

STATE OF NATURE REPORT 2006 - 2007

MINISTRY OF ENVIRONMENT AND SPATIAL PLANNING

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KOSOVO ENVIRONMENTAL PROTECTION AGENCY

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Kosovo Institute for Nature Protection

STATE OF NATURE REPORT

2006 - 2007

Prishtinë 2008

Dear reader,
Nature benevolent...



Human kind and nature have cohabited harmonically since the prehistory, by being always integrated parts of the same entirety. Many generations of human kind have survived by using the nature goods and by using them properly and rationally. Forests, pastures, water resources, animals and plants have played important role in economic, social and welfare development of human society.

Unfortunately, the nowadays generations, more then ever before are impacting the nature ecological balance in our planet. Deforestation, habitats fragmentation and uncontrolled use of natural resources are some of activities with long-term consequences which are evident and cause irreparable damages to nature. Like never before, the number of disappeared species and threatened species is becoming alarming indicator. Decrease of water resources, global warming and debacle of polar glacier are some of trends we are feeling in every part of the globe.

Besides the fact that nowadays generations have to meet their needs, it is a moral obligation for us to let to our descendants as rich nature and biodiversity as we received by our predecessors

It is up to us to think about the perspective of coming generations and it is in our hand to decide about the fate of many threatened species. Therefore, we have to have in our mind, it is the deadline to orient our activities toward nature protection in order to secure the future of our planet.

Even though the biodiversity conservation is considered to be one of greatest challenges we are facing out today, we have to bear in our mind, every living specie has its importance and its right to exists as much as human kind has.

Kosovo, even though a small country in the global map, it is characterized with rich nature, landscapes and biodiversity. As elsewhere in the world, our natural heritage is under the permanent pressure from unplanned and uncontrolled use of natural resources.

In order to prevent future nature degradation our intention is to intensify our efforts for conservation of our natural heritage values. By making effective policies on nature protection, by increasing the number of protected areas, by improving the management of protected areas, by protecting rare animal and plant species, by protecting forests we fulfill our obligation to secure a sustainable environment and life for current and future generations.

Ilir Morina,
Executive Chief of KEPA

Introduction

This report is prepared by Kosovo Institute for Nature Protection aiming to inform Kosovo's public and institutions with the state of nature.

During the postwar period, the Kosovo Institute for Nature protection has continuously monitored the state of nature, in particular protected areas and biodiversity. Reports have shown problems in the field and measures to overtake this situation are proposed.

One of major activities was to recognize and evident new areas with potential to be protected and proceeding to put them under legal protection. Recognition of new nature values is completed for 16 Kosovo municipalities and over 200 potential areas for protection are evidenced.

During years 2006/2007, about 24 new nature areas are added to the register of protected areas, by increasing the number of protected areas in 75 (46 437 ha), which represents 4.25 % of Kosovo territory.

Development of many different activities in the nature as: enlargement of settlements, development of mountainous tourism, installing industrial and hotelier establishments, forests cutting and other activities very often are made without respecting sustainability criteria and threatened the protected areas and biodiversity. The habitats fragmentation, ecosystems degradation, threatening species etc, were also some of major concerns evident in protected areas as: the only national park in Kosovo "Mali Sharr", "Bjeshkët e Nemuna", "Mirusha" park, "Gërmia" park etc.

Except activities on nature protection made by national institutions, international initiatives for nature protection were present in Kosovo during this period as well. The project for identifying the potential areas for the network "Natura 2000" and projects for cross borders protected areas are some of initiatives which are supported by MESP.

This report contains over 100 pictures, 17 tables, 13 maps, 5 graphs, which intend to present the real state of nature and trends which show the increasing impact of human activities in the nature.

Also this report contains recommendations for overcoming the evidenced problems.

Index of Abbreviations

EEA	European Environmental Agency
EAR	European Agency for reconstruction
KTA	Kosovo Trust Agency
KEPA	Kosovo Environmental Protection Agency
KFA	Kosovo Forestry Agency
EU	European Union
KCB	Kosovo Consolidated Budget
CITES	Convention of International Trade of Endangered Species
KSA	Kosovo Statistical Agency
FAO	Food and Agriculture Organization
GIS	(Geographical Information System
KINP	Kosovo Institute for Nature protection
KHMI	Kosovo Hydro Meteorological Institute
NIPH	National Institute of Public Health
IUCN	International Union of Nature Conservation
KOG	Kosovo Official gazette
KK	Municipal Assembly
KFOR	NATO Mission in Kosovo
MESP	Ministry of Environment and Spatial Planning
MBPZHR	Ministry of Agriculture Forestry and Rural Development
MTI	Ministry of Trade and Industry
NGO	Non Governmental Organization
GMO	Genetically Modified Organisms
KEAP	Kosovo Environmental Action Plan
NP	National Park
KES	Kosovo Environmental Strategy
KPC	Kosovo Protection Corps
UNDP	United Nations' Development Program
UNESCO	United Nations Educational Scientific and Cultural Organization
EIA	Environmental Impact Assessment
SEA	Strategic Environmental Assessment

Brief Background of Nature Protection

First steps for nature and environment protection in Kosovo are recorded since the end of 60es, even though initiatives for putting certain nature values under legal protection were undertaken much time earlier. In 1968 is established the Unit for Nature Protection within Kosovo Authority for Protection of Culture Monuments.
In 1974 is taken a decision for separating the unit of nature protection from the Authority for Protection of Cultural Monuments and the Authority for nature Protection is established[1]. This authority continued functioning with the same name according to the law for establishing the Kosovo Authority for Nature Protection[2].
In 1988, the Kosovo Assembly adopted the law for nature values protection and development[3], where the article 78 paragraph 2 of this law describes the activities of this authority. One year later, the Kosovo Assembly adopts the law for Kosovo Authority for Nature and Environment Protection[4].
After the war in Kosovo new political circumstances were created, where all legislative and executive power is passed to UNMIK (*regulation 1999/1*). In the year 2000, the ex authority for Nature and Environment Protection is registered in Interim Administration of United Nations in Kosovo by the name " Kosovo Institute for Nature and Environment Protection" with its headquarters in Prishtina.[5]
In May 2000, the Department for Environment Protection is established, and within it following institutions are subordinated: Kosovo Institute fort Nature and Environment Protection, Kosovo Hydro-meteorological Institute and the authority of National Park "Mali Sharr".
After the national election (2001) and establishment of governmental institutions of Kosovo, the Ministry of Environment and Spatial Planning is created[6]. The Ministry is responsible for making policies, laws and monitoring of them as well as other activities related to the environment, including management of water resources, land use and biodiversity. Currently the KINP functions within Kosovo Environmental Protection Agency.

1 Decision for establishment of Section for Nature protection ("GZK". 42/74)
2 Law for establishment of Regional Authority for Nature Protection ("GZK". 15/81)
3 Law for Protection and Development of Natural Values ("GZK" 39/88)
4 Law for Kosovo Authority for Nature and Environment Protection ("GZK"nr. 38/89)
5 Number of register of 80156359, date 14.08.00) with the name "Kosovo Institute for Nature and Environment Protection"
6 Establishment of MESP (Reg. 2001/19 and 2002/5).

Goals of Nature Conservation

The nature conservation, sustainable use of natural resources and goals of nature protection are based mainly in the law of nature protection. They are described as follows:

- Protection,Conservation and sustainable use of natural resources and renewable resources of nature
- Revitalization of damaged areas of nature or its parts and compensation for damages
- Preservation and restoration of ecological balance of nature
- Setting up the planning, management, inventory, monitory, information and financing systems for nature protection
- Achieving the goals that are set up in nature protection policies
- Promoting the sustainable use of nature resources and decreasing the threat toward flora and fauna species in particular for important species as rare and threatened species and their habitats
- Providing the public with information and ensuring the public participation in the field of nature protection
- Enabling the citizens a healthy environment , safe areas for recreation and tourist and scientific purposes
- Ensure the biodiversity conservation through protecting natural habitats of important flora and fauna species
- Setting up national standards for nature protection which are compatible with EU standards.



I.
Protected Areas

1. Classification of protected areas

Classification of protected areas is made by the law for nature protection (Reg. 2006/22)

A protected area of nature is an area designated with the aim to protecting the biodiversity, landscapes, natural characteristics and cultural heritage; and for offering the effective management through juridical means and others.

According to this law protected areas are:

I. Strict nature reserve – a protected area mainly designed for scientific purposes.
II. National Park – a protected area mainly designed for ecosystem protection and for recreation purposes.
III. Natural Monument – mainly designed for conservation of specific natural characteristics
IV. Area of managed habitats or protected species - a designed area aiming to protect a habitat or a specie
V. Protected landscape – an area designed for protecting landscapes
VI. Protected area of natural resources – a designated area aiming to prohibit unsustainable use of natural resources in natural ecosystems.

The categorization of protected areas in the law for nature protection is made according to the IUCN[7] (*The World Conservation Union*).

2. Nature Protected areas

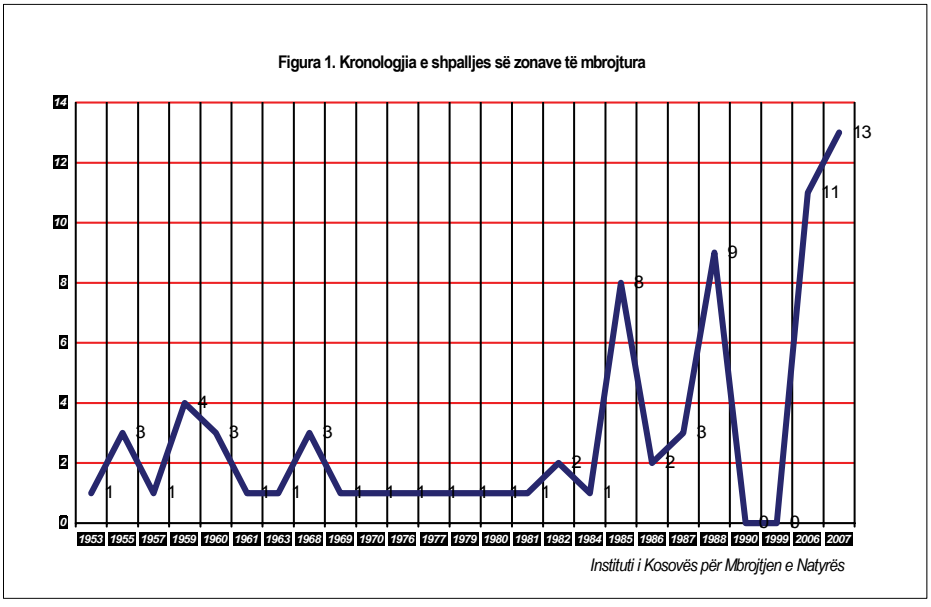
The nature protection through protected areas is an important legal tool that enables protecting the values of natural heritage and biodiversity. The national network of protected areas is consisted by 75 nature areas with the total surface 46 437 ha (4.25 % of Kosovo territory). The largest surface of protected areas has the national park "Mali Sharr". The main protected areas are: 11 Nature reserves ("Bifurcation in Nerodime river", "Arnenit reserve", "Maja e Ropsit", "Rusenica", etc.), 1 National park ("Mali Sharr"), 59 Natural Monuments ("The spring of Drinit i Bardhë", "Cave in Gadime", "Rugova Canyon", "Fshajt's Bridge", "Old Trees", etc.), 2 Nature Regional Parks ("Gërmia" and "Mirusha") and 2 Forestry parks ("Pishat e Deçanit" and "Rahavani"). (tab.1& 2).

Proposed areas for protection are 195, including "Bjeshkët e Nemuna" proposed to be declared a national park.

7 IUCN(The World Conservation Union)

Table 1. Nature Protected areas

Nr	Name	Nr. Of areas	Surface /ha
1	**Nature reserves**	**11**	**847**
	Plants	7	
	Animals	2	
	Special	2	
2	**National Park**	**1**	**39.000**
3	**Nature monument**	**59**	**4.874**
	Speleological	4	
	Hydrologic	10	
	Geomorphologic	5	
	Botanic	36	
	Memorial	3	
	Museum of crystals in Stantërg	1	
4	**Regional Park**	**2**	**1. 681**
5	**Forestry Park**	**2**	**35**
	Total	**75**	**46.437**



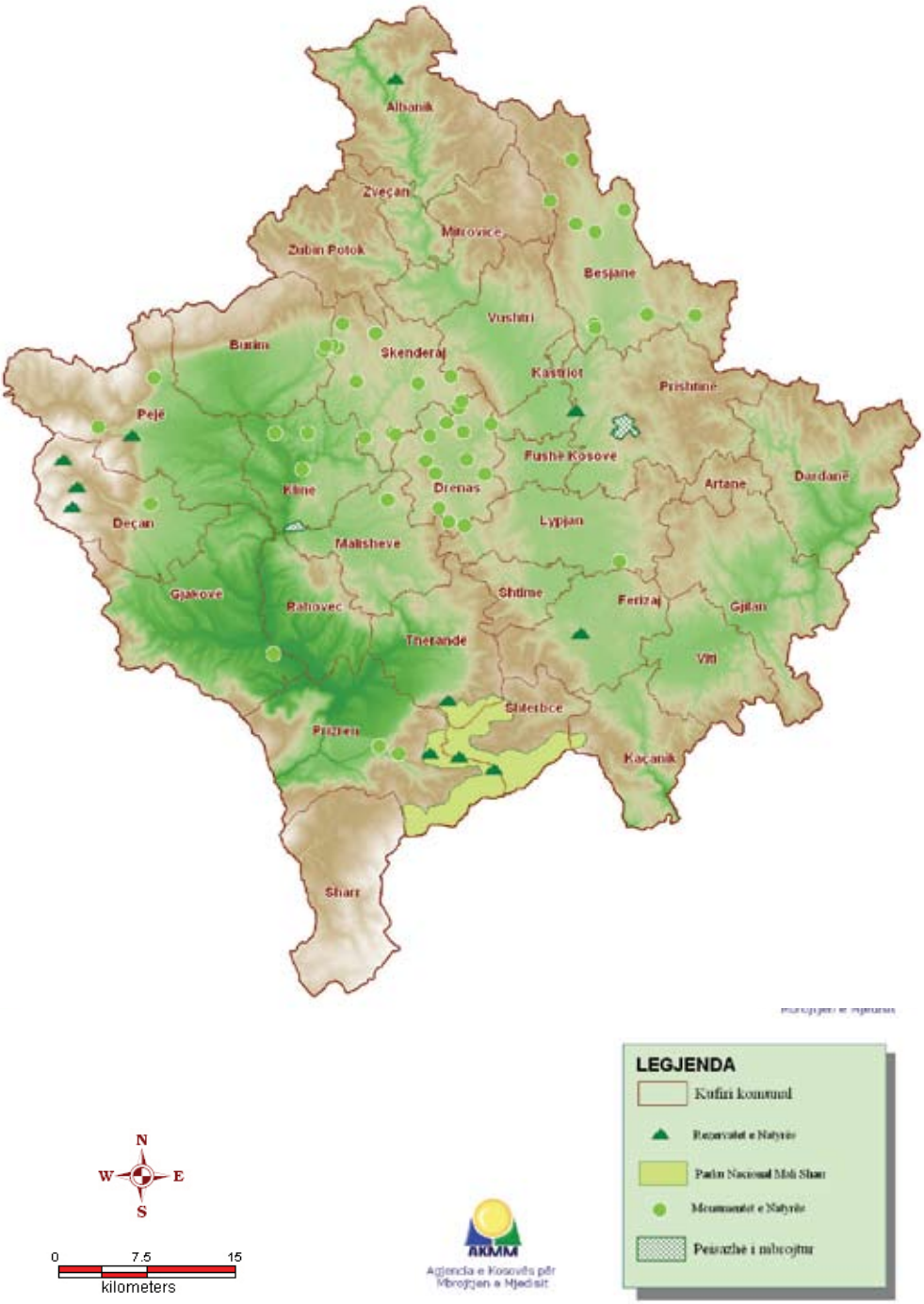

Albanik
Zveçan
Mitrovicë
Zubin Potok
Besjane
Vushtri
Skenderaj
Kastriot
Prishtinë
Pejë
Fushë Kosovë
Artanë
Dardanë
Klinë
Drenas
Deçan
Lypjan
Malisheve
Shtime
Gjakovë
Rahovec
Ferizaj
Gjilan
Thetande
Viti
Shterbce
Prizren
Kaçanik
Sharr
LEGJENDA
Kufiri komunal
Rezervatet e Natyrës
Parku Nacional Malë Sharr
Monumentet e Natyrës
Peisazhe i mbrojtur
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kilometers
AKMM
Agjencia e Kosovës për Mbrojtjen e Mjedisit

Table 2. List of Protected areas

Name of area	Municipality	Surface in ha	Year of protection	category	Description
NATURE RESERVES					
1. Maja e Ropsit	Deçan	20	1955	I	Plant reserve of molika, fir-tree, pine, and beech
2. Gubavci	Pejë	38	1959	I	Plant reserve of endemic-relict specie Forsythia europeae
3. Maja e arnenit	Prizren	30	1960	I	Plant reserve of Bosnian pine (Pinus heldreichii).
4. Gazimestan	Prishtinë	12	1953	I	Plant reserve of Scarlet Paeony (Paeonia decora Anders)
5. Kozhnjeri	Deçan	150	1955	I	Animal reserve of wild goat (Rupicapra rupicapra L.)
6. Oshljaku	Prizren	20	1960	I	Plant reserve of endemic-relict specie Bosnian pine (Pinus heldreichii).
7. Malet e Prelepit	Deçan	0.92	1963	I	Plant reserve of Balkan maple (Acer heildreichii)
8. Rusenica	Therandë	300	1955	I	Animal reserve Lynx lynx L.
9. Bifurcation in Nerodime river	Ferizaj	13	1979	I	Special nature reserve. A unique phenomena in Europe. High educative, scientific and tourist values
10. Pisha e madhe	Prizren	35	1960	I	Plant reserve of endemic-relict specie Bosnian pine (Pinus heldreichii).
11. Kamilja	Albanik -Leposaviq	228	1988	I	Special nature reserve Calcareous hill "kamilja" with paleontological features
NATIONAL PARKS					
1. Mali Sharr	Prizren, Suharekë, Kaçanik, Shtërpcë	39.000	1986	II	Characterized with many relict and endemic species of flora and fauna and with high tourist values
NATURAL MONUMENTS					
1. Cave in Gadime	Lypjan	56. 25,02	1969	III	Nature geo-monument, rich with natural ornaments, one of most beautiful caves in Balkans, high educative, scientific and tourist values.
2. Cave in Baicë	Drenas	00. 11, 55	1987	III	Nature geo-monument with speleological hydrological values
3. Cave in Gllanasellë	Drenas	00. 50, 17	1987	III	Nature geo-monument with speleological, morphological and hydrological values

4. Canyon in River Bistrica	Prizren	200.00,00	1976	III	Nature monument with hydrological and landscape characteristics
5. Spring of Drini i Bardhë river together with the cave and waterfall in Radavc	Pejë	89. 94	1983	III	Nature monument with geo-morphological, hydrological and tourist values.
6. Water flow of river Mirusha [1]	Therandë - Klinë	10. 03, 35 1. 93, 94	1983	III	Hydrological, geo-morphological and landscape values
7. The spring of mineral water Dresnik	Klinë	0.0,6.75	1985	III	Nature monument with hydrological values
8. The spring of termo-mineral water in Vuqë	Albanik - Leposaviq	16. 60, 13	1988	III	Nature monument with hydrological values
9. water spring in Revuqë	Podujevë	1. 16, 94	1988	III	Nature monument with hydrological values
10. Mineral water spring in Sallabajë	Podujevë	00. 31. 47	1988	III	Nature monument with hydrological values
11. Spring in Shakovicë	Podujevë	1. 40,54	1988	III	Nature monument with hydrological values
12. Canyon on river Klina	Klinë	1.204,94,49	1985	III	A complex nature monument with geo-morphological, hydrological and botanic values.
13. Rugova canyon	Pejë	4. 301,05,49	1985		Geological, hydrological, landscape, speleological and botanic values
14. Canyon of Drinit iBardhë river nex to Fshajt's bridge	Gjakovë, Rahovec	73.86,47 124.6,09	1986	III	Nature monument with hydrological, geo-morphological values
15. Oriental Plane (Platanus orientalis)	Prizren		1959	III	Nature monument with botanic , educative scientific and culture values
16. Mulberry (Morus sp.)	Pejë	3, ari	1957	III	Nature monument with botanic values
17. Aspen (Populus tremula)	Podujevë		1959	III	Nature monument with botanic values
18. Bosnian pine in Nerodime (Pinus heldreichi)	Ferizaj		1959	III	Nature monument with botanic values
19. Lime in Isniq (Tilia argentea)	Deçan	00.02.11	1968	III	Nature monument with botanic values
20. Lime in Strellci i Epërm (Tilia argentea)	Deçan		1961	III	Nature monument with botanic values
21. Lime's trees in Isniq (Tilia argentea)	Deçan		1968	III	Nature monument with botanic values
22. Elm-tree in Lukinaj (Ulmus campestris)	Prizren		1981	III	Nature monument with botanic values
23. Oak trees in Lozicë (Quercus sp.)	Malishevë		1985	III	Nature monument with botanic scientific values

24. Oak tree in Zllakuçan (Quercus cerris)	Klinë		1985	III	Nature monument with botanic and tourist values
25. Turkish oak tree in Potërç i ulët (Quercus sp.)	Klinë		1985	III	Nature monument with botanic values
26. Elm tree in Çabiq (Ulmus minor Muller)	Klinë		1985	III	Nature monument with botanic values
27.Turkish oak in Bërkovë (Quercus sp)	Klinë		1985	III	Nature monument with botanic values
28. Turkish oak in Dumnicë e Poshtme (Quercus cerris)	Podujevë		1988	III	Nature monument with botanic values
29. Turkish oak in Polatë (Quercus cerris)	Podujevë	00.44,20	1988	III	Nature monument with botanic values
30. Aspen tree in Orllan (Populus tremula)	Podujevë	00.26,20	1988	III	Nature monument with botanic values
31. Turkish oak tree in Dobratin (Quercus cerris)	Podujevë		1988	III	Nature monument with botanic values
32. Maja e zezë (Black peak	Pejë	112.50.00	1977	III	Nature memorial monument
33. Ramjani	Viti	190.00,00	1982	III	Nature memorial monument
34. Çabrati	Gjakovë	64,00.00	1984	III	Nature memorial monument
35. Minerals – crystals	Stantërg, Mitrovicë		1970	III	Conserved minerals and crystals in the museum of Stan- tërg.
36. Common oak trees (Nekovc)	Drenas	5. ari	2006	III	Nature monument with botanic values
37. Complex of common oak trees (Negroc)	Drenas	5. ari	2006	III	Nature monument with botanic values
38. Hungarian oak (Negroc)	Drenas	5. ari	2006	III	Nature monument with botanic values
39. Cave in Kishnarekë	Drenas	2. ha	2006	III	Nature geo-monument with speleological and hydrological values
40. Turkish oak tree in (Krajkovë)	Drenas	5. ari	2006	III	Nature monument with botanic values
41. Rock in Gradinë (Llapushnikë)	Drenas	2. ha	2006	III	Nature monument with geo-morphologic values
42. Spring of mineral water (Poklekë)	Drenas	5. ari	2006	III	Nature monument with hydrologic values
43. Oak trees, six trees (Likoshanë)	Drenas	5. ari	2006	III	Nature monument with botanic values
44. Oak trees (Terstenikë)	Drenas	5. ari	2006	III	Nature monument with botanic values
45. Turkish oak tree (Likoshanë)	Drenas	5. ari	2006	III	Nature monument with botanic values

46. "Guri I Plakes (eng. Rock of old women) (Dobroshevc)	Drenas	5. ari	2006	III	Nature monument with geo-morphologic values
47. Pubescent oak tree (Quercus pubercens willd.) Aqarevë	Skenderaj	5 ari	2007	III	Nature monument with botanic values
48. Oak trees (Quercus sp.) Polac	Skenderaj	5. ari	2007	III	Nature monument with botanic values
49.Oak tree (Quercus sp.) në Likovc	Skenderaj	5. ari	2007	III	Nature monument with botanic values
50. Spring of thermal water in Bajë	Skenderaj	10. ari	2007	III	Nature monument with botanic values
51. Oak tree (Quercus sp.) in Prellovc	Skenderaj	5 ari	2007	III	Nature monument with botanic values
52. complex of oak tres (Quercus sp.) Rrezallë	Skenderaj	2. he.	2007	III	Nature monument with botanic values
53. Complex of pubescent oak trees (Quercus pubescens willd.) në Klladernicë	Skenderaj	10, ari	2007	III	Nature monument with botanic values
54. Turkish oak tree (Quercus cerris L.) in Kotorr	Skenderaj	5 ari	2007	III	Nature monument with botanic values
55. Turkish oak tree (Quercus cerris L.) in Padalishtë	Skenderaj	5, ari	2007	III	Nature monument with botanic values
56. Pubescent oak tree (Quercus pubescens Willd.) in Çitak	Skenderaj	5, ari	2007	III	Nature monument with botanic values
57. Turkish oak tree (Quercus cerris L.) in Runik	Skenderaj	5. ari	2007	III	Nature monument with botanic values
58. spring of salty water in Leqinë	Skenderaj	5. ari	2007	III	Nature monument with hydrologic values
59. Oak tree in Lubovec	Skenderaj	5. ari	2007	III	Nature monument with botanic values
REGIONAL PARK (Protected landscape)					
1. Regional park of nature[2]	Klinë, Rahovec	357.01,72 198.77,98	1982, 1983		A rare nature phenomena with series of waterfalls, specific landscapes with scientific, culture and tourist values
2. Regional park Gërmia	Prishtinë	1.126, 01, 00	1987		Nature monument with scientific, educative culture and tourist values
Forestry Park					
1. "Pishat e Deçanit"	Deçan	15	1968		A pure content of Black Pine next to the Deçan Monastery
2. Rahavane	Therandë	20.25,83	1980		A complex of trees

2.1. Nature reserves

Nature reserves are original (or almost pristine) areas of nature with characteristic forms of plants, animals and their associations, as integral part of ecosystems designed mostly for conservation of genetic stock. This kind of areas might be with botanic importance, where species and plant associations are conserved "in situ", or with fauna importance due to conservation of animal species and their original nature habitats. Also, nature reserves may be areas where one or more specific nature values are indicated and which values should be protected.
A strictly protected nature reserve is a terrestrial or aquatic area characterized with distinguished ecosystems with geological features and species. These areas are designated mostly for scientific and environmental monitoring purposes[8].

The goals of protecting the strict nature reserves are: protecting habitats, species and ecosystems from the stress and disturbing, to pay attention to dynamic and evolutional genetic resources, taking care for ecological processes, conserving the structural, landscape and geological features, saving samples of nature for scientific purposes, education, environmental monitoring, reducing the stress and impact to the nature through appropriate planning, researches etc.
The strict nature reserves are protected according to the first class of protection and decision for their protection is made by the government.

From total surface of protected areas, nature reserves represent 847 ha. In Kosovo there are three types of nature reserves so far: Plant reserves (7), animal reserves (2) and special reserves (2)

8 Article 18 in the law for nature protection (reg. Nr. 2006/22)

Table 3. Nature reserves

Name of nature reserve	Municipality	Surface in ha	Year of protection	category	Description
1. Maja e Ropsit	Deçan	20	1955	I	**Plant reserve of molika, fir-tree, pine, and beech**
2. Gubavci	Pejë	38	1959	I	**Plant reserve of endemic-relict (*Forsythia europeae*)**
3. Maja e arnenit	Prizren	30	1960	I	**Plant reserve of Bosnian pine (*Pinus heldreichii*).**
4. Gazimestan	Prishtinë	12	1953	I	**Plant reserve of Scarlet paeony (Paenonia decora Anders)**
5. Kozhnjeri	Deçan	150	1955	I	**Animal reserve of wild goat (*Rupicapra rupicapra L.*)**
6. Oshljaku	Prizren	20	1960	I	**Plant reserve of endemic-relict specie Bosnian pine *(Pinus heldreichii)*.**
7. Malet e Prelepit	Deçan	0.92	1963	I	**Plant reserve of Balkan maple (Acer heildreichii)**
8. usenica	Therandë	300	1955	I	**Animal reserve *Lynx lynx L***
9. Bifurcation in Nerodime river	Ferizaj	13	1979	I	**Special nature reserve. A unique phenomena in Europe. High educative, scientific and tourist values**
10. Pisha e madhe	Prizren	35	1960	I	**Plant reserve of endemic-relict specie Bosnian pine *(Pinus heldreichii)*.**
11. Kamilja	Albanik -Leposaviq	228	1988	I	Special nature reserve Calrareous hill “kamilja” with paleontological features

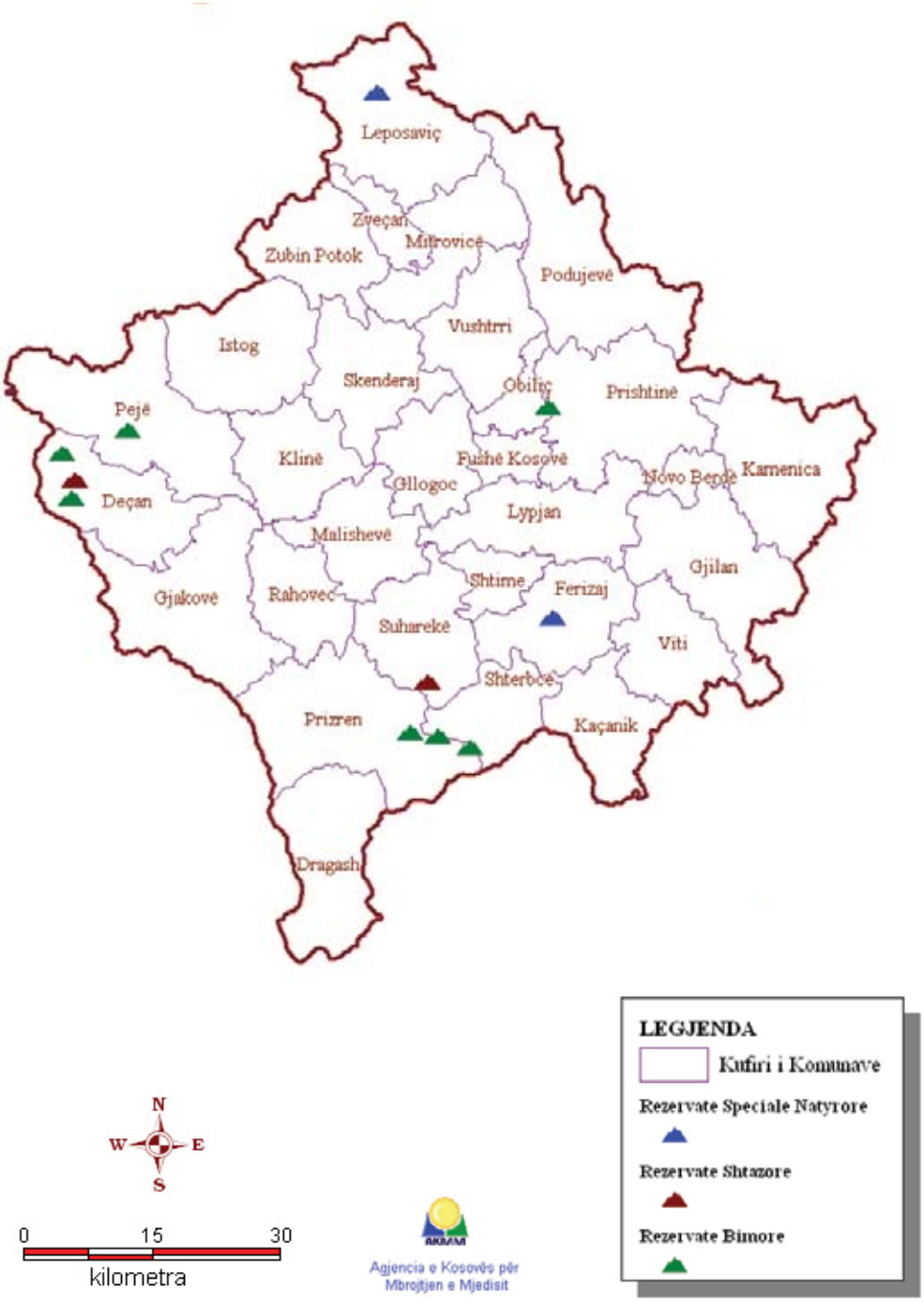


Figure 3. Map of Nature Reserves

The state of nature reserve "Maja e Arnenit: (Prevallë)

The surface of the area is 30 ha. It is declared a protected area as a plant reserve in 1960. it is an area with high botanic importance due to the presence of the specie Bosnian pine (*Pinus heildreichi*). Also it has ornito-faunistic values due to the presence of Black cock *(Tetrao urogallus*). The area is distinguished by recreational and medical values.



Figure 4. Bosnian pine nature reserve (Pinus heildreichii), Prevallë

The state of endemic-relict forests of Bosnian pine (*Pinetum heldreichii*), which are situated in the southern exposition of Oshlak Mountain is unfavorable as the result of fire of the yer 2000, as well as from the damages caused by insects (*Blastophagus sp*.). Due to negative impact of these factors (fire and insects) as well as other biotic and non biotic (climate factors) factors considerable parts of this forest are degraded. Most of the trees of Bosnian pine are affected by the fire and insects and their biological survival has come to the question. Another threat to this forest is made by the construction of a tourist village "Prevalla" which is being developed by an urban plan of Prizren municipality. From other development aspect in these forests we emphasize:
Intensity of damages in this year is lower than in previous years, but it doesn't warranty it will happen a natural revitalization and for sustainable development of these forests. The evidences show that there are not signals for natural revitalization and the herbal plants are increasingly developing in the area. In particular is evidence development of specie *Ephilobium angustifolium* and *Salix capre*).



Figure 5. Bosnian pine (Pinus heildreichii)



Figure 6. Forest of Bosnian pine (Pinetum heldreichii) after the fire in 2000 in Prevallë



Figure 7. Damages caused by insect Blastophagus sp. After the fire in the forest

The state of beech forests which are located in the northern exposition of Sharr Mountain is relatively good and sustainable. In forests groups with high density corolla (0.9-1) it is evident lack of natural revitalization, whilst in forests with the density of corolla les than 0.6-0.8, is evident a significant development of seedlings of different ages. From biotic and non biotic factors with impact in the beech forests are identified:

- Mushroom of decay *Fomes fomentarius* which appears in old and damaged trees of beech (*Fagus moesiaca*),
- The mushroom *Nectria ditissima,* which causes the tumor and deformation of trees' cortex which are with low immunity
- Impact of snow winds which caused damages of trees' branches and extraction of trees in hilly terrains
- Impact of anthropogenic factor through trees' cutting and fires.

In the area of Prevalle, currently are under development two Plans (projects) by Municipality of Prizren: the Urban Regulative Plan "Prevalla" in the left side of the road Prizren – shtrpce, where is planned constructing a tourist village with over 360 buildings in a surface of 17 ha; and Regulative Camping Plan in the are where basements of summer camping houses made by ex "Bankos" still exist.

In the area bordered with strictly protected nature reserve "Maja e Arnenit" are opened four roads which are based in the Urban Regulative Plan made

by Municipality of Prizren and which coused many damages in ecosystems of herbal, shrubs, beech and Bosnian pine species. During the road construction are cut exemplars of Bosnian pine with diameter from 14 to 54 cm. it is done without respecting existing procedures that are described in the law on forests nr 2003/6 (article) and without respecting the professional opinion of National Park Authority Sharr Mountains. Based in the projects for road construction except herbal and shrubs ecosystem, it is planed to be destroyed about 5 hectares of endemic-relict forest ecosystems where species listed below are evidenced to be present: *Pinus heldreichii*, *Pinus peuce*, *Fagus moesaicae*, *Fraxinus ornus*, *Acer pseudoplatanus*, *Pinus nigra*, *Picea excelsa*, *Lonicera xilosteum*, *Juniperus communis*, *J. nana*, *Daphne mezereum*, *Rosa canina*, *Rhamnus cathartica*, *Salix caprea*, *Salix arenaria*, *Sobus aucuparia*, *S. austriaca*, *Betulla pubescens*, *Alnus glutinosa*, as well as other herbal species



Figure 8. Opening a road very close to Bosnian pine (Pinus heldreichii)

Researches in the area of Prevalle have shown that this part of National Park has extraordinary natural and scientific values. The rich biodiversity of the area is characterized with endemic plant species: steno endemic specie *Vrbascum scardicolum* (which can be found only in the area of Prevalle and no else in the planet), *Pinus heldreichii* (endemic-relict), *Pinus peuce* (Balkan endemic)), *Gentianella bulgarica var. albanica, Dianthus cartusonarum, Dianthus integer, Lazerpitium siler, Campanula albanica, Thymus albanus,Campanula foliosa, Verbascum nikolai, Stachys scardica, Viola zoisii, Viola grisebachii, Ephilobium anagallidifolium, Buplenium subthorpianum, Phytenua pseudoverbiculare, Trifolium velenovskyi* (Balkan endemic), *Carex leavis, Anthemis carpatica, Onobrychis scardica, Anthyllis*

aurea, Doronicum orphanidis, Campanula spatulata, Campanula epigea, Scabioza dubia, Potentilla speciosa, Cynanchum huteri etc.





Figure 9, 10. Endemic plant species in Prevalle



Figure 11. Urban Regulatory plan in Prevallë



Figure 12. A landscape view from Prevallë

Bifurcation in Nerodime River

The Bifurcation in Nerodime River represents a unique case in Europe, where a river discharges in two seas.

The River spring is in Jezerc Mountains and in the village Nerodime it irreversibly divides in two branches, which discharges in two different seas. The northern branch (left one) discharges in Sitinice River and continues its path to the rivers Iber, Morave and



Figure 13. Map of bifurcation location

through Danube it reaches the Black Sea. The southern branch (right one) through rivers Lepenc and Vardar reaches the Aegean Sea. This nature phenomenon is attractive for many researchers and visitors and has high educative scientific and tourist values. Since the year 1979 it is taken under the law protection as a special nature reserve. The protected surface is 12. 78. 71 ha

The state of Bifurcation

During the frequently monitoring visits made to the Bifurcation, it is noticed that as the result of many concrete barriers in the river bottom, mostly in the left branch, the bifurcation is not functional.
The left branch is totally empty from the water flow. In the other side, the right branch which takes water to an old existing mill is damaged due to often changing the direction of water flow, made by local inhabitants.
Another factor disturbing the area is the Restaurant "Ujevara", who created an artificial waterfall for its commercial interest, thus influencing the water flow.



Figure 14. The bifurcation in Nerodime, long time ago…

In 2005, the Municipality of Ferizaj in cooperation with KPC, initiated an action to re-open and to clean up the left side of the river branch. Unfortunately, this project is not completed. Initiatives to improve the water flow in both branches are undertaken many times, but unfortunately with no sustainable positive results

In order to enable the normal functioning of the bifurcation it is a need to undertake a series of measurements for avoiding management and concrete technical problems. Some recommendations made to the decision makers were:

- The area should be taken under the administration of Government directly, as it is described in the law on nature protection
- A management authority should be established for the area
- Developing a serious and appropriate project in order to reopen (clean up) the left branch of the river and to make the bifurcation functional.
- Creating normal conditions (rehabilitate the area) and undertake preventive measurement in order to protect the area.
- Developing a management plan
- Developing urban and tourist plan
- Putting informative signs and other facilitations.



Figure 15. The empty left branch of the bifurcation nowadays



Figure 16. Left branch of the bifurcation, empty and not functional



Figure 17. The waterfall next to the restaurant, on of factors interrupting the normal flow of the river

The nature reserve of Lynx in Rusenicë

According to the body size lynx is the third carnivore in Europe, after the bear and wolf. It is member of cats family (*Felidae*) and it isspread in Euro-Asia from European Alps to eastern Siberia.

In Kosovo it inhabits mainly mountainous areas in Sharr Mountains. Its permanent presence is recorded since 1912. Afterward it is noticed in Nerodime Mountains, Jezerc, Pashtrik, Koritnik, Bjeshket e Nemuna etc. It prefers high and virgin forests. It has characteristic body, with shrunken body, long legs and broad foots. It has orbicular head, large ears and short tail. It is about 80 – 130 cm long, and about 65 cm high body. It weights between 12-35 kg. Its usual food is mostly deer, wild cat, rabbits, fox and any forestry birds. It is a typical eremite animal, it meets other lynxes only during the copulation period, it occupies large territories (up to 2000 km ^{2}) and it is active mainly during night time. During one night it can travel up to 45 km. The lynx lives up to 17 years.

The protected area of Lynx as a rare and threatened specie of our fauna is in Rusenice in the territory of Suhareke Municipality. Its habitat is protected as protected nature reserve in 1955 and includes an area of 300 ha.

The preliminary assessment on native population of lynx in south east Europe, shows that this is the most dangerous area for lynx in the entire world. The situation becomes more alarming if we take into the consideration that lynx is becoming sub-specie *Lynx lynx martinoi*. Its real state is not well known, but it is considered the number of lynx individuals is under 100, and mainly concentrated in South west Balkans (Albania, Macedonia and partially Kosovo).[9]

Data on the Lynx in Kosovo are rather old, since 1990. Those data showed about the presence of lynx in “Sharr” and “Bjeshkë të Nemuna”. In “Sharr Mountains” are evidenced 10 individuals of lynx and those in Popovo prase, Oshlak, Koxhaballkan and Ostrovicë. Meantime in “Bjeshkët e Nemuna” are evidenced 12 individuals of this specie.

From the most recent information and evidences about the state of Lynx in Sharr Mountain, concretely in the nature reserve of Rusenice, the situation is alarming. This is taking into account that in area are operating illegal quarries, which not only damage the ecosystem, but also decrease the size of the nature reserve and disturb the protected specie. This becomes more terrifying when we take into the consideration that Lynx is very sensitive on the presence of anthropogenic factors.

9 http://euronatur.org/



Also, another negative factor is uncontrolled hunting which disturb not only lynx directly, but also other species which serves as a prey for lynx.

It can be comcluded that the state of the lynx is the best representator of the wild fauna state in Kosovo.



Figure 18. (Lynx lynx) in Albania (. http://euronatur.org)

2.2. National park "Mali Sharr"

The Sharr Mountains are located in the region of Kosovo and Macedonia and includes an area of 1600 km2. The northern part of Sharr Mountains belong to Kosovo and includes an area of 1100 km², what approximately represent 1/10 part of total Kosovo territory. In 1986, part of Sharr Mountains was declared as a National Park by Kosovo Assembly. The area of national Park includes 39 000 ha, and it includes territories of four municipalities: Prizren (19.500 ha), Shtërpcë (15.210 ha), Therandë (2730 ha) and Kaçanik (1560 ha).

The Sharr Mountains are distinguished by botanical, fauna, ecological, tourist, recreational, sportive, educative and cultural values. 25 lakes in the altitude 1900 m above sea level, represent rare nature values of this mountainous massive. The largest lake is Lake of Livadhi (2173 m). From the floristic point of view, these mountains belong to most rich areas with biodiversity not only in Kosovo but in Balkans Peninsula and they represent a treasure of plant species with a number of endemic, relict, rare and threatened species.



Figure 19. National Park "Mali Sharr"

So far are evidenced about 2000 plant species and 68 plant associations. Within forestry vegetation there are different species of shrubs, beech, pines, endemic and relict pine of high mountains: Bosnian pine (*Pinus heildreichii*), *Pinus peuce*, Common yev (*Taxus baccata*), Mountain pine (*Pinus mugo*), *Rhododendron ferrugineum,* etc.[10]

Among these species, 86 of them are declared to be important for national interest, 26 species are included in European Red List of threatened plant and animal species, and 32 species are listed in the IUCN Red List of threatened species



Figure 20. Animal Species from national park "Mali Sharr"

The territory of Sharr is very rich with different biotopes an animal species. There are present specific species of animals, which are exclusively connected to these habitats. It means they have small area and they are endemic species. Meantime, other species that can be found in different biotopes have a broad area. The fauna of Sharr, and in general fauna of Kosovo is not researched sufficiently, but based in the data from the existing literature it may be concluded that fauna of Sharr is represented by: *7 fish species, 9 amphibian species ,10 reptile species, 154 bird species and 30 mammal species.*

10 Feasibility study on declaring the Sharr Mountain a National Park (Prishtinë 1982)

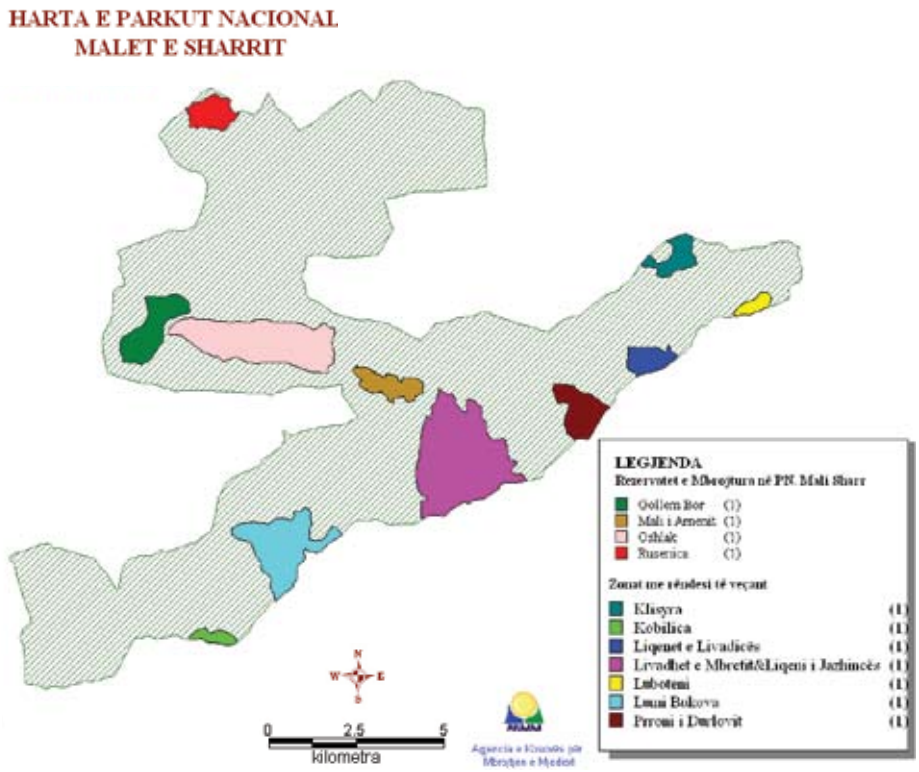


Figure 21. Map of nature reserves and other areas with special values with national park "Mali Sharr

Within territory of national Park "Mali Sharr" exists following areas with status of Protected nature reserve: Koxhaballkani (Large pine), Oshlaku, Maja e Arnenit (Prevalla) and Rusenica.

1. Maja e Arnenit (Popovo prase)- is consisted by pure forests of Bosnian pine (*Pinus heldreichii*). It is located in Prevalle (eastern part of Oshlak) with a surface of 30 ha. It is taken under legal protection in 1960. In this locality is spread the forest of endemic and relict specie of robullit (*Pinus heldreichii*).

2. Oshlak – It is rich with pure forest of Bosnian pine (*Pinus heldreichii*). The Oshlak area is rich with many endemic plant species. A distinguished symbol of this area is the steno-endemic specie *Achillea alexandri - regis* that is located mainly in high mountainous terrains. Other important floristic aspect in this area is the plant associations: *Achilleo – Pinetum mugo* (Pinetum mugo calcicolum) and Achilleo alexandri – regis. From fauna species in this area is evidenced wild goat (*Rupicapra rupiapra*), which inhabits the highest pastures of Oshlak. Other wild animals in the area are: brown bear, wolf, deer, birds etc. This nature reserve covers an area of 20 ha and it is declared a protected area in 1960.



Figure 22. Nature reserve of Oshlak in Koxhaballkan

3. Large Pine (Pisha e Madhe) – it is a nature reserve of pure forests of Bosnian pine (*Pinus heildreichii*). It is located in south east hills of Koxhaballkani, where are located old forests of Bosnian pine, which creates the plant association Seslerio autumnalis– Pinetum heldreichi, and which represent the most beautiful complex of arneni forest in Balkans. The area covers a surface by 35 ha, and it is declared a protected area in 1960.



Figure 23. Large Pine (Pisha e madhe), nature reserve of Bosnian pine (Pinus heildreichii)

4. Rusenica- is a habitat of Balkans lynx (*Lynx Lynx balcanicus*), which is a rare and threatened specie. Rusenica covers an area of 300 ha. In order to protect the habitat of lynx, tt is declared a protected area in 1955,. No detailed study for this specie in Kosovo is made so far. This area is important also for floristic and landscapes aspects, where is present the specie Balkan maple (Acer heldreichii).

Zonat me Vlera të Veçanta

Within area of National Park "Mali Sharr" are identified some areas with special nature values.

1. Pashallarë (Ostrovica) – a serpentine locality of high mountains (1600 – 2092 m), with pure forests of Bosnian pine and beech. This mountainous massive is distinguished with serpentine geological fundaments, where are developed rare and specific vegetation of high mountains. In northern and north-west hills of Pashallare, starting from the altitude 1600m to the highest peak 2092m, are located rare forest associations as: Junipero – Pinetum heldreichii (*Bruckenthalio – Pinetum heldreichii*), Pinetum – heldreichii serpentinicolum, Pinetum – heldreichii peucis scardicum, as well as beech associations in serpentine terrains. Higher in the area is located specific vegetation as Pinetum mugo serpentinicum. An additional value of these associations is the endemic specie Bornmuellera–dieckii. The forest of Bosnian pine in serpentine territory represents the special structure of natural vegetation in the Balkans. The area is about 45 ha.

2. Koplica – is a calcareous area of high mountains, with rare flora and fauna. The calcareous massive is reach with rare calcifil and hezmofile species. Characteristic specie of area is Hieraacium kabilicanum. The area surface is 12 ha.

3. Area of Lumbardh river spring – it is a silicate glacier circle if high mountains with two small lakes. This area is characterized with special ecological, geological, biological and landscape values. In the area of this nature reserve is the upstream of Lumbardhi River and two lakes with glacial features. The area is rich with endemic plant species like: Pinguicla balcanica, Alysum scardicum, Crocus scardicus and glacial relicts Anemone narcissiflora and Draba doerfleri. The area surface is about 40 ha.

4. Luboteni- is the highest peak (2496 m), it is located in the east part of Sharr Mountains. Its geological structure is mainly calcareous, what made it different from other parts with silicate geological structure. The flora of the area is rich with rare species. So far, are identified 649 species of vascular flora, grouped in 81

families. In the vegetation of Luboten so far are evidenced 21 plant associations. The areas surface is 50 ha.



Figure 24. Forest of Bosnian pine (Pinus heldreichi) in the nature reserve "Pisha e Madhe", burned in the year 2007

5. Livadhi i mbretit – (the Jazhince lake) – It is located in rocky area of Sharr mountains in the Bistra peak, with an area of 50 ha. In this area are identified following plant associations: Fagetum Montanum, Seslerio automnalis – Pinetum heldreichii, Ajugo – pinetum peucis etc. In the highest parts of this area are identified associations: Rhododendron – Pinetum peucis, Juniperus sp., Ranunculetum crenati scardicum, Potentillo doerfleri – Juncetum trifidi.

Evidenced problems in National Park "Mali Sharr":

- Disharmony between existing laws (Law on National Park „Mali Sharr",1986; Law on forests, 2004; Law on nature protection, 2005);
- Mixture of competences. (The national Park is being managed by three subjects: Directorate of the Park with it headquarters in Prizren, Directorate of the Park withit headquarters in Shtërpce And Kosovo Forestry Agency;
- Lack of spatial and management plan;
- Un controlled use of natural resources, forests cutting and damaging;
- Fires in the nature reserves: large pine, balkan pine and other parts of the park

- Damaging illnesses and insects;
- Quarries operating in the area of the Park;
- Illegal constructions and construction of the tourist village in Prevalle
- Not yet well defined park borders (the outside border line is determined only in the territories of Prizren and Suhareke Municipalities. Internal zoning of the area isn't completed.

Nature Monuments

Natural monument is a territory, which contains one or more natural or cultural specific characteristics with special or unique values, due to rarity, natural characteristic, recreational and esthetic or special cultural values.[11]

Nature monuments may be with character of:

a) Geological paleontological, mineralogical, hydro-geological, sediment)
b) Geo-morphologic (caves, abyss, rocks);
c) Hydrologic (water flow, waterfall, lakes, springs);
d) Botanic (rare exemplar of plant species);

Nature monuments are declared by local governments, except those with special importance for national interests which proposed by KEPA are declared by government as protected areas.
Goals for management of nature monuments are:

- Protection and conservation of sustainable nature features, that are to a special interest and that have unique values



Figure 25. The waterfall in Drini i Bardhe River

11 The law on nature protection article 20 (2006/22)

- Providing with opportunities for research, educative and evaluation values
- Preventing activities that may damage are may make significant changes in the monument
- Creating benefits for local population that live in the area.

The nature monuments cover 4.874 hectares of total protected areas surface. Total number of nature monuments is 59. 35 of them are with botanic character, 10 hydrologic, and 10 of them are with geo-morphologic character.
Most important protected monuments of nature are: The marble cave in Gadime. Rugova Canyon, Spring of Drini I Bardhe River together with cave and waterfall in Radavc, The canyon of Klina River, Fshat's Bridge area, Oriental plane tree in Marash and many other old trees, thermal and mineral water springs, caves etc.

The state of nature Monuments

"GADIMES' CAVE"

It is located in vicinity of Lipjan (next to the road Prishtinë – Ferizaj), in the "Murturi hill" of Gadime village. The altitude of the location is 580 m. it is known also as Marble cave, because it is consisted by marble rocks that made it one of most beautiful in Balkans and wider.
In Gadimes' cave appear all types of ornaments characteristic for caves. The most frequent crystals are stalagmites and stalactites which are spread in all parts of the cave and are to different shapes and size. Particularly in this cave are attractive aragonite ornaments which are in a huge number ant with different shapes like nowhere in the world. The aragonite channel in north gallery is a unique case. Its bottom is covered with a mosaic of shapes, white and blue colored, which look like a dense net of spides. Some of crystals are oriented in different directions, with broken lines with length up to 30 cm.
The Cave's age is millions of years. It is discovered in 1969. It is taken under law protection by 29 July 1969. In 1982 is revised its statute and it is protected as a geo-monument with rare nature values. The protected surface is 56.52,02 ha.



Figure 26. Cave in Gadime

For the assessment of the Cave's state is taken into the consideration the inside and outside area. In the "Murmuri" hill, where the cave is located, in north-west part of the cave are evidenced erodes of rocky material of the cave. In this area is constructed a water storage as a part of water supply system for local population. Also it is evident, many constructions and wells opening are happening in the western parts of the area.

In the southern part of the area are operating 8 quarries which exploit the calcareous rocks in an intensive manner. It is considered that explosive used for mining in quarries is damaging the cave ornaments and it creates non secure state of the cave.
Also there are evident other activities in the flow of Klysyr River, which may affect the state of the cave. In the close vicinity of the cave are constructed different objects which are not in the function of cave's management.



Figure 27. A view fro Murtur Hill, where the cave is located

Inside the cave are identified problems as follow:

- In some parts of the cave are identified large damages as in tectonic area in entrance of “tears channel”. It is permanent risk of erosion and dropping down the cave’s rocks in the areas that are visited by visitors.
- Due to hydrological and hydro-geological impacts in channels, in the roof and lateral parts the argyle masses have moved
- There are evident hydrological changes, resulted with decrease of water quantity. It is concluded that except changes resulted by hydrological cycle, the intensive use of water from the well opened in the vicinity of the cave has affected the cave’s hydrological state.
- In the cave is appeared moss and the ornaments are colored in yellow, which may impact the sustainability of the cave.



Figure 28. Operations in Murtur Hill



Figure 29. The Klysyr River close to the cave is almost closed

It is concluded this situation is created due to the improper lightening and airing of the cave.

- In the cave are evident physical damages (broken crystals)
- In the cave entirely are evident graphite and inscription.
- Lightening is not adequate and the power supply network is damaged.
- In the cave are taking place illegal activities and researches without previous permission from competent institutions.
- The management of cave is not done appropriately.



Figure 30. Quarry operating in Gadime



Figure 31



Figure 33



Figure 32. Electric lightening network, a permanent risk for the cave.



Figure 34. Moss and mushrooms developed in the cave



Figure 35. Soil erosion in the cave



Figure 36. Broken crystals



Figure 37. Inscription in the cave

THE CAVE AND THE SPRING OF DRINI I BARDHE RIVER IN RADAVC



Figure 38. The waterfall of Drini i Bardhë in Radavc



Figure 39. Entrance of the Cave in Radavc



Figura 40. Crystals are polluted by bats

The cave and the spring of Drini I Bardhe River are taken under legal protection in 1983, as nature monument. The surface of protected area is 89.94 ha and they are located in Radavc village, about 11 km away from Peja town, aside from the road (Pejë-Rozhajë).

These two nature rarities of nature heritage are located in the north-east part of Bjeshket e Nemuna Mountains (Albanian Alps).

The cave in Radavc is a typical spring cave. Its creation is linked with erosion and chemical reaction of ground water in Drini I Bardhe.

The total length of researched channels is is about 1420 m, whilst horizontal channels have a total length by 680 m. The entrance of the cave is in the altitude from about 578 m, which is an opened entrance with irregular triangle shape. The main gallery, consist by three parts: Entry channel, central gallery and the channel of tubs.

In most galleries and channels of the cave are evident proves of bats presence. A concern for the cave is that cave is visited by many unauthorized people who very often make inscriptions in the cave channels and walls. In the area of Drini i Bardhe spring and waterfall are noticed garbage.



Figure 41. A landscape in Rugova Canyon

Rugova Canyon

The Rugova Canyon as a nature monument is one of the areas with very special morphological, geo-morphological, geological, hydrological, biodiversity tourist and recreational values..

In this area are identified some problems. The road along the gorge is damaged and it is a risk for visitors safety. Construction of tourist complexes, restaurants, drinking water factory, etc, affects the nature landscape of the area.



Figure 42. Soil erosion in the road in Rugova Canyon



Figure 43. The drinking water plant



Figure 45. Canyon of Drinit i Bardhë River next to Fshajt's bridge



Figure 46. Beton production and sand separation installations in protected area



Figure 47. An hotelier object in protected area

Canyon of Drinit i Bardhë River next to Fshajt's bridge

The Canyon of Drinit i Bardhë River next to Fshajt's bridge is a nature monument with hydrologic character and it is taken under legal protection in 1986. The protected area surface is 199 ha and it belongs to the municipalities Rahovec[12] and Gjakovë[13]. During a long geo-morphological process the Drini I Bardhe River opened a canyon between two calcareous rocks, by creating a very attractive and interesting canyon for researchers and visitors. In the protected area are evident constructions and other impacts that damage the landscape of this area.

12 Decision 01 nr. 352-13 dt. 9.04.1986 Rahovec

13 Decision 01 nr. 011-10 dt. 05 March 1986 Gjakovë

The state of BIO-MONUMENTS

Tress and trees' complexes belong to the category of nature monument with botanic character[14]. In the list of protected areas are listed 35 nature monuments with botanic values and most of them are trees or trees' complexes.

During the period 2005/2007 are organized many field visits in order to monitoring the protected nature monuments. According to the collected data it is concluded that some of protected trees are not in a good state, whilst some of them because they are damaged significantly, are in the procedure of rejecting their protection statute.

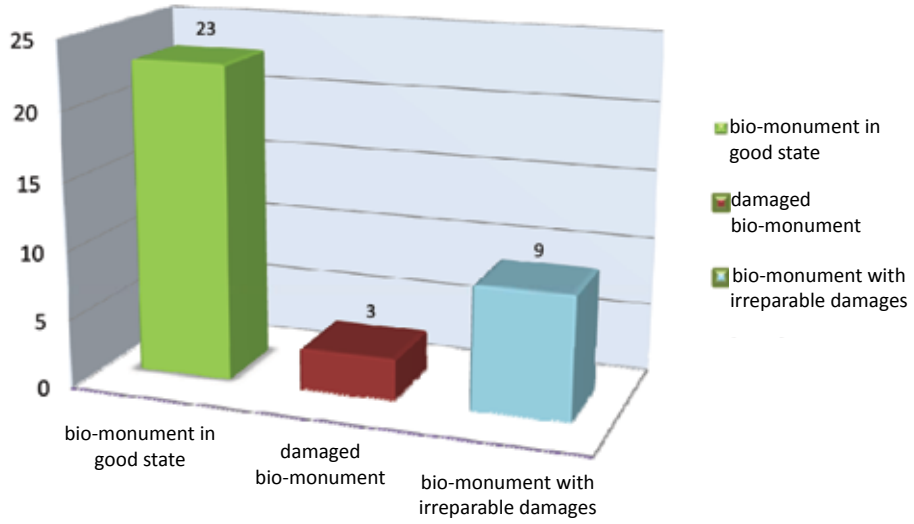


Figure 48. Current state of bio-monuments

14 LNP 2006/22, article 24.2 , d) nature monument with botanic character (rare exemplars of plant species)

Table 4. Current state of bio-monuments

Nr.	Bio-monuments in good state	Nr.	Damaged bio-monuments	Nr.	Bio-monuments with irreparable damages
1	Oriental plane (Platanus orientalis) in Marash	24	Plepit Tree(Populus tremula) in Bajqinë,	27	Balkan oak tree in Nerodime e Epërme
2	Trungu i Qarrit (Quercus cerris) në Dobratin	25	Oak tree (Quercus sp) in Dumnicë e Ulët	28	Lime tree in Lukinaj
3	Oak tree (Quercus cerris) in Pollatë	26	Oak tree (Quercus cerris) in Zllakuqan	29	Elm tree (Ulmus minor Miller) in Qabiç
4	Oak trees in Llazicë			30	Oak tree in Potërq
5	Mulberry tree (Morus sp.) in Pejë			31	Aspen tree(Populus tremula) in Orllan
6	Lime Tree (Tilia argentea) in Isniq			32	Lime tree(Tilia argentea) in Strellc
7	Six oak trees (Likoshan)			33	Oak tree in Bërkovë
8	Oak trees (Terstenik)			34	Bungut tree in Lubovec
9	Oak tree (Likoshan)			35	Complex of trees in Ramjanë
10	Pubescent oak tree (Quercus pubercens ëilld.) Aqarevë				
11	Oak trees (Quercus sp.) Polac				
12	Oak tree (Quercus sp.) in Likovc				
13	Oak tree (Quercus sp.) in Prellovc				
14	Complex of oak trees i (Quercus sp.) Rrezallë				
15	Complex Pubescent oak of trees (Quercus pubescens Ëilld.) Klladernicë				
16	Oak tree (Quercus cerris L.) Kotorr				
17	Oak tree (Quercus cerris L.) Padalishtë				
18	Pubescnet oak tree (Quercus pubescens ëilld.) Çitak				

19	Oak tree (Quercus cerris L.) Runik				
20	Lime trees (Tilia argentea) në lsniq				
21	Complex of Common oak trees (Negroc)				
22	Shpardhit tree (Negroc)				
23	Oak tree (Krajkovë)				

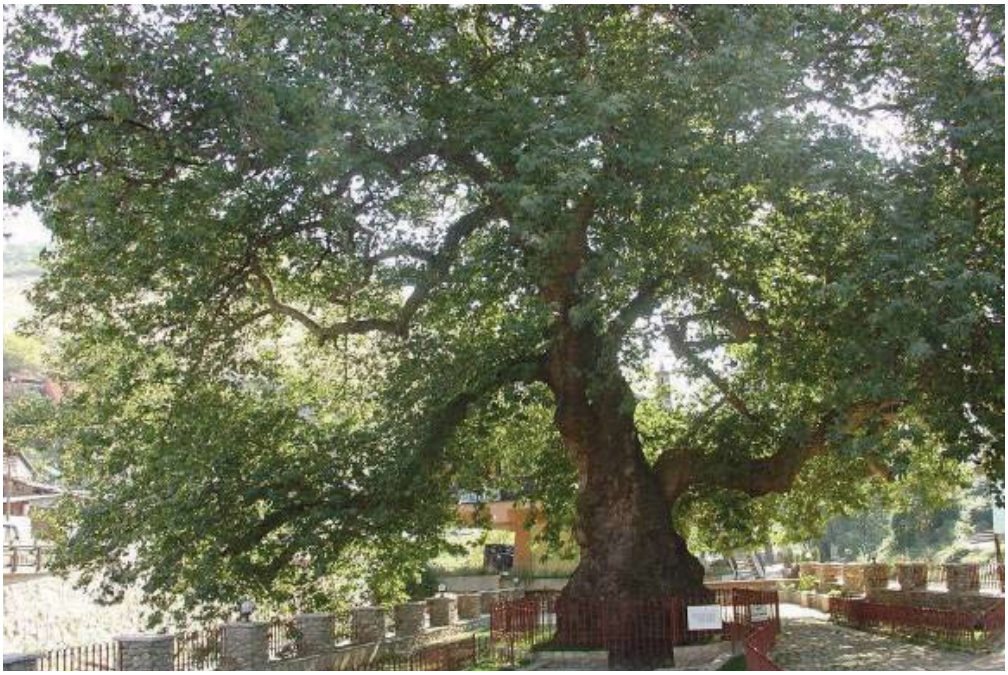


Figure 49. Oriental plane tree (*Platanus orientalis*) in Marash, botanic monument



Figure 50. Complex of six trees in Likoshan, nature monument with historical values



Figure 51. Aspen tree (populus tremula) in Bajqine, damaged bio-monument

2.4. REGIONAL PARKS

Among protected areas in Kosovo, Regional Parks cover the surface about 1. 681 ha. There are two regional parks in Kosovo, Mirusha park with 555. 80.70 ha and Gërmia park with 1126 ha.

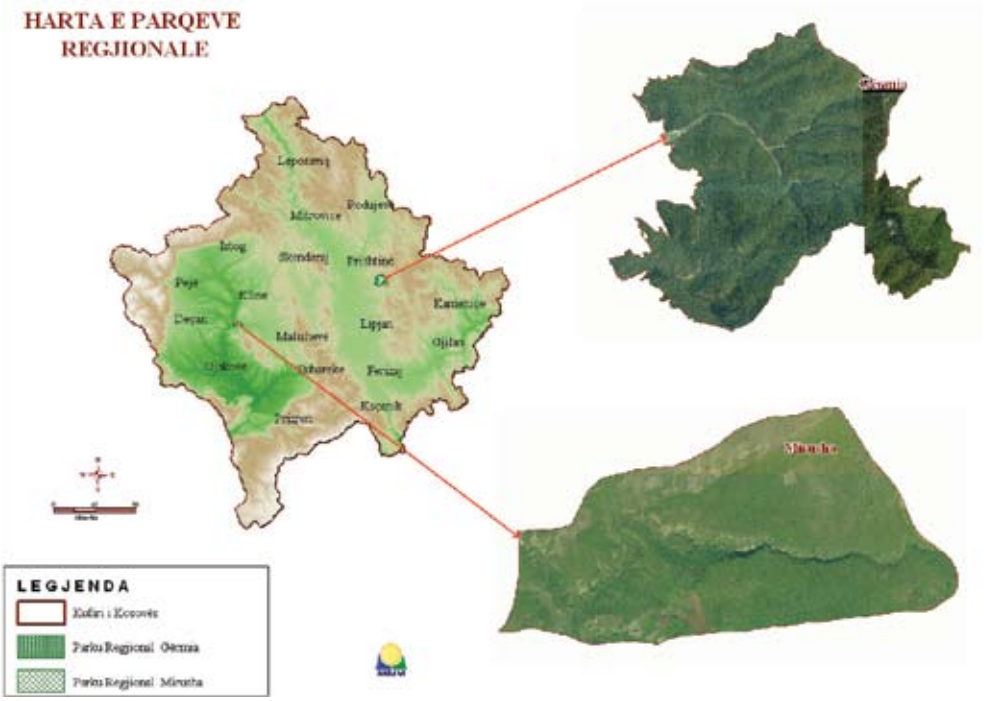


Figure 52. Map of regional parks

Mirusha

The canyon of Mirusha is one of most interesting nature areas in Kosovo. The downstream of Mirusha Rivers passes through a gorge which is known as Canoyn of Mirusha River. In this part of the canyon are located 16 exciting waterfalls with lakes that make the most attractive part of the canyon.
The nature Park of Mirusha is located in both sides of Mirusha River, from the beginning of canyon up to the discharge in the Drini i Bardhe River. The surface of protected area is 555.80.70 ha, and it belongs to three municipalities: Klinë[15], Malishevë and Rahovec[16].

15 GZK Nr. 3/76 and 41/81 24 May 1982.
16 GZK Nr.21/76 date 15 February 1983



Figure 53. Waterfalls in Mirusha

Flora, vegetation and fauna- The area is quite rich with species and associations. The largest part of the area is covered by the association of bungut (Ass. Querrcetum farnetto - cerris scardicum Krasniqi 1968), which is one of most spread association sin Kosovo. In the territory of Mirusha Park are identified 330 species of vascular flora, without taking into account species of Mosses and tallophyta. From Tallophyta are identified 44 species of high fungus (macromycete) where in the wide area of Mirusha are identified 838 taxones, represented with 590 species of vascular flora. A specific of the Mirusha territory flora, is the presence of 14 plant associations, and 5 of them are to endemic character, whilst the total number of endemic species is 21. Among them the specie Aristolochia merxmuelleri, which is a steno-endemic specie and so far it is not found elsewhere in the world, except in Mirusha.

Fauna – In Mirusha area are identified following animal species: boar (*Sus scrofa*), badger (*Meles meles*), rabbit (*Lepus europaeus*), squirrel (*Scirius vulgaris)*, wolf

(*Canis lupus*), wild cat (*Felis silvestris*), (*Martes Martes*), maus (*Ondatra zibethica*), mountainous mous (*Apodemus flaviocollis*), hedgehog (*Erinaceus concolor L*.), terrestrial turtle (*Testudo sp*.). rocky poisonous snake *(Vipera amodytes)*. etc. In the Mirusha river also exists good condition for amphibian and fish species.

Constructions and intervention in Mirusha river embankment as well as other vegetation damages that affect directly the biodiversity are most evident in the area. Lack of a management body for the Mirusha park is also one of the problems for area management.

In the entrancy of the area, next to the road which sends to the waterfalls, two installations are constructed. Construction of these installations has direct impact to the Mirusha river flow. In the right side of the river are evident interventions that caused damages to the association (**ass. Salicetum albae**). In this association are present species: *Salix alba, Fraxinus angustifola, Populus nigra., Cornus mas, Acer campestre* and *Carpinus betulus*. Most of abovementioned trees are in very bad conditions due to the beton and other concrete materials put next to them. Also from the surface layer erode of grassland areas, is totally damaged the association: *Salvio-Scorzoreneretum villosae*.



Figure 54. Construction in Mirusha area



Figure 55. Intervention in Mirusha river embankment

NATURE PARK "GËRMIA"

It is located in north-east of Kosovo (Prishtina) and it covers an area of 62 km^2. The border of Germia passes starting from the "Hill of Vineyard" in the west, continues through "Mirdita's Hill) up to the mining in Ajvalia and to the Graçanica River. The southern border passes along the Graçanica River up to the place where the Busia River is adjoining, continues to the villages Mramor and Butos up to the Prishtina River which represents the northern border of this mountainous massive. The highest peak of Germia is the "Peak of Butos" with the altitude 1050 m asl.



Figure 56. Vegetation in Gërmia

The Geomorphology of the are a is structured by hills with different altitude, which are divided by valleys, beck and rivers. In this area is distinguished the Vellusha River Valley, which's spring is in western side of Butosi hill and which represents the most characteristic area of Mirusha with altitude above 1000 m and valley length 8 km. This area is located between the Prishtina River in the north and Badoc River in the south, thus representing the hydrologic node of Rivers: Prishtina, Badoc and Velloshe.

Otherwise in Germia exists other small water resources which during the summer time get dry. Recently the water of these springs is linked in a network which ends up in Germia swimming pool.

Flora, vegetation and Fauna of Gërmia

Based on geographical position, geological features, and climate conditions the mountainous massive of Germia is quite rich in regard to flora, vegetation and fauna.

In researches made so far, 610 species of vascular flora are evidenced. These species are grouped into 83 families, 83 fungi species, 5 endemic species and 12 medical plants.

The Forestry vegetation of Germia is consisted by 4 forest associations: the association of *Hungarian oak and Turkish oak (prej 600- 700 m)*, a*ssociation oak and hornbeam (800 m*), *association of oak (820- 870 m) and beech (1000 m).*

The complexity of germia natural biotopes provides good conditions for a wide number of animal species. According to the researches made so far, in Germia area are identified: 5 amphibians specie, 7 reptile species, 19 mammal species of and 30 bird species. Also a huge number of insects is identified in area. Unfortunately, the recent reports from the Germia are alarming for the disappearing of many species.



Figure 57. Recreational area in Gërmia Park

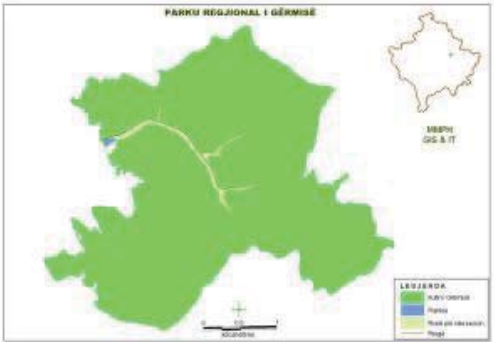


Figure 58. Map of Gërmia Park



Figure 59. Swimming pool in Germia

In 1966 [17] it is decided that one part of Germia mountainous massive to be declared as "Forest for Picnic". IN 1987 [18], The municipal Assembly of Prishtina, decided to take Germia under protection as a "Regional Nature park of Germia. By this decision is protected the area which covers the surface of *1.126.01.00 ha*. *R*egarding to this decision The Park is managed by the *"Hortikultura*", whilst professional monitoring is made by Kosovo Institute for Nature Protection.

General state :

- During 2007, in some localities of "Germia", (next to antennas Germia II, Restaurant Freskia, area Germia I) are caused fires which covered an area of 12 ha. In the locality "to the pines" – Germia II, the fire covered an area of 10 ha. The area covered by fire is afforested by white pine, and also in the area are spread species like: Juniperus comunis and Juniperus oxidentalis. All this area is covered by different herbal species. From the fire are caused damages that impacted (disturbed) the habitats of fauna species and species migration is evident.
- Also due to the forest exploitation are appeared soil erosion and decrease of water flows. Because the Germia represents an important and interesting flora, fauna, tourist and recreational area, it is necessary to undertake proper measures in order to prevent further degradation.
- The protocol and administrative center of Kosovo Assembly is constructed (2005) as well as other construction took place in the area
- The forests are damaged by insects (Blastofagus sp.);
- Garbage are thrown away in inadequate areas
- Damaged trees are evidenced in the areas bombed by NATO during the war time.

17 "GZK" nr. 32/66
18 "GZK" nr. 43/87.

- Mined areas;
- Zoning and information signs. etc.



Figure 60. Forest damaged by the fire



Figure 61. Construction in Germia Park
Figure 62.



Construction of administrative and protocol center

3. AREAS PROPOSED FOR PROTECTION

During the period 2002-2006, the Kosovo Institute for Nature Protection has recognized and evidenced the new nature values in 16 Kosovo municipalities (Gjakovë, Skenderaj, Drenas, Burim, Rahovec, Kastriot, Vushtrri, Gjilan, Malishevë, Mitrovicë, Klinë, Podujevë, Fushë Kosovë, Therandë, Lipjan dhe Viti). During this process about 200 new areas are proposed to be taken under law protection. The proposed areas are to different categories and with botanic, hydrologic and geo-morphologic character.

In 2003 is developed the initiative to put the Bjeshket e Nemuna Mountains under the law protection. The KINP in cooperation with Prishtina University and other institutions has prepared the feasibility study. The declaration of Bjeshket e Nemuna a National Park, with the surface about 60 000 ha, is expecting the approval by the Kosovo Assembly. Since the Bjeshket e Nemuna will be declared a National Park, the total protected are will represent 10% of total Kosovo territory.

From the total number of proposed areas, during the period 2006-2007, 24 of them are proceeded ant approved to be protected (11 in the territory of Drenas Municipality and 13 in the territory of Skenderaj Municipality).

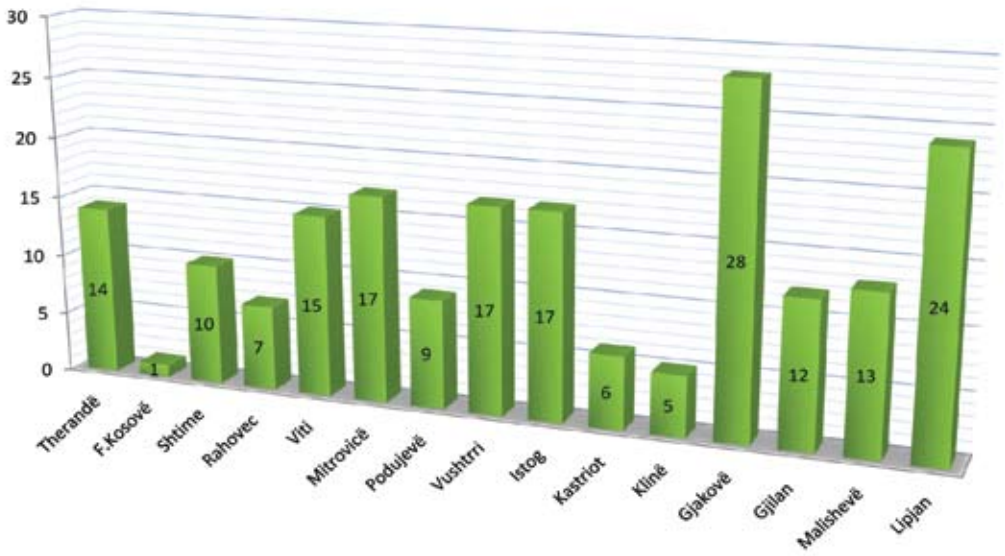


Figure 63. Number of areas proposed for protection according to the municipalities

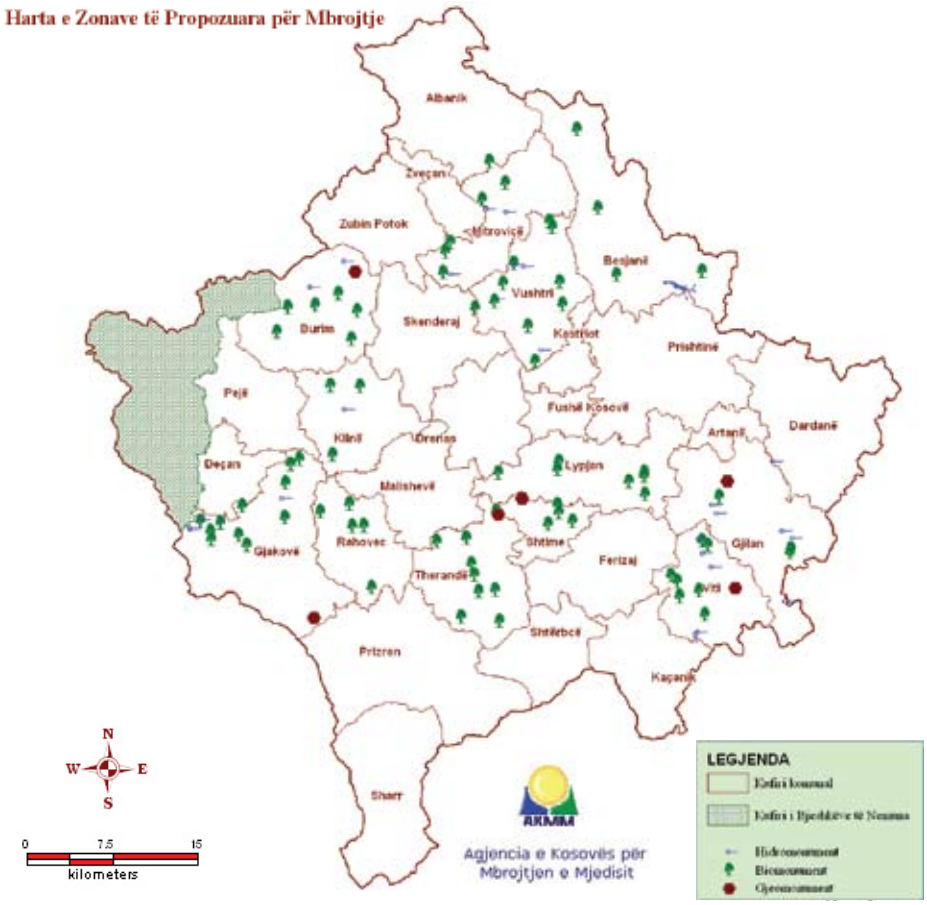


Figure 64. Map of areas proposed for protection

BJESHKËT E NEMUNA

According to the geological, geo-morphological, flora and fauna values the "Bjeshkët e Nemuna" represents the most important mountainous massive in Balkans peninsula. The wildlife (flora and fauna) is very rich in species and with high biodiversity values.

Flora, vegetation and Fauna

Due to characteristic geographical position, geological structure and hydrological values the area is distinguished by a very interesting biological and landscape diversity. It offers good conditions for protecting (conserving) important species and their habitats.

According to the researches and studies, in the territory of Bjeshket e Nemuna are identified about 1500 plant species. Most of them are relict species as: *Acer heildreichii, Asyneuma trichocalicinum, Campanula lingulata, Cardamine glauca, Castane sativa, Cotinus coggigria, Edrianthus graminifolius, Edrianthus tenuis* etc. 19 protected species as: *Pinus peuce, Pinus mugho, Pinus heildreichi, Taxus baccata, Alnus viridis, Quercus trojana, Spirea canea, Acer heildreichii, Acer intermedium, Daphne laureola, Forsythia europea, Gentiana lutea, Wulfenia carinthiaca, Ramonda serbica, Succisa pratensis, Leontopodium alpinum, Lilium martagon, Dactylorhiza cordigera* and *Dactylorhiza majalis*. Among endemic and other species, 4 of them are listed in European Red List: *Viola elegantula, Sempervivum macedonicum, Ramonda serbica, Narthecium scardicum*.
According to the researches the Fauna of "Bjeshkët e Nemuna" is consisted among others by :8 fish species, 13 amphibian species, 10 reptile species, 148 bird species, 36 mammal species (*with out counting here bats*), 129 butterfly species of the order Lepidoptera.

Initiative for Declaring the "Bjeshkët Nemuna" a National Park

The Iniciative for Declaring the "Bjeshket e Nemuna" a national park, is started since 1970 by the Ent for Culture Monuments Protection. It is continued in 1985 by the Ent for Nature Protection. According to the initiative, the National Park "Bjeshket e Nemuna" would include parts of territories of Peja and Decan municipalities. The Decan municipality disagreed with the proposal, therefore only part of Peja municipality to be declared a protected area and a feasibility study on declaring the "Bjeshket e Nemuna" –Peja territory a National Park, is prepared.
In 2002, the KINP reinitiated the process for declaring the "Bjeshket e Nemuna" a National Park. According to this initiative it is planned the National park to include territories of: Peja, Istog, Decan and Gjakova municipalities. In 2003, the study for declaring the "Bjeshket e Nemuna" a National Park is prepared and also the project law for "Bjeshket e Nemuna" is drafted.
The initiative is supported by Kosovo Government and Kosovo Assembly. Also the respective municipalities gave positive consent to this initiative.

The state of "Bjeshkë e Nemuna"

One of major problems in the territory of "Bjeshkët eNemuna", is the wood cutting. Actually, the Kosovo Forestry Agency is managing with the forest in "Bjeshket e Nemuna". The illegal wood cutting is taking place almost in all municipalities that have access to "Bjeshket e Nemuna" (Gjakovë, Deçan, Pejë and Istog).
Uncontrolled cutting of forests have irreparable effects that except wood losing, directly affect the ecosystem balance, disturbing animal species, landscape damages, erosion etc.

Another actual problem is illegal construction of buildings, mostly hotels and restaurants. Due to the lack of urban, spatial and development plans of the area the constructions are developed without respecting any standard or criteria. The construction activities included erosion, landscape damage, and biodiversity loss. Constructions are concentrated in the areas with high tourist potential as Rugova Canyon, Boge, Leqinat etc



Figure 65. Complex of houses in Leqinat



Figure 66. Forest cutting in Junik Mountains



Figure 67. Forest cutting in Rugova Canyon



Figure 68. Erosion as a result of tree cutting

Cave "Gryka e Madhe" in Rugova Canyon

The cave "Gryka e Madhe" is located in the 8th kilometer of Rugova Canyon, in the left side, about 60 m above the LumëBardhi I pejes River, in the altitude 637 m.
Researches in this cave have started since 1993, by some Slovak speleologists, who randomly were traveling to Macedonia through Rugova canyon, even though this cave was known for local inhabitants since long time ago. The researches in the cave continued in the period 1966 – 2007, with a break time 1998 – 2001.
During the last expedition research it is identified that corridors are to oval profile, homogenous and to different dimensions, which have the character of a continuously underground canyon with high walls. The highest levels of the cave do not have sediments, but they are riffraff of the sand, whilst the lower levels are characteristic for large and circle shape rocks. Five levels are researched so far in the cave. The first is river level, which is quite active. This level is high up to 66m starting from the entrance. It has a dynamic escalation and in some places to dangerous. Through some small channels in the tube shapes, from this level can be passed to the river. In this area is identified sediment or riffraff of different colors.
Due to the terrain configuration and the high risk to enter inside, the cave is saved by the anthropologic impact and it is in good state. Recently are taking place researches from different teams of experts by Slovakia, Bulgaria, the NGO "Aragoniti" and KEPA



Figure 69. The entrance of the cave "Gryka e Madhe"



Figure 70. Crystals in the cave Gryka e Madhe



Figure 71. Gallery in the cave Gryka e Madhe

Table 5. List of areas proposed for protection 2002-2007

Nr.	Emërtimi i zonës	Komuna
1	Gurbadhë – Turkish oak tree	Malishevë
2	Burim - Ash tree	Malishevë
3	Turjak - Turkish oak tree	Malishevë
4	Panorc – "Shpella e Flladit" cave	Malishevë
5	Drenovc -Trees	Malishevë
6	Drenovc – Bozhuri Cave	Malishevë
7	Bubavec - Mali i Vakafit - tree	Malishevë
8	Vermicë - Lagj.e Limanajev	Malishevë
9	Balinc - Mali i Vakafit - tree	Malishevë
10	Marali - Guri i Maralis - rock	Malishevë
11	Marali - Turkish oak tree	Malishevë
12	Pagarush - Turkish oak tree	Malishevë
13	Gurisht – water spring	Malishevë
14	Pidiq – thermal-mineral water spring	Gjilan
15	Nasalë – mineral water spring	Gjilan
16	Gumnishtë - mineral water spring	Gjilan
17	Llashticë - Turkish oak tree	Gjilan
18	Lipovicë – Pear tree	Gjilan
19	Buricë - Oak trees	Gjilan
20	Uglarë – thermal water spring	Gjilan
21	Lovcë -Trungu i Bungut	Gjilan
22	Lugina e Llapushing river valley	Gjilan
23	Kmetovc - thermal-mineral water spring	Gjilan
24	Brisallc - Cave	Gjilan
25	Perplenic – Perplnica lake	Gjilan
26	Parku Regjional " Pashtriku "	Gjakovë
27	Park Pyjor " Maja e Gllavës"	Gjakovë
28	Complex of black pine Shkukëz	Gjakovë
29	Herreq - Turkish oak tree	Gjakovë
30	Stubullë - Lime tree	Gjakovë
31	Berijah - Lime trees	Gjakovë
32	Dobrosh - Oak tree	Gjakovë
33	Rracaj – lime and Turkish oak trees	Gjakovë
34	Vogovë – Turkish oak tree	Gjakovë
35	Mulliq – water spring	Gjakovë
36	" Gurra e Demjanit"	Gjakovë
37	Kusar – water spring	Gjakovë
38	Potok – water spring	Gjakovë
39	Shpella e Qiriut - cave	Gjakovë
40	Shpella e Kusarit- cave	Gjakovë
41	The association of Tamarisk	Gjakovë
42	Locations of Macedonian oak and Yams	Gjakovë

43	Location of lule Bozhures inPashtrik	Gjakovë
44	Common yew tree	Gjakovë
45	Association of Forsythia and chestnut	Gjakovë
46	Shqiponjë - Zabeli i Gojanit -forest	Gjakovë
47	Greqinë - Turkish oak tree	Gjakovë
48	Molliq – oak trees	Gjakovë
49	Madanaj - Turkish oak tree	Gjakovë
50	Bec – Oak tree	Gjakovë
51	Zhabel - oak trees	Gjakovë
52	Gergoc - oak trees	Gjakovë
53	Potok (2) – water spring	Gjakovë
54	Ujmirë - Oak tree	Klinë
55	Deiq - Oak tree	Klinë
56	Nagllavk – Turkish oak tree	Klinë
57	Gllarevë - Oak tree	Klinë
58	Dresnik - Banja e Dresnikut –water spring	Klinë
59	Sibovc - Oak tree	Kastriot
60	Sibovc - Lime tree	Kastriot
61	Mazgit - Trungu i Manit -tree	Kastriot
62	Grabovc - mineral water spring	Kastriot
63	Grabovc – oak trees complex	Kastriot
64	Breznicë - complex of water springs	Kastriot
65	Cerrcë – Mulberry trees	Istog
66	Lubozhdë – Lime tree	Istog
67	Vrellë – water spring	Istog
68	Istog i Poshtëm – Lime tree	Istog
69	Shushicë e Epërme - Lime tree	Istog
70	Istog – water spring	Istog
71	Zhakovë - Oak tree	Istog
72	Uçë - oak tree	Istog
73	Cërkolez – complex of oak trees	Istog
74	Kaliqan - Lime tree	Istog
75	Baicë –Lime tree	Istog
76	Banjë – Thermal-mineral water spring	Istog
77	Lubovë - Lime tree	Istog
78	Zallq -Oak tree	Istog
79	Zabllaq - oak tree	Istog
80	Turbuhovc - Oak tree	Istog
81	Saradran - Oak tree	Istog
82	Gjelbishtë – mineral water spring	Vushtrri
83	Bajë - Oak tree	Vushtrri
84	Bajë – thermal water spring	Vushtrri
85	Bajë – thermal water spring (Q. e zotnisë) 2	Vushtrri
86	Karaqë - water spring	Vushtrri

87	Skromë – water spring	Vushtrri
88	Koderflamur – beech trees complex	Vushtrri
89	Shtruerë – oak tree	Vushtrri
90	Ashlan – oak tree	Vushtrri
91	Cecel – oak tree	Vushtrri
92	Lumkuq - Parku i Ketrit (nature park)	Vushtrri
93	Krasniqe e mesme – Turkish oak tree	Vushtrri
94	Galic – complex of oak trees	Vushtrri
95	Brusnik - oak tree	Vushtrri
96	Rreznik – oak trees	Vushtrri
97	Druar – oak trees	Vushtrri
98	Trimor – oak tree	Vushtrri
99	Lugina dhe qafa e Kaqanollit - river valley	Podujevë
100	Popovë - "Ushton Reka"- river phenomena	Podujevë
101	Orllan – Batllava lake	Podujevë
102	Dobratin – water spring and oak trees	Podujevë
103	Murgullë – Aspen tree	Podujevë
104	Llapashtic e Epërme - Trungjet e Dushkut (varreza)	Podujevë
105	Dyz – oak tree	Podujevë
106	Orllan -Aspen tree	Podujevë
107	Gërdoc - Aspen tree	Podujevë
108	Braboniq – mineral water spring	Mitrovicë
109	Mazhiq – mineral water spring	Mitrovicë
110	Braboniq – Turkish oak tree	Mitrovicë
111	Zasellë – Chestnut tree	Mitrovicë
112	Zabergjë -Oak tree	Mitrovicë
113	Vllahi – Oak tree	Mitrovicë
114	Bare – beech trees	Mitrovicë
115	Rahovë - Kroni i Akullit - water spring	Mitrovicë
116	Vidimiriq - Vojsës tree	Mitrovicë
117	Rahovë – Chestnut tree	Mitrovicë
118	Lugu i Bares – water spring	Mitrovicë
119	Melinicë - Ujëvara e Trepqalive - waterfall	Mitrovicë
120	Vinarc i Epërm – Maple tree	Mitrovicë
121	Ovqar – beech tree and water spring	Mitrovicë
122	Bistric e Shalës – Aspen tree	Albanik
123	Boletin – Chestnut tree	Zveçan
124	Kelmend - Guri i Gjatë dhe Guri i Mprehtë (rocks)	Zveçan
125	Viti – oak tree	Viti
126	Kllokot – thermal water spring	Viti
127	Zhiti – oak tree	Viti
128	Ballanc – complex of trees	Viti
129	Zhiti - Burimi i Ujit Mineral	Viti
130	Binq – oak trees complex	Viti

131	Samakov – water spring	Viti
132	Samakov – hydrologic monument	Viti
133	Debeldeh – nature landscape	Viti
134	Gërmovë – Turkish oak tree	Viti
135	Sllatin e Epërme - landscape	Viti
136	Sllatin e poshtme – trees complex	Viti
137	Vërnekolle - Reka e Vernezit	Viti
138	Ballanc - Burimi i Ujit Mineral - river	Viti
139	Gjylekar - Guri i Blinave - rock	Viti
140	Breshanc – oak trees	Therandë
141	Savrovë – complex of oak trees	Therandë
142	Delloc – pine tree (Pinus sp.)	Therandë
143	Grikoc – oak trees (Quercus sp.)	Therandë
144	Reçan - Aspen tree(Populus sp.)	Therandë
145	Muhlan - oak trees complex	Therandë
146	Biraqë - Lokaliteti i Bujgerit - landscape	Therandë
147	Reçan – water spring	Therandë
148	Papaz – trees complex	Therandë
149	Budakovë - whitebeam Tree	Therandë
150	Luzhnicë – complec of trees	Therandë
151	Bllacë - Oak trees	Therandë
152	Bllacë - Oak trees	Therandë
153	Vraniq - Turkish oak tree	Therandë
154	Nagavc - Turkish oak tree	Rahovec
155	Drenovc – oak trees	Rahovec
156	Vranjak – Elm tree	Rahovec
157	Koznik – Turkish oak trees	Rahovec
158	Dabidol – Turkish oak trees	Rahovec
159	Potoqan i ulët – Turkish oak trees	Rahovec
160	Brestuvc - oak tree (Lisi i Bajraktarit)	Rahovec
161	Petrovë - Vrella e Zezë – water spring	Shtime
162	Devetak – Turkish oak trees	Shtime
163	Mollopolc – Turkish oak trees	Shtime
164	Godanc i Epërm - oak tree	Shtime
165	Godanc i Poshtëm – Turkish oak tree (Taravillaz)	Shtime
166	Rashinc – Turkish oak tree	Shtime
167	Karaqic – complex of trees	Shtime
168	Karaqic - Guri i Xhamisë - rock	Shtime
169	Pjetreshticë - cave	Shtime
170	Shtime – complex of pines	Shtime
171	Sllovi - Turkish oak tree	Lipjan
172	Sllovi – complex of trees	Lipjan
173	Smallush – three Turkish oak trees -	Lipjan
174	Smallush –Turkish oak trees	Lipjan

175	Bregu I Zi – Turkish oak forest	Lipjan
176	Poturovc –Turkish oak tree	Lipjan
177	Dobëraj e Madhe - oak tree	Lipjan
178	Baicë – water spring	Lipjan
179	Baicë – Turkish oak tree next to the school	Lipjan
180	Baicë – Turkish oak trees	Lipjan
181	Baicë – therma water spring	Lipjan
182	Krojmir - Guri te Kroi - rock	Lipjan
183	Shalë- Guri i Shpuar - rock	Lipjan
184	Shalë – Turkish oak tree	Lipjan
185	Vrellë – water spring	Lipjan
186	Vershec - oak trees	Lipjan
187	Kompleksi i Blinajës - forest	Lipjan
188	Qylagë - oak tree (to the school)	Lipjan
189	Torinë – oak forest	Lipjan
190	Bregu i Zi - oak tree	Lipjan
191	Bujanë - oak tree	Lipjan
192	Gadime –Marble cave	Lipjan
193	Gadime - Pylli në Kodrën mbi Xhami - forest	Lipjan
194	Gadime e Epërme – oak tree	Lipjan
195	Golesh - habitat of Fotsythia europea	Fushë Kosovë



Figure 72. Batllava Lake proposed for Protection



Figure 73. Complex of trees proposed for protection in Sllatinë of Vitia



Figure 74. Cave in Ponorc, nature monument proposed for protection



Figure 75. Thermal-mineral water spring in “Banja e Istogut”, proposed for protection



Figure 76. The Valley of Llapushnik River, Gjilan



Figure 77. The valley of Selac River Shalë e Bajgorës, proposed area for protection



Figure 78. “Kroi i akullit” – water spring, Shalë e Bajgores, proposed for protection

4. Management of protected areas

The aim of protected areas management is:

- Scientific researches;
- Conservation of wild species, habitats and ecosystems
- Conservation of genetic diversity and species biodiversity
- improving environmental state;
- conservation of specific nature and cultural values
- tourism and recreation
- education, public awareness and acces to the information
- sustainable use of natural resources
- conservation of cultural and heritage values

The status of nature protected areas is defined with bylaws in accordance with laws which established the category of protection and management guidelines. For each protected are is ascertained the level of protection.[19]
The decision on declaring a protected area establishes the goals of management and specific measures and techniques for protecting the values of the area. After the decision for protection is developed the management plan which is produced by the management body of the area and approved by the Ministry[20] .

Managementif National park "Mali Sharr" I smade by the Park Directorate, which has the headquarters in Prizren. The regional park of Nature "Germia" is managed by public enterprise "Horticultura". The "Marble Cave" in Gadime is managed by a body who is not under the responsibility of the Government, whilst nature reserves "*Maja e Ropsit", "Gubavci", "Gazimestani"," Kozhnjeri","Malet e Prilepit"," Bifurcation in Nerodime River","Kamilja", as well as regional park of Nature "Mirusha" have not management bodies. Other nature monuments are managed by respective local authorities*

The harmonization of protected areas categories with the law on nature protection is not done yet, therefore we often meet different of area's names. The central register of protected areas is in the process to be completed and mean time the areas that are devaluated will be removed from the register.

The nature values of protected areas often are threatened by different factors as settlements, mountainous tourism development, wood cutting, quarries etc. the improper use of nature resources is attacking the ecosystems and biodiversity,

19 Article 30 LNP
20 Article 36

and under the impact of such developments unfortunately are as well as: National Park “Mali Sharr”, Regional park of nature “Mirusha”, Cave in Gadime, Germnia park etc.

Table 6. Interventions in protected areas

Protected area	intervention
Gërmia / Regional Park of Nature / GZK. Nr.43/87	Construction of protocol administrative center
Canyon of Drini i Bardhë River next to the Fshajt’s bridge/ Nature monument/ Nr. 352-13 / 9.04.1986 Rahovec	Hotelier object constructed
Kanioni i Drinit të Bardhë te Ura e Fshajtë/ Monument i Natyrës/ Nr. 011-10 / 5 mars 1986 Gjakovë	Recreational -sportive center
Mirusha/ Regional Park of Nature / 1982, 1983	Fuel station
Mirusha/ Regional Park of Nature / 1982, 1983	restaurant
Prevalla/ National Park/ GZK Nr.11/86	Tourist village
Rugova Canyon/ Nature Monument/ GZK Nr. 25, 1988.	Water production plant
Kozhnjeri/ Nature reserve/ 1955	Fish farming

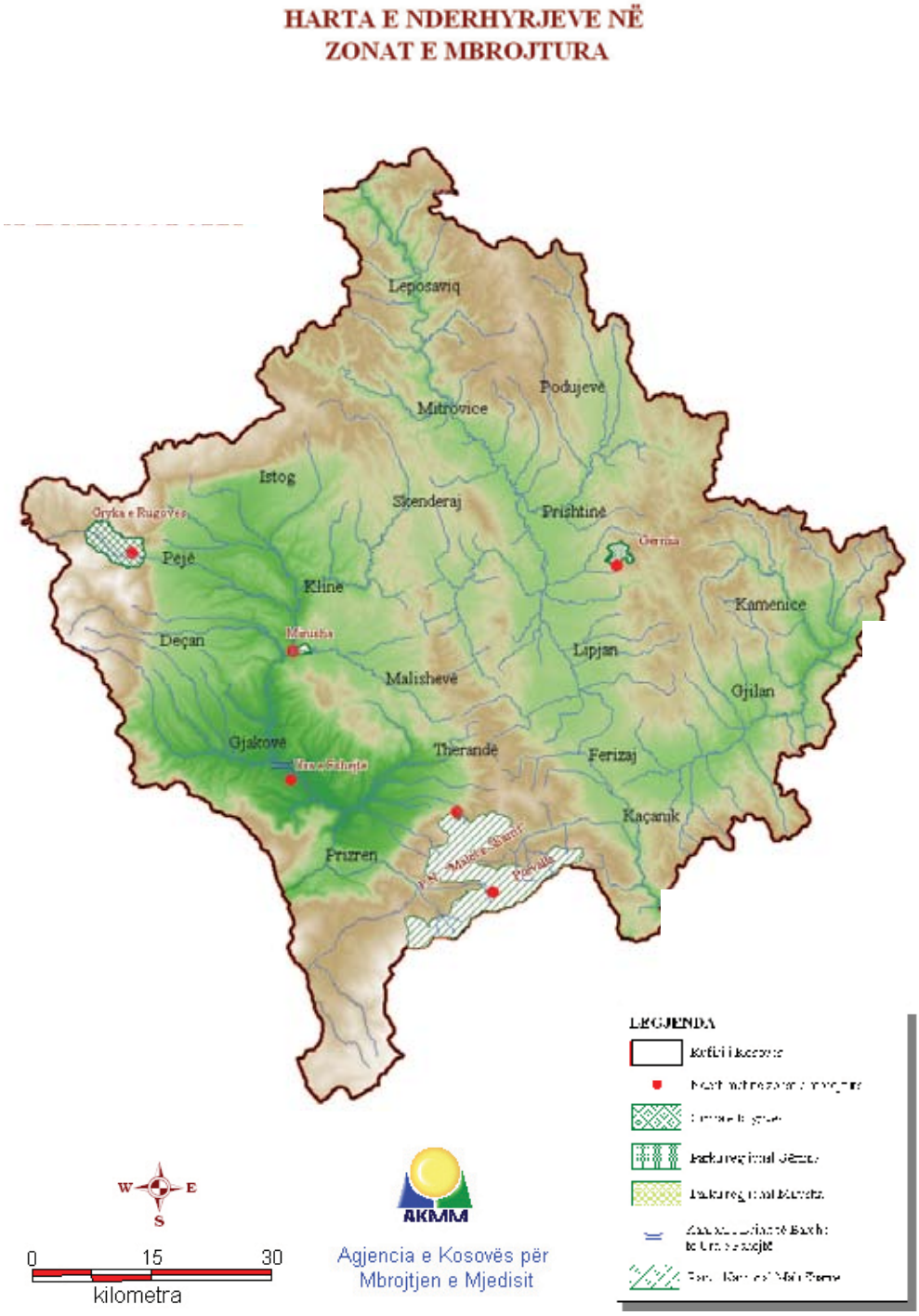


Figure 79. Map of interventions in protected areas

5. IDENTIFICATION OF POTENTIAL AREAS FOR NATURA 2000

"Natura 2000" is an integrated system of protected areas within EU. It includes protected areas according to the directive on habitats (92/ 43/EEC), as well as protected areas according to the directive on birds **79/409/EEC**). The areas of "Natura 2000" represent a joint interest of EU and they are proposed by member states. The habitat directive and bird directive represent an important legal tool for species and their habitat conservation and contributes to meet the principles of biodiversity convention (CBD Rio 1992) for conservation of species diversity and their habitats

The bases for identification of areas for "Natura 2000" network are such like Article 3; Paragraph 1 of the directive 92/43 on habitats conservation. This directive has established the concept of the network "Natura 2000" which should be integrating special protected areas (SPA) as described in habitats directive and special areas of conservation (SAC) as described in bird directive. Also in the network of "Natura 2000" should be included existing protected areas which meet the criteria, KORINE locations, important bird areas (IBA)

Kosovo is not an EU member state and it is not obliged to follow the "Natura 2000". But, the process of EU integration that Kosovo is oriented on, among other criteria and standards, environment and nature protection have an important role. Therefore, being aware that meeting these standards requires a long time, initiating to identify the potential areas for Natura 2000 should be a priority.

The process for identifying the areas potential for Natura 2000 is initiated within the project on "Sustainable Forest Management" which is implemented by "Project Management Group" in consortium with "Green Belt" and Project Management International Services Group SRL" financed by EU. In this process working groups consisted by experts fro Prishtina University, Governmental institutions and NGOs is created.

The project is in the phase of identification of: legal and institutional needs for "Natura 2000"; Important flora and fauna areas; National Network of Protected Areas; Potential biosphere reserves (MAB); World heritage areas UNSECO; Green Belt initiatives; butterfly important areas ; Emerald network; wetlands (Ramsar); Important Bird Areas (IBA); red list of IUCN; endemic and relict species etc.

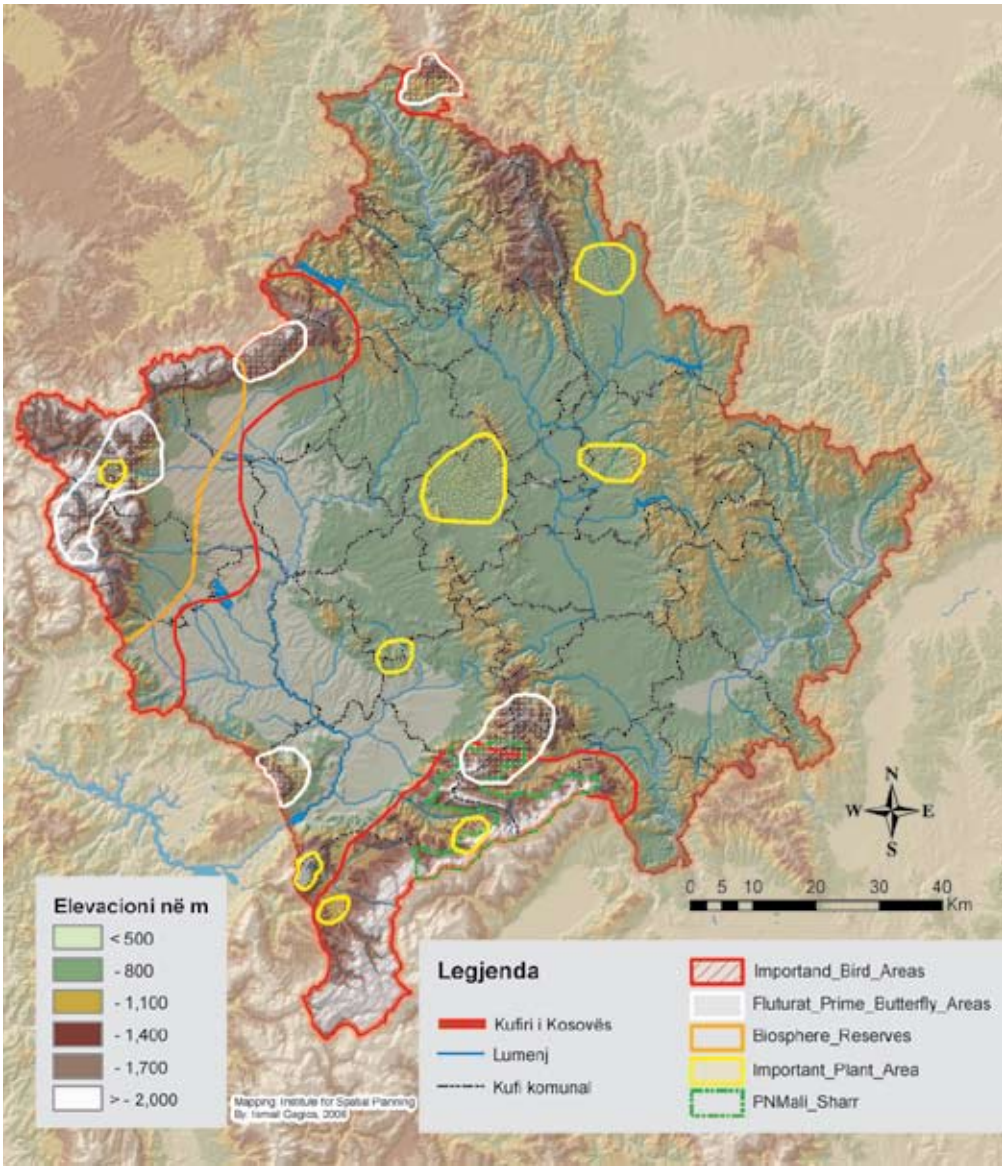


Figure 80. Potential areas for Natura 2000

6. Initiative "Bjeshkët e Nemuna" a cross border protected area, Kosovo-Albania-Montenegro

The trans-boundary protected areas are nature protected areas which include two or more countries, equally protected from the each side of the border. In trans-boundary areas, each side (country) benefits without harming territorial aspects of each other. According to the IUCN, transboundary protected areas (Parks) are defined as "transboundary protected areas, which are formally dedicated to the biological diversity protection, nature and culture heritage values protection and promoting peace and cooperation."

The political (state) borders are often unfair toward nations but also toward ecosystems, flora and fauna. Taking into account the obstacles occurring by political borders, many countries in the world raised the idea to create transboundary protected areas. Recently in the world exists over 600 transboundary protected areas. The first international transboundary park is "Morokulia" wich is located in cross border between Sweden and Norway. Other famous cross border international Parks are: Waterton Glacier (USA/Canada), Parque La Amistad (Costa Rica/Panama), Cordillera del Kondor (Peru/Ecuador), Limpopo (South Africa/ Mozambique) etc.

The initiative for creating the transboundary protected areas in the triangle Albania-Kosovo-Montenegro is raised by civil society and NGOs **"Aquila"Pejë –Kosovo, NGO "Intelektualët e Rinj Shpresë", Shkodër-Albania, NGO "Hali" Rozhajë – Montenegro,** who made first steps and found support from a number of activists from Colgate University (USA) and Bradford University (UK). Among the activities for establishing the BPP (Balkan Peace Park) is the activity for empowering the environmental NGOs from the three sides of the border which created the coalition known as "Coalition for Balkans Peace Park" which is established in the meeting which took place in Rugova (August 2006), supported by the Ministry of Culture Youth and Sports of Kosovo and SOROS. The coalition is consisted by six NGOS from Kosovo, Montenegro and Albania. These NGOs are dedicated to open the debate and to ask for support from all stakeholders, aiming to create a comprehensive action between three countries.
In order to contribute to the development of the initiative for establishing the transboundary protected area, a number of activities are realized so far: workshops, conferences, individual and group study visits, presentations, meetings with national and local authorities from the three countries, exhibitions with motives from the area made in Balkans, USA, Canada, UK etc.

Kosovo national Institutions as MESP, MCYS as well as local Institutions with access to the area, have supported the initiative. Also, International Organizations as

UNEP, REC, IUCN and others showed interest and supported the development of Transboundary protected area.

In order to promote the vision of the project on establishing the transboundary protected area in November 2006 is organized the conference: "Transboundary Park in Balkans: strategic cooperation among civil society, local authorities and International Institutions. The conference aim was to awareness raising, promoting the benefits, to involve important stakeholders and to get support by local communities, donors and other actors in order to push forward the implementation of the transboundary protected area in Bjeshket e Nemuna.

Activities are continued in March 2008 in a workshop held in Shkoder, with all involved actors. The workshop produced the program for integrated development of area proposed for protection.

The area proposed to be a transboundary (International) Park, is characterized with high geological and biological diversity, objects of cultural heritage etc, which are attracting for visitors.
One of the greatest concerns in the area is the depopulation, therefore establishing the transboundary protected area would help local population to develop their welfare and through eco-tourism and other benefits to motivate them to continue living in the area.

Strategic objectives of this project are:

- conservation of nature and culture diversity in the transboundary area in three sides of the border Kosovo-Albania-Montenegro
- To promote peace and development, free movement and perspective in the area
- To help local sustainable development, based in family organized eco-tourism, agriculture, organic production, traditional handicraft productions, human resources development, etc

7. Tourism

Tourism represents one of main development fields for a country. Its development impacts the nature, in particular if sustainable development principles are not respected. The virgin nature values of Kosovo as well as historical and culture monuments diversity in Kosovo, offers good opportunities for tourism development. Tourism resources are identified in almost all parts of Kosovo territory. "Malet e Sharrit" and Bjeshket e Nemuna" (both of them mountainous areas) are the most important tourist areas in Kosovo

According to the existing data, the Kosovo tourism realizes 8 – 10 %of National GDP[21].

After the year 2000, the tourism sector in Kosovo is characterized with spontaneous uncontrolled and intensive development, which affected the environmental balance. Assessing from the tourism point of view, Kosovo belong to the developing countries.

Actually the tourism sector in Kosovo is lacking the tourist offer, which left Kosovo behind other countries. This sector needs to define its position, to grow the incomes and at the same time to save the nature resources. The tourist demands in Kosovo are directly connected with international and local tourists. Data on structure and countries where tourist come are missing. Tourism in Kosovo is regulated with the law on tourism which is approved by Kosovo assembly. A strategy on Tourism development is in process of drawing.

Tourism in Protected Areas

According to the data, tourists in Kosovo prefer mostly mountainous tourism, which is represented by Tourist area of "Bjeshket e Nemuna" and tourist area of "SHarri". Other tourist products in Kosovo, but less preferred are: winter - recreational tourism, culture tourism, adventurous tourism, transit tourism, health tourism and speleological - tourism.[22]

Except "Malet e Sharrit" and "Bjeshkët e Nemuna", other protected areas visited by tourists are: Canyon and waterfall in Mirusha, Rugova Canyon, Spring of Drini I Bardhe Rive, Bifurcation in Nerodime River, Marble Cave in Gadime etc. Protected areas in Kosovo do not have tourist information centers or tourist development plans and or strategies; therefore the number of visitors is rather low.

Tourism in Sharr Mountains (Malet e Sharrit)

The Sharr mountainous massive, offers good conditions for tourism development, and different kind of tourism activities are developed in the area as: mountainous

21 ISP 2004 –Sector report on spatial planning for tourism sector.

22 ISP 2004 - Sector report on spatial planning for tourism sector.

tourism, winter, summer, rural, hunting, fishing. walking, health, alpine and excursion tourism.

The Sharr tourist region, includes the most attractive complex of Kosovo, good skiing terrains, the number shape and length of skiing lanes, represent high tourist values of the area.

Brezovica is the locality of Sharr where the tourism terrain is mostly developed. Also the experts from OSCE, evaluated the Prevalla as the area with highest tourist values in Sharr. Brezovica, disposes with 1112 beds, 690 of them belongs to the "A" and "B" categories, which have access to the skiing lanes, telpher, elevator and other facilitations.[23]

In the past, this tourist center is visited by a huge number of tourists, but nowadays it is visited by tourist only for a day time or weekends



Figure 81. Skiing lanes in Brezovicë

As another locality with high tourist potential is Prevalla. Part of Prevalla belongs to Prizren municipality and it is within Sharr National Park area. Types of tourism activities that develop in Prevalla are: mountainous tourism, health tourism, excursion tourism etc.
Prevalla is a location, frequently visited by local tourists, organized tourist groups and these activities take place during the year time entirely.
The tourist infrastructure is not well developed in Prevalla and everything is improvised and created to be used temporarily (weekend houses, restaurants, motels). The hotelier services are not to a high class services, there is not an organized tourism development, lack of management plans and tourist strategies are evident.

23 MTI (2001) Brief information on Kosovo tourist resources, Prishtinë,



Figure 82. Prevalla in winter season

An emergency need in the area is to take under control the developments and to develop proper urban, tourist and development plans of the area

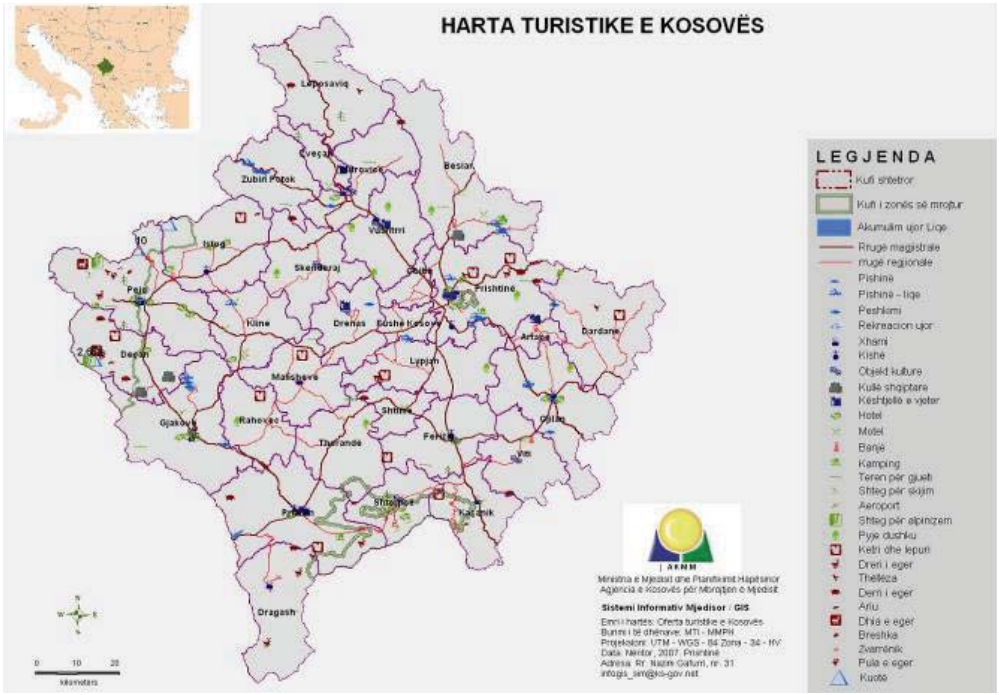


Figure 83. Tourist map of Kosovo.

Tourist region of Bjeshkët e Nemuna

The tourism region of "Bjeshkët e Nemuna" includes 2340 km^2, with 51500 inhabitants where are included municipalities: Peja, Gjakova, Deçan, Burim, Klina, Rahovec and Junik pilot municipality. This region has good connection capacities with other centers in Kosovo; also it has good conditions for development of transboundary tourism with Albania and Montenegro.
The area is characterized with: high snowfalls, good skiing terrains, many high peaks (Gjeravica 2656 m), water flaws, high forest, rich fauna, and exciting landscapes, thus offering good conditions for sustainable tourism development.

The tourism region of "Bjeshkët e Nemuna", represents a capital area of nature heritage for tourism development. Based on characteristic nature specifics, geographical and biological diversity, water resources and landscapes the Albanian Alps represents the most unique area in Balkans.
Studies made by OECD, show that in this tourist region may be built 10 centers for development of winter-sportive tourism.

Table 7. Main centers for development of winter-sportive tourism in Bjeshkët e Nemuna 24

Main centers	Nr. Skiers	Total capacity of centers
Maja e Rusolisë	19.250	40.000
Maja e Kurvalës	11.250	22.000
Bjeshkët e Belegut	7.550	15.000
Koprivniku	6.620	11.000
Rrasa Zogut	5.150	10.000
Starzc	4.150	8.000
Maja e Strellcit	3.855	7.000
Hala	3.780	7.000
Maja e Leqinatit	2.760	5.000
Maja e Moknës	2.030	4.000
Gjithsej	**65.393**	**129.000**

This region is quite rich with monuments of culture heritage and represents a rich f ethnic-culture treasure of different ages. These monuments are featured with a diversity of types, qualities, values and historical events.

The tourist region of "Bjeshkët e Nemuna" is risch with lakes, which enriches the tourist offer. The most famous lakes are: Radoniqi, Mokna, in Rugovë Leqinati lake, Large lake, small lake in Gjeravica mountain etc.
Among the rare tourist potential of this region are caves as caves in: Radavc,

24 MTI, Department of Tourism, Tourist region of Bjeshkët e Nemuna, 2007

Rugova, Zatriq etc. Thermal water springs in the region are in: Istog, Studenicë, Deçan etc.

Geographical position, climate conditions and hydrographic components of the area offer good condition for development of rich flora and fauna.

As most impressive geomorphologic occurrence with apparent aesthetic attributes which provocate the curiosity of visitors are also: “Rugova Canyon”, “Drini I Bardhe River Spring”, “Cave in Radavc”, “Cave in Rugova Canyon”, “Cave in Zatriq”, “Therma water spring in Istog”, “rocky hills ”etc.



II.
Biodiversity

BIODIVERSITY

"Biodiversity is defined as differences between organisms that live in terrestrial, maritime and other water ecosystems and ecological complexes in which they belong; includes diversity among species, between species and ecosystems[25].

Biodiversity is a complex notion that means the entirety of species and ecosystems, or differently said biodiversity means diversity of living species in the planet.
Biodiversity also includes recreational, culture and aesthetic values.
The rapidly consumption growth by the society in one side, population growth in the other side result with lose of biodiversity and decrease the capability of nature systems to meet with all human needs demands.
Human activities have increased the rate of lose parallel with economic development. Unfortunately this process is continuing and the earth is facing with the high destruction activities in its billion year history. Based on simple accountings, almost two from three bird species are threatened with decrease of their populations; one in eight plant species threatened to be disappeared; one of four mammals, one of four amphibians and one of five reptiles threatened.
Also in a threatened situation are forest ecosystems, which represent essential biological ecosystems. According to the data of World Institute for resources, only one of five parts of original plant coverage has survived as unfragmented, whilst still the deforestation is continuing rapidly.
Kosovo even a small country, it is distinguished with rich biodiversity. Its geographical position, geological factors, hydrology and climate are some of factors that enabled Kosovo to have rich biological diversity, rich flora, fauna and vegetation as well as presence relict, endemic and other important species.

Flora and Vegetation

Based on researches made so far, in Kosovo are inventoried about 1800 species of vascular flora, but it is supposed this number is much higher and reaches about 2500 species. It means the Kosovo species inventory is not completed yet.
Kosovo vegetation is represented by 139 plant associations grouped in 63 alliances, 35 orders and 20 classes. Sharr Mountains and Bjeshket e nemuna Mountains are considered to be centers of biodiversity in Kosovo.
In the territory of National park "Malet e Sharrit" are identified over 2000 species of vascular flora, that represents 25 % of Balkan flora and about 18% of European Flora. Based on existing data, about 29%of these species are to endemic character. From total number of identified species in "mallet e Sharrit", 86 species are declared to be internationally important, 26 species included in European Red List, and according to the IUCN 32 species of Sharr Mountains are evidenced in

25 Rio Convention 1992 Rio de Janeiro

the red list of threatened species. Only in sub alpine and alpine area of “Bjeshket e Nemuna” mountains are evidenced 797 species of vascular flora, where 128 of them are with endemic character.

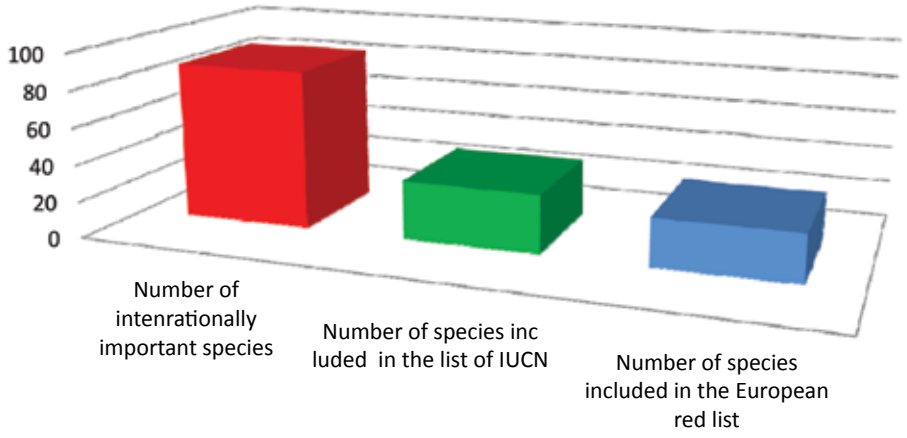


Figure 84. Floristic specter of species in Sharr Mountains with international protection status

Also the fact that a number of relict, endemic and sub-endemic species makes the Flora of Kosovo, to be very important and interesting for researches from the world wide..
During the period 2005-2007, teams of KINP have visited most of endemic species localities and made the assessment of the state.

Table 8. Some plant species with endemic character

Nr.	FAMILY / Specie	Flowering/ Fruits	Biotope	location in Kosovo	Endemic specie of	state
	ARISTOLOCHIACEAE					
1	Aristolochia merxmuelleri Greuter et Mayer 1985.	IV/ V-VI	Rocky – sand terrains, near by shrubs, serpentine substrate	Mirusha region	Kosovo	Well developed population in limited areas
	ASTERACEAE					
2	Achillea alexandri – Regis Bornm. et Rud. 1934.	VII/ VIII	Grassy areas and in çetinaku forest (Achilleo – Pinetum mugi) in alpine areas.	Sharr mountains (Oshlak).	Kosovo Steno-endemic	Well developed population in limited areas
3	Centaurea albertii Rexhepi 1980.	VI–VII / VIII-IX	In rocky, grassy, hilly areas up to 1000 m asl. Only in serpentine substrates.	Devë Golesh.	Kosovo Steno-endemic	Threatened population
	BORAGINACEAE					
4	Cynoglossum krasniqii 1986.	IV-VI/ VI	Rocky-calcareous terrains	Pashtrik (Gorozhup).	Kosovo	!
	BRASSICACEAE					
5	Bornmuellera dieckii Deg. 1900.	VI–VII/ VIII	Rocky – serpentine terrains in mountainous sub-alpine areas	Ostrovicë (1500 – 1900 m. lasl.	Kosovo	Rare
	CARYOPHYLLACEAE					
6	Dianthus scardicus Wettst. 1892.	VI–VII/ VIII	Rocky, grassy terrains in sub-alpine and alpine areas	Sharr Mountains (Luboten, Prevallc).	Kosovo	Threatened population
	CONVOLVULACEAE					
7	Convolvulus cochlearis Griseb. 1844.	VI–VII/ VIII	Rocky, grassy terrains in hilly serpentine terrains	Gorancë (Hani i Elezit).	Kosovo	rare (steno-endemic should be protected by the law)
	CRASSULACEAE					
8	Sedum flexuosum Ëettst. 1892.	VI–VII/ VIII	In rocky – calcareous terrains in sub-alpine areas	Sharr Mountain (Luboten), Oshlak).	Kosovo	Rare
9	Sempervivum kosaninii Praeger 1930.	VII– VIII / IX	In rocky – calcareous terrains in sub-alpine and alpine areas	Albanian Alps	Kosovo	Should be protected by the law
	DIPSACACEAE					

10	Cephalaria pastricensis Dorfl. et Hayek. 1921.	VI–VII/ VIII	In grassy terrains, with shrubs, mountainous and alpine forests	Pashtrik, Albanian Alps (Lumbardhi Mountains, Zhleb).	Kosovo	Threatened populations (Should be protected by the law)
	FABACEAE					
11	Astragalus fialae Degen 1900.	VII/ VIII	In rocky alpine areas	Albanian Alps (Lumbardhi Mountains,	Kosovo	Threatened populations (Should be protected by the law)
12	Trifolium wettsteinii Dorf. et Hayek 1921.	VII–VIII/ VIII-IX	In alpine and sub-alpine pastures	Pashtrik.	Balkan	Rare (Should be protected by the law)
	LAMIACEAE					
13	Micromeria albanica (Griseb. ex K. Maly) Silic. 1979.	VII–VIII/ VIII–IX	Rocky calcareous terrains in hilly-mountainous areas	Lumëbardhit gorge - Prizrenit.	Kosovo	Rare (Should be protected by the law)
14	Thymus albanus H. Braun 1892.	V–VI/ VIII–IX	Dry areas, shrubs, pastures, alpine and sub-alpine forests, mostly in calcareous substrates.	Oshlak, Koritnik, Albanian Alps.	Balkan	Should be protected by the law
15	Thymus doerfleri Ronn. 1924.	VI–VII/ VIII–IX	Dry areas, rare forests of sub-alpine e mountains	Koritnik.	Kosovo	Rare (Should be protected by the law)
16	Thymus rochlenae Vel. 1903.	VI/ VII	Pastures, grasslands, in mountainous and sub-alpine areas	Oshlak, Deçanit.	Kosovo	Threatened populations (Should be protected by the law)
	LILIACEAE					
17	Lilium albanicum Griseb. 1845.	VI–VII/ VII	In fresh rocky terrains of mountainous sub-alpine areas	Sharr Mountains, Albanian Alps.	Kosovo	Should be protected by the law
	POACEAE					
18	Stipa mayer Mart. 1971.	V–VI/ VII	Pastures, serpentines	Koznik, Mirusha, Godanc, Gllanasellë	Kosovo	Should be protected by the law
	RANUNCULACEAE					
19	Aconitum pentheri Hauek 1916.	VII / VIII	Shrubby, grassy areas in mountainous sob-alpine areas	Albanian Alps (Zhleb, Rusoli).	Kosovo	Rare populations (Should be protected by the law)
	ROSACEAE					
20	Potentilla calabra ten. 1811.	VII–VIII / VIII	In Acidic rocks to volcano origin in altitude 2000 m.	Sharr Mountains (Guri i Zi (Restelicë – Kosovë).	Kosovo	Threatened populations (the only locality in Balkans)

	Potentilla doerfleri Ëettst. 1892.	VII– VIII/ IX	Rocky, grassy terrains of alpine areas	Sharr Mountains (Bistra, Maja e Zezë).	Kosovo	Rare threatened populations, should be protected by the law)
	Rubus ipecensis rech. 1935.	!	Shrubby serpentine areas	Gubavc (Pejë)..	Kosovo	Threatened populations, should be protected by the law)
	SAXIFRAGACEAE					
	Saxifrage scardica Griseb. 1843.	VI– VIII/ VIII– X	Rocky terrains of alpine areas	Koritnik, Albanian Alps (Leqinak, Koprivnik etj).	Kosovo	Threatened populations, should be protected by the law)
	Verbascum scardicolum Bornm. 1922.	VII– VIII/ VIII	Pastures and shrubs of alpine areas	Sharr Mountains (Oshlak).	Kosovo	Threatened populations, should be protected by the law)
	Wulfenia blecicii Lak. 1971.	VI– VIII/ VIII	Grassy, forest and shrubs of sub-alpine areas	Alpet Shqiptare.	Kosovo	!
	VIOLACEAE					
	Viola gracilis Sib. Et Smith. 1806.	VI – VII / VII	In alpine areas pastures	Sharr Mountains	Kosovo	Small or large groups



Figure 85. Achilleo Aleksandri Regis



Fig. 86. Aconitum pentheri



Figure 87. Stipas mayer



Figure 88. Potentilla dorfleri



Figure 89. Micromeria albanica



Figure 90. Convolvulus cochlearis

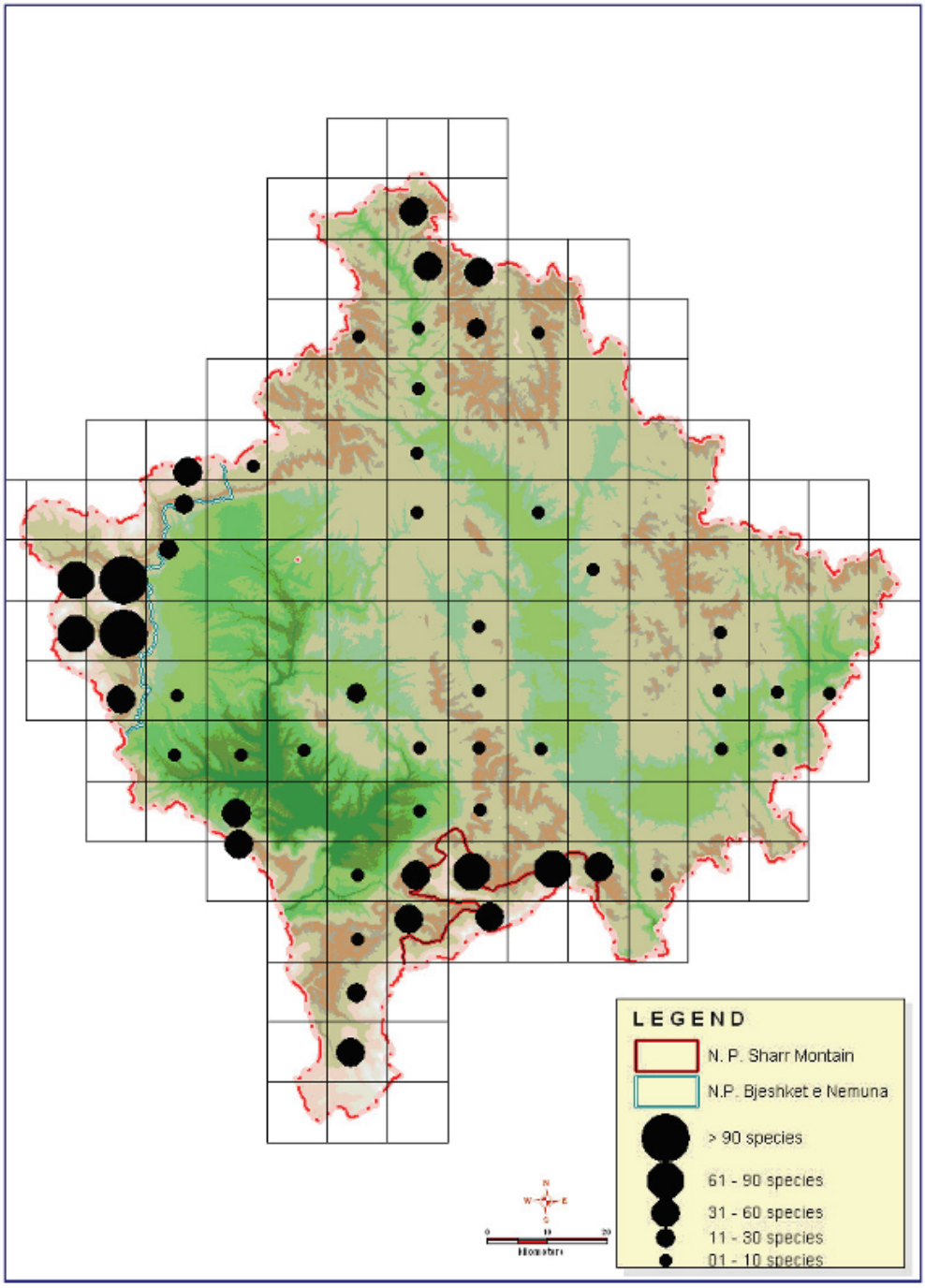


Figure 91. Map of localities of important endemic species

Flora of Kosovo is characterized with some species that have small areal and which are recognized as rare and threatened species. Follow is prepared a short list of rare and threatened plant species . Kosovo still do no thavethe national red list.

Table 9. Some plants species, considered to be rare and threatened species in Kosovo	
1.	Taxus baccata L.
2.	Quercus trojana Ëebb.
3.	Ulmus campestris L.
4.	Acer heldreichii Orph.
5.	Forsythia europea Deg. Et Bald.
6.	Ëulfenia carinthiaca Jack.
7.	Tulipa scardica Bornm.
8.	Trollius europeus L.
9.	Lilium albanicum Gris.
10.	Dianthus scardicus Ëetst.
11.	Fritillaria graeca Boiss. Et Sprun.
12.	Narcissus poeticus L.
13.	Rumex balcanicus Roth.
14.	Ilex aquilifolium L.
15.	Dphne blagayana Freyer.
16.	Ramonda serbica Pančˇ.
17.	Paeonia decera Anders.
18.	Paeonia corallina Retz.
19.	Ëaldesteinia geoides Ëilld.
20.	Polugala dorfleri Hayek.
21.	Moltkea doerfleri Ëettst.
22.	Dioscorea balcanica Koshan.
23.	Rhododendron ferrugineum L.
24.	Gentiana lutea L.



Figure 92 Forsythia europea



Figure 93. Quercus trojana



Figure 94. Moltkea doerfleri



Figure 95. Paeonia decora

Medical Plants

Particular roles in the flora of Kosovo have medical and aromatic species. It is evidenced that these species are threatened by uncontrolled collection. The most significant problem is that these species are collected in the time of flowering, by interrupting their reproduction process.

Tab. 10. List of medical plants which have economical potential.				
Family	Scientific name	Name in Albanian	Name in English	Type of plant
	Non flowering plants			
Cupressaceae	**Juniperus communis**	Dellinja e zeze	common juniper	Tree
	Juniperus oxycedrus	Dellinja e kuqe	juniper	Tree
Equisetaceae	**Equisetum arvense**	Keputja e ares	horsetail	Herb
Pinaceae	**Pinus nigra**	Pisha e zeze	Austrian pine	Tree
	Pinus sylvestris	Pisha e bardhe	scotch pine	Tree
	Thuja occidentalis	Tuja perendimore	cedar	Tree
	Flowering plants			
Acoraceae	**Acorus calamus**	Kashtefryza	calamus	Herb
Asteraceae	**Achillea millefolium**	Barpezmi	common yarrow	Herb
	Cichorium intybus	Bresa	chicory	Herb
	Matricaria chamomilla	Kamomili	German chamomile	Herb
	Taraxacum officinale	Lule shrudha mjekesore	common dandelion	Herb
	Tussilago farfara	Thunder mushke	coltsfoot	Herb
	Urtica dioica	Hithra	stinging nettle	Herb
	Arctium lappa	Rrodhja	greater burrdock	Herb
	Artemisia absinthium	Pelini	absinthium	Herb
	Arnica montana	Arnika	mountain arnica	Herb
	Calendula officinalis	Kalendula mjekesore	pot marigold	Herb
Betulaceae	**Betula pendula**	Meshtekna	European ëhite birch	Tree
Boraginaceae	**Symphytum officinale**	Kufelma mjekesore	common comfrey	Herb
Caprifoliaceae	**Sambucus nigra**	Shtogu	Eu. black elderberry	Tree
Caryophyllaceae	**Saponaria officinalis**	Saponika	bouncingbet	Herb
Cornaceae	**Cornus mas**	Thana	Cornelian cherry	Tree
Brassicaceae	**Capsella bursa-pastoris**	Mediculs-shtraper	shepherd's purse	Herb
Fagaceae	**Castanea sativa**	Geshtenja	European chestnut	Tree
Ericaceae	**Arctostaphylos uva-ursi**	Rrush arusha		Herb
	Vaccinium myrtillus	Boronica	Bilberry	Herb
Gentianaceae	**Centaurium erythraea**	Bar ethesh		herb
	Gentiana lutea	Sanza	yelloë gentian	herb
Hypericaceae	**Hypericum perforatum**	Lulja e ballsamit te shpuar	St. Johnswort	herb
Lamiaceae	**Melissa officinalis**	Melissa	common balm	herb
	Origanum vulgare	Rigoni i zakonshem	oregano	herb
	Prunella vulgaris	Prunella	common selfheal	herb
	Salvia officinalis	Sherbela	kitchen sage	herb
	Teucrium chamaedrys	Arresi dushkvogel		
	Thymus serphyllum **Thymus pulegioides**	Krasta	lemon thyme	herb
	Satureja hortensis	Thrumbisht	summer savory	herb
	Stachys officinalis	Sarusha mjekesore	common hedgenettle	herb
Fabaceae	**Medicago sativa**	Tërfoja	alfalfa	herb
	Ononidis spinosa	Therra e lepurit		
	Phaseolus vulgaris	Fasulja	kidney bean	herb
	Galega officinalis	Qerbashi	professor-weed	herb

Liliaceae	Colchicum autumnale	Xherrokulli	autumn crocus	herb
Malvaceae	**Malva sylvestris**	Mellaga pyjore	high malloë	herb
	Althaea officinalis	Mullanjadhja	common marshmallow	herb
Papaveraceae	**Chelidonium majus**	Latrapeci	celandine	herb
	Papaver rhoeas	Lulkuqu	corn poppy	herb
Plantaginaceae	**Plantago lanceolata**	Gjethdelli heshtor	Narrow leaf plantain	herb
Primulaceae	**Primula veris**	Agulicja	cowslip primrose	herb
Ranunculaceae	**Paeonia officinalis** **Paeonia decorah** **Paeonia carolina**	Bozhure mjekesore	common peony	herb
Rosaceae	**Crateagus monogyna**	Murrizi njeberthamor		
	Rosa canina	Trendafili I eger	dog rose	herb
	Agrimonia eupatoria	Agrimoni	churchsteeples	herb
	Alchemilla vulgaris	Virak		
Rubiaceae	**Galium verum**	Ngjitesja e vertete	Yellow Spring bedstraë	herb
Rutaceae	**Dictamnus albus**	Bari I uzos	gasplant	herb
Salicaceae = **Celastraceae**	**Salix alba**	Shelgu	white willow	tree
Sapindaceae	**Aesculus hippocastanum**	Gështenja e egër	horse chestnut	tree
Scrophulariaceae	**Verbascum sp.**	?		
	Digitalis lanata	Luletogeza leshtake	Grecian foxglove	Herb
	Digitalis purpurea	Luletogezi I purepurte	purple foxglove	Herb
Solanaceae	**Atropa bella-donna**	Helmarina	belladonna	Herb
	Capsicum annuum	Speci	cayenne pepper	Herb
Malvaceae	**Tilia cordata**	Bliri gjethvogel	littleleaf linden	Tree
Apiaceae	**Daucus carota**	Karota	Queen Anne's lace	Herb
	Pimpinella anisum	Anason	anise burnet saxifrage	Herb
	Angelica archangelica	Angjelika	angelica	Herb
	Foeniculum vulgare	Marac	sweet fennel	Herb
Valerianacae	**Valeriana officinalis**	Haraqina mjekësore	garden valerian	Herb
Verbenaceae	**Verbena officinalis**	Sporisi mjekësorë	herb of the cross	Herb



Figure 96. Cornus mas



Figure 97. Crataegus monogyna

Forests

Forests are the most advanced nature ecosystems. They are very important due to the rich biodiversity. Forests are climate regulatory, they save the water and air quality, and they save the soil from the erosion. Also forests are the largest accumulators of CO_2 in the earth and largest suppliers to the atmosphere with oxygen. Forests are renewable nature resources, and their products can be used for industry and for other purposes. In forests develops huge number of animal and plant species which are important for food and for medical purposes. Forests serve as barrier for the winds and they offer relaxing conditions for human beings. Even so, human impact in forests is increasing. By uncontrolled cutting, we contribute to the environmental changes, climate changes, flooding etc. Also, forests are sensitive in air pollution.

According to the national forest inventory made in 2003, it is estimated that total forestry surface in Kosovo is 464 800 ha or 42% of total Kosovo territory. About 278 880 ha are forestry lands in public ownership, managed by Kosovo Forestry Agency (KFA), which is organized in 6 geographical regions. The deciduous forests represent 90 % of Kosovo forests and they are dominated by oak and beech, whilst conifer forests covers about 7% of total forest area and they are dominated by pines, spruce. [26]

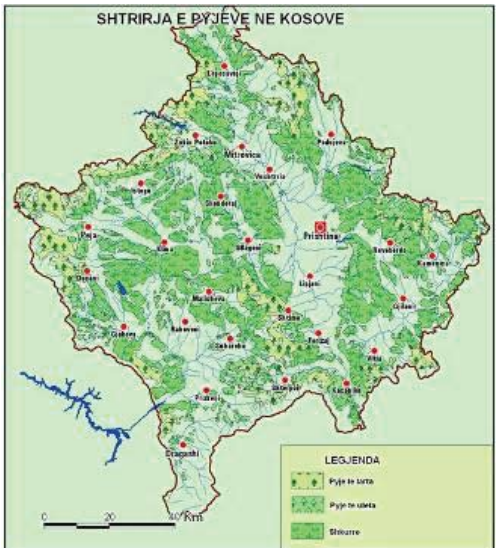


Figure 98. Map of forests in Kosovo

The total volume of live wood in public forestry lands is estimated to be 33.5 million m^3 and in private forests 19.5 million m^3. The annual gross growth is approximately

26 KFA , 2007

1.3 million m^3. Inventory of forests allowed quantity for annual cutting from about 900.000 m^3 correspond with 77% of annual growth. About 700,000 m^3 will be cut in high forests and 200.000 m^3 in law forests. The road infrastructure is not good developed and not maintained during the last years. This resulted with wood cutting mostly in the areas with easy access and most of forests with allowed cutting volume are remained in remote areas, where access is nit easy. Currently legal wood cutting quantity is about 200,000 m^3 a year. Since after the war, most of wood quantity is used for fire (hitting) as main resource for hitting. The demand for dire wood is huge, and according to the estimations the national demand per year is about 1 million m^3.

The biggest part of Kosovo forests (aout 50%) belongs to the age between 0-20 years, whilst the smaller part (17%) belongs to the age 60-80 years.

Table 11. Age and ownership of forests in % (KFA 2006)

Age/Years	Public forests	Private forests
0-20	29 %	**23 %**
20-40	18 %	**32 %**
40-60	11 %	**23 %**
60-80	**9 %**	**8 %**

Approximately about 240 ha a year are afforested in Kosovo. It is an institute in Peja, which produces about 700 000 young plants a year. Main species for afforesting are *Pinus Nigra, Pinus sylvestris, Picea abies, Pseudotsuga taxifolia.* Each year the KFA allocates about 10% of produced young plants for private sector. The biggest success achieved so far is considered to be mixed afforesting. A study made in 2001 about the forestry, has concluded that the annual value of products and forestry lands is between 50 – 70 million €. So far, the contribute of forestry in national GDP is calculated to be between 1.8 % and 2.6%.

Tabela 12. Forestation according to the specie and ownership (MAFRD 2003)

Type of forest	Public forest	Private	Unknown	Total
Temporarily without trees	21.200	7.600	3.400	32.200
Natural forestation	82.000	74.000	15.200	171.200
Artificial forestation	1.800	400	---	36.600
Mixed forestation	64.000	54.000	19.000	137.000

Forest inventory has estimated that about 40% of public forests and 29% of private forest were subject of illegal cutting. The results of the inventory confirm the experts' opinion that low forests, particularly those in public ownership, are under the high pressure of cutting and using them for fire wood. Results also show that many of

young and middle age forests needs urgent management interventions, starting from pre commercial cleaning/rarefaction, up to the commercial rarefaction.
Forests are also source of non wood products, like mushrooms, blackberries, fruit trees, hazelnut, chestnut etc; as well as their secondary products. No doubt, hunting and tourism are great opportunity that forests offer.

Kosovo forests are divided in high forests, low forests, shrubs, and degraded forests. The largest part of Kosovo forests is consisted by low forests (42%), and the smallest part represents high forests (15%)

Table 13. Kosovo forests according to the type and ownership in ha and % (KFA)

Type of forest	Ownership			%
	State	Private	Total	
High forests	51000	15000	66000	15
Low forests	116000	63000	179000	42
Degraded forest	34000	48000	82000	20
Shrubs	67000	36000	103000	23
Total	268000	162000	430000	100

Over 50 000 ha of forests are included in protected areas. Largest part belongs to tne National Park “Mali Sharr” (18.884 ha) and “Gërmia” (885 ha). The surface of protected forests is intended to be grown. Since 2003, it is proposed to be declared as a National Park the “Bjeshket e Nemuna” Mountains, which have a surface about 20 000 ha of forests.

According to the data presented in the published report by the commission for evaluation of forests damaged by the fire, about 6 682 ha of Kosovo forests are included in the fire during 2007. From this surface, 4 142 ha are public property and 2 548 ha are private property. About 1439 ha of damaged surface is pasture. The total lost volume in m^3, expressed in Euro, it is estimated to be 29645, whilst the lost volume of technical wood in m^3 is 17 170. Total value of lost live wood is 2 942 338.

Forests are main resources for economical, social and environmental welfare of Kosovo population. A large part of biodiversity is spread in forests, and forest management in the future will be a key issue, in order to meet the criteria of “Nature 2000” network and EU directives on habitats and birds. The great benefits from forests may be achieved only if they are managed properly and in accordance with the principles of Sustainable Forest Management



Fig. 99. Spruce forest in Sharr Mountain



Figure 100. Beech forest in Sharr Mountain



Figure 101. Forest cutting in Bjeshkët e Nemuna

FAUNA

Taking into account the geographical position, complex of ecological, historical and other factors, Kosovo belongs to the richest fauna countries in Balkans.
The richest fauna territories are: "Malet e Sharrit", "Bjeshkët e Nemuna", "Kopaoniku", "Mokna", and othes mountainous massifs as well as rivers and lakes.
According go the researches made so far, in Kosovo are identified over 250 wild vertebrate species as wellas a number of invertebrates (so far recognized 200 butterfly species, over 500 macrozoobentos species).
In the list of protected areas exist two strict nature reserves, where are protected two animal species. Nature reserve of **Rusenica** in Suhareka municipality, where is the habitat of lynx and **Kozhnjari in Deçan** municipality, habitat of **wild goat *(Rupicapra rupicapra)***.
Within fauna, an important role have birds where are identified 180 species. The most rich areas with bird species are: "Bjeshkët e Nemuna" and "Malet e Sharrit".



Figure 102. Field butterfly



Figure 103 Black bird nest (Turdus merulla)

The high forests and mountainous ecosystems offer good conditions for important mammal populations as: brown bear (*Ursus arctos*), *lynx*, roe (*Capreolus capreolus*), wild cat (*Rupicapra rupicapra*), then many preying and singer birds important for Kosovo, Balkans and European Ornitofauna. The mountainous Eagle (*Aquila chrysaetos)* falcon (*Falco naummani*), health cocks (*Tetrao urogallus*) are some of representative species which have international protection status.

Fauna in Bjeshkët e Nemuna

The territory of "Bjeshket e Nemuna" is distinguished by exceptional rich biological and landscape diversity. The geographical position, geologic structure and climate characteristics, makes it to be a specific area which offers good living conditions to a huge number of animal and plant species.

The "Bjeshkët e Nemuna" are characterized with a rich heterogenic, endemic and interesting fauna. This fauna potential of "Bjeshket e Nemuna" in particular and of Kosovo in general are product of Mediterranean, Euro-Siberian and Nordic- Alpine impacts as well as by the many ecological changes in the past. In this area can be found many mammal and bird species which are rare species for Balkans region. Most of them are relic, endemic, threatened species, therefore they are listed in European and international conventions as species to be protected
Based in researches made so far, the fauna of "Bjeshket e Nemuna" is consisted by: 8 fish species, 13 amphibian species, 10 reptile species, 148 bird species (it is assumed the number of bird species to be much higher), 37 mammal species and 127 butterfly species which belong to the order Lepidoptera.

The most representative species that inhabit the "Bjeshket e Nemuna" are: *Lynx,* brown bear (*Ursus arctos*), roe(*Capreolus capreolus*), wild goat (*Rupicapra rupicapra*), mountainous eagle(*Aquila chrysaetos*), falcon(*Falco naummani*), *Tetrao urogallu*) etc.

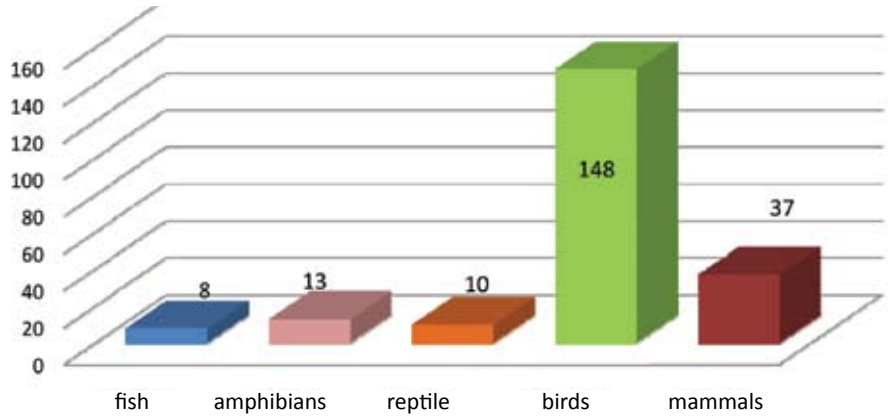


Figure 104. Fauna structure in Bjeshkët e Nemuna

Ihtiofauna

In the territory of "Bjeshket e Nemuna" is permeated by many water streams, whilst the main water capacity represents the "Lumebardhi" River. According to the ichtiologic characteristics, these waters belong to Salmonide type, which represents a habitat of two trout populations (*Salmo trutta m. fario L.* and *Salmo marmoratus C.*). These water streams are active in all seasons and resists to dry seasons. Due to the terrain, the water stream is fast, and during the snowfalls water becomes turbulent. The water temperatures in the area are relatively stable and the water is not significantly affected by industrial pollution. In the water upstream, the trout is dominant fish specie, whilst in the rest of the water stream are dominant species of Ciprinide family.

Herpetofauna

"Bjeshkët e Nemuna" represents the most important area concerning to the amphibians and reptiles in Balkan Peninsula. Researches made so far have evidenced: 13 amphibian species and 10 reptile species.

***Amphibians**:* The biggest number of amphibians is connected to the water environment in the period of reproduction, whilst the rest of the time they pass in wet areas as: under the roots, fallen leafs, and other wet areas. Amphibians of "Bjeshket e Nemuna" are represented by two orders, urodella (one family, 2 genres and 6 species).

Species of *Anura* order can be found in wetlands, forest or next to the water surfaces, whilst some species of frog live exclusively in water environments. In this order are included 5 families with 7 species.



Figure 105. Turtle (Testudo sp.)

Reptiles: In the group of reptiles that inhabit the "Bjeshkëve të Nemuna" territory are identified 5 families with 10 species, like forest turtle, lizards and snakes species

Ornitofauna

Natural habitats of "Bjeshkëve të Nemuna" offer good hosting conditions for many bird species. Most of the bird species are endemic and have an unfavorable protecting status. So far are evidenced 148 bird species but it is assumed to be about 200 species. Their protection has international character; therefore the "Bjeshkët e Nemuna" are evidenced in international list as IBA region (Important Bird Area). Birds inhabit different parts of the area and they can not be found everywhere. A small number of them is connected to small areal, in specific terrains like specie heath cook (*Tetrao urogallus*). Other important bird species are: *Aquila chrysaetos*, *Aquila heliaca*, *Falco naumanni*, *Crex crex*, *Otis tarda*, *Alectoris graeca*, etc. Among them, 4 species have ths status of globally threatened species. .

Mammalofauna

In "Bjeshkët e Nemuna" inhabit all mammal species that can be found in other parts of Kosovo as well as Balkan Peninsula. Some species are connected exclusively for high mountainous areas, as: wild cat, brown bear. The most spread mammals are gnawer species. The class of mammals is consisted by three insectivore species, 19 gnawer species, 11 carnivore species, 1 non ruminant specie, 3 ruminant species. In the "Bjeshkët e Nemuna " are evidenced mammal species that are listed in the list of internationally threatened species. Important populations of large mammals are populations of species: brown bear (*Ursus arcto*s), *Lynx lynx*, wild goatt (*Rupicapra rupicapra*), roe (*Capreolus capreolus*), wolf (canis lupus), jackal (*Canis aureus*), etc.



Figure 106. Wild goat (Rupicapra rupicapra)

Order	Family	Specie
PODICIPEDIFORMES	1	2
CICONIIFORMES	2	2
ANSERIFORMES	1	3
FALCONIFORMES	2	17
GALLIFORMES	4	9
CHARADRIFORMES	1	2
COLUMBIFORMES	1	5
CUCULIFORMES	1	1
STRIGIFORMES	1	6
CAPRIMULGIFORMES	1	1
APODIFORMES	1	2
CORACIFORMES	3	3
PICIFORMES	1	10
PASSERIFORMES	21	85
Total : 14	41	148

Table 14. Ornitofauna of Bjeshkët e Nemuna

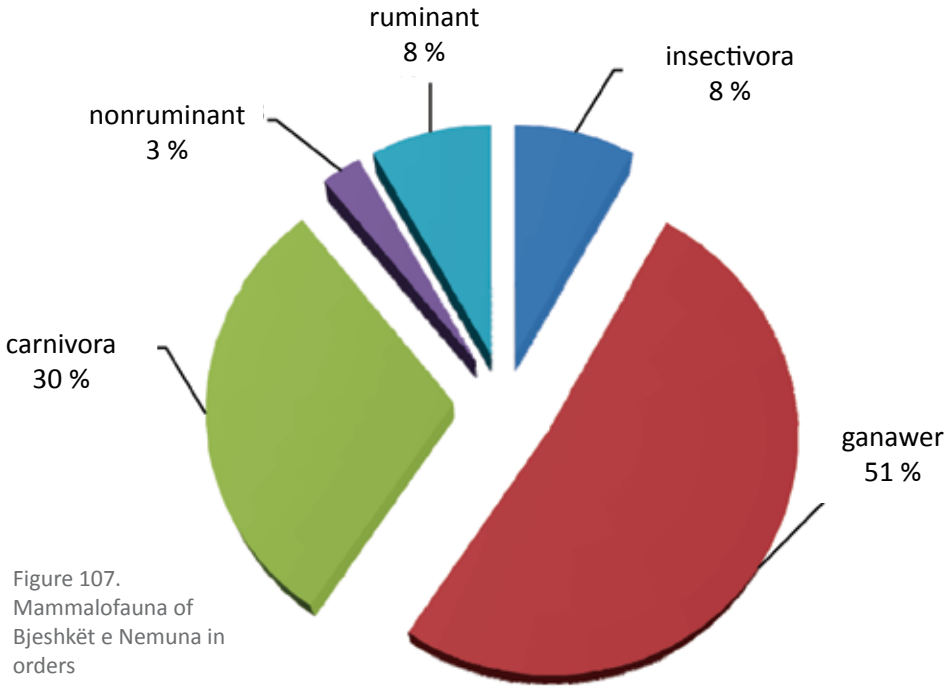


Figure 107. Mammalofauna of Bjeshkët e Nemuna in orders

Fauna in Sharr Mountains

Territory of Sharr Mountains with its different biotopes is very rich in terms of fauna species. There are present species which are exclusively linked for specific biotopes, that means they have small real. The fauna of Sharr Mountains is not researched sufficiently, but from the existing data it is concluded that fauna of the area is consisted by: 7 fish species, 9 amphibian species, 10 reptile species, 154 bird species and 30 mammal species

Pisces

Territory of Sharr is characterized with small water streams and mountainous rivers that belong to the Lepenc river basin, which discharges in Aegean Sea, and to the Bistrica e Prizrenit River that discharges in Adriatic Sea. Based in existing data in Sharr Mountains are identified following fish species: *Salmo trutta m.faro L.*, *Barbus fluviatilis Ag.*, *Anguilla vulgaris* , *Esox lucius*, *Cyprinus carpio*, *Perca fluviatilis*.

Amphibians

Following species are evidenced: *Salamandra maculosa*, *Salamandra atra*, *Triturus vulgaris*, *Bufo bufo*, *Bufo viridis*, (*Hyla arborea*, *Rana temporaria, Rana dalmatina*, *Rana graeca*

Reptilia: *Emys orbicularis, Testudo graeca*, *Lacerta viridis*, *Lacerta muralis*, *Lacerta agilis, Natrix natrix*, *Natrix tesselata, Vipera ammodytes*, *Vipera berus*, *Anguis fragilis*



Figure 108. Frog in Sharr Mountain (Rana sp)

Birds (Aves)

Birds are present in all Sharri biotopes, whilst, number of their populations overcomes all other classes of fauna, with exception of insects. The biggest number of bird species has a broad spread, therefore they can be found in all areas of the Sharr Mountains. Due to the numbr of bird species, according to the provisions of IUCN, Sharr Mountains should be protected as Ornito – reserve

Table 15. Ornito-fauna of Sharr

Order	Family	Specie
FALCONIFORMES	2	26
GALLIFORMES	1	6
CHARADRIFORMES	3	6
COLUMBIFORMES	1	5
CUCULIFORMES	1	1
STRIGIFORMES	2	8
CAPRIMULGIFORMES	1	1
APODIFORMES	1	1
CORACIFORMES	4	4
PICIFORMES	1	10
PASSERIFORMES	22	86
Total: 11	39	154



Figure 109. The Eagle (Buteo buteo) in Sharr Mountains 2008



Figure 110. White stork (Ciconia ciconia), Shterpce 2008

Mammals

The fauna of Sharr mammals is represented with all species that Inhabit Kosovo, as well as with other species which are ecologically linked with their habitats in high mountainous areas. Sharr is characterized with endemic mammal species.

Some of mammal species of Sharr:

Insectivora): *Erinaceus europeus*, *Talpa europae*, *Sorex araneus.*

Rodentia: *Lepus europaeus*, *Ondatra zibethica*, *Arvicola terrestris*, *Mus musculus*, *Apodemus agrarius*, *Apodemus silvaticus*, *Glis glis*, *Muscardinus avellanarius*, *Scirius vullgaris*, *Spalax monticola*, *Cricetus vulgaris*, *Cricetus cricetus*, *Castor fiber* .

carnivora: lynx, *Ursus arctos*, *Canis lupus, Canis vulpes*, *Felis silvestris*, *Meles meles*,

Martes martes, *Martes foina*, *Lutra lutra*, *Mustela nivalis*, *Putorius putorius*.
Non ruminant: *Sus scrofa*, r
Ruminant: Capreolus capreolus, *Rupicapra rupicapra.*
Chiroptera: no specific researches are made in Sharr area for bats.



Fig. 111. Mountainous eagle (Aquila chrysaetos) Sharr, 2005

Ex- situ animal management ("MINI -ZOO-s")

There are not Institutional practices in Kosovo for "Ex situ" species protection. But, there are some private initiatives to carry few species of wild fauna in so called "Mini – ZOOs". In this cases are carried
During the year 2005, KINP realized an activity for evidencing all tMini – ZOOs, respectively species they carry on. In this case are evidenced, species, number of species and conditions where they are carried. A conclusion is that none of these ZOOs meet the criteriato be a zoo.

Mostly these kind of "Zoos" are set up in different restaurants and they are opened for visitors. In very improper cages they closed species which are strictly protected by international conventions, like: *Ursus arctos Linn*., *Cervus elaphus Linn*., *Vulpes vulpes, Canis lupus*, *Meles meles*, *Aquila chrysaetos*, *Gyps fulvus*, *Buteo buteo L*., *Falco pelegrinus*, *Streptotelia decaocta*, *Falco pelegrinus* etc



Figure 112. Three bears, Restaurant "Freskia" in Gërmia



Figure 113. Fox in Restaurant "Freskia" in Gërmia



Figure 114. Brown bear in the garden of KB"Agronomi" in Gjinofc – Suharekë



Figure 115. Deer (Cervus elaphus),restaurant Ariu, Prishtinë



Figure 116. Eagle (Aquila chrysaetos) restaurant "Shqiponja" Prizren



Figure 117. Gyps fulvus, restaurant "Shqiponja" Prizren



Figure 118. Brown bear (Ursus arctos) restaurant "Shqiponja" Prizren



Figura 119. wolf (Canis lupus) restaurant "Shqiponja" Prizren



Figure 120. Eagle (Buteo buteo L.) restaurant "Shqiponja" Prizren



Figura 121. Falcon (Falco pelegrinus) restaurant "Shqiponja" Prizren

There is lack of ZOO in Kosovo and it is well known that real Zoo serve for scientific, educative culture and recreational purposes. Also Zoo contributes to the "ex-situ" conservation of certain species.
Taking in to the account the conditions that a zoo should meet, like space, environment, food, number of individuals and reproduction conditions, contact with other species, natural living conditions etc, we may conclude that al of this "Mini ZOOs" should be closed because they give a bad message to the new generations concerning the living conditions we should offer for specific species.

Taking in to account the obligations derived bythe law on nature protection as well as International Conventions in the field of wildlife protection (CITES convention, Bern Convention etc) Minister of MESP has adopted the decision[27] for protection of certain rare and threatened mammal specie**. Article 3** of this decision indicates: **In particular it is banned: every capture, isolation and trade of these species**, as well as article 5 Action s that violate the provisions of this decision will be punished according to the applied provisions.

According to this decision as rarities, rare and threatened mammal species of Kosovo are declared as strictly protected the following species:

- Brown bear (*Ursus arctos),*
- Lynx (*Lynx lynx),*
- Wild goat (*Rupicapra rupicapra),*
- Roe(*Capreolus capreolus),*
- Wild cat *(Felis sylvestris),*
- Deer(*Cervus elaphus),*

27 Decision nr.04/03 MESP, dt. 23 MAY 2003

- Squirrel (*Scirius vulgaris),*
- Golden marten *(Martes martes*),
- White marten *(Martes foina)* and
- *Muscardinus avellanarius*

Protection of threatened fauna species “in situ” is regulated in the way that special areas are declared as nature reserves of protected species.
There is not any management plan that currently would ensure the sustainability wildlife management.
According to the data collected in the field the state of high mammals is not good. The fauna is impacted by the increasing human activities like enlargement of settlements, tourism development, road infrastructure development, construction of industrial and hotelier installations, uncontrolled forest cutting, uncontrolled hunting, unsustainable use of nature resources. All the above mentioned impacts have affected the ecosystem balance, have contributed to the habitat fragmentation, and to the disappearance of certain species.

Fishery

There is only recreative fishing in Kosovo - (anglers in English) which means fishing by fishhook for sport and recreation. There is no commercial fishing, because there are no resources to carry out this kind fishing, which means fishing for profit-seeking. This fishing activity has less chance to happen in the near future. There is no protected area by law for fishing so far, regarding to the fishing. Sportive –recreational fishery in a way is organized through fishing which carries out inspection through 14 local fishing associations. It is a concern illegal fishing .This activity of illegal anglers very often is in a period of fish reproduction, having an impact in reduction of their fond, which is strictly unlawful by Law for fishery and aquaculture. Currently, in Kosovo are produced about 500 to 600 tons of fish of Californian trout (Oncorhnchus mykiss).

In total, there are 13 farms cultivating trout and carp. This means that approximately 600 tons of food with proteins (as contaminants of environment with N and P) in a trout farms. Other contaminants are different medications as are: antibiotics, disinfectants and antiparasitics. Fish in the farms is modified genetically; this may have an impact in a fish living in free environment, there where is trout living in rivers.

Another potential problem may be transmission of disease from farm fish in a fish living in a free environment. The disease can be transsmised from other countries, because of fish and fish eggs are imported. Also, are produced about 40 tons of carp which is, a smaller contaminant of the environment because of food stuffs used for their feeding (corns).

Animal fond

Animal fond in Kosovo has been increased evidently during these years .According to the informations from Department of Livestock, within MAFRD, cattle and poultry are the animals dominating, and in a less number there are horses and goats. According to the data from the general registration of livestock population, made in

2004, only 2 % of the bovine belong to commercial farms, which mean that they mostly are distributed in husbandries (small farms). The average number of cattle per husbandry is 1.12 heads per husbandry, and 15 heads per large farms. The average number of dairy cows per husbandry is 1.57 in small farms, respectively 8.5 in large farms.[28].

Tabela 16: Animal fond [29]

Animal Species	Number heads
Cattle	256.007
Sheep	120.102
Goats	13.154
Swine	48.000
House	5.672
Poultry-Comnercial farms	493.900
Poultry-Backyard farms	1.500.000
Bee hives	43.000

Farms in Kosovo are mainly small and half commercial .According to the registration, made in 2005, in Kosovo there are 171.179 registered farms. About 80% of the farms are smaller than 5 ha[30]. This means that development of agriculture is in a small level.

28 ESK-Kosovo in digits 2005

29 MAFRD

30 ESK-Kosovo in 2005

Legal and Institutional Framework

Legal Framework

The basic law for protected areas and biodiversity is the Law on Nature protection (2006/22) and all subsequent legal acts. Also, a number of activities in nature is regulated by other laws.

Kosovo Assembly so far have approved the following Laws with regard to the nature protection:

- Law on nature protection (2006/22)
- Law on environment (2003/9)
- Law on water (2004/41)
- Law on Spatial Planning (2003/30)
- Law on National Park "Mali i Sharrit" (1986)
- Law on forests (2003/6),(2004/40)
- Law on hunting (2006/41)
- Law on Fishery and Aquaculture (2006/58)

Important sub regulations:

- Administrative Instruction on EIA (Nr.09/2004-MMPH)
- Administrative Instruction on the central register of Nature Protected Areas: (Nr.04/2006-MMPH, 2006)
- Administrative Instruction on signalization of Nature Protected Areas (Nr.01/07-MMPH , 2006)
- Administrative Instruction on Management Plans of Nature Protected Areas Nr 11/07 02/11/2007
- Administrative Instruction on Criteria and Procedures for the use of Caves (in the procedure)
- Administrative Instruction on Ecological License (Nr.26/05-MMPH, date 07.11.2005)
- Administrative Instruction on licensing individuals and companies for EIA (Nr.03/2004-MMPH)
- Administrative Instruction on criteria for establishing water protected areas (Nr.13/07-MMPH)
- Administrative Instruction on implementation of the law on Spatial Planning and on the basic elements of special areas planning (Nr.2005/42-MMPH, date 04.03.2005)
- Decision on Protected areas (Total 75 decisions for declaring protected areas)

Environmental Strategy and Environmental Action Plan

In June 2004, Kosovo Government adopted the Kosovo Environmental Strategy. Long-term objectives set in the strategy are:

- Decreasing the environmental pollution, degradation and environmental damages; minimizing and preventing the pollution; controlling the economic activities with impact in the environment
- Biodiversity protection, saving the ecological balance in Kosovo
- Rational and sustainable use of natural resources, nature and land
- Protection of valuable nature landscapes, in particular those most representative and important likeNational Parks, Nature Monuments etc.

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Based on the obligation resulted by the Law on Environment Protection, during 2006, is prepared Kosovo Environmental Action Plan 2006 – 2010.
Main objective of this plan concerning nature protection is: creating an effective legal and institutional system for biodiversity and nature heritage conservation as well as putting under legal protection about 10% of Kosovo territory.

To achieve this objective in the KEAP are prepared many projects. So far none of projects are implemented
The Ministry of Agriculture, prepared a Strategy for Wildlife Management.

Table 17. Projects on nature protection in NEAP

Project title	Implementer	Proposed time for project initiation	Implementation duration time	Proposed budget (€)
Digitalizing and updating the list of protected area (including existing and future areas	MESP KINP	2007	18 months	53,800
Preparing the red list and red book of Kosovo	MESP KINP	2007	2 years	60,810
Preparing National strategy for Biodiversity protection	MESP KINP	2007	15 months	106,000
Inventory of flora and fauna in Bjeshkët e Nemuna Mountains	MESP KINP	2007	2 years	126,750
Inventory of flora and fauna in Sharr Mountains	MESP KINP	2006	2 years	126,750

Institucionet për Mbrojtjen e Natyrës

Kosovo's Assembly as highest legislative body in Kosovo ,consisted by 120 Parliamentarians ,Within the Assembly is established a functional commission for Environment and Spatial Planning ,initially by 11 members, which in 2005 was fusioned in to the other Commission for Agriculture, forestry and rural Development with 15 members. The assembly adopt the law on nature protection, declares the National Parks, approve the nature protection strategy etc.

The Government of Kosovo, consisted by 14 Ministries[31], which the Ministry of Environment and Spatial Planning is one of them.

Ministry of environment and Spatial Planning (MESP) it is responsible to create policies, to implement laws, and to monitoring the activities on Environmental Protection including nature resources, air, water and biodiversity.
Subordinated by the Ministry is functioning the National Park "Mali Sharr" Authority, which manages the territory of National park.

31 Rreg.2001/19 & Rreg. 2002/5.

Monitoring of law implementation and other sub-regulations is made by the Ministry, through inspectorate sector.

Kosovo Environmental Protection Agency

KEPA is established in 2003, by the approval of the law for Environmental Protection[32]. Within Kepa are included Kosovo Institute for Nature protection (KINP) and Kosovo Hydro-Meteorological Institute (KHMI). Responsibilities of KEPA include: environmental monitoring, public information, environmental information system (Database), environmental reporting as well as research projects development and advisory tasks.

Kosovo Institute for Nature Protection

It is established in 1974 with the name "Kosovo Ent for Nature Protection".
KINP, performs professional tasks in the field of nature protection. It functions under KEPA[33]. Professional responsibilities of KINP include:
a. Nature data collection and elaboration;
b. Establishes professional bases for protection of certain plant and animal species, habitats, ecosystems and landscapes.
c. Monitoring the biological and landscape biodiversity and proposing professional measures for nature protection.
d. Accomplish statistical analyzes, result elaboration and preparing reports on nature state;
e. Follow European and international trend on nature protection.

Ministry of Agriculture, Forestry and Rural development, makes policies for agriculture, forestry, hunting, fishing etc.

Kosovo Forestry Agency

It is responsible for forest management, administration of public and private forest and forestry lands, management of forests in National Parks, etc.

Kosovo Museum- nature section is in charge for Kosovo natural heritage

Local authorities, in accordance with the law for nature protection, Environmental Strategy, NEAP and other documents on spatial planning are obliged[34] to: ensure the protection of biological and landscape biodiversity in their territory, to designate new protected areas, to provide good condition for management of protected areas that are at their competency, to participate in the process of developing management plans for protected areas, to inform the public about the state of nature at their territories, to undertake measurements for nature conservations, etc

32 Law on environment Protection 2003/9
33 Article 9.2. Law on nature protection Nr.2006/22
34 Article 10, LNP2006/22

Scientific Institutions

The Kosovo Academy of Sciences and University of Prishtina, accomplish scientific researches and implement educational programs in the field o nature and biodiversity conservation.

Environmental NGOs

According to the last assessments, made in 2006 in Kosovo are active 30 registered environmental NGO-s which is the duplicate number of, comparing to first registration in 2001. The major number of active environmental NGO-s is in Prishtina (6), Pejë (5) and Mitrovica (3) etc. On the base of the details from this research in a half Kosovo
Municipalities there are no environmental NGO-s, registered.
Event though a number of NGOs is registered with an Environmental Mission/ vision, none of NGOs, have nature or biodiversity their priority area of interest

Problems And Recommendations

Problems

- Legal framework on nature protection not completed;
- Lack of the law for National park;
- Transposition of EU directives not completed;
- Lack of strategy and action plan for nature and biodiversity protection;
- Institutional responsibilities and competences not defined clearly;
- Nature institutional framework not developed properly;
- Local institutions concerning to the nature protection not developed
- Lack of management bodies for protected areas
- Lack of spatial plans for protected areas
- Existing laws are not implemented sufficiently;
- Not clear definition of management bodies competences
- Uncontrolled use of nature resources
- Illegal cutting of forests
- Lack of initiatives and projects for the use of renewable resources
- Ecosystem and habitat fragmentation as the result of settlement end infrastructure enlargement
- Intervention in protected areas
- No development of projects for nature protection
- Lack of full inventory for flora, fauna and habitats
- Not sufficient researches on biodiversity are taking place
- Low budget for nature protection
- Lack of funds on nature protection
- Lack of mechanisms for fundraising
- Lack of programs for biodiversity monitoring
- Lack of activities on awareness rising
- Public is not sufficiently involved concerning to the nature developments
- Lack of informative offices in protected areas
- Lack of educative programs about the nature and biodiversity in Kosovo educative institutions.

Recommendations

- Implementation of the Law for Nature Protection
- Transposition of EU Directives in the national legislation for nature protection
- Research and inventory of species and habitats
- National red list of flora and fauna
- Inventory and digitalization of protected areas
- Establish the control system for trade of the species
- Declare the “Bjeshket e Nemuna” a National Park
- Support projects on transboundary protected areas
- Prepare spatial plans and management plans for protected areas
- Kosovo Government to take under Control the marble cave in Gadime and to support researches in other caves
- Implement project on improving the state of bifurcation in Nerodime River, The area should be undertaken under direct management by the Government and establishing a management body
- Develop and implement projects on awareness raising for nature protection
- Establish an office, to be responsible for coordinating, ratifying and implementing the international convention and other international agreements on nature protection
- Clarify the role and responsibility of institutions concerning protected areas, in particular concerning National parks.
- Establish management authorities for important areas
- Harmonize and categorize the protected areas in accordance with the Law on Nature Protection

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(Footnotes)

1 Malisheva is created as a municipality later on.

2 The Park includes also territory of Malisheva, but it is created as a municipality after the decision for the area is made.

