

PROBLEMS AND POSSIBILITIES FOR STEERING URBAN SPRAWL IN SERBIA

1. INTRODUCTION

In the countries of Northern and Western Europe in which the urbanization process has almost reached its final stage, more than three quarters of the inhabitants live in urban settlements which cover over quarter of the territory (EEA 2006). The traditional division into urban and rural settlements practically does not exist any more, because the essential differences in the quality of life (QoL) and spatial arrangement between them have diminished to a considerable extent.

The share of the urban population in Serbia increased for about two and half times from 22.5% (in Central Serbia - 21.2%) in 1953 to 56.4% (56.2%) in 2002. Compared to the neighbouring countries, Serbia is less urbanized than Bulgaria, Hungary and Romania, more urbanized than Albania and Bosnia and Herzegovina, and at the similar level as Croatia and Macedonia. Over the past two decades, the number of inhabitants in Serbia has been increasing only in urban areas.

Like in some European countries, Serbia is faced with distinct polarization between the regions with an increasing concentration of population and the regions with a decrease in population size. The first group includes urban regions in which the highest population increase is recorded in peripheral and periurban zones, while rural and hilly and mountain regions are featured by depopulation. Like in urban areas in the European countries (e.g. in France, Portugal, Spain and Italy), the population growth and an increase in population density in suburbs and peripheral zones is manifested in a large territory intake for urban sprawl. In Serbia, like in Italy, this phenomenon is recorded not only around large cities, but also around the majority of medium-sized and small towns (e.g. Kragujevac, Niš, Užice, Smederevo, Valjevo, Novi Pazar, Knjaževac, etc.).

For more than four decades, the urban areas in Serbia have been undergoing major changes in their functioning, physical structure and organisation. Such changes have had both positive and negative consequences, whereby the latter include irrational urban sprawl, that is, spatial squandering which resulted in a sharp rise in the prices for municipal infrastructure and its arrangement. Unplanned and unregulated peripheral zones, especially during the past 20 years, resulted in the formation of rings and agglomerations around the towns and cities in Serbia. Unintended construction both in urban core and peripheral zones is threatening the urban identity of most Serbian cities, but we still have no doctrine or adequate experience so as to ensure spatial rehabilitation and, at least to some degree, spatial arrangement and the improvement of QoL in such agglomerations (Maksin-Mićić, Perišić 2005:302).

We ought to be realistic about the possibilities to overcome the ongoing tendencies of urban sprawl. Is it realistic to expect that we can stop those tendencies? It seems more realistic to steer those tendencies in a more suitable and sustainable manner.

Since the causes of urban sprawl can be identified at the macro, mezzo and micro levels, they should be regarded by taking a multilevel and integrated approach both in theory and practice, namely by response at all levels of governance, coordination of different policies and by upgrading the control systems.

The key problems for steering the urban sprawl in Serbia are related to:

- regional disparities and polarization, inter-related with incoherent and asymmetric urban system;
- differences in the quality of life between the central and peripheral town zones, and in comparison to their rural surroundings in the functional urban area (so-called FUAs, PlaNetCenSe 2006) of macro, mezzo and micro regional size;
- problems of rehabilitation and identity of the built-up areas, and of achieving a balance between spreading built-up areas and protecting open spaces of the peripheral town zones.

In the paper, the possibilities offered by the concepts of polycentric urban system, functional urban areas and transport corridors development proposed by the national spatial plan for steering urban sprawl have been pointed out in brief. The paper analyzes the planning concepts and options for the sustainable development of functional urban areas, and for the urban centre and its peripheral zone growth control in the case of two municipalities in Serbia.

The main standpoint discussed in the paper is that to achieve any success in steering urban sprawl, the focus should be laid on the efficiency of the settlement network in the functional urban areas.

The question is how to define the urban sprawl? In recent European Environmental Agency report (2006) the urban sprawl is defined as the synonymous with unplanned incremental urban development, characterized by low density mix of land uses on the urban fringe.

2. THE PERIPHERAL TOWN ZONES AND URBAN SPRAWL IN SERBIA

2.1. *The Origin and Growth of Peripheral Zones and Urban Sprawl*

After World War II, the network of settlements in Serbia consisted of very small towns and many villages. Urban settlements had no peripheral zones; instead, towns and cities were surrounded by rural settlements.

After World War II, migratory movements from rural to urban areas were encouraged for ideological reasons, due to the lack of confidence in peasantry and with a view to achieving the supremacy of the working class. Migrations were encouraged by artificial and non-economically based industrialisation, which was supported by the creation of new jobs and employment opportunities for unskilled and semiskilled workers in towns; by pursuing urbanocentric housing policy and organisation of public services; by the system of selective social security (for the employed in socially-owned enterprises), as well as by disinvestment of public funds in rural settlements (Petovar 2003:12). Like other Balkan countries under the socialist system, Serbia had no real economic potentials for industrialisation, through which the process of forming the working class was conducted, coupled with the marginalisation of the rural population and agricultural estates, as well as the lack of government support to the economic and social development of rural areas.

The mass outward migration of the rural population, accelerated population growth in urban areas and the government's inability to direct urban development and ensure the spatial, social and cultural integration of the population resulted in the fact that population growth was not accompanied by qualitative changes in urban development, as well as in the formation of peripheral town zones. The main reason for the growth of, and settling in peripheral town zones lies in intensive industrialisation.

Serbia's abrupt urbanisation and industrialisation were experienced as a great surprise. Insofar as the regulations and control of spatial arrangement and construction are concerned, the relevant government bodies, planners and planning regulations were absolutely unprepared for the events taking place during the past fifty or so years (so-called "ostrich urbanism") and especially during the past three decades, when large settlements were formed in peripheral town zones. For a very long time, the greatest attention has been devoted to the arrangement and construction of central town districts, while peripheral zones have been neglected from a social, economic as well as legal viewpoint. Those are the main reasons why such zones in Serbian towns have been constructed without any planning, regulation or control. Since the government and government-owned enterprises were unable to solve the housing problem of all incoming population in urban areas, either in central districts or in new settlements with high-rise buildings, this people built their houses by themselves in large peripheral town zones, with small financial assistance of their enterprises and credits, but mostly working alone and with the help of their relatives (Živković 1972, Saveljić 1988, Stojanović 1990, Petovar 2003).

It is estimated that more than half of the migrating rural population has so far settled in peripheral town zones. This estimate is based on the fact that in almost every inter-censal period, some parts of those zones were incorporated into towns (administratively and statistically), while the zones themselves continued to grow and import new population. The problem faced in such surveys arises due to the use of different criteria in setting up the boundaries of the city/town and its peripheral zone: formal - statistical, administrative, building land boundaries, boundaries of the master plan of the town (and its peripheral zone) and factual – functional.

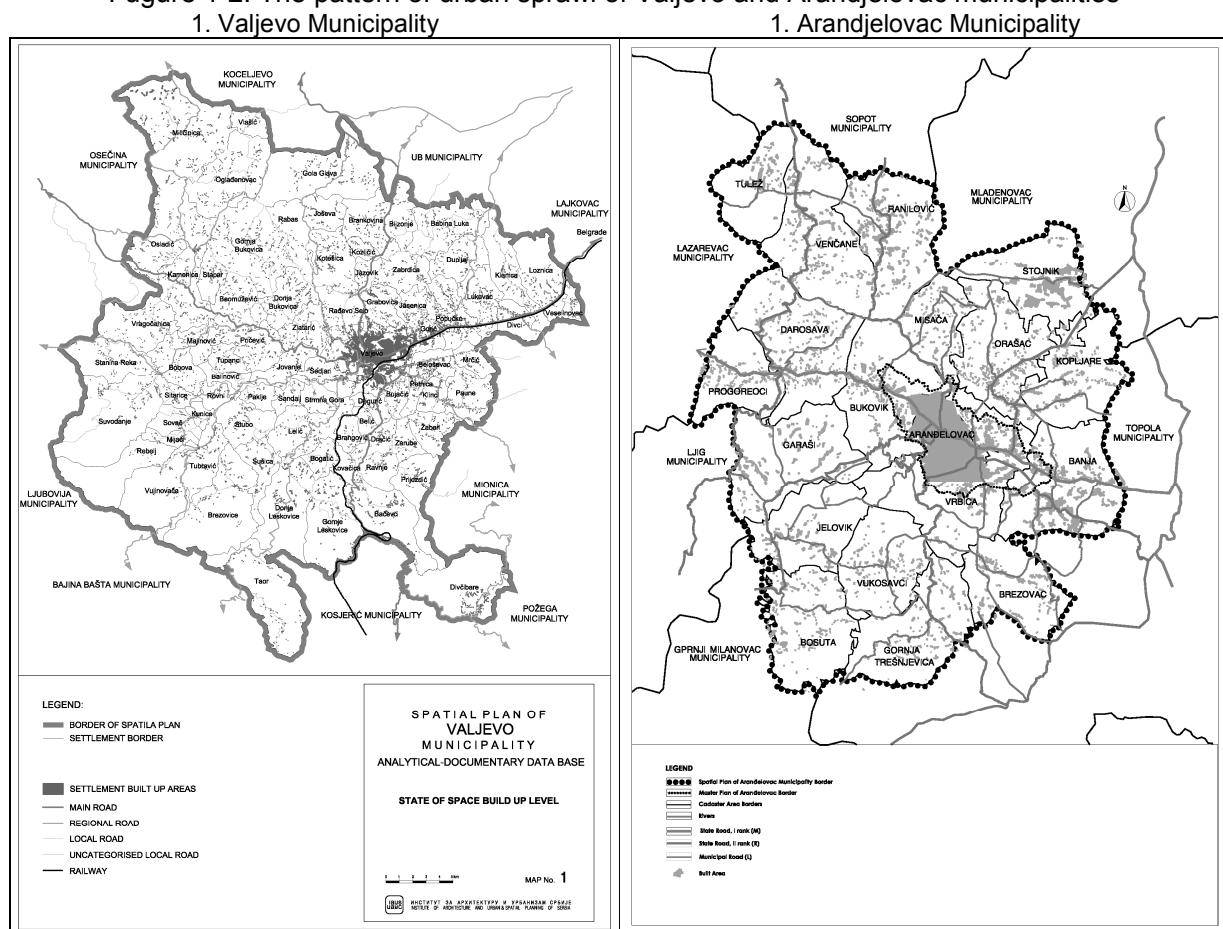
Since population mobility is closely related to the age of migrants, it causes spatial segregation with respect to the age distribution of the population - into the younger population which settles in and around urban centres and the older population which remains in, or begins to return to rural areas. Since 1980, the younger generation has been showing a marked tendency towards settling in peripheral zones rather than in central town districts. These processes change the age distribution of the population, resulting in imbalanced natural growth in the districts and zones that export and import the population. Therefore, the population in central town districts is ageing, while its rejuvenation is recorded almost exclusively in the settlements in their peripheral zones (e.g. in Belgrade, Niš, Valjevo, Smederevo, Pirot, Knjaževac, etc.).

2.2. Patterns of Urban Sprawl and Life Style in Peripheral Zones

The second half of the 20th century was characterized by significant urban sprawl in the urban-rural belt, along access roads. Instead of wide and continuous peripheral zones, the radial spreading system was formed.

Due to unplanned and irrational construction, peripheral zones occupy a larger area than other town districts. During the past forty years, in most towns, the signposts indicating the town boundary/name were moved several times towards the periphery, evidencing the formal conviction of the municipal government that peripheral zones, as well as some villages in the suburbs became a part of the town.

Fugure 1-2. The pattern of urban sprawl of Valjevo and Arandjelovac municipalities



Source: Maksin-Mišić M. et al. (2004): Analytical-documentary Data Base, Spatial Plan of Valjevo Municipality (2004), Institute of Architecture and Urban & Spatial Planning of Serbia, Serbia, Belgrade; Maksin-Mišić M. et al. (2007): Analytical-documentary Data Base, Spatial Plan of Arandjelovac Municipality, Institute of Architecture and Urban & Spatial Planning of Serbia, Serbia, Belgrade

The radial system of settlement and construction along access roads enables the inhabitants to have direct and good transport links with their workplaces in the town and their estates in the rural areas they came from. In other words, access roads to towns in Serbia are a prerequisite for urban sprawl in peripheral zones (Fig. 1-2).

Migrants were usually settling along the roads by which they arrived to towns from rural areas, i.e. along the roads connecting hilly and mountain regions with urban centre. One of the basic features of the peripheral zones of Serbian towns is that they are populated by migrants from the same or neighbouring villages, located in the dominantly hilly and mountain regions in Serbia, many of whom are related to each other. For this reason, settlements along certain roads are characterized by social homogeneity and solidarity among their inhabitants regarding their subsistence and the building of houses.

The open spaces of peripheral town zones with cheaper (agricultural and forest) land enable the formation of a number of locations with large and cheaper plots for the construction of residential, commercial and industrial buildings than in central urban districts.

In most cases, it is the question of one-storey houses, whose building is not very rational in terms of population density for the provision of utility and social infrastructure, as well as of urban suffocation and the loss of urban identity in urban-rural, that is, peripheral zones.

A tendency towards the movement to and development of micro, small and medium-sized enterprises engaging in secondary and tertiary activities, from town centre to these zones, brought about a change in land use and intensity, from residential to residential-business and business uses. This is especially evident along main roads to a town and major urban centre - markets in the surroundings.

These tendencies, coupled with commuting intensification, also exert influence on the social and economic transformation of the population in peripheral zones. Insofar as the occupational structure of the population is concerned, it should be noted that since its settlement in these zones there has been, in general, an increasing share of the employed in the secondary and tertiary sectors, as well as households with non-agricultural and mixed sources of income. It is estimated that the share of households with mixed sources of income is the highest, i.e. it is considerably higher than that disclosed in the official statistics, because many households still engage in agriculture, mostly in the rural areas they came from. Most of these inhabitants maintain certain social and economic relations with their families, most frequently with their parents; they also go to their villages from time to time, or lease agricultural land in the peripheral town zone and engage in agriculture as a secondary job. In this way, after settling in a peripheral town zone, their core activity becomes a secondary job.

2.3. The Quality of Life in Peripheral Town Zones

The term quality of life (QoL) has a very broad meaning, which has not been scientifically defined in a precise way to the present day. The normative way of defining QoL is most frequently confined to an attempt to determine the marginal values of its comparative advantages. In essence, QoL is assessed relative to an individual, that is, the conditions under which he realizes himself as a member of a specified group, society or region, so that it is mostly frequently investigated through specified target groups of inhabitants of a town, a peripheral zone and/or a rural settlement (Pušić, 1997:395-401).

The quality of life in peripheral town zones can be assessed on the following basis:

- Accessibility to the central town district – distance, suburban public transport and travel time;
- Spatial equipment level and organization with respect to transport and utility infrastructure and services (water supply, sewerage, electric power supply, telephone lines, district heating system, municipal solid waste removal), and their connection to the municipal infrastructural systems;
- Availability of social infrastructure, as well as public and other services in town districts (proximity, organization of service delivery);
- Basic elements of urban equipment in the arrangement of streets, parks, squares etc.;
- Possibilities for organizing and financing the activities relating to the improvement of living conditions and spatial arrangement, and
- The size and quality of buildings and the method of house plot arrangement.

This will be examined by using the medium-sized town of Valjevo and small-sized town of Arandjelovac as examples.

The accessibility of the central town district is satisfactory in both towns, since their peripheral zones are located on the daily (30-minute) isochrone of the town centre. Since the peripheral zone develops along main roads, its inhabitants have good transport links and easy access to suburban public transport. Most frequently, the dispersed municipal functions (commerce, elementary education, workplaces, etc.) are not available at the walking distance, which especially affects the most vulnerable target groups – preschool children, children attending the first four grades of primary school and the elderly.

The streets in the settlements formed in such a zone have been spontaneously constructed, that is, in an unplanned way, like the settlements themselves. As a rule, they have no pavement, parking space, green strips, etc. Peripheral town zones have predominantly local water supply. Settlements are connected to municipal water supply and to municipal sewerage only

exceptionally, mostly the parts along the main roads, or when a part of the peripheral zone is transformed into a town district. It cannot be said that these settlements are supplied with safe and high-quality drinking water, nor that the collection, conveyance and treatment of waste waters from households, farms and manufacturing facilities are safe. The supply of these zones with electric power supply and telephone lines is mostly satisfactory and close to the urban standards. Peripheral town zones are not connected to the district heating system. Municipal utility services organize the collection of municipal solid waste only periodically (once a week) and only for those parts of the zones which are located on the daily isochrone of the town. A great problem is posed by graveyard development and management in those zones which do not form part of the municipal utility system.

The greatest problem is probably posed by the accessibility of social infrastructure, as well as public and other services and the provision of adequate facilities. In contrast to the planned development of the urban area, where housing construction was accompanied by the construction of the facilities required for public services and services meeting the daily needs of the population, peripheral town zones do not have such facilities and have been neglected by municipal authorities.

The provision of child-care services and adequate facilities – kindergartens and primary schools, have also been neglected, so that the most vulnerable age groups – preschool children and children attending the first four grades of primary school – have to commute to the appropriate institutions in the town. Thus, they are not in the same position as the children of the same age living in the town, whose schools are located at the walking distance from their homes. The situation is similar with respect to the provision of primary health care. Even if the facilities for a health station or surgery are available, medical services are only periodically provided, so that the inhabitants are referred to health institutions in the town. One of the problems is posed by the fact that the public and private sectors do not enjoy equal status when the use of public health insurance funds is in question and this is of special significance for peripheral zones where these services are not provided by the public sector.

A special problem is posed by poor access to postal and financial services, which are available to the residents of most peripheral zones only in the town.

Peripheral town zones lack the basic elements of urban equipment – from the arrangement of streets, parks and squares to children's playgrounds and sports and recreational /facilities.

Decentralization in Serbia is still in the transitional phase. This is especially evident in towns and cities where, in real fact, the centralized system of government is dominant relative to the municipalities within the urban area and, in particular, to smaller local communities (neighbourhood units with several thousand to tens of thousands of inhabitants). Municipal branch offices located in these local communities are assigned a small number of administrative tasks by the municipal government, including specifically the issuing of certain enactments and documents, instead of being a part of the administrative system which is easily accessible to the inhabitants of urban and peripheral zones. The possibilities for organizing and financing the activities relating to the improvement of living conditions and spatial arrangement of peripheral town zones are very limited, since they are confined to the funds of the residents of those zones, private sector and donations, as well as very small or non-existent financial support out of municipal funds. The municipal government does not provide even minimum technical assistance to local actions with a view to improving the living conditions, especially in peripheral zones. Another problem is that local communities do not enjoy the status of a legal entity, so that they cannot represent their interests before the municipal government, funds or investors. In other words, small local communities have only the formal right to organize themselves, because they have no basic instruments so as to initiate any action and represent the citizens' interests. In this way, the residents of peripheral town zones and town districts are denied the possibility to act in an organized way and lobby for their interests at different levels of government and sources of finance.

It seems that one of the basic criteria for the assessment of QoL in peripheral town zones in comparison to central town districts and rural settlements would be the level of integration/inclusion of those zones in municipal infrastructural and superstructural systems and the system of government.

In general, the living conditions and quality of life in Valjevo and Arandjelovac peripheral town zones, especially with respect to the equipment level and availability of utility and social infrastructure, are much better than in economically undeveloped rural settlements with poor

infrastructure in the hilly and mountain regions from which the population has emigrated. On the other hand, they are less favorable than in central town districts.

As for the availability of basic public infrastructure and public services, it can be noted that the residents of peripheral town zones are underprivileged, i.e. they are "second-class citizens" relative to those living in central town districts (Maksin-Mićić 2006).

2.4. Spatial Arrangement and Construction of Peripheral Town Zones

In the peripheral town zones of Valjevo and Arandjelovac, it is possible to make a differentiation of settlements and their parts on the basis of spatial arrangement and construction method applied to residential and to cultural landscape protection.

The first type of settlement (or its parts) is characterized by the urban method of spatial arrangement and construction, with changes from cultural towards urban landscape, which can be differentiated on the following basis:

- Adequately organized and accessible suburban public transport system, formed or spatial conditions for the development of a system of hierarchically arranged streets;
- Partial or full connection of local water supply and sewerage to municipal systems; availability of electric power supply and telephone lines, organized municipal solid waste removal, formed or spatial conditions for the creation of public recreational and green spaces;
- Minimum public services (kindergarten, primary school or school outlet, health station or private doctor's surgery, municipal branch office and post-office);
- Relatively uniform size of plots and height of buildings, with a relatively uniform location of buildings relative to the street and a favorable location relative to the neighbours.

The second type includes settlements or their parts with the rudimentary urban method of spatial arrangement and construction, with some negative impacts on cultural landscape, which can be improved due to:

- Organized suburban public transport and spatial conditions for the development of a system of hierarchically arranged streets;
- Spatial conditions for the development and possibilities for connecting local water supply and sewerage to municipal systems; relatively satisfactory electric power supply, telephone lines and organized municipal solid waste removal; spatial conditions for the creation of public recreational and green spaces;
- Spatial conditions for the development of minimum public services;
- Relatively uniform size of plots and height of buildings with the prevailing favorable location of buildings relative to the street and neighbours.

The third type includes settlements or their parts with distinctly disorganized and deregulated spatial arrangement and construction, with massive landscape degradation. There are usually two subtypes:

- With some features of the urban method of spatial arrangement and construction, including the partial arrangement of streets and development of hydraulic infrastructure, relative electric power supply and telephone lines, different size of plots and relatively uniform height of buildings, with the dominant location of buildings which does not allow for complete street reconstruction and widening, and
- Without the features of the urban method of spatial arrangement and construction, where it is very difficult to provide for minimum urban control, spatial arrangement and provision of infrastructure, as well as building regulation.

The fourth type includes settlements or their parts, with the rural method of spatial organization and arrangement, preserved cultural landscape and modernized traditional method of plot arrangement and organization and construction of agricultural or mixed households' buildings.

The greatest differences arise between the parts of the settlement located along trunk, regional and frequently used local roads, on one side, and other parts of the settlement, on the other. In the built-up part of the settlement, along the access road to the town, which has already merged with the urban tissue, one can observe the first three methods of spatial arrangement and construction, the most frequent being the second and third ones. In the remaining part of the settlement one can find the fourth type or a combination of the second and fourth types.

Since the highest concentrations of the population and activities are recorded along the access-exit roads to the urban centre relative to other parts of the settlement area, it is possible to achieve more rational population densities, mixed uses and more intensive use of the built-up area and,

thus, its more rational provision of infrastructure and the conservation of agricultural and forest land only in the initiated and ongoing construction zones in these transport corridors.

3. THE POSSIBILITIES FOR STEERING URBAN SPRAWL AND THE ARRANGEMENT OF PERIPHERAL TOWN ZONES IN SERBIA

The spatio-structural and functional organization of the settlement network in Serbia is dominated by small urban settlements. Serbian urban system is incoherent and asymmetric. There is an evident lack of urban centres with 200,000-500,000 inhabitants and macroregional functions, which would be the agents of Serbia's balanced endogenous development and linkage to the European urban system. Due to such a structure, the Serbian urban system is neither compatible nor complementary with the aims of establishing the European urban system. Since the European strategy is geared to the future integration of polycentric urban structures, it is imperative that the Serbian urban and regional development models are adjusted to that concept (Tošić, Maksin-Mišić 2007).

Proceeding from the concept of polycentric development and the model which are favoured in the European Union, the functional regions of urban centres can provide an adequate basis for more balanced territorial development. The model of polycentric urban system and functional regions of urban centres adopted under the Spatial Plan of the Republic of Serbia, coupled with the necessary adjustments to the changes occurring in the last decade, provides a sound basis for inclusion in the European urban system, and for steering the urban development and urban sprawl in more sustainable manner (*Ibid*).

Under the Spatial Plan of the Republic of Serbia, Valjevo has been categorized as a regional centre and Arandjelovac as a subregional centre. In 2002, Valjevo was ranked as the tenth largest urban centre in Serbia with 61,035 inhabitants. Arandjelovac falls into the group of settlements with 10,000-50,000 inhabitants (25,199). Their demographic picture would be considerably different should the settlements in their peripheral zones be taken into account as well. In 2002, with its settlements in the peripheral zone Valjevo had 71,167 inhabitants (or 73.5% of the total population of the municipality) and Arandjelovac 35,967 inhabitants (or 74.7% of the total population of the municipality).

This means that in the analyzed municipalities there is a very distinct polarization into the area of the urban centre with the peripheral zone and main transport corridors, in which the concentration of the population and activities is increasing, and the rural areas in which it is decreasing. In the peripheral zone, like in the rural areas of the municipalities, there is one more form of polarization, whose intensity is smaller relative to the previous one, into the zones/complexes along all roads with more intensive traffic, which are featured by the concentration of the population, and other parts of the settlement area in which this concentration is decreasing.

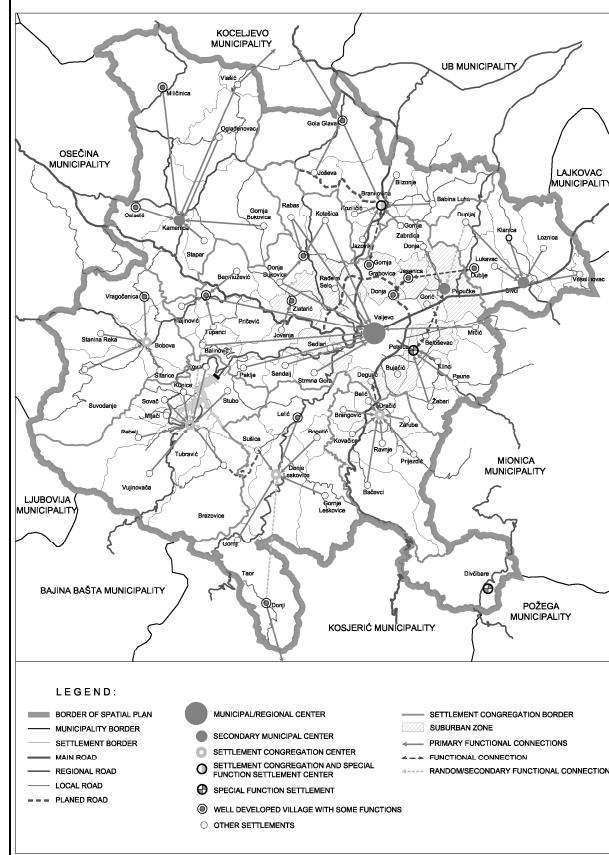
The most acceptable model for a more balanced development of the functional area of the regional centre of Valjevo and the subregional centre of Arandjelovac is the model of concentrated decentralized development, which implies the development of economic activities, public and other services not only in the urban centres, but also in the micro development centres in the rural area. Concentrated decentralized development can enable the lessening of differences in the quality of life between the rural and urban populations, preservation of the demographic vitality of the rural area, lessening of the migration of the population and activities to the urban centre and its peripheral zone. In other words, the problem of urban sprawl and the arrangement of peripheral town zones must be addressed by an integrated approach at the national, regional and local levels of planning and management. Such an approach can enable a certain relaxation of pressure on the urban centres and their peripheral zones, as well as the control and rehabilitation of unplanned construction, planned and controlled arrangement and rehabilitation of the peripheral zone, revitalization and reconstruction of the central and other urban zones.

It is not realistic to expect that it is possible to reverse to a more significant extent the long-standing depopulation trends in the rural area and the concentration of the population and activities in the urban centre and its peripheral zone. The current trends point out that the model implies the simultaneous and combined implementation of the strategy of urban renewal/revitalization with a wide range of new environmental initiatives and the strategy of controlled decentralization. Therefore, the option of multicentric city with more intensive public transport and activity centres in the peripheral zone, to which the development of specified functions of the urban centre will be steered, seems to be realistic.

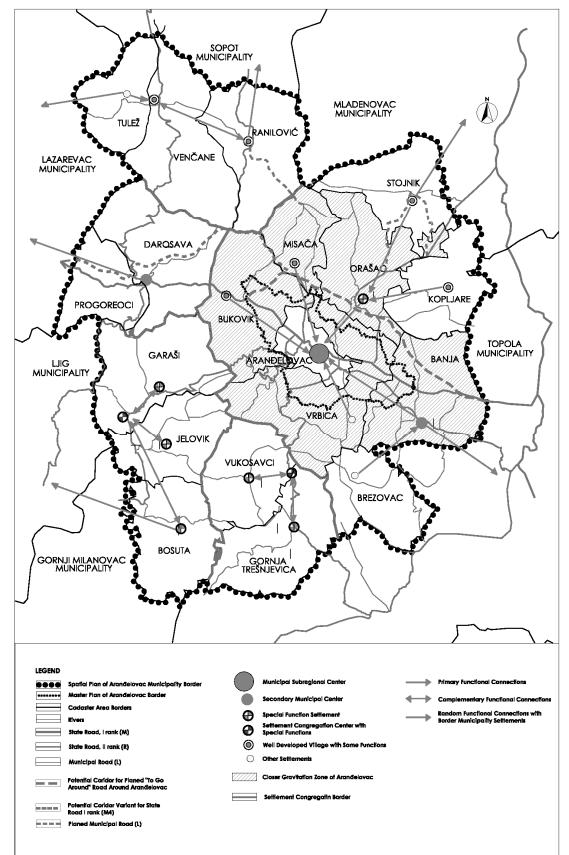
The implementation of the described conceptions, models and options has been adjusted to the specifics, potentials and limitations of developing each area in the spatial plans of Valjevo and Arandjelovac municipalities (Fig. 3-4).

Figures 3-4. The model of concentrated decentralized development in the territory of Valjevo and Arandjelovac municipalities

3. Valjevo Municipality



4. Arandjelovac Municipality



Source: Maksin-Mišić M. et al. (2004): Strategy of Spatial Development, Spatial Plan of Valjevo Municipality (2004), Institute of Architecture and Urban & Spatial Planning of Serbia, Serbia, Belgrade; Maksin-Mišić M. et al. (2007): Strategy of Spatial Development, Spatial Plan of Arandjelovac Municipality, Institute of Architecture and Urban & Spatial Planning of Serbia, Serbia, Belgrade

The hitherto development brought about the formation of micro development centres in the peripheral zones of these urban centres, with different current and potential functions at the levels of the submunicipal centre, centre of the community of settlements, settlement with specific functions, or a more developed settlement with specified functions, i.e.:

- In the peripheral zone of Valjevo – the submunicipal centre of Popučke, Petnica, a settlement with specific functions, and Jasenica, Grabovica and Zlatarić, more developed settlements with specified functions;
- In the peripheral zone of Arandjelovac – the submunicipal centre of Banja, Orašac, a settlement with specific functions, Misača and Bukovik, more developed settlements with specified functions, whose greater part has been integrated into the urban tissue as the secondary urban centre.

The micro development centres of the peripheral zone, in which the development of the secondary and tertiary sectors has been intensified over the past decade, have assumed the functions of the submunicipal centres. They have been tending to, or have already been functionally and physically integrated with the urban centre, when they assume the functions of the secondary urban centre, while some of them assume the functions of a specialized urban centre, while at the same time preserving or expanding their field of influence.

In the functional area of the regional and subregional centres there is the tendency toward forming micro development centres in the main transport corridors and their merger through continuing

construction along the roads. These tendencies are especially pronounced in the transport corridors from Valjevo to Lajkovac, Lazarevac and Belgrade, and from Arandjelovac to Lazarevac, Lajkovac and Valjevo, that is, to Topola. In fact, this is the question of the belts of more intensive development, which are specified by the Spatial Plan of the Republic of Serbia or, in other words, the question of the potential secondary belt of more intensive development having regional significance (Lazarevac-Arandjelovac-Topola), which connect macroregional, regional and subregional centres. Therefore, for steering urban sprawl it is significant to anticipate planned arrangement and control over construction not only for peripheral zones, but also for the belts of more intensive development along the transport corridors.

The rehabilitation of unplanned construction and the arrangement of the Valjevo and Arandjelovac peripheral zones imply: the development and improvement of all infrastructural systems (including the green space system) and utilities and their integration with the urban systems; improvement of public transport and development of specialized one (on call, in the public and/or private sector); decentralization of public and other services in the micro development centres in the peripheral zone; establishment of order in the fields of urban development and construction by adopting and implementing the rules governing the arrangement, protection and construction of the peripheral zone, etc.

The rules governing spatial arrangement and construction and the rules governing the preservation of the landscape of the peripheral town zone can be established under the municipality's spatial plan only in principle, thus requiring their more detailed elaboration based on the appropriate urban plan. Since the question of the protection of open areas – agricultural and forest land in the peripheral zone is especially significant and sensitive, it will be the most appropriate to adopt the plan for the preservation and management of the peripheral zone landscape, on the basis of which it will be possible to precisely define the boundaries of open spaces, as well as the measures and instruments of the policies for their arrangement and protection against construction.

The rules governing the spatial arrangement and development of the peripheral town zone under the municipality's spatial plan must be clearly differentiated for the construction zones relative to the zones with the varying degrees and regimes of spatial protection and reservation, which requires a restrictive approach to construction. It is necessary to lay down the general and particular rules governing construction and arrangement for the following zones and belts of spatial protection, reservation, construction and arrangement: water protection zones, zones of protection of natural and stationary cultural monuments, protection belts in infrastructural corridors, zones and belts of protection from the sources of environmental pollution, ongoing and initiated construction zones, zones and localities for industry and SMEs (Maksin-Mičić 2005).

4. CONCLUDING CONSIDERATIONS

A vital prerequisite for sustainable urban development (Thematic Strategy on the Urban Environment 2006; The Common Declaration of Saarbrücken 2005; Integrated Environment Management 2007) is an integrated approach to the process of planning and design of the urban area and environment in which all actors (national, regional and local levels of government, local and non-governmental organizations, economic agents and experts) attempt to ensure the following by integrating their activities and actions:

- Balanced, acceptable and equitable economic development, which enables urban revitalization and reconstruction;
- Protection of space resources and its most rational use by giving precedence to the change of its designated use and more intensive use of the existing yet underused or abandoned urban land relative to the new locations outside the urban area so as to limit urban sprawl;
- Functional links and environmental interaction among the urban areas and the urban areas with their rural and regional surroundings;
- Necessary population density, intensity of land use and activities, so as to enable rational organization, efficiency and accessibility of public and other services and achieving the expected life and environmental quality;
- Mixed land use, which is regarded as a precondition for minimizing traffic on the basic routes (home-workplace-services) in the urban and periurban areas;

- High-quality infrastructure, especially the network of transport routes and public transport systems so as to improve the accessibility of less developed local communities and intensify social, cultural and economic activities.

Bearing in mind the differences and similarities with respect to economic restructuring, social and environmental processes and changes and the hitherto tendencies in urban development, arrangement and construction in the countries of the European Union and in Serbia, it has been determined that there are both the need and potentials for the implementation of the concept of sustainable urban development in the Serbian practice of development planning and management, primarily for steering urban sprawl. The basic limitations will be derived from the slowed-down dynamics and problems in the economic restructuring of the regions and urban areas; inadequate development level of the entire management and planning system, especially at the local level of government; the absence of steering regional, urban and rural development and inadequate control over the use and construction of urban centres and their peripheral zones.

In the development of the Serbian urban system, the focus should be laid on reducing the concentration of population and activities in the state and provincial centres, that is, on qualitative changes in their economic and socio-economic structures, in addition to the more intensive use of available building funds, land and locational advantages, intellectual, scientific and development potentials. Priority should be attached to the implementation of the principle of polycentric development by spurring development and improving the quality of life in macroregional and regional centres, as well as in smaller cities in the Republic, and their functional areas (FUAs).

In the case of Valjevo and Arandjelovac the most appropriate model for a more balanced development of the functional areas of the urban centres, is the model of concentrated decentralized development, which implies the development of economic activities, public and other services not only in the regional and municipal centres, but also in the micro developmental centres in the rural area. Concentrated decentralized development can enable the lessening of differences in the quality of life between the rural and urban populations, preservation of the demographic vitality of the rural area, lessening of the migration of the population and activities to the urban centre and its peripheral zone. The issue of urban sprawl and arranging peripheral town zones requires an integrated approach at the national, regional and local levels of planning and management. Such an approach can contribute to a certain relaxation of pressure on the urban centres and their peripheral zones, and enable the control and rehabilitation of unplanned construction, planned and controlled arrangement and rehabilitation of the peripheral zone, and the revitalization and reconstruction of the central and other urban zones.

The option is that it is necessary to provide the model of alternative urban development, which will enable that the current negative influences and consequences of urban sprawl are avoided. Depending on the specificity of each region, urban area and its peripheral zone, it is necessary to adopt differentiated measures, primarily with respect to increasing density in the peripheral zone and decreasing density in other urban zones; determination of adequate measures for the relevant groups of actors; appropriate zoning of the area of the peripheral zone and the development of public infrastructure, etc. (URBS PANDENS 2005).

Considering the possibilities and needs for improving the living conditions and QoL, as well as the proposed typology of settlements and their parts in the peripheral zones of Serbian towns, it is necessary to establish the rules governing spatial arrangement, protection and construction, as well as to prepare the program for the improvement and rehabilitation of those zones, especially with respect to their gradual (stepwise) integration into the municipal infrastructural and suprastructural systems. In order to implement improvement and rehabilitation program, it is necessary to decentralize the municipal government system and transfer some of its competences and access to public funds to small local communities in the town and its peripheral zone. In order to direct and manage the development of peripheral zones, it is also important to formulate land use and housing policies, as well as to provide incentive measures and instruments of tax policy, thus encouraging the private sector's investments in the arrangement of those zones, all the more so because their intensive development and growth are expected in the future. Special attention should be devoted to the dissemination of information and education of the population so as to enable the preservation of the values of rural life style and peripheral zones and their improvement by adopting and adjusting the patterns of urban life style and spatial arrangement and construction.

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Author:

Marija Maksin-Mićić, Ph. D

Associate Professor

Faculty of Tourism and Hospitality Management

"Singidunum" University

Belgrade, Serbia

