

KOMPAKTNO MESTO ALI RAZPRŠENA MESTNA REALNOST: ŠTUDIJA PRIMERA BANJE LUKE

COMPACT CITY OR DISPERSED FORM REALITY: BANJA LUKA CASE STUDY

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IZVLEČEK

Skladno z najnovjšo urbanistično teorijo in raziskavami so se številna mesta iz oblik s prepoznavnim središčem, obrobjem in jasnimi robovi spremenila v velika in razpršena tkiva, ki prodirajo globoko in svoje zaledje. V nasprotju s temi ugotovitvami in izkušnjami razpršenosti pa v urbanistični politiki in praksi načrtovanja še vedno prevladuje ideologija kompaktnega mesta. Na primeru mesta Banja Luka (Bosna in Hercegovina) raziskava ugotavlja nezdržljivost med prostorskimi strategijami kompaktnosti (opredeljenimi v prostorskem načrtu mesta Banja Luka) in razpršenosti urbane oblike, ki se izraža v prostoru. Morfološka študija prikazuje različne vzorce urbanih oblik, ki izhajajo iz razmerja med stavbami, odprtimi prostori in pokrajino. V nasprotju z značilnostmi urbanih oblik analiza načrtovalskih dokumentov kaže prostorske strategije zgoščevanja in kompaktnosti v pripovedi urbanističnega načrtovanja. Raziskava prispeva k opisu razpršene urbane oblike z razvojem metodološkega modela, ki temelji na tradiciji krajinske teorije. Poleg tega raziskava potrjuje pomembnost upoštevanja urbane oblike in urbane morfologije pri prostorskem načrtovanju.

ABSTRACT

According to recent urban theory and research, many cities have transformed from formations with recognisable centres, periphery and precise edges to large, dispersed tissues that penetrate deep into their hinterland. Contrary to these findings and experience of dispersity, the ideology of a compact city dominates urban policy and planning practice. In the context of the City of Banja Luka (Bosnia and Herzegovina), the research elaborates on the incompatibility example between the spatial strategies of compactness (defined in the Spatial plan of the City of Banja Luka) and the dispersed character of urban form in reality. The morphological study demonstrates different urban form patterns arising from the relationship between buildings, open spaces, and landscapes. In contrast to urban form characteristics, the planning documents analysis shows the spatial strategies of densification and compactness in the urban form planning narrative. The research contributes to the characterisation of the dispersed urban form by developing the methodological model founded on the landscape theory tradition. Moreover, the research affirms a more substantial consideration of urban form and urban morphology in spatial planning.

KLJUČNE BESEDE

razpršena urbana oblika, urbanizacija, prostorsko načrtovanje, odprt prostor, krajinska oblika, Banja Luka

KEY WORDS

dispersed urban form, urbanisation, spatial planning, open space, landscape form, Banja Luka

1 INTRODUCTION

“Through greed and ignorance we could destroy the very values that inspired the new city and build instead a degenerate urban form that is too congested to be efficient, too chaotic to be beautiful, but too dispersed to possess the diversity and vitality of a great city (Fishman, 1991, p. 45).”

Since the 90s, compact cities have been one of the leading paradigms in urban policy and planning practice. Many reports and policy papers have argued that the compact city model has positive effects on transportation efficiency, local economy, citizen health, social cohesion, and cultural dynamics since the European Union Green Paper on the Urban Environment (EC, 1990) (OECD, 2012; UN-Habitat, 2017; EC, 2017). The model is presented almost as a straightforward positive phenomenon, and critical debate on compact cities is rare and scarce (McFarlane, 2023). Compactness, density, diversity, mixed land use, efficient transportation, and abundant green space are the compact city's core planning strategies for achieving sustainability (Bibri, 2020; Bibri et al., 2020). Desirable spatial continuity is achieved through higher density and continuity of the built structure, which provides shorter spatial distances in the transport system and infrastructure. The defined edge of compact urban form is considered a measure of protection of agricultural land, forests, and natural landscapes outside the city perimeter. In conclusion, the dispersed character of urban form is considered problematic.

However, is it possible to universally apply spatial strategies of the compact city model? Many urban environments were compact from a historical perspective, but not all of them. For example, cities in Bosnia and Herzegovina were never morphologically compact in their historical growth. Many urban environments that used to be compact are transforming into vast and porous (Schmid, 2006; Kasanko et al., 2006; Van Der Velde & de Wit, 2009; Schwarz, 2010; Brenner, 2013; Brenner & Schmid, 2015; Topalovic, 2015; Brenner, 2019; Viganò et al., 2017; Brenner & Katsikis, 2020). Moreover, by exceeding a certain perimeter, compact urban forms could become congested, uncomfortable, inaccessible, and encounter problems of GHG emissions, energy consumption, and the loss of open green areas in light of escalating urbanisation (Bibri et al., 2020, p. 4). In the ideological supremacy of the compact city model, the planning strategies in which open spaces have a structural and compositional role in directing spatial growth are rare (Maruani & Amit-Cohen, 2007).

This research deals with the dispersed urban form and spatial strategies in planning (as guidelines on the city's spatial development) investigated in the context of Banja Luka (Bosnia and Herzegovina). The landscape approach is applied in the research to analyse and understand the urban form. Specifically, *the landscape form of a metropolis* analytical theory provides an insight into the existing and potential compositional integrity of the urban form, which is not based on compactness - the continuity of the built space, but considers the structural role of open space in different scales (Van Der Velde & de Wit, 2009). The research elaborates on the incompatibility between the spatial strategies of compactness (defined in spatial planning documents relevant to the City of Banja Luka) and the dispersed character of urban form (described through morphological study). Finally, the research will demonstrate the existence of various patterns in Banja Luka's urban form arising from the relationship between buildings, open spaces, and landscape, which is different from the compact city model.

Ignorance of the dispersed character of urban environments and the existence of various form patterns (beyond compactness), the authors consider a missed opportunity for potential control of urban growth

through spatial planning and oversight that can have negative consequences in the context of sustainability. The research contributes to the methodological model of urban form characterisation, founded on the landscape theory tradition. Its general aim is to contribute to a knowledge platform for creating spatial strategies in planning corresponding to the nature of the dispersed urban form. Those strategies could focus on the problem of spatial continuity and form integrity based equally on built and open spaces, through whose entanglement dispersed cities potentially contain ecological, sociological and aesthetic quality. Moreover, the research affirms a more substantial consideration of urban form in spatial planning, which means the disciplinary integration of large-scale urban design theory and methodology of their analysis in the spatial planning domain.

1.1 A landscape approach to spatial continuity

The analytical theory of the landscape form of a metropolis enables the description and reflection on spatial continuity, which is not based solely on the proximity and density of the built structure. The unbuilt space also contributes to the experience of spatial continuity and the integrity of urban form. According to the theory, the landscape is the critical methodological device that addresses the fragmentation of the metropolis - “an unstable, dynamic environment in which elements of the contemporary city re-array themselves in an unbounded urbanised territory” (ibid, p. 56). Nevertheless, it enables rethinking and reconceptualisation of the large-scale urban form without relapsing into the hierarchy-based organisation of the ‘traditional’ city. Instead, the theory refers to landscape patterns as the primary spatial units of urban configurations, which can be recognised and the logic of their composition understood. This procedure opens up the possibility of thinking about new compositions as the design of the metropolis.

The landscape form of a metropolis theory defines three landscape form patterns characteristic of dispersed cities and form their composition: *flowscape*, *plantation* and *theatre*. Their morphological peculiarities and ways of use and experience arise from the relationship between the built structure, the shape of open spaces, topography and green structure. *Flowscapes* are linear patterns that develop around an elongated basic structure (natural or artificial) as a spatial and functional backbone. *Flowscapes* generate and support movement through which the immediate environment is dominantly experienced. *Plantations* are patterns in which the program is the key generator of spatial order and the collage of diverse architectural forms they contain. Given that they are based on a previously defined program (which can refer to an area of different sizes), plantations are exclusively planned areas. *Theatres* are ‘negative’ patterns defined by the morphological characteristic of unbuilt or open space - urban voids. As scenes of urban life, these patterns expose human activity and natural processes to view and experience.

2 METHODOLOGY

The case study city, Banja Luka, has around 185,000 inhabitants living in 1,209 km² of the city’s administrative area. Planning documents divide the city territory into the city core and its surrounding belt, which comprise *the urban area* (15 % of the total administrative area), where seventy-five per cent of the city population lives. The rest of the city territory is called *the non-urban area*.

The research on Banja Luka’s urban form and spatial strategies in planning is qualitative research based on data collection, analysis and interpretation as the primary methods. The research follows the two

questions: What are the significant characteristics of Banja Luka’s urban form considering the relation of built and open space composition in the landscape? How does the urban form vision in planning documents correspond to the urban form’s current state? Two research strategies were applied concerning the research questions: the morphological study and the planning documents study. The morphological and planning documents study results were compared and discussed. Furthermore, by expanding and refining the landscape form analysis method, the research contributes to developing the model for morphological studies of large-scale urban forms.

2.1 Morphological study

The model for the morphological study is scale-sensitive and tends to illuminate the mutual dependence of transformations in space through different scales for a comprehensive understanding of urban form. The first part of the research is done on the city territory scale (1:25 000 according to the spatial plan), while the second part describes landscape form patterns on a 1:2500 scale (Table 1). Research on a smaller scale is used for a more comprehensive understanding of the urban form character on the city territory scale, and it will not be presented in detail in this paper. Due to the availability of cartographic material and planning documents, the morphological study included mapping, landscape form pattern classification, and pattern composition analysis within the city’s administrative boundaries. The spatial scope was recognised in advance as a weak point of research. Mapping was conducted in 2020 with master students at the University of Banja Luka, Faculty of Architecture, Civil Engineering and Geodesy, within the course Urbanisation in Western Balkan countries (Novaković et al., 2020a).

Table 1: Applied model for morphological study

| Scale | Task | Content and focus | Data and techniques |
|--|---|--|---|
| 1:25 000 Desk research: Urban form | 1 A. Historical research | - The transformation of urban form over time and the essential characteristics of its growth; - The form as a composition of patterns and their general characteristics on a smaller spatial scale. | - Content analysis of archival documents, literature, planning documents and mapping. |
| | 2 B. Mapping study | - The relation between built and open space and their relationship to terrain morphology, green structure, land use, and communications network. | - Figure/ground and other maps drawing. Data for mapping was extracted from secondary literature, the spatial plan, orthographic photography and Google Maps. |
| | C. Landscape form patterns classification | - The landscape form patterns and their composition: plantations, theatre, and flows. Theory patterns were supplemented with one new from the previous research - the carpet. | - In-depth reading and analysis of maps; - Definition of criteria for classification; Identification and mapping of landscape form patterns. |
| | D. Composition analysis | - Representation of landscape form patterns, their mutual relations and spatial continuity. | - In-depth reading and analysis of maps; - Comparison with results of historical research. |
| | E. Sampling | - The fabric of landscape form patterns. | - Drawing of grid 1x1 km over maps and selection of characteristic fields as samples. |

| Scale | Task | Content and focus | Data and techniques |
|---|----------------------|---|--|
| 1:2 500 Field research: Landscape patterns | 3 F. Mapping study | - The fabric of landscape form patterns individually, according to the relation between built and open space and their relationship to terrain morphology, green structure, land use, and communications network. | - Figure/ground and other maps drawing. Data for mapping was extracted from orthographic photography, Google Maps, and field research. |
| | G. 3D study | - The spatial relations between buildings, open space, human activities, and landscape in three dimensions. | - Photography in sequences and axonometric drawing. |
| | H. Synthesis | - General spatial characteristics of landscape form patterns and reflections on urban form. | - In-depth reading and analysis of landscape patterns results (F and G); - Discussion concerning results of urban form composition analysis (D) and analysis of landscape patterns (F and G). |
| | 4 J. Recommendations | The potential for achieving the spatial integrity of the urban form. | |

Urban form is primarily observed and described through four landscape form patterns. In addition to the three patterns outlined in the theory, the fourth pattern was defined in preliminary research of Banja Luka’s urban form and employed in the study (Novaković et al., 2020). It is named *the carpet* and refers to the pattern dominated by landscape elements, low built density, a mix of urban functions, and sub-urban and rural way of life. It is built over a long period, household by household, without the overall design or program. In this research, the authors defined additional qualitative criteria and descriptive classification indicators for unambiguous recognition of all four landscape form patterns (Table 2).

Table 2: Qualitative criteria and indicators for defining landscape form patterns

| Landscape form patterns | Landscape form of metropolis theory | | Additional criteria | |
|-------------------------|--|--|---------------------|---|
| | Program criteria | Spatial criteria | Program criteria | Spatial criteria |
| Plantation | - Colonisation grid with an ordering principle based on the urban program of dwelling, work and leisure; - Urban concentration; | - Compact or coherent form; - Regular patterns (grids) placed upon the natural and cultural landscape; - Natural landscape is technically modified; | | |
| Flowscape | - Circulation artery as a main ordering principle; - Mix of dwelling, work and infrastructure; | - Linear structure; - Infrastructural elements can become visually dominant compared to built structures; - Kinetic perception dominant, with the route as a basis for the succession of scenes; | | - Linear structure: /principle of continuity – maximal length of unbuilt space along the road edge; |

| Landscape form patterns | Landscape form of metropolis theory | | Additional criteria | |
|-------------------------|---|---|--|--|
| | Program criteria | Spatial criteria | Program criteria | Spatial criteria |
| Theatre | - The counterpart to the urban program; | - Architectonic fragments of defined voids; - Natural processes exposed; - Spatial staging as the relationship between the spectator, internal horizon, and non-programmatic content; | | - Spatially defined void inside of plantation or theatre; /principle of closing – a defined boundary that visually insinuates the closing; /minimal area measure of void; /void area proportions; |
| Carpet | | | - Urban program not planned as a spatial whole but realised in fragments; - Mix of urban programs (dominantly of infrastructure) and rural way of life; | - Constellation of smaller built patches: /principle of closeness – the defined distance between the patches; /maximal area measure of patches; |

2.2 Planning documents study

The urban form narratives and spatial strategies were analysed in two planning documents. These are the Spatial plan of the Republic of Srpska (RS - one of two Bosnia and Herzegovina administrative entities) (MPUGE & UZBL, 2021) and the Spatial plan of the City of Banja Luka (GBL et al., 2014). The established system of planning documents with a strategic character in directing the transformation of the local self-governing territory (*jedinice lokalne samouprave*) includes a spatial plan, an urban plan, and zoning plans for areas of particular importance. However, the city of Banja Luka does not have an urban plan, with the last one adopted in 1975 or zoning plans. The existing planning documents analysis aimed to extract and understand the vision or prospective image of the urban form. Only explicit descriptions concerning the urban form, land use, and spatial elements are interpreted, which means that potential effects of economic, social or other sector strategies on the urban form were out of the scope of this research.

3 RESEARCH RESULTS

3.1 Historical study on urban form

Throughout history, Banja Luka grew as a sparsely built, dispersed, and green city (Simonović, 2010). After the Ottoman Empire's conquest in the 16th century, Banja Luka, like many Bosnia and Herzegovina settlements, transformed into a particular oriental town beyond stereotypes of the dense and compact urban fabric of the Islamic world. Oriental building culture and worldview were adapted to the abundant nature, climate, and geography. Urban growth manifested through the emergence and composition of family house groups - *mahala*, and the trade and artisan centres - bazaars (*čaršija*) along the Vrbas River. While the bazaars had a dense and consistent spatial order, the sparsely built mahala, which emerged

slowly and organically, adapting to natural conditions and following the specific dwelling culture, is the pattern from which Banjaluka gets its dispersed character.

The centuries-long Ottoman rule and annexation to the Austro-Hungarian monarchy did not stimulate the industrialisation and urbanisation characteristic of other parts of Europe, so Bosnia and Herzegovina remained distinctly rural. However, the period of the Austro-Hungarian administration in Bosnia and Herzegovina (1878–1918) left recognisable traces in urban history, primarily by introducing the regulation and space management system characteristic of European cities. Still, in the absence of significant housing demand, like in industrialised societies, the spatial patterns of the compact city, such as perimeter block, will never become characteristic of Bosnian cities. The closed city blocks and dense construction remain the exception in Banja Luka.

Banja Luka went through the most intensive urbanisation during the 20th century. Dispersed arrangements of households surrounded by gardens and orchards were complemented with modernist larger-scale housing ensembles but immersed again in generous park-like environments. The open and green spaces were critical structural elements of urban compositions, forming distinctive landscapes of Bosnian towns. This potential historical continuity of morphological openness brought by modernism was recognised by eminent modernist architects Juraj Neidhardt, Dušan Grabrijan and Jahiel Finci (Grabrijan & Neidhardt, 1957; Finci, 1962; Finci, 1967). They find modernist planning ideas such as urban decentralisation, division of city functions, and interpenetration of built, open, and green spaces extending the unwritten principles of Bosnia and Herzegovina's 16th-19th-century vernacular architectural culture.

3.2 Dispersed and low-dense: Urban form in reality

By observing the built structure on the figure/ground map (Figure 1a), we can see the significant fragmentation and dispersion of the urban fabric. However, translated into landscape form patterns, the urban form shows itself in a new and more comprehensible composition assembled by four patterns (Figure 1b). The urban core is the most compact and densely built fabric. Geometrically irregular and porous edges characterise the less densely built core belt. Nevertheless, according to the classification criteria of landscape form patterns, they represent a large plantation (dark grey, Figure 1b). There are three smaller isolated plantations in the western and southern parts of the city. Unbuilt lands (voids) of various sizes and forms are dispersedly embedded in the urban core and belt, corresponding to the theatre pattern (red, Figure 1b). The built fabric of the core and belt extends linearly deep into non-urban territory at several points. These linear road formations are flowscape patterns (light red, Figure 1b). Along the rest of the edge of the urban area, the built fabric spills out towards the open land in smaller fragments (Novaković et al., 2020a).

According to the patterns sample analyses, the building coverage ratio in plantations varies depending on the construction time and the morphological type of urban units (according to the relation between plot size, the number of buildings, and the ensemble configuration). Until 2000, the building coverage ratio in the city core pattern samples was at most 40%, with the lowest coverage ratio in ensembles from the 1960s and 70s with even 20-25%. In samples built recently, the building coverage ratio has grown to 70%.

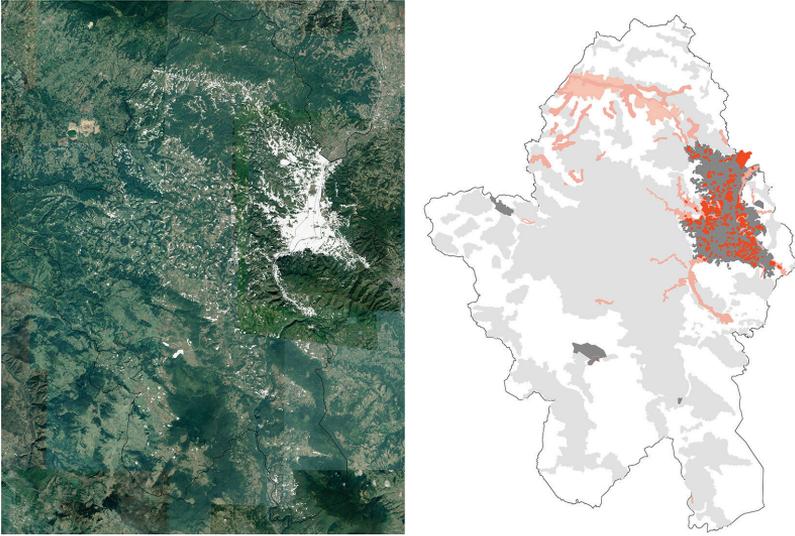


Figure 1: Patterns composition analysis: Comparison of the figure/ground representation (1a left) and urban form as a composition of landscape form patterns (1b right). Map legend (1b): plantations (dark grey), theatres (red), flows (light red), carpets (light grey), forests, heights, and other uninhabited landscapes (white).

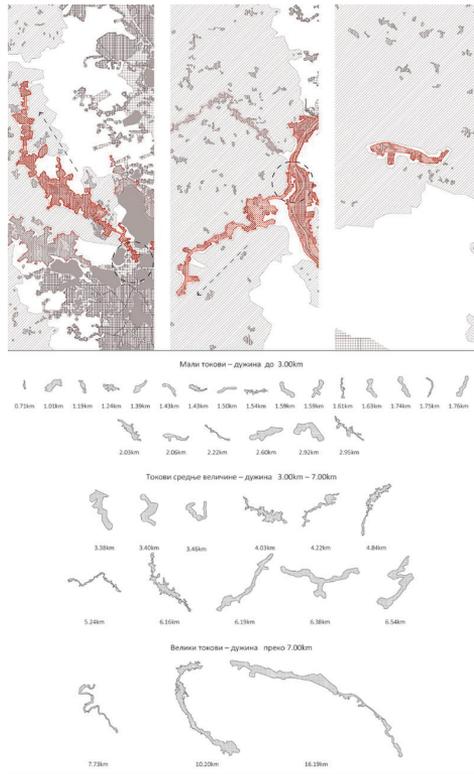


Figure 2: Patterns composition analysis: flowscape pattern (light red) – analysis of spatial characteristics, relation to other patterns, typological classification according to length (Drawings by Jovana Janjić, Nataša Lizdek, Nataša Ignjatić, Milica Borić).

The length of the flowscapes varies from 1 to 16 km (Figure 2). The four large flowscapes stand out, of which the north-western stream towards the city of Prijedor and the southern stretches along the Vrbas river valley. The two large flowscapes, which connect the urban fabric of Banja Luka with Gradiška in the north and Čelinac in the southeast, are not visible on the map because they do not fall within the administrative boundaries of the city. The size of the voids varies from 0.35 to 66 ha. The most numerous (71) have an average size of 0.3 ha, while the fourteen largest have an average area of 25 ha (Figure 3).

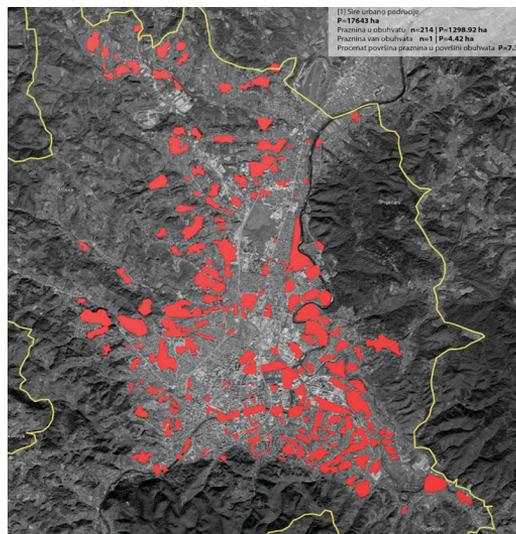


Figure 3: Patterns composition analysis: theatre pattern (red) - analysis of spatial characteristics, relation to other patterns, typological classification according to surface size (Drawing by Stefan Ilišković).



Figure 4: F. Mapping study of patterns: figure/ground maps of plantation, theatre and flowscape in 1x1 km samples (Drawings by Aleksandra Komljen, Stefan Ilišković, and Nataša Lizdek, respectively).

Therefore, the urban area of the city territory is a distinct composition of three landscape patterns of various sizes and forms. In morphological terms, it is a vivid collage of diverse building typologies and infrastructural elements standing next to each other in a continuous open space (Figure 4). However, 44% of the non-urban territory is covered with a carpet pattern. This part of the metropolitan landscape consists of tiny houses and sporadically larger structures dispersed along local roads and surrounded by greenery (Figure 5). The carpet form is created and grows over a long period without a general program, in which only the

infrastructure is subject to sectoral planning. Dominant representation and a wide range of types of unbuilt space (agricultural land, grassland, groves) spread over dynamic geomorphology give the essential character to this pattern (Novaković et al., 2020). It also contains significantly transformed former villages and sporadic elements of the rural lifestyle. The rest 45% of the city territory is uninhabited heights and forests.



Figure 5: F. Mapping study and 3D study of patterns: figure/ground map, axonometric drawing and photo essay of carpet pattern sample (Drawings and photography by Dajana Savić).

3.3 Coherent and polycentric: Planning vision of Banja Luka's urban form

Comprehensive territorial development achieved through the polycentric formation of the urban fabric and functions is a fundamental planning strategy for the growth of Banja Luka in national and city territory plans (Novaković et al., 2020). All municipalities and urban territories of the RS, with Banja Luka as the largest, are envisioned to have an urban centre, forming a hierarchically organised network (MPUGE & UZBL, 2021). Banja Luka is also the focus point of the urban linear tissue Banja Luka - Gradiška - Mrkonjić Grad, one of four regions that constitute the territory of RS. However, this strategic division of the RS entity territory into regions is not supported in the domain of operational planning, although it has a basis in the context of topographical and economic specificities. Spatial and urban plans have been created only for municipalities and cities, at least some with sufficient budgets. The vast terrain between urban centres that has been actively transformed over the previous two decades is a spatial planning blind spot and is morphologically still unexplored (Novaković et al., 2020).

Besides belonging to a polycentric form on a larger scale, Banja Luka is also conceived as a network of settlements and their centres (GBL et al., 2014). All urban units in the network should receive some of the planned metropolitan functions and services in the economic vision of the city's development, which tends towards a greater degree of "metropolisation". At the same time, the spatial growth of the city should reach the "increase of territorial coherence" (GBL et al., 2014, pp. 15-16). The polycentric territorial vision is supplemented by categorising urban centres based on the variety and number of urban functions (Figure 6a). Besides one large city centre (core and surrounding belt), there are secondary centres, village community centres, and local centres. In spatial terms, each centre has a corresponding construction area, depending on centre classification. Therefore, Banja Luka's urban form is supposed to grow and increase territorial coherence through the distribution of smaller concentrations and one significant agglomeration, all arranged in the vast rural territory with no formal character. According to the Plan, there are three secondary centres, two village centres, seven local centres and thirty-six small "other settlements", with a dot-like distribution on the city territory map.

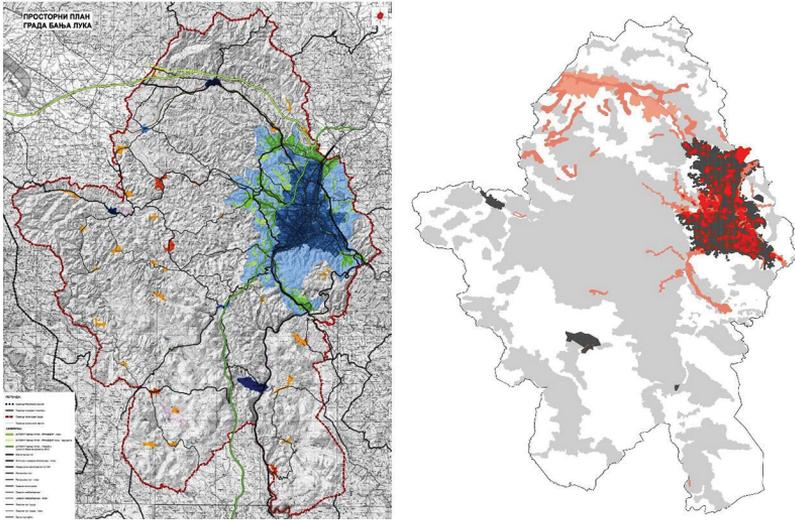


Figure 6: Comparison of the urban form from the Spatial plan (6a left) and the composition of landscape patterns (6b right). 6a map legend: core urban area (dark blue), core belt (the lightest blue), sub-urban construction areas (green), construction areas of secondary centres, village community centres, and local centres (the darkest blue, the light blues, shades of orange, respectively).

The Spatial plan ensures the realisation of the spatial strategy of densification and compact growth of urban units within the network through the definition and positioning of construction land and land under protection. New construction is directed around and within built-up areas wherever feasible. The strategy of densification and compactness is considered rational and ecological because it positively affects the distribution of infrastructure, energy efficiency and protection of land resources. The plan defined several categories of land under protection in which construction is not allowed, such as the land of natural values, cultural and landscape values, agricultural values, infrastructural importance, and exploitation.

4 DISCUSSION

The two maps of Banja Luka's urban form show significantly different morphological features (Figure 6). If we look at both compositions through the landscape form lenses, the urban form in the Spatial plan is defined with one pattern - plantations - a space with a planned program and a higher level of building coverage. The planned urban form is a constellation of one large and several smaller plantations (urban centres) that 'float' in the topography of undefined character (non-urban territory). The plan mandates "the definition of open spaces" in the central urban area and the architectural and landscape elements of the urban identity in the future urban plan (ibid, p. 35). The voids are not imagined as a form generator at the territory level, and their comprehension is considered only relevant for land use arrangements. Thus, these open spaces still need to be mapped as an integral part of the urban form as a whole, having in focus their potential ecological and social values for an expanding urban agglomeration.

The existing flowscape patterns of shorter length, which extend almost radially from the central urban area, are merged in a new coherent belt of robust construction in the Spatial plan strategy. Although the plan sporadically mentions the urban linear development in the distinct parts of the territory (ibid,

p. 31), it ignores dimensionally striking linear structures connecting Banja Luka with other cities and settlements. The linear development of the urban fabric along vital roads and waterways has a specific spatial and economic logic of growth and daily life, and it should be considered in planning as such.

Finally, a large part of the city territory - the carpet pattern, is defined in the Spatial plan as a rural or non-urban territory. It does not take part in structuring the urban form and represents a neutral base where the urban concentrations (centres) and minor protected areas lie. The plan overlooks the existing built structure, economic and other activities, and the ongoing transformation inside this territory. The plan implies that the construction and transformation trend will stop outside the urban centres since it directs the new construction towards them. This process will be unrealistic, as indicated by the fact that this territory (outside urban centres, protected areas, and special purpose areas) is not subject to regulatory planning (regulatory and zoning plans), and the existing planning system does not support rural plans. Paradoxically, land outside the scope of planning documents can be converted to construction land and acquire a construction permit. Furthermore, illegal construction is not irrelevant in this context, with around 20,000 no-permit buildings on city territory (GBL, 2016, p. 99).

The most evident errors in planning methodology and system related to the incompatibility between urban form in reality and urban form in spatial plan are as follows. How a space is viewed and analysed directly affects how it is planned and designed. In the initial analytical phase of the spatial planning process, in which the relevant aspects of the space are considered - natural and human-made conditions, a morphological study of the city's territory is not supported. Space is dominantly viewed, and urbanisation consequently is directed through the lenses of construction, functioning and protection.

The established planning documents system does not support smaller-scale plans for parts of the city outside the urban or special purpose area, such as rural or landscape plans. Therefore, part of the city's territory is outside the system of the regulatory level of planning, which includes the urban area's zoning plans, regulatory plans, and urban design projects. Only plot subdivision plans are applicable in this context. Moreover, all planning documents foreseen by the established planning system are not prepared in practice. Between the city's spatial plan and numerous regulatory plans for parts of the urban territory, which are often changed, Banja Luka still needs the urban plan and zoning plans. These plans are necessary as a framework that harmonises the operational documents of urban form regulation on a smaller scale, through which construction takes place - primarily, regulatory plans. In general, the incompleteness of the hierarchy of planning documents makes it impossible to direct the transformation of space at different scales, as well as their horizontal and vertical harmonisation.

Finally, the planning methodology in Bosnia and Herzegovina and the RS, as defined through the system of planning documents, their content and procedures for making plans, has changed slightly over the last five decades, while the political and socio-economic context has undergone an immense transformation.

5 CONCLUSION

Banja Luka's spatial and other plans should develop a vision of urban growth with an understanding of dispersed urban form. More precisely, spatial plans need to be concerned with qualities and potentials coming from the various intertwining states of built and open space, not just seeing it as one possible condition defined by compactness. Otherwise, losing sight of the variety of form patterns and the spatial continuity not coming

from the continuity of the built fabric will not enable the comprehensive development of the territory. On the contrary, it could generate segregation and marginalisation. Meanwhile, these other patterns will continue to emerge and change, as they did in the last decades. Ignoring these processes in the context of the spatial strategy of the entire city territory and the system of spatial regulation is a fundamental mistake in planning.

The model used for the morphological study is conceived as a tool for the larger view of urban form and morphological understanding of the spatial dimension of urbanisation. The model enables the identification of urban form landscape patterns and their composition's character; that is, it offers the possibility of their prospective reassembling. The analysis results, i.e. the palette of different relationship patterns between built and open spaces and landscape, show the importance of open spaces as structural elements of the form. More precisely, they enable reflection on the integrity of a large-scale urban form that is not based on the continuity and compactness of the built fabric. The analysis model can be improved in the context of research techniques through software and geodetic databases for spatial mapping.

This analysis model could be a valuable tool in the first phase of the spatial planning process when other relevant studies are being prepared. Understanding the morphological character of the city and the principle of morphogenesis could enable the definition of strategies, norms and codes for balancing density and dispersion, which will complement spatial strategies based on land functionality (Wandl & Hausleitner, 2021). Currently, spatial strategies are dominantly based on the land use paradigm and the exploitative land value, at least in the context of spatial and urban planning in Bosnia and Herzegovina. However, if we move the planning focus from built and exploitative to looking at the city through the integrity of its space - relations between buildings, infrastructure, landscape, and people - we might hope for new, fresh visions of the metropolis.

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