

Dragan Nonić

University of Belgrade, Faculty of Forestry, Belgrade
Serbia

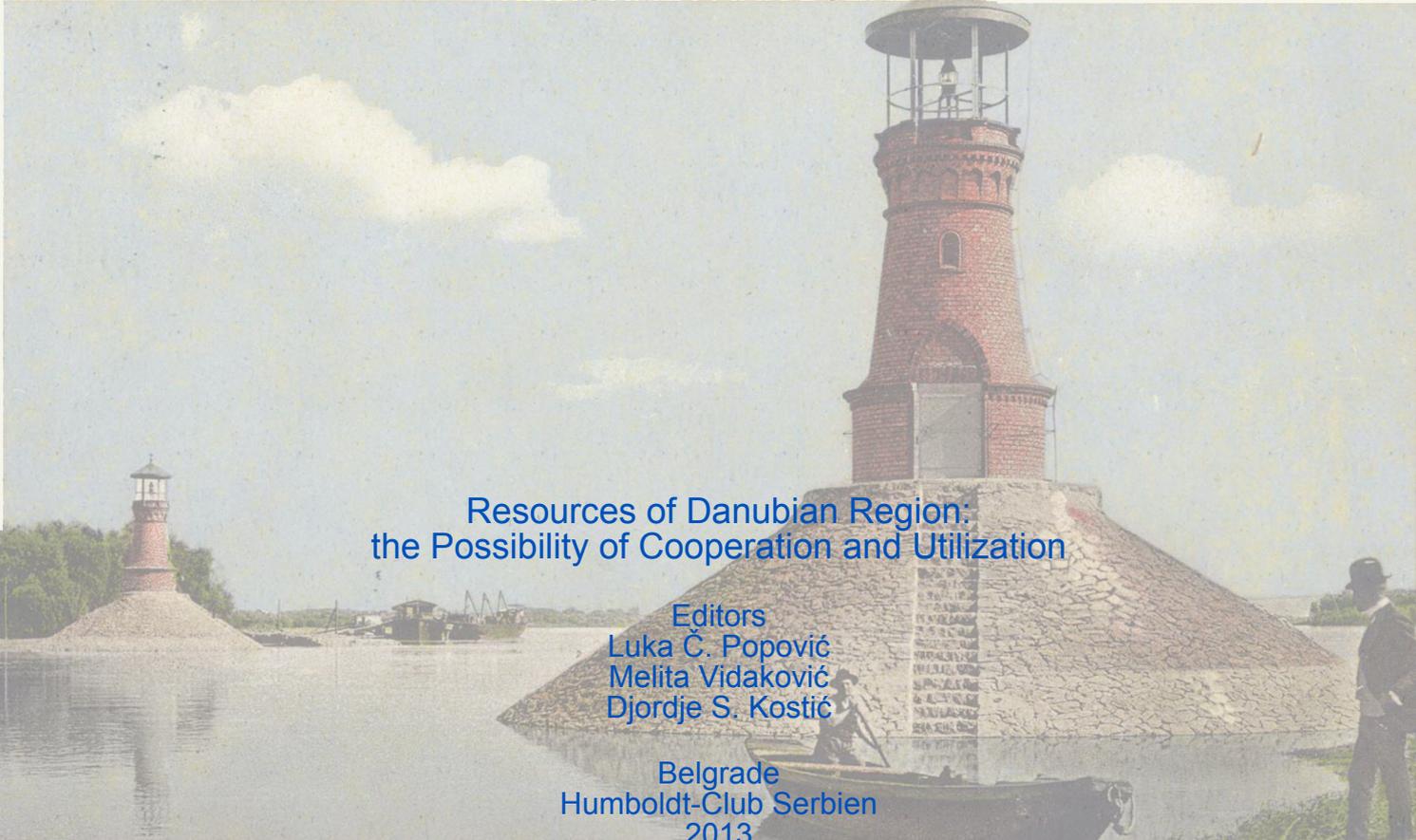
Jelena Nedeljković

University of Belgrade, Faculty of Forestry, Belgrade
Serbia

Marina Nonić

University of Belgrade, Faculty of Forestry, Belgrade
Serbia

MANAGEMENT OF NATURAL PROTECTED AREAS IN SERBIA – NATIONAL PARK DJERDAP



Resources of Danubian Region:
the Possibility of Cooperation and Utilization

Editors

Luka Č. Popović

Melita Vidaković

Djordje S. Kostić

Belgrade
Humboldt-Club Serbien
2013

ISBN 978-86-916771-1-4

Donau

Dunaj

Duna



Dunărea

Donau

Abstract. In Serbia, under different type of protection is around 6% of the State territory. There are more than 400 protected areas and 5 of them are national parks (NP). The largest NP in Serbia, NP Djerdap, stretches along the right bank of the Danube River, for about 100 km. NP Djerdap is managed by Public Enterprise “NP Djerdap”. Priority management goals relate to sustainable use, protection, maintenance, monitoring and improvement of natural resources. The aim of this paper is to present state and governance of natural protected areas in Serbia, with a special emphasis on management of NP Djerdap.

Key words: natural protected areas, management, National park Djerdap, Danube, Serbia

1. Introduce

Serbia is a country of rich biodiversity, which is primarily evident in the diversity of its vegetation and fauna. Covering only 1,9% of the whole European territory it is „home to 39% of European vascular flora, 51% of European fish fauna, 40% of European reptile and amphibian fauna, 74% of European bird fauna, 67% European mammal fauna“ (2013/d).

System of protected areas (PAs) in Serbia has a relatively long tradition and it has been gradually developed for almost 70 years. However, coverage of the PAs is still very low and many of them do not have adequate management (Sekulić, 2011).

In Serbia, under different type of protection is 522,120 ha, which is 5.91% of the State territory. There are 463 PAs and 5 of them are national parks (NP), which have a status of “*protected area of extraordinary importance*”.

The largest NP in Serbia, NP Djerdap, with the total area of 63,608 ha, is located in north-eastern Serbia, on the border with Romania and stretches along the right bank of the Danube River, for about 100 km. In this region, the Danube River passes through the longest European composite valley, which is comprised of 3 smaller gorges, 2 canyons and 3 valleys.

NP Djerdap’s most characteristic features are exceptional wealth and diversity of flora, fauna, hydrological values, geomorphologic objects. The total forest area is 45,240 ha, of which 84.5% are state forests and 15.5% private. More than 50 different types of forest and bush formations, out of which 35 are relict, and about 900 species and subspecies of vascular plants inhabit the territory of the NP (Stevanović, 1996; Medarević, 2001).

The fauna of this area is very rich and various. Numerous species of mammals, great number of insect species, amphibians and reptiles inhabit the territory of NP Djerdap (Macura *et al.*, 2010).

There is the profusion of historic monuments throughout the gorge: The Golubac Fortress, on the Danube's right bank, at the very entrance to the Iron Gates; Lepenski Vir - one of the most important archaeological sites in Serbia, located in the Gospodjin Vir Gorge, which architecture and monumental sculptures from 7000 to 6000 BC changed the global notion of the beginnings of civilization; Diana – one of the largest Roman-Byzantine fortresses that dates back to the period between 102 and 103 BC; Emperor Trajan's tablet (Tabula Traiana) - part of an assemblage of Roman monuments on the Roman Road through Djerdap.

The aim of this paper is to present state of natural protected areas (NPAs) in Serbia, with a special emphasis on management of NP Djerdap. The subjects were NPAs and NP Djerdap.

2. Structure of Natural Protected Areas in Serbia

Current system of categories of PAs is set by the Law on nature protection adopted in 2009. The system had started with 1 type in 1946 and ended with 7 different types - all six categories from the previous Law (from 1991) are transposed to the new Law and one new category is added - protected habitat (Sekulić, 2011).

According to national legislation, there are seven basic types of NPAs in Serbia (2009):

- 1) strict nature reserve (area of unmodified natural features with representative natural ecosystems set aside for the preservation of its biodiversity and for scientific research and monitoring);
- 2) special nature reserve (area of unmodified or slightly modified natural features of great importance due to uniqueness, rareness or representativeness, which includes the habitats of endangered species set aside for the preservation of its unique features, education, limited tourism and for scientific research and monitoring);
- 3) national park (area with large number of diverse natural ecosystems of national value, with outstanding landscape characteristics and cultural heritage set aside for the preservation of its natural resources and for educational, scientific and tourist use);
- 4) monument of nature (small unmodified or slightly modified natural feature, object or phenomenon, physically clearly distinguished, recognizable and/or unique, with representative geomorphological, geological, hydrographical, botanical and/or other characteristics);
- 5) protected habitat (area which includes one or more habitats that are significant for conservation of one or more populations of wild species and their communities);
- 6) landscape of outstanding features (area of remarkable appearance with important natural and cultural value) and
- 7) nature park (area of well preserved natural values with preserved natural ecosystems and picturesque landscape set aside for the preservation of biodiversity and for educational, tourist,

recreational and scientific use).

Within basic types of NPAs, national legislation distinguishes three categories of NPAs (2009):

- 1) I category: protected areas of extraordinary importance;
- 2) II category: protected areas of great importance;
- 3) III category: important protected areas.

In table 1 is shown structure of some NPAs in Serbia (national parks, nature parks, landscape of outstanding features, nature reserves and monuments of nature), in Serbia and along the Danube.

Table 1. Structure of some NPAs in Serbia (in total and along the Danube)

Type of NPAs	No - Serbia	No - Danube
National parks	5	2
Nature parks	16	2
Landscape of outstanding features	16	1
Nature reserves	67	4
Monument of nature	317	~ 20

Source: (2013/b; 2013/c)

Along the Danube in Serbia, there are 2 national parks – Djerdap and Fruska Gora; 2 nature parks - Tikvara, Begečka jama; 4 nature reserves - Gornje Podunavlje, Karadjordjevo, Koviljsko-petrovaradinski rit, Deliblatska peščara and around 20 natural monuments.

3. Management of Natural Protected Areas in Serbia – National park Djerdap

In Serbia, there is very complex strategic, legal and institutional framework regulating the nature protection. In the following sub-chapters are presented strategic and legal documents that directly and indirectly regulate nature protection in Serbia, as well as institutions in charge for this area.

3.1. Strategic Framework

There are three strategic documents, **directly related** to NPAs:

- Spatial plan of the Republic of Serbia (2010-2020);
- National Strategy of Sustainable Use of Natural Resources and Goods of the Republic of Serbia;
- Biodiversity Strategy of the Republic of Serbia (2011-2018).

Spatial Plan of the Republic of Serbia from 2010 to 2020 defines basic goals in the field of nature conservation and environmental protection. Spatial Plan defines the establishment of PAs to 10% of the territory of Serbia until 2014 and up to 12% until 2020. As well, this document preliminary estimates that the area of ecological networks reach approximately 20% of the territory of Serbia (2010/b).

National Strategy of Sustainable Use of Natural Resources and Goods of the Republic of Serbia establishes a link between the use of resources and the negative impact of resource use on the environment and determines certain actions in order to overcome the problem. Its goal is to promote sustainable economic development, efficient use of natural resources while reducing the negative environmental impact. It is focused on finding policy options for separating the trend of economic development and development in general, the trend of resource use and environmental impact (2012/b).

Biodiversity Strategy and its Action Plan are in full accordance with the National Sustainable Development Strategy. The Action Plan of the Biodiversity Strategy for the period 2011 - 2018 contains activities, responsible institutions, timeframes and potential source of financial resources for implementation of the Strategy (2011).

Strategic documents, **indirectly related** to NPAs are:

- Millennium Development Goals in Serbia;
- Poverty Reduction Strategy of Serbia;
- National Sustainable Development Strategy of the Republic of Serbia;
- Forestry Development Strategy of the Republic of Serbia.

In **Millennium Development Goals in Serbia** (adopted in 2005 by Serbian Government) is defined overall strategic and political framework of nature conservation on general level. Secure sustainability of nature environment presents one of important objective which could be achieved by integrating of sustainable development principles into national politics and programs as well as prevention of environmental resources loss (Grujičić, 2009).

Poverty Reduction Strategy of the Republic of Serbia pays attention on ecological aspects of poverty reduction. The concept is to get an income in changed conditions and obtain higher support on local level (2003).

National Sustainable Development Strategy of the Republic of Serbia also defines overall strategic and political framework for the field of nature conservation. Among the main objectives are improvement of the capacities of PA managers and increase of the effectiveness of responsible state bodies in preventing and acting against unwanted and unregulated activities in ecologically important and protected areas (2008). The most important nature conservation objectives are (2008):

- ratification of international agreements;
- increase the area under protection up to 10% of the territory of Serbia;
- broadening the network of PAs, establishment of eco-corridors and a network of environmentally significant areas;
- establishment of an efficient system of bio-monitoring;
- establishment of an IT system of the living world and other natural assets of the Republic of Serbia;
- development of a register of biodiversity in Serbia;

- establishment of components of monitoring biodiversity.

Forestry development Strategy of the Republic of Serbia refers to the protection and conservation of forest areas. The Strategy emphasized the importance of sustainable forest management in NPAs, which should provide "... *the harmonised development of the ecological, economic, social and cultural forest functions...*" (2006). When it comes to biodiversity conservation and enhancement in forest areas, the objective of Forest Development Strategy is "... *the conservation, the appropriate enhancement and the sustainable utilisation and evaluation of forest biodiversity*" (2006). In the Strategy are defined the appropriate measures to achieve these goals.

3.2. Legal Framework

In addition to the above mentioned strategies, nature protection in Serbia is directly regulated since 2009 by the Law on Nature Protection and indirectly through several laws, and regulations. In total are applied more than 130 different regulatory norms (Grujičić, 2009).

Nature conservation is in the process of harmonization with the European Union legislation. In 2009, 16 laws related to the environment and nature protection were adopted, which means that harmonization process shows great progress that is still ongoing.

Law on nature protection directly regulates the protection and conservation of nature, biological, geological and landscape diversity as part of the environment. This law defines types of natural assets as: protected areas, protected species and moveable nature protected documents. As well, this law defines seven types of PAs, which are mentioned above. Beside these seven types of PAs, Law also defines three zones of protection, which can be of the first (Ia and Ib), second or third degree, and consist of a group of measures and conditions that determine the means and level of protection, use, management and improvement of the PAs (2009).

Law on environmental protection regulates, "*the integrated environmental management system that ensures the realization of the human right to live and develop in a healthy environment and a balance between economic development and environmental protection*" (2004) in Serbia. Management of natural values (natural resources, protected areas, public natural resources) is achieved by planning of sustainable use and preservation of their quality and diversity, in accordance with the conditions and measures to protect the environment by this and by a special law (2004).

Since PAs are largely located on the areas of forest and forest land, its use and management is indirectly regulated by **Law on forests**. In this Law is stated that, "... *forests for which the priority multiple-use function is designated shall be managed in accordance with this Law, the act by which multiple-use function is designated and by special regulation on nature protection*" (2010). The law further defines ways of management, organization and financing of forest (2010).

From the **Law on National Parks** are only valid Articles 6 and 7, which provide the description of the areas of national parks. The Art. 6 refers to the number of activities that are prohibited in the National Park, while Art. 7 provides protection regimes. This article defines the elaboration of the master plans for

the area of national park, which need to be approved by the competent ministry in this area (1993).

3.3. Institutional Framework

At the state level, the responsibility for NPAs lies with the Ministry of Natural Resources, Mining and Spatial Planning and the Ministry of Agriculture, Forestry and Water Management.

The Ministry of Natural Resources, Mining and Spatial Planning is responsible for state administration, in terms of:

- public administration tasks related to the sustainable development of natural resources;
- system of protection of natural resources;
- strategy and policy for the development of natural resources;
- research relating to the exploitation of natural resources;
- development of research activities in the field of natural resources;
- inspection in the field of sustainable use of natural resources;
- provide financial and other requirements for the implementation of these programs, as well as other statutory duties.

Department for Forests, as a body within the **Ministry of Agriculture, Forestry and Water Management** is responsible for state administration and professional activities related to forest policy and forest conservation, improvement and use of forests and wildlife, implementation of protection of forests and wildlife and other activities stipulated by the management. In addition to these activities, the Department for Forests represents forestry sector of Serbia in international organizations, processes and coordinate international cooperation in the sector. Department for Forests, in terms of management of PAs, provides support in the preparation of forest management plans, which include guidelines for each PA, and inspection in forestry (Nonić, 2010).

In addition, the **Institute for Nature Conservation of the Republic of Serbia** and **Provincial Institute for Nature Conservation of Vojvodina** play an important role at the level of the state and of the autonomous provinces. These state institutions are responsible for professional control, support, protection and improvement of Serbia's natural heritage and its biological and geological diversity.

At the level of autonomous provinces, **Provincial Secretariat for Urban Planning, Construction and Environmental Protection** performs the following activities: activities in the field of nature conservation and PAs, ecosystem and species diversity; collection of scientific data and information that are relevant to the protection, development and improvement of natural resources, and their sustainable use; professional and analytical work in the domain of natural resources and biodiversity of AP Vojvodina, elaboration of the legal acts of putting under the protection natural resources, the adoption of plans and programs for the management of natural resources and assets in accordance with the strategic documents and approval of plans, programs, and other acts regulating the issues related to the protection and use of natural resources etc.

Secretariats for environmental protection exist in some cities (e.g. Belgrade, Novi Sad, Niš).

However, this is not the case in all cities and municipalities. Instead of such secretariats, some of them have an Environment Board. Municipalities and cities are also allowed to designate PAs within their territory.

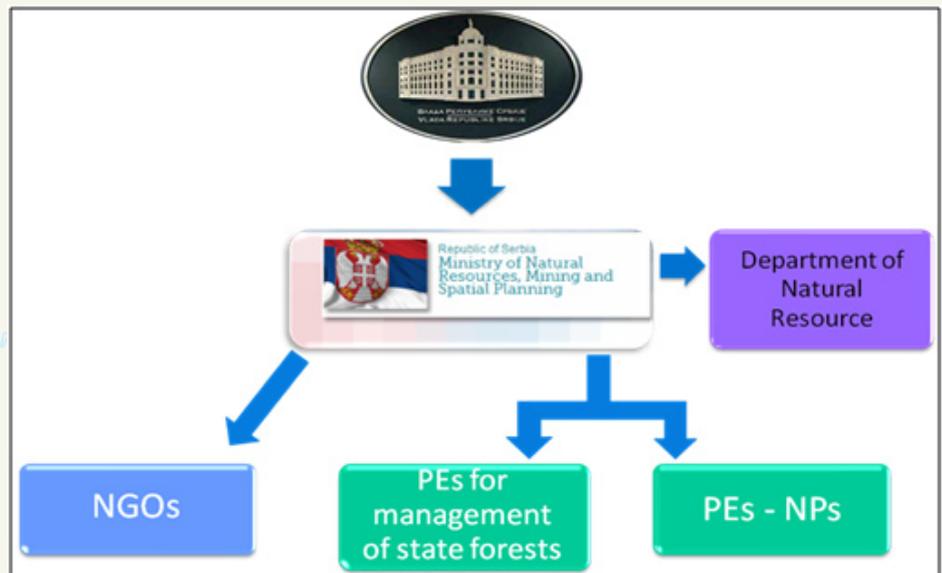
4. Governance of Natural Protected Areas in Serbia

The governance of PAs is organised on several levels (Grujičić *et al.*, 2008):

- State level (state administration);
- Level of autonomous province or municipality level (local administration);
- Level of public enterprises;
- Non-governmental level (non-governmental organisations and chambers);
- Other entities (individual persons and companies).

In addition to the above mentioned state institutions, there are an increasing number of non-governmental organisations in the field of environment and nature conservation (NGOs) (Nonić, 2004). The NGOs are important for the management of natural areas, but most lack knowledge on issues relating to PAs. Their influence on local government and state institutions is significant and it is expected to increase. One of their goals is to achieve a decrease in the use of natural resources, especially in forest areas.

The managers of national parks are special state enterprises (public enterprises of Fruška Gora, Tara, Kopaonik, Djerdap and Šar-planina national parks), which are under the jurisdiction of the Ministry of Energy, Development and Environmental Protection of the Republic of Serbia (Scheme 1). These public



Scheme 1.
Governance of the NPAs in Serbia

enterprises are established according to the Law on National Parks, and manage 21% of the total area of the NPs (Grujičić *et al.*, 2008).

The wardens of national park areas are legal persons responsible for National Park Areas, according to the Law on National Parks. Wardens of other PAs include public enterprises, companies, communal enterprises, faculties, museums, tourist organisations, foundations, ecological NGOs, and other legal entities. The public enterprises for forest management, "Srbijasume" and "Vojvodinasume", are the two most significant wardens, taking care of the majority of PAs: respectively, 48% and 15% of the total number of PAs. Both enterprises have organisational structure consisting of a central unit (Directorate General), lower regional units (Forest Estates), and community units (Forest Management Units). They perform services for state and private forests, administrative functions, managerial functions and functions related to hunting, commercial production in forestry and other domains (Grujičić *et al.*, 2008).

The owners of PAs are legal or natural persons who own PAs.

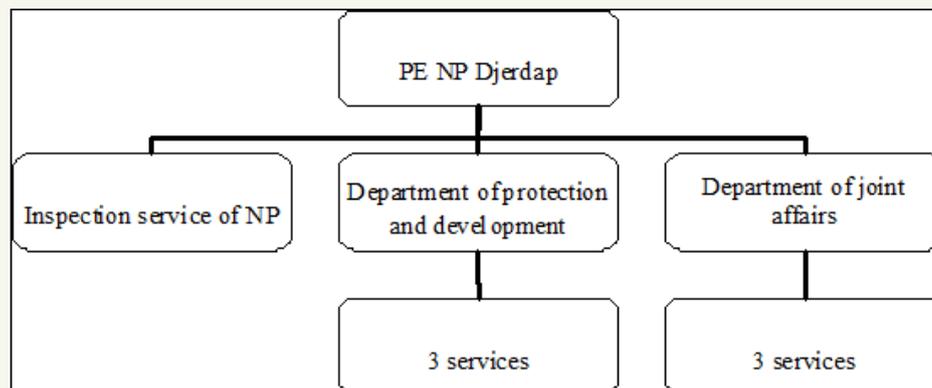
Users of natural values and PAs services are various: in strict nature reservations, the primary users are scientific-educational institutions (academic departments, institutes and schools); in other categories of PAs, users can be visitors, tourists, different enterprises, institutions and others who come to the PAs, for their natural and cultural values, recreation, sightseeing, etc.

5. Management of NP Djerdap

The main task of protecting NPs is an implementation of the obligations defined by laws. The main instruments in the management and protection of national parks are planning, organization, standards, information and finance (Simeunović-Bajić, 2011).

NP Djerdap has been established in 1974. Protection and development company NP Djerdap was founded in 1989 and was operating as Public Enterprise (PE) until the adoption of Law on national parks in 1993. This Law proclaimed establishment of PE "NP Djerdap".

Today, NP Djerdap is managed by this PE, with headquarter in Donji Milanovac and two operating



Scheme 2.
Organisational scheme
of PE "NP Djerdap"

units in Dobra and Tekija (Scheme 2).

As shown in this scheme, PE “NP Djerdap” is divided into three sections: Inspection service, Department of protection and development and Department of joint affairs.

Inspection service of NP is engaged in surveillance operations and functions independently of the other two departments. The core of the company, when it comes to nature protection and forestry, is Department of protection and development. In this department are carried out activities related to the protection and development of natural resources and the protection and improvement of breeding fish fauna. This sector also operates services in forest management. The department of joint affairs is in charge of legal and administrative affairs, finances and marketing.

Main activities of the PE “NP Djerdap”, according to the national Business Register Agency are activities of botanical and zoological gardens and the protection of natural resources.

Other activities include (2013/a):

- Forest management;
- Protection, breeding, improvement of game and fish fauna;
- Presentation and popularization of NP and its cultural values and resources;
- Professional opinions about constructions and infrastructure;
- Education;
- Organization of research in the field of protection and development of the NP.

The concept of management of NP Djerdap is based on the protection of natural resources, the overall biological and geological diversity, as well as fulfilment of the scientific, educational, cultural, tourist and recreational needs, in accordance with the principles of nature protection and sustainable development.

General objectives are (2012/a):

- conservation, protection and improvement of:
 - sites of natural values and rarities of landscape and environment (flora, fauna, soil, water, air, forests, pastures and meadows);
 - cultural and historical heritage of the NP;
- organized, multidisciplinary, long-term scientific research, education, presentation and popularization of NP;
- system management, control and supervision ;
- development of tourism, sport and recreation;
- establishment all forms of cooperation with the users of the NP and local communities.

5.1. Activities and measures for protection and improvement of natural resources

According to the *Proposal of Management plan for NP Djerdap (2011-2020)*, priority activities and measures on the protection, maintenance, monitoring and improvement of natural resources are as following (2012/c):

1) Forests

- establishment of nursery;
- forest certification;
- elaboration of Plan of forest development in NP Djerdap (2011-2020);
- elaboration of forest management plans for state forests;
- monitoring of forest health;
- construction and maintenance of forest roads;
- construction of fire protection systems;

2) Flora and fauna

- inventory of NP Djerdap's fauna;
- mapping and monitoring of significant populations of rare and endangered species of flora and fauna;
- creation of the list of potentially extinct species;
- reintroduction of the species *Tulipa hungarica*;

3) Game

- monitoring populations of large mammals;
- training of game guards;
- active cooperation with scientific, educational, hunting and other institutions;
- elaboration of general and annual management plans for the hunting grounds;

4) Geological Heritage

- qualitative and quantitative defining of geological potentials;
- elaboration of geological maps.

Dunaj

Duna

5.2. Zones of Protection and Regimes of use

According to the *Spatial Plan for the area of special purpose NP Djerdap* (2013/e), there are three zones of protection in NP:

1st zone - strict protection of natural and cultural heritage (8.83% of the NP area);

2nd zone - the area surrounding the 1st zone: special nature values and natural areas around cultural monuments (21.03% of the NP area);

3rd zone - territory of NP outside the borders of the 1st and 2nd zones (70.14%). Certain activities, such as tourism, sports, recreation, forestry, water use, potential exploitation of mineral resources, urban construction, etc. are permitted.

Protective functions of forest resources are dominant in the area of the NP Djerdap. Although there are three different zones of protection, only 5.9% of the total forest area is in the first zone of protection, while the rest is under the second and the third zones, where use of forest resources (including timber) is allowed.

Priority measures and activities relate to sustainable use, protection, maintenance, monitoring and

Дунав

Дунав

improvement of natural resources. Other activities include landscape planning and management, education, research and scientific activities, protection and promotion of cultural and historical heritage and tourism development.

6. Conclusions

The territory of Serbia, and the entire Balkan Peninsula, are characterized by extraordinary richness and diversity of wildlife. For that reason, this area is classified as one of the most important centers of biodiversity. At the same time, the NPAs along the Danube preserve and restore the most valuable habitats of this international river, thus safeguarding an important part of Europe's natural heritage for future generations.

The benefits that society receives from the PAs areas will gain in value in future. In addition to basic services, nature protection provides a range of new possibilities of broadening the scientific knowledge and information to the new trends in management, etc. Protected resources are much more than the concern of authorities and institutions responsible for environment. It also provides an opportunity for cooperation, which includes a variety of public, communal and private interests.

Governance of PAs is great challenge, because current concepts of nature conservation in Serbia try to meet numerous interests, both economic and non-economic. It should be emphasized that only better integration of nature protection with existing human activities will lead to the improvement of management of NPAs.

Cross-border and trans-national cooperation is an indispensable part of this work. As nature does not recognize state borders, nature protection needs cooperation across borders, if results are to be achieved.

There are numerous strategic and legal documents that regulate the nature protection in Serbia. These documents emphasize the importance of an effective system for management of NPAs, as well as the significance of capacity building, infrastructure improvement. When it comes to institutional framework, there is certain overlapping of duties of in-charge institutions. However, there are two aspects of supervision of NPAs management: by government institutions (ministries) and professional institutions (Institute for Nature Conservation), which could be characterized as a positive feature.

In order to perform good management of NPAs, it is necessary to establish and maintain communication and flow of information and knowledge among the all stakeholders in this field, especially because nature protection is cross-sectoral topic.

7. References

- (2011): *Biodiversity Strategy of the Republic of Serbia for the period 2011-2018*, Ministry of environment and spatial planning of the Republic of Serbia, Belgrade.
- (2006): *Forestry Development Strategy of the Republic of Serbia*, Official Gazette of the RS No. 59/06, Belgrade.
- Grujičić, I. (2009): *Assessment of Protected Areas Management Effectiveness in Serbia: Application of WWF/World Bank Management Effectiveness Tracking Tools in Protected Areas Managed by Public Enterprises for Forest Management "Srbijašume" and "Vojvodinašume"*. Master Thesis of the Management of Protected Areas Program, University of Klagenfurt, Klagenfurt. (107)
- Grujičić, I., Milijić, V., Nonić, D. (2008): *Conflict management in protected areas: The Lazar Canyon natural monument, Eastern Serbia*. The International Journal of Biodiversity Science and Management, Vol. 4, No. 4, Sapiens Publishing, London. (219-229)
- (2013/a): *Information Booklet – PE "NP Djerdap"*, PE "NP Djerdap", Donji Milanovac.
- (2004): *Law on environmental protection*, Official Gazette of the RS No. 135/04, Belgrade.
- (2010/a): *Law on forests*, Official Gazette of the RS No. 30/10, Belgrade.
- (1993): *Law on national parks*, Official Gazette of the RS No. 39/93 and 44/93, Belgrade
- (2009): *Law on nature conservation*. Official Gazette of the RS No. 36/09, Belgrade.
- (2010/b): *Law on spatial plan of the Republic of Serbia*, Official gazette of the RS No. 88/10, Belgrade.
- Macura, B., Bojović, D., Petrić, I., Čosić, N., Tadić, M., Jarić, I., Knežević, J., Spirić, J., Jarić, M. (2010): *Local Communities and Management of Protected Areas in Serbia*. Ecological Society Endemit, Belgrade. (29)
- (2012/a): *Management program for the NP Djerdap for 2013*, PE "NP Djerdap", Donji Milanovac.
- Medarević, M. (2001): *Forests of Djerdap*, NP Djerdap and Ekolibri, Belgrade. (168)
- (2012/b): *National Strategy of Sustainable Use of Natural Resources and Goods of the Republic of Serbia*, Official gazette of the RS No. 33/12.
- Nonić, D. (2004): *Organization of forestry in the transition process: relation of public forest administration and private forest owners*. Doctoral dissertation, University of Belgrade, Faculty of Forestry, Belgrade. (232)
- Nonić, D. (2010): *Organisation and business administration in forestry – textbook*, University of Belgrade, Faculty of Forestry, Belgrade. (111)
- (2003): *Poverty Reduction Strategy of the Republic of Serbia*, Government of the Republic of Serbia, Belgrade.
- Sekulić, G. (2011): *Overview of the national system of protected areas in Serbia: Recommendations for the Implementation of IUCN Protected Area Management Categories*. Master Thesis of the Management of Protected Area's Programme - University of Klagenfurt, Klagenfurt. (89)
- Simeunović-Bajić, N. (2011): *Protected natural resources: media representations of national parks*. Journal of the Geographical Institute "Jovan Cvijić" SASA, Vol. 61-3, Geographical Institute "Jovan Cvijić" SASA, Belgrade. (33-45)
- Stevanović, V. (1996): *Native Botanical Garden*, In: Angelus, J. (ed.): *National Park Djerdap – Long history of nature and man*, IP Ecolibri, Ministry of Environmental Protection of Republic of Serbia, National Park "Djerdap" (72-82)
- (2012/c): *Proposal of Management plan for NP Djerdap for period 2011-2020*, PE NP Djerdap, Donji Milanovac. (39)
- Internet sources:**
- (2013/b): *Danube Virtual Museum*, www.virtuelnimuzejdunava.rs (accessed 16.07.2013)
- (2013/c): *Protected areas of the Republic of Serbia*, <http://www.natureprotection.org.rs/> (accessed 16.07.2013)
- (2013/d): *Serbian biodiversity*, <http://iucn.org/about/union/secretariat/offices/europe/?10618/Serbian-biodiversity> (accessed 16.07.2013)
- (2013/e): *Spatial Plan for the area of special purpose NP Djerdap*, <http://www.npdjerdap.org/> (accessed 16.07.2013)