

Article

The Institutional Structure of Land Use Planning for Urban Forest Protection in the Post-Socialist Transition Environment: Serbian Experiences

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Abstract: In recent decades, Serbia has been undergoing a period of post-socialist transition that has significantly altered the value system underlying spatial development due to alteration of ownership frameworks and land use rights. In consequence, issues have arisen of how to strike a balance between the various interests involved in the distribution of spatial resources and how to control the outcomes of public policies. Land use planning has been identified as an efficient instrument for implementing the public policy value framework. The objective of this paper is to identify the key points of land use planning in relation to urban forest management of significance for the maintenance of urban forests in the environment of post-socialist institutional transformation in Serbia. Seen as an institutional structure, the practice of land use planning in Serbia is the product of a stable interaction between the set of interrelated rules, procedures and organisational units that allows spatial development outcomes that take into account and safeguard land resources and, ultimately, urban forests. The research was carried out in relation to the concept of institutional transformation across three scales: macro/governance, meso/coordination and micro/agency: (a) components of the regulatory framework; (b) procedures for cooperation between stakeholders; and (c) specific activities of land use planning practice. As a result, the concept of Land use Planning for Urban Forest Protection (LUPUFP) in Serbia was established. It identifies components of institutional structure of importance for regulating system changes in the post-socialist transition environment and steering them towards the establishment of a value framework that allows the agenda of saving urban forests to be implemented.

Keywords: urban forest; institutional design; land use planning; Serbia; governance

1. Introduction

The research objective of this paper is to provide a critical overview of the institutional framework of the development planning system in relation to urban forest management, particularly land use planning, in the post-socialist environment in Serbia, in order to highlight components of importance to be used by institutional design for re-establishing a stable interaction inside the institutional structure that promotes a value system aimed at saving urban forests. As a result, this paper presents an improvement of the current land use planning system in Serbia by proposing the concept of Land Use Planning for Urban Forest Protection (LUPUFP), focusing on three major components: urban forests, land use planning and post-socialist environment in Serbia.

The problems of urban growth in the 21st century emphasise the importance of managing land resources in order to achieve sustainable development [1–4]. As a limited resource, land in cities, especially urban forests as compact large greenfield land, is particularly affected by new

construction requirements that are directly reflected on environmental problems such as “heat islands”, flooding and air pollution. Therefore, the network of woodlands, groups of trees and individual trees located in a city that include forests, street trees, trees in parks and gardens and trees in derelict corners [5], in terminology known as urban and peri-urban forests, play a crucial role in meeting global commitments on sustainable development as well as adaptation to climate change and mitigation of its impacts. These requirements represent a particular challenge for local governments that are expected to make land use more efficient for planning compact cities and mixed-land use [1].

As it was indicated in recent research, urban forest services enhance nine of the seventeen Sustainable Development Goals (SDGs) [6,7]. These SDGs are 1: No poverty; 2: Zero hunger; 3: Good health and well-being; 6: Clean water and sanitation; 7: Affordable and clean energy; 8: Decent work and economic growth; 11: Sustainable cities and communities; 13: Climate action; and 15: Life on land.

These analyses included five categories that were considered to be urban forest (peri-urban forest and woodlands, city parks and urban forests > 0.5 ha, pocket parks and gardens with trees, trees on streets or in public squares and other green spaces with trees) where the category of peri-urban forest and woodlands was scored with the highest score, suggesting that it contributes to human health and well-being, climate change mitigation, climate change adaptation, biodiversity and landscapes, economic benefits and a green economy, land and soil degradation, watershed protection, resilience to flooding events, food and nutrition security, wood security, recreation, education, social cohesion and social security and equity. Further, it should be noted that the positive effects of urban forests ecosystems are confirmed within numerous studies [8–11] where it is specifically stressed that in regard to the public’s perceptions of the effectiveness of the ecosystems services “environmental knowledge plays a key role in fostering pro-environmental behaviours” [12] (p.171).

Land use planning is a key mechanism for reducing pressure on land resources, which facilitates the implementation of environmental protection policies and steers choices in the direction of nature protection. This intention has been affirmed in the Curitiba Declaration on Cities and Biodiversity [13], where the issue of integrating biodiversity into urban planning is placed within the context of establishing the appropriate regulatory mechanisms and implementing tools, as well as decision-making instruments that will ensure the integration of nature/biodiversity and the urban structure. Land use planning directly serves the green agenda for ecological health and management of natural ecosystems on the local level, which aims at preserving green open spaces in cities for biodiversity protection and recreation [14]. The importance of integrating green structure planning in city development planning is also borne out by the findings of a survey of 23 European cities [15] that have met green policy targets by employing land use planning as the key instrument.

The achievement of the saving urban forests agenda has been challenged in post-socialist transition Serbia. Namely, after the year 2000, with the transition of the socioeconomic system from a socialist orientation to that of the market and democracy, and the start of the process of joining the European Union, significant institutional changes were initiated in Serbia. Following major challenges are of particular importance for this research.

Firstly, ownership relations over land have changed, thus establishing a new relationship of strengths of power in society and the consequent plurality of interests in the process of creating public policies concerning the use of land resources.

Secondly, with entering into the process of joining the European Union, the principle of subsidiarity, which transfers competencies to the local level, is an important principle in decision-making on public policies, thus giving the highest responsibility and commitment to local authorities in selecting and promoting the agenda. This is particularly challenging for post-socialist transition countries that do not have developed expert capacities at the local level.

Thirdly, global demands for the implementation of sustainable development promote the concept of governance, which implies the development of horizontal and vertical coordination mechanisms at different levels of the institutional structure. These demands entail a fundamental change in

the concept of decision-making in post-socialist countries, which up to now was hierarchical rather than collaborative.

Harmonization of the above components of institutional changes represents a huge challenge for the transition society, in the selection of a value framework for operation and the regulation of all domains of public policies. This is, beyond doubt, a highly sensitive institutional redesign process that will create instability and insecurity. Models that have proven successful in other situations cannot be applied, and locally-specific answers are expected to be created. In this context, the country must develop its own path of institutional transformation that will satisfy the demands of the new environment of post-socialist transition and the EU accession process, while, at the same time, retaining the positive experiences of the past. That is why this paper will investigate the current institutional framework of the development planning system in Serbia, which is in the function of achieving the agenda 'saving urban forests'. According to the concept of institutional transformation [16–25] the values are embedded in the institutional system and are a result of a balance between its components. With the disturbance of the stability of the institutional system, due to the transition process, which is induced by the influences that came into the system from the outside, an institutional transformation and consequently a distortion of the value framework of public policies and related agendas are inevitable.

Following an introductory section, the paper will first outline the theoretical framework in three important domains: land use planning, urban forest management and the concept of institutional transformation. The methodological section that follows relies on the key conclusions of the previous section to be used as the basis for the selection of methodological instruments and definition of key research questions. The analysis section comprises a detailed presentation of the institutional system of land use planning in relation to urban forest management from the national to local level, according to the concept of institutional transformation, illustrated by examples of the land use planning practice of two medium-sized cities. Within the discussion and conclusion section, as the first step in institutional design, the components of the presented institutional system are highlighted as the basis for the development of the Land use Planning for Urban Forest Protection (LUPUFP) concept.

1.1. Theoretical Background

1.1.1. Land Use Planning

In the last decades it has been emphasised that land use planning represents a significant management tool for dealing with unprecedented challenges that lie ahead of the accelerated urbanization process of cities [14,26]. Land use planning is a local development instrument that is complemented by regulations introduced hierarchically within vertical power relations. In general, land use planning is regulatory in character and is used by governments as a legal instrument intended to achieve public/common interest or public policy [27]. It essentially aims at controlling the use of and rights to land, both public and private [28], by applying various regulatory measures, such as protected areas, building codes and rezoning. More specifically, the purpose of the land use plan is to regulate the land as a category of usage, while the purpose of regulatory measures is to change ownership rights [29].

Contemporary development planning, and consequently land use planning, is a political and democratic process that mediates the conflicts over land use, not just a technical tool [30]. Contemporary planning has abandoned the traditional position of technical activity, where plans are understood as documents, to become a collaborative practice jointly undertaken by planners and local communities. This is consistent with the concept of safeguarding green areas, where traditional land use planning is seen as a passive, technical, regulative and rigid planning instrument that is lacking the capacity to protect spatial resources [15,31]. In contrast, the collaborative planning practice predominantly rooted in strategic spatial planning is considered to allow the articulation of a more coherent and coordinated long-term spatial logic for land use regulation [17]. Collaborative strategic planning practice looks at the distribution of spatial resources through process orientation, social inclusion and a multilevel

approach. From this point of view, the distribution of land use is seen as a policy conditioned by the design of appropriate governance institutions and proactive management activities [16,32]. In this context, decision-making is the key mechanism for establishing the value framework for public policy, and consequently selecting objectives relevant for the protection of spatial resources. The practice of strategic planning has proven to be a highly successful instrument for redistributing land in favour of larger open green areas, such as the development of a new urban forest, 'Parkbos', in Ghent, Belgium [33].

1.1.2. Urban Forest Management

Contemporary global development policies, which prioritize climate change issues in addition to sustainability, assign particular importance to urban forests in the context of adaptation to climate change and mitigation of its impacts. In addition to the Sustainable Development Goals (SDGs) the EU's current strategic framework [34,35] promotes an integrated landscape approach, which links protected spaces with other sectoral interests.

The Framework for Assessing and Monitoring Forest Governance [36] suggests six principles of good governance as cornerstones for a stable institutional structure for managing forest land: accountability, effectiveness, efficiency, fairness, participation and transparency. These principles intersect three key pillars: (1) policy, legal, institutional and regulatory frameworks; (2) the planning and decision-making process; and (3) implementation, enforcement and compliance. The second pillar is of immediate significance for development planning processes, emphasising as it does how important it is to "examine the extent, characteristics and quality of participation of a range of stakeholders in forest governance and the capacity of different stakeholder groups to engage in governance processes. Components under this pillar also consider the transparency of forest-related decision-making and resource allocation and the degree of accountability of governance mechanisms and processes" [36] (p. 13).

Similarly, in the domain of multi-disciplinary research into urban forest governance, Lawrence et al. [37] defined the analytical framework as a research tool. This framework is proposed to comprise four variables for researching the institutional system: (1) policies including national, regional or local policies, plans and programmes that affect urban forestry; (2) planning and regulations, which comprise planning and legal requirements specific to the case; (3) ownership of the land; and (4) access and use rights, such as the right to walk/cycle and/or make use of products from the urban forest. The proposed framework is only a starting model for studying urban forest governance which, according to the authors, should be elaborated on to achieve a deeper understanding of the ways to ultimately make our cities more sustainable.

The importance of stakeholder involvement in policy making to protect natural areas is also acknowledged by the Natura 2000 network, the core pillar in the EU's biodiversity conservation policy [34] and one of the largest networks of protected areas in the world. Although member states are free to align national regulations with EU instruments [34,35], the expected changes reach deep into the institutional foundations of public policy decision-making by legitimising a broad range of stakeholders and, consequently, introducing a multitude of varied interests that need to be harmonised [38–41]. This primarily affects the local decision-making level, the most effective forum for exercising the concept of public interest, as the issues at hand are specific and easy to operationalise.

1.1.3. Concept of Institutional Transformation

According to the concept of institutional transformation, values are embedded in institutional systems and are the result of the established balance between system components [18,19]. From a normative perspective, values and commitments generated in interaction shape undermine and augment formal and official regimes [23]. The concept of institutional transformation additionally describes in detail the procedures and interactions within processes of interest that can be used to

identify challenges in public administration, the formation of interests, the development of policies and links, and the implementation of administrations' programmes in the planning process [21–23].

The orientation of planning practice depends on the values built into the institutional structure. In other words, the dominant ideology informs beliefs, values and systems, which in turn shape institutions, which, ultimately, result in policies [42]. As such, land use planning, the regulation of the use of space, reflects the ideology of defining and using space.

Socioeconomic changes under the influence of external factors initiate the process of institutional transformation [24], which inevitably alters the behaviour of political and economic actors [22] and, consequently, leads to changes in public policy. In essence, institutional transformation takes place in the domain of changes to the value framework, and as such directly shapes the development of society over time. Institutional transformation disrupts what is termed 'stable interaction' within the institutional structure as the guarantee of the established value framework. Stable interaction reduces uncertainty in decision-making by securing stable outcomes, dubbed 'equilibria'. Institutional transformation, therefore, must aim at establishing these stable interactions within the institutional system and so reduce uncertainty.

Institutional design, as a normative aspect of institutional transformation, is an integral and essential part of the planning practice [22]. Institutional design determines the success and quality of interventions by agents (individuals and organisations), and so also determines the success of the planning practice [22,25]. The operation of institutions, from the national to the local level, affects the role and success of planning. Institutions create elements of order and predictability, impose orderliness on societal relationships, reduce flexibility and variability in behaviour, and limit options for one-sided exercise of personal interests [19,24]. Striking a balance between differences in land use interests is a matter of policy choice and the design of appropriate institutions and proactive management activities [22]. Consequently, it can be considered that institutional design is a useful method for changing planning practice.

The behaviour of political and economic actors is conditioned by sets of regularised practices with a rule-like quality [24] that also affect policy outcomes. The so-called regulatory regime of land use management is of crucial importance for the application of planning practice as the source of environmental protection policies [25]. The regulatory regime provides a framework for action within which agencies enjoy autonomy in choosing their modes of operation and create room for exerting influence on the value framework.

From a planning perspective, three general concepts should be viewed as the key elements to be addressed by the institutional design [22]:

- (a) The first is the concept of governance, which is the most appropriate at the macro-level as it involves society as a whole and is linked to constitutional and legal amendments. This is the level of institutional design to which belong requirements for institutional change encountered by Serbia in its EU accession process.
- (b) The second concept is that of coordination, at the meso-level, which pertains to the domain of planning and comprises procedures which facilitate the development and implementation of policies, programmes, projects and plans associated with professional planners' fields of practice.
- (c) The third is the concept of agency, which occurs at the micro-level and involves intra-organisational design, the ordering of smaller working units and groups and the processes and interactions within and between them. This level directly entails managing planning processes and policy, the plan or project implementation [22].

That being said, institutional analysis does not focus on norms, rules and practices as integral elements of institutions, but, rather, on their mutual interaction within the context that conditions action [25]. The emphasis here is on understanding relationships between activities and the institutional context that generate practices and a power structure that subsequently determine relationships and changes. Institutional analysis, therefore, observes relationships between systems within an institution,

individual processes within and between those systems, what the constituent units of an institution are, which rules or norms govern their relationships, etc. [19,20]. According to Alexander [22] (p. 213), “institutional design means designing institutions: the devising and realisation of rules, procedures and organisational structures that will enable and constrain behaviour and action so as to accord with held values, achieve desired objectives or execute given tasks”. Institutional analysis, as an initial step of institutional design, will be in this research applied to the land use planning practice related to urban forest management in Serbia.

2. Materials and Methods

In accordance with the presented theoretical framework, the critical re-assessment of the institutional structure of land use planning in the post-socialist environment of Serbia related to urban forest management, will highlight the following two aspects: (a) on the one hand, understanding the institutional and regulatory context of the planning process and (b) the other on discerning the relationships between dominant stakeholders in this process that reflect value-based approaches.

Furthermore, the research is based on qualitative assessment on three scales that correspond to the levels of institutional design [22]:

1. The macro-level entails assessing the regulatory framework for the development planning system related to urban forest management in Serbia from two aspects:
 - (a) Overview and assessment of the institutional and legal framework for urban forest protection standards at all levels of administrative organisation: national, regional and local. In this assessment the position of urban forest protection standards within basic land use planning documents is also included.
 - (b) Overview and assessment of the value framework for urban forest protection in national policy documents. This phase of the research relies on reviewing and analysing both the primary literature (laws, strategies and other public documents) and secondary sources dealing with issues of the planning system for urban forest protection.
2. The meso-level looks at the procedures for cooperation between institutions of the land use planning process on the local level, related to urban forest management in Serbia. Institutions are observed from the national to the local levels through the lens of multilevel governance. The focus is on the procedures for collaboration between institutions in the process of the ‘General zoning plan’ production, as well as policy-making procedures, and is observed in two aspects:
 - (a) Identification of the organisational structure, with particular attention to the position, powers and roles of the relevant institutions.
 - (b) Arrangements for collaboration that includes insight into both the horizontal and the vertical levels. This segment of the research relies primarily on a review of primary literature that sets out organisational powers while also considering secondary documents devoted to how land use planning and urban forest management policies are made.

The micro-level entails a detailed review and assessment of the land use planning process in relation to urban forest protection in selected examples of land use planning practice on the local level. It is focused on analysis of activities of concrete cases of planning practices, where formal and informal institutional arrangements in the planning process are observed. The cases of planning practice are concrete solutions for the use of space viewed through the enacted policies and regulations. The accent here is on the description and analysis of the procedure of land use planning in terms of decision-making by the stakeholders (public, private and civil sector) involved that employ various mechanisms, instruments and actions. Both policy-related and regulatory planning solutions are analysed equally. This part of the research relies on both a critical analysis of the actual land use plan development process (particularly the planning

procedure for the 'General Zoning Plan') and the concrete examples of the general zoning plans (a result of the planning process) as undertaken by planners. Examples include the land use planning processes of two Serbian cities: Bor and Vrnjačka Banja. The criteria for the selection of the cases were the following.

- (a) Medium-sized cities (in order to avoid the overly complex problems that are characteristic of large cities).
- (b) The dominant planning agenda is 'saving urban forests'. Bor is a town where the urban environment is exposed to the impacts of copper and gold mines situated in the immediate vicinity, and Vrnjačka Banja is an urban environment purposefully developed as a spa.
- (c) The planning processes started after the year 2000, following the introduction of Serbia's new socioeconomic framework.

The methodological procedure shown is seen as suitable for institutional assessment as it emphasises case development factors linked to the context, in the same manner as institutional theory links norms and procedures to the broader institutional landscape [43].

3. Results

In socialist Yugoslavia, green open spaces were considered a public resource and were, as such, accorded particular attention by urban planners. After World War II, with the institutionalisation of socialism in Yugoslavia, land policy that determined land use was based on the ideological belief in common or 'social' property, as opposed to the private ownership of land. The fundamental political, social and economic reforms pursued at the time, accompanied by the establishment of a new constitutional and legal order by the communist regime, declared which cities and urban settlements stood to be social property and excluded them from legal transactions. In consequence, any extension of the urban territory automatically made new land socially owned. Land use plans served as direct instruments for these transformations and were employed to put public interest into effect in actual space [44,45].

Although the trend under state socialism was to make forest land socially owned as well, forests could be owned by the state, cooperatives or private individuals. Nevertheless, all forests, regardless of ownership, were declared to be of general interest to the community and were placed under government protection [46]. This made the preservation of forests and forest land a matter of public interest, and a system of safeguards was designed and implemented across all levels of governance to attain this objective.

Difficulties encountered by post-socialist countries in transitional processes [47] are inseparably linked to the crucial issues of changes to the value system and established norms [48,49]. Private property, instituted by the changes as a new form of land ownership, has brought about a major shift in traditional patterns of land use planning. Private interests, needs and expectations of how land is to be used have gained legitimacy and so become major factors in land-related policy-making. Consequently, development land has come to be a fundamental resource for a city's economic growth. In these circumstances, pressure has increased to allow construction on greenfield land, where developers do not incur additional costs when investing. Therefore, in a democratising society facing privatisation and the construction of market institutions, land use planning has become both a tool to safeguard property rights and interests of various land use stakeholders and an instrument to correct for market failure [44].

Institutional changes characteristic of post-socialist transition altered the value basis for planning, which also caused a shift in the planning paradigm [50]. Lacking a common planning system model they could employ, post-socialist countries have developed their own approaches to institutional transformation [51]. The experiences of post-socialist countries have shown that no changes were

possible to planners' modes of operation that would allow them to protect the public interest without an institutional foundation being laid first [52].

The issue of public interest in planning has remained ill-defined in Serbia following the democratic changes of 2000. Urban plans have endeavoured to protect interests by defining public land, public areas and public buildings, but the protection of other, privately owned land remained subject to political decision-making and mechanisms intended to safeguard public interest. As such, issues including protection of public spaces, the environment, public health and security, energy efficiency, etc., topics that the public sector is not interested in addressing [53,54], remained within the remit of regulatory regimes of land use governance, primarily at the national level.

By contrast, the EU accession process has placed a number of new demands before the practice of environmental planning. Serbia formally became a candidate country for EU membership in March 2012, starting a negotiations procedure to align the country's regulatory framework with EU law through 34 chapters. Chapter 27 envisages the creation of a sustainable environmental management system, which cuts across all policy sectors and constitutes a value framework for their formulation [55]. In addition to the requirements of the negotiations process, other instruments pertaining more directly to the preservation of green open spaces also affect the harmonisation of the Serbian regulatory framework with the European context. One major such document is the European Landscape Convention [56], ratified by Serbia in 2011 [57]. An innovation introduced in the Convention is the understanding of landscape as a dynamic category that evolves with societal change. This approach means that landscape-related planning activity can no longer be subject only to deliberation by specialised technical bodies, but that landscape development policies must be enacted through democratic dialogue wherein all stakeholders are able to present their perceptions and views of the future of landscape [56].

On the other hand, the changes brought about by transition commenced a decentralisation process in which the local level became involved in decision-making about environmental protection policies. The EU accession process explicitly requires the adoption of standards to allow equal participation of all the various stakeholders in decision-making and reduce the scope for conflict between interests and preferences for protected spaces [58], as is confirmed in the ARHUS convention ratified by Serbian law [59]. This accords with the concept of governance, which promotes the establishment of diverse forms of cooperation, partnership agreements, delegation of authority and greater powers of the local community. Good governance entails the management of protected areas pursuant to the principles and values chosen by all stakeholders. As part of societal and cultural heritage, these principles are modified in accordance with globally recognised requirements and become integral parts of constitutions, laws and other legal enactments that regulate nature protection. However, most powers and responsibilities remain within the remits of governments and their agencies [60].

3.1. Macro-Level: Regulatory Framework for Development Planning System Related to Urban Forest Management in Serbia

3.1.1. Institutional and Legal Framework for Urban Forest Protection Standards

As yet, Serbia has not enacted legislation that specifically supports planning for the system of green spaces as a separate and autonomous domain. The Law on the Protection and Improvement of Green Spaces has remained at the drafting stage for a number of years [61,62]. Furthermore, a project by the Serbian Association of Landscape Architects, supported by the Ministry of Environmental Protection, that besides requiring spatial and urban plans to acknowledge and recognise existing greenery, green spaces, spaces close to nature and ecosystems, stressed the importance of the institutional framework at the local government level related to management, maintenance and reconstruction of urban green spaces [63].

The lack of an appropriate statutory and planning basis is compounded by the absence in Serbia of guidelines and recommendations for planning green spaces. Plans and regulations do not recognise the expression 'urban forest', but rather define forest land in urban contexts as 'town forests', an echo

of the German *Stadtwald* better suited to a general understanding of the urban forestry concept [64,65]. Terms of importance for urban forests formally employed in the green spaces planning system are defined in the Forests Law [66]; these are (a) 'forest', an area of land in excess of 5 acres (500 square metres) covered by forest trees and (b) 'forest land', the land on which are located structures facilitating the attainment of the generally beneficial effects of forests.

In Serbia, the powers for managing, safeguarding and improving forests in urban areas (see Table 1) in essence reside predominantly within two policy departments: the environment and planning. At the national level, the responsible institutions are the Government of Serbia and the Nature Conservation Institute, tasked with conservation activities, as well as the Ministry of Environmental Protection and the Ministry of Construction, Transportation and Infrastructure. These ministries are charged with the development of the national statutory framework for planning and protecting urban forests. The key regulations for urban forests protection are a set of planning laws that govern norms for establishing land use balance in the context of the regulation of property rights to land (i.e., public, private and cooperatively owned property). The relevant nature conservation laws govern standards for the protection, management and use of urban forests.

There is no regional governance level in Serbia, so only the Provincial Nature Conservation Institute (with powers in the Province of Vojvodina) is the only formal regional body. At the local level, urban forests are managed by local state-owned enterprises, established independently by local authorities depending on their size, status and resources. However, powers are often dispersed amongst different organisations and departments, as well as between various levels of governance. So, for instance, in Belgrade, the capital city, the state-owned enterprise manages 32,322,70 hectares of forests, while an additional 611 hectares of forests in the territory of Belgrade are owned and managed by the city itself [65] (p. 339).

Nevertheless, local land use planning has the greatest impact on urban forest protection. Land use planning, one of the most important components of planning in Serbia, is regulated chiefly by the Planning and Construction Law [67], which envisages two spatial governance instruments: Spatial Plans, more focused on the strategic orientation of development, and Urban Plans, more land use oriented with some elements of an integrated approach. Urban Plans are the most common instruments of local land use planning and are divided into three categories: (a) General Urban Plans, mostly oriented towards strategic aspects; (b) General Zoning Plans; and (c) Detailed Zoning Plans, mainly devoted to technical aspects. Land use maps and technical parameters, such as rules of planning and rules of construction, are integral parts of Urban Plans. These land use maps are effective instruments for designating land of public interest, as they formally distinguish between development land (land designated for construction) and other land, which is as a rule publicly held [67]. The Serbian planning system is characterised by a tradition of land use planning [68] that is based exclusively on regulation and where plans are rigid instruments that set out long-term land use, architectural and aesthetic standards, and landscape and natural resource protection rules [69].

Table 1. Institutional and legal framework for standards of urban forest protection in Serbia.

Territorial Organisation	Institutions	Laws	Standards of Protection	
National level	Government of Serbia	Government Order on the Environmental Network [70]	Environmentally significant areas	
		Government Order on Safeguards [71]	Area safeguards	
	Ministry of Construction, Transportation and Infrastructure	Law on the Spatial Plan of the Republic of Serbia [72]	Land use balance at the national level	
		Planning and Construction Law [67]	Change in intended use of forest land to development land	
		Expropriation Law [73]	Determination of land of public interest	
		Public Property Law [74]	Resources of general interest (national level)	
			Resources in general use (local level)	
		Utilities Law [75]	Right to use public property	
		Ministry of Environmental Protection	Utilities Law [75]	Management and maintenance of public green surfaces
			Nature Conservation Law [76]	Natural resources and natural values
	Protected areas			
	Environmental Protection Law [77]		Forest development plans and forest management rules	
			Safeguards and options for use as defined by plans	
	Forests Law [66]		Ban on sale of publicly-owned forests	
Prohibited activities				
Regional level*	Serbian Nature Conservation Institute	Environmental Impact Assessment Law [78]	Conditions for change in intended use	
		Strategic Environmental Impact Assessment Law [79]	Preventive protection measures	
	Vojvodina Urban Planning Institute	Preventive protection measures		
		Safeguards and conditions for their implementation		
Local level	Vojvodina Nature Conservation Institute	Local authority spatial plan	Safeguards and conditions for their implementation	
		General Urban Plan	Land use balance at the local level	
Local level	Special-purpose areas (no administrative powers)	General Zoning Plan	Spatial plans for special purpose areas	
		Detailed Zoning Plan	Land use	
		Local authorities' departments	Zoning	
			Building codes	
Local level	State-owned enterprises tasked with developing natural resources		Development and maintenance programmes	

* Serbia is not formally divided into administrative regions. The only part of the country with territorial and administrative autonomy is the Province of Vojvodina.

3.1.2. Value Framework for Urban Forest Protection in Serbia

Achieving land use balance is a core task of the planning process in Serbia. So, for instance, the first Spatial Plan of the Republic of Serbia provided for three key categories of land use as the bases for striking balance in spatial development: agriculture, forests and land for other uses [80]. There are many benefits to preserving forest land and, consequently, the biodiversity of Serbia's ecosystems. With a total surface of 670,598,81 hectares of protected area in Serbia [46] (p. 88), forest and forest land account for more than 40%.

Table 2 presents an overview of the basic value framework for urban forest protection in Serbia. It reveals the extent to which strategic documents address issues of planning and managing urban forests. The key words used in this assessment were: 'urban forests', 'forest parks', 'forests', 'town forests' and 'forest land'. Clearly, the expression 'urban forests' is not recognised in any of the documents considered. The phrase 'town forests' was employed in only one of the instruments, the National Strategy for Sustainable Use of Natural Resources [81], while most of the remaining documents made use of the phrases 'forests' and 'forest land'. The highlight here is that forests are recognised as notable finite natural resources that are important for preserving biodiversity, amongst other considerations. As such, the policy documents provide significant frameworks that guide forest development and protection, in particular to ensure alignment with EU rules and institutional strengthening. Indirectly, it is noteworthy for urban forests protection that the value framework acknowledges the social and cultural functions of forests (in addition to protective and regulatory ones).

3.2. Meso-Level: Formal Cooperation Procedures between Institutions for Land Use Planning Related to Urban Forest Management in Serbia

3.2.1. Organisational Structure

The organisational structure of institutions for land use planning related to urban forest management in Serbia is analysed through three aspects: position, powers and roles.

Position: Institutions of formal importance for land use planning related to urban forest management reside at the national and the local level (Figure 1). There are no institutional powers at the regional level, except for the Autonomous Province of Vojvodina, and as such these cannot be considered to be a general rule. The Serbian Government and Parliament are the supreme institutions, and both are formally the establishing entities for specialised expert organisations responsible for urban forest protection. As such, the Government of Serbia is responsible for the Nature Conservation Institute, while Parliament has responsibility over 'Srbijašume', the Socially Owned Enterprise (SOE) charged with forest management. In addition, the central public administration includes a number of ministries responsible for sectoral duties in relation to land use planning related to urban forest management, such as the Ministry of Construction, Transportation and Infrastructure; the Ministry of Environmental Protection; and other government departments whose remits include urban forest protection issues.

There are also two key groups of institutions at the local level, city administrations and city assemblies. The administrations include a number of departments tasked with urban forest management, while city assemblies formally establish local SOEs that directly perform urban forest management duties.

Table 2. The value framework for urban forest protection in Serbia.

Policy Document	Values: Urban Forest
National Sustainable Development Strategy [82]	Sets out strategic objectives for management and use of forests and forest land, mandates an institutional framework for safeguarding the protective functions of forests, and provides a model for inter-sectoral cooperation in the development of plans.
National Strategy for Sustainable Use of Natural Resources [81]	Defines the concept of ‘forests’ and ‘forest land’; highlights the significance of forests as finite biological resources used, amongst other purposes, for sports, recreation and tourism; and cites the overexpansion of tourism capacity and infrastructure as a threat. Lays out the ultimate objective of sustainable development—balance between the use of all forest functions to ensure lasting multifunctionality in the provision of material goods and other ecosystem services. Advocates the introduction of institutional and economic measures to preserve and advance the recreational and health-related functions of forests and forest ecosystems. Envisages the creation of 5000 hectares of new town and suburban forests (by 2020).
Forestry Development Strategy [83]	Introduces the fundamental objective of safeguarding and enhancing forests and developing forestry as an industry. Particularly advocates the preservation, advancement, sustainable use, and acknowledgment of the protective, social, cultural and regulatory functions of forests and reform and advancement of institutions in the forestry sector.
Biodiversity Strategy, 2011–2018 [84]	Provides an overview of the state of biodiversity, safeguards and the legal, institutional and financial framework for preserving biodiversity; defines strategic areas, goals and activities and includes an action plan. Divides forests by how mixed they are and provides recommendations to achieve the objectives of reducing loss of habitat, including forests, by 2020, and instituting protection of 17% of all land and water areas subject to safeguards. The strategy sets out a framework for measures to prevent adverse impacts of genetically modified species of trees and allochthonous and invasive species on forests and biodiversity. Also advocates development of forest certification programmes and best sustainable forestry practices based on an ecosystem-wide approach.
National Environmental Protection Programme [85]	Advocates the preservation, improvement and extension of existing forests and enhanced monitoring in line with international frameworks.
Law Ratifying the Convention on Biological Diversity [86]*	Advocates the preservation and sustainable use of biological diversity and all its components. Requires biodiversity issues to be considered when any national decisions are being made to preserve and sustainably use biological resources and measures to be adopted to avoid and minimise adverse impacts on biodiversity.
Law Ratifying the European Landscape Convention [57]*	Sets out the principles that each country should adjust to suit its national law and incorporate into spatial development policies. The Convention defines ‘landscape’ as a dynamic category that comprises areas of action of both natural and human resources, and advocates dialogue in enacting landscape development policies, especially at the local level to facilitate practical implementation.
Law Ratifying the Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters [60]*	This convention, also referred to as the Aarhus Convention, guarantees the right to access information, participate in decision-making, and access justice in environmental matters. It establishes principles that public administration should adhere to when communicating with the public on environmental issues so as to safeguard the right of everyone, whether belonging to present or future generations, to live in an environment adequate to his or her health and well-being.

* Although these documents have legal force, they in effect ratify international instruments and are not binding in urban forest management practice.

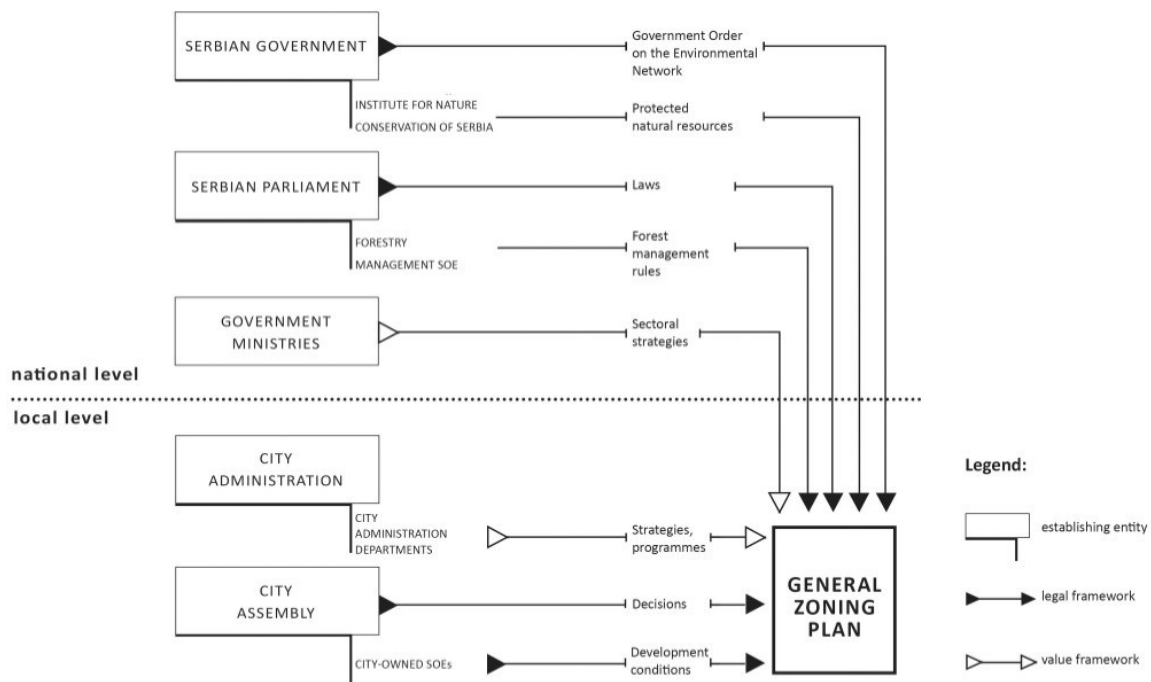


Figure 1. Formal cooperation procedures between institutions for land use planning related to urban forest management in Serbia (source: Authors).

Powers: National-level institutions are responsible for the regulatory framework binding on all levels of governance. Here, the Parliament enacts legislation proposed by the line ministries, while the Government is able to adopt ‘Government orders’, which carry the force of secondary legislation that elaborate on existing regulatory arrangements. The Nature Conservation Institute is specifically charged with assessing the value of natural resources and assigning protected status to ‘natural resources of national importance’, while the forest management SOE is responsible for regulating forest management at the national level. Documents designating ‘protected natural resources’ and setting out ‘forest management rules’ constitute a legally binding framework for land use planning at all territorial levels. Apart from legally binding decisions, the various ministries are responsible for enacting strategic documents that set out the value framework.

At the local level, it is the city assembly that is responsible for decision-making. Decisions are drafted by the city administration through its sectoral departments. In addition to these, the city assembly may incorporate local SOEs responsible for preparing ‘development conditions’, which regulate norms for the use of space by sector. Apart from legally binding documents, departments of city administration also prepare documents setting out values, such as strategies, action plans and programmes.

Roles: The key role in the governance system is played by Parliament, the Serbian National Assembly, which is the country’s legislature. Its local counterpart is the City Assembly. The executive power is vested in Cabinet Ministries at the national level, and in Departments of City Administrations at the local level. Institutions important for enacting legally binding documents specifically aimed at urban forest management are the national Nature Conservation Institute and forest management SOE and local SOEs.

3.2.2. Arrangements for Collaboration

At the horizontal level, collaboration takes place between legislative and executive institutions responsible for land use planning related to urban forest management that are at the same time the key pillars of democratic society. National arrangements in this regard are mirrored at the local level. Particularly important for land use planning related to urban forest management is close horizontal

collaboration between national and local parliaments with specialised nature and forest conservation institutions, which these legislative bodies have formal responsibility for as their incorporating entities. Their horizontal cooperation results in sectoral standards that safeguard land covered by urban forests.

Vertical collaboration between institutions of land use planning related to urban forest management is defined by the national regulatory framework which is legally binding for all lower levels of governance. Within the land use planning system itself, legislation mandates compliance with plans enacted at higher levels (i.e., plans are vertically conditioned).

3.3. Micro-Level: Activities in Land Use Planning Practice

Amendments to the Planning and Construction Law [87] established the General Zoning Plans as the binding planning documents for central built-up areas at the local level. These plans are defined as operational instruments that allow direct implementation, meaning that they set out conditions for construction. They define the intended use and status of land (publicly-owned and other); typology of construction, regulation, capacities and infrastructure; and set out safeguards and development rules. The General Zoning Plans are hierarchically linked with higher-level plans, the National Spatial Plan and the Local Spatial Plan, which provide strategic guidelines for urban development.

The procedure for preparing urban plans is governed by the latest Planning and Construction Law [67]. This is identical for all planning levels in this category (Figure 2). The planning process is preceded by the local parliament's 'Initiative for planning'. The actual process of producing the planning document is entrusted to an expert organisation, which may be a public enterprise or a private company. Various public institutions become involved at various stages of the development of the plan, as do civil or private-sector actors. At the outset of the process, when the 'Concept of the plan' is defined, binding conditions are obtained from the relevant national-level SOEs and institutions, which, for urban forest management, are the Nature Conservation Institute, the forest management SOE and local SOEs tasked with public utilities and environmental protection. Public participation is ensured at two points in the planning process: once at the very beginning, to verify the overall concept, and once at the end, to vet the proposed plan. Immediately before the proposed plan is put up for 'Public viewing', it is at the stage termed 'Inspection of the plan' by the Planning Commission, an expert body established by the local government. After the 'Inspection of the plan' and 'Public viewing' phases, the 'Plan finalization' follows, after which it is sent to the local assembly for 'Adoption of the plan'. The plan may be amended by the local assembly before it is enacted, and the amendments may significantly impact some aspects of the plan.

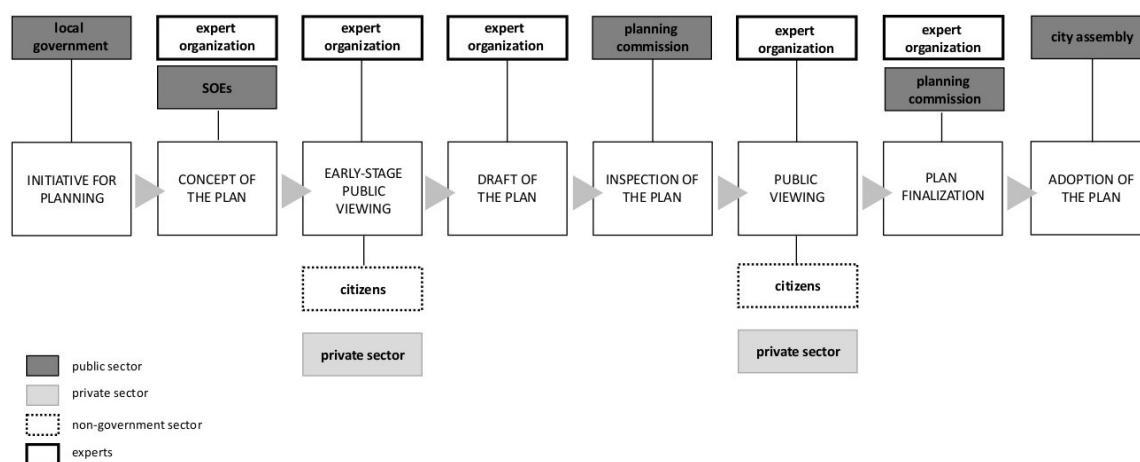


Figure 2. Formal and informal arrangements in the planning procedure (Source: Authors, based on [88]).

Strategic Environmental Impact Assessments (SEA) is yet another key tool for nature conservation. These are defined by the relevant legislation [77], and assessment is mandatory if a decision is made to

produce it at the same time as the Initiative to develop a plan. Even though these assessments were first introduced as early as 2004 as a new environmental protection tool, until 2010 this was only a parallel procedure. The new regulations made them a mandatory and integral component of spatial plans; for urban plans, depending on the scope of each document, formal decisions are made to prepare or not to prepare impact assessments. The SEA aims at describing, evaluating and assessing the likely impact of the General Zoning Plan on the environment and envisages measures to mitigate adverse effects. It is developed in parallel with the draft of the plan and is subject to expert verification by the Planning Commission.

In terms of the transparency and collaborative nature of planning procedures, the practice of public participation does not differ much from that employed in the later stages of the socialist period. Until the enactment of the Planning and Construction Law [87], members of the public could become involved only at the end of the process, once the plan had already been developed, which meant that public comments could pose an issue and draw out the planning process. The 2014 the Planning and Construction Law introduced the option of ‘Early-stage public viewing’ at the very outset of the planning process.

Within the presented planning model, we can identify formal and informal positions that influence the issue of forest management and preservation:

- (a) The formal influence is implemented through
 - plans of higher order,
 - conditions of institutes for environmental protection and
 - conditions of SOEs for managing forest land;
- (b) The informal influence is implemented through
 - capacity of experts in relation to urban forest management and preservation in various positions of the planning procedure—local councillor, expert responsible for a plan creation, expert in the planning commission, expert from the civil sector and expert from the private sector; and
 - capacity of nonexpert stakeholders in relation to urban forest management and preservation in various positions of the planning procedure—local councillor, civil sector and private sector.

3.3.1. Examples of the Land Use Planning Practice Related to Urban Forest Management in Serbia

The General Zoning Plans of two medium-sized Serbian cities were chosen for this assessment of the institutional structure of land use planning related to urban forest management at the micro-level. These are the General Zoning Regulation Plan for Vrnjačka Banja [89] and the General Zoning Plan for the Town of Bor [90].

General Zoning Plan for the Town of Vrnjačka Banja

Vrnjačka Banja is one of Serbia’s major spas and a tourist resort of key national importance. Tourism is the city’s chief industry, and as such development strategies focus on improving tourism capacities and the quality of the tourist offering.

The General Zoning Plan is based on the Spatial Plan of Serbia [72] and the Spatial Plan of the Municipality of Vrnjačka Banja [91]. A specific feature of this plan is the Government Order Establishing the Area of the Vrnjačka Banja Spa [92], which defined the boundaries of the 182-hectare spa zone, which contains a number of hot and mineral water springs harnessed for use in public baths and medical establishments. In that sense, it should be stressed that forests and forest land are recognised as critical for protection of mineral water springs. A number of the objectives set out in the higher-level plans are of strategic importance for the development of Vrnjačka Banja, including preventing continued degradation of space, addressing threats to natural resources, combating unpermitted construction and

use of space contrary to intended purposes and revitalising areas, in particular those with perspectives for development.

The immediate reason for enacting the General Zoning Plan for Vrnjačka Banja was the need to take stock of new structures due to wide-ranging changes in the field resulting from not just legal but also illicit construction. The primary objectives of the Plan are to safeguard the city's character as a spa town, increasing the extent of green spaces in the broader territory of the city, especially in naturally green areas and plots of agricultural land that divide commercial zones from housing and central facilities.

The SEA is an integral part of the General Zoning Plan. The SEA concluded that the plan placed substantial emphasis on the sustainability of urban planning, zoning and construction. It also concluded that environmental protection considerations were complied with and incorporated into all aspects of the plan so as to allow the necessary development to proceed with minimum consequences for the environment.

The General Zoning Plan for Vrnjačka Banja covers an area of 2.318,97 hectares (see Table 3). One of the Plan's objectives is to protect forests, agricultural land and biodiversity in general. The summary of the current state of publicly-owned green spaces identifies only two uses: forests and forest parks. The General Zoning Plan introduces a forest park with an overall area of 150,3 hectares (see Figure 3). The purpose of this specific type of land use is to preserve forest configurations, ensure they can receive the required care and maintenance and permit them to be used for purposes of tourism and recreation.

Table 3. General Zoning Plan for Vrnjačka Banja: aspects relevant to land use planning related to urban forest management.

General Zoning Plan	Vrnjačka Banja
Area covered	2.318,97 hectares
Existing use	Forests (public use)
Planned use	Forest park
Area/percentage of total area covered by plan	150,3 hectares/6.5%
Objective of change of use to forest park	Forest configurations entailing additional attention in terms of maintenance, care and protection with a minimum of park facilities. The primary objective is to maximise the protection of forests and greenery in general, safeguard autochthonous vegetation, landscape configurations, and characters of areas. These zones most commonly integrate recreational and tourism-related facilities of central and boundary areas. These areas are designed for tourism and/or meeting the needs of the residential population of all ages.
Development rules	Construction of appropriate hydraulic engineering structures to provide protection from torrential flooding and floods; Provision of discreet lighting and street furniture as designed; Scheduled maintenance as part of park care projects; Provision of cafe and restaurant facilities (construction of 1 to 3 buildings of up to 150 square metres)
Restrictions	Change in intended use of space, construction of structures, tree felling and unplanned removal of vegetation, earth moving works, vehicle movements, waste disposal
Implementation conditions/instruments	Urban Planning Design required. General Zoning Plan required for Forest Park 1 (10,46 ha), Forest Park 2 (17,31 ha) and Forest Park 3 (34,91 ha)
Protection zones	Sanitary Protection Zone 2
Protection conditions	Greenery of major importance for the character of the area (Borjak) Conditions issued by the Kraljevo Cultural Heritage Institute (Forest Park 1 as whole)

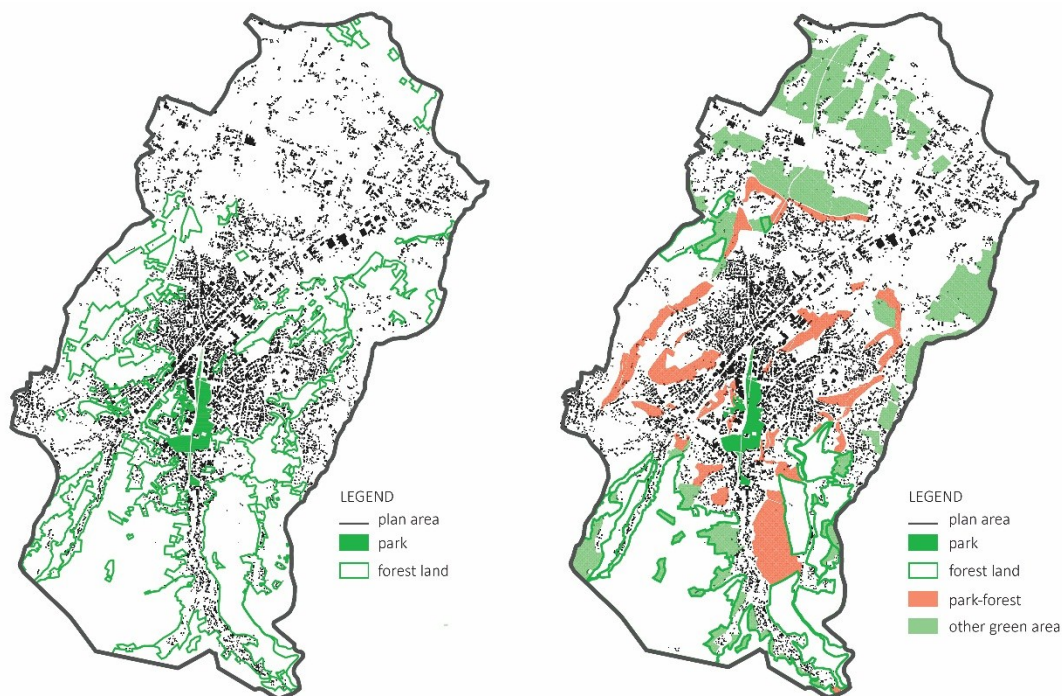


Figure 3. General Zoning Plan for Vrnjačka Banja: green spaces land use plan, current vs. planned state (source: Authors).

The plan also lays down rules for development in the forest parks and sets out conditions for particular types of constructions (catering and hydraulic engineering facilities). The plan bans any changes to the intended use of space, construction of structures, tree felling and unplanned removal of vegetation (except where required to protect plant health, as assessed by the relevant local SOE), earth moving works (except where envisaged by the project designs) and unrestricted vehicle movements and waste disposal. Detailed Zoning Plans are mandated for the three forest parks (Forest Park 1, of 10,46 ha; Forest Park 2, 17,31 ha; and Forest Park 3, 34,91 ha), whereas urban planning designs are required for any interventions within the planned forest parks. Apart from the development rules applicable to all planned forest parks, special requirements were introduced for the Borjak Forest Park (34,91 ha) to take account of the greenery of major importance for the character of the area there, as well as for the forest park near the central city park due to the need to protect cultural heritage monuments.

General Zoning Plan for the Town of Bor

Bor is located close to a major copper and gold mining and smelting facility. Rapid industrialisation in the latter half of the 20th century made the city an important centre for Eastern Serbia. Current and future development of the area is based on mining and industry and the accompanying manufacturing and services sectors.

The General Zoning Plan is based on the Spatial Plan for the Municipality of Bor [93] and the General Urban Plan of Bor [94]. Specific issues are regulated by the local Development Land Decision [95] and the Decision on Public Development Land [96], which determine which development land can be owned publicly or held otherwise: (1) development land intended for public use, comprising infrastructure and buildings (utilities facilities, urban greenery and other public structures and areas of general interest, such as those devoted to education, child protection, healthcare, social welfare, culture, sports and recreation, etc.) and (2) areas intended for other uses, meaning all other structures and areas (housing, businesses, services, etc.).

Higher-level plans designate Bor as a (sub)regional hub with a catchment area covering a number of surrounding municipalities. Bor is an industrial centre with well-developed industry and significant prospects for continuing development of the nonferrous metals sector based on the mining and

processing of copper and gold ores. The Spatial Plan of Serbia envisages increasing the forested area of the Municipality of Bor from 45% to 49.2% of the total land surface, or to 3,570 hectares. The new forests are planned to take the place of poorer quality agricultural land. The General Zoning Plan sets out priorities for development in all areas; for environmental protection, they entail the implementation of the Municipality of Bor Sustainable Development Strategy and revitalisation of degraded land.

The General Zoning Plan applies to the entire territory of the town of Bor, which is divided into seven spatial units and does not comprise the mining and smelting facilities. The area covered amounts to 1312,20 hectares (Table 4). The plan aims at providing an urban planning framework for buildings and areas of public interest. It sets out the requirements for the reconstruction of the town core and other spaces, construction of public, commercial and other facilities, improved protection of the environment, cultural heritage, natural and man-made settings and other issues. Green areas are a major consideration of the Plan, especially in the town core and as part of housing complexes containing multi-dwelling units. These green areas are planned to account for 0.85% of the entire area covered (or 11,2 hectares).

Table 4. General Zoning Plan for the Town of Bor: aspects relevant to land use planning related to urban forest management.

General Zoning Plan	Town of Bor
Area covered	1312,20 ha
Existing use	Urban greenery (public use)
Planned use	Forest park
Area/percentage of total area covered by plan	11,2 ha/0.85%
Objective of change of use to forest park	Conversion of a forest, including a zoo, into a forest park. Development of recreation and tourism facilities
Development rules	<p>Basic natural characteristics to be retained</p> <p>Minimum development:</p> <ul style="list-style-type: none"> - Passive recreation zone: basic equipment, walking paths, lawns to be used for recreation purposes - Active recreation zone: maximum percentage of paved and built-up areas: 2.5% of total - Activity zone: additional equipment (cycle paths, running paths, miniature golf course, children's playground, restaurants, etc.); maximum percentage of paved and built-up areas: 5% of total <p>Part of forest may be developed as park</p> <p>Only natural materials to be used for all paths, minimum lighting</p> <p>Only natural materials (wood and stone) to be used for benches and rest areas</p> <p>Parking spaces to be sited at the main approaches to the forest</p> <p>Endeavour to restrict movement to pedestrians only</p> <p>Provide signage and development and maintenance programmes</p>
Restrictions	-
Implementation conditions/instruments	<p>Appropriate technical documentation must be developed for newly planned green areas and reconstruction of existing ones.</p> <p>The Plan repealed the Zoning Plan for 'Section 3'—Forest Park (Municipal Official Journal Nos. 19/94, 4/01 и14/03).</p>
Protection zones	-
Protection conditions	-

The SEA as an integral part of the Plan concludes that attaining the objectives of the plan will not seriously threaten natural and environmental values, and recommends close adherence to the guidelines of the Plan and the SEA with regard to the environment, spatial development and use of natural resources.

The objectives of the General Zoning Plan for Bor include safeguarding and improving the state of green areas and protective greenery, developing sports and recreation spaces and making the urban

environment more attractive with the aim of attaining public values and interests of the urban area. The plan identifies two intended uses of publicly-owned green areas: Urban greenery (within the limits of urban development land) and Other greenery (for areas other than urban development land), which also includes forests (Figure 4). In Section 4, the General Zoning Plan introduces forest parks as a separate intended use of land, with a total area of approximately 11.2 hectares. The existing forest, which includes a zoo, is planned to be converted into a forest park designed for recreation. The plan mandates that the fundamental purpose of green areas be respected and that the key natural characteristics of the space be retained in their entirety (including vegetation, elevations, bodies of water and the like). This includes preserving autochthonous vegetation and minimum interventions in terms of introducing additional developments.

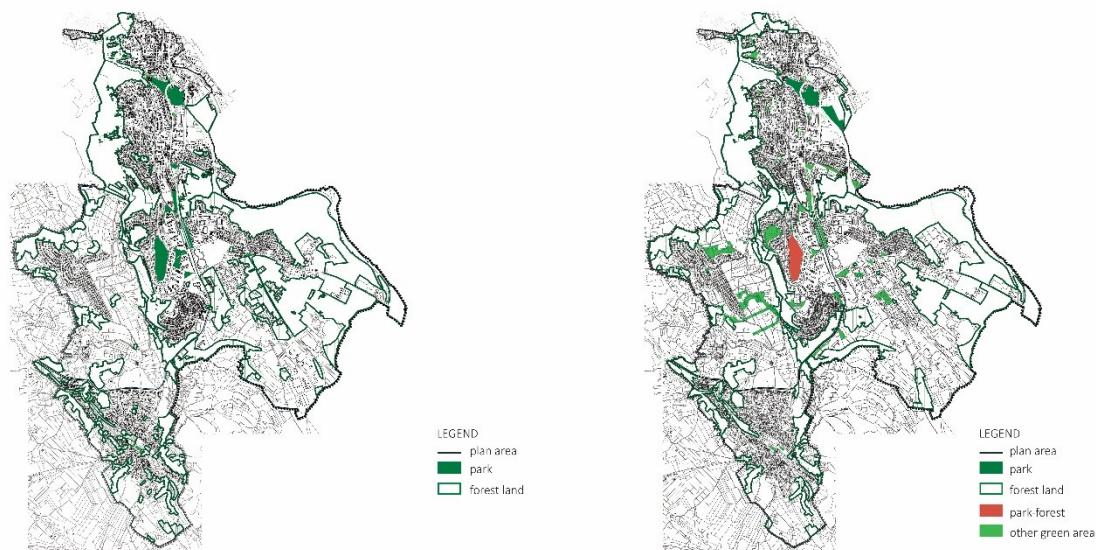


Figure 4. General zoning plan for Bor: green spaces land use plan, current vs. planned state (source: Authors).

The plan sets out development rules for the forest parks and provides conditions for development of passive and active recreation and activity zones, indicates which facilities can be constructed, regulates materials to be used in covering paths and walkways, stipulates how vehicular access is to be controlled and gives pedestrians priority within the forest parks. The creation of the newly-planned green areas and reconstruction of existing ones (which applies to the Section 4 forest park) requires the development of the appropriate technical documentation. This location is not subject to any specific restrictions.

4. Discussion and Conclusions

Land is a fundamental yet finite resource for urban development, and, as such, is directly exposed to the influence of complex socioeconomic factors. In these circumstances, urban planning must rise to the challenge of addressing the manifold development priorities that stem from public policies. Land use planning consequently becomes an efficient instrument for implementing the value framework of public policies through the definition of ways in which land can be utilised. According to the concept of institutional transformation, values are inherent to the institutional system and are the result of a balance struck between its elements. With the disturbance of the stability of the institutional system, induced by the influences outside the system, there is an institutional transformation and a distortion of the value framework of public policies and accompanying agendas, such as “saving urban forests”.

The key factors that influence the transformation of the institutional system in Serbia are as follows.

- (a) The shift in the economic system to embrace open market principles, directly leading to altered ownership of land and, thereby, to a new balance of power in society. This has brought about a fundamental change in perspectives of public property and promoted the diversification of interests related to land use. While it was formerly beyond question, public interest, as a category defined by ideological norms, is now a matter of political agreement that reflects the balance of power in society.
- (b) Acceptance of the global value framework and the principle of sustainability as the dominant development concept, which occasioned the development of horizontal and vertical coordination mechanisms at all levels of institutional structure. This is significantly different in relation to top-down decision-making practice that was dominant in a socialist society, where communication mechanisms were exclusively in the function of carrying out the decisions made at the highest level.
- (c) Acceptance of European integration, where a primary value concept is the principle of subsidiarity, whereby responsibility for decision-making on shared issues is transferred to the lowest possible tier of social organisation. It has introduced democratic dialogue as a means of determining the value orientation of future spatial development. This presents a major challenge for local authorities that should demonstrate the ability to carry out democratic dialogue within the community and the choice of development goals.

Despite a sound and well-developed tradition of nature and forest land protection under socialism, these key factors listed above, have significantly eroded the stability of the previous institutional structure and initiated a process of institutional transformation. As a result, the position of land use planning as a robust mechanism for mediating conflicts over land use and a regulatory instrument for policy implementation is highlighted.

Given the objective of this paper, to provide a critical overview of the institutional framework of land use planning in relation to urban forest management in the post-socialist environment of Serbia, we have defined the components of importance, presented below, for establishing a stable interaction inside the institutional structure for promotion of a value system aimed at saving urban forests. As a first step of institutional design, these components represent key aspects of the concept of land use planning for urban forest protection (LUPUFP) in the Serbian post-socialist transition environment.

The analysis was conducted across three scales: macro/governance, meso/coordination and micro/agency. This included the analysis of system components from the national to local level, illustrated by examples of the land use planning practice of two medium-sized cities. Accordingly, the analysis has identified the major institutional changes regarding:

- (a) Regulatory structure and the value framework of public policies. This aspect of institutional analysis is aimed at examining the macro-level, which is in Serbia determined by significant macro-societal processes that take place due to the adoption of national and supranational constitutions [22]. It includes two aspects: (a) an institutional and legal framework for urban forest protection standards and (b) a value framework for urban forest protection. Serbia's planning system is hierarchically organised, from higher to lower levels of governance. Legislative changes have aimed at reducing the number of planning levels to promote efficiency and effectiveness in implementing plans. However, planning has failed to keep up with the pace of legislative change, which has in practice led to unclear planning procedures and misalignment between the outcomes of planning at various spatial levels. These circumstances have caused confusion between the national, regional and local levels as to their respective powers and roles. Further, the practice of land use planning related to urban forest management is subject to a variety of laws enacted by administrative authorities in numerous sectors. One issue here is the lack of alignment between urban forest protection standards introduced by the various regulations, which has caused problems with interpretation and implementation at the local level. On the other hand, the value framework for urban forest protection is formally implemented through the legislative framework and the standards for protection envisaged by it. A major issue here is

the set of policy documents the implementation of which is not formalised and is therefore not mandatory. The multitude of formal and informal policy documents at the national level, not sufficiently aligned with one another, prevent both the establishment and the implementation of a clear value framework. As a basic drawback, the absence of a terminological framework and the identification of urban forests as a separate category of urban green land are observed, leaving at the local level a space for different interpretations, as is shown in the cases of the General zoning plans of Vrnjačka Banja and Bor. In addition, the underdeveloped capacities of local SOEs, due to the lack of expert profiles in the formation of employees, as well as the burden on the public service of many utilities, represent an obstacle in the formulation of requirements as well as the implementation of protection measures. Thus, as was illustrated in both of the General Zoning Plans of Vrnjačka Banja and Bor, standards defined on the national level serve as guidelines for particular land use planning processes; however, LUPUFP is not yet recognised as a concept. Consequently, the key components of the regulatory framework for the establishment of the LUPUFP system are

- Retaining the hierarchy of the planning system;
 - Setting clear planning procedures and defining expected outcomes of planning at various spatial levels;
 - Harmonising different regulations that envisage urban forest protection standards;
 - Establishing a clear relationship between formal and informal policy documents;
 - Mutual alignment of the multitude of policy documents;
 - Formalising relationships between legally binding and nonbinding policies at the national and local governance levels.
- (b) Procedures for cooperation between institutions. The next level of institutional analysis (the meso-level) involves planning and implementation structures and processes [22]. Serbia's traditional hierarchical planning system, which entails complex inter-organisational networks, requires cooperation at the horizontal and vertical levels aimed at the development and implementation of policies, programmes, projects and plans. The top-down approach, which emphasised the national decision-making level and an expert-driven approach to policy-making, is slowly opening up to bottom-up initiatives and the acknowledgment of particular interests in decision-making. This has been accompanied by a new set of regulatory reforms that aim at decentralising public administration and placing responsibility for making spatial planning decisions at the local level. This type of institutional transformation entails a reform process wherein the regulatory system is carefully harmonised both horizontally and vertically. The preconditions for these changes are a clear political orientation and the provision of appropriate professional capacity. As such, institutional design must be based on firm foundations, including institutions and regulations, which both define policies for urban forest protection and ensure decision-making procedures aimed at safeguarding the public interest. From the urban forest management perspective, the institutional structure is strictly divided between the national and the local level of governance. Each institutional level possesses a distinct unit charged with issues of nature conservation, including forests, whereby the communication between them is very weak. Also, the strict sectoral division between governance units at the same level poses a problem for horizontal communication. As was illustrated in cases of the General Zoning Plans of Vrnjačka Banja and Bor, there is a noticeable absence of horizontal communication between the sectors dealing with the "saving urban forest" agenda, as the requirements for defining planning measures such as "restrictions", "protection zones" and protection conditions" are not obligatory. This clearly shows that, for example, climate change issues, drinking water protection, energy efficiency, healthy environment, etc. are irreconcilable, and therefore they are dependent of the expertise of the organisations involved in the development of the plan as well as the knowledge of the local community. The value framework for the agenda of saving urban forests requires firm

regulations for stakeholder involvement in making decisions on urban forests, indicating that various control mechanisms are necessary. The weaknesses of such a system lie in the rigidity of its mechanisms and their uncritical application in locally specific situations. Implementation of the public policies and safeguarding the adopted value framework is contributed by units specialised in nature and forest protection at all levels. As was illustrated in Vrnjačka Banja and Bor, bottom-up initiatives for forest protection and development from the local level that are recognised within land use planning processes, such as particular local decisions, reflect the adjustment of the institutional structure in order to promote the concept of LUPUFP. Consequently, the key components for the establishment of the LUPUFP system related to the procedures for cooperation between institutions are

- Strengthening vertical coordination between specialised nature and forest protection units at the national as well as local levels;
 - Establishing procedures and mechanisms for horizontal communication between sectors at the same level of governance;
 - Establishing procedures and mechanisms for bottom-up communication by decision-makers;
 - Creating preconditions for efficient multi-stakeholder cooperation;
 - Establishing firm regulations to control the impact of market forces;
 - Defining legal procedures that acknowledge control mechanisms;
 - Ensuring more flexibility in the application of control mechanisms in locally specific situations;
 - Retaining specialised units and their instruments for implementing nature and forest protection instruments;
 - Establishing mechanisms for horizontal and vertical coordination of policy implementation instruments.
- (c) Activities in land use planning practice. This level of analysis pertains to intra-organisational design, addressing organisational subunits and small semiformal or informal social units, processes and interactions [22]. Also, it directly examines the extent of stakeholder participation related to the legal framework, the effectiveness of processes, and the space for the involvement of civil society [36] in relation to urban forest management. Land use planning at the local level in Serbia in general is noticeably top-down oriented, with strict control conducted by public sector, and mainly subordinate to the attainment of public sector interests. The participation of stakeholders from the private and civil sectors is partial and insufficient. The role of expert organisations does not enjoy a sufficiently clear position in the decision-making system. Substantial responsibility—and power—is given to the planning commission as an expert body of the local government. Accordingly, their position is sensitive to the influence of various interests. Furthermore, the structure of the commission does not include experts from the domain of urban forest management. As was illustrated in the example of the General zoning plan of Vrnjačka Banja, the formal institutional framework, particularly in the domain of top-down coordination and standards for protection, serves as a base for urban forest protection that was recognised as a crucial resource for further spa protection and development. In the example of Bor, where urban forest protection is not specially required outside of the formal standards, the informal institutional structure gives space for informal institutional actions for urban forest protection and bottom-up initiatives that are in line with the requirement for ‘fostering pro-environmental behaviours’. Consequently, the key components for the establishment of the LUPUFP system related to the activities in the land use planning practice are
- Establishing collaborative planning, which entails informed decision-making about the directions of urban development at key stages of plan production;
 - Clarifying the roles of experts in the decision-making system and ensuring their independence from political decision-making;

- Clearly defining policies and regulatory mechanisms at the national level;
- Standardising the various categories of land use at the national level;
- Retaining mechanisms that acknowledge the regulatory norms and hierarchy of the planning system;
- Harmonising regulations across various sectors;
- Strengthening the positions and capacities of local public sector experts;
- Establishing a clear methodology for the development and content of urban plans.

These three groups of components constitute possible guidelines for preserving the robust tradition of land use planning related to urban forest protection by the establishment of the concept of LUPUFP in Serbia. The complexity of the subject, rooted as it is in differing sectors of expertise, certainly calls for deeper consideration of the myriad components of the system in the future. The findings presented in this paper have no ambition to include all the components of the system, but to provide some valuable insight into the practice of land use planning as one of the most efficient instruments for protecting green land in cities and that adheres to the agenda of saving urban forests.

The concept of LUPUFP is in line with current recommendations for the safeguarding and sustainable management of forests and other green areas in cities as crucial components for the health and well-being of citizens, promoted by the most influential documents such as Agenda 2030, the Paris Agreement and the New Urban Agenda. Related to that, the main contribution of this research is in the promotion of the relevance of the concept of LUPUFP in accordance to the importance of ecosystem services especially, as outlined by the FAO report regarding the nine SDGs.

The conducted research also contributes to the concept of institutional transformation, which is verified through the system of the land resource management of society in the environment of post-socialist transition. The results of this research presents the specific, practical and applicable path of institutional redesign that leads to the establishment of a concept of LUPUFP as an experience that may assist other countries in the region seeking answers in the process of developing their own models.

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