

# COMPARATIVE ANALYSIS OF ELEMENTS AND MODELS OF IMPLEMENTATION IN LOCAL-LEVEL SPATIAL PLANS IN SERBIA

*Nebojša Stefanović*<sup>1</sup>, Institute of Architecture and Urban & Spatial Planning of Serbia, Belgrade, Serbia  
*Nataša Danilović Hristić*, PE Urban Planning Institute of Belgrade, Belgrade, Serbia  
*Nikola Krunić*, Institute of Architecture and Urban & Spatial Planning of Serbia, Belgrade, Serbia

**Implementation of local-level spatial plans is of paramount importance to the development of the local community. This paper aims to demonstrate the importance of and offer further directions for research into the implementation of spatial plans by presenting the results of a study on models of implementation. The paper describes the basic theoretical postulates of a model for implementing spatial plans. A comparative analysis of the application of elements and models of implementation of plans in practice was conducted based on the spatial plans for the local municipalities of Arilje, Lazarevac and Sremska Mitrovica. The analysis includes four models of implementation: the strategy and policy of spatial development; spatial protection; the implementation of planning solutions of a technical nature; and the implementation of rules of use, arrangement and construction of spaces. The main results of the analysis are presented and used to give recommendations for improving the elements and models of implementation. Final deliberations show that models of implementation are generally used in practice and combined in spatial plans. Based on the analysis of how models of implementation are applied in practice, a general conclusion concerning the complex character of the local level of planning is presented and elaborated.**

**Key words:** analysis, element, model, implementation, spatial plan.

## INTRODUCTION

In recent years, there has been a notable increase in the importance of local-level spatial planning in the Republic of Serbia. In addition to legal requirements, this has resulted from the interest and efforts of local governments to view the overall situation and direct further development in a way that allows them to react quickly to changing circumstances, to consider different needs and interests, to realise investments, and also to protect spaces. The first cycle of preparing local-level spatial plans was completed for the tentative period 2003 – 2013, bringing the issue of their implementation to the fore.

However, practice in Serbia has shown that implementation is the weakest link in planning, it being under-researched, methodologically vague and unclear in theory, and only formally and partially carried out in practice. Therefore, researching the implementation of local-level spatial plans is a priority that both the theory and practice of planning need to deal with.

The research presented in this paper is based on the view that it is necessary to define and theoretically elaborate a model for implementing spatial plans, to identify all its elements and to determine the primary types of the model. To reach appropriate conclusions and guidelines for the implementation of plans at the local level, a comparative analysis of the application of elements and models of implementation was carried out on three local-level spatial plans.

## INITIAL THEORETICAL ASSUMPTIONS FOR ANALYSIS OF THE SPATIAL PLAN IMPLEMENTATION MODEL

The answer to the question “What is being planned?” determines the entire process of planning – the methodology of preparing a plan, the solutions and policies, and monitoring the implementation of the plan. Taking into account the new trends in planning and the practice of plan design so far, four basic types of planning which answer this question can be defined in theory and recognized in practice. These are as follows (Milić and Stefanović, 2009):

<sup>1</sup> Bulevar kralja Aleksandra 73/II, 11000 Belgrade, Serbia  
nebojsa@iaus.ac.rs

- *Strategic planning and defining a general policy of spatial development* – where planning is “generally developing”. This type of planning produces strategic decisions related to the development of specific areas, whereby actual space and time-specific activities are not planned in detail. This type of planning primarily concerns the national and regional levels of planning (*Planning and Construction Act, 2003-2014*). Basic elements of the plan relate to strategic opinions, general objectives, principles and guidelines for development in lower levels of planning, priorities important for the state, etc., while the actual planning solutions are presented in a general sense and need to be carried out and elaborated at lower levels of planning.
- *Planning activities of a technical nature that are physically executed in space* – where planning is more concrete and spatially defined than in the previous type. It can also be termed physical planning. It produces specific spatially defined planning solutions, which in practice mostly relate to infrastructure networks and facilities. This type of planning can be described as original or traditional – it was used in the first generations of spatial plans (reservoirs, lignite basins).
- *Planning the protection of a space* – where emphasis is not on major physical interventions in space, but rather on planning solutions in the form of protective measures and specific activities that protect the space with all of its natural and built assets. This type of planning relates to special purpose areas with protected natural and immovable cultural assets, water supply sources, special purpose complexes and similar.
- *Planning using a system of rules of use, arrangement and construction* – where planning solutions are reduced to a system of rules that define the manner of use, arrangement and construction of a space. This type of planning and planning solutions deals with specific spatial and technical guidelines and serves as the foundation for construction in space, whereby it is primarily used for lower levels of planning. Owing to its flexibility and the fact that it gives everyone the right to act in accordance with rules, it is a specific type of planning open to individual investments on land that is not for public use.

Some authors link the implementation process to the nature of planning, stating that the role of implementation fundamentally depends on the planning approach (method) applied, and on the role and idea of what the plan should represent (Alexander, Faludi, 1989; Stewart, Underwood, 1983; Alterman, 1983). For instance, Baer (1997) lists: the plan as a vision; the plan as a blueprint; the plan as a set of guidelines (e.g. for land use, development management, etc.); the plan as a remedy to cure specific problems; the plan as a means to attract investment; the plan as a means of communication and interaction; the plan as a policy; and similar. Except with regard to the plan as a vision, most other planning approaches or models require the fulfilment of objectives of the planned undertaking itself, so they most frequently include specific instructions or guidelines for implementation.

The central question posed by Vujošević (2004a) concerns the actual implementation of plans (its role, significance, subject, etc.) and how much it depends on types and methods of planning. He underscores the fundamental discrepancy between two types of planning – the one accentuating the importance of development and other projects (specific planning solutions in the most general sense) and the one focusing on the significance of a general strategic framework (in which development projects/solutions are placed). Ideally, efforts are made to strike a balance and attain some flexibility between the two approaches. While such coordination is very difficult to achieve, even in countries with good systems and developed planning practices, it is essential for the creation of high-quality and mutually-aligned decisions that can be implemented.

Such opinions on planning and implementation indicate the necessity to define and theoretically develop a spatial plan implementation model and to specify the primary types of these models (Stefanović et al., 2015), whereby the definition of a model of implementation of a spatial plan must be based on:

- A general definition of a model as 1) the basic specimen according to which something is made, or 2) the approximate description of the manifestation or the object in the real world, with the assistance of mathematical symbolism.
- A definition of planning as the process of preparation of a set of decisions on future actions, directed towards achieving the objectives by the preferred means (Perišić, 1985).
- The position that implementation is a unique and continuous process beginning with the preparation of a plan, which incorporates “planning” and “post-planning” elements, as well as monitoring, evaluation, institutional and organisational aspects, and the position that implementation is not a process that begins only once the plan is made.
- The requirement that the entire planning system must be logically, functionally and temporally coherent (for successful implementation, it is crucial that planning objectives are conveniently structured in terms of general decisions, relatively concretised target propositions, and highly concretised statements regarding content, time and space) (Vujošević, 2004a).
- The fact that implementation is directly dependent on that which is planned, and on the types and methods of planning.

In line with the above opinions, this work and the analysis performed are based on the accepted definition that *the spatial plan implementation model is a simplified presentation of a set of related planning decisions on future actions that illustrates the logical, functional and temporal coherence in planning actions, depending on the type and methods of planning* (Stefanović, 2011).

Such a model has elements that are defined by a set of planning actions in the most general sense, from general decisions and relatively concretised target propositions to highly concretised statements regarding content, time and

space. Model elements surpass the actual plan as a document (the planning phase of the process) and, in addition to the above “planning” elements, include “post-planning elements” that are only defined by the plan (implemented later), and all of the required elements of monitoring (overview of model elements – Table 1).

Taking into account the various issues and methodologies of spatial plan preparation, the practice of plan design so far reveals the following implementation models (Stefanović, Milijić, 2009) which were used to conduct the analysis, as follows:

- Model of implementation of spatial development strategy and policy.
- Model of implementation of spatial protection.
- Model of implementation of planning solutions of a technical nature.
- Model of implementation of rules of use, arrangement and construction of spaces.

## RESULTS OF THE COMPARATIVE ANALYSIS OF IMPLEMENTATION ELEMENTS AND MODELS BASED ON EXAMPLES FROM PRACTICE

The comparative analysis of implementation models and their elements was carried out on three local-level spatial plans: 1) Arilje Municipality Spatial Plan (located in central Serbia, a sparsely populated hilly and mountainous area with extensive agriculture and small areas under some regimes of water source protection); 2) Sremska Mitrovica Municipality Spatial Plan (located in AP Vojvodina, a predominantly flatland area with intensive agriculture, a network of settlements with a regional hub and large areas under nature protection regimes); and 3) Lazarevac Municipality Spatial Plan (part of the administrative and metropolitan area of the City of Belgrade, predominantly focused on mining, industry and energy, without protection regimes).

The criterion for assessing the application of implementation models in the plans was identifying more than half of a model’s elements in the plan. The exception was analysing the application of the implementation model of rules of use, arrangement and construction of spaces, which was assessed using only the criterion of identifying the appropriate rules in the plan.

The comparative analysis of the elements and models of implementation in local-level spatial plans points to conclusions not characteristic of regional- and national-level plans, or special purpose area plans (Stefanović, 2011). The primary conclusions of the analysis of local-level plans are as follows:

1. *The model of implementation of spatial development strategy and policy (M1)* was applied in the plans with the conclusion that, as a rule, it lacks elements of monitoring and financial measures and instruments of implementation. The results of the analysis also confirm that the model of implementation of spatial development strategy and policy was in practice applied with the highest number of recognised elements (Table 1), whereby the model’s elements were found relatively evenly among

the three plans (64% to 71%). However, the results of the analysis, in particular the discovery that elements of this implementation model were most commonly found in the plans, indirectly point to one of the problems of local-level spatial planning – the overemphasis on the overall development approach to planning, which implies the generality of planning statements, an accent on the economic dimension of development and planning actions, and assumptions for the further elaboration of plans and subsequent overview of the spatial (physical) dimension of development. It is this overall development approach to planning that needs to be controlled, particularly at the local level of planning, which can be achieved by applying other models of implementation. In this context, conclusions were made that this model of implementation should be used as a guideline for “further steps” and other implementation models.

2. *The model of implementation of spatial protection (M2)* was not applied in all the plans. The results of the analysis (Table 1) reveal important findings that the model’s elements are relatively rarely found in plans, that there are few monitoring elements and that the elements of evaluation and the system of indicators were not recognised in any of the plans analysed. There is a distinct unevenness in the application of elements of this model of implementation in the plans (from 14% to 79%). The plan of the Municipality of Arilje contains planning and post-planning elements relating to a part of the drainage basin for the planned reservoirs, and to some natural assets protected or proposed for protection by the local government. However, this model was not applied in the spatial plans of the Municipalities of Lazarevac and Sremska Mitrovica, where the only model elements identified were objectives and some planning solutions. This can be explained by the fact that there are no protected natural assets or large water sources in the Municipality of Lazarevac, while the Municipality of Sremska Mitrovica contains parts of the “Fruška Gora” National Park and “Zasavica” Special Nature Reserve, for which special purpose area spatial plans were prepared, making any emphasis on elements of protection unnecessary at the local level of planning.

3. *The model of implementation of planning solutions of a technical nature (M3)* was applied in the spatial plans for the Municipalities of Lazarevac and Arilje, largely on an equal footing with other models of implementation. The exception is Sremska Mitrovica, where this model was not applied, given the relatively small number of model elements recognised. All three plans contain some model elements, such as planning solutions, planning-programme measures, instruments of implementation and participants in implementation. In practice, this model of implementation lacks certain elements – as a rule, these include some post-planning and monitoring elements. Also, there is a lack of inadequate definition of the planning-programme measures and implementation instruments that need to define the preparation of project documents and their relation to the subsequent preparation of planning documents, and of financial measures and instruments that can be used to identify the approximate funds required for the plan’s execution. In practice, the preparation of spatial plans in

Serbia has not yet properly identified the above measures and instruments within this implementation model.

4. *The model of implementation of rules of use, arrangement and construction of spaces (M4)* was applied in these plans. Some model elements were recognised in all of the plans, whereby it is evident that rules are a specific element of the plan and defining them does not imply coherence in planning actions in relation to all of the model's elements. Such findings justify the fact that the criterion of applying models in plans was reduced to the use of arrangement and construction rules in the plan and the ability to directly carry out the plan. Assessment based on this criterion pointed to the conclusion that the model of implementation of rules of use, arrangement and construction of spaces was applied in all of the plans. Still, owing to the specifically defined rules supported by other model elements, particularly successful are the spatial plans for the Municipalities of Lazarevac and Arilje. The systems of rules created opportunities to directly implement (execute) some planning solutions, which are indicated by numerous examples of detailed rules for arrangement and construction. Unlike plans at other levels of planning, these plans elaborate in more detail on rules of construction for privately-owned structures and construction in areas for other purposes. Such rules are quite flexible and open to a wider spectrum of possible initiatives. They prove that planning practice has welcomed new tendencies and demands for new planning styles that entail defining principles and rules, predicting future territorial tendencies and effects, and activating the capacities of the private sector. Even though this model is not directly

comparable to other models of implementation in terms of the number and use of model elements in the plans, a conclusion can be made that it is used evenly and always in combination with other models of implementation.

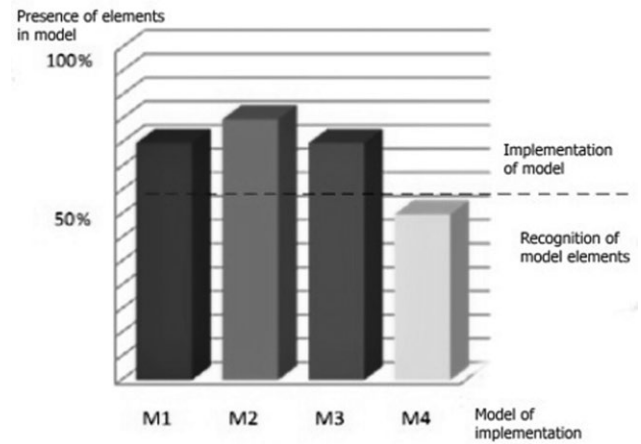


Figure 1. The presence of elements of implementation models in Arilje Municipality Spatial Plan (Source: Stefanović, 2011)

**NEED IMPROVING THE ELEMENTS AND MODELS OF IMPLEMENTATION IN LOCAL-LEVEL SPATIAL PLANS**

1. *The model of implementation of spatial development strategy and policy (M1)* needs to be applied in plans where logical, functional and temporal coherence in planning actions (model elements) implies a distinct overall

Table 1. Overview of the elements and models of implementation in plans

| Model of implementation | I Planning elements                         |                    |                     |                    | II Post-planning elements               |                              |                          |                |                     |           |              | III Monitoring el.   |                         |   | Presence of elements in the model (%) |
|-------------------------|---|--------------------|---------------------|--------------------|---|------------------------------|--------------------------|----------------|---------------------|-----------|--------------|----------------------|-------------------------|---|---------------------------------------|
|                         | Strategic framework                         | General objectives | Specific objectives | Planning solutions | Dynamic framework                       |                              | Measures and instruments |                |                     |           | Participants | System of monitoring | Evaluation (indicators) | Institutional and organisational aspect |                                       |
|                         |   |                    |                     |                    | Priority planning solutions first stage | Medium- and long-term stages | Planning-programme       | Organisational | Normative and legal | Financial |              |                      |                         |   |                                       |
| SPM Arilje              | Spatial development strategies and policies | ✓                  | ✓                   | ✓                  | ✓                                       | ✓                            | ✓                        | ✓              | ✓                   | ✓         | ✓            |                      |                         |   | 71                                    |
|                         | Spatial protection                          | ✓                  | ✓                   | ✓                  | ✓                                       | ✓                            | ✓                        | ✓              | ✓                   | ✓         | ✓            |                      |                         |   | 79                                    |
|                         | Planning solutions of a technical nature    | ✓                  | ✓                   | ✓                  | ✓                                       | ✓                            | ✓                        | ✓              | ✓                   |           | ✓            |                      |                         |   | 71                                    |
|                         | Rules of use, arrangement and construction  | ✓                  | ✓                   | ✓                  | ✓                                       |                              |                          | ✓              | ✓                   |           |              | ✓                    |                         |   | 50                                    |
| SPM Lazarevac           | Spatial development strategies and policies | ✓                  | ✓                   | ✓                  | ✓                                       | ✓                            | ✓                        | ✓              | ✓                   |           | ✓            |                      |                         |   | 71                                    |
|                         | Spatial protection                          |                    | ✓                   | ✓                  |   |                              |                          |                |                     |           |              |                      |                         |   | 14                                    |
|                         | Planning solutions of a technical nature    | ✓                  | ✓                   | ✓                  | ✓                                       | ✓                            | ✓                        |                |                     |           | ✓            |                      |                         |   | 57                                    |
|                         | Rules of use, arrangement and construction  | ✓                  | ✓                   | ✓                  | ✓                                       |                              |                          | ✓              | ✓                   |           |              | ✓                    |                         |   | 50                                    |
| SPM S. Mitrovica        | Spatial development strategies and policies |                    | ✓                   | ✓                  | ✓                                       | ✓                            | ✓                        | ✓              | ✓                   |           | ✓            |                      |                         |   | 64                                    |
|                         | Spatial protection                          |                    |                     | ✓                  | ✓                                       |                              |                          |                |                     |           |              |                      |                         |   | 14                                    |
|                         | Planning solutions of a technical nature    |                    |                     |                    | ✓                                       |                              |                          | ✓              |                     |           | ✓            |                      |                         |   | 21                                    |
|                         | Rules of use, arrangement and construction  | ✓                  |                     |                    | ✓                                       |                              |                          | ✓              |                     |           |              | ✓                    |                         |   | 29                                    |

(Source: Stefanović, et al., 2015)

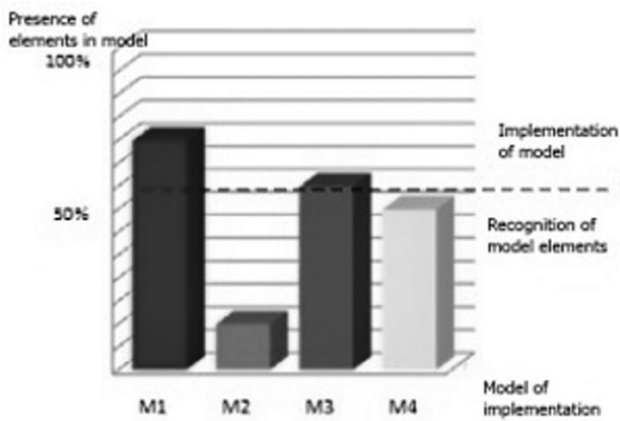


Figure 2. The presence of elements of implementation models in Lazarevac Municipality Spatial Plan (Source: Stefanović, 2011)

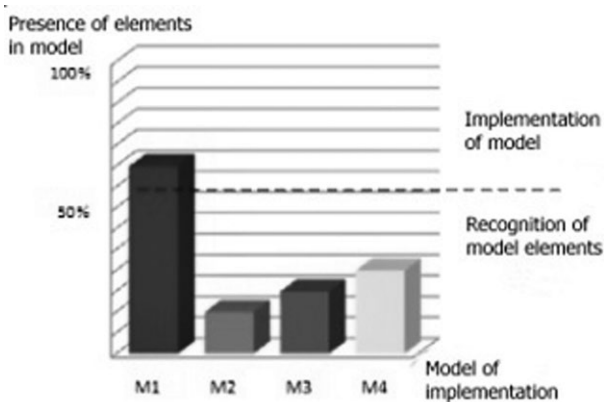


Figure 3. The presence of elements of implementation models in Sremska Mitrovica Municipality Spatial Plan (Source: Stefanović, 2011)

development approach to planning. This approach often leads to a generality of planning statements and an emphasis on the economic dimension of development and planning actions. At the same time, such an approach assumes the further development of planning actions, in particular their spatial (physical) dimensions. In cases when the scope of the plan is smaller and the level of detail higher (larger scale), and when the entire scope of the plan will not require lower-level plans such as spatial plans of local government units, this model of implementation must be applied in order to define the strategic framework for development of the planned territory (strategy and policy), whereby it cannot be used alone, but instead needs to be applied evenly with the other models of implementation. The very nature of the terms “strategy” and “policy” indicates that this model of implementation needs to be used as the “first stage of planning” in higher-level plans or as a guideline for “further steps” and other models of implementation in local-level plans.

2. *The model of implementation of spatial protection (M2)* needs to be applied in preparing local-level spatial plans depending on the surface area that needs to be protected and the obligations regarding protection arising from higher-level planning documents. As the analysis of examples from practice has shown, this model of implementation needs to be applied when the plan includes larger areas of protected

natural assets and water sources, and when their protection is not regulated by a special planning document (special purpose area spatial plan), or when the plan of the local government unit proposes specific areas for protection and prescribes zones and protection regimes. In this case, this model needs to be applied evenly with other models. It does not have to be the dominant model, since protection is largely not the responsibility of the local government, and priorities of local development are aimed more at spatial construction, planning solutions of a technical nature and other local government responsibilities.

3. *The model of implementation of planning solutions of a technical nature (M3)* must be used in local-level spatial plans, since planning infrastructure networks and facilities is a mandatory and often predominant issue of interest to local governments. Thereby it needs to be used evenly with other models of implementation. Since the model concerns concrete technical planning solutions, the plan needs to define the following model elements: clear deadlines, participants (responsibilities/competences) and financial instruments of implementation, which is not the case for other models of implementation.

The process of planning, designing and constructing infrastructure facilities is highly complex and requires knowledge and understanding of various economic, environmental, technical, proprietary, legal and other aspects. For all of them to be identified and aligned, a special mechanism of coordination between the preparation of planning documents and technical documents needs to be developed from the earliest stages of planning. This can be supported by improving the implementation model of planning solutions of a technical nature in a theoretical and practical way by introducing a special post-planning model element that would help define the relationship and set guidelines for aligning the processes of preparing planning and project documents. Such an element should define the rate and interdependence of preparing spatial and urban plans on the one hand, and the conceptual, basic and final design of an infrastructure system on the other. Guidelines for preparing planning documents should include: principles for determining the macro-location of the structure in relation to regional hubs, the network of settlements, natural and cultural assets, etc.; e relationship, connection and combination with other infrastructure systems; the manner of determining the required protection zones and prescribing the regime of use of spaces in them; procedural elements relating to public participation in the planning process; the strategic impact assessment of planning solutions on the environment; elements for resolving proprietary and legal relations, etc. Guidelines for preparing technical documents should include: principles for determining the micro-location of the structure; the technical, economic, environmental and transport feasibility of construction; environmental impact assessment of planning solutions; technical aspects of connection and combination with other systems; elements for issuing the required approvals; etc. The above elements may be recognised in the practice of preparing spatial plans so far, though they are frequently unsystematised and incomplete; thus, their differentiation and definition as a separate element of this model may be considered justified.

Financial measures and instruments of implementation should be a mandatory element of this model of implementation, since they relate mostly to the use of funds from the public budget. They need to define approximate amounts of funds required to execute planning solutions of a technical nature, based on known methodologies of calculating the price of construction of infrastructure systems. Emphasis among financial measures and instruments of implementation should be put on estimated funds for preparing technical documents, resolving proprietary and legal relationships, and obtaining land for the purposes of constructing infrastructure systems, which has been only partially used in urban planning so far.

At the same time, the institutional and organisational aspect of implementation as an element of this model needs to be improved in practice, to allow it to predict and offer the appropriate model of a mixed public-private partnership for the execution of planning solutions. Concrete planning solutions of a technical nature whose execution may be viewed in terms of clear deadlines, participants and required funds show that there are numerous stages of implementation that can be defined in this model.

4. *The model of implementation of rules of use, arrangement and construction of spaces (M4)* needs to be a mandatory model in all local-level spatial plans. Local-level plans are the only planning documents that cover the entire territory of a local government unit. Therefore, these plans must apply this model of implementation and define rules for areas which will not be covered by urban plans, which often make up the majority of the planned territory.

However, this model of implementation needs to be unburdened of most of its elements, which somewhat alters the previously stated basic theoretical assumption of model elements. The plan needs to stress that direct application is one of the tasks of plan preparation. It would determine further development of plans and concepts by defining priority areas and activities for planning interventions, which would be reinforced by rules and the ability to directly implement the plan (e.g. economically and demographically threatened periphery areas, areas requiring urgent rehabilitation, reconstruction and similar). The model's elements would be rounded by rules of arrangement and construction, provisions regulating the manner of direct implementation, and in particular a set of rules which would not be directly implemented, but instead serve as guidelines which would be elaborated through the preparation of urban plans. Finally, the plans need to define a special element of monitoring – a system of monitoring and evaluation which would include an information system on submitted, resolved and executed construction requests, as well as an evaluation of implementation, both through direct execution and through the preparation of urban plans.

Taking into account the developed practice of defining rules of arrangement and construction in construction areas, which mainly lies in the domain of urban planning, further theoretical improvement of spatial planning and use of this model of implementation require the development and enhancement of the methodology of identification and the content of rules of arrangement and construction

on agricultural, forest and riverside areas. The practice of preparing spatial plans in Serbia in recent years has highlighted the importance of defining such rules, so it is realistic to expect further development of initiatives for construction on agricultural, forest and riverside areas, thus the system of plans and rules needs to be adjusted accordingly so as to appropriately respond to such initiatives.

## CONCLUSIONS AND RECOMMENDATIONS

A comparative analysis of models of implementation in local-level spatial plans confirmed that some elements of implementation models may be recognised in plans, but also that models of implementation are not recognised in their entirety, i.e. a model of implementation with all its elements was not recognised in any of the plans analysed. For this reason, the models applied do not fully reflect logical, functional and temporal coherence in planning actions, since they, as a rule, lack some elements.

On the other hand, the theoretically defined elements of implementation models, envisaged so that they reflect the above logical, functional and temporal coherence in planning actions, cannot be refuted, given that most of the model elements mentioned were recognised in practice thus far in some of the plans, except for monitoring elements (Stefanović, 2011). Such findings serve as the basis for one of the primary conclusions, which is that the problem of applying implementation models in practice is not in their elements, but rather in the fact that they are not connected in a whole and coherent set.

It is important to mention that this conclusion corresponds to the opinions of some authors who have worked on the theory of implementation. Boisier (1981) notes that successful implementation hinges on favourable structure of planning objectives, from general decisions and relatively concretised target propositions to highly concretised statements in terms of content, time and space – he emphasises the above “planning” elements of implementation. Johansen (1985) believes that implementation is in constant interaction with planning concepts and policies; he stresses that plans need to be internally consistent – their individual parts must not be contradictory, the assessment of the condition and objectives must be compatible with the structure of what is being planned, the parts must be mutually aligned, and objectives must be aligned with measures and instruments. Similarly, Barras and Broadbent (1979) state that a plan must meet the structure of objectives in a coherent set of general, special and detailed planning decisions related to measures and instruments of implementation from various areas.

This comparative analysis of how the elements and models of implementation are applied in spatial planning practice showed that models of implementation are not mutually exclusive, but are combined during a plan's design. Confirming the combination of models of implementation and recommendations for further application and improvement of models may be useful, especially taking into account the theoretical considerations of Lewis and Flynn (1979), who offer one of the most practical systematisations of planning characteristics important for implementation, whereby they particularly mention *the mix of modalities of implementation*.

Similarly to the presented views, they assume that several of the above modalities of implementation will be present in actual planning, simultaneously and in parallel. For example, forms of control planning may be accompanied by forms of initiative, indicative, and even advocacy planning that are not necessarily mutually exclusive and bring about different approaches and modalities of implementation. In addition to the striking use of the term “modality of implementation”, the authors underscore that the process of implementation has not been theoretically examined in detail and that mechanisms of planning and the mix of modalities of implementation have not been researched.

Comparative analysis of the application of models of implementation yields important results in relation to combining models of implementation in the spatial plans analysed, as follows:

- In the *Arilje Municipality Spatial Plan* (Figure 1) all four models of implementation were applied.
- In the *Lazarevac Municipality Spatial Plan* (Figure 2) the models concerned the implementation of spatial development strategy and policy, planning solutions of a technical nature, and rules of use, arrangement and construction of spaces, while elements of the model of implementation of spatial protection were recognised.
- In the *Sremska Mitrovica Municipality Spatial Plan* (Figure 3) the models concerned the implementation of spatial development strategy and policy and rules of use, arrangement and construction of spaces, while elements of implementation models for planning solutions of a technical nature and spatial protection were recognised.

The primary conclusion based on the research results is that different models of implementation are evenly used and combined in the spatial plans of local government units, i.e. at the local level of planning. Such a view is supported in particular by the example of the Spatial Plan of the Municipality of Arilje, which is specific in the way that all four models of implementation are evenly used (Figure 1), and by the example of the Spatial Plan of the Municipality of Lazarevac (Figure 2) with three evenly used models of implementation.

The view that one model of implementation is predominant in a spatial plan and determines the character of the process and the plan and, by extension, of the implementation, was not proven in the example of local-level spatial plans, unlike e.g. in the Spatial Plan of the Republic of Serbia, regional spatial plans and spatial plans for special purpose areas, i.e. at national and regional planning levels.

Equal use of models of implementation is crucial at the local level of planning, i.e. in the spatial plans of local governments units, which relates to all models of implementation. The only exception may be the model of implementation of spatial protection, which does not have to be applied if it was applied in a higher-level plan or if there are no protected assets in the planning area.

Based on the classification of the character/nature of planning in terms of its use of implementation models (Stefanović, 2011) into: 1) *general planning* – where models

of implementation are not combined and only the model of implementation of spatial development strategy and policy is applied; 2) *thematic planning* – where models of implementation are combined with the predominant use of one model of implementation; and 3) *complex planning* – where all models of implementation are evenly combined, without the predominant use of any model of implementation, the comparative analysis of elements and models of implementation points to the conclusion that local-level planning can be characterised as complex planning.

#### Acknowledgments

This paper is result of the projects “Spatial, Environmental, Energy and Social Aspects of Developing Settlements and Climate Change – Mutual Impacts”, No. TR 36035 and “The Role and Implementation of the National Spatial Plan and Regional Development Documents in Renewal of Strategic Research, Thinking and Governance in Serbia”, No. III 47014, both financed by the Ministry of Education, Science and Technological Development of the Republic of Serbia in 2011-2017.

#### REFERENCES

- Alexander, E.R., Faludi, A. (1989), Planning and Plan Implementation: Notes on Evaluation Criteria, *Environment and Planning, B – Planning and Design*, Vol. 16, No. 2, pp. 127-140.
- Alterman R. (1983), Implementation Analysis in Urban and Regional Planning-Toward a Research Agenda, in P. Healey, G. McDougall and M.J. Thomas (eds.), “*Planning Theory: Prospects for the 1980-s, Urban and Regional Planning Series*”, Volume 29, Oxford: Pergamon Press, pp. 225-245.
- Arilje Municipality Spatial Plan* (2010)/*Nacrt prostornog plana opštine Arilje*, JP “Direkcija za izgradnju” Arilje.
- Baer, W.C. (1997), General Plan Evaluation Criteria, An Approach to Making Better Plans, *JAPA, Journal of American Planning Association*, No.63, pp. 329-344.
- Barras, R., Broadbent, T.A. (1979), The Analysis in English Structure Plans, *Urban Studies* Vol. 16, No.1, pp. 1-18.
- Boisier, S. (1981) *Planning a Regional System*, ECE/UN for Latin America, Santiago de Chile: ILPES.
- Johansen, L. (1985) *Predavanja iz makroekonomskog planiranja*. Zagreb: Cekade [Johansen, L. (1985) *Lessons in macroeconomic planning*, Zagreb: Cekade].
- Lazarevac Municipality Spatial Plan* (2008)/*Prostorni plan gradske opštine Lazarevac*. Službeni list grada Beograda 58/08. Lewis J., Flynn R. (1979) The Implementation of Urban and Regional Planning Policies, *Policy and Politics*, Volume 7, No.2, pp. 123-142.
- Milić, Đ., Stefanović, N. (2009) Pristup izradi i sprovođenju regionalnih prostornih planova u aktuelnoj praksi planiranja u Srbiji, in Marić, M. and Milijić, S. (eds.) *Regionalni razvoj, prostorno planiranje i strateško upravljanje*, Beograd: Institut za arhitekturu i urbanizam Srbije, pp. 159-176.
- [Milić, Đ., Stefanović, N. (2009) Approach to developing and implementing regional spatial plans in the current planning practices in Serbia, in Marić, M. and Milijić, S. (eds.) *Regional development, spatial planning and strategic management*,



- Belgrade: Institute for Architecture and Urban & Spatial Planning of Serbia, pp. 159-176.]
- Perišić, D. (1985) *O prostornom planiranju*. Beograd: Institut za arhitekturu i urbanizam Srbije. [Perišić, D. (1985) *On spatial planning*. Belgrade: Institute for Architecture and Urban & Spatial Planning of Serbia.]
- Planning and Construction Act (2003-2014)/Zakon o planiranju i izgradnji (2003-2014)* Službeni glasnik Republike Srbije 47/03, 34/06, 72/09, 24/2011, 12/2012, 132/20014, 145/2014.
- Sremska Mitrovica Municipality Spatial Plan (2009)/Prostorni plan opštine Sremska Mitrovica*, Službeni list opštine Sremska Mitrovica, 9/09.
- Stefanović, N. (2011) *Modeli implementacije prostornih planova*, doktorska disertacija, Beograd: Geografski fakultet Univerziteta u Beogradu [Models of Implementation of Spatial Plans, doctoral thesis, Belgrade: Faculty of Geography, University of Belgrade]
- Stefanović, N., Danilović Hristić, N., Milijić, S. (2015) The implementation model of planning rules in spatial plans, *Spatium*, No. 33, pp. 62-68.
- Stefanović, N., Milijić, S. (2009) Potrebe i mogućnosti unapređenja implementacije prostornih planova u Srbiji, in Filipović, D. et al. (eds.) *Planska i normativna zaštita prostora i životne sredine*, Beograd: Asocijacija prostornih planera Srbije i Geografski fakultet Univerziteta u Beogradu, pp. 373-381. [Stefanović, N., Milijić, S. (2009) Needs and opportunities for improving the implementation of spatial plans in Serbia, in Filipović, D. et al. (eds.) *Planning and normative protection of space and the environment*, Belgrade: Association of spatial planners of Serbia and Faculty of Geography, University of Belgrade, pp. 373-381.]
- Stewart M., Underwood, J. (1983) Inner Cities-A Multi-Agency Planning and Implementation Process, in P. Healey, G. McDougall and M.J. Thomas (eds.) *Planning Theory, Prospects for the 1980s, Urban and Regional Planning Series*, Volume 29, Pergamon Press, Oxford, pp. 211-224.
- Vujošević, M. (2004a) *Racionalnost, legitimitet implementacija planskih odluka – novije teorijske interpretacije pouke za planiranje u tranziciji*. Beograd: Institut za arhitekturu i urbanizam Srbije. [Vujošević, M. (2004) *Rationality, the legitimacy of implementing planning decisions – recent theoretical interpretation of lessons for transition planning*. Belgrade: Institute for Architecture and Urban & Spatial Planning of Serbia].
- Vujošević, M. (2004b) The Search for a New Development Planning/Policy Mode: Problems of Expertise in the Transition Period, *Spatium*, No. 10, pp. 12-18.