regional development goals, RDA LUR and the City Municipality of Ljubljana (with some other LUR municipalities) are also participating as project partners (or observers) in other EU (co)funded projects - transnational, cross border and inter-regional cooperation programmes such as INTERREG IV C, INTERACT II, ESPON II, URBACT II, 7th Framework Programme, and other international city networking activities. This is also an institutional learning process for RDA LUR as well as individual learning for the staff and members of the regional councils. In this way most of participating stakeholders are improving their knowledge of regional development issues in Europe, while at the same time strengthening capacity building process, regional needs and demands with the help of the EU funding mechanisms. Since 2006 RDA LUR has participated in the following European projects focusing on sustainable mobility, environment, spatial planning, innovatives, such as:

- **CLUNET: Cluster Policy Networking and Exchange via the Themes of Internationalization and Incubation** (6th FP PRO-INNO initiative, 2006-2009);
- **INNO-DEAL: Analysis, Diagnosis, Evaluation, Pilot Actions and Learning Processes for Joint Innovation Programmes** (6th FP PRO-INNO initiative, 2006-2009);
- **RURBANCE: Rural – Urban inclusive governance strategies and tools for the sustainable development of deeply transforming Alpine territories** (Alpine Space 2012-2014);
- **CCALPS: Creative companies of Alpine Space** (Alpine Space 2011-2014);
- **POLY5: Polycentric Planning Models for Local Development in Territories by Corridor 5 and its TEN-T (Trans-European transport network) ramifications** (Alpine Space 2011-2014);
- **TURaS: Transitioning towards Urban Resilience and Sustainability** (7FP 2011-2016);
- **RAIL4SEE: Urban rail nodes: important element of transport links in South-East Europe** (South-East Europe, 2012-2014);

- **RAILHUC:** *Urban rail nodes in TEN-T network* (Central Europe, 2011-2014);
- **CREATIVE cities:** *Development and Promotion of Creative Industry Potentials in Central European Cities* (Central Europe, 2010-2013);
- **CATCH_MR:** *Cooperative approaches to transport challenges* (INTERREG IV C, 2010-2012).

Municipal spatial planning and development of Domžale

Local development of the municipality of Domžale is also guided by the *Development programme of municipality of Domžale 2012-2025* and the (draft) of the new *Municipal spatial plan* (strategic part) that was completed in May 2013, while the implementation part is still in the last stage of preparation, that will need to be approved by the municipal council of Domžale and *the Ministry of Infrastructure and Spatial Planning of RS*. Until then the current *Long Term Plan of Domžale 1986-2000* with *Middle-term social plan for Domžale 1986-1990* (with amendments) are still valid.

Development programme of municipality of Domžale 2012-2025 is an »umbrella« document for other strategic projects such as municipal budget, individual development programmes and projects, and municipal spatial plan. Strategic development goals of the municipality of Domžale are focusing on development of urban conurbation Domžale-Kamnik (as a centre of regional importance) that will need to be competitive with centres of national importance (SPRS, 2004), and as a development pole of Kamniško-zasavska (sub)region as prospective urban municipality with enhancement of employment opportunities, improvement of local infrastructure and services, urban revitalisation and sustainable management of urban sprawl, improving mobility and public transport facilities, quality of life for local population enhancement of inter-municipal cooperation in the field of tourism, education, spatial planning and management.

At the moment there is more competition between near by municipalities in northern part of LUR than cooperation. Inter-municipal cooperation with neighbouring municipalities need to be improved. Several joint projects have been developed within the regional development project »Entrepreneurial region«, landscape project Volčji potok with municipalities of Kamnik and Lukovica, and plans for regulation of Kamniška Bistrica river. More intensive cooperation is especially needed with municipality of Kamnik, in order to implement many inter-municipal projects of regional interest in the field of sustainable mobility, tourism, education, polycentric urban system, flood protection, and other spatial development and management projects. From 2007-2013 only few projects in municipality of Domžale were co-funded under the framework of *European Cohesion Policy*, priority orientation »Regional development programmes« within OP »Strengthening regional development potentials 2007-2013«, development priority *Development of regions*. The most important projects in this programming 2007-2013 period that have been put forward for financing are the following:

- ***(Re)construction of the sewage system in Ihan settlement area*** (total costs 887.231 EUR / ERDF 360.000 EUR) for new 3,3 km of the sewage system, 211 new connections, covering three settlements with the construction of new or upgrading of the sewage system;
- ***Kamniška Bistrica as a green axis of the region: strengthenig regional importance of Kamniška Bistrica river area with inflows.*** This is the multi-annual project and the total estimated costs is approx. 3.000.000 EUR. For 2012 – 2014 implementation period of RDP LUR 2007-2013 about 605.000 EUR (with co-funding from ERDF 371.540 EUR) are

approved focusing on information services, recreation, heritage protection, bridges for cyclists and pedestrians, paths along river, parks, children playgrounds, resting places, etc.

In Domžale municipality some other projects have been put forward for (potential) financing from the EU funds (with estimated costs):

- *Reconstruction of the current central wastewater treatment plant and construction of the new plant Domžale - Kamnik with municipalities Mengeš and Trzin (19 mil. EUR);*
- *Landscape concept of Volčji Potok (municipalities of Domžale, Kamnik Lukovica) (1.3 mil. EUR);*
- *Living with trees – development of the open museum in Arboretum Volčji potok (botanic gardens) (1.6 mil. EUR);*
- *Revitalisation of the city centre of Domžale (8 mil. EUR);*
- *Development of education centre Univerzale (old factory to be converted in museum and education centre) in town of Domžale (5 mil. EUR);*
- *Češminov park in town of Domžale (1.1 mil. EUR);*
- *Radomelje circle motorway (2 mil. EUR);*
- *Wastewater purification system of at the dispersed settlement areas in Domžale municipality (600.000 EUR);*
- *Renovation and upgrading of Domžalski home at Mala Planina (Small Mountain) at 1534 m and establishment of information – education centre. Alpine Club Domžale (146.000 EUR).*

Some projects that have been under development in Domžale municipality in the past few years are focusing on improvement of local roads and street pavements, public lightning, cycling lanes, water supply and sewage systems, paths along Kamniška Bistrica river with new bridges, renovation of kindergardens, schools, playgrounds, town centre, renovation of bus and railway stations, wireless Wi-Fi, etc. The municipality of Domžale can annually invest approx. 2,5 mil. EUR from the municipal budget for implementation of these projects.

Development programme of municipality of Domžale taking in consideration regional and municipal investment priorities and other municipal strategic documents such as: spatial development strategy, development of housing, tourism, transport infrastructure and environment, energy efficiency, as well as subsidy rules for preservation of rural areas and state aid for promotion of economic development. This municipal development programme is the basis for preparation of particular implementation programmes. The programme is a result of cooperation between municipal bodies, local population and experts, and RDP LUR, according to the public finance regulations and by-laws for municipal borrowing.

Vision of Domžale: “as respectable and successful economic, sport and cultural centre with satisfied people. Domžale will become successful and respectful entrepreneurial, sport and cultural centre, with environment that will support sustainable development, innovation, creativity and self-initiatives of local population. Domžale will transform in comfortable and nice town that will offer quality of life to all generations with opportunities for young people”.

Municipal development programme of Domžale 2012-2025 will focus on: provision of new jobs, economic investments and subsidies for entrepreneurs, enhancement of tourism, preparation and adoption of the new spatial development plan, investments in local infrastructure (water supply, sewage system, (re)construction of roads, street pavements,

parking spaces, cycling lanes, bus and railway stations), renovation of kindergardens, school, sports and children playgrounds, provision of non-profit housing, improvement of health services, renovation of the town centre of Domžale, as well as natural and cultural heritage in the municipality.

According to *Spaial Planning and Management Act (2002)* and *Spatial Planning Act (2007)* and the statut of municipality of Domžale, the municipality has been preparing the new *Spatial Municipal Plan of Domžale* since year 2006. The draft of *Spatial development strategy of municipality of Domžale* was completed in May 2013 that is now in further procedure before being adopted by the municipal council and approved by the Ministry of Infrastructure and Spatial Planning of RS. With adaption of the new municipal spatial planning documents there will be a need for preparation of the municipal detailed spatial plans as necessary requirements for spatial development and management of activities in planned locations in urban and rural areas (i.e. industry, commercial, housing, etc). Municipal spatial plan and detailed land use plans are also the basis for issuieng of construction permits, as a way for solving individual needs (most notably housing), and municipal development problems in Domžale. The most important planning goals are related to strategic directions for management of urban sprawl (especiall for individual housing) that will reduce pressure to open municipal areas, and to transport and infrastructure corridors for provision of new roads for more efficient transport network including further upgrading of the railway system. Upgrading of social infrastruture and services is equally important for improving the quality of life as well as management of open and green areas in the municipality. The economy need to be strengthen along the tradition of Domžale in providing jobs in producer and consumer services.

The list of spatial development priorities with local projects and the time frame, estimated costs as well as potential funding sources for their implementation are listed in the *Development programme of municipality of Domžale*. Some of these projects are shown in Table 5.4.2 linked with municipal development priorities (1-5) and goals.

Table 5.5. Municipal development priorities, goals and local projects.

<p>Priority 1: Quality of living environment</p> <ul style="list-style-type: none"> - knowledge and innovation - good provision of cultural, recreation and sport facilities, accessibility to open and green areas, cycling lanes, and pedestrian paths - accessibility of telecommunications, energy and local infrastructure - unpolluted and regulated environment - provision of services - better accessibility and transport networks (including public transport) - housing availability 	<p>Important municipal projects with estimated costs and time frame for implementation:</p> <ul style="list-style-type: none"> - activation of new drinking water supply wells (2013-2015: 1 mil EUR, municipal, national, EU funds); - upgrading of central wastewater purification plant Domžale-Kamnik (2011-2015: 16 mil. EUR, municipal, national, EU funds) ; - development of small wastewater purification plants (5) (2012-2017, 550.000 EUR, municipal, national, EU funds); - investments in regional waste collection and recycling site (RCERO) (2013-2016: 145 mil EUR, municipality of Domžale: 1.6 mil EUR); - development of parking spaces in the town centre as part of urban renovation of Domžale (2014: 3 mil. EUR, PPP); - upgrading of municipal public transport and links with Ljubljana public transport system and railway (> 2013: municipal budget); - provison of new cycling lanes in the town,
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	<p><i>between settlements and neighbouring municipalities</i> (> 2014: multiple funding sources);</p> <ul style="list-style-type: none"> - <i>provision of non-profit and other rented housing</i> (municipal budget, PPP, national funds); - <i>enlargement and roofing of the town market</i> (2015: 120.000 EUR, municipal budget); - <i>development of new cemetery at Vir and enlargement of cemeteries in Radomlje and Ihan</i> (2014-2016: 800.000 EUR, municipal budget); - <i>purchasing of strategic land (and old buildings) in the town centre for new use</i> (cc 5 mil EUR from municipal budget, loans, PPP).
<p>Priority 2: Innovative economy</p> <ul style="list-style-type: none"> - strengthening of entrepreneurial economy - development of tourism - provision of modern commercial zones - creative society 	<ul style="list-style-type: none"> - <i>development and restructuring of municipal economic areas</i> (i.e. commercial zones) (private sources)
<p>Priority 3: Development of infrastructure:</p> <ul style="list-style-type: none"> - investments in energy renewable resources - investments in environmental, telecommunications, energy and local infrastructure - development of transport network (local and national) - energy efficient renewal of buildings 	<ul style="list-style-type: none"> - <i>establishment of wireless telecommunication network</i> (2013: 230.000 EUR, municipal and EU funds)
<p>Priority 4: Equal society:</p> <ul style="list-style-type: none"> - inter-generation coexistence - social inclusion - quality of health services - social network 	<ul style="list-style-type: none"> - <i>provision of additional spatial potentials for activities of the Cultural centre Franc Bernik</i> (> 2015: 2 mil. EUR, municipal, national, PPP, EU funds); - <i>development of new (18-20) kindergardens in Ihan, Vir and other settlements in eastern part of municipality</i> (2012-2014: 6 mil. EUR, municipal, national, PPP, EU funds); - <i>construction of elementary school in Vir</i> (> 2015: 4 mil. EUR, municipal and national budget, EU funds);
<p>Priority 5: Visibility and municipal cohesion</p> <ul style="list-style-type: none"> - management of natural, cultural and technical heritage - management / intelligent authorities - inter-municipal role and visibility - rural development - development of settlements 	<ul style="list-style-type: none"> - <i>establishment of cultural and touristic information centre</i> (2014: 100.000 EUR, municipal and EU funds, marketing); - <i>development of wardrobes at the sport stadium in Domžale</i> (> 2014: 3 mil EUR, municipal and national budgets);

All the interviewed stakeholders agree that municipality of Domžale has been intensively transforming for many decades – in both positive and negative ways. Domžale is one of the largest “new” towns in Slovenia that has been developed spontaneously in wide built-up agglomeration without consistent spatial and urban planning efforts - without a specific

urbanity and identity. Urban revitalisation of Domžale is needed with town square, urban park, re-allocation of old industrial buildings to other locations, or their transformation for new uses, as well as the upgrading of local infrastructure in Domžale – Kamnik agglomeration. Today Domžale is becoming more like a large suburban area of the capital city of Ljubljana that needs to improve provision and quality of services, local infrastructure, and supply of diverse jobs especially for highly educated local inhabitants in order to become a modern town. The ambition of some local politicians in Domžale (as in Radovljica) is to become the urban municipality and a centre of (sub)region – alone or together with a nearby town of Kamnik. Therefore the challenge today is to transform this large urban agglomeration north of Ljubljana in functioning urban conurbation area Domžale – Kamnik.

6 Conclusions of the case study SMSTs in Slovenia

1.a. Employment centers and sectorial shifts

The case study SMSTs – **Postojna, Radovljica, Domžale** are providing some qualitative insights on the occupational shift among different sectors. Review of data and other information sources as well as stakeholders opinion clearly show the sectorial changes such as de-industrialisation in labour intensive sectors (e.g. woodworking, furniture, textile, leather, food production, etc.). Tourism sector as well as knowledge-based activities are showing increase in provision of jobs.

The process of deindustrialisation and tertialisation of the economy has been supported by national sectoral policies (and European) transformed into regional and municipal development programmes. The objectives and policies have been agreed with key decision and policy makers at all territorial levels.

1.b. Tourism economy in relation with residential/consumption-based economies

The case study towns provide some specific information about tourism patterns and occupational effects. Tourism sector is important in all case study areas – i.e. Postojna (Postojnska jama, Predjamski castle, karst phenomena, near by mountains, Adriatic coast and the capital city Ljubljana), Radovljica (medieval town, castles, churches, near by Alps, Bled and Bohinj lakes, Kranjska Gora, Ljubljana), Domžale (Arboretum botanic park, golf course, near by Alps, Ljubljana...). The socio-cultural, economic and territorial consequences of tourism development are very important for individual towns and municipalities, regions, but also for Slovenia, as a tourist destination in Central Europe.

Development of tourism economy and infrastructure is explicitly supported by local, regional, national and EU policies, operational programmes and projects. All decision and policy makers are in favour of further development of the tourist sector.

1.c. Retails and market areas

The retail sector is very important in all case study towns providing 15-20% of all jobs in these municipalities in year 2011 (e.g. 14% in Slovenia). There was a job growth in retailing 2001-2007 in Radovljica and Postojna with stagnation of jobs between 2007-2011, most probably due to recession and lower consumer demand. The number of jobs in retailing was declining in Domžale from 2001-2011, most notably due to opening of many large shopping centres in the region since 2001 and closing down of small retail shops. According to data analysis presented in Chapter 3, Postojna is the most *residentially* oriented town among three case studies. This is most probably due to location of Postojna cave and all touristic activities that accompany approx. 500.000 tourists per year. Domžale and Radovljica had very similar profile in 2001. Until 2011 the number of jobs in *residential* profile of Domžale decreased for only 1%, but significantly in Postojna (-36%), while increased in Radovljica (+13%).

Development of retailing infrastructure and economy was explicitly supported by local municipal stakeholders (providing land and local infrastructure) and private investors – large domestic and international retail chains - especially after the end of 1990s, in order to satisfy consumer demands for imported goods. All decision and policy makers at all territorial levels

were in favour of such developments in the retailing sector – until the economic and financial crisis since 2008.

1.d. Agricultural sectors and rural areas

We have managed to obtain some insights from available information sources on the role of the agriculture sector in the case study areas. In Slovenia as well as in case study municipalities the number of jobs in agriculture sector is low – Postojna (8%), Radovljica (5%), Domžale (1%). In Postojna almost 70% of land is covered by forests, as well as in Radovljica while good quality (protected) agricultural land can be found in western part of Domžale municipality. Number of family farms is low in all case study municipalities with high aging index of owners. The self-sufficiency of food production in Slovenia has declined from almost 90% at the end of 1980s to less than 30% in recent times. Food has been imported and sold in large shopping centres built in all municipalities in Slovenia, including case study towns. Some locally produced food has been sold on local markets while many restaurants in case study areas offer a selection of traditional Slovene cuisine to local population, visitors and tourists.

Agricultural sector was always explicitly protected and supported by national and European policies with the protection of agricultural land (from urbanisation) and subsidies for farmers – but with different effects on self-sufficiency in production of good quality local food. A lot of effort are being made recently in Slovenia – including the case study areas - to support eco-farming in connection with eco-tourism taking in consideration good quality local food and beverages products (i.e. fruit, vegetables, meat and dairy products, etc.).

1.e. Clusters of SME and industrial districts

In all case study towns there are large companies as well as small and medium size enterprises (SMEs) that characterise their industrial sectors. Some of them are also well known export companies. They were established in the past based on local resources – like wood (Postojna and Radovljica), agricultural land (Domžale), but also on educated and skilled labour force, as well as the geo-strategic location of case study towns and their transport links by motoways, railways, accessibility to several international ports and airports in the range of 200 km in Slovenia, Austria, Croatia, Italy, and to large markets in Europe. Transformation and privatisation of the former large state-owned companies, their internationalisation, and recent economic crisis brought some disadvantages to local economies in case study towns, as can be observed in closing down of some companies and higher unemployment rates.

Development of SMEs has been strongly supported by economic and industrial policies at the national and European level that are incorporated into regional and municipal development programmes (i.e. provision of municipal land and infrastructure for new enterprise and logistic zones, tax benefits, etc.). The objectives and policies have been agreed with key decision and policy makers at all territorial levels.

1.f. Knowledge-based economy

The case study towns provide some insights on the role of knowledge-based economy, such as the presence of university branches, R&D centers, and innovative and cultural-based activities. There are synergies with local industry and tourism sectors as well as with educated and skilled labour force providing new jobs and services to local population,

immigrants and visitors. Some of these activities represent de-centralisation of (public and private) universities and research institutes, or a new development strategies based on innovation in specific industrial sector, or on developing of new forms of tourism related to recreational, cultural and educational activities. In all three case study towns in Slovenia, the share of jobs in *creative* profile increased from 2001-2011, mostly in Domžale and Postojna followed by Radovljica (see Chapter 3).

Development of knowledge-based strategy in case study areas has been strongly supported by regional and municipal development programmes and key decision and policy makers at the regional (inter-municipal level).

1.g. Economic interdependencies among sectors

The analysis of the three case study towns provide some insights how different sectors are related together in municipalities – for the benefits of all inhabitants, or particular sectors and interest groups. These are very complex links that are also changing over time depends on the local factors but also external demands, including national (sectoral) demands, and internationalisation of the economy. Some of these links are supported by public policies at different territorial levels, but some of them are created in more spontaneous ways, by different stakeholders, as a response to external challenges, or local demands for innovative developments.

1.h. Public sector role: services and employment

All three case study towns are important local i.e. municipal (LAU 2) centres as well as administrative (LAU 1) centres. Postojna is also a regional centre of Notranjsko-kraška NUTS 3 region, while urban conurbation Jesenice - Radovljica – (Bled) is a centre of Zgornja Gorenjska subregion. Both urban centres are marked as “centres of national importance” in *Spatial Development Strategy of Slovenia* (SPRS, 2004). Domžale is a larger urban area, municipality and administrative unit located near the capital city Ljubljana. Urban conurbation Domžale – Kamnik is marked as a “centre of regional importance” in SPRS (2004). Therefore all case study towns have a relatively large public sector – providing approx. 30% of municipal jobs in year 2011, and access to service such as health, education, social services and related welfare issues for population in wider areas.

Most of the public sector jobs in year 2001 were found in Postojna while in 2011 in Domžale. The number of jobs in public sector in Domžale has grown since 2001, but declined in Postojna (i.e. as a consequence of decline of jobs in the military sector and industry). In Radovljica the number of jobs in public sector increased from 2001-2007 but declined between 2007-2011. The effects of the financial crises in Slovenia since 2008 have been also visible in the public sectors finances and employment, especially after year 2010 due to municipal budgets deficits. This is a threat not only to case study municipal economies – but also to other municipalities in Slovenia.

Traditionally the concept of *polycentric* development has been the basic development concept of Slovenia, through the allocation of public investments in jobs and services in “regional centres” (middle-size towns) and “local centres” (small towns) and implementation of different sectoral policies at the local level. Individual municipalities are also responsible for provision of services at the intra-municipal level in different settlements for population in rural areas (i.e. elementary schools, health services, etc.) or providing services for the whole municipal territory (i.e. public transport, local infrastructure, etc.).

2.a. Agglomeration effects

The case study towns – especially Domžale provides qualitative insights of strong agglomeration effects as the urban area is located in surrounding of the capital city Ljubljana – as part of the large built-up agglomeration in the north part of Ljubljana Urban Region. The most visible side of the e.g. “borrowing-size effect” is the growth of diverse and better-paid jobs in Ljubljana (until 2009) and decrease of jobs in Domžale from 2001 – 2011. At the other side due to lower land and housing prices than in Ljubljana, a lot of young and educated people have been moving to Domžale municipality – while working and commuting to Ljubljana or other nearby towns (Kamnik, Kranj) and other employment centres. The similar situation can be found in Postojna (50km away from Ljubljana) where people are living and daily commuting to Ljubljana for work or education.

The policy awareness of this process is strong but there are no coherent policy measures and results are rather weak, producing diverse commuting patterns, traffic congestion and environmental pollution.

2.b. Urban regions and polycentric systems

The case study town of Radovljica is part of urban conurbation Jesenice – Radovljica – (Bled) and larger built up agglomeration in Zgornja Gorenjska subregion. This city cluster is not functioning as a conurbation due to competition between these municipalities for investments, jobs, residents, and tourists. More cooperation has taken place since accession to EU in year 2004 for preparation of the regional development programmes of Gorenjska region and implementation of projects of common interest for Zgornja Gorenjska subregion (e.g. transport and local infrastructure, sport and cultural events, etc.) and participation in cross-border cooperation projects.

Urban conurbation Domžale – Kamnik, including smaller municipalities in this large urban agglomeration in the north of Ljubljana Urban Region is another example of insufficient cooperation for improving the morphological patterns and strengthening functional links in this complex urban area.

The policy awareness of this process is strong but there are no coherent policy measures and results are rather weak, producing diverse commuting patterns, traffic congestion and environmental pollution.

2.c. Isolated towns

The case study of Postojna is an example of the town’s role in regional contexts characterised by absence of other urban areas in its proximity. Postojna has a very important geo-strategic location but it is a “weak” regional centre due to economic decline and stagnation of industrial companies, and insufficient investment capital as a consequence of financial crisis. Companies are less competitive, with low productivity and lack of innovative activities. Postojnska cave is the most important touristic site of (inter)national importance that is visited annually by 500.000 people. Preservation of the environment with specific natural (karst) phenomena is the municipal priority with development of high quality and diverse tourist infrastructure. Town of Postojna also needs to enhance its role and position in the national urban network with further development of education, research and medical activities.

The policy awareness of this process is very strong with coherent policy measures but results are rather weak, producing job loss and commuting patterns to larger employment centres such as Ljubljana and the Coastal conurbation (Koper-Izola-Piran).

2.d. Other centralities

All case study towns are not only employment centers but they are also tourist and recreation centers, public services centre, local government centres, retailing, and infrastructural nodes. This is also a heritage of the past as a result of polycentric development of small and medium size town since 1960s in Slovenia.

The policy implications has been rather weak since 1995 due to privatisation and de-industrialisation processes and lack of better paid jobs for educated and skilled local population.

3.a. Migration and social changes

The case study towns are also providing some insights of demographic and social changes and migration dynamics. Migration processes are characterised by different age groups. From 2001-2011 despite the absolute increase of active working population between 15-64 years (see Chapter 3) mostly in Domžale, due to suburbanisation trends from Ljubljana and immigration of young people from other parts of Slovenia. The relative shares in relation to all population, has decreased in all three case study towns, mostly in Radovljica, followed by Postojna. The elderly population of 65 years and more increased in all case study towns, mostly in Domžale and Radovljica while young population (0-14 years old) decreased mostly in Radovljica. The case study towns provide also services for all age groups as well as cultural, sport and recreation activities, and environmental amenities. Therefore Domžale is mainly attractive for young active population from Slovenia, Radovljica for elderly, while Postojna for foreign citizens.

There is no coherent migration strategy in Slovenia. There are not many foreign citizens living in Slovenia and most citizens of foreign origin are from the former Yugoslavia - notably Bosnia, Croatia, Serbia. Some professions are in demand due to deficit of local medical doctors in small towns and rural areas. Top athletes are also privileged groups of foreign citizens. There are policies for social inclusion of foreigners, especially related with learning of the Slovene language.

3. b. Housing

The case study town analysis are not providing much information on housing markets. The number of new dwellings – both single family houses and multi-dwelling buildings has increased since 2001 and most of them are in private ownership. There is a price difference between Ljubljana and other parts of Slovenia. This is also one of the reasons of intensive commuting patters towards Ljubljana where more diverse and better paid jobs are located. The property prices are higher in Domžale, followed by Radovljica than in Postojna. Housing provision from year 2004 was almost exclusively in private specualtive market with the exception of provision of small number of non-profit dwellings for specific social groups. Speculative housing development was based on bank loans that is also now in crisis while all large constractuion companies in Slovenia are being bankrupt and insolvent. Negative equity is also visible in the property market for the first time. The new policies are trying to

solve the banks problems while housing crisis problems are left to the market to resolve the situation.

3.c. Social capital – local resources

The case study towns analysis provide some evidences on the role and importance of social capital in their performances. Social networks are important especially of well educated people who after completion of the university returned back and obtained a job in their home municipality. Political connections are also important especially in the business sector. All case study towns and their municipalities are known for their different social groups, cultural societies, and activists (e.g. choirs, firebrigades, music bands, sport clubs, cultural societies.....). Not much information have been collected on NGOs and the third sector in the case study towns but they are becoming (again) important actors in the economic and social life. Social capital is very important for small towns and their municipalities.

3.d. Quality of life

The case study towns are very much concerned with the provision of good quality of life that are also mentioned in all regional and municipal development policies. Quality of life is related with the ownership of a (large) house with the garden, family and friends, mobility, availability of jobs, provision of local infrastructure and social services, safety, preservation of natural and cultural heritage, environmental amenities for sport and recreation. The availability of funds for implementation of these issues is very important for local citizens and other municipal inhabitants that is also influencing municipal policies, strategies and projects.

4.a. Local development strategy and territorial capital

The case study towns analysis of Postojna, Radovljica, Domžale are depicting interesting local development strategies based on territorial capital valorisation, such as environmental, cultural, demographic socio-economic and other urban and municipal assets. They are all presented in regional development as well as in municipal development programmes (with the list of priority projects) as well as in the new municipal spatial plans. The strategies are based on local specificities through the “branding” processes based on local assets – such as Postojnska cave, the Alps, lakes, castles, churches, sports, etc. The preservation of the natural and cultural heritage and environmental assets, as well as the geo-strategic location and accessibility are equally important. Most of them are “conventional” (local) initiatives but some of them are also innovative strategies – based on creative activities of educated and skilled labour force, cooperation, networking and marketing, etc.

4.b. Multi-scalar policy approach

In all case study towns there is a capacity to define a wider policy strategy at the (sub)regional level – as a part of regional development programmes and municipal strategies in order to valorise the general spatial structure of the locality. The institutional setting that helps to define these strategies could be found between (strong and charismatic) mayors, (cohesive and pro-active) municipal councils, regional development agencies, business and crafts associations, funding opportunities, political connections at the national level, etc. Both formal and informal ways are important for coping with strategic (re)positioning of the case study towns and municipalities in the wider economic market. The relationship

between formal and informal practices are complexly inter-related especially in small towns and municipalities.

The upper tiers – government of RS, MPs, and different ministries are supportive of local initiatives based on operational programmes and projects of national, regional and local importance, as well as the availability of funds from the national budget and accessibility of different EU funds. This is mainly taking place within the public domain but include also the involvement of other stakeholders from the private sector, including the Catholic Church, and Slovenian overseas diaspora.

4.c. Horizontal cooperation: (competition vs. partnership)

The *Spatial Development Strategy of Slovenia* (2004) and comprehensive *Development Strategy of Slovenia* (2005) as well as regional development programmes 2007-2013 and some regional development concepts define complementary functions and roles of towns in a specific territorial area. Some municipal authorities are cooperating for attracting resources, services and other functions for the benefit of all (or some) municipal inhabitants. Until recently more competition could be found than cooperation, but economic and financial crisis and consequently lack of resources at all territorial level are forcing (small) municipalities to be engaged in more cooperation at the meso-scale territory with shared formal or informal arrangements, inter-municipal or inter-agency cooperation. This is mainly taking place within the public domain but also includes the involvement of other (private and individual) stakeholders.

In Slovenia there are several instruments of inter-municipal cooperation / partnership:

Bottom-up:

- a) ***Association of municipalities in Slovenia*** (established in 1999) – ZOS (141 small and medium size municipalities / of 212 municipalities). Case study municipalities of Postojna, Radovljica and Domžale are members of ZOS.
- b) ***Association of municipalities and towns of Slovenia*** (established in 1992) – SOS (174 members / of 212 municipalities with several urban municipalities: Maribor, Celje, Nova Gorica, Novo mesto). Case study municipalities of Radovljica and Domžale are members of ZOS.
- c) ***Association of city municipalities in Slovenia*** (established in 2010) – ZMOS (8 members: Ljubljana, Kranj, Ptuj, Koper, Slovenj Gradec, Nova Gorica, Novo mesto, Velenje - 8 / 11 city municipalities). Case study municipalities of Postojna, Radovljica and Domžale are not urban municipalities and therefore not members of ZMOS.

Networks:

- d) ***Spatial Development Strategy of Slovenia*** (2004) promotes cooperation between towns and municipalities – i.e. between “urban centres” including “city conurbations” defined as “centres of (inter)national, regional and inter-municipal importance” (together 50 “urban centres” with 61 towns). Networking at this level between municipalities is low, including case study areas of Postojna, Radovljica, Domžale.
- e) ***Regional Development Agencies in 12 NUTS 3*** regions are promoting inter-municipal cooperation for preparation and implementation of regional development programmes,

operational programmes with projects. Case study towns are actively participating in their respective regional associations.

g) **Cross-border cooperation** – participation in bilateral and multilateral links and networks and EU projects.

4.d. Funds and sectors

The analysis of the case study towns are not providing detailed insights on different funds that municipalities can access to implement different projects, but combination of local resources with national and European funds including private funds are important in all cases. Some funds are used in a sectorial way and the other in territorial way, based on the list of projects in regional and municipal programmes and municipal budgets as well as in some national sectoral strategies. Private financial resources are also involved in municipal development strategies most of them based on lending capital from the banks. We do not have enough information from case study analysis about some innovative ways of using funds through programmes and initiatives.

Municipality of Radovljica received EU support from the pre-accession and cohesion funds (approx. 134.000 EUR) during 2004-2007, Postojna from structural and cohesion funds (approx. 8.5 mil. EUR) during 2008-2010, while Domžale municipality received only approx. 3.900 EUR in year 2011 from other European institutions.

7 Policy recommendations for SMSTs at the European, national and local level

The process of economic and social integration of the new EU member countries (including Slovenia) is still an ongoing process as the gaps still exist between the EU-15 and the new EU-12 members. The impact of such changes is very high modifying previous *centralities* and *peripheries*. Some of earlier prosperous regions have lost their role while others are slowly emerging, as resources go toward new sectors and places. Central Europe is also a large potential European integration area and strengthening the accessibility and economic links with the *EU-15* remains crucial in order to facilitate processes of *spin-offs* to improve the capacity of cities and regions in Central Europe to compete effectively on a global stage. Moreover the improvement of the overall conditions for the creation of endogenous growth factors at the regional and local levels are essential in order to fully exploit the expected increased in accessibility and avoid the increasing outflow of people, and decline of the peripheral areas or the isolated cities. The role of the state in public policy management has dramatically weakened since 1991 in which case the regions might take an important role for regulation and improvement of the efficiency, provided that exist enough institutional capacities. The weak role of the regions (NUTS 2 / NUTS 3) in the new EU member states (with the exception of Poland), remain a critical aspect, as *regionalisation* could help to overcome the excessive *centralisation* around the capital city regions, and improve the allocation of resources in the countryside. The processes of economic, social and spatial adjustments have brought increasing *polarisation* around the **capital city regions** in Central Europe (including Ljubljana), as the process of concentration of resources during the transition period has been a dominant trend vis-à-vis the process of diffusion. This confirms the fact that strengthening of the capital city regions in Central Europe is the most important for bringing higher economic growth and sustaining the increasing pressure from international competitiveness, and from the macro-economic view ensuring an adequate catching-up with the advanced EU countries.

The TOWN analysis shows that **SMSTs** are also extremely important as they can play an important role for social, economic and territorial cohesion as secondary urban nodes in regions. Their position in the urban system depends on the specificities of economic functions and physical locations in regional and national contexts. Small towns have important role in the process of economic and social integration from the *bottom up* that enable the processes of diffusion of services and improvement of the living standard of the local population in rural areas or in scarcely populated areas. Particular importance of small towns can be found in *peripheral areas* in the absence of other urban centres, especially medium-sized towns. *Highly specialised profiles* can become a strong factor for competitiveness of small towns with *specialisation* in tourism, recreation, high technology or specific type of industry or services. Small towns in the hinterland of larger urban areas have also a peculiar role of integrating residential and service functions with a local labour market, and for limiting urban sprawl phenomena and suburbanisation of large cities.

In Slovenia at the national level, the **urban policy** has been traditionally part of spatial planning policies through formulation and implementation of the polycentric development concept(s), or different national sectoral and regional policies implemented at the local level. Since 1970s various formal and informal policy instruments have been used in Slovenia for implementation of the polycentric urban concept(s) – as implicit urban policy. The most important were provision of new jobs in industry and services and housing provision in

regional centres and other municipal (local) centres, together with the establishment of state institutions at the local level – i.e. courts of justice, health institutions, land surveying offices, cultural institutions, state administrative offices, etc. The regional policy instruments were tax revenues, provision of roads and local infrastructure, support for preparation and implementation of development programmes, and stimulation of endogenous (bottom-up) local development. The principle goals of spatial planning and regional development policies were to bring jobs and services close to people (e.g. within the 30 min travel isochrones) and keep population in mountain, rural, and border areas. Since 1991 with the introduction of the market economy and democratic society there are different interests of public institutions, corporative, and private interests of various social groups and individuals, than predominantly the state-led investments as before 1991 in Slovenia. Today municipalities are attracting new inhabitants, investments and jobs (and budget revenue) by selling the land, or developing the urban land with local infrastructure for new housing, commercial or recreation activities. The new job creation is now also in the domain of individual entrepreneurs, foreign companies, or with the support of EU structural and cohesion funds.

In the *Spatial Development Strategy of Slovenia* (SPRS, 2004), the overall **urban policy** goal is to strengthen polycentric development of 50 »centres of (inter)national, regional and inter-municipal importance« with *urban-rural partnerships* at the local and regional levels (LAU 2 / NUTS 3). The overall goal of **regional policy** is to strengthen economic and social cohesion and balanced regional development within the paradigm of sustainable development. At the local level the goal of **physical and land use planning** is development or renewal of urban and other settlements, landscape areas and efficient urban land use development and management with adequate urban design and building regulations.

The jurisdiction and territory of most of municipalities in Slovenia is different now (smaller) than it was before local government reform in year 1994. Due to suburbanisation and urban sprawl the agglomerations and functional (urban) areas are much larger than one municipality but the cooperation between municipalities are not sufficient for effective implementation of different horizontal and vertical strategies, programmes and projects being formulated at the (inter)national, regional or municipal levels. Lack of coherent spatial, regional and land use planning policies between the national, regional and local levels due to transition reforms and the »investment-led response of public leadership in a planning vacuum« coupled with day-to-day urban problems and side-effects of reforms (e.g. privatisation, restitution, de-centralisation, etc.) have transformed the intra-urban pattern (i.e. suburbanisation and urban sprawl, de-industrialisation, tertialisation, deferred maintenance of buildings in urban areas, loss of urban identity, traffic congestion, environmental pollution, etc.). Many projects were not developed according to the spatial and land use planning documents from 1980s, but according to the needs and demands of the market economy and new public and private investors.

7.1 SWOT analysis of spatial policies in Slovenia

Strenght:

- strong policy support since the end of 1960s for **polycentric urban development** and **balanced regional development**;

Opportunities:

- EU membership (since 2004) and availability of cohesion and structural funds are stimulating urban and regional development as well as cross-border, inter-regional, trans-national cooperation of cities and regions;

Weaknesses:

- strong (national) regional policies without administrative regions (NUTS 3 /NUTS 2);
- strong sectoral policies but no explicit URBAN POLICY;
- *ad hoc investment-led planning decisions* by local authorities, and unplanned but legal *urban sprawl*;

Threats:

- political conflicts and competition between municipalities as impediment for better urban cooperation and networking;
- Anti-urban lobby at the national and municipal levels.

Planning scope	Strengths	Weaknesses
Spatial planning	Polycentric urban development concept(s) since the end of 1960s;	Inadequate implementation of polycentric development concepts due to change of the political and economic systems since 1991 and <i>investment-led</i> local development after 1994;
Physical planning	Since 2004 all municipalities have been obliged to prepare and adopt new generation of municipal spatial development plans with detailed land-use plans;	Preparation of municipal spatial plans is a very slow process as some municipalities have to solve the conflicts of ownership and various demands for land use;
Regional policy	Regional development documents are supporting balanced regional development of less developed regions and intra-regional areas;	Strong regional policy without administrative regions. There are structural differences between NUTS 3 statistical / developing regions:
Urban policy	Polycentric urban development concept supports urban networks, functional urban areas, city clusters (conurbations), and urban revitalisation;	NO explicit urban policy at the national and regional (inter-municipal level). At the municipal (urban – rural level) there are detailed land use plans with urban design standards and recommendations (spatial ordinance);
Planning scope	Opportunities	Threats
Spatial planning	At the national level new strategic planning documents are prepared according to the polycentric development concept and EU recommendations;	Market economy, laissez-faire planning and capital investments in urban – rural areas and lack of intra-municipal and regional cooperation are diminishing polycentric concept;
Physical planning	According to new spatial planning legislation (>2002) all municipalities are obliged to prepare new municipal spatial and land use plans;	Local economic interests and land use demands for profit-making activities and conversion of agricultural and forest land in built-up land.
Regional policy	No administrative regions in Slovenia but 12 statistical / developing NUTS 3 regions as a basis for regional development and programming;	Structural differences could increase between more developed urban areas and less developed peripheral areas;
Urban policy	Urban policy should become implicit development policy. Effective	Lack of cooperation between urban and other settlements in functional

	polycentric urban network is an instrument of urban policy.	urban regions (inter-municipal) could diminish competitiveness.
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Recently there has been some cooperation between municipalities during formulation of the regional development programmes 2004-2006, 2007-2013 and new 2014-2020 programming period, implementation of some common infrastructure and environmental projects (i.e. roads, water and sewage supply systems, waste collection plants, tourism), and networking within (horizontal) municipal associations in Slovenia.

Therefore the main results of the TOWN SMSTs analyses in Slovenia indicate some important findings for policy evaluation, although many aspects require further in-depth study in order to better understand phenomena that are of difficult evaluation.

7.2 Policy recommendations to the European level

After the last EU enlargement in year 2007 about 70 major cities with more than 500.000 inhabitants dominate the European urban system. About 20% of the EU population in 27 member states has been living in these cities. Approximately 120 mil. inhabitants or 40% of urban population in Europe live in 600 cities between 100.000 – 500.000 inhabitants which are the economic poles and nodes of polycentric and balanced development of competitive cities and regions in the EU. Strengthening a *polycentric and balanced system of metropolitan areas and urban networks* is one of the main objectives in shaping the development of European urban system and territorial integration of the EU (*ESDP*, 1999; *Territorial Agenda of EU*, 2007). Urban policy at the EU level is hidden in *environmental policies* (i.e. regulation, norms and standards), *regional policy* (financing projects in urban areas) and different *urban networks and associations*. For some cities and urban regions the EU offers new possibilities to position themselves in highly competitive urban networks. *Larger cities and urban regions* often concentrate on influencing policies affecting cities' competencies; *other cities* try to gain further powers in national bargaining structures, as hierarchical relationships seem to be questioned by the involvement in EU policies. Many cities use the additional resources provided by EU policies and programmes for implementing municipal and regional policies, but also for coping with structural problems. For another category the EU is just an additional supra-level of political regulation, which constrains the "local room for maneuver".

The sustainability of European cities is currently threatened by social change, loss of cultural identity and heritage, insecurity and criminality, changing employment patterns, deteriorating infrastructure and built environment, urban sprawl, traffic congestion, bad air quality and noise pollution, and poor water and waste management, the aging of population, immigration, energy efficiency demands, and new challenges of the financial and environmental crisis. Most European cities are still operating unsustainable management practices. Cities are facing particular challenges due to reduced public budgets and the persistence of older industrial areas within urban regions. Different European cities will require different approaches to become sustainable, according to their local context. This makes the transfer of good practice difficult. Innovative practices need to be defined with respect to the local conditions where they are generated, including a transparent and comprehensive assessment of their costs and benefits. A key factor in this process will be the *encouragement of positive interfaces between researchers, local decision-makers and citizens*. There need to be a better understanding of the respective roles of *spatial and*

regional planning, local management and the market in urban areas. The social and psychological motivations behind urban interaction need to be given more importance as the sustainability of European cities will depend on the motivations and actions of European citizens. **New tools of governance** will be necessary to achieve sustainability in the longer term. These will need to incorporate **short-term flexibility** with longer term **urban visioning**, and ensure greater **citizen participation in the planning processes**. An urban policy must be **place-based** to the greatest extent possible, in order to obtain the very few financing opportunities made available by the EU for the next 2014-2020 programming period.

7.3 Policy recommendations to the national level

Urban policy in Slovenia can be understood by two dimensions: from a *city perspective* or as a *national policy component of the spatial planning strategies*. At the city level policy can address the phenomena related to (sub)urbanisation processes with the correlated effects of *congestion and urban sprawl*. As a component of spatial planning strategy, *urban policy* is part of an integrated vision that perceives cities, towns and urban areas as the pillars of the national development process. The strong *physical planning* legacy of the previous system and its influence on the present (urban) policy approach is rather strong. Main scopes of the **spatial planning** policies and overview of the proposed vision by national authorities need to mention the implication of this type of strategy on the competitiveness and cohesion of urban areas. The overview of **urban policy strategy** needs to explain the consistency, trade-off and coordination between *spatial planning, physical planning, regional policy, and urban policy*. Very important for the specific mode of development is a *degree of decentralisation*, the role of regions and *regional centres*, as well as other *secondary centres* in the national urban system. *Effectiveness and efficiency* of the proposed spatial visions and plans depends on *monitoring and territorial impact evaluations* as strong instruments of efficient policy implementation.

The lack of *national reference framework for urban policies* in Slovenia is inevitably reflected at the local level. There is a need for an urban policy with specific strategies and corresponding instruments to address problems and opportunities of urban areas. Some urban strategies and recommendations can be already found in the Operational Programmes 2007-2013 as the instrument that regulates the absorption of cohesion and structural funds in Slovenia for the programming period 2007 - 2013. They are elaborated in accordance with the EU guidelines and recommendations, *National Development Plan of RS* with the *National Strategic Reference Framework (NSRF)*, the *Lisbon and Gothenburg strategies*, and national (sectoral) policies and regional development policies. With regards to urban systems - as engines of growth - and reference areas within cohesion policy – they are widely recognised within the ERDF, focusing on the processes of growth and of development of entrepreneurial activities with higher added value, support of sustainable growth and the recovery of social and physical decay as well as demands for energy efficiency and use of renewable sources.

In the future national urban policy a clear policy distinction need to be made between *a large city/metropolitan areas, medium-sized towns, and small towns / municipal systems*. Cities should not be considered as finite territorial areas or limited administrative districts, but also as *functional urban areas*. Creation of a multi-level governance system to oversee the urban programming (not only regional) of cities can also be recommended to give them full authority to choose development plans and provide them with the operative tools they need to achieve successful implementation.

Polycentric vision needs consequently to be adapted addressing major disparities as they can be costly over the long run. The SMSTs acquire a strong role in particular in the less urbanised areas as they need to upgrade their functions and become attractive for investments, jobs creation and services delivery. The **accessibility and mobility** need to be taken through integrated vision not exclusively focusing on hard investments but also on efficiency and intermodal system strategy development. The improvement of the overall conditions for the creation of endogenous growth factors at the regional and local levels are essential for SMSTs in order to fully exploit the expected increase of accessibility and avoid the effects of increasing outflow of people with demographic decline of the peripheral areas or the “isolated” cities.

The relevance of the **regionalisation and decentralisation process** remains a critical aspect in Slovenia to overcome the excessive centralisation around the capital cities and improve also allocation of the resources in the countryside. The “*laissez-faire*” approach has dominated the process since transition started in the 1990s, while the role of the state in public policy management has dramatically weakened, without the second institutional layer of administrative regions. This aspect might represent an important issue when talking about *governance* and efficiency of the policies put in place. The **adoption of integrated approach** ensuring coherence and consistency between sectoral policies, and spatial, regional and urban policies is a determinant reason for successful implementation of policies, as soft and hard factors interact reciprocally in the territorial context with favourable institutional and environmental conditions.

Strengthening the city networking, both horizontally and vertically, with the benefits of different cooperation schemes can be sensitive. A new strategy of inter-connections at different levels needs to be more actively diffused particularly taking into consideration the local attitudes for cooperation. City networks based on proximity as well as on spatially distant partnership can become a strong instrument for counterbalancing excessive polarisation and disparities. The involvement of different institutional layers, including regional and local (city) is important, as strategic cooperation can bring improvement of the integration and diffusion of experiences and policy implementation efficiency (i.e. best practices, exchanges of experiences, information, etc.).

Enhancing **cross-border cooperation** between urban areas, as well as promotion of bilateral or multilateral links and joint participation in projects supported by the EU is equally important policy strategy for promotion and visibility of individual SMSTs in specific urban networks together with development of **city-marketing strategies** at the national level. *Cross-border links and connections* remain central as common historical and cultural background which is important for developing more close ties. Importance of different size of urban centres are significant for identifying the expected impact and relative importance of these connections - as daily commuting for jobs and service provision whilst more relevant cooperation with medium size towns represent a critical mass for development and integration of SMSTs.

7.4 Policy recommendations to SMSTs level

The **SMSTs** are also extremely important as they can play an important role for social and economic cohesion in the territory. Their position into the urban settlement system depends on their location and other territorial specificities. They can have determinant role as **diffused types** of urban centres that contribute to the process of economic integration from the bottom up. Their density and their location can be a factor that support the process of

diffusion of services and improvement of the living standards of the population in rural areas or scarcely populated areas. Particular importance is given to SMSTs in the most peripheral areas in the absence of other larger urban centres. The SMSTs in the **hinterland of the large metropolitan** areas have a peculiar function of integrating labour market and secondary services functions, also for limiting urban sprawl and suburbanisation of large metropolises. Some SMSTs have **specialised profiles** that can become a strong factor for competitiveness - in tourist functions, as recreational areas, high technology or industrial and service clusters. *Specialisation* becomes a *condition sine-qua non* for integration of SMSTs into different urban networks and / or conurbations with near-by towns, as attraction for expansion of specialised services.

Cohesion policies should support improved efficiency and effectiveness **of network infrastructures and public services** in SMSTs, as well as to provide better services delivery for residents and users. Revision and modernisation of urban services involves strengthening the knowledge economy since the SMSTs seem to be generally deficient on this issue. In particular, in relation to tourism as leverage towards growth, an essential objective is to increase their attractiveness and accessibility, including telecommunications services. In a selected number of SMSTs, cohesion policies should also support prestigious segments of local production and services known for creativity, innovative welfare services, corporate governance, public relations, communication, advanced services for industries and / or agriculture. This suggestion is particularly important for SMSTs with tourism role but also with an excellent quality of life that make them very attractive and competitive. In addition, increased specialisation could reinforce knowledge-based economy and help to augment further production diversification.

Reinforcement of **social inclusion** projects and practices for the most disadvantaged population and local districts will have to earmark social inclusion projects involving voluntary organisations and the social economy by exploiting participative local development tools. This suggestion is valid not only for larger urban where social unrest is known and evident but also for the SMSTs often affected by depopulation which, at the same time, have a significant influx of immigrants and risk social tensions, especially during a period of economic crisis. As regards to the **inner area priorities** many initiatives were implemented as part of the restructuring of old town centres, schools and hospitals, local infrastructures, and cultural and social projects. However, even though the results were moderately interesting, there is no national strategy specifically focused on the development of these areas in order to reduce depopulation and to promote natural, cultural and landscape diversity of SMSTs. Strengthening **polycentric networks** with other SMSTs will help to increase the communication activities and achieve a supra-local strategic vision. This is true above all for the SMSTs which can enlarge their competitiveness through better **cooperation** in order to tackle common problems through integration with other areas - *as regards provision of transport and other infrastructure, logistics, integrated river projects, or the need for integrated sustainable public transport between towns*).

Strategic planning and political leadership have a key role to play - with the availability of long-term funding sources. *Integrated development* may be an appropriate tool of place making. However, new ways of *thinking* about urban development are needed. Integrated planning would have to include professional planning capacity building while citizens' thinking should constitute the contextual base of development. What planning should do is to manage change and spatial justice instead of promoting physical growth. Elsewhere planners are participating in decisions about planning, which means that planning is *de facto* a part of the (political) decision making process. In times of scarcity and greater awareness

about the need for sustainable development, this may mean that planners need to acquire greater skills to manage urban change. Therefore, the successful implementation of spatial, regional and urban development strategies and policies and planning decisions depends upon the ability of local leaders to encourage active involvement of different professions, social groups and local communities, as well as their efficient and transparent role in implementation activities. Strong political leadership with co-operation and partnership between different public and private institutions and other stakeholders and citizens are important for the progress and essential for the implementation of comprehensive urban programmes in future.

At the same time most municipalities needs to strengthen economic, social and territorial cohesion to avoid the problems of homelessness, urban decline, social and spatial polarisation, crime and vandalism, or transport congestion, known to many other larger European cities. In order to achieve the overall goal of the new spatial development vision and strategy, regional and municipal development programmes and individual projects - a coherent horizontal and vertical actions are needed - not only supporting growth but also other specificities of the territorial capital of SMSTs in the (inter)national context. Redefinition of the scope of urban policies is based on a number of issues identified as priorities, including the limitation of land use and urban regeneration, transport infrastructure and sustainable mobility, labor market and welfare, culture, education and the smart cities strategy, and coherence with the European strategy on climate change and energy. The other important spatial development activities need to be focused on improving the ***international position***, role and identity of SMSTs in European urban networks, marketing their competitive advantages through implementation of the “flag-ship” projects. Yet, as a result of *good territorial governance* – with the protection of cultural and natural heritage, investments in human resources and innovative activities, strengthening local identity and overall quality of life – the SMSTs have the opportunity to become attractive places for living, working, and visiting.

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Appendix 1: List of Slovenian LAU 2 municipalities 2000 – 2011

Code	Municipality (LAU 2)
1	Ajdovščina
2	Beltinci
3	Bled
4	Bohinj
5	Borovnica
6	Bovec
7	Brda
8	Brezovica
9	Brežice
10	Tišina
11	Celje
12	Cerklje na Gorenjskem
13	Cerknica
14	Cerkno
15	Črenšovci
16	Črna na Koroškem
17	Črnomelj
18	Destričnik
19	Divača
20	Dobrepolje
21	Dobrova - Polhov Gradec
22	Dol pri Ljubljani
23	Domžale
24	Dornava
25	Dravograd
26	Duplek
27	Gorenja vas - Poljane
28	Gorišnica
29	Gornja Radgona
30	Gornji Grad
31	Gornji Petrovci
32	Grošuplje
33	Šalovci/Šalovci
34	Hrastnik
35	Hrpelje - Kozina
36	Idrija
37	Ig
38	Ilirska Bistrica
39	Ivančna Gorica
40	Izola/Isola
41	Jesenice
42	Juršinci
43	Kamnik
44	Kanal
45	Kidričevo
46	Kobarid
47	Kobilje
48	Kočevje
49	Komen
50	Koper/Capodistria
51	Kozje
52	Kranj
53	Kranjska Gora
54	Krško
55	Kungota

Code	Municipality (LAU 2)
56	Kuzma
57	Laško
58	Lenart
59	Lendava/Lendva
60	Litija
61	Ljubljana
62	Ljubno
63	Ljutomer
64	Logatec
65	Loška dolina
66	Loški Potok
67	Luče
68	Lukovica
69	Majšperk
70	Maribor
71	Medvode
72	Mengeš
73	Metlika
74	Mežica
75	Miren - Kostanjevica
76	Mislinja
77	Moravče
78	Moravske Toplice
79	Mozirje
80	Murska Sobota
81	Muta
82	Naklo
83	Nazarje
84	Nova Gorica
85	Novo mesto
86	Odranci
87	Ormož
88	Osilnica
89	Pesnica
90	Piran/Pirano
91	Pivka
92	Podčetrtek
93	Podvelka
94	Postojna
95	Preddvor
96	Ptuj
97	Puconci
98	Rače - Fram
99	Radeče
100	Radenci
101	Radlje ob Dravi
102	Radovljica
103	Ravne na Koroškem
104	Ribnica
105	Rogašovci
106	Rogaška Slatina
107	Rogatec
108	Ruše
109	Semič
110	Sevnica

Code	Municipality (LAU 2)
111	Sežana
112	Slovenj Gradec
113	Slovenska Bistrica
114	Slovenske Konjice
115	Starše
116	Sveti Jurij
117	Šenčur
118	Šentilj
119	Šentjernej
120	Šentjur
121	Škocjan
122	Škofja Loka
123	Škofljica
124	Šmarje pri Jelšah
125	Šmartno ob Paki
126	Šoštanj
127	Štore
128	Tolmin
129	Trbovlje
130	Trebnje
131	Tržič
132	Turnišče
133	Velenje
134	Velike Lašče
135	Videm
136	Vipava
137	Vitanje
138	Vodice
139	Vojnik
140	Vrhnika
141	Vuzenica
142	Zagorje ob Savi
143	Zavrč
144	Zreče
146	Železniki
147	Žiri
148	Benedikt
149	Bistrica ob Sotli
150	Bloke
151	Braslovče
152	Cankova
153	Cerkvenjak
154	Dobje
155	Dobrna
156	Dobrovnik/Dobronak
157	Dolenjske Toplice
158	Grad
159	Hajdina
160	Hoče - Slivnica
161	Hodoš/Hodos
162	Horjul
163	Jezersko
164	Komenda
165	Kostel
166	Križevci
167	Lovrenc na Pohorju
168	Markovci
169	Miklavž na Dravskem polju

Code	Municipality (LAU 2)
170	Mirna Peč
171	Oplotnica
172	Podlehnik
173	Polzela
174	Prebold
175	Prevalje
176	Razkrižje
177	Ribnica na Pohorju
178	Selnica ob Dravi
179	Sodražica
180	Solčava
181	Sveta Ana
182	Sveti Andraž v Slov. goricah
183	Šempeter - Vrtojba
184	Tabor
185	Trnovska vas
186	Trzin
187	Velika Polana
188	Veržej
189	Vransko
190	Žalec
191	Žetale
192	Žirovnica
193	Žužemberk
	From 2002
194	Šmartno pri Litiji
	From 2006
195	Apače
196	Cirkulane
197	Kostanjevica na Krki
198	Makole
199	Mokronog - Trebelno
200	Poljčane
201	Renče - Vogrsko
202	Središče ob Dravi
203	Straža
204	Sv. Trojica v Slov. goricah
205	Sveti Tomaž
206	Šmarješke Toplice
207	Gorje
208	Log - Dragomer
209	Rečica ob Savinji
210	Sv. Jurij v Slov. goricah
211	Šentrupert
	From 2011
212	Mirna

Appendix 2: Collected and delivered variables at LAU 2 level in Slovenia for 2001/2002, 2007 (with the 2001 municipal geography) and for 2011.

Varcode	Variable	Description
A1-01	Population 2001	Population by age groups at 1.1.2001
A1-07on01g	Population 2007 (with the 2001 municipal geography)	Population by age groups at 1.1.2007 calculated for the 2001 municipal geography (192 LAU 2)
A1-11	Population 2011	Population by single year at 1.1.2011
A2-01	Deaths and deaths before 65 years in 2001	Number of deaths in 2001 Number of deaths before 65 years in 2001
A2-11	Deaths and deaths before 65 years (2011)	Number of deaths in 2011 Number of deaths before 65 years in 2011
A3-01	Live births in 2001	Number of live births in 2001
A3-11	Live births in 2011	Number of live births in 2011
A4-02	Foreign citizens 2002	Number of residents in 2002 who were born in a foreign country
A4-11	Foreign citizens 2011	Number of residents in 2011 who were born in a foreign country
A5-01	Immigrants in 2001	Number of immigrants in 2001
A5-11	Immigrants in 2011	Number of immigrants in 2011
B1-02	Employed in 2002	Number of resident population who are in employment in 2002
B1-07on01g	Employed in 2007 (with the 2001 municipal geography)	Number of resident population who are in employment in 2007 calculated for the 2001 geography
B1-11	Employed in 2011	Number of resident population who are in employment in 2011
B2-02	Self-employed in 2002	Number of resident population who are in self-employment in 2002
B2-07on01g	Self-employed in 2007	Number of resident population who are in self-employment in 2007 calculated for the 2001 geography
B2-11	Self-employed in 2011	Number of resident population who are in self-employment in 2011
B3-02	Unemployed in 2002	Number of resident population who are unemployed in 2002
B3-07on01g	Unemployed in 2007	Number of resident population who are unemployed in 2007 calculated for the 2001 geography
B3-11	Unemployed in 2011	Number of resident population who are unemployed in 2011
B4-01	A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U	Number of jobs who work in an area by NACE rev2 classification 2001
B4-07on01g	A, B, C, D, E, F, G, H, I, J, K, L, M, N, O, P, Q, R, S, T, U	Number of jobs who work in an area by NACE rev2 classification 2007 calculated for the 2001 geography
B4-11	A, B, C, D, E, F, G, H, I,	Number of jobs who work in an area by NACE rev2 classification

Varcodes	Variable	Description
	J, K, L, M, N, O, P, Q, R, S, T, U	2011
B5-01	C, D, E, F, G, H, I, J, K	Number of businesses located within the area by NACE rev 1 classification and by size in 2001
B5-11	C, D, E, F, G, H, I, J, K	Number of businesses located within the area by NACE rev 2 classification and by size in 2011
C1-01	Education in 2001	Number of resident population by the highest level of qualifications attained in 2001
C1-11	Education in 2011	Number of resident population by the highest level of qualifications attained in 2011
D1-02	Dwellings in 2002	Number of dwellings/housing units in 2002
D1-11	Dwellings in 2011	Number of dwellings/housing units in 2011
D2-02	Dwellings for seasonal use (2002)	Number of dwellings/housing units that are second or holiday homes in 2002
D2-11	Dwellings for seasonal use (2011)	Number of dwellings/housing units that are second or holiday homes in 2011
D3-02	Unoccupied dwellings (2002)	Number of dwellings/housing units that are vacant or unoccupied homes in 2002
D3-11	Unoccupied dwellings (2011)	Number of dwellings/housing units that are vacant or unoccupied homes in 2011
E1-01	Town in 2001	Dummy variable that indicates whether a municipality has the administrative status of 'town' in the local government system in 2001
E1-11	Town in 2011	Dummy variable that indicates whether a municipality has the administrative status of 'town' in the local government system in 2001
E2-01	Budget in 2002	The municipal budget in 2001
E2-11	Budget in 2011	The municipal budget in 2011
G1-01	Work in same municipal in 2001	Number of resident population who are in employment who also work within LAU 2 area in 2001
G1-11	Work in same municipal in 2011	Number of resident population who are in employment who also work within LAU 2 area in 2011
G2-01	Commuters in 2001	Number of commuters to all other LAU 2 in 2001
G2-11	Commuters in 2011	Number of commuters to all other LAU 2 in 2011

Appendix 3a: Population polygons, settlements in MR 2001

N_polygon	Type	LAU 2_ID	LAU 2	SET_ID	SETTLEMENT	DESCRIPTION
264	HDUC	23	DOMŽALE	11	DRAGOMELJ	
264	HDUC	23	DOMŽALE	27	PŠATA	the polygon covers just a part of the settlement
264	HDUC	23	DOMŽALE	37	ŠENTPAVEL PRI DOMŽALAH	
8336	SMST	23	DOMŽALE	5	LEŠENIK	the polygon covers just a part of the settlement, the other part is covered by the polygon VST 21481
8336	SMST	23	DOMŽALE	7	DOB	
8336	SMST	23	DOMŽALE	10	DOMŽALE	
8336	SMST	23	DOMŽALE	12	GORILICA PRI IHANU	
8336	SMST	23	DOMŽALE	14	HOMEC	
8336	SMST	23	DOMŽALE	15	HUDO	
8336	SMST	23	DOMŽALE	16	IHAN	
8336	SMST	23	DOMŽALE	18	KOULEVO	
8336	SMST	23	DOMŽALE	23	NOŽICE	
8336	SMST	23	DOMŽALE	24	PODREČJE	the polygon covers just a part of the settlement, the other part is covered by the polygon VST 21355
8336	SMST	23	DOMŽALE	25	PRELOG	
8336	SMST	23	DOMŽALE	26	PRESERJE PRI RADOMLIJAH	
8336	SMST	23	DOMŽALE	30	RADOMLJE	
8336	SMST	23	DOMŽALE	31	RODICA	the polygon covers just a part of the settlement
8336	SMST	23	DOMŽALE	34	SPODNJE JARŠE	
8336	SMST	23	DOMŽALE	35	SREDNJE JARŠE	
8336	SMST	23	DOMŽALE	39	ŠKRJANČEVO	the polygon covers just a part of the settlement, the other part is covered by the polygon VST 21481
8336	SMST	23	DOMŽALE	43	VIR	
8336	SMST	23	DOMŽALE	44	ZABORŠT	the polygon covers just a part of the settlement, the other part is covered by the polygon VST 21355
8336	SMST	23	DOMŽALE	46	ZGORNJE JARŠE	
8337	SMST	23	DOMŽALE	6	DEPALA VAS	
21355	VST	23	DOMŽALE	24	PODREČJE	the polygon covers just a part of the settlement, the other part is covered by the polygon SMST 8336
21355	VST	23	DOMŽALE	44	ZABORŠT	the polygon covers just a part of the settlement, the other part is covered by the polygon SMST 8336
21444	VST	23	DOMŽALE	48	ŽELODNIK	
21481	VST	23	DOMŽALE	5	LEŠENIK	the polygon covers just a part of the settlement, the other part is covered by the polygon SMST 8336
21481	VST	23	DOMŽALE	39	ŠKRJANČEVO	the polygon covers just a part of the settlement, the other part is covered by the polygon SMST 8336
21481	VST	23	DOMŽALE	42	TURNŠE	
21567	VST	23	DOMŽALE	32	ROVA	
21482	VST	68	LUKOVICA	23	LUKOVICA PRI DOMŽALAH	the polygon covers just a part of the settlement, the other part is covered by the polygon VST 21532
21482	VST	68	LUKOVICA	35	PREVOJE PRI ŠENTVIDU	
21482	VST	68	LUKOVICA	47	ŠENTVID PRI LUKOVICI	
21532	VST	68	LUKOVICA	2	BRDO PRI LUKOVICI	the polygon covers just a part of the settlement
21532	VST	68	LUKOVICA	23	LUKOVICA PRI DOMŽALAH	the polygon covers just a part of the settlement, the other part is covered by the polygon VST 21482
21400	VST	77	MORAVČE	5	DRTIJA	the polygon covers just a part of the settlement
21400	VST	77	MORAVČE	19	MORAVČE	
21400	VST	77	MORAVČE	46	ZALOG PRI MORAVČAH	the polygon covers just a part of the settlement
2548	SMST	94	POSTOJNA	21	POSTOJNA	
19310	VST	94	POSTOJNA	23	PRESTRANEK	the polygon covers just a part of the settlement
19501	VST	94	POSTOJNA	8	HRAŠČE	
19739	VST	94	POSTOJNA	20	PLANINA	the polygon covers just a part of the settlement
18994	VST	91	PIVKA	3	DOLNJA KOŠANA	the polygon covers just a part of the settlement
18994	VST	91	PIVKA	13	NEVERKE	
19025	VST	91	PIVKA	8	KAL	the polygon covers just a part of the settlement
19099	VST	91	PIVKA	17	PETELINJE	
19099	VST	91	PIVKA	18	PIVKA	
8341	SMST	102	RADOVLJICA	13	HRAŠE	the polygon covers just a part of the settlement
8341	SMST	102	RADOVLJICA	17	LESCE	
8341	SMST	102	RADOVLJICA	34	RADOVLJICA	
21956	VST	102	RADOVLJICA	26	OVSİŠE	
21956	VST	102	RADOVLJICA	28	PODNART	the polygon covers just a part of the settlement
21999	VST	102	RADOVLJICA	4	BREZOVICA	
21999	VST	102	RADOVLJICA	15	KROPA	
22074	VST	102	RADOVLJICA	14	KAMNA GORICA	
22075	VST	102	RADOVLJICA	19	LJUBNO	
22075	VST	102	RADOVLJICA	47	ZALOŠE	
22109	VST	102	RADOVLJICA	3	BREZJE	
22152	VST	102	RADOVLJICA	6	ČRNIVEC	the polygon covers just a part of the settlement
22152	VST	102	RADOVLJICA	22	MOŠNJE	
22189	VST	102	RADOVLJICA	11	GORICA	
22189	VST	102	RADOVLJICA	45	VRBNJE	
22189	VST	102	RADOVLJICA	51	ZGORNJI OTOK	
22288	VST	102	RADOVLJICA	1	BEGUNJE NA GORENJSKEM	the polygon covers just a part of the settlement
22288	VST	102	RADOVLJICA	9	DVORSKA VAS	
22288	VST	102	RADOVLJICA	52	ZGOŠA	

Appendix 3b: Population polygons, settlements in MR 2011

N_polygon	Type	LAU 2 ID	LAU 2	SET ID	SETTLEMENT	DESCRIPTION
264	HDUC	23	DOMŽALE	11	DRAGOMELI	
264	HDUC	23	DOMŽALE	27	PŠATA	the polygon covers just a part of the settlement
264	HDUC	23	DOMŽALE	37	ŠENTPAVEL PRI DOMŽALAH	
8336	SMST	23	DOMŽALE	5	LEŠENIK	the polygon covers just a part of the settlement, the other part is covered by the polygon VST 21481
8336	SMST	23	DOMŽALE	7	DOB	
8336	SMST	23	DOMŽALE	10	DOMŽALE	
8336	SMST	23	DOMŽALE	12	GORILICA PRI IHANU	
8336	SMST	23	DOMŽALE	14	HOMEC	
8336	SMST	23	DOMŽALE	15	HUDO	
8336	SMST	23	DOMŽALE	16	IHAN	
8336	SMST	23	DOMŽALE	18	KOULLEVO	
8336	SMST	23	DOMŽALE	23	NOŽICE	
8336	SMST	23	DOMŽALE	24	PODREČJE	the polygon covers just a part of the settlement, the other part is covered by the polygon VST 21355
8336	SMST	23	DOMŽALE	25	PRELOG	
8336	SMST	23	DOMŽALE	26	PRESEJJE PRI RADOMLJAH	
8336	SMST	23	DOMŽALE	30	RADOMLJE	
8336	SMST	23	DOMŽALE	31	RODICA	the polygon covers just a part of the settlement
8336	SMST	23	DOMŽALE	34	SPODNJE JARŠE	
8336	SMST	23	DOMŽALE	35	SREDNJE JARŠE	
8336	SMST	23	DOMŽALE	39	ŠKRJANČEVO	the polygon covers just a part of the settlement, the other part is covered by the polygon VST 21481
8336	SMST	23	DOMŽALE	43	VIR	
8336	SMST	23	DOMŽALE	44	ZABORŠT	the polygon covers just a part of the settlement, the other part is covered by the polygon VST 21355
8336	SMST	23	DOMŽALE	46	ZGORNJE JARŠE	
8337	SMST	23	DOMŽALE	6	DEPALA VAS	
21355	VST	23	DOMŽALE	24	PODREČJE	the polygon covers just a part of the settlement, the other part is covered by the polygon SMST 8336
21355	VST	23	DOMŽALE	44	ZABORŠT	the polygon covers just a part of the settlement, the other part is covered by the polygon SMST 8336
21444	VST	23	DOMŽALE	48	ŽELODNIK	
21481	VST	23	DOMŽALE	5	LEŠENIK	the polygon covers just a part of the settlement, the other part is covered by the polygon SMST 8336
21481	VST	23	DOMŽALE	39	ŠKRJANČEVO	the polygon covers just a part of the settlement, the other part is covered by the polygon SMST 8336
21481	VST	23	DOMŽALE	42	TURNŠE	
21567	VST	23	DOMŽALE	32	ROVA	
2548	SMST	94	POSTOJNA	21	POSTOJNA	
19310	VST	94	POSTOJNA	23	PRESTRANEK	the polygon covers just a part of the settlement
19501	VST	94	POSTOJNA	8	HRAŠČE	
19739	VST	94	POSTOJNA	20	PLANINA	the polygon covers just a part of the settlement
18994	VST	91	PIVKA	3	DOLNJA KOŠANA	the polygon covers just a part of the settlement
18994	VST	91	PIVKA	13	NEVERKE	
19025	VST	91	PIVKA	8	KAL	the polygon covers just a part of the settlement
19099	VST	91	PIVKA	17	PETELINJE	
19099	VST	91	PIVKA	18	PIVKA	
8341	SMST	102	RADOVLJICA	13	HRAŠČE	the polygon covers just a part of the settlement
8341	SMST	102	RADOVLJICA	17	LESCE	
8341	SMST	102	RADOVLJICA	34	RADOVLJICA	
21956	VST	102	RADOVLJICA	26	OVSIŠE	
21956	VST	102	RADOVLJICA	28	PODNART	the polygon covers just a part of the settlement
21999	VST	102	RADOVLJICA	4	BREZOVIČA	
21999	VST	102	RADOVLJICA	15	KROPA	
22074	VST	102	RADOVLJICA	14	KAMNA GORICA	
22075	VST	102	RADOVLJICA	19	LJUBNO	
22075	VST	102	RADOVLJICA	47	ZALOŠE	
22109	VST	102	RADOVLJICA	3	BREZJE	
22152	VST	102	RADOVLJICA	6	ČRNIVEC	the polygon covers just a part of the settlement
22152	VST	102	RADOVLJICA	22	MOŠNJE	
22189	VST	102	RADOVLJICA	11	GORICA	
22189	VST	102	RADOVLJICA	45	VRBNJE	
22189	VST	102	RADOVLJICA	51	ZGORNJI OTOK	
22288	VST	102	RADOVLJICA	1	BEGUNJE NA GORENJSKEM	the polygon covers just a part of the settlement
22288	VST	102	RADOVLJICA	9	DVORSKA VAS	
22288	VST	102	RADOVLJICA	52	ZGOŠA	

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The ESPON 2013 Programme is part-financed by the European Regional Development Fund, the EU Member States and the Partner States Iceland, Liechtenstein, Norway and Switzerland. It shall support policy development in relation to the aim of territorial cohesion and a harmonious development of the European territory.

ISBN