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MANAGEMENT OF PROTECTED AREAS IN SERBIA: TYPES AND STRUCTURE OF MANAGERS

SUMMARY

During last decade of 20th century, and after 2000, there have been significant changes in the management of protected areas (PAs) in Serbia. Prior to that time, most of PAs, were managed by public sector, but changes on international and national level, caused involvement of other actors. In the system of management of PAs, beside private sector, from 1994, is present private sector. The problem of determining types of managers of PAs in Serbia and their systematization is important for understanding changes in the existing system of PA and, so far, has not been sufficiently treated. For these reasons, the aim of this paper is to determine types and structure (categories and subcategories) of PAs managers in Serbia. Types of managers are defined in relation to public and private character of the initial capital. Management categories are established in relation to the ways of organization and legal form, while subcategories represent managers which are defined on the basis of available secondary data. In paper are applied quantitative methods of content analysis and specialization (classification) as well as comparative and statistical method. The results indicate the existence of two main types of PAs managers in Serbia from public and private sector. Within the public sector, two categories are distinguished: „enterprises” and „institutions”, and within private sector, also two categories, „companies” and „other organizations and individuals”.

Keywords: protected area, management, managers, typology, Serbia

INTRODUCTION

Nature protection represent concept that has been established as a society need to set aside certain areas from regular use and to intent them to use, which is partially or completely restricted. Thus, in Europe, „ about a thousand years, many forests were placed under protection as hunting grounds for aristocracy” (Martinić 2010). Nature protection in Serbia has long tradition since first protected area (PA) was established in 1874 (Đorđević *et al.* 2012), similar to Montenegro, where oldest PA dates from 1878 (Čurović *et al.* 2011).

At the beginning of the 19th, and to a large extent during 20th century, dominant practice was establishment of protected areas by the government, through legislation at the national level and regulations at the level of regional

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government's i.e. local governments. As a result of process of transition, many countries began the process of involvement of civil society, especially local communities and non-governmental sector in the management of PA (Balloffet, Martin, 2007).

In Serbia, use of PAs is regulated through three levels of protection². PAs in Serbia covers 520.099 ha, representing 5.89% of the total territory (Djordjević *et al.*, 2013). In accordance with the Law on Environmental Protection (2009) seven basic categories of PAs are defined: strict nature reserve (StNR), Special Nature Reserve (SNR), National Park (NP), nature monument (NM), protected habitat (PH), area of outstanding feature (AOF) and nature park (NaP).

However, in practice, in addition to these, there are other categories that are the result of overlaps with previous classifications prescribed by the Law on Environmental Protection (1991) and the regulations of other relevant laws that were in effect in the past³. For these reasons, other categories of PAs (general nature reserve, scientific research reserves and reserves for maintaining gene pool) are in paper identified as other nature reserves (ONR).

In order to successfully notice this, all categories of PAs, that are present in practise, were grouped, appropriately to the categories defined by the Law on nature protection.

In this respect, following grouping is established:

- SNR include special nature reserve and special reserve of nature;
- NM include nature monuments, monuments of landscape architecture, memorial nature monuments and nature area around unmovable cultural property;
- AOF include area of outstanding feature and park of exceptional natural beauty;
- NaP include nature park, regional nature park and park forest.

Within the system of nature protection in Serbia, different interests are met, which is why management of PAs „...become challenge, not only for sector of nature protection, but also for other sectors“(Grujičić *et al.* 2008). Organization of system of management of PAs in Serbia represent „...complex structure of different actors, rules and responsibilities” (Đorđević *et al.* 2013). Result of these changes is presence of different types of PA managers.

In period after 1990, in Serbia emerged new categories of managers of PAs, which were result of, on the one hand, transition reforms, and on the other, activities that needed to be taken in account within the framework of fulfilling international obligations (e.g. Convention on biological diversity⁴). Actual Law

² In first level of protection (I) is defined strict protection, in second level (II) is present active, while in third (III) can be conducted management interventions with aim of restoration, revitalizations and overall improvement of PA (2009).

³ Law on nature protection from 1961 (1961) and 1986 (1986).

⁴ During United Nation conference on environment and development, numerous conventions were adopted, while for management of PAs, is most important Convention

on nature protection (2009) gives new categorization of PAs and system of control, monitoring and planning (in relation to Law on Environmental protection from 1991) and defines different managers:

- legal entity;
- entrepreneur;
- individuals.

In the past, research were conducted on categories of PAs (Ostojić *et al.*, 2007, Radović *et al.* 1998, Milanović *et al.* 2008), but detailed analysis of the types and structure of managers in Serbia, so far, has not been carried out.

Previous analysis of the organizations involved in the management of PA, determined four basic types and categories within them (Djordjević *et al.* 2011) but without a detailed insight into the system of management.

Many authors emphasize diversity of management in PA and underline process of decentralization (Dudley 2008, Borrini-Feyerabend *et al.* 2013, Graham *et al.* 2003). Research conducted in the neighbouring countries, point to the fact that, except management by government, it is present also, another form of PA management, and this situation is also observed in Serbia (Djordjević *et al.* 2011).

Future research should analyze effectiveness of PA management by different organizations. Prior to this analysis, it is necessary to study and to define types and structure of PA managers.

In accordance with the above, the aim of the research is to determine types and structure (categories and subcategories) of PA managers in Serbia. The purpose of the research is to create a basis for further studies of the organization and management of various categories of PA managers. Subject of research are categories of PA and organizations that manages them in Serbia.

MATERIAL AND METHODS

In the paper are applied different scientific methods: analysis and specialization, comparative and statistical methods. Content analysis, as type of partial analysis (Milosavljević and Radosavljević, 2008) is applied in order to study the contents of the documents. Some authors classify content analysis of documents in the group of non-reactive methods, because it does not involve direct data collection from the subject of research (Bulmer 2003, Neuman, 2006).

This research use quantitative content analysis. This analysis divides content into its basic meanings, by which, scientific systematization and typology of content is conducted, according to its characteristics and features (Mihailović 2004).

The group of non-reactive method also involves the analysis of secondary data, which includes an analysis of quantitative and/or qualitative data that are

on biological diversity (1992). Within this convention it is recognized role of different stakeholders in the management of PAs and emphasised need for their involvement in these activities (1992; 2010). Serbia ratified Convention on Biological diversity in 2001 (2001).

not collected by the researcher (Neuman 2006, Bryman 2008). In this way are analyzed statistical data on PA, relating to area representation (ha) and PA categories, as well as basic information about managers. Method of specialization, or one of its forms - classification (Milosavljević and Radosavljević 2008), is applied in order to define and explain types, categories and subcategories of PA managers.

The comparative method is used to determine the similarities and differences, between types, categories and subcategories of managers, compared to the area and category of PA that they manage.

Statistical method is applied during processing of data, i.e. in determining share of types, categories and subcategories of managers in the management of the total area and certain categories of PA.

In the research are used secondary data related to the protection of nature, i.e. documentation of relevant professional organizations in Serbia.

Governance types of protected areas (IUCN)

In governance of PA, the central question is „...who holds authority, responsibility and can be held accountable for the key decisions” (Borrini-Feyerabend *et al.* 2013).

According to International Union for Conservation of Nature (IUCN), participants involved in the governance of PA can be divided in „governmental” and „non-governmental”. „Governmental” participants are local authorities, agencies, public enterprises (PE) etc. „Non-governmental” participants include individuals, non-governmental organizations (NGO), research and educational institutions, religious bodies, enterprises and corporations (in private ownership), etc. (Borrini-Feyerabend *et al.* 2013).

From the other hand, in relation to the type of governance, IUCN differs (Graham *et al.*, 2003):

1. governance by government;
2. shared governance;
3. private governance;
4. governance by „indigenous peoples and local communities”⁵.

In type governance by government, one or more government organizations, make decisions and have responsibility for management of PA, sets up goal of protection and conducts management plan. In some cases „...government retains the overall control of a PA and takes all major decisions, but delegates planning and management tasks to other actors”, as to NGO, PE,

⁵ Under „indigenous peoples and local communities” are considered autochthonous population and communities that live on the territory of some country. This term is used to describe „...natural and/or modified ecosystems, containing significant biodiversity values, ecological benefits and cultural values, voluntarily conserved by indigenous peoples and local communities, through customary laws or other effective means” (Kothari *et al.* 2012).

companies and etc. Thus, three different subtypes are defined (Graham *et al.* 2003):

1. ministry or agency in charge;
2. sub-national ministry or agency in charge;
3. government-delegated management.

Shared governance is based on the institutional mechanisms and processes, in which, formally or informally, authority and responsibility are divided between the different actors (Borrini-Feyerabend, 2013). One of the forms of shared governance is collaborative governance in which „...decision-making authority and responsibility rest with one agency, but the agency is required, by law or policy, to inform or consult other rights-holders and stakeholders, at the time of planning or implementing initiatives” (Borrini-Feyerabend 2013). Unlike the „governance by government”, feature of this type is the involvement of other stakeholders (NGOs, local communities and organizations in other countries) by the appropriate governmental agencies in the management process.

Private governance is characterized by private ownership of the territory under some form of protection. In this case, there are varieties of stakeholders: individuals, NGOs and corporations (Graham *et al.* 2003). This includes also management by religious communities and organizations engaged in research and education (Borrini - Feyerabend 2013). However, it is important to emphasize that, in the case of private governance, „...the authority for managing the protected land and resources rests with the landowners, who determine conservation objectives, develop and enforce management plans and remain in charge of decisions, subject to government legislation and site-specific restrictions” and government can ensure protection through certain subventions (Borrini - Feyerabend 2013).

Governance by indigenous peoples and local communities means making decisions about PA, „...based on various forms of customary or legal, formal or informal, institutions and rules“ (Dudley 2008). However, it should be „...made distinction between governance by indigenous peoples and local communities and governance by the lowest administrative level in a given country“, which refers to type „governance by government” (Borrini-Feyerabend 2013). Highlighting these differences is important, not only because of the fact that characteristics of management are different, but because of „...traditional communities may need the lowest administrative level to validate their governance and management plans in order to function effectively” (Borrini-Feyerabend 2013).

RESULTS

Within results are presented and analysed data related to determination of:

–typology and structure of managers, and definition of:

- types,
- categories and
- subcategories;

–managers by PA categories.

Types and structure (categories and subcategories) of managers are shown in Figure 1.

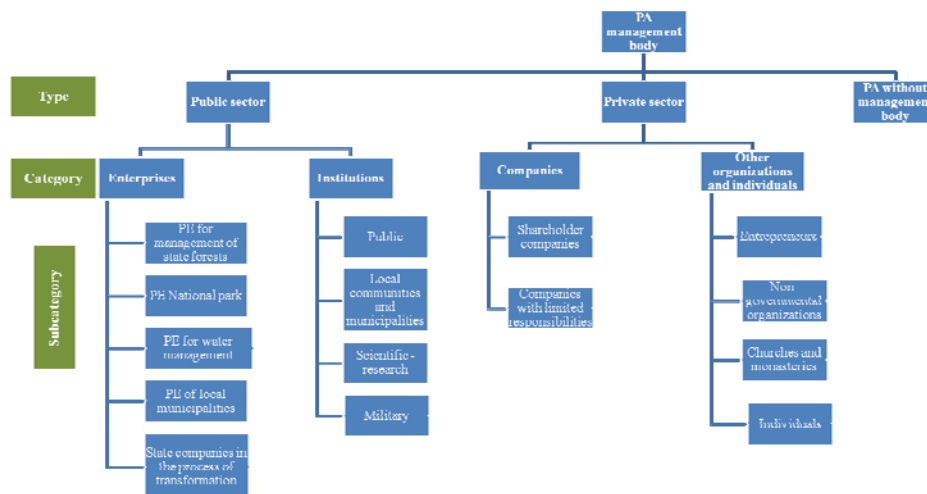


Figure 1. Types and structure of PA managers in Serbia

Types of managers are defined in relation to public and private character of the initial capital. Management categories are established in relation to the way of organization and legal form, and subcategories are those that are defined on the basis of available secondary data.

In table 1 is given detail overview of separated types, categories and subcategories, by area (ha) and number of organizations.

Managers of PA are divided into two basic types:

- public sector;
- private sector.

Public sector manages 94.4% while private with 5.6% from total area of PAs in Serbia, that have managers, respectively 92.45% and private with 5.49% of total area of PAs. Certain area (2.06% of the total area of PAs) does not have a manager.

Public sector includes following categories of managers:

- enterprises;
- institutions.

Enterprises manage 98.9% (institutions 1.1%) from total area managed by public sector, i.e. 91.39% (institutions 1.05%) from total area of PA. Category of enterprises includes two subcategories:

1. public enterprises (PE), where belong:

- PE for management of state forests: PE „Srbijašume” and PE „Vojvodinašume”;
- PE for managing NP;

- PE for water management: PE „Vode Vojvodine”⁶;
- PE on the level of local municipalities⁷;

2.state companies in the process of transformation.

Within the first subcategory, PE manages 475,196.41 ha of PA area.

The highest share (45.90%) in management of PAs has PE „Srbijašume“, which represents 41.95% in relation to total area of PAs. This PE manages NaP „Stara Planina” which is, by area, one of the biggest PAs (114,332.00 ha). PE „Vojvodinašume“ manages 14.6% (13.35% of total PA), by which biggest PA by area is SNR „Deliblatska peščara“ (34,829.32 ha).

Within five PE that manages with NP, biggest one is managed by PE NP „Đerdap“ (63,608.45 ha).

PE „Vode Vojvodine” manages one PA (NaP „Jegrička“) that covers area of 1,144.81 ha.

On the level of local municipalities, are present numerous PE that manage PA. PE „Direkcija za građevinsko zemljište i puteve opštine Surdulica” manages AOF „Vlasina“, which represents one of the largest in this subcategory (12,740.90 ha).

PA managed by state enterprises in the process of transformation counts 148.42 ha. As the biggest manager is present social enterprise from the field of water management „Tamiš-Dunav“, which manages NaP „Ponjavica“ (133 ha).

In category institutions, two subcategories of managers are separated:

1.local, which could be:

- public⁸;
- local communities and municipalities;

2.national, which could be:

- scientific-research;
- military.

Institutions manage 5,480.43 ha, and the largest share have public institutions (2,418.13 ha). Tourism organization „Čačak” manages AOF „Ovčarsko-kablarska klisura” (2,250 ha), largest PA managed by public institutions. Local community Popšica manages NM „Pećina Popšički pešter” (20.80 ha), largest PA managed by local communities and municipalities.

Scientific-research organizations manage area of 46.93 ha, and as the managers are present Faculty of Biology and Faculty of Forestry from Belgrade.

Faculty of Biology manages NM „Botanička bašta Jevremovac” (4.82 ha) and Faculty of Forestry NM „Arboretum Šumarskog Fakulteta“ (6.69 ha). Also, as the manager is present Institute for Pulmonary Diseases of Vojvodina from Sremska Kamenica. This institute manages regional nature park „Park Instituta u Sremskoj Kamenici” (35.42 ha).

⁶ PE for water management „Srbijavode” does not manage any of PA.

⁷ Activities of these PE are very diversified, because they deal with service of maintaining buildings and environment, collection and purification of waste and water, construction works and organization of cultural and entertainment activities.

⁸ Here belong: museums, primary schools and gymnasiums, libraries, medical centres, tourism organizations and funds.

Table 1a. Managers of PA in Serbia (Public sector)

Type Category	PUBLIC SECTOR					
	ENTERPRISES			INSTITUTIONS		
Subcategory	Public enterprises			Local		National
	for management of state forests	national parks	for water management	local municipalities	public and municipalities	scientific-research
Area (ha)	158,986.36	1,144.81	27,344.14	2,418.13	60.04	46.93
Number of managers	5	1	30	18	9	3
Share in relation to the area managed by category (%)	33.45	0.24	5.77	44.10	1.10	0.90
Share in relation to total area of PA (%)	30.56	0.22	5.25	0.46	0.01	0.01

Table 1b. Managers of PA in Serbia (Private sector)

Type Category	PRIVATE SECTOR						
	COMPANIES		OTHER ORGANIZATIONS AND INDIVIDUALS				
Subcategory	joint stock companies		limited liability companies	entrepreneurs	non-governmental organizations	churches and monasteries	individuals
	Area (ha)	Number of managers	Area (ha)	Number of managers	Number of managers	Number of managers	Number of managers
Area (ha)	1,790.60	7	18,736.17	11.39	5,391.72	2,608.42	5.40
Number of managers			4	2	13	9	20
Share in relation to the area managed by category (%)	91.30		8.70	0.14	67.25	32.54	0.07
Share in relation to total area of PA (%)	0.34		3.6	0.02	1.04	0.50	0.001
Serbia (ha)	WITHOUT MANAGERS						
Share in relation to total area of PA (%)	10,730.49						
	2.06						

*Source: original (according to the register of protected natural goods, 2012)

Military institution (MI) manages SNR „Karadordevo” (2,955.33 ha).

Within management of private sector, following categories are defined:

- companies;
- other organizations and individuals.

Companies manage 71.9% (other organizations and individuals 28.1%) of total area of PA managed by private sector, i.e. 3.95% (other organizations and individuals with 1.54%) of total PA area. Category of companies include following subcategories:

1. joint-stock companies;
2. limited liability company.

Category of other organizations and individuals includes following subcategories:

1. NGO;
2. churches and monasteries;
3. entrepreneurs⁹;
4. individuals.

Companies manage 20,526.77 ha and, as biggest manager, is present „Ribarsko gazdinstvo Ečka“, under which responsibility is SNR „Stari Begej-Carska bara” (1,676 ha). In subcategory of limited liability company, the biggest manager is „Park prirode Mokra gora“, which manages NaP „Šargan-Mokra gora” (10,813.73 ha).

In category of other organizations and individuals, the highest involvement belongs to NGOs (5,391.72 ha) and churches and monasteries (2,608.42 ha). NGO „Ekološko društvo Gradac” manages biggest PA in this subcategory („Klisura reke Gradac” – 1,268.06 ha). In subcategory of churches and monasteries, AOF „Dolina Pčinje” (2,606 ha) is the biggest PA in this subcategory, and is managed by „Srpska pravoslavna crkva – Eparhija Vranjaska”. In addition to these, there are two more subcategories entrepreneurs (11.39 ha) and individuals (5.40 ha).

In table 2 are shown data on number of specific PA categories in relation to type of managers. Based on these results, it is evident that the majority of PAs, regardless of category, is managed by public sector. The only exception are NMs, which, in relation to the number of them, have no manager, but even in this case, most of them are under management by organizations from public sector.

⁹ Entrepreneur and/or physical person can be manager of PA in special cases, i.e. „... if it is a protected area of a small area and mainly private ownership of real property” (2009).

Table 2. PA categories and types of managers

PA categories*	ΣPA	Public sector				Private sector				PA without managers	
		№ PA	% (from ΣPA)	№ organ.	Subcategories (organizations)	№ PA	% (from ΣPA)	№ organ.	Subcategories (organizations)	№ PA	% (ΣPA)
SNR	46	24	52.2	1	PE for management of state forests	-	-	-	-	22	47.8
SNR	20	10	50	6	PE for management of state forests, PE of local municipalities, State enterprises in process of transformation, MI	7	35	7	joint stock companies, limited liability companies, NGO	3	15
NP	5	5	100	5	PE NP	-	-	-	-	-	-
NM	343	153	44.6	68	PE for management of state forests, PE of local municipalities, State enterprises in process of transformation, local public institutions, local communities and municipalities	55	16	15	joint stock companies, limited liability companies, NGO, churches and monasteries, individuals	135	39.4
AOF	21	12	57.1	6	PE for management of state forests, PE of local municipalities, local public institutions	3	14.3	3	NGO, churches and monasteries	6	28.6
NaP	19	12	63.2	8	PE for management of state forests, PE of local municipalities, PE for water management, Scientific-Research institutions, State enterprises in process of transformation	3	15.8	3	limited liability companies, NGO	4	21
ORN	7	4	57.1	1	PE for management of state forests	-	-	-	-	3	42.9

*Although Law on nature protection (2009) defines category PH, it is not still present in the practise.

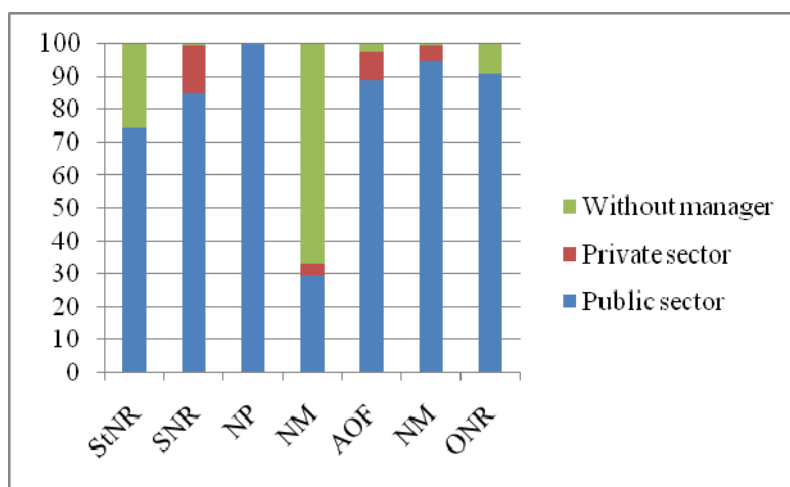
Also, within the public sector it can be seen following:

- PEs for management of state forest are present as managers of all categories except NP;
- PEs NP are managers of NP;
- PE for water management, manages with NaP;
- PEs of local municipalities manages SNR, NM and NaP;
- state enterprises in process of transformation are managers of NM and AOF;
- local public institutions are managers of NM and AOF;
- local communities and municipalities are managers of only NM;
- scientific-research institutions are managers of only NaP;
- MI manages only SNR.

Comparing to the number of PAs, it is evident, that private sector is less present than public. Therefore, in relation to category of managers and PA category, it is observed that:

- joint stock companies are managers of SNR and NM;
- limited liability companies manage SNR, NM and NaP;
- entrepreneurs and individuals are only managers of NM;
- NGO are managers are managers of SNR, NM, AOF and NaP;
- churches and monasteries are managers of NM and AOF.

Figure 2 shows share of certain types of managers in specific PA categories, in relation to total area of PAs in Serbia.



*Source: original (according to the register of protected natural goods, 2012)

Figure 2. Share of manager types by PA category

It is observed that, in relation to the area, in all PAs categories except the NM, the prevailing manager is „public sector“. It is important to point out that, when it comes to NM, the most of the area (66.76%) has no manager.

Relation toward PA category, based on the total area managed by different types of managers, are shown in Table 3

Table 3. Share of PA category in relation to different types of managers

PA category	Type of manager		
	Public sector (%)	Private sector (%)	Without manager (%)
StNR	0.35	-	5.44
SNR	15.36	44.51	2.60
NP	33.07	-	-
NM	0.79	1.76	80.35
AOF	8.44	13.57	10.89
NaP	41.98	40.16	0.66
ORN	0.01	-	0.06
Σ	100	100	100

Source: original (according to the register of protected natural goods, 2012)

Therefore, it can be observed that, within public sector, compared to the area, the most common categories of PAs are: NaP and NP. On the other hand, in private sector, the most common categories, also in relation to the area of PAs, are SNR, followed by NaP. In PAs that do not have managers, the most dominant category is NM.

DISCUSSION

Previously, it was stressed that IUCN distinguishes four types of governance. On the other hand, on the basis of the above result is observed, that in Serbia is not present such a division. However, managers of PA, defined by this research can be classified into one of these types specified by the IUCN (Table 4).

In Serbia, there is one type of IUCN governance type, defined as governance by government. Within this type, IUCN distinguishes three subtypes, of which in Serbia are present two (governance by the „sub-national ministry or agency in charge” and „government-delegated management”).

Shared governance, in the form of trans-boundary governance is a concept that has recently been developed through cross-border cooperation. In the next period, these forms of governance will grow in its importance, because of the large number of PAs, which are on the borders with neighbouring countries.

Private governance, as defined by IUCN, in Serbia does not include all subcategories of managers, which are defined within private sector, because ownership of PA is mostly state, and the part that is privately owned is not organized in a form that would belong to this category. Governance by indigenous peoples and local communities is not present in Serbia.

Based on the above, it is evident that in Serbia, to some extent, is present decentralization of PAs. The importance of decentralization of these activities has been emphasized in previous studies, which indicate that this situation is

progressively present in the past few decades. Also, protected area policy becomes more comprehensive in terms of the adoption of general principles, identification of priorities and objectives for management of natural resources (Lockwood 2006, Borrini-Feyerabend 2013, Lausche *et al.* 2013).

Table 4. Managers of PAs in Serbia, according to IUCN classification

Type of governance	IUCN	Serbia
	Subtypes of governance	Subcategory of managers
Governance by government	Ministry or agency in charge	/
	Sub-national ministry or agency in charge	Local communities and municipalities
	Government-delegated governance	PE for management of state forests, PE NP, PE for water management, PE of local municipalities, state companies in process of transformation, local public institutions, MI, joint stock companies, limited liability companies, NGO, churches and monasteries, individuals, scientific-research institutions
Shared governance	/	/
Private governance	/	/
Governance by indigenous peoples and local communities	/	/

*Source: original (according to: Graham *et al.*, 2003 and register of protected natural goods, 2012)

In many countries of Western Europe „...legislative and budgetary responsibilities for nature conservation rest at sub-national administrative levels” while these responsibilities „...in Eastern Europe are still centralized” (Borrini-Feyerabend 2013). The countries with the greatest diversity in terms of types of managers are Latvia, Bulgaria and Finland and the highly centralized system is present in Albania, Croatia, Finland, the Czech Republic and Slovakia (Stanciu *et al.* 2013).

The most common type of management in Eastern Europe is governance by government, with the state having the most serious role in this sector (Stanciu *et al.* 2013). In Serbia, management of most PAs is carried out by the government, and as the biggest manager is present public sector. This situation is

also present in Croatia, although only public sector manages PAs, and management is divided between national and regional levels. On both levels, there are public institutions that are responsible for the management of PAs (Spurgeon *et al.* 2009). In Serbia, on the other hand, is present also private sector.

In some countries (e.g. Bulgaria, Slovakia, Romania), there are cases that non-governmental participants are present in the management of PAs (Borrini-Feyerabend 2013). Thus, in Romania, in addition to the management of public institutions, managers may be NGO, universities and private individuals (Borrini-Feyerabend 2013). Based on the results presented here, it can be seen that a similar situation is also in Serbia¹⁰.

However, fully private ownership of PA, and therefore management, is present in Bulgaria, Latvia and Finland (Stanciu *et al.* 2013).

By involvement of non-governmental sector in the management of PAs was achieved one of the basic assumptions of modern concepts of natural resources, management because part of responsibilities is decentralized and transferred to the local population (Borrini-Feyerabend 2013, Stanciu *et al.* 2013).

Looking at the relation of PA categories and managers, there is a dominant presence of the public sector in the management of NP, StNR and ONR (100%). Similar is the situation in Croatia, when it comes to managing of NP and NaP, where is only present public sector (Spurgeon *et al.* 2009, Martinić 2010).

Management of NP by public sector is in relation with recommendations and generally accepted guidelines of IUCN, which „...commit to institutional protection, which means that the founder (usually state) is required to establish management structure and ensure the preparation and adoption of basic management documents” (Martinić 2010).

Increasing presence of the private sector in the SNR and AOF in Serbia is partly a result of the decentralization process started during last decade of XX century¹¹. On the other hand, the predominantly public sector participation in the management of NP, StNR and ONR is due to the fact that most of these PAs are established in the period before 1990s, and as such, remained in the public sector. NMs mostly (66.76%) do not have managers. The reason for this may be the low level of protection (mainly category III), which causes that these PAs do not have high priority for establishing managers.

¹⁰ In Serbia, private forests cover 47% (Banković *et al.* 2009), and „... 40% of PAs consists of forests and forest lands” (Grujičić *et al.* 2008), while in Montenegro private forest cover 59.9% of total land (Andjelic *et al.* 2011). Therefore, part of PAs is located on land that is privately owned, which raises the question of compensation, which owners should receive for any restriction of rights. These compensation mechanisms in both countries are regulated by Laws on nature protection (2009, 2008), which states that owners should receive compensation for lost of rights.

¹¹ In Serbia, since 1994 is present private sector in the management of PA. SNR „Stari Begej – Carska bara” was established in that year and was given to the management to private sector.

CONCLUSSIONS

Based on analyses of the system for managing PAs, and when it comes to managers, following conclusions can be drawn:

- there are two types of managers:
 1. public sector;
 2. private sector;
- within „public sector” there are two categories:
 1. enterprises, with subcategories PE for management of state forests, PE NP, PE for water management, PE of local municipalities and state enterprises in the process of transformation;
 2. institutions, with subcategories local public institutions, local communities and municipalities, scientific-research institutions and MI;
- within „private sector” there are two categories:
 1. companies, with subcategories joint stock companies and limited liability companies;
 2. other organizations and individuals, with subcategories entrepreneurs, NGO, churches and monasteries, individuals;
- certain number of PAs do not have managers.

Analyzing results, related to categories of PA and managers, following can be concluded:

- public sector manages majority of PAs, regardless of category;
- enterprises from public sector are mostly managers of NP, NaP, ONR, AOF and SNR;
- PE for management of state forests are present in all categories of PA, except NP;
- NGO are managers in four category of PA, managed by the private sector (SNR, NM, AOF, NaP).

Based on the above, it can be seen that managers of PAs are very diverse and that form of management can range from PEs, through institutions, to other organizations that belong to management by „private sector“.

This research points to the fact that almost all PAs in Serbia are delegated to some category of managers (enterprises, institutions, companies and other organizations and individuals), and that the management, in this sense, is decentralized, while state has a legislative and monitoring role in the management of these resources. In Serbia, compared to the neighbouring countries, appear most different subcategories of management bodies.

Also, there are number of PAs (individual trees) that are appointed to individual persons, and they might be categorized to completely private type of management. However, because of the lack of data, it is uncertain, whether these trees are located on private property, or these individuals are just holders of functions for maintaining these trees.

Therefore, further research should address issue of ownership over PA territory, limitations that exists with respect to its use, as well compensation

mechanism that are present in neighbouring countries and through which partly limited use can be reimbursed. Also, it is necessary to investigate, since when in Serbia is present decentralized management especially for those PAs which are not managed by PEs. This analysis is important for two reasons, in order to analyze establishment of PA in private sector and to define reasons for this change.

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UPRAVLJANJE ZAŠTIĆENIM PODRUČJIMA U SRBIJI: TIPOVI I STRUKTURA UPRAVLJAČA

SAŽETAK

Tokom poslednje decenije XX veka i nakon 2000. godine, došlo je do značajnih promena u upravljanju zaštićenim područjima (ZP) u Srbiji. Pre tog perioda, većinom ZP, upravljao je javni sektor, ali su promene na međunarodnom i nacionalnom nivou uslovile uključivanje i drugih aktera. U sistemu upravljanja ZP, pored javnog sektora, od 1994. godine, prisutan je i privatni sektor. Problematika utvrđivanja tipova upravljača zaštićenih područja u Srbiji i njihovog sistematizovanja je značajna za razumevanje promena postojećeg sistema upravljanja ZP i, do sada, nije bila dovoljno obrađivana. Iz tih razloga, cilj rada je utvrđivanje tipova i strukture (kategorija i podkategorija) upravljača ZP u Srbiji. Tipovi upravljanja su definisani u odnosu na javni i privatni karakter osnivačkog kapitala. Kategorije upravljanja su formirane u odnosu na način organizacije i pravnu formu, a podkategorije predstavljaju upravljače koji su definisani na osnovu dostupnih sekundarnih podataka. U radu su primenjene metode kvantitativne analize sadržaja i specijalizacije (klasifikacije), kao i komparativna i statistička metoda. Rezultati istraživanja ukazuju na postojanje dva osnovna tipa upravljača ZP u Srbiji, iz javnog i privatnog sektora. U okviru javnog sektora, izdvajaju se dve kategorije: „preduzeća“ i „institucije i ustanove“, a u okviru privatnog sektora, takođe dve kategorije, „privredna društva“ i „ostale organizacije i pojedinci“.

Ključne riječi: zaštićena područja, upravljanje, upravljači, tipologija, Srbija