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# **Overview of Nature Protection Progress in Kosovo**

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# **Abstract**

This paper presents an overview of progress in the area of nature conservation in the last decade in Kosovo. Two very important laws were promulgated in 2012 about two national parks: Bjeshket e Nemuna and Sharri National park. With this expansion, the protected area network that in 2003 was about 4.36 % of the territory was increased to 10.9%, reaching a satisfactory degree of protected areas and increasing the number of protected areas in a total of 116. While in terms of conservation of protected areas a significant progress has been achieved, stagnation is seen in the conservation of rare and threatened species of flora and fauna. Although envisaged by legislation, the Red List of Kosovo of rare and threatened species has not been adopted yet. Also, there is a small progress in the implementation of practical conservation and management measures contained in the legislation.

# **Keywords:**

biodiversity, conservation, protected areas, legislation, environment

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# 1 Introduction

✓ osovo within its small territory is rich in high natural values. Conservation of the natural areas in Kosovo through the network of protected areas was initially regulated in the late 1950s with the designation of the first nature reserves such are: Kozhnjeri (1955), Rusenica (1955), Gubavci (1959) etc. (Veselaj & Mustafa 2009). More developments in this respect were made in the second half of 1980s, respectively, in 1986, when after the complete scientific assessment of feasibility from biodiversity and other natural values; the Law on the "Sharr Mountains" national park was adopted. In 1988 was approved the Law for the preservation of natural and manmade environments in Kosovo. However, major developments have occurred in the postwar period (after year 1999), and particularly after 2003 when the first institutions of self-government were established and the Law on environmental protection and other relevant legislation was adopted (Mustafa et al. 2013).

2 Materials and Methods

This study aims to present an overview of qualitative and quantitative extension of protected area networks in the Republic of Kosovo in the decade from 2003 to 2013. It also provides concrete conservation measures undertaken up to now for better and effective conservation of protected areas. Authors analyzed laws in the field of nature conservation and biodiversity approved in the last decade from the Kosovo Official Journal (https://gzk.rks-gov.net/). Nature protection legislation that is consulted for the purpose of presenting progress in the field on nature protection in Kosovo covered:

- Law on nature protection Nr. 2005/02-L18,
- Law on nature protection Nr. 2010/03-L-233,
- Law on national park "Bjeshket e Nemuna".
  Nr. 2011/04-L-086,
- Law on national park "Sharri" Nr. 2011/04-L-087.

This study also included a dozens of field work visits done by group of experts throughout the network of protected areas implemented by Institute of Nature Protection of Kosovo, as a key institution in charge of monitoring of protected areas network. These reports are published in the periodic Institute reports of state of nature in Kosovo:

- Values of natural heritage in Kosovo,
- Report on state of protected areas in Kosovo 2006-2007 and the
- Report of the state of nature in Kosovo 2010-2014.

Results on species biodiversity included the data's from professional reports for designation national parks, as well the spatial plan zoning projects of both national parks: for the "Sharri" national park during 2006-2008 adopted in 2013 (Spatial Plan of national park "Sharri" 2013) and for the "Bjeshket e Nemuna" national park during years 2013-14 (still in process).

# 3 Results

First provisions about the nature conservation are initially set in the Law on Environmental Protection (Law Nr. 09/2003), which dedicates a special chapter to the nature protection issues covering nature protected areas and biodiversity conservation. However, this law enabled approval of the regulation on "nature conservation, sustainable use of natural values, classification of areas with special international categories, procedures of conservation, protection of rare and endangered species of flora and fauna, protection categories, protected areas management, public participation in decision-making on the nature and professional supervision of areas with specific natural values", which will be regulated by a special law. Furthermore, the Institute of Nature Protection operating under the authority of the Kosovo Environmental Protection Agency is designated as a key nature conservation professional institution in Kosovo.



The first Law of nature protection (Law on nature protection 2005) was adopted in 2005 aiming to regulate "the system of the nature conservation in the territory of Kosovo" and "special protection of the natural values determined by this law that are of interest for Kosovo". This law has had 13 chapters and 47 articles covering: main principles of environmental protection (i.e. principle of sustainability, principle of cooperation, user pays principle, principle of integration, etc.), main policy documents for nature conservation (i.e. the Strategy and Action Plan for the Nature Conservation, which is to be approved by the Assembly of Kosovo), and programs of nature conservation adopted by municipalities.

The administrative duties in the field of nature conservation are carried out by the Ministry of Environment and Spatial Planning and municipalities, while the professional work in this sector is a responsibility of the Kosovo Institute of Nature Protection. General measures for the nature conservation will be implemented through a landscape protection and conservation of flora and fauna species.

Categorization of nature protected areas is primarily based on categories provided by the International Union for Conservation of Nature (IUCN) following procedures for the designation of protected areas and their management.

In 2010, the Assembly of Kosovo adopted the new

Law on Nature Protection (Law on nature protection 2010), which was more detailed than the first one containing 15 chapters and 177 articles. Guiding principles of the law remain more or less those of the 2005 law, as well as regulatory documents and institutions responsible for nature conservation in Kosovo.

From Table 1 we can see that there is a difference between the 2005 law, where the protected areas were strictly complied with the IUCN categories (Dudley 2008), and the 2010 law that includes other categories than IUCN ones such as: natural parks, the particular areas of conservation, the monument of park architecture. These categories, according to their degree of importance, are classified into: international, national and local values. This classification should be done based on administrative directives, which have not been approved yet. Chapter 3 provides the procedures and institutions responsible for the designation of protected nature in Kosovo given in the Table 2.

According to the law, the relevant directorates govern with the natural protected areas. Directorates for management of national parks, natural parks, natural monuments of special importance are established by the Ministry of Environment with a special decree, while for all other categories of protected areas these directorates are established by municipalities. Conditions for issuing construction permits, implementation of works and interventions

Table 1. Categories of protected areas in 2005 and 2010 legislation

Categories of PA-s in Law of 2005	Categories of PA-s in the Law of 2010
(Law on nature protection Nr. 2005/02-L18)	(Law on nature protection Nr. 2010/03-L-233)
1.Strict nature reserve	1.Strict nature reserve;
2.National park	2.National park;
3.Natural monument;	3.Particular area of conservation;
4. Management areas of habitat or species;	4.Natural monument;
5.Protected landscapes;	5.Monument of nature of particular importance
6.The protected area of natural resources.	6. Protected landscape;
	7.Monument of park architecture
	8.Natural park



Institution	Parliament (Law):	Government Decree:	Municipal Assembly Decision:		
		Strict nature reserve;			
Category National park	Particular areas of	Natural monument,			
	conservation;	Protected landscape;			
	Natural park;	Monument of park			
	Monument of nature of	architecture,			
	particular importance.				

Table 2. Categories of designation of protected areas according to existing legislation

in the territory of national parks, special protected areas, nature parks, and monuments of nature are issued only if the construction of buildings is within the spatial plan of the protected area and if the environmental impact assessment procedures are completed. Municipalities are responsible for issuing construction location permits for construction and interventions in the territory of protected landscape and architecture monument marks.

A number of administrative acts (administrative instructions and decisions) have derived from the Law on nature protection to ensure proper implementation of it. From 21 sub-legal acts to be adopted by the Law on nature protection, up to now only 13 of them are issued (more than half of them). In the European Commission progress reports, prepared yearly for Kosovo since 2008, a limited progress in the field of nature protection is reported, especially in relation to its compliance with the Birds and Habitat Directives (Veselaj et al. 2012).

Advantages of the 2010 law can be noticed in the following points: it is more detailed in its scope, it is more referred to the EU directives (Birds and Habitat) as well as Natura 2000 aims, provides broader conservation national categories besides IUCN ones, more competencies are given to local level on designation and management of some categories etc. (Law on nature protection 2010)

In December 2012, after more than four decades of intensive work, the Law on the National Park "Bjeshket e Nemuna" (Law on national park "Bjeshket e Nemuna" 2011) was adopted with the justification as "territory with high natural values and

natural rarities, with a large number of important forest ecosystems and other conserved ecosystems, with high number of endemic and relict species, rich with geomorphologic, hydrological and landscape features, that have important scientific, education, cultural-historical and tourist-recreational activities that will contribute to economic development following ecological criteria" (Veselaj et al. 2013). National park area is about 62.488 ha and lies on the western and north-western territory of Kosovo, respectively in the territory of five municipalities: Gjakova, Junik, Decan, Peja and Istog. In biodiversity terms "Bjeshket e Nemuna" is characterized by high floristic values (Law on national park "Bjeshket e Nemuna" 2011). There are 1,611 taxa's (species and sub-species), 435 genera, 105 families, 50 orders and 6 classes (Veselaj Z. 2010, Mustafa et al. 2011). According to the researches, in the highest peaks of "Bjeshket e Nemuna" such as Gjeravica, Lumbardhi Mountains, Guri i Kuq, Koprivnik, Liqenat are found 255 Balkan endemic species and subspecies. From the plant species of "Bjeshket e Nemuna", 19 taxa's are included in the IUCN Red List of Threatened Plants of 1997 (Veselaj 2010, Veselaj et al. 2004).

Fauna of "Bjeshket e Nemuna" national park contains: 8 species of fish, 13 species of amphibians, 10 species of reptiles, 148 species of birds, 37 species of mammals and 129 butterfly species from the order Lepidoptera, which make the region as one of the richest in Europe, and it's identified as Primary Butterfly Area (Jaksic 1988, MESP 2015). According to the latest data, it is expected to have over 200 species of birds, and because of this high diversity and migratory routes passing through



the area, "Bjeshket e Nemuna" are identified as IBA (Important Bird Areas IBA) regions (Mustafa et al. 2009). The Spatial Plan is currently being developed for the "Bjeshket e Nemuna" national park respectively zoning of the conservation zones 1, 2 and 3 (Law on nature protection 2010). Conservation zone 1 (strict protection) includes parts of the territory of the national park with exceptional natural features, with rare species, endangered plants and animals and habitat types in the wild conditions. This zone is strict protection. Conservation zone 2 (active management) includes parts of the territory of national park characterized by ecosystems, landscape and other values which can be exercised through nature ecotourism, traditional agriculture and activities that are inconsistent with the purposes of protection. Conservation zone 3 (sustainable use) includes parts of the national park planned for: tourism and recreation, construction, reconstruction, needs of residents in the territory and the use of pastures and economic use of natural resources under the Law on Nature Protection and in accordance with the spatial plan of the national

park. Zoning of the national park is proposed by a group of 20 university professors and experts during 2013-2014 (MESP 2015). Management of national parks is based on the national park's Spatial Plan and specific National Park Development Plan national parks as required by the article 81 and 82 of the Law on Nature Protection Law on nature protection 2010.

The 1986 Law on national park "Sharr Mountain" in December 2012 was replaced by a new law on national park "Sharri" (Law on national park "Bjeshket e Nemuna" 2011), which extends protected areas from 39,000 ha as it was in the previous law, to 53,469 ha with the description "territory with natural values and rarities, preserved forests, the high number of important forest and other ecosystems, with high number of endemic and relics species, with rich geomorphologic, hydrological features, and with scientific, cultural, historic, landscapes, sports, tourism and recreation and activities that contribute to economic development with ecological criteria". The territory of "Sharri" national park lies in south of



Figure 1. Mirusha Waterfalls- one of the most beautiful protected site network in Kosovo



Kosovo in the territory of five municipalities: Kacanik, Shtërpce, Suhareka, Prizren and Dragash (Mustafa et al. 2013, Spatial Plan of national park "Sharri" 2013). The "Sharri" national park is characterized by high biodiversity values with about 1500 species of vascular flora. Marking elements of the "Sharri" national park are: 77 plant species with international significance, 26 species included in the European Red List and 32 species included in the IUCN Plant Red List. Also, the area is rich in vegetation, with 314 vegetation units including 180 associations, 16 sub associations, 59 alliances, 7 sub alliances, 32 orders and 20 classes, which have been registered till nowadays (Enti Krahinor për Mbrojtjen e Natyrës 1982, Mustafa et al. 2013). Fauna of the park consists of 147 species of butterflies, 7 species of fish, 9 species of amphibians, 10 species of reptiles, 154 species of birds and 30 species of mammals (Amidzic & Ostojic 2006, Mustafa et al. 2013).

Due to these values, both national parks have been identified as Important Plant Areas (IPA) and regional Important Bird Areas (IBA's) as well as primary butterfly's areas (PBA) (Mustafa et al. 2011, Mustafa et al. 2009, Spatial Plan of National Park 2013).

With a special decree, in 2012, one of the most beautiful and attractive natural areas of Kosovo, "Mirusha Waterfalls" changed the category of protection for the purpose of advancing its conservation and management.

# 4 Discussion

With these developments, a significant increase in the number of protected areas in Kosovo has occurred. The overall protected area at a country level is provided in Table 3. Table 3 shows the increase of protected area surface of Kosovo from 4.26 % in 2003 (MESP 2005, 2008), to 10.9% of country's territory in 2013 (MESP 2015).

Although the number and the surface of protected areas has been increased by legislative developments, progress in establishment of management bodies for the main protected areas is moving very slowly, and this is reflected in the poor management and protection. National parks are run by respective directorates, under the competencies of the Ministry of Environment and Spatial Planning. Directory of "Sharri" national park has a more consolidated structure, while Directory of national park "Bjeshket e Nemuna" is in its initial stage of operation (MESP 2015).

Regional Park of Germia is under management of the municipal company "Horticulture" whose main responsibility is to maintain green spaces in Prishtina, the capital city. Marble Cave of Gadime so far has had a type of "private" management, but without legal basis for privatization. In 2011, a governmental decree was adopted to protect the

Table 3. Progress of protected	areas network during	the period 2003-2013
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Туре	IUCN category	Nr. of PAs 2003	Nr. of PAs 2013	Area in ha 2003	% of PA-s in 2003	Area in ha 2013	% of PA-s in 2013
Nature reserves	I	11	11	847	1.8	847	0.7
National parks	II	1	2	39,000	84.1	115,957	97.0
Natural monuments	III	38	99	4,867	10.5	1,507	1.2
Protected landscapes	V	2	3	1,683	3.6	1,320	1.1
Total		52	116	46,397	100	118,913	100



Table. 4 Protected areas network in Kosovo

Category (IUCN Category)	Type of PA-s	Number
	Strict Nature Reserves	11
Strict Nature reserves (Cat. I)	Botanical reserve	7
	Fauna species reserve	2
	Hydrologic reserve	1
	Geological reserve	1
National Parks ( Cat. II)	Natural parks	2
	Natural monuments	99
Natural monuments (Cat. III)	Botanical monuments	66
	Hydrological monuments	17
	Speleological monuments	9
	Geomorphologic monuments	7
	Protected landscapes	4
Protected landscapes (Cat. V)	Natural park	1
	Protected landscapes	2
	Special area for birds	1

cave as Natural Monument of Particular Importance in order to improve its management (MESP 2015). This came after much degradation caused as a result of in-proper management: changes of microclimate, damages of crystals, changes in flora species that are characteristics of caves, etc. In September 2012, the cave was closed by environmental inspectorate in order to finish the process of establishing an effective management body of the Ministry of Environment and Spatial Planning.

Even the progress of expansion of protected areas are significant, the positive changes on the ground are still very small. So far, Bifurcation of Nerodime River, being the second such case in the world, as a result of degradation by human factor, has lost the vital function for which has been protected as a special natural reserves (Veselaj & Mustafa 2009).

There are also evident and visible cases of degradation in the territory of national parks such as: illegal constructions, legal and illegal forests lodging, forest fires, wild animal shootings etc. Constructions in the protected areas and particularly in national parks are not following any of legal rules. One of the worst examples is the degradation of the natural reserve of Bosnian pine (Pinus heildreichii) for construction purposes in the Prevalla touristic village near Prizren (Veselaj et al. 2012).

Even wild species of flora and fauna are facing tremendous pressure, including those in habitats of national parks. In March 2012, media reported of a "mysterious hunting action" followed by mass shootings of animals in the area Decani region, belonging to "Bjeshket e Nemuna" national park, where over 100 bodies of deer, wild goats, and wild boars were found shot and killed (Veselaj et al. 2013).



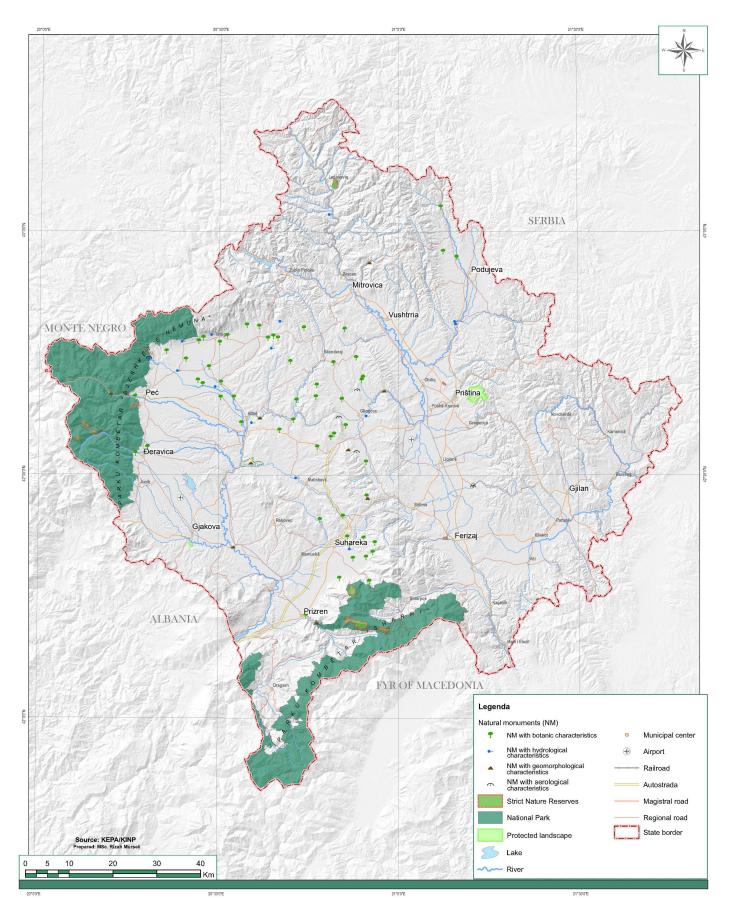


Figure 2. Map of protected areas network in Kosovo (Source: Kosovo Environmental Protection Agency)



#### **5 Conclusions**

Based on the presented results it is seen that there is progress in terms of increasing the surface area and number of protected natural areas in Kosovo in the last decade. The number of protected areas is increased from 52 in 2003 to 116 in 2013 while the surface of protected areas from 46.397 ha in 2003 to 118,913 ha in 2013 or expressed in percentage from 4.27 % in 2003 to 10.9 % of the territory in 2013.

There is slow progress in terms of practical regulation implementing the law through secondary legislation. From 23 by-laws that arise from the nature conservation legislation, until July 2013, only 13 regulations or 62% of secondary legislation is adopted.

Apart from the" Sharri" national park that has a spatial plan prepared, all other protected areas are without spatial plan and other management plans. For national parks as a special area of interest, under the current legislation, specific spatial plans must be harmonized with the Spatial Plan of Kosovo. Spatial Plan for the "Sharri" national park is already approved while the plan for the national park "Bjeshket e Nemuna" is in process of development.

There is a lack of management institutions for protected areas. Only four of the designated protected areas currently have established their management institutions: two national parks, a regional park "Gërmia" and Marble Cave of Gadime, but all of them with very limited human capacities and financial resources.

A change of the situation on the ground, compared with legislative progress, is very slow. In this respect, there are limited developments especially in the protection of rare and endangered species living in Kosovo, which, in many cases have been brought to the brink of extinction, as is the case with the lynx (Lynx lynx), golden eagle (Aquila chrysaetos) etc.

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