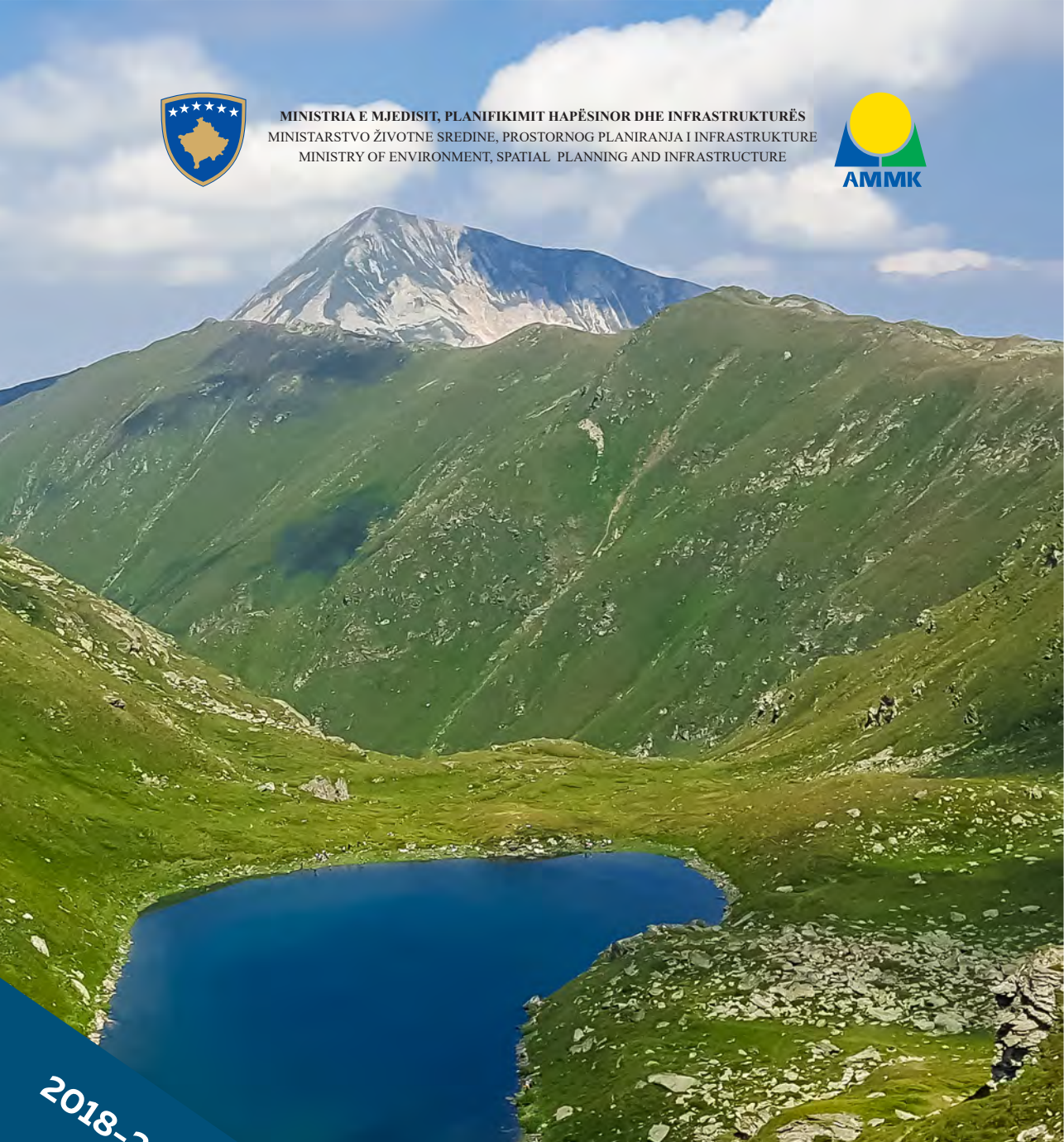




MINISTRIA E MJEDISIT, PLANIFIKIMIT HAPËSINOR DHE INFRASTRUKTURËS  
MINISTARSTVO ŽIVOTNE SREDINE, PROSTORNOG PLANIRANJA I INFRASTRUKTURE  
MINISTRY OF ENVIRONMENT, SPATIAL PLANNING AND INFRASTRUCTURE



2018-2021

# STATE OF NATURE REPORT

Prishtina, 2023



**MINISTRY OF ENVIRONMENT, SPATIAL PLANNING AND  
INFRASTRUCTURE  
KOSOVO ENVIRONMENTAL PROTECTION AGENCY  
KOSOVO INSTITUTE FOR NATURE PROTECTION**



# STATE OF NATURE REPORT

**2018 - 2021**

Prishtina, 2023



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## Abbreviations

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**KEPA** - Kosovo Environmental Protection Agency  
**OGRK** - Official Gazette of the Republic of Kosovo  
**GRK** - Government of the Republic of Kosovo  
**MLGA** - Ministry of Local Government Administration  
**MESPI** - Ministry of Environment, Spatial Planning and Infrastructure  
**NPD** - National Park Directorate  
**NP** - National Park  
**MCYS** - Ministry of Culture, Youth and Sports  
**EU** - European Union  
**SO** - Strategic Objective  
**IUCN** - International Union for Conservation of Nature  
**IPA** - Pre-Accession Instruments  
**NGO** - Non-Governmental Organizations  
**MAFRD** - Ministry of Agriculture, Forestry and Rural Development  
**UP** - University of Pristina  
**SPA** - Special Protected Area  
**PAK** - Privatization Agency of Kosovo  
**NMSI** - Natural Monument of Special Importance  
**SEA** - Strategic Environmental Assessment  
**HSSI** - Hunting Site of Special Importance  
**EEA** - European Environment Agency  
**NFI** - National Forest Inventory  
**NFRPK** - National Forestry and Reforestation Program of Kosovo  
**NFHP** - National Forest Health Program  
**MLSW** - Ministry of Labor and Social Welfare  
**EMA** - Emergency Management Agency  
**KEP** - Kosovo Environmental Program  
**KEDS** - Kosovo Energy Distribution Service  
**LBAP** - Local Biodiversity Action Plan  
**JHS** - Joint Hunting Site

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## 1. INTRODUCTION

### 1.1. General characteristics of Kosovo

**Region:** Southeast Europe

**Latitude:** 41° 51' 21 and 43° 16' **Longitude:** 19° 59' and 21° 47'

**Official name:** Republic of Kosovo

**Capital:** Prishtina

**Area:** 10,908 km<sup>2</sup>

**Population:** (2021 est.) 1,773,971

**Population density:** 163 inhabitants per 1 km<sup>2</sup>

**The total length of the border:** 743.5 km

**The length of the borders:** The border of the Republic of Kosovo with the neighboring countries mainly passes through the mountains and has a natural character.

- The Republic of Albania in the south-west 113.5 km
- The Republic of Macedonia in the south 170.7 km
- The Republic of Montenegro in the north-west 79.1 km
- The Republic of Serbia to the north and east 380.1 km

**Relief:** hilly-mountainous

- 63 % hilly-mountainous
- 37 % field

**Average altitude:** 810 m

- Lowest point 270 m (Drin i Bardhë valley, on the border with Albania)
- Highest point 2656 m (Geravica peak)

**Climate:** medium continental

**The longest river:** Drini i Bardhë 111.5 km

**The main lake:** Ujmani (Gazivoda) 9.10 km<sup>2</sup>

**Number of protected areas:** 248 (2021)

**The protected areas** (2021), are 126023.2 ha, or 11.55 % of the total area of Kosovo.

- Strict reserves: 19, (1082.96 ha)
- National parks: 2, (115957 ha)
- Natural Monument: 219, (61735 ha)
- Nature Park: 1, (5934 ha)
- Protected landscape: 6, (2227 ha)
- Special Protected Area of Birds 1 (109 ha)

**Biogeographic zones:** continental and alpine

- Continental area 90% of the surface of Kosovo
- Alpine area 10% of the surface of Kosovo

**Forests:** total area 481000 ha (44 %)

High forests: 24 %

- Medium forests: 62 %
- Bushes: 14 %

**Flora:** over 3000 species of the vascular flora

**Fauna:** about 350 species of vertebrates (220 species of birds, about 20 species of reptiles, over 10 species of amphibians, and over 30 species of fish) and about 600 species of invertebrates (including about 180 species of butterflies).

**Number of municipalities:** 38

**Number of settlements:** 1469

## 1.2. Purpose of the report

Drafting of the Report on the State of Nature in Kosovo is under the responsibility and duty of the Kosovo Institute for Nature Protection, as regulated by the Law on Nature Protection, Article 142. In order to implement the Strategy and program of nature protection as well as other documents regulating particular issues in the area of nature protection, a report on the state of the natural environment in the Republic of Kosovo shall be drafted and submitted to the Government for adoption and the Assembly shall be informed<sup>1</sup>.

The main purpose of the report is to inform the public about the state of nature, protected areas, and biodiversity of Kosovo. In addition, this report is intended to influence the improvement of policies for the management and conservation of the values of natural heritage and biodiversity. The report can also serve as a good guideline for the orientation of projects and donor support in the nature protection and conservation sector.

The report contains data on the legal, strategic and institutional framework in the nature sector, the state of protected areas, biodiversity, rare plant and animal species, forest ecosystems, interventions in protected areas, interventions in protected nature areas, and activities and projects carried out with the aim of nature protection. An important part of this report is the measures taken for the protection of nature as well as the conclusions and recommendations.

The data presented in this report were collected during site visits, by the managing bodies of protected areas, as well as other governmental and non-governmental institutions. Part of the Report is also information from laws, strategies, publications, reports, analysis of the implementation of the Biodiversity Strategy, and other relevant documents for the nature protection sector.

The presentation of the situation in the Report for some sectors (fields) of nature is less covered, as a result of the lack of data. The data of the Report refers to the 2018 - 2021 period, but in some cases in absence of data and for comparison aspects, data for previous periods were presented (Report on the state of nature 2010-2014 and report on the state of nature 2015-2017).

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<sup>1</sup> Law No.03/L-233



### 1.3. Background of nature protection of Kosovo

The first steps of nature and environmental protection in Kosovo began in the late 50s. In 1968, the nature protection unit is established within the Office for Protection of Cultural Monuments of Kosovo. In 1974, with the Decision on the division of the Nature Protection Section from the Office for Protection of Cultural Monuments of Kosovo, the Office for the Protection of Nature is established, which continued to work with the same name under the Law on Kosovo Office for Nature Protection. In 1988, the Assembly of Kosovo adopted the Law on Protection and Development of Natural Values and the Values Created by the Work of Human Environment. Under this law, a year later, the Assembly of Kosovo adopted the Law on the Kosovo Office for Protection of Nature and Environment.

In 2000, the former Kosovo Office for Protection of Nature and Environment is registered in the UN Interim Civil Administration under the name "Institute for Protection of Kosovo's Nature and Environment" with headquarters in Prishtina. In May 2000, the Environmental Protection Department is established, and the following existing institutions are incorporated and operated within it: Institute for the Protection of Kosovo's Nature and Environment, Hydro-meteorological Institute of Kosovo, and "Sharr Mountains" National Park Directorate. After the formation of Kosovo's governing bodies (2001), the Ministry of Environment and Spatial Planning is also established. In 2002 the Kosovo Assembly adopted the Law on Environmental Protection No. 2002/8 (Reg. 2003/22), this law foresees the establishment of the Kosovo Environmental Protection Agency which includes the Nature Protection Institute and the Hydrometeorological Institute.

In 2006, the Assembly of Kosovo adopted the Law on Nature Protection (Reg. 2006/22), according to this law the Institute carries out nature protection activities (Article 9, paragraph 2). In 2010, the Assembly of the Republic of Kosovo adopted Law No. 03/L-233 on Nature Protection. Since 2006 the nature protection sector acted within KEPA, while in 2013, the Kosovo Institute for Nature Protection is established.

#### 1.3.1. Current state in KPNI

According to the Law on Nature Protection (No. 03/L-233, OGRK No. 85/09, 2010), the Kosovo Nature Protection Institute is responsible for all professional work in the field of nature protection in Kosovo. Currently, the duties and responsibilities for the protection of nature are carried out through the KNPI, which operates within KEPA, with insufficient staff, with only three (3) officers, one (1) officer for biodiversity/fauna, one (1) officer responsible for flora and one (1) officer for the protected areas.

With such a small number of staff, it is not possible for the KNPI to implement the work plan, the obligations arising from the legislation in force, its implementation, reporting to the European Environment Agency, as well as the fulfillment of the obligations arising from the international conventions and European Union Directives (*Directive 2009/147/EC on the conservation of wild birds and Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna, and the ecological network "Nature 2000", etc.*).



## **II. LEGAL AND INSTITUTIONAL FRAMEWORK FOR NATURE PROTECTION**

### **2.1. Legal framework**

Based on the Constitution of the Republic of Kosovo, nature, biodiversity, environment and national heritage are everyone's responsibility (Article 52).

#### **2.1.1. Laws**

The legal framework for the protection of nature and biodiversity in the Republic of Kosovo consists of:

- Law No. 03/L-233 on Nature Protection OGRK No. 85/09 (November 2010);
- Law No. 04/L-086 on National Park "Bjeshket e Nemuna" OGRK No. 2/21 (January 2013);
- Law No. 04/L-087 on National Park "Sharri" OGRK No. 2/21 (January 2013);
- Law No. 03/L-25 on Environmental Protection OGRK No. 50/09 (April 2009);
- Law No. 2003/3 on Forests in Kosovo with amendments and supplements 2004/29;
- Law No. 02/L-53 on Hunting (August 11, 2006);
- Law No. 03/L-214 on Environmental Impact Assessment, (September 23, 2010);
- Law No. 03/L-230 on Strategic Environmental Assessment, (September 30, 2010);
- Law No. 04/L-174 on Spatial Planning, (July 31, 2013);
- Law No. 02/L-85 on Fishery and Aquaculture, (October 10, 2006);
- Law No. 02/L-122 on Organic Farming, (08 January 20008);
- Law No. 02/L-95 on Plant Protection, (January 31, 2007);
- Law No. 02/L - 41 on Fire Protection;
- Criminal Code of the Republic of Kosovo.

#### **2.1.2. Sub-legal acts adopted**

The existing legal framework for the protection of nature during the 2018 - 2021 period has been improved and supplemented with several bylaws in accordance with the requirements for harmonization with the *Acquis communautaire*.

Within the framework of the obligations arising from Law No. 03/L-233 – 2010 on Nature Protection, (3) Administrative Instructions and seven (7) GRK Decisions were approved during this period.

- Administrative Instruction MESP (No. 05/2018) on the content and way of providing professional exams for protected areas supervisory.
- Administrative Instruction MEE (No. 12/2020) for the declaration of wild species protected and strictly protected.
- Administrative Instruction (No. 01/2021) on amending and supplementing the Administrative Instruction MESP (No. 03/2016) on the determination of tariffs for

issuance of consents, permits, licenses, certificates, and verifications prescribed by legislation on nature protection.

- Decision of GRK, (No. 07/104) of 23.05.2019 on the declaration of the Protected area in the category of Natural Park " Pashtrik Mountain and Vermica Lake".
- Decision (No. 3173/21 of 16.08.2021) on declaration under the protection of the autochthonous race of the pigeon "Peja pigeon", a local domesticated type.
- Decision (No. 3173-2/21 of 16.08.2021) on declaration under the protection of the autochthonous race of pigeon "Gjakova Kryemusmi" local domesticated type.
- Decision (No. 3173-1/21 of 16.08.2021) on declaration under the protection of the autochthonous race of the pigeon "Prizren Gjylia" a , local domesticated type.
- Decision (No. 3173-4/21 of 16.08.2021) on declaration under the protection of the autochthonous race of pigeon "Peja Piklani", local domesticated type.
- Decision (No. 3173-5/21 of 16.08.2021) on declaration under the protection of the autochthonous race of pigeon "Acrobatiku - Kosova Dyneku" local domesticated type.
- Decision (No. 3173-6/21 of 16.08.2021) for the declaration under the protection of the autochthonous race of pigeon "Drenica Kuti" local domesticated type.
- Local Biodiversity Action Plan (LBAP) of Gjakova municipality (2019-2024).

#### **2.1.3. Acts under procedure 2018 - 2021**

- Preparation of amending and supplementing the Law on Nature Protection.
- Preparation of the Strategy and Action Plan on Biodiversity 2022-2030.
- Drafting of the draft Spatial Plan for NP "Bjeshket e Nemuna",
- Drafting of the Management Plan for NP "Bjeshket e Nemuna",
- The decision of Ferizaj Municipality on the categorization of the Nerodime River Bifurcation.

#### **2.1.4 Assessment of the legality of municipal acts**

Based on the request of the MLGA, for assessment of the legality of municipal acts, the evaluation of the legality of Decisions on the declaration under the protection of 66 (sixty-six) natural monuments and one (1) protected landscape was carried out.

#### **2.1.5. Permits and licenses for nature protection**

During the 2018-2021 period, fifteen (15) permits were issued for the implementation of scientific research in nature, based on the requests made mainly by local and foreign university institutions as well as non-governmental organizations. During 2021, a permit for keeping wild animals in deportation was also issued by the Foundation for Animals Protection "Vier Pforten Kosova" in Prishtina.

## **2.2. Institutional framework**

### **2.2.1. Decision-making bodies:**

- Assembly of the Republic of Kosovo,
- Functional Committee of the Assembly on Agriculture, Forestry, Rural Development, Infrastructure, Environment, and Spatial Planning,
- Government of the Republic of Kosovo,
- Ministry of Environment, Spatial Planning and Infrastructure - MESPI

### **2.2.2. Responsible bodies for nature management**

- Ministry of Environment, Spatial Planning, and Infrastructure - MESPI,
- Kosovo Environmental Protection Agency - KEPA,
- Directorate of the National Park "Sharri" - DNP,
- Directorate of the National Park "Bjeshket e Nemuna" - DNP,
- Ministry of Agriculture, Forestry and Rural Development - MAFRD,
- Kosova Forestry Agency - KFA,
- Kosova Forestry Institute - KFI,
- Local level - Municipalities.

### **2.2.3. Professional works for the protection of nature:**

- Kosovo Nature Protection Institute - KNPI (MESPI),
- Nature Protection Division - (DPEW/MESPI),
- Museum of Kosovo - MCYS,
- Scientific institutions,
- Civil society environmental organizations.

### **2.2.4. Bodies responsible for drafting Spatial Plans**

- Spatial Planning Institute - (SPI/MESPI)

## **2.3. Analysis of the implementation of Strategy and Action Plan on Biodiversity 2016-2020**

Strategy and Action Plan on Biodiversity 2016-2020 is a fundamental document for the protection of nature, which determines long-term objectives for the conservation of biodiversity and landscape diversity, protected nature values, and also the manner of implementation in harmony with general economic, social, cultural development in the Republic of Kosovo.

The Action Plan on Biodiversity 2016 - 2020 is the second five-year plan and represents the implementation document of the Strategy and Action Plan on Biodiversity 2011 - 2020, based on the following strategic objectives:

*Strategic Objective 1:* Development and implementation of the legal and institutional framework in line with the EU standards. Regarding this SO, it can be reported that the Ministry has undertaken the appropriate measures related to the harmonization of legislation for the protection of nature with the EU Directives and Regulations, as well as efforts have been made to strengthen their implementation.

Regarding this Strategic Objective, the Ministry (MESPI) has also undertaken concrete actions related to increasing the capacities of the competent bodies for the implementation and strengthening of the legislation related to the preservation of biodiversity.

In regards to the legislation for the protection of nature, the goals of this objective have been achieved to the extent of 80-100% depending on the Directive, while regarding the strengthening of legislation we have encountered difficulties related to the lack of capacities for strengthening and implementation. The signing of the Conventions has not been achieved due to the situation in which Kosovo is (non-membership in the United Nations).

In this objective, after several efforts and commitments, in March 2019 an achievement was after membership of Kosovo in the World Organization for Conservation of Nature (International Union for Conservation of Nature - IUCN).<sup>2</sup>

*Strategic Objective 2:* Initiation and support of projects that will contribute to the protection and improvement of the state of plants and animal species, natural habitats, and representative landscapes.

The Ministry has undertaken measures to increase the total area of protected zones in the territory of the Republic of Kosovo, increasing it to a solid percentage of 11.56%, which ensured the coverage of several types and natural habitats. While the ex-situ protection of plant and animal genetic resources as well as the preparatory works for the establishment of the "Nature 2000" ecological network have not been carried out due to the lack of institutional capacities and the lack of financial support (these are projects that the countries of the region have implemented with the IPA (Instruments of Pre-Accession) assistance), therefore we are making efforts to benefit from this technical assistance with IPA III.

*Strategic Objective 3:* Protection of nature, to be integrated in sectorial policies through cooperation with important stakeholders. The Ministry has actively participated in the drafting process of sectoral policies for: energy, agriculture, forestry, tourism and hunting, and has contributed to the creation of integrated sectoral policies, effective management and sustainable use of biodiversity.

*Strategic Objective 4:* Support and close cooperation with municipalities, NGOs and the university in implementation of projects in the education and communication sector. For the reporting period, the Ministry has cooperated with municipalities, UP, and NGOs, in declaring new protected zones as well as in raising awareness on the importance of preserving biodiversity.

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<sup>2</sup> Following is the link: <https://www.iucn.org/search/Kosovo>

These four Strategic Objectives are broken down into 11 (eleven) Specific Objectives (in the document so-called as "measures") and 40 (forty) specific projects in the document so-called as actions. Regarding the implementation of activities/actions in order to achieve the strategic objectives, we will provide the details in the following table:

*Table 1. Implementation of the Action Plan for Biodiversity according to activities (measures and actions)*

No.	Activity	Responsible institutions	The achieved status of implementation
1.	Drafting and approval of sub-legal acts deriving from the Law on Nature Protection.	MESP, GRKS	This activity has been fully implemented.
2.	To continue with the promotion in the community of the legislation for the nature protection.	MESP, Municipalities	This activity has been fully implemented.
3.	Approval of nature protection programs for each municipality.	Municipalities, MESP	Partially implemented, only three municipalities have approved Biodiversity Conservation Programs.
4.	Lobbying for ratification of relevant Conventions and treaties.	MFA, MESP, Assembly of Kosova	This activity was not implemented due to the Kosovo status, only membership in the IUCN was achieved.
5.	Harmonization and strengthening of legislation and clarification of competencies for the management of National Parks.	MESP, MAFRD, Assembly of Kosova	It has not been implemented, the Draft Law on Forests is under the approval procedure.
6.	Empowerment of competent institutions and bodies for the protection and conservation of biodiversity.	MESP, Donors	The activity is ongoing and has been partially implemented.
7.	Capacity building for access to international funds.	KIPA, Donors	The activity is ongoing and has been partially implemented.
8.	Declaring of Pashtrik as a transboundary protected zone.	Government, MESP	The activity was partially implemented because the area was declared a Natural Park with the GRKS Decision, while the Republic of Albania has not declared it yet as a Protected area.
9.	Identification and declaration of important bird areas.	MESP, GOvernment	Partially implemented, due to the lack of institutional capacities.
10.	Inventory and mapping of rare species of flora and fauna in "Bjeshket e Nemuna".	MESP, Donors	Partially implemented, this activity is developed continuously.
11.	Updating the inventory of birds in "Bjeshket e Nemuna".	MESP, Donors, NGO	The activity was not implemented due to the lack of financial means and institutional capacities.
12.	Inventory and mapping of rare species of flora and fauna in "Sharri".	MESP, Donors	Partially implemented, this activity is developed continuously.
13.	Updating the inventory of birds in "Sharri".	MESP, Donors, NGO	The activity was not implemented due to the lack of financial means and institutional capacities.
14.	Inventory of invasive and alien plant species.	MESP, MAFRD	The activity was not implemented due to the lack of financial means and institutional

			capacities.
15.	Preparation and publication of the Fauna Red Book.	MESP, Donors	The activity is fully implemented, and the Fauna Book published.
16.	Provision of equipment for research and monitoring of natural resources.	MESP	The activity has been partially implemented, monitoring equipment has been provided (GPS camera raft, Camera, etc.).
17.	Strengthening the Genetic Resources Bank for plants and Establishing the Genetic Resources Bank for animals.	MEST, UP, MESP	The activity has not been implemented, there are some actions that have been carried out by the Faculty of Veterinary and Agriculture of UP, especially for plants.
18.	Preparation of a manual for the interpretation of types of settlements in accordance with the Directive on Settlements.	MESP, Donors, UP,	The activity was not implemented due to the lack of financial means and institutional capacities.
19.	Development of the Central Information System (CIS) for biodiversity.	MESP, Donors	The activity has been partially implemented, CIS is organized within the Environmental Information System (SIM).
20.	Human and technical capacity building for the cartographic representation of settlements and the inventory of types (training).	MESP, Donors	The activity has been partially implemented, the staff has been trained for the inventory of species
21.	Collection of data on settlement types (including distribution, representation, etc.) including fieldwork.	MESP	The activity has been partially implemented, and preliminary research of the natural settlements present in the Republic of Kosovo has been implemented, it needs to be continued in the future.
22.	Production of distribution maps for all settlement types and species, based on existing data.	MESP, Donors	The activity has been partially implemented, and some preliminary maps have been created (definition of biogeographical regions), while in the future we must continue with the preparation of maps according to the requirements for the Ecological Network "Natura 2000".
23.	Continuation of the effective implementation of SEA and EIA procedures.	MESP, Donors	The activity is continuously implemented in accordance with the SEA and EIA laws.
24.	Preparation and approval of regulatory plans and Management Plans for NP "Bjeshket e Nemuna".	MESP, Donors, Assembly of Kosova	With the support of the Environmental Program for Kosovo (SIDA), these plans have been prepared but have not yet been approved.
25.	Preparation and approval of management plans for other large protected areas (over 500 ha).	MESP, MBPZHR, Donors	This activity has not been implemented.
26.	Preparation of Management Plans for large mammal species.	MESP, MAFRD, UP, NGO, Donors	There are no tangible results, even though consultations have been held with the responsible actors, this action is expected to be implemented in the documents.
27.	Support for the development and implementation of the Drini i Bardhë River Basin Management Plan.	MESP, Donors	With the support of the Environmental Program for Kosovo (SIDA), the Drini i Bardhë Basin Management Plan has been prepared but has not yet been approved.
28.	The development of incentive	MESP,	This activity was partially implemented with

	measures for the promotion of biodiversity conservation in other sectors, to continue with the implementation of measures in the forestry-agriculture sector.	MAFRD	the participation of the WG in the drafting of policies in other influential sectors.
29.	To continue with the policy of reviewing the legislation of other relevant sectors in relation to objectives, practices, and regulations. that potentially have a negative impact on biodiversity.	MESP, MED, MTI, MAFRD	This activity is developed continuously with the participation in the WG in the drafting of legislation in other sectors with an impact on biodiversity.
30.	Capacity building for the implementation of the "Assessment of Acceptability" (AoA), in accordance with the Settlements Directive.	MESP, Donors	The activity was not implemented due to a lack of support from donors, while MESP does not have the capacity to offer such trainings.
31.	Continuation of the determination of conditions for the protection of nature during the preparation of legislation, strategies, programs, and plans of other relevant sectors.	MED, MTI, MI, MAFRD	The activity is developed continuously and currently can be assessed as partially fulfilled.
32.	Implementation of additional training programs for teachers regarding nature protection and curriculum implementation at all levels.	MEST, MESP, Municipal Directorates	This activity has been continuously implemented.
33.	Continuation of the Pako e Gjëlber Junior Project, training of lower cycle teachers.	MEST, MESP, Municipal Directorates	The activity was implemented in some of the municipalities for the selected topics.
34.	Raising awareness of local residents living in or near protected areas.	MESP, Donors	The activity has been partially implemented, for example, the project financed by JICA in Suhareka.
35.	Strengthening cooperation between MESP and NGOs for non-formal education activities.	MESP, NGO	The activity was implemented through activities marking the environmental holidays, the green week for sustainable development.
36.	Development of Eco Trail Project in "Gërmia" Regional Park as well as the management plan with a focus on education.	Prishtina Municipality, Donors	The activity is fully implemented, the trail is functional.
37.	Development and Implementation of the Botanic Garden Project.	MESP, Donors	The activity was not implemented due to lack of funds.
38.	Development and implementation of awareness campaigns at the national level.	MESP, MAFRD, MED, MTI, MI, Media	The activity has been partially implemented and should continue in the future.
39.	Increasing number of university staff for taxonomy, cartography, biodiversity management and protection.	MEST, UP	The activity was partially implemented with the commitment of the staff for a specific campaign.
40.	Supporting scientific research and projects in the field of biodiversity protection.	MEST, UP, MESP	The activity has been partially implemented, such activities are carried out continuously.
	<b>Fully Implemented</b>	Partially implemented	Not implemented

Source: DMEW /MESPI



As mentioned above, with the Action Plan for Biodiversity 2016-2020, 40 (forty) activities are planned through which the strategic objectives for biodiversity conservation will be implemented. 6 (six) activities out of these forty actions have been fully implemented, 22 (twenty-two) have been partially implemented, while 12 (twelve) activities remain to be implemented in the future.

### **III. CHRONOLOGY OF DECLARATION OF PROTECTED AREAS**

In the chronology of the declaration of nature-protected areas in Kosovo, three very important periods of time can be distinguished, which are linked with the general developments in Kosovo. After the war in 1999, significant results were recorded in the increase of the total number of protected areas as well as in the expansion of protected nature areas of all categories.

The period 1950 – 1970, represents the initial phase of nature protection and the declaration of nature-protected areas in Kosovo. It starts with the declaration of the first area in 1950 which was “Gazimestan”. Until the beginning of the 70s, the number of protected areas was gradually increasing reaching up to 19 (nineteen) areas. In this period, the following were put under protection: Shpella e Gadimes/Gadime Cave and some other monuments of botanic importance such as Rrapi (Plane tree) in Marash, Trungjet in Isniq, etc.

The period 1970-1988 is characterized by the declaration of the greatest number of nature areas. The reason for this success is the establishment of the Kosovo Office for Protection of Nature in 1974, by the Assembly of Kosovo. During this period, 32 nature areas have been put under protection in total from which will be distinguished: “Bifurcation of Nerodime River”, First National Park “Mali Sharr/Sharri Mountain”(1986), Spring of Drini i Bardhë with the Cave and Waterfall in Radave (1983) and some other nature monuments.

During the 1989-1999 period, like in other spheres, there was complete stagnation in nature protection regarding the declaration of protected areas. It was the period when, as a result of the exclusion of Albanian experts from the institutions for the protection of nature, but not only that, we do not even have a protected or proposed area for protection.

The period after 2000 is characterized by the reestablishment and re-functioning of Kosovo institutions, including also the institutions for nature and environmental conservation, respectively the Institute of Nature Protection. During this period, 200 new nature areas have been taken under legal protection and over 30 others have been proposed. Among the protected areas, the following should be mentioned: National Park "Bjeshkët e Nemuna" (2013), NP "Sharri" (extended), Pashtrik Mountain and Vërmica Lake, Wetland of Henci - Radeva, etc. Whereas most of them are natural monuments with a botanic, hydrologic, geomorphologic, speleological character, etc.



Figure. 1. Number of Nature Protected Areas 1950 - 2021



Source: KINP

### 3.1. Period 2018-2021

In the 2018-2021 period, a total of 64 new areas have been added to the total number of protected areas (Gjakova 10, Mitrovica 12, Obiliq 4, Vitia 7, Gjilan 13, Deçan 17 and the locality of Boshtra in Golesh area, which is in the territory of the following municipalities: Drenas, Fushë Kosova and Lipjan), out of which: 62 natural monuments (trunk of the *Quercus pubescens* in Hareq, complex of trunks in Jabllanica - Gjakova, the caves in Kaçandoll, Trepçalia Waterfall in Melenica, ice crown in Rahova, oak tree trunks in Zabërgja - Mitrovica, mulberry tree trunk in Mazgit - Obiliq, oak tree trunk complex in Lower Slatina, hornbeam tree trunk in Zhitia - Vitia, hornbeam tree trunk in Llashtica, aspen tree trunk in Llovce - Gjilan, hornbeam tree trunk in Ratisha e Ulët, spring of mineral water in Deçan, glen of Lluka in Lluka e Ulët - Deçan, etc.), and two (2) protected landscapes (Llomova beech trees in Selac - Mitrovica and Lapushnik river valley in Pogradje village - Gjilan).

In the framework of activities for the protection of biodiversity, with the initiative of the Institute for the Protection of Nature, the Minister of MESPI, through separate decisions, has placed under protection several indigenous breeds of pigeons of Kosovo. With the approval of these decisions, the autochthonous types of pigeons: Pëllumbi/pigeon of Peja, Kryemusmi of Gjakova, Gjylia of Prizren, Piklani of Peja, Akrobatiku-Dyneku of Kosova, and Kuti of Drenica have been placed under legal protection.

During this period, several other new natural areas were identified in the municipalities: Novobërda, Peja, Fushe Kosova, Podujeva, Pristina, and Ferizaj. After the identification of the natural values, KINP drafted the professional rationales and will proceed it for legal protection.

#### IV. NATURE-PROTECTED AREAS

The total number of nature-protected areas in Kosovo (2021) is 248, and includes a territory of 126,023.2 ha, or 11.5% of the territory of Kosovo. These areas include *19 Strict Nature Reserves* ("Rezervati i Arnenit", "Maja e Ropsit", "Rusenica", "Kamilja", etc.), *2 National Parks* (NP "Sharri", NP "Bjeshket e Nemuna"), *219 Nature Monuments* ("Spring of White Drin with the Radavci Cave/Burimi i Drinit të Bardhë me Shpellën e Radavcit", "Gadime Cave/Shpella e Gadimes", "Mirusha Waterfalls/Ujvarat e Mirushës", "Rugova Gorge/Gryka e Rugovës", "White Drin Canyon of Ura e Fshajte/Kanioni i Drinit të Bardhë te Ura e Fshajtë", "Trungu i Rrapit në Marash", etc.), *1 Nature Park* ("Pashtrik Mountain and Vërmica Lake/Mali Pashtrik dhe Liqeni i Vërmicës"), *6 Protected Landscapes* ("Shkugeza", "Germia" and "Pishat e Deçanit", etc.) and one (1) *Special Protected Area of Birds* ("Wetland of Henci-Radeva").

The largest area of protected areas consist of the National Parks "Bjeshkët e Nemuna" and "Sharri", Nature Park "Pashtrik Mountain and Vermica Lake", Protected Landscape "Germia", NMSI "Mirusha Waterfalls" and NM "The locality of Boshtra in Golesh area", etc.

Table 2. Protected Areas by category (2021)

IUNC Category	Name	No.	Surface/ha	Participation in the total surface of PAs	Participation of PA in the area of
I	Strict Nature Reserves	19	10,882.96	7.7	0.99
II	National Parks	2	115,957	82.1	10.6
III	Nature Monuments	219	6,173.35	4.4	0.56
V	Nature Park	1	5,934	4.2	0.5
V	Protected Landscape	6	2,227.35	1.6	0.2
V	Special Protected Areas of Birds	1	109.5	0.08	0.01
	Total	248	126023.2 <sup>3</sup>	100 <sup>4</sup>	11.55 %

Source: KINP

##### 4.1. Classification of Protected Areas

Classification of Protected Areas is based on the Law No. 03/L233 on Nature Protection and is partially in line with the International Union for Conservation of Nature (IUCN). Nature protected areas under this Law are classified into seven (7) categories:

<sup>3</sup> Clarification: this area of protected areas does not include the protected areas located within "Sharri" and "Bjeshket e Nemuna" National Parks.

<sup>4</sup> Clarification: the percentage is derived from the total area, including the area of protected areas within national parks.

#### **4.1.1. Strict Nature Reserves**

A strict nature reserve is an area of land and/or water unchanged or little changed and is dedicated exclusively to the preservation of untouched nature, scientific research of biological diversity, monitoring of the state of nature. *Out of the general territory of protected areas, strict nature reserves take up 10885.82 ha. In Kosovo, so far we have 19 strict nature reserves.*

#### **4.1.2. National Park**

A national park is a large area of land and/or water, with extraordinary and diversified natural values, including one or more of natural ecosystems conserved or least-changed and especially dedicated for conservation of nature authentic values. A national park is intended for scientific, cultural, educational and recreational purposes.

*Kosovo has two National Parks declared by the Assembly of Kosovo: NP "Sharri" with an area of 53,469 ha and NP "Bjeshkët e Nemuna" with 62,488 ha. The national parks cover a total area of 115,957 ha.*

#### **4.1.3. Special Protected Area – SPA and SAC**

Special protected area is a wide area of the land and/or water, with special importance because it's unique, rare or representative or is a habitat of wild species and especially is important for scientific research. *Kosovo has only one Special Protected Birds Area – Wetland of Henci-Radeve covering an area of 109 ha.*

#### **4.1.4. Nature Park**

Nature Park presents large natural or partly artificial area of the land and/or water, with ecological features of national and international importance with emphasized values of landscapes diversity, educational, cultural - historical and tourist – recreational values.

*Within this category, "Pashtrik Mountain and Vermica Lake" are put under protection, as a protected cross-border areas between Kosovo and Albania, with a total area of 5934 ha.*

#### **4.1.5. Nature Monument**

A nature monument is the individual unchanged segment or a group of segments of living or nonliving nature distinguished by ecological, scientific, aesthetic or cultural-historical and/ or tourist value. Nature monument may be: geological - pale-ontological, mineralogical, hydrologic, geologic structure, sediment, geomorphologic - cave, chasm, cliff walls, hydrologic – water sources, water flow, waterfall, lake, botanic - rare exemplars or important for vegetative world of one locality, small botanic or zoological locality, important for its scientific values.

In Kosovo there are 219 Nature Monuments under protection with an area of 6173.35 ha. Out of them, 161 with botanic character, 29 hydrological, 11 geomorphologic and 18 speleological.

#### 4.1.6. Protected Landscape

The protected landscape is a natural or factitious nature area with high landscape and biological diversity values, or cultural-historical, or landscape with unique conservation characteristics for a certain region that is dedicated to relaxation and recreation.

*Within this category are Gërmia (Prishtina), Shkugza (Gjakova), Complex of Pines in Strazha, (Kaçanik), Pishat e Deçanit (Deçan), Lapushnik River Valley/Lugina e Lumit Lapushnikë (Gjilan), Ahishtat e Llomovës (Mitrovica). The total area of the Protected Landscape category is 2227 ha.*

#### 4.1.7. Monuments of Park Architecture

A Park architecture monument is an artificially created space: botanic garden, arboretum, city park, tree lining, and other forms of parks and gardens, respectively individual trees or groups of trees with high aesthetic, cultural-historical, ecological, or scientific values. *Within this category of protection, there is still no protected area in Kosovo classified.*

### V. STRICT RESERVES

In Kosovo, there are (19) Strict Reserves. The Strict Reserves are mainly located within the territory of National Parks. In the National Park “Sharr”, there are the following reserves: Lëndina e Shenjtë, Shutmani, Bredhiku, Pashallar, Gryka, Lumëbardhi, Luboteni, Koritniku, Kobilica, Dupnica, Bistra, Rusenica, Oshllaku, Maja e Arnenit, and Pisha e Madhe. Whereas in the National Park “Bjeshkët e Nemuna”, there are: Bjeshka e Kozhnerit-Maja e Ropsit, Malet e Prilepit, and Gubavci, while Kamilja reserve is in Leposaviq.

#### 5.1. Lëndina e Shenjtë

Lëndina e Shenjtë is located in the mountains of Mushtisht, Suhareka Municipality, at an altitude of 1150-1372 meters with a surface area of 17.98 hectares. In this area, apart from the steno-endemic type *Burnmullera dieckii*, there are rare and endemic species such as: Heldreich's pine (*Pinus heldreichii*), mugo pine (*Pinus mugo*), *Stachys scardica*, *Polygala doerfleri*, etc. Medical types are: common hedgenettle (*Stachis officinalis*), European goldenrod (*Solidago virgaurea*), cowslip primrose (*Primula officinalis*), cross gentian (*Gentiana cruciata*), angular Solomon's seal (*Polygonatum officinale*), green-veined orchid (*Orchis morio*), spring gentian (*Gentiana verna*), etc

Regarding the fauna in this area, there are species such as: roe deer (*Capreolus capreolus*), wild boar (*Sus scrofa*), badger (*Meles meles*), beech marten (*Martes foina*), common buzzard (*Buteo buteo*), common cuckoo (*Cuculus canorus*), and green woodpecker (*Picus viridis*).

## 5.2. Shutmani

Shutmani is located on silicate and limestone rocks, at an altitude of 1,400 to 2,658 meters, and covers an area of 5057 hectares. In these areas, there are plant species such as: Alkana e Sharrit (*Alkana scardica*), Siberian onion (*Allium sibiricum*), *Alyssum scardicum*, Armeria e alpeve (*Armeria alpina*), Barbarea ballkanike (*Barbarea balcana*), *Cardus scardicus*, Albanian lily (*Campanula albanica*), Cicerbita e Pançit (*Cicerbita pancicii*), Sharri Krokus (*Crocus scardicus*), Sharri Carnation (*Dianthus scardicus*), Magnificent carnation (*Dianthus superbus*), Wild gooseberry (*Discorea balcanica*), Bulgarian Gentianella (*Gentianella bulgaria* var. *Albanica*), *Draba scardica*, *Draba korabensis*, *Achillea abrotanoides*, *Achillea chrysocoma*, *Achillea atrata*, etc. The most important medical species are Sanëza (*Gentiana lutea*), Genciana pikaloshe (*Gentiana punctata*), etc.

From the bird species, there are the golden eagle (*Aquila crysaetos*) and sometimes the griffon vulture (*Gyps fulvus*).

## 5.3. Bredhiku

Bredhiku is located on silicate rocks, at an altitude of 1100 - 1450 meters and has a surface area of 123.16 hectares. In this area are identified the types of vegetation, such as: Bulgarian fir (*Abies borisi regis*) and silver fir (*Abies alba*). Within this area there are also the following plant species: *Aruncus dioicus*, *Campanula foliosa*, *Chrysanthemum leucanthemum*, *Melampyrum bishariense*, etc. This area is the habitat of roe deer (*Capreolus capreolus*) and brown bear (*Ursus arctos*).

## 5.4. Pashallarë

Pashallarë is located on serpentine rocks, at an altitude of 1280 – 2092 metres and has a surface area of 400 hectares. From the woody and shrub species found in this area, the following are distinguished: Heldreich's pine (*Pinus heldreichii*), Macedonian pine (*Pinus peuce*), mugo pine (*Pinus mugho*), Tisi (*Taxus bacata*), bilberry (*Vaccinium myrtillus*), Siberian juniper (*Juniperus nana*), Mountain rose (*Rosa pendulina*), etc. Within this reserve, there are steno-endemic type plants such as burnmullera e Dieckit (*Bornmullera dieckii*) and cerasti i Sharrit (*Cerastium neoscardicum*), which are of international importance. Other endemic type plants are: *Adenostyles glabra*, *Anthylis vitelina*, *Lazerpitium* sp., *Lilium albanicum*, *Campanula moesiaca*, *Campanula albanica*, *Campanula foliosa*, *Campanula glomerata*, *Knautia dinarica*, etc.

The fauna of this area consists of many species, while the most important ones are: *Lynx lynx*, *Ursus arctos*, *Canis lupus*, *Capreolus capreolus*, *Canis vulpes*, *Sus scrofa*, *Felis sylvestris*, *Martes martes*, *Meles meles*, *Apodemus silvaticus*, etj. Recently, the presence of chamois (*Rupicapra rupicapra*) that have migrated from their habitat in Oshlak is noted.

The most important bird species in the area are: *Aquila chrysaetos*, *Falco biarmicus*, *Accipiter gentilis*, *Accipiter nisus*, *Bubo bubo*, *Strix aluco*, *Otus scops*, *Alectoris graeca*, *Tetrastes bonasia*, *Loxia curvirosta*, *Pyrrhocorax pyrrhocorax*, *Lullula arborea*, *Parus atricapillus*, etc.

### 5.5. Gryka

Gryka is located on serpentine rocks, at an altitude of 1050 – 1531 meters, and has a surface area of 103.98 hectares. Within the forest vegetation in this area, there is Tisi with beech (*Fageto-Taxetum baccata*). While regarding plant species we can mention: endemic and relict type, Natalie's ramonda (*Ramonda nathaliae*), as well as Heartleaf oxeye (*Telekia speciosa*), bladder campion (*Silene vulgaris*), maidenhair spleenwort (*Asplenium trichomanes*), etc.

The area represents a habitat and migration area for many wildlife species: *Ursus arctos*, *Capreolus capreolus*, *Felis sylvestris*, *Canis vulpes*, *Sus scrofa*, *Meles meles*, *Martes foina*, *Testudo graeca*. The most important birds in the area are: *Buteo buteo*, *Falco biarmicus*, *Accipiter gentilis*, *Bubo bubo*, *Strix aluco*, *Lanius collurio*, *Lullula arborea*, *Dryobates minor*, *Picus viridis*, *Alectoris graeca*, *Cuculus canorus*, *Turdus merula*, etc.

### 5.6. Lumëbardhi

Lumëbardhi is located on silicate rocks, at an altitude of 1570 – 26 meters, and has a surface area of 304 hectares. Within this reserve, the following plant communities are included: Beech forests (*Fagetum subalpinum*) and Juniper with blueberry (*Vaccinio-Juniperetum nanae*). Whereas from plant species, there are: *Dinathus scardicus*, *Crocus scardicus*, *Draba korabensis*, *Potentilla montonegrina*, *Selaginella selaginoides*, *Pedicularis oederi*, *Silene waldsteinii*, *Salix herbacea*, *Lilium albanicum*, *Ranunculus incomparabilis*, *Pinguicula balcanica*, *Allysum scardicum*, *Anemone narcissiflora*, *Draba doerfleri*, etc. The highest rocky parts of the area represent the habitat of chamois and golden eagle (*Aquila chrysaetos*), while the forests and pastures in the lower parts of the area are used by the brown bear and roe deer.

### 5.7. Luboteni

Luboteni is located in limestone rocks, at an altitude of 1600 - 2514 meters and has a surface area of 202.16 ha. In this area is found the vegetation: *Carex laevis*-*Helianthemum*.

Regarding the plant species, there can be found: *Achillea ageratifolia* var *aizooni*, *Centaurea kasanini*, *Euphorbia glabriflora*, *Draba scardica*, *Genista hassertiana*, *Thlaspi bellidifolium*, *Salvia scardica*, *Stachys scardica*, *Thymus albanus*, *Thymus lykai*, *Dianthus microlepis*, *Dianthus scardicus*, *Silene roemerii*, *Ranunculus millefoliatus*, *Silene sendtneri*, *Asperula dorfleri*, *Fumana bonapartei*, etc.

This area is the habitat of wild goats, and during the summer can be seen also predatory birds: The golden eagle (*Aquila chrysaetos*), the peregrine falcon (*Falco peregrinus*), the common buzzard (*Buteo buteo*), which uses this area for food search.



### 5.8. Kozhnjer Mountain and the Peak of Rops

The Mountain of Kozhnjer and the Peak of Rops is located on limestone and serpentine rocks, at an altitude of 1708 - 2501 meters, and has a surface area of 1,110.57 ha. In this area, there are plant communities such as: the community of *Picetum excelsae*, the community of *Piceo-Pinetum peucis*, and the community of *Pinetum peucis*. Within the vegetation of herbaceous plants, the following types are distinguished: *Saxifraga stellaris*, *Valeriana tripteris*, *Malva moschata*, *Cirsium candelabrum*, *Tanacetum vulgare*, *Salix eleagnos*, *Lilium martagon*, *Centaurea ipecensis*, *Verbascum baldacii*, etc. The highest rocky parts of the area represent wild goat (*Rupicapra rupicapra*), and lynx (*Lynx lynx*) habitat, while forests represent habitat of brown bear (*Ursus arctos*), deer (*Capreolus capreolus*), wild boar (*Sus scrofa*), etc.



Source ERA. Photo No. 1. Balkan lynx (*Lynx lynx Balcanicus*),

### 5.9. Koritniku

Koritnik is located on limestone rocks and has a surface area of 818 ha. In this area is found the plant community Rrobulli (*Pinetum heldreichii*). While within the vegetation of herbaceous plants, the following types are distinguished: *Achillea chrysocoma* Friv., *Achillea holosericea*, *Alysum montanum*, *Armeria alpina*, *Anthylis vitelina*, *Asperula doerfleri* Wettst., *Bunium alpinum*, *Carex laevis*, *Campanula versicolor*, *Centaurea napulifera*, *Crocus veluchensis* Herb., *Euphrasia salisburgensis*, *Festuca panciciana*, *Daphne cneorum*, *Dianthus scardicus*, *Draba lasiocarpa*, *Draba corabensis* Kumm. et. Deg., etc. Koritniku is the habitat of many species of fauna where the most important are: *Lynx lynx*, *Felis silvestris*, *Rupicapra rupicapra*, *Ursus arctos*, *Canis lupus*, *Capreolus capreolus*, *Meles meles*, *Canis vulpes*, *Sus scrofa*, *Glis glis*, *Mustela nivalis*, *Sciurus vulgaris*, *Sorex alpinus*, etc.



Photo No. 2. The forest community of Rrobulli (*Pinetum heldreichii*)

#### 5.10. Kobilica

Kobilica is located in limestone rocks, at an altitude of 1800 – 2527 meters and has a surface area of 199 ha. In this area is found the herbal stenoendemic type of international importance such as: *Hieracium kobilicanum*, while other important endemic species are: *Silene schmuckeri*, *Rumex nivalis*, *Dianthus superbus*, *Viola grisebachiana*, *Erigeron uniflorus*, *Saussurea alpina*; *Lilium albanicum* dhe *Salix herbacea*, etc.

#### 5.11. Dupnica

Dupnica is located on silicate rocks, at an altitude of 1250 to 2585 meters and has a surface area of 494 ha. In this area are found plant communities such as: beech (*Fagetum subalpinum*) and Siberian juniper (*Juniperetum nanae*). Most important endemic plants are: Klokëz shmukeri (*Silene schmuckeri*), herbaceous willow (*Salix herbacea*), curly carnation (*Dianthus superbus*), etc. Dupnica represents the wild goat habitat. This area possesses favorable conditions for the development of fauna in NP "Sharri". In the lower parts of the area are found nests of the brown bear and wolf. During the summer season, this area is visited by predatory birds such as the: the eagle of the mountains (*Aquila crysaetos*), the common buzzard (*Buteo buteo*), the peregrine falcon (*Falco peregrinus*) etc.

#### 5.12. Bistra

Bistra is located on silicate rocks, at an altitude of 1350 – 2651 metres and has a surface area of 642.12 ha. There are found plant communities such as: Rowan (*Seslerio-Pinetum heldreichii*), Arneni (*Ajugo-Pinetum peucis*), Spruce, Rowan and Arneni (*Abieti-Pinetum peucis heldreichii*), Beech and White Pine (*Fago-Pinetum silvestris*), Beech, Spruce and Arneni (*Abieto-Fageto-Pinetum peuciae*), Arneni, Siberian Juniper and Blueberry (*Vaccinio-Junipero-Pinetum peuciae*), etc.



There is also the sub-association (*Vaccinetum uliginosi*) at the highest altitude. From the endangered fauna types, we distinguish the following: *Felis silvestris*, *Rupicapra rupicapra*, *Ursus arctos*, *Canis lupus*, *Capreolus capreolus*, *Canis vulpes*, *Spermophilus citellus*, *Meles meles*, *Glis glis*, *Spalax monticola*, *Mustela erminea*, *Mustela nivalis*, *Arvicola terrestris*, etc. In the Bistra area, there are habitats of rare and endangered species of birds: *Tetrao urogalus*, *Aquila chrysaetos*, *Aquila heliaca*, *Buteo buteo*, *Falco peregrinus*, *Accipiter gentilis*, *Bubo bubo*, *Strix aluco*, *Loxia curvirosta*, *Tetrastes bonasia*, *Lullula arborea*, *Dryobates minor*, *Montifringilla nivalis*, etc.



Photo No. 3. Strict Reserve "Bistra"

### 5.13. Prilepi Mountains

Prilepi Mountains is located on the limestone rocks, with an altitude of 1815 m and with a surface area of 106.04 hectares. The following plant communities are present in this area: Heldreich's maple (*Acer heldreichii*), Arneni (*Pinus peuce*), Scots Pine (*Pinus silvestris*), Norway spruce (*Picea abies*), European silver fir (*Abies alba*), Sycamore maple (*Acer pseudoplatanus*), Norway maple (*Acer platanoides*), Beech (*Fagus moesiaca*), Silver birch (*Betula pendula*), Aspen (*Populus tremula*), Goat willow (*Salix caprea*), etc. The most important fauna species are the following: Brown Bear (*Ursus arctos*), Beech Marten (*Martes foina*), European badger (*Meles meles*), etc. The following can be distinguished from the species of ornithofauna: Rock partridge (*Alectoris graeca*), Stock dove (*Columba oenas*), Common raven (*Corvus corax*), Common Cuckoo (*Cuculus canorus*), White-backed Woodpecker (*Dryobates leucotos*), Woodlark (*Lullula arborea*), etc.

### 5.14. Gubavci

The Strict Reserve "Gubavci" is located in the western part of Peja at the foot of Koprivnik. In 2016, the reserve area has been expanded from 38 hectares to 76.84 ha. The Boshtra (*Forsythia europaea*) plant community is present in this area.

Within the types of herbaceous plants, the following can be mentioned: *Centaurea kosaninii*, *Fumana bonapartei*, etc. According to the data (literature), the stenoendemic type *Rubus ipecensis*<sup>5</sup> is also mentioned.

### 5.15. Rusenica

Rusenica is located on limestone rocks, with an altitude of 780-1810 m, with a surface area of 270 hectares. The following plant communities can be found in this area: fir beech forests (*Abieto-Fagetum*), Beech (*Fagetum montanum*), Gall and black ash (*Orno-Ostryio carpinetum*), Robulli and Bornmullera (*Bornmullero-Pinetum heldreichii*), and Red Juniper (*Daphno-Juniperetum oxicedri*), etc.

Within the types of herbaceous plants, the following species are distinguished: *Bornmullera dieckii*, *Potentilla argentea*, *Pilygala doerfleri*, *Ramonda serbica*, *Achillea holosericea*, *Hieraceum weldsteini*, *Galium rupestre*, *Scrophularia bosniaca*, *Minuartia verna*, *Achillea ageratifolia*, *Erysimum silvestre*, *Aetionema saxatile*, *Eryngium palmatum*, *Sylibum marianum*, *Camapnula secundiflora*, etc.

As for the fauna, in addition to the lynx, other species are also found in this area, such as: *Rupicapra rupicapra*, *Ursus arctos*, *Capreolus capreolus*, *Sus scrofa*, *Felis sylvestris*, *Meles meles*, *Lepus europeus*, *Erinaceus europaeus*, *Vipera amodydes*, *Lacerta viridis*, etc. Rusenica is a habitat for multiple species of bats (*Chiroptera*), which should be further studied.

The most important species of birds in the area of Rusenica are: *Milvus milvus*, *Falco peregrinus*, *Accipiter gentilis*, *Bubo bubo*, *Lullula arborea*, *Dryobates leucotos*, *Cuculus canorus*, *Turdus merula*, *Parus atricapillus*, *Pyrrhocorax pyrrhocorax*, *Alectoris graeca*, etc.

### 5.16. Oshlak

Oshlak is located on the limscale rocks, at an altitude of 1150 - 2212 metres, with a surface area of 550.47 hectares. Within the vegetation of herbaceous plants, these types are distinguished: *Achillea Alexandri regis*, *Gentiana lutea*, *Helianthemum canum*, *Dianthus scardicus*, *Dianthus integer*, *Dianthus superbus*, *Dianthus cruentus*, *Gencianella bulgarica*, *Thymus albanicus*, *Lilium albanicum*, *Alkanas scardica*, *Potentilla montenegrina*, etc.

The following plant communities are present in this area: Bosnian pine (*Seslerio-Pinetum heldreichii*), Dredhak (*Pinetum mugho*), Dredhak and Mushtekna (*Betulo-Pinetum mugho*), spruce (*Picetum excelsae*), Oriental hornbeam (*Carpinetum orientalis*), Beech (*Fagetum montanum*).

Oshlak is a habitat of multiple species of wildlife. The most frequent species is the chamois (*Rupicapra rupicapra*), which can be found in the highest peaks of Oshlak, dominated by mountain pastures and limestone rocks. Other species of wildlife include: *Ursus arctos*, *Canis lupus*, *Capreolus capreolus*, *Canis vulpes*, *Sus scrofa*, *Felis sylvestris*, *Martes foina*, *Glis glis*, *Spalax monticola*, *Talpa europea*, *Mustela nivalis*, *Sorex aranens*, *Vipera ammodydes*, *Lacerta viridis*, etc.

<sup>5</sup> Report – Zoning of National Park "Bjeshkët e Nemuna", Prishtina, 2014

Lynx (*Lynx lynx*) footprints have been noticed in Oshlak, which uses this area as a search for prey and migration from its habitats in Rusenica, Prevalla and Ujërat e Humbur, however its concentration in this area cannot be excluded, since this area (the northern part of Oshlaku) is covered with dense wood and the human presence and impact is restricted.

#### 5.17. Maja e Arnenit (Arneni Peak)

The Strict Reserve “Maja e Arnenit” is located on the limestone rocks, at an altitude of 1100 – 1946 meters, with a surface area of 145.48 hectares. The following plant communities can be found in this area: Bosnian pine (*Seslerio-Pinetum heldreichii*), the dominating herbaceous flora is (*Sesleria autumnalis*), Bosnian pine (*Luzulo-Pinetum heldreichii*), the dominating herbaceous flora is (*Luzula maxima*), Beech (*Fagetum montanum*), Bosnian pine and beech (*Fago-Pinetum heldreichii*), Beech and European silver fir (*Abieto-Fagetum*), Norway spruce (*Picetum excelsae*). Within the species of herbaceous plants, the following can be distinguished: *Verbascum nikolai*, *Verbascum scardicolum*, *Gentianella bulgarica* var. *Albanica*, *Dianthus cartusonarum*, *Dianthus integer*, *Lazerpitium siler subsp. gargaricum*, *Campanula albanica*, *Thymus albanus*, *Stachys scardica*, *Viola grisebachii*, *Ephilobium anagallidifolium*, *Lilium albanicum*, *Onobrychis scardica*, *Scabioza dubia*, *Potentilla speciosa*, etc.

The following species of animals can be found in this area: brown bear (*Ursus arctos*), roe deer (*Capreolus capreolus*), red fox (*Canis vulpes*), wild boar (*Sus scrofa*), wildcat (*Felis sylvestris*), pike marten (*Martes martes*), beech marten (*Martes foina*), etc. Among the birds, the following can be mentioned: golden eagle (*Aquila chrysaetos*), buzzard (*Buteo buteo*), lanner falcon (*Falco biarmicus*), hazel grouse (*Tetrastes bonasia*), rock partridge (*Alectoris graeca*), red-billed chough (*Pyrrhocorax pyrrhocorax*), wallcreeper (*Tichodroma muraria*), etc.

#### 5.18. Pisha e Madhe / The Great Pine

The Strict Reserve “Pisha e madhe” is characterized by old forests, which represent the prettiest and the most interesting complex of Bosnian pine (*Pinus heldreichii*) in the Balkans. A part of this forest, 35 hectares, was declared a strict reserve in 1960, while with the 2016 Decision, it was expanded to 44 hectares.

The following plant communities can be found in this area: Bosnian pine (*Seslerio-Pinetum heldreichii*), Bosnian pine and Norway spruce (*Piceto-Pinetum heldreichii*), Beech, Norway Spruce and Bosnian pine (*Fageto-Piceto-Pinetum heldreichii*), Bosnian pine and silver birch (*Betulo-Pinetum heldreichii*), Pinetum mughi, Norway spruce (*Picetum excelsae subalpinum*), European silver fir and Beech (*Abieto-Fagetum*), Beech, European silver fir and Norway spruce (*Abieto-Fagetum-Picetosum*), Bosnian pine (*Seslerio-Pinetum heldreichii*), etc. The area is rich in numerous species of cosmopolitan flora, i.e. widely spread in the national park.

Within the species of herbaceous plants, the stenoendemic plant species *Sedum flexiosum* can be distinguished, but the area is rich in various medicinal herbs, such as: White asphodel (*Asphodelus albus*), stemless carline thistle (*Carlina acaulis*), cross gentian (*Gentiana cruciata*), European centaury (*Centaureum erytrea*), oregano (*Origanum vulgare*), tormentil (*Potentilla tormentilla*), etc.<sup>6</sup>

Pisha e Madhe represents a habitat to numerous of wildlife species, while the most important are: brown bear (*Ursus arctos*), roe deer (*Capreolus capreolus*), wildcat (*Felis sylvestris*), beech marten (*Martes foina*), lanner falcon (*Falco biarmicus*), buzzard (*Buteo buteo*), etc. The biggest problem in this area is illegal hunting.

### 5.19. Kamilja

Kamilja was declared a reserve in 1988 and it has a surface area of 228 hectares. Kamilja limestone hill is characterized by special natural value of paleontological period. This area should be included within the monitoring plan in order to ascertain the state of natural values and biodiversity within it.

### 5.20. Current State

The general state of the reserves is not at a satisfactory level, because different activities, which are prohibited in legal terms, are taking place in those areas. The negative impacts come as a result of various activities being carried out within and near the reserve territory.

Based on the situation on the ground, most of these impacts are caused by the actions of the human factor, such as: road construction and the use of inerts in the vicinity of the reserves, construction of camp-houses, (Kozhnjeri Mountain reserve - Ropsi peak, Shutmani, Lendina e Shejte, Prilepi Mountains, etc.), livestock grazing, (Shutmani Reserve, Prilep Mountains, etc.) illegal exploitation of medicinal plants, (Shutmani Reserve, Prilep Mountains, etc.), setting fires in forests, (Oshlak Reserve, Koretnik, Pisha e Madhe, etc.), illegal logging, (Kozhnjer, Koretnik, Prilep mountains, Rusenica, Pashallarët, etc.) illegal hunting, (Kozhnjeri Mountain - Ropsi peak, Oshlak, Bistra, Pashallarët, etc.) improper tourism, and since the strict reserves are mainly located on the peaks of high mountain areas, these areas are used by hikers (hiking in nature), littering (in all reserves), etc.

Whereas the impacts from natural factors are: rock sliding, the drying of trunks inside the reserves as a result of parasites (Koritnik, the rubble forests have suffered significant damage from fires and pest insects - bark beetles that have developed to a large extent after forest fires), climate impacts, etc.

The presence of rivers in many strict reserves has turned into a serious problem, considering that the most frequent interventions are in the use of these water courses, such as the case of (Bredhiku) Strict Reserve, etc.

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<sup>6</sup> Special natural value zones in the National Park "SHARRI"

In the reserves, the phenomenon of illegal exploitation of medicinal and aromatic plant species is also very evident, which is greatly affecting the reduction of the number of plant species.

These activities are having a negative impact on the natural values and biodiversity present in the Strict Reserves, based on which they have been declared as areas of the first protection category. As a result of such activities, in some parts, the condition of the reserves has started to change, associated with negative consequences on species, ecosystems, and on the natural appearance of their landscapes.

Since 18 reserves are located within the National Parks, the institutions for the Administration of National Parks do not have the professional and technical capacities for monitoring and management of these reserves. Moreover, the lack of staff, lack of plans and programs, lack of information boards, marking of the external border, lack of awareness of the local community on the importance of reserves, etc., continues to be a problem in the management of reserves.

The managerial bodies and the MESPI Inspectorate must take concrete and immediate actions to prevent these illegal activities in accordance with the laws and regulations in force.

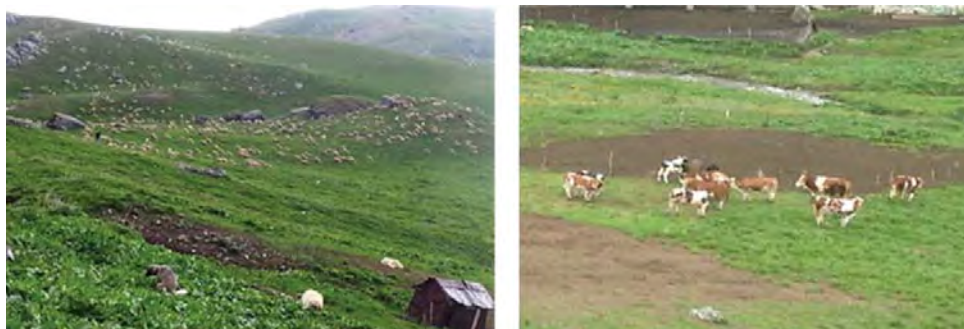


Photo No. 4 and 5. Illegal use of pastures in the "Shutman" strict reserve

### 5.3. Recommendations

1. To draft management plans for strict reserves;
2. To establish Working Groups for the reassessment of the strict reserves and to examine the possibility of the accurate definition of their borders;
3. To stop all illegal activities in the strict reserves such as: sheep grazing, construction, tourism, infrastructure, use of resources, etc.;
4. To take measures to prevent the illegal exploitation of medicinal plant species in strict reserves;
5. To stop illegal constructions and demolish all constructions located in strict reserves;
6. To conduct scientific research on flora, fauna, and habitats in the territory of all strict reserves;



7. Better management and supervision of strict reserves by the Directorates for the Administration of National Parks;
8. The MESPI Inspectorate, in cooperation with the Director of National Parks, to increase the number of inspections in strict reserves;
9. To mark the outer border of strict reserves;
10. To prohibit visits of hunters and tourists to the strict reserves.

## **VI. NATIONAL PARK "SHARRI"**

### **6.1. General overview of the National Park "Sharri"**

The Sharri Mountains are ranked among the most attractive and important mountains not only in the Balkans but also in Europe. In 1986, the area of 39,000 ha of this mountain was declared a National Park<sup>7</sup>, while in 2013 the area was expanded to 53,469 ha<sup>8</sup> and extends into 5 municipalities: Dragash (45.1%), Shtërpce (23.9%), Prizren (22.2%), Suhareka (4.7%) and Kaçanik (4.1%). According to plant cover and land use, the National Park "Sharri" has the following structure: herbaceous vegetation 30,904.85 ha (57.81 %), forests 18,298.82 ha (34.22 %), shrubs 1,419.15 ha (2.65 %), water 1,467.64 ha (2.74 %), bare surfaces 1,355.33 ha (2.54 %), urban surfaces 23.21 ha (0.04 %).<sup>9</sup>

The National Park "Sharri" is characterized by specific natural beauty and values (biological, biogeographic, geological, geomorphological, pedological, hydrological, climatic and landscape) that have special ecological and socio-economic importance.

Characteristic of Sharri Mountains is the extremely rich flora and fauna biodiversity, which includes: about 1800 species of plants (350 species are endemic, 21 stenoendemic species, 500 medicinal species, 200 woody species, etc.), 180 plant communities/associations, 32 species of mammals (excluding bats), 19 species of reptiles, 12 species of terrestrial water, 6 species of fish, 147 species of daily butterflies, etc.

The endemic, rare and endangered species of flora and fauna are of particular importance, which are mainly concentrated in 15 strict nature areas (the first protection zone) with an area of 9363.51 ha, which represents 17.5% of the "Sharri" National Park area. This natural wealth has influenced the park to be ranked among the main centers of biodiversity in the Balkans and Europe.<sup>10</sup>

<sup>7</sup> Law on "Sharri Mountain" National Park No.11/86 (1986)

<sup>8</sup> Law on "Sharri Mountain" National Park No. 04/L-87 (2013)

<sup>9</sup> Management plan of "Sharri" National Park (2015)

<sup>10</sup> Management plan of "Sharri" National Park (2015)

The geographical position of Sharr Mountain and the natural attractions (forests, mountain pastures, rivers, glacial lakes, mountain climate, beautiful landscapes, and terrains for skiing and recreation) provide favorable conditions for the development of tourism throughout the year.



Photo No. 6. "Sharri" National Park

## **6.2. The state of natural resources in the National Park “Sharri”**

The natural resources of "Sharri" National Park are constantly endangered by the negative effects of biotic (man, insects, diseases) and abiotic (fire, natural disasters: wind, snow, avalanches, etc.) factors, which have influenced on their unstable situation. The most evident damages in nature are caused by the anthropogenic factor, whose influence is manifested in different ways, such as: illegal logging, illegal hunting, illegal constructions, arsoning, dumping of waste, pollution of soil, air and water, etc.

## **6.3. Forest Ecosystem**

The forests represent the most complex, the most important, but also the most endangered ecosystems in the National Park “Sharri”. The most widespread (dominant) forests are those of beech (*Fagetum montanum*, *Fagetum subalpinum*) which are endangered by natural disasters (wind, snow, etc.) and illegal logging. Damages from natural disasters occur continuously, mainly sporadically and during the 2018-2021 period, they were not expressed to a large extent. Significant damage to the beech forests was caused by illegal logging, in particular in the Luboten mountain that lies in Kaçanik and Shtërpce municipalities. The main factors that have influenced the obvious illegal logging are:

- The difficult socio-economic conditions of the rural population in the border area of the NP "Sharri";
- Insufficient number of employees (nature guards and professional officials) of the Directorate for Administration of National Park "Sharri" in Shtërpce and Kaçanik municipalities;
- Lack of investments in the protection of natural resources;
- Prolongation and failure to carry out indictments for forest theft in the relevant courts.

The challenging situation is also present in the pine forests (*Pinetum heldreichii*) in the areas of Koritnik and Pisha e Madhe, as a result of wildfires (2000, 2007, 2012, and 2015) and the development of harmful insects (subbark). Due to massive forest wildfires and the intensive development of pest insects (subbark) after the fires, more than 1000 ha of forests on Koritnik mountain and about 100 ha of pine forests in the area of Pisha e Madhe have dried up. The dried woody mass has started to rot, while many of the dried trees have been blown away by the mountain winds.

Other pure and mixed coniferous and leafy forests in NP "Sharri" have good health and developmental stability. Forest damages from natural disasters and other factors (illnesses and pests) appear sporadically and do not have a particular ecological and economic impact on these forests. Natural renewal is scarce in beech and Bosnian pine forests, while it is more frequent in European silver fir and Macedonian pine forests. This has affected the expansion of the surfaces of these forests, in particular, those of Macedonian pine, in the areas of Pashallara, Procka e Durrës, and Ujërat e Humbur.



Photo No. 7. Damage to forests from wildfires and pest insects in the birch forests in Koritnik

#### 6.4. Herbaceous Ecosystems

The state of herbaceous vegetation, which are particularly widespread in the municipality of Dragash, is relatively good. A part of herbaceous vegetation in the high mountainous areas is being used as pastures by the seasonal farmers (May-September). The highest concentration of livestock during the summer is in the Restelica and Brod regions (municipality of Dragash)



because there can be found the largest and the most qualitative areas of pastures in the NP “Sharri” and Kosova.

Most of the endemic plants are found in the herbaceous ecosystems of the high mountains of the NP “Sharri”. Based on the research carried out, a database for endemic plants with about 335 species and about 500 species of medicinal herbs was established. These data indicate the extraordinary biodiversity of the NP “Sharri”, which is among the six main biodiversity centers in Europe.

Every year there has been an increase in the interest of the local population and certain businesses in collecting medicinal herbs and small fruits in the entire territory of NP “Sharri”. Yellow gentian (*Gentiana lutea*), a rare medicinal herb that is on the verge of extinction, is not exempt from collection either. A negative phenomenon that is constantly increasing is the illegal collection of medicinal plants and forest fruits (cranberries, juniper, red currant/kacha, etc.) by Albanian residents who illegally cross the state border in Dragash municipality. DANP “Sharri” cooperated with the border police to stop these illegal actions, however, there were difficulties due to an insufficient number of workers (guards and professional staff) in this municipality where 45% of NP “Sharri” territory is located.

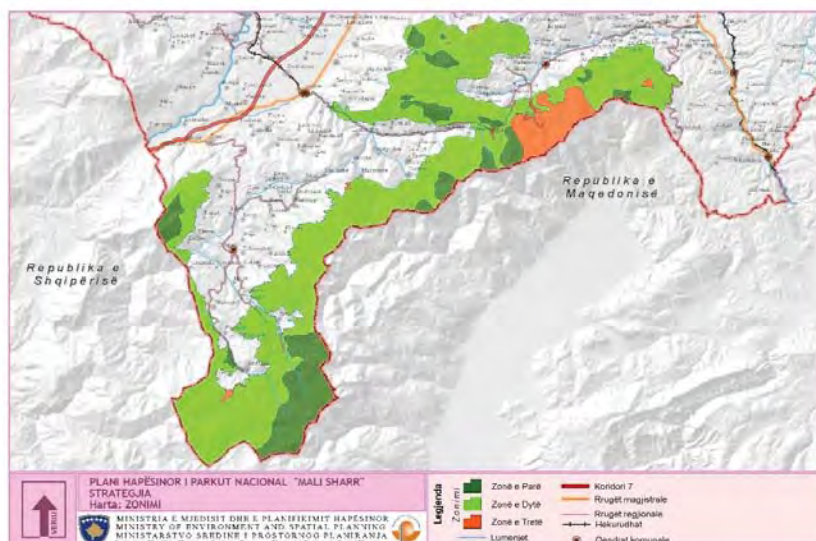


Photo No. 8. High mountain pastures in Vraca

## 6.5. First Protection Zone

According to the Spatial plan of the NP “Sharri” (2014), in this Park there are 15 first protection zones, with a surface area of 9374.18 ha or 17.60% from the total territory of the NP “Sharri”. These zones are mainly located in the highest parts of the NP, where the most important natural values are concentrated. In 2016, the Government of Kosovo, with a Decision, declared these strict natural areas. The condition of these areas in general is good, while the wildfires and the intrusions of the human factor represent the greatest risk. The most difficult situation is in Koritnik, where the Bosnian pine forests incurred significant

damage from wildfires and pest insects (sub-barks beetles) that have settled to a large extent after the fires. In the first areas where herbaceous vegetation prevails, illegal use of pastures and medicinal plants is reported. In order to avoid these illegal phenomena, it is necessary to mark the first areas of protection on the ground with visible signs and to organize awareness training with livestock farmers and the local community for the biodiversity preservation. Most of the strict reserves are used by visitors, especially skiers, for hiking. In the future, the mountain activities in NP “Sharri” should be under full supervision.



Source SPI. Map No. 1. Strict reserves in "Sharri" National Park

## 6.6. Water Resources

Many of the water sources/springs in the past have been exploited by local villages (communities) to meet drinking water needs. There was no water pollution, but in some tourist areas, especially in the wider area of Prevala, wastes of different types have been spotted along the rivers, streams and water springs. This issue can be regulated with the institutional waste management on the territory of the National Park and citizen awareness raising for environmental care. NP “Sharri” rivers represent the habitat of the stream trout, the number of which is decreasing each year. Therefore, the repopulation with this important type of fish should be planned in the future. Illegal fishing appears from time to time, particularly in the Manastirica, Lumëbardhi of Prizren, and Brod rivers.

The highest risk for the degradation of aquatic ecosystems in the park is represented by the mini hydropower plants in Shtërpce municipality that were built during 2017-2020. Five rivers have been degraded and destroyed by these works: Brevci River, Kallugjeri River, Murzhnica, Blateshtica, and the Durla flow. Degradation of the nature-protected values, in particular, the hydrological values in NP "Sharri" is prohibited.

Therefore, for all cases of destruction of rivers and nature, adequate legal measures should be taken. The problem is even more evident when considering the fact that for these destructive actions, environmental documentation (consent) was issued by MESP for the natural resource values of the park.



Photo No. 9. Lumëbardhi waterfall in "Sharri" National Park

## 6.7. Fauna

The state of fauna is relatively good, but the permanent danger to certain types of animals (roe deer and chamois) is illegal hunting, which occurs occasionally (especially during the weekends) in some areas of the NP "Sharri", such as Shutmani, Oshlaku, Bistra, Koxha Ballkani, Rusenica, and Jazhinca Lake. The animals hunted by illegal hunting are taken to restaurants in the area of Zhupa and other locations. In order to stop the sale of this meat, the relevant municipal and central inspectorate should be more seriously involved.

Based on the research conducted, especially upon installation of camera traps (monitoring), in the mountainous areas such as of Oshlak, Rusenicë, Pashallar, Vrtop and Brezovicë, it was proven the presence of a variety of fauna, in particular of mammals (brown bear, fox, roe, chamois, wild boar, white marten, pine marten, rabbit, squirrel, badger, hazelnut dormouse etc.) and birds (golden eagle, buzzard, lanner falcon, grey falcon, great owl, forest owl, hazel grouse, quail, rock partridge, etc.)

Based on the traces found on the ground, it was also verified the presence of Balkan lynx (*Lynx Lynx balcanicus*) in the area of Rusenica, Vrtop, Oshlak and Brezovica. These areas have even in the past been the habitat of this rare and endangered animal. The brown bear and wolf are best developing in the entire territory of the NP "Sharri", while at risk are, in particular, the chamois and roes because they are an attractive target for illegal hunting.

## 6.8. Sanitary measures for forest protection, conservation, and maintenance

For the purpose of avoiding the spread of infections and improvement of the state of forests, limited wood cutting and sanitary cleaning of forests damaged by wildfires, natural disasters (wind and snow), harmful insects and plant diseases have been undertaken. Sanitary cleaning applies on the basis of legislation (regulations for services and internal order, etc.) and respective management plans.

Damaged and infected wood mass involved in annual sanitary cleaning (around 6.000 m<sup>3</sup>)<sup>11</sup> represents the minimum of quantity that is prioritized to be cleaned from public and private forests in order to protect and maintain forest ecosystems. This wood mass achieved by way of sanitary cleaning is a small percentage (9.5 %) compared to the (annual) wood mass of 63.000 m<sup>3</sup> and the production capacity of the forests of the NP "Sharri".<sup>12</sup>

Wood mass from sanitary cleaning is dedicated to meeting the needs of the local community for fire wood. This has contributed to alleviating the high demand for fire wood in the rural areas of NP "Sharri", preventing illegal logging and establishing friendly relations of DANP "Sharri" with the local community representing the interest group of special importance to the park. The benefits of sanitary cleaning are comprehensive in the ecological, social and economic aspect.

By applying the sanitary measures, the following objectives have been achieved:

- Avoiding the development of entomological and phytopathological pests,
- Improving the health status of forests,
- Creation of optimal conditions for renewal and development of forests,
- Improvement of polyvalent (economic, ecological and social) functions of forests,
- Provision of the local population with firewood within the planning capacities,
- Prevention of illegal logging/woodcutting,
- Ensuring funds for the MESPI budget.

## 6.9. Tourist zones and constructions at NP "Sharri"

In the National Park "Sharri", in the third protection zone, according to the Spatial Plan there are nine (9) areas with a surface of 3769.81 ha (7.1% of the Park's territory) planned for the development of tourism: Guri i Dellocit (22 ha, Suhareka Municipality), Gradaci (9 ha, Suhareka Municipality), Prevalla (31 ha, Prizren Municipality), Ujërat e Gropuar (3 ha, House of mountaineers over Skorobisht, Prizren Municipality), Guri i Zi (35 ha, Zaplluxhe, Prizren/Dragash Municipality), Restelica (109 ha, Dragash Municipality), Brodi (44 ha, Dragash Municipality), Brezovica (3426 ha, Shtërpce Municipality), Nënahishte (91 ha, Kaçanik Municipality).<sup>13</sup>

<sup>11</sup> DANP "Sharri" annual work reports for 2018, 2019, 2020 and 2021

<sup>12</sup> Management Plan of NP "Sharri" (2015)

<sup>13</sup> Spatial Plan of NP "Sharri" (Decision of Assembly of Kosovo No. 04-V-772, February 2014.)

For these areas, it is planned the drafting of detailed Regulatory Plans which should regulate tourist constructions and development of commercial activities in accordance with the protection of the natural values of NP “Sharri”. The most popular tourist areas are Prevala and Brezovica where tourism is being developed wildly and without proper management by MESPI. The problem in these tourist areas is the lack of physical infrastructure (parking lots, etc.), inadequate waste management, and the low awareness of visitors who throw trash in park areas without any control, etc.

Among the biggest problems in the tourist areas (third zones) are the illegal and multi-storey constructions that have continuously appeared since the end of the war and continue even now. The particular problem is the no definition of competencies for issuing consents and building permits, which has affected the various local and central institutions to issue this documentation by entirely bypassing the NP “Sharri” managing authority. In Prevala, environmental and construction documentation is issued by the Department of Housing and Construction of MESPI, while in Brezovica, it is issued by Shtërpce Municipality without environmental criteria and consultations with DANP “Sharri”. The issuance of construction permits should be suspended until the drafting of the Regulatory Plans for the third areas foreseen by the Spatial Plan and Management Plan of the NP “Sharri”.

During 2018-2021, illegal constructions were also carried out in the second protection zone, in the mountainous areas of Guri i Livadheve (Suhareka Municipality), Stanët e Brodit and Firaja (Shtërpce Municipality), Stanët e Doganajve and Dubrava (Kaçanik Municipality) and Sherupa (Dragash Municipality). For these cases, lawsuits have been filed in the relevant courts by DANP “Sharri” and the MESPI Inspectorate. The delay and non-implementation of indictments in the justice bodies has made it difficult to stop these illegal actions in the NP “Sharri” territory.



Photo No. 10. Illegal constructions in Brezovica weekend area





Photo No. 11 and 12. Illegal constructions in Gradac area (municipality of Suhareka)



Photo No. 13 and 14. Illegal constructions in Brezovica weekend area



Photo No. 15 and 16 Illegal constructions in Brezovica weekend area



Photo No. 17. Illegal constructions in Restelica



Photo No. 18. Illegal constructions in Prevalle

## **6.10. Challenges and problems in NP “Sharri”**

National Park “Sharri” is facing many challenges and problems, such as:

1. Incomplete organizational structure (insufficient number of forest guards in municipalities: Dragash, Shtërpce, and Kaçanik, relevant professional sectors, local offices in the municipalities), etc.,
2. Insufficient budget and investment for sustainable management of NP “Sharri”,
3. Lack of external and internal border marking (first, second and third protection area) of the NP “Sharri”,
4. Numerous illegal constructions and attempts to develop tourism in contradiction with the principles of protecting the Park’s natural values,
5. Construction of hydropower plants in the rivers of NP "Sharri" and the
6. destruction of natural resource values that have led to this territory being declared a National Park,
7. Illegal logging in Luboten Mountain (municipalities of Kaçanik and Shtërpce),
8. Failure to define the ownership of most of the plots that are socially owned by former agricultural cooperatives and forestry economies (it is necessary that these socially owned properties be transferred to the publicly owned property of MESPI),
9. Prolongation and non-execution of the lawsuits for illegal acts in the respective Courts,
10. Insecurity of DANP “Sharri” facilities in Prizren and Brezovica in the absence of the guards,
11. Permanent risk for natural resources as a result of natural disasters (wind and snow), plant diseases and pest insects;
12. Etc.

## **6.11. Recommendations**

In order to ensure the proper protection of natural resources and sustainable management of NP “Sharri”, it is necessary to undertake numerous measures, such as:

1. Increasing the number of professional staff and nature guards in NP "Sharri";
2. Providing budget and investments for the sustainable management of NP "Sharri";
3. Protection of forests from illegal logging;
4. Protection of forests from wildfires, harmful insects and plant diseases;
5. Monitoring and protection of flora and fauna (endemic and medicinal plants) and ecosystems;
6. Monitoring the condition of strict reserves in the park;
7. Monitoring of tourist sites in the park;
8. Rational use of the park's natural resources;
9. Informing public and promoting natural values in NP "Sharri";
10. Cooperation with local and international institutions in various projects;
11. Participation in projects for the sustainable management of "Sharri" National Park;
12. Professional skills capacity building of NP "Sharri" staff;



13. To stop all activities that have a destructive impact on the natural heritage values in the territory of NP “Sharri”;
14. All activities carried out within the territory of NP “Sharri” shall be in accordance with the Law on Nature Protection and the Law on NP “Sharri”, the Regulation on the Internal Order of National Parks, the Spatial Plan and the management plan of NP “Sharri”;
15. To prohibit illegal constructions in the entire territory of the national park "Sharri"
16. To stop the construction of hydropower plants in NP "Sharri" and rehabilitate the damaged areas;
17. All activities and works carried out within the territory of NP “Sharri” shall be continuously monitored by the MESP inspectorate and NPD “Sharri”;
18. To build the NP "Sharri" information center;
19. The issuance of construction permits should be suspended until the drafting of the Regulatory Plans for the third areas as foreseen by the Spatial and Management Plan of the NP “Sharri”
20. Functionalization of entry points in tourist areas Brezovica and Prevala;
21. Drafting of the Administrative Instruction on the rules, procedures, competencies, and conditions of constructions in national parks;
22. To transfer into the ownership of MESPI of the properties of socially owned enterprises;
23. Demolition of all illegal facilities in the park (outside third areas);
24. Drafting Detailed Regulatory Plans for the third areas in the territory of NP “Sharri” which should regulate the tourist constructions and development of economic activities in accordance with the protection of the natural values of NP “Sharri” and the applicable laws;
25. Define competencies for granting construction consents and permits, etc;

## VII. NATIONAL PARK “BJESHKËT E NEMUNA”

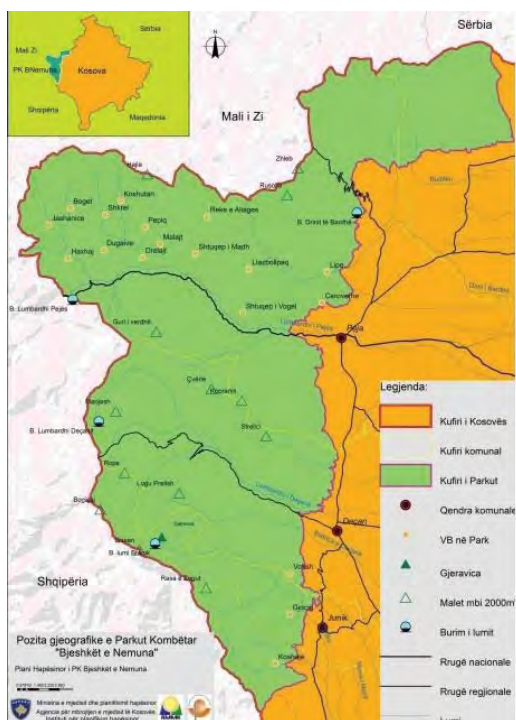
### 7.1. General overview of the National Park “Bjeshkët e Nemuna”

Bjeshkët e Nemuna represents a mountainous area in the north-western part of Kosovo that extends to the northern part of Albania and southeast of Montenegro.

In regard to geological, geomorphologic, fauna, and floristic composition it represents the most important and interesting massif not only of Kosovo but the whole Balkan Peninsula. This Park constitutes the western suburb of Kosovo, which descends almost vertically and ends in the east and northeast at the end of the Dukagjin Valley and the valley Iber. And in the west, it is surrounded by mountains (border) with Albania and Montenegro. They stretch in the north-south direction with a length of about 50 km, while their width does not exceed 26 km. Bjeshkët e Nemuna is cut by deep and transverse valleys, often in the form of a canyon, such as those of Lumëbardhi of Peja, Deçan, and Erenik, etc.

NP "Bjeshkët e Nemuna" is distinguished by a large number of high peaks above 2000 m, starting with the highest peak in Kosovo, Gjeravica (2,656 m), Koprivniku (2,377 m), Negjinati (2,341 m), Lumbardhi Mountains (2335 m), Zhlebi (2352 m) and Rusolija (2381 m), etc. The average height above sea level in Bjeshket e Nemuna exceeds 1,600 m. The morphology of Bjeshkët e Nemuna is characterized by steep slopes, deep valleys, narrow gorges, and numerous rapids, which present rare natural beauties not only in Kosovo but also beyond.

In December 2012, the Assembly of Kosovo approved the Law on the National Park "Bjeshkët e Nemuna", with a total area of 62,488 ha, extending over the territory of 5 municipalities: Peja 52.1%, Deçan 26.6%, Junik 8.4%, Istog 8.1% and Gjakova 4.8%.



Map No. 2. "Bjeshket e Nemuna" National Park

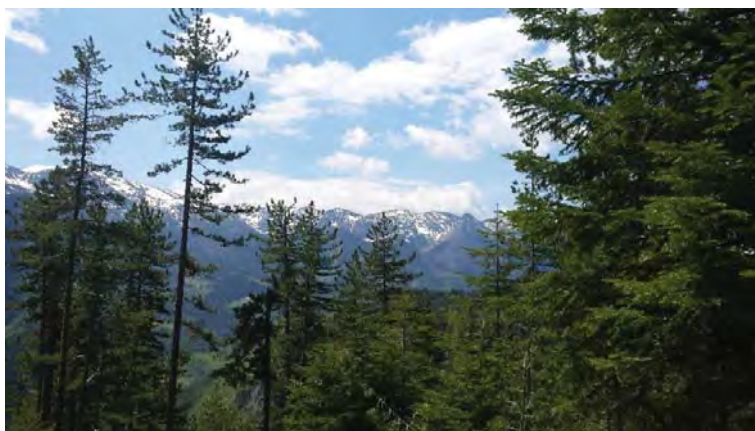


Photo No. 19. "Bjeshket e Nemuna" National Park

## 7.2. Flora

Bjeshkët e Nemuna is among the most characteristic mountain massifs of the Balkans in terms of the variety of flora and vegetation. In terms of endemic species should be noted that in Bjeshket e Nemuna only in the alpine and subalpine areas are present 128 Balkan endemic species. Among endemic species of Kosovo in Bjeshket e Nemuna are also the *Sempervivum kosaninii* (Burgull of Koshani), *Cephalaria pastricensis* (Cefalaria of Pashtrik), *Astragalus fialae* (Arrithja of Fial), *Aconitum pentheri* (Akonitum of Rusolia), *Rubus ipecensis* (Blackberry of Peja), *Saxifraga scardica* (Iriqëza of Sharr), *Wulfenia blecicii* (Vulfenia of Bleçiqi; *Centaurea nervosa* (Kokoçeli), *Thlaspi cuneifolium* (Tlaspi), *Thymus rohlena* (Listra of Rohleria), etc.

From relic types widespread in Bjeshket e Nemuna, characteristic are: *Carpinus orientalis* (Black hornbeam) spread within the forests of oak and beech. In Rugova canyon are found in the northern exposition, while in Mali i Thate, Bjeshket e Sinajit, and Lebeniq in southern exposition. Near the Lloqani Bistrica together with it is presented the *Carpinus Betulus* (White hornbeam) which is also tertiary relic. Beside native endemic in Bjeshket e Nemuna are present many Balkan endemic species among which the *Crepis albanica* (Albanian Shmanga), *Draba korabensis* (Draba of Korab), *Cerastium dinaricum* (Dinaric Cerast), *Sempervivum macedonicum* (Macedonian Burgul), *Euphorbia montenegrina* (Montenegro milkweed), etc.



Photo No. 20. Carnation of Sharr (*Dianthus scardica*)



Photo No. 21. Sage (*Gertrina lutea*)

### 7.3. Fauna

The massif of Bjeshket e Nemuna is characterized by a very rich, heterogeneous, endemic, and interesting fauna. Based on research made so far, the fauna of the “Bjeshket e Nemuna” consists of 8 fish species, 13 species terraqueous, 10 reptile species, 178 bird species, 37 mammal species, and 129 species of butterflies from the Lepidoptera type.

The most representative species of the fauna of Kosovo living within the territory of Bjeshket e Nemuna are Balkan lynx (*Lynx lynx balcanicus*), Brown Bear (*Ursus arctos*), European Roe (*Capreolus capreolus*), Wild Goat (*Rupicapra rupicapra*), Imperial Eagle (*Aquila heliaca*), Mountain Eagle (*Aquila chrysaetos*), Lesser Kestrel (*Falco naummani*), Capercaillie (*Tetrao urogallus*), etc, which have national and international protection status.

The Kosovo Institute for Nature Protection has continuously monitored the state of fauna in the National Park "Bjeshket e Nemuna", while more comprehensive results regarding Kosovo fauna, including the Bjeshket e Nemuna massif, have been published in the Kosovo Red Book of Fauna which was published during during period on which the report is prepared (2019).





Photo No. 22. Balkan lynx (*Lynx lynx balcanicus*), photo ERA



Photo No. 23. Roe deer (*Capreolus capreolus*)



Photo No. 24. Brown bear (*Ursus arctos*)

#### 7.4. Water Resources

The territory of the National Park "Bjeshket e Nemuna" has a fairly dense hydrographic network. Rivers such as Lumbardhi of Peja, Lumbardhi of Deçan, Ereniku, Lumbardhi of Lloqani, etc. are flowing through the park. All the water courses of the park have a west-east and south-east flow direction, which are discharged into the Drini i Bardhë river, which is the main catchment of the Dukagjin Basin. All the river springs are located at altitudes above 1000 m, flowing through deep and narrow valleys of the park mountain complexes. The water of these rivers from its spring to the middle course is estimated to have good quality. The rivers are joined by a large number of streams (small rivers and streams) on both sides. Based on the existing data, there are about 730 water springs/sources within the borders of the National Park "Bjeshket e Nemuna". Water flows (water capacity) vary from 0.03 to 3000 l/s. The pH value fluctuates from 5 to 7. The water from these springs/sources is of high quality.

## 7.5. State of the National Park “Bjeshket e Nemuna”

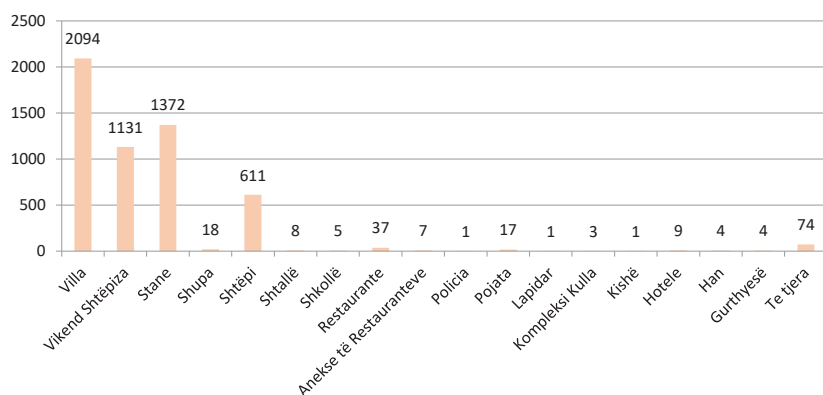
Among the major problems identified during the period 2018 - 2021, in the territory of the National Park "Bjeshkët e Nemuna" are: the illegal constructions, illegal logging, opening and widening of new roads, quarries in the park and in its vicinity, hydropower plants (in the gorge of Deçan), fires, illegal hunting, uncontrolled tourism, electrification and garbage, etc.

**Illegal constructions** – are widespread in the territory of "Bjeshkët e Nemuna" National Park, however, they are much more expressed in the potential tourist areas, such as: Rugova Gorge, Boga, Leqinat, Gropa e Erenik, Lugu i Butë, Beleg Mountain, Strellci Mountain, Deçan Gorge, Lumëbardhi Mountain, Qërshiz, Stankaj, Shkrel, Kushutan, Dugajevë, Drini Bardhë spring, etc.

Until 2014, about 3,000 constructions were identified in the park, while in 2019, the number of constructions reached around 5,397<sup>14</sup>, which shows the disturbing proportions of illegal constructions in the territory of the National Park "Bjeshkët e Nemuna", thus influencing the degradation of natural values, flora, and fauna, and have changed the image of the park.

The largest number of constructions in the park was registered in Peja municipality, 3085 (considering that there are 13 settlements in the territory of this municipality that lies within the park), Deçan 1490, Istog 442, Junik 257 and Gjakova 123 buildings. During 2019 - 2021, the directorate of the National Park "Bjeshkët e Nemuna" proceeded to the court about 400 reports for construction within the park without permission. Among the illegal constructions in NP "Bjeshke e Nemuna" is also the construction of several Via Ferratas built by various associations without permission and relevant consents.

Figure No. 2. Number of constructions in the NP. “BN” according to activities<sup>15</sup>



<sup>14</sup>Report of the working group for the identification of constructions and other interventions in "Sharri" and "Bjeshket e Nemuna" National Parks, KEPA, 24.06.2020. (Prot. No. 2916/20).

<sup>15</sup> Ibid.



Photo No. 25. Construction of facilities in Koshutan



Photo No. 26. Construction of buildings in Shkrel



Photo No. 27. and 28. Construction of buildings in Shtupeq and Stankaj

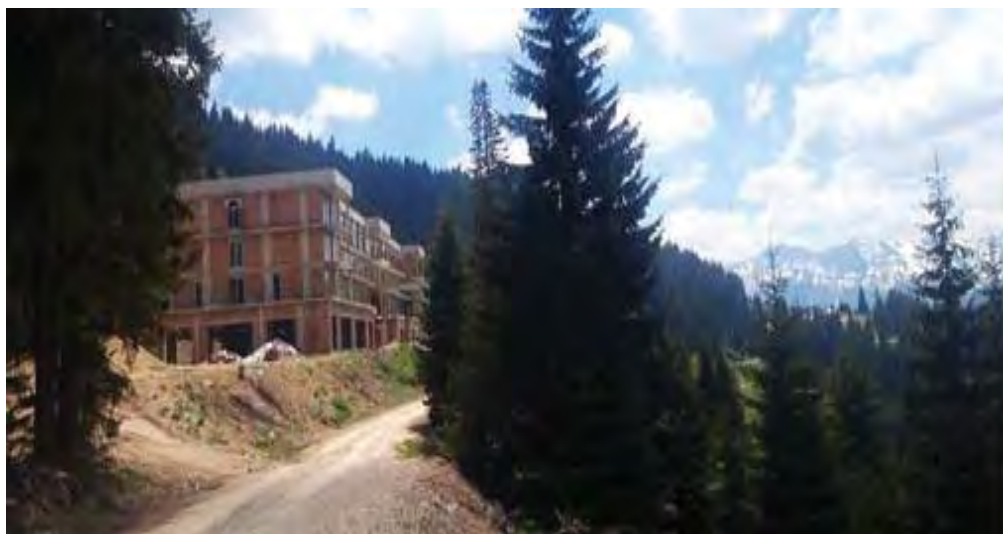


Photo No. 29. Construction in Boga





Photo No. 30. Illegal constructions in Lumëbardhi Mountain



Photo No. 31. Constructions in Qërshiza

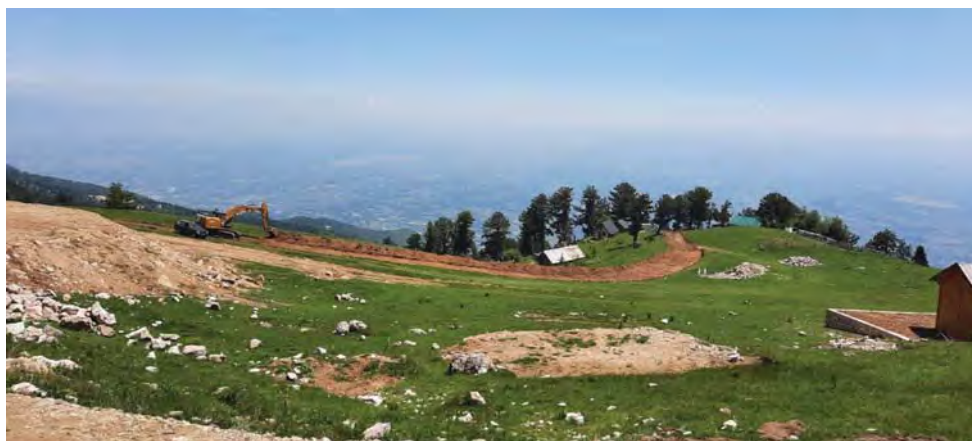


Photo No. 32. Illegal constructions in Strellci Mountain

**Illegal logging** – is occurring almost in all municipalities where the territory of the NP “Bjeshket e Nemuna” lies, in particular in municipalities of Decani, Peja, and Istog. Uncontrolled logging of forests has irreparable consequences, that besides losing the wood mass, also directly reflects on the disorder of ecosystems, disturbing the animal world, damaging the landscape, emerging erosion, etc.

*Table No. 3. Logging of forests in "Bjeshkët e Nemuna" National Park 2018-2021 (based on the directorate's reports)<sup>16</sup>.*

Year	Quantity m <sup>3</sup>
2018	1023.75
2019	1048.35
2020	299.98
2021	237.33
Total	2609.41

Source: Directorate of NPBN

<sup>16</sup> Data provided by the Directorate of "Bjeshkët e Nemuna" National Park, February 2022.

**Infrastructure** - the construction, widening and opening of new roads is a disturbing problem in "Bjeshket e Nemuna" National Park. Fragmentation of habitats by road infrastructure are frequent occurrences during this period. The most influential axes on biodiversity and the landscape are the roads: Maja e Zezë - Peklenë - Shtupeq i Vogël - Varri i Syktyt, Junik - Livadh i gjatë - Gropat e Erenikut, Lugu i Butë - Stanet e Mehajve dhe Haxhiajve, the road to Lloqani Gorge, the road Rugova Gorge - Milishevc, Deçan - Plavë, etc. A large number of open roads started only with preliminary measures and calculations, without detailed plans and projects, without environmental consents and without real environmental impact studies.

This infrastructure, which has a negative impact on the park, is financed by the municipality and the Ministry of Infrastructure, without respecting legal procedures (without Environmental Impact Assessment, etc.).



Photo No. 33. Opening of new roads in Kushutan



Photo No. 34. Construction of the Junik - Lugu i Gjatë road

During the period 2018-2021, in addition to continuing with the above-mentioned roads, there were also investments in the opening, expansion, and asphaltting of the following roads:

- Peja:- Koshutan - Hajl road (existing road widened and asphalted), Koshutan - Lekajje hill (existing road widened and asphalted), Shtupeq i Madhë - Podi i Jakupit (existing road widened and asphalted), Shtupeq i Madhë - Brezë Kofile (existing road widened and asphalted), Peklen (Maja e Zeze) the second part (existing road widened and asphalted), Pejë - Bjeshke e Lumbardhit (widened), Bogë - Stankaj (partially existing road, and asphalted), Drelaj - Leqinat (existing - widening), Kuqisht - Leqinat (existing road widened and asphalted), Drelaj - Reke e Allages (existing road widened and asphalted), Koshutan - Pepiq (existing road widened and asphalted), Stankaj - Bogë (new open road), Bogë - Shkrrel part from Gropa e Madhe (existing road widened and prepared for asphaltting)<sup>17</sup>.
- Deçan: - road to Plava (existing road widened), road in the mountain of Strellici (widening and asphaltting).
- Junik: - Batushë-Stanet e Babajve, water supply.<sup>18</sup>

<sup>17</sup> Data provided by the Directorate of "Bjeshkët e Nemuna" National Park, February 2022.

<sup>18</sup> Data provided by the Directorate of "Bjeshkët e Nemuna" National Park, February 2022.

The opening and expansion of road axes have been accompanied by other negative phenomena such as erosion (sliding). As a consequence, the process of landslides of the rock mass occurred that caused significant damage to biodiversity and the landscape of the park.



Photo No. 35 and 36. Massive landslides on the road Deçan-Plavë and Lumbardhë - Milisheve

**Hunting** - There is no detailed research in the park regarding the exact number of fauna, so the population of each species in a certain location or qualitative information regarding the fauna in the National Park "Bjeshket e Nemuna" is not clearly known. Illegal hunting in National Park "Bjeshket e Nemuna" is present, and if it continues, it can lead to the reduction of the population of habitat species, where certain species are endangered.

The park fauna is very diverse, with different types of species, and some of the species are endangered at the national and European levels. This group includes large mammals, such as the Balkan lynx, brown bear, wolf, wild cat, golden jackal, etc.

The state of fauna is relatively good, however with permanent danger for some animal species (roe deer and wild goats) from illegal hunting which occurs from time to time (especially on weekends) in some areas of the National Park "Bjeshket e Nemuna", such as: Rugova Gorge, Gropa e Erenikut, Gorge of Lumbardhi i Deçanit, etc.

It should be noted that it is necessary to organize an awareness campaign for local residents and hunters' associations because many hunters use the hunting permits they receive when they join a hunting association.

**Quarries** - within the territory of the park operate two quarries, which represent the degradation of natural values. Whereas in the buffer zone of 100 m from the park borders, several other stone quarries are carrying their activity contrary to the Law on Nature Protection (No. 03/L-233), the Law on National Park "Bjeshket e Nemuna" (No. 04/ L-086), Regulation No. 21/2013 on Internal Order of the National Parks. The presence of quarries in the park has affected the disturbance and damage of flora and fauna. After the expiration of the work licenses, the quarry sites were left unrehabilitated, thus creating a bad image for the park.



Photo No. 37. Exploitation of limestone rocks (near Italian KFOR in Peja)

## 7.6. Wildfires

A concern for the National Park "Bjeshket e Nemuna" is the occurrence of wildfires which have caused significant damage in different parts of the park. During the period 2018 – 2021, the area of park forests burned by wildfires was about 218 ha.

As it can be seen from table No. 4, in 2021 there were two high-risk wildfires in the National Park "Bjeshket e Nemuna" that have caused significant damage to coniferous and deciduous forests (pine, spruce, hemlock and beech, etc.) damaging various types of forests which represent habitat for many animal and plant species.

Table No. 4. Wildfires in "Bjeshket e Nemuna" National Park 2018 - 2021<sup>19</sup>

No:	Economic entity	Surface/ha	Type of wood	Wildfire occurrence date	Wildfire extinguishing date	Participants in firefighting	Wildfire damage
1	Kozhnjer - Roshkodol - Zllonopoj	10	Halor-barishta	20.10.20219	30.11.2019	DANP, Firefighters	70%
2	Kozhnjer - Roshkodol	15	Halor - barishta	22.10.20219	30.11.2019	DANP, Firefighters	40%
3	Hajla - Stankaj	12	Halor - gjethor	25.10.2019	29.10.2019	DANP, Firefighters	30%
4	Rusolia - Zhleb	10	Halor - gjethor	21.03.2020	25.10.2020	DANP, Firefighters	40%
5	Rusolia - Zhleb	7	Halor - barishta	18.04.2020	21.04.2020	DANP, Firefighters	40%
6	Kopranik	2	Halor - gjethor	12.04.2020	13.04.2020	DANP.	10%

<sup>19</sup> Data provided by the Directorate of "Bjeshket e Nemuna" National Park.



7	Lloqani - 1	6	halor - gjethor	16.10.2020	19.10.2020	DANP, Firefighters	15%
8	Hajla - Shtupeq i Madh	150	Halor - gjethor	23.07.2021	12.08.2021	KSF, KFOR, Firefighters DANP	70%
9	Hajla - Shtupeq i Madh	6	Halor - gjethor	10.05.2021	13.05.2021	DANP, Firefighters	20%
	Total	218					

Source: DNPBN



Photo No. 38. Wildfire in the National Park "Bjeshkët e Nemuna", economic entity Hajla-Shtupeq i Madhë



Photo No. 39 and 40. Forest damage from wildfires at the National Park "Bjeshket e Nemuna"

## **7.7. Challenges and problems of the NP “Bjeshkët e Nemuna”**

Some of the challenges and problems that the National Park “Bjeshkët e Nemuna” is facing are:

1. Lack of Spatial Plan;
2. Lack of Management Plan;
3. Lack of professional staff and forest guards in the Directorate of NP “Bjeshkët e Nemuna”;
4. Lack of budget and investments for sustainable management of NP "Bjeshket e Nemuna";
5. Illegal constructions and without any criteria in NP "Bjeshket e Nemuna",
6. Construction of the hydropower plant in the Deçan gorge and the massive destruction of natural resource values;
7. Prolongation and non-implementation of indictments for illegal acts at the relevant courts;
8. Permanent risk to natural resources from the negative impacts of biotic (humans, pests, and phytopathogens) and abiotic (fires, natural disasters: wind, snow, etc.) factors;
9. Mungesa e shenjëzimit të kufirit të jashtëm dhe të brendshëm (zonës së parë, të dytë dhe të tretë) të parkut,
10. Transformation of socially-owned properties of former socially-owned agricultural (cooperatives) and forestry (forestry economies) enterprises owned by NP “Bjeshkët e Nemuna”; (MESPI),
11. Attempts to develop tourism contrary to the principles of protection of natural values;
12. Non-cooperation of the local community for extinguishing wildfires with the directorate of the park and other institutions;
13. Lack of equipment for extinguishing wildfires and terrain vehicles;
14. Infrastructural constructions without permission (without environmental consent) and without concrete projects,
15. Lack of funds for flora and fauna inventory in NP "Bjeshket e Nemuna",
16. Non-coordination of activities between the Administration Directorate of NP "Bjeshket e Nemuna" and the local level.

## **7.8. Recommendations**

In order to ensure the proper protection of natural resources and sustainable management of the NP "Bjeshket e Nemuna", the following immediate measures are necessary.

1. Adopt the Spatial Plan for the National Park “Bjeshkët e Nemuna”
2. Draft the Management Plan for the NP “Bjeshkët e Nemuna”;
3. All the activities that are carried out within the territory of NP “Bjeshket e Nemuna” must be in line with the Law on Nature Protection, Law on NP "Bjeshket e Nemuna", and the Regulation on the Internal Order of National Parks;

4. MESPI shall issue a decision on the prohibition of all illegal activities (construction, opening and widening of roads, etc.) in the National Park "Bjeshket e Nemuna" until the Spatial Plan and Management Plan of the park are approved;
5. Draft detailed Regulatory Plans for the third areas in the territory of the NP "Bjeshkët e Nemuna", which should regulate the tourist constructions and development of economic activities in accordance with the protection of the natural values of the NP "Bjeshkët e Nemuna";
6. Draft the Administrative Instruction on the rules, procedures, competencies and conditions of construction in NP "Bjeshkët e Nemuna";
7. Stop all activities that have a devastating impact on the values of natural heritage in the territory of NP "Bjeshkët e Nemuna";
8. Transferring the properties of former socially owned agricultural enterprises (cooperatives) and forestry (forest economies) to MESPI;
9. To stop the construction of hydropower plants in NP "Bjeshket e Nemuna" and to rehabilitate the degraded areas;
10. To define the competencies for granting consents and construction permits in the park;
11. To stop the operations of stone crushers and to rehabilitate the degraded areas in the park and its vicinity;
12. To stop sawmill operations in the National Park "Bjeshket e Nemuna";
13. To stop all illegal constructions in the National Park "Bjeshket e Nemuna" until the approval of the Spatial and Management Plans for the park;
14. All activities and works carried out within the territory of NP "Bjeshkët e Nemuna" shall be continuously monitored by the MESP Inspectorate and NPD "Bjeshkët e Nemuna";
15. Measures should be taken by all institutions responsible for the protection of forests from illegal logging, wildfires, harmful insects, and diseases;
16. Continuous monitoring of the state of flora and fauna and ecosystems in the territory of the park and in the strict reserves;
17. To organize as many activities and actions related to informing and raising awareness of the public for the protection of the park and the promotion of the natural values of NP "Bjeshket e Nemuna", and building information centers in NP Bjeshket e Nemuna";
18. To increase cooperation with local and international institutions and coordinate joint activities;
19. To continue participating in national, cross-border, and regional projects for sustainable management of the values of the National Park "Bjeshket e Nemuna";
20. To continue raising the professional capacities of the staff of KP "Bjeshket e Nemuna" and to increase the number of professional staff in the park;
21. Installation of the surveillance system for monitoring and early warning of wildfires;
22. Adequate equipment, in particular backpack fire extinguishers (V-25 liters) of the parks directorate, the creation of volunteer groups in settlements within the park for rapid response in case of wildfires.



## VIII. SPECIAL AREAS – SPA and SAC

### 8.1. The Wetland of Henc - Radevas – Special Protected Bird Area

The Wetland of Henc - Radeve lies in the central part of the Kosovo plain, near the International Airport "Adem Jashari", in between the villages Henc - Fushë Kosova Municipality, Vrelle - Lipjan Municipality, and Radevë - Graçanica Municipality at an altitude of about 545m and with total area of 109 ha 52 are 35 m<sup>2</sup>.

This area was created by the confluence of the Magura and Vrella watercourses, which are the left tributaries of the Sitnica River. The wetland was created in the 1960s, with the purpose of cultivating Carp fish (*Cyprinus carpio*). Considering that the Wetland of Henc – Radeva is the only ecosystem of such species in Kosovo, although artificially formed, it is characterized by special natural values such as: ornithological, ichthyological, hydrogeological, botanical, landscape, etc. In 2013, the professional rationale was prepared for declaring the Henc - Radeva Wetland a protected area. Whereas, the Government of the Republic of Kosovo in 2014 issued a Decision (No. 08/178, of 18.03.2014) declaring the Henc - Radeve Wetlands a Special Protected Bird Area.



Map No. 3. Wetland of Hanci - Radeva

According to findings in the field, more than 50 species of vascular plants are present in this area. A large number of wild fauna species live here, with the majority represented by wild birds, which is what makes this area famous. The number of bird species found so far is about 78, however, it is believed that this number is much higher considering that no systematic and professional research has ever been carried out at the desired level. The natural habitats of Henc - Radeva Wetland and its surroundings provide shelter to many bird species, with many of them being rare species and with unfavorable conservation status in Europe.

The area is characterized by economic activities such as fishing, agriculture, livestock, hunting, etc. The basins are mainly used for cultivating fish, while agricultural production activities take place in their direct vicinity, while rural tourism and recreation are also developed. The whole area of the Henc - Radeva Wetland is a publicly-owned property and is managed by the Privatization Agency of Kosovo (PAK).



Photo No. 41. Landscape from the Wetland of Henc - Radeva

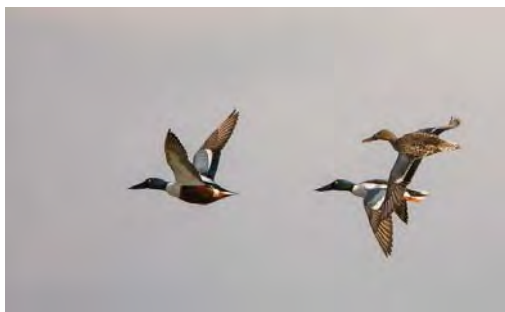


Photo No. 42. Mallard duck - *Anas clypeata* (A. Mavriqi)



Photo No. 43. *Anax imperator*

## 8.2. The current situation

Since the area is under the KPA authority, and is not managed by central institutions, the consequences of the degradation of the area are becoming more pronounced. The most prominent problem remains the drying of water in the basins and other surrounding areas due to the stoppage of the water flow in them, which is expressed by the lack of fish that are the main food for the bird species present in the area, and thus their number compared to previous years, drastically decreased.

Another concerning issue is the phenomenon of common reed burning around the basins, which serve as a shelter for many species of aquatic birds and also as a place where most of such species build their nests.

Garbage, uncontrolled tourism, illegal and uncontrolled hunting have negative impact on the bird species present in this area. If this trend continues, it will certainly endanger the presence of a large number of species, particularly the migratory species.

Considering that the International Airport "Adem Jashari" is located at the border of this area, according to airport officials, a large number of birds and the proximity of wetland to the airport pose a concern for airport security, therefore it should be worked together in the future in order to increase the overall safety at the airport.

### **8.3. Recommendations**

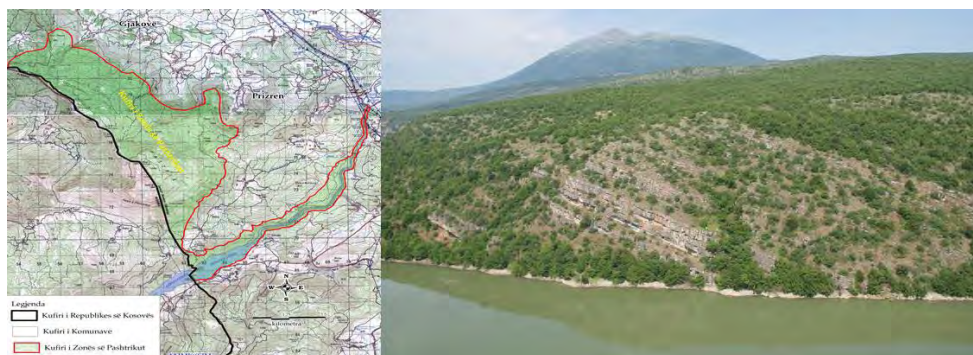
1. To establish an administration and management body for this area;
2. The authorities of the International Airport "Adem Jashari" should monitor the number of birds and take all necessary measures to create safe conditions in and around the airport area;
3. To draft the Wetland Management Plan;
4. To draft a project to study the possibilities of functionalizing this area;
5. To continue the research for the inventory of species and habitats in this area;
6. The privatization of this area should be prohibited and the properties managed by the Kosovo Privatization Agency (KPA) should be transferred under MESPI's responsibility.

## **IX. NATURE PARK**

### **9.1. Pashtriku Mountain and Vermica Lake**

In 2019, Pashtrik Mountain and Lake Vërmica were declared a nature park, with an area of 5,762,57 ha. Based on the research so far, it is concluded that Pashtrik Mountain is an important center of natural values and biodiversity, not only in our country but also beyond. This area is very rich in floristic, faunal, geological, geomorphological, cultural, and tourist aspects.

The Vermica Lake is created in the White Drin/Drini i Bardhe downstream, at the river exit in the territory of Albania and is characterized by specific biological, bio-geographical, geological, hydrological, and landscape values. In this area, the river has created an epigenic gorge, which represents an important monument with a geomorphological character. This area presents a very important potential for the development of cross-border tourism.



Map No. 4. Pashtrik Mountain and Lake Vermica

Photo No. 44. Mountain Pashtriku and Lake Vermica

## 9.2. Flora

Pashtriku Mountain presents a real mosaic with heterogeneous vegetation, in the vertical extent, where we can distinguish several areas of phytocenoses with characteristic properties for the region. Based on the research so far, it is established that in Pashtrik Mountain, there are more than 1000 species of vascular plants and 120 medicinal and aromatic plants, 56 species of plants (they are endemic plants of the Balkans), 12 relic species, and the local endemic species Gjuhëqeni i Krasniqit (*Cynoglossum krasniqii* T. Wraber, 1986)<sup>20</sup>.



Photo No. 45. *Cephalaria pastricensis*



Photo No. 46. *Kemashna (Hieracium waldsteini)*

## 9.3. Vegetation

The Pashtrik Mountain vegetation consists of 20 plant associations such as: *Quercetum frainetto cerris scardicum*, *Quercetum trojana dukagjini*, *Dioscoreo-carpinetum orientalis*, *Quercetum pubescentis cerris*, *Ostryo-Quercetum cerris*, *Columno-Ostryetum carpinifolia*, *Polygalo-Forsythietum europaeae*, *Polygalo-Gensitetum hassertianae*, *Astero-Juniperetum oxycedri*, *Teucrio-Artemisietum camphoratae*, *Echinaria-Convoletum altheoides*, *Fagetum*

<sup>20</sup> Research by Krasniqi, 1972; Rexhepi & Ruzic, 1985; Rexhepi, 1985; 1994; Wraber, 1985; 1990; Mustafa, 1999; Veselaj, 2006, as well as research during 2012-2014.



*moesiaca montanum*, *Abieti-Fagetum moesiaca*, *Inulo-Danthonietum alpinae*, *Centaureo-Trifolietum velenovsxy*, *Fagetum subalpinum*, *Potentillo-Anthylletum montanae*, *Coronillo-Arctostaphylletum uvae ursi*, *Erico-Quercetum petraeae serpentinicum*, *Ostryo-Fagetum*<sup>21</sup>, of which two associations are endemic: *Polygalo-Forsythietum europeae* and *Polygalo - Gensitetum hassertianae* and two others are relic associations: *Dioscoreo - carpinetum orientalis* and *Colurno-Ostryetum carpinifoliae*, etc.

#### 9.4. Fauna

Pashtrik Mountain is rich in faunistic aspect. In this area there are different species of fauna, such as: birds, mammals, reptiles, terrestrial water, etc. Large mammals such as lynx (*Lynx lynx*), brown bear (*Ursus arctos*), wolf (*Canis lupus*), fox, roe deer, wild goat, wild boar, white shrew, golden shrew, squirrel, fox, hazel grouse, etc., while the bird species are the golden eagle, the buzzard eagle, the mountain hawk, etc.

While butterflies are among the most researched groups of animals within Pashtrik Mountain, where a total of 98 species of butterflies have been found. Out of these, 95 species of butterflies are listed in the "Red Book of Butterflies of Europe"<sup>22</sup>.



Photo No. 47. *Polyommatus Icarus*.



Photo No. 48. *Pieris mannii*

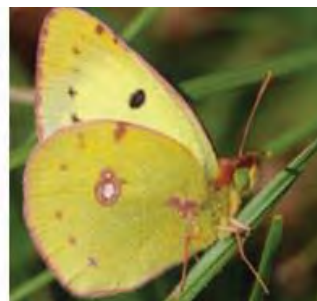


Photo No. 49. *Calias alfacariensis*

#### 9.5. The current situation

Although Pashtrik Mountain and Vërmica Lake were declared Nature Park in 2019, the Ministry still has not managed to establish an administrative body for the area, and there is no management plan. As a consequence of not establishing a management body, the natural values and biodiversity are being degraded, and mainly it comes from the human factor such as: illegal logging of forests, illegal constructions, wildfires, fauna illegal hunting, dumping of garbage, the opening of roads, (without projects), uncontrolled tourism, and illegal collection of medicinal and aromatic plants, etc. In the vicinity of Vermica Lake, various activities related to the hotel industry are being developed. In some places, there is dumping of garbage and discharge of wastewater by visitors and economic operators. This phenomenon is increasing and is affecting the biodiversity of the lake and its general

<sup>21</sup> Research by Rexhepi (1986, 1994)

<sup>22</sup> Research by Jaksic, 1999;

appearance, and at the same time, it is causing the pollution of the land and water surface of the lake.

#### **9.6. Recommendations:**

1. Urgently establish the administrative body of the Nature Park "Pashtrik Mountain and Vërmica Lake";
2. To draft the Management Plan for "Pashtrik Mountain and Vermica Lake";
3. The MESPI Inspectorate in cooperation with the Municipal Inspectorate, to inspect the area and take measures in accordance with the applicable laws;
4. To stop illegal constructions, infrastructure and illegal collection of medicinal and aromatic plants;
5. To continue with further floristic and faunistic research;
6. To complete cleaning of Pashtrik Mountain from mines;
7. To promote the natural, tourist and traditional production values of the cross-border area;
8. To build an overpass for wild animals, an "ecological bridge" over the highway/nation's road in order to enable free movement from one side to the other;
9. Cooperation with Albania for declaring Pashtrik Mountain and Vermica Lake (the part of Albania) a cross-border protected area between Kosovo and Albania;
10. To mark the outer border of the park and promote the natural and cultural values of the area;
11. The local level to carry out the waste and wastewater management around Vermica Lake.

### **X. NATURE MONUMENTS**

#### **10.1. Nature Monument of Special Importance "Gadime Cave"**

In 2009, the Government of Kosovo declared the Gadime Cave a Natural Monument of Special Importance, with an area of 39 ha. This monument represents a unique karst phenomenon not only in Kosovo but also beyond. It is developed in a limestone lens of the Paleozoic age, marbled with small spatial dimensions interbedded with Permo-Triassic shales. The fact that the channels, galleries, and voids of this cave are created in Paleozoic marble, makes this cave a special rarity of world proportions.

What makes the cave special is the presence of the Aragonites, which are characterized by different extension shapes and directions, which are particularly interesting and attractive.

##### **10.1.1. The current situation**

During the period from 2018 to 2021, the state of the NMSI "Gadime Cave" has not improved and the cave faces numerous problems. The MESPI has not yet managed to establish the Directorate for Administration of the Nature Monument of Special Importance "Gadime Cave", for by the Law on Nature Protection (No. 03/L-233).

Due to the lack of professional staff and the lack of investments in the cave during this period, the situation in the NMSI "Gadime Cave" is not satisfactory. Different slides that come from the cave chimneys, especially during the wet periods when the clay is moving and the pieces of rock are falling in the corridors frequented by visitors are of concern for the safety of cave visitors.

A considerable number of quarries operate in the vicinity of the cave, which have created an ugly image for the tourist area. There are no seismic measurements of the effects of quarry mining on the Gadime cave, however these minings may have a negative effect on the cave.

Another disturbing issue is the lightening in the cave. Based on the field monitoring and reports from the cave staff, it has been confirmed that the main electrical network cable has not been changed (since the 70s) and as such represents a risk for the visitor.

It is also worth noting that the lighting in the cave was not professionally installed, since a large number of lights are oriented towards the visitors' walking paths. The lighting in the cave does not automatically turn off after the visitors leave the gallery, but the cave is lightened the entire period while the visitors are in the cave, which also presents a problem for the cave. Another problem is the appearance of mosses and mushrooms as a result of microclimatic changes, conditioned by the hermetic closure of the entrance-exit as well as long-term and inadequate lighting. In the cave corridors and galleries, there are some graffitis and inscriptions that damage the image and originality of the cave.



Photo No. 50. The state of lighting in the Gadime Cave      Photo No. 51. Moss in Gadime Cave

Based on the evidence from the administration, during the period 2018 - 2021, the cave was visited by around 50 thousand visitors.

*Table No. 5. Number of visitors to Gadime Cave*

Year	Total number of visitors	Number of visitors exempt from payment	Number of visitors charged with 2 / €	Number of visitors charged with 1 / €	Number of visitors charged with 0.50/cent
2018	16757	1434	9552	5235	5681
2019	19862	1429	7775	6637	3441
2020	1505	213	603	489	200
2021	9084	2184	3843	2712	349

Source: NMSI "Gadime Cave"



### **10.1.2. Recommendations**

1. Establishment of the administration body of NMSI "Gadime Cave";
2. To take urgent measures for the safety of visitors from sliding of clay and other materials with the laying of protective nets/barriers;
3. To take urgent measures to improve the electricity network in the cave in order to increase visitors' safety;
4. To prepare a management plan for the Nature Monument of Special Importance "Gadime Cave";
5. All activities carried out within the protected area - Nature Monument of Significant Importance "Gadime Cave" should be in accordance with the Law on Nature Protection (No. 03/L-233) and the Regulation (MESP, No. 23/2014);
6. The MESPI Inspectorate should take necessary measures against illegal construction and the premises owned by the cave should be returned to the administration body;
7. To increase the number of professional staff in NMSI "Gadime Cave" ;
8. To provide professional training to the "Gadime Cave" staff;
9. To carry out seismic measurements in the cave to ascertain the impacts from the quarry minings;
10. Prohibition of visitrso in the hall of aragonites and taken of measures for protection of aragonite crystals;
11. To stop all quarry activities in the vicinity of the Gadime Cave;
12. To carry out the rehabilitation of the area where the quarries are located;
13. Tickets must be issued with a fiscal coupon;
14. The revenues from the cave visitors, are to be used for cave investments and research;
15. To research the corridors and other galleries in NMSI "Gadime Cave" and prepare them for visitors;
16. To carry out permanent monitoring of geo-climatic parameters, and based on the climatic conditions to allow tourists to visit the cave;
17. To promote the Gadime Cave as a geo-tourist point in Kosovo and in the region.

### **10.2. Nature Monument of Special Importance "Mirusha Waterfalls"**

The nature monument "Mirusha Waterfalls" is one of the most beautiful and interesting areas. In 2012, the Government of the Republic of Kosovo issued the decision for the promulgation of Mirusha Waterfalls a as Nature Monument of Special Importance with a total surface of 598.4 ha. The downstream of the Mirusha River passes through a gorge which is known as the Canyon of Mirusha River. In this part of the canyon are located 16 exciting lakes with waterfalls which create a morpho-hydrologic phenomenon that makes the most attractive part of the canyon. the caves of different forms and sizes make up another characteristic form in the composition of the relief (the Cave of Dush, the Cave of Great and Small Church, the Cave at the tenth lake, etc.)

The NMSI Mirusha Waterfalls is quite rich in plant species, where we can spot 330 species of vascular plants and 44 species of higher fungi (macromycetes). In terms of fauna, this territory is also rich in specific species of animals, which are related to specific biotopes and belong to endemic species.



Photo No. 52. Mirusha waterfalls



Map No. 5. NMSI " Mirusha Waterfalls"

### 10.2.1. The current situation

The Assembly of Kosovo has adopted the Spatial Plan for the protected area "Mirusha Waterfalls" (2014) in order to prevent unplanned developments that would damage the area, however, the negative phenomena continued even further. MESPI has not yet established the managing body for NMSI "Mirusha Waterfalls", as foreseen by the Law on Nature Protection.

During the monitoring period 2018-2021, significant interventions from human factors were discovered, especially during the works for the opening of paths towards the waterfalls from the road axis Klina - Gjakova. Based on the Spatial Plan for the Natural Monument of Special Importance "Mirusha Waterfalls", the project route passes along the first and second protection regime zones.

The Spatial Plan for the protected area "Mirusha Waterfalls", defined the protection regime under the measures for the protection of nature in point 1.21. MESPI drafts the SEA (with EIA and SEA) based on the Spatial Plan as a framework of measures, projects and the activities that will take place within the NMSI "Mirusha Waterfalls".

During the monitoring of the area, it was found that in addition to the unnecessary expansion of 12 m (based on the project, the width of the path will be 6 m, 2 m pedestrian path, 2 m green path and 2 m bicycle path), the expansion of the axis in the part of its length exceeds these dimensions which can be observed with the landscape and vegetation degradation.



Photo No. 53 and 54. Road widening and landslide in NMSI "Mirusha Waterfalls"

The expansion/widening of the road axis was also observed in the segments of the road with a rocky base where this material was used for paving the path/lane. On this occasion, it should be emphasized that in some segments, the paths were opened/created near the Mirusha River banks.

The other negative phenomena in the protected area NMSI "Mirusha Waterfalls" are solid waste, waste from visitors, construction of illegal facilities, pollution of the river by local residents in its middle flow, discharge of sewage into the river, where as a consequence of this pollution, it led to the death of fish and other river creatures.

The use of water in the Mirusha river during the summer season by residents for agricultural purposes, and the construction of the river bed weir, constitutes a concern. These interventions are affecting the depletion of water in the Mirusha River Waterfalls.

In the Mirusha river canyon, zip lines have been installed illegally by different individuals and associations, which pose a danger to visitors, as well as graffiti on the rock walls, etc. All these illegal interventions and other interventions have created a bad image for NMSI "Mirushë Waterfalls".



Photo No. 55 and 56. Illegal constructions in NMSI "Mirusha Waterfalls"

#### 10.2.2. Recommendations:

1. The Ministry of Environment, Spatial Planning and Infrastructure must establish the managing body of the protected area NMSI "Mirusha Waterfalls";
2. All the activities that are carried out within the protected area NMSI "Mirusha Waterfalls" must be in line with the Law on Nature Protection and the Spatial Plan for NMSI "Mirusha Waterfalls";
3. The MESPI Inspectorate must continuously inspect the state and act in accordance with the applicable laws;

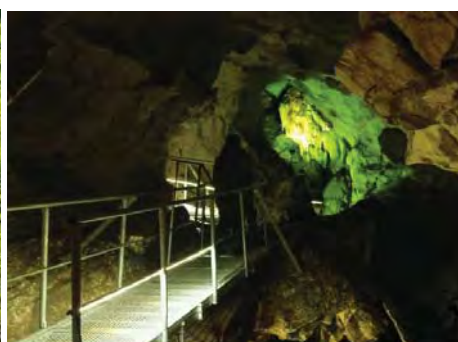
4. All activities within the border of the protected area NMSI "Mirusha Waterfalls", must be carried out with concrete projects and with prior consent from the MESPI;
5. Measures for the rehabilitation of the area, especially the part of the paths must be undertaken;
6. To stop all activities that have a negative impact on the natural heritage values in the territory of NMSI "Mirusha Waterfalls" and to respect the principles and criteria of nature protection;
7. Municipality of Malisheva must take necessary measures to prevent the wastewater and garbage to be discharged into the Mirusha River;
8. To prepare the Management Plan for NMSI "Mirusha Waterfalls" which will determine the acceptable activities in accordance with the degree of protection;
9. To carry out research on flora, fauna, and on the geomorphological, speleological, and hydrological features in the area;
10. To demolish all illegal constructions in NMSI "Mirusha Waterfalls";
11. To construct the tourist and educational information center in this area;
12. To place information boards;
13. Visitors in NMSI "Mirusha Waterfalls" must be accompanied by tour guides;

### 10.3. Drini i Bardhë Spring and Radavci Cave

Drin i Bardhe Spring and Radavci Cave have been put under protection in 1983, as natural monuments with total area of 89.94 ha. Radave Cave is a typical spring cave. Its formation is associated with erosion and groundwater chemical work of Drin i Bardhe. So far, 2100 m of underground channels have been researched; however, researches are ongoing.

Also known as the “Sleeping Beauty,” it has been open for visitors since 2015. Only the entrance gallery, central gallery and tubs gallery are open for visitors. Radavci Cave is a cultural heritage monument – Archaeological Locality, where signs of ancient population since Neolithic times have been found.

Upon the declaration of “Bjeshkët e Nemuna” as a National Park in 2013, the majority of the area has been included within the park.



Images 57 and 58. Drini i Bardhë Spring and Radavci Cave



### 10.3.1. Situation

Based on the continuous monitoring of the field state in the Nature Monument “Drin i Bardhë Spring and Radavci Cave,” it has been concluded that there have been interventions from the anthropogenic factor. Interventions have been mainly done in the surrounding area of the waterfall, which consist of the construction of different shops, without any criteria, throughout the path leading to the spring, interventions in the visitors paths, littering, logging, lack of information boards, etc. interventions of previous years in the rehabilitation of the water supply network from the water plant for the supply of the local population with drinking water has had a direct impact on the drastic decrease of the water quantity in the waterfall of the Drini i Bardhë Spring.

In Radavci cave is subject to various activities, such as research studies from foreign speleologists, interventions for the rehabilitation of visitors paths within the cave, electrifications, recordings, littering, etc. All of these activities are performed illegally, with no concrete projects, permits or consents from the competent institutions.



Image 59 and 60. Interventions in the protected area

### 10.3.2. Recommendations

1. All activities and interventions performed within the Natural Monument “Drini i Bardhë Spring and Radavci Cave” should be in accordance with the Law on Nature Conservation, the Law on Environmental Impact Assessment, the Law on Waters etc.;
2. Define responsibilities in the management of Radavci Cave between the Municipality of Peja and Speleological Association “Aragoniti,” in accordance with the Law on Nature Conservation and other applicable laws;
3. All studies and activities within the borders of the protected area of Drini i Bardhë Spring and Radavci Cave should be implemented with concrete projects and with MESPI’s consent;
4. The municipality of Peja should establish the Administration Authority for the Radavci Cave and Drini i Bardhë Spring;
5. MESPI Inspectorate, in cooperation with the Municipality of Peja Inspectorate, should inspect the area and take measures in line with the applicable laws;
6. Ban all activities that have a negative impact on natural heritage values in the territory of the protected area and observe the principles and criteria of nature conservation;

7. Implement professional projects for research studies on new corridors and galleries in the Radavci Cave;
8. Municipality of Peja should align Decision 02 Number 633/7, dated 29.12.1982 on the conservation of Drini i Bardhë Spring and Radavci Cave with the Law on Nature Conservation (No. 03/L-233);
9. Review the protected area surface of Drini i Bardhë Spring and Radavci Cave;
10. Strictly protect and ban visits to the the part of the cave that has archeological values;
11. Ban all illegal construction within the protected area;
12. Develop a Management Plan for the Radavci Cave and Drini i Bardhë Spring;
13. Install signs/information boards in the protected area;
14. Include the Radavci Cave and Drini i Bardhë Spring in tourism programs and educational programs, in the region and beyond;
15. Build a tourist information center.

#### 10.4. Nerodime River Bifurcation

Nerodime river bifurcation represents Europe's only instance of a river flowing into two seas. Nerodime river springs in the Jezerc Mountains; near the city of Ferizaj, it splits irreversibly into two branches, which flow into two different seas. The left branch flows into Sitnica River and continues its route to Iber River, Morava and through Danube flows into the Black Sea, while the right branch through Lepenc River and through Vardar River flows into the Aegean Sea.

The Municipal Assembly of Ferizaj declared Nerodime River a protected area in the Special Natural Reservoir, with a surface of 12. 78, 71 ha.

Due to the legal disparities between the time when the phenomenon was declared protected and the Law on Nature Conservation in 2018, the Ministry, in cooperation with the Municipality of Ferizaj, established a working group to develop the professional rationale for the categorization of the Bifurcation in the category of Natural Monuments.



Image. 61. Nerodime River Bifurcation



In 2018, the professional rationale for the re-categorization of the protected area "Bifurcation of the Nerodime River" was prepared and it was recommended to the municipality of Ferizaj to issue a decision on the categorization of the Bifurcation in the natural monument category. The Municipal Assembly of Ferizaj issued the decision for the categorization of the "Nerodime River Bifurcation" as a Natural Monument, however, after the review of the legality by the Ministry of Public Administration (MAPL), the decision was returned to the municipality for supplementation, but the municipality of Ferizaj has not supplemented the decision yet, so the "Nerodime River Bifurcation" has remained without a defined status of legal protection.



Map 6. Border of Nerodime River Bifurcation proposed for protection as a natural monument

#### 10.4.1. The current situation

During the period of 2018-2021, the situation in the Nerodime River Bifurcation did not improve and the Bifurcation is not functional.

Despite the interventions made in the past, this rare natural phenomenon is still not functional.

The interventions were carried out without genuine projects for the functionalization of the bifurcation and not all areas were included, but only some segments in the bed of the Nerodime river. Obstacles have been created on the river bed, which consists of material brought by the river itself, waste thrown by residents, uncontrolled use of water, but also various obstacles erected on the river bed by economic operators who carry out their activities near the protected area, especially in the left branch. As a result of the aforementioned activities, as well as the lack of rainfall during the summer and early autumn, the Bifurcation is often faced with a lack of water in its two branches. The situation in the Nerodime River Bifurcation is not good (non-functional), therefore it is required to undertake

all necessary measures to functionalize the normal water flow in both branches of the Bifurcation.



Pic. 62 and 63. The situation in the left branch of the Bifurcation

#### 12.4.2. Recommendations

1. Given that the Law on Nature Conservation No. 03/ L-233 does not have a category for the Special Natural Reserves, we recommend to align the legal protection of the Special Natural Bifurcation Reserve in the category of natural monuments, i.e. change the protection category;
2. The Municipal Assembly of Ferizaj must urgently initiate the procedures for the decision on the re-categorization of Nerodime River Bifurcation, in the category of Natural Monuments;
3. MESPI Inspectorate, in cooperation with the Municipality of Ferizaj Inspectorate, should inspect the area and take measures in line with the applicable laws;
4. The Municipality of Ferizaj should monitor and engage in the maintenance of the Nerodime River flow, for the purpose of functionalizing the bifurcation, as obstacles may form during the periods of rapid vegetation development and increased irrigation requirements, and water quantity may be reduced throughout the water flow;
5. All interventions in the “Nerodime River Bifurcation” protected area should be developed through professional projects, in line with the Law on Nature Conservation;
6. The Municipality of Ferizaj, in cooperation with MESPI, should design a project to rehabilitate the Nerodime river bed, which would enable the normal functioning of the bifurcation, in order for this phenomenon to regain its natural value and turn into a tourist attraction;
7. Drafting of the Project for the opening, cleaning and rehabilitation of the river bed from 100 meters above the waterfall to the Nika Mill, in a length of about 1.3 km, to continue with the right branch the waters of which flow into the Sazli stream with a length of about 1.2 km, which would enable the functionalization of the Bifurcation phenomenon.

## 10.5. Drini i Bardhë Canyon at Ura e Fshejtë

During a long geomorphological-hydrological process, Drini i Bardhë river has created a gorge between two massifs of limestone rocks, forming a very attractive and interesting canyon. The canyon was created in the Neogene period of the Dukagjini lake. However, the intensity of the "cutting" and deepening of the epigenist canyon was also conditioned by the processes of subsequent tectonic movements. The gorge has typical canyon features and is developed in Late Cretaceous carbonate formations.

The canyon lies in the middle flow of Drini i Bardhë, is a natural monument with a hydro-geomorphological character and represents natural geomorphological, geological and hydrographic, vegetative, flora and fauna values. Due to the aforementioned values, the Drini i Bardhë Canyon of Ura e Fshejte was protected as a Natural Monument in 1986 with an area of 199 ha and is located in the territory of the municipalities of Rahovec (125 ha) and Gjakovë (74 ha).

### 10.5.1. The current situation

Monitoring of the situation of the area at Drini i Bardhë Canyon, at Ura e Fshejte, revealed interventions on both sides of the canyon. The most obvious interventions are in the part managed by the municipality of Gjakova, which within the framework of the project, the revitalization of the Village Bridge & Canyon, lighting, walking paths, intervened by opening a parking lot and a path for visitors.

The project did not observe the construction principles in protected areas; the path in some cases is wider than 3 m. During this period, the municipality of Gjakova intervened with the construction a "Tibetan Bridge" which connects the two banks of the canyon in its most magnificent part, thus violating the Law on Nature Protection.

Earlier visits revealed significant interventions in the part that is managed by the Municipality of Rahovec, particularly in the lower part of the highway. The project on redefining the status and border of this area, which is in progress, has proposed to leave out this part below the highway from the new border of the area. On the upper part of the highway, on the other hand, the municipality has built a Memorial with an obelisk. The interventions in this area are even more concerning given the fact that a new vegetation species (*Sternbergia colchiciflora*) and a new genus (*Amaryllis*) for the Kosovo flora were found in the same place where this path was opened, in the part belonging to the Municipality of Rahovec.



Pic. 64. Interventions in the protected area

### 10.5.2. Recommendations

1. All activities implemented within the NM protected area “Drini i Bardhë Canyon at Ura e Fshejtë” should be aligned with the Law on Nature Conservation No. 03/L-233 and the Law on Environmental Impact Assessment;
2. Ban all construction and illegal activities in this area,
3. Every intervention in this area should be done with studied and well-analyzed projects and in accordance with municipal plans and programs;
4. MESPI Inspectorate, in cooperation with the Inspectorate of the Municipality of Gjakova and Rahovec should inspect the area and take measures in line with the applicable laws;
5. Ban all activities with negative impact on natural heritage values in the territory of the Natural Monument, and observe the principles and criteria of nature conservation;
6. The Municipality of Gjakova and Rahovec should issue a decision on the re-categorization of the Natural Monument “Drini i Bardhë Canyon at Ura e Fshejtë” in line with the proposals of the working group (Prot. No. 3522/17);
7. The area should be promoted and used for educational purposes.

### 10.6. The Situation of Some Natural Monuments others

The monitoring visits in the natural monuments in some municipalities such as Prizren, Podujeva, Klina, Malisheva, Skenderaj, Istog, Drenas, Mitrovica, Obiliq, Suhareka revealed that the situation of some of the protected monuments is not good. In all cases, their situation is found to have changed as a result of the impact of natural factors, actions of different insects, due to their old age or the human factor (fires) etc. As a result of these phenomena, in some of them damage to the trunk was observed, manifesting with large cavities inside, drying of the branches and simultaneously weakening the stability of the root and trunks, as well as changing their general appearance.

In the Municipality of Malisheve, the entrance and space above the Temeqine cave has been damaged and destroyed by the human factor. The damage to the cave came as a result of the exploitation of the limestone quarries above the cave and in the surrounding area by local residents for economic benefits. Many natural monuments with a speleological character still do not have an administration body and, as a result, there has been damage to the cave ornaments, and littering (Panorci Cave, Kusari Cave, Kishnareska Cave, etc). Constructions were also found in the vicinity of the mineral water resource in Sallabaej and water spring in Shakovic village, Municipality of Podujeva. These constructions have impacted the degradation of the area and the poor image of the protected area.

Table 6. List of damaged monuments

No:	Municipality	Natural Monuments	Year	No.
1	Podujeva	Oak tree ( <i>Quercus sp.</i> ) in Llapashticë e Epërme	2015	1
2	Klina	Turkey oak tree ( <i>Quercus cerris</i> ) in Zllakuçan	1985	1
		Hungarian oak tree ( <i>Quercus frainetto</i> ) in Gllareva	1985	1
3	Malisheva	Turkey oak tree ( <i>Quercus cerris</i> ), in Bubël	2014	1
		Sessile oak tree ( <i>Quercus petraeae</i> ) in Llozica	1985	2
		Temeqina Cave	2014	1
4	Skenderaj	Downy oak tree ( <i>Quercu pubescens</i> ) in Klladernica	2007	3
		Turkey oak tree ( <i>Quercus cerris</i> ) in Kotorr	2007	1
5	Istog	Mulberry tree ( <i>Morus nigra</i> ) in Cerrce	2008	1
6	Drenas	Downy oak tree ( <i>Quercus pubescens</i> ) in Likoshan	2006	1
		Downy oak tree ( <i>Quercus pubescens</i> ) in Likoshan	2006	1
		Turkey oak tree ( <i>Quercus cerris L.</i> ) in Krajkova	2006	1
		Downy oak tree ( <i>Quercus pubescens</i> ) in Tërstenik	2006	1
7	Mitrovica	Beech tree ( <i>Fagus sylvatica</i> ) in Bare	2019	1
		European beech ( <i>Fagus sylvatica</i> ) in Bajgorë	2019	1
8	Obiliq	English oak tree ( <i>Quercus robur</i> ) in Sibovc	2019	1
		Mulberry tree ( <i>Morus nigra</i> ) in Mazgit	2019	1
9	Suhareka	Tree complex ( <i>Quercus sp.</i> ) in Papaz	2007	1
<b>Total</b>				<b>21</b>

Source: KNPI



Pic 65. Turkey oak tree (*Quercus cerris*)  
Bubël, Malishevë



Pic. 66. Oak tree (*Quercus sp.*)  
in Llapashtice, Podujeva



The monitoring in the last three years in several protected areas (Natural Monuments) has revealed that some natural monuments have been completely destroyed and lost the protected area value. KNPI has drafted reports and proposed to the relevant municipalities to repeal decisions on the damaged monuments during different periods.

Table 7. List of monuments that have lost the protected area status

Name	Municipality	Area in hectares	Year of protection	Year of damage	Category
English oak tree ( <i>Quercus robur</i> ) in Gurrakoc	Istog	12.5	2008	2021	Natural monument with a botanic character
Silver linden tree ( <i>Tilia tomentosa Moench</i> ) in Kaligan	Istog	5	2008	2021	Natural monument with a botanic character
Turkey oak tree ( <i>Quercus ceris L.</i> ) in Drenovc	Malisheva	25	2014	2017	Natural monument with a botanic character
Downy oak tree ( <i>Quercus pubescens</i> ) in Ujmir	Klina	2	2008	2018	Natural monument with a botanic character
Poplar tree ( <i>Populus sp.</i> ) in Reçan	Suhareka	5	2007	2019	Natural monument with a botanic character
Mineral water source in Reçan	Suhareka	1	2007	2019	Natural monument with a hydrological character
Oak trees ( <i>Quercus sp.</i> ) in Grejkoc	Suhareka	15	2007	2019	Natural monument with a botanic character

Source: KNPI

#### 10.6.1. Recommendation

1. Municipalities should monitor and report to MESPI about the situation of the protected areas in their territory;
2. Municipal inspectors should conduct continuous inspection and take measures in line with the applicable laws;
3. The Municipality of Prizren should align the decision for the protection of the natural obstacle, Bistrica e Prizrenit Canyon (No. 633-12, dated 15.11.1972, Official gazette 51/76) with the Law on Nature Conservation (Law No. 03/L-233);
4. The Municipality of Klina should align the decision on the protection of the natural obstacle of the Klina river canyon (No. 01-325-10, dated 27.03.1985) with the Law on Nature Conservation (Law No. 03/L-233);
5. The Municipality of Malisheva should establish the Panorci Cave Administration Body;
6. The Municipality of Gjakova should establish the Kusari Cave Administration Body;
7. Municipalities should conserve the damaged monuments (tree trunks);



8. The Municipality of Podujeva should develop the regulatory plan for the use of mineral and thermal water sources in Sallabaje and Shakovic villages;
9. Perform phytosanitary interventions in some of the dry branches of natural monuments of the botanic character;
10. Install information boards;
11. Ban the usage of stones, littering and all negative activities in the protected areas where the caves are located;
12. Natural protected monuments in municipalities should be included in the zonal maps;
13. Municipal assemblies should repeal decisions on natural monuments that have lost the protected area status.

## XI. PROTECTED LANDSCAPES

### 11.1. Germia Protected Landscape

The Germia protected landscape lies northeast of the municipality of Prishtina. The Municipal Assembly of Prishtina made a decision in 2016 to declare Germia as a Protected Landscape, with an area of 1,949 ha.

#### 11.1.2. Flora and Vegetation

From the research conducted so far, in the Gërmia massif, the following have been evidenced: 610 species of vascular flora grouped into 82 families without including ruderal taxa, 88 species of mushrooms, 14 species of moss, 51 species of lichens.

The forest vegetation of Gërmia consists of four forest groups, as in the following: the Hungarian oak-Turkey oak forest (*Quercetum frainetto-cerris scardicum* Kras.), downy oak and hornbeam forest (*Quercus-Carpinetum moesiacum*), oak forest (*Quercetum moesiacum montanum*), and the beech forest (*Fagetum moesiacum montanum*). The Germia massif currently includes six endemic Balkan species, including the *Melampyrum heracleoticum*, *Dianthus gracilis*, *Dianthus cruentus*, *Lamium bifidum*.



Pic. 67. *Melampyrum heracleoticum*



Pic. 68. *Dianthus cruentus*



Pic. 69. *Lamium bifidum*

Types of relict vegetation in the Gërmia massif consist of spurge-laurel (*Daphne laureola*), the Macedonian oak (*Quercus trojana*), the Turkish hazel (*Corylus colurna*), the European bladdernut (*Staphyllea pinnata*), the common ivy (*Hedera helix*), *Comandra elegans* and *Allium cupanii*. Studies conducted so far have found 23 types of rare plant species that are at risk of extinction such as: two-flowered everlasting pea (*Lathyrus grandiflorus*), the flat pea (*Lathyrus sylvestris*), *Coeloglossum viride*, *Ptilostemon strictus*, the Macedonian oak (*Quercus trojana*), Dwarf Spurge (*Euphorbia exigua*), *Pedicularis comosa*, Valerian (*Valeriana officinalis*), the Turkish hazel (*Corylus colurna*), *Ranunculus illyricus*, *Linum gallicum*, *Haplophyllum suaveolus* (*Dianthus pinifolius*) etc.



Pic. 70. *Ranunculus illyricus*



Pic. 71. *Linum gallicum*



Pic. 72. *Haplophyllum suaveolens*

Medical plant types include 52 plant types, such as the medical valerian (*Valeriana officinalis*), the common hedgenette (*Stachys officinalis*), common verbena (*Verbena officinalis*), the belladonna (*Atropa bell-donna*), the lemon balm (*Melissa officinalis*), the autumn crocus (*Colchicum autumnale*), the lesser calamint (*Calamintha officinalis*), the common fumitory (*Fumaria officinalis*), the garlic mustard (*Alliaria officinalis*), the lungworts (*Pulmonaria officinalis*), the common dandelion (*Taraxacum officinale*), the common daisy (*Bellis perenis*), the Cornelian cherry (*Cornus mas*), etc.

### 11.1.3. Fauna of Gërmia

The fauna of Kosovo in general and that of Gërmia in particular is little studied. Gërmia's different biotopes and different heights provide good living conditions for various animal species. According to research conducted to date, the fauna of Gërmia consists of: 5 species of amphibians, 7 species of reptiles, 65 species of birds, 19 species of mammals.

Also, in this mountain massif, studies have been conducted on a large number of insect orders of Orthoptera, Homoptera, Coleoptera, Diptera, Himenoptera and Lepidoptera, which represent the largest group of organisms.

**Reptiles** - *Natrix natrix* (grass snake) *Zamenis longissimus* (Aesculapian snake), *Vipera ammodytes* (horned viper), *Vipera berus* (common European viper) etc.

**Birds** - *Cuculus canorus* (common cuckoo) *Dendrocopos major* (great spotted woodpecker), *Dryocopus martius* (black woodpecker), *Garrulus glandarius* (Eurasian jay), *Parus caeruleus* (Eurasian blue tit), *Parus ater* (coal tit), *Troglodytes troglodytes* (wren), *Luscinia megarhynchos* (common nightingale), *Erithacus rubecula* (European robin), *Carduelis carduelis* (European goldfinch), *Serinus canaria* (Atlantic canary), *Aegithalos caudatus* (long-tailed tit) etc.

**Mammals** - *Erinaceus europaeus* (woodland hedgehog), *Talpa europaea* (European mole), *Lepus europeus* (European hare), *Sciurus vulgaris* (red squirrel), *Muscardinus avellanarius* (hazel dormouse), *Spalax leucodon* (lesser blind mole-rat). *Canis lupus* (wolf), *Canis vulpes* (fox), *Felis silvestris* (wildcat), *Meles meles* (European badger), *Martes martes* (European pine marten), *Mustela nivalis* (least weasel), *Sus scrofa* (wild boar), *Capreolus capreolus* (roe deer) etc.

### 11.2. The current situation

Despite the good maintenance of the recreational area by the management body, some issues regarding the preservation of natural values have been identified in the Germia landscape. The lack of a management plan, the lack of defined areas within the landscape, the tendency to build the "Adventures Park" in the area with the richest biodiversity, afforestation with trees that are inappropriate for the area, illegal hunting, disturbance of fauna and flora, uncontrolled infrastructure and tourism as well as damage to natural values are among the main issues of the Germia landscape. Damage was also caused to the forest ecosystems by the anthropogenic factor, such as: illegal logging, fires, littering, constructions, the organization of the "Sunny Hill Festival" music festival, etc.

While in terms of the natural factor, we noticed trees blown down by atmospheric conditions (wind), the appearance of worms and insects that caused damage to the leaves of the trees, causing the forests to dry up. It is worrying that in the forest communities of "Gërmia" PL, especially in the oak ones, we have observed the phenomenon of drying of many trees due to the action of certain insects as forest pests. Therefore, there is an urgent need for a sanitary cleaning and disinsection of this mountain massif, in addition to the protected area.



Pic. 73. Trunk damage caused by insects



Pic. 74. Interventions in "Gërmia" PL

#### 11.1.5. Recommendations

1. Draft the Managing and Regulatory Plan for the protected landscape "Gërmia";
2. Apply sanitary measures for the rehabilitation of forests damaged by biotic and abiotic factors;
3. Continue research in order to inventory species and habitats;
4. Conduct continuous inspection by the MESP Inspectorate and the Municipal Inspectorate;
5. Prohibit illegal constructions inside the protected landscape "Gërmia";
6. Increase the number of managing staff for the "Gërmia" Protected Landscape;
7. Signalize trails and the external border of the "Gërmia" Protected Landscape;
8. Align all activities and interventions in the Protected Landscape with the relevant laws and bylaws;
9. The management body should organize continuous educational activities in the "Gërmia" Protected Landscape.

### 11.2. "Shkugëza" Protected Landscape

"Shkugëza" Protected Landscape is located in the southern part of the municipality of Gjakova, lying between two hills separated by the small river of Shlepica, at an altitude of 410-460 m. The area is rich in biodiversity, tourism, recreational and educational values. In 2011, the Municipal Assembly of Gjakova decided to declare Shkugëza as a "Protected Landscape" with an area of 70 hectares.

#### 11.2.1. Flora and vegetation

In 1960, Shkugza was forested with black pine (*Pinus nigra*). A rough estimation of plant diversity results in about 280 species. Among others, the following species can be found: the primrose (*Prinula vulgaris*), dogtooth violet (*Erythronium dens – canis*), sheep's fescue (*Festuca ovina* agg.), barren brome (*Bromus sterilis*), yarrow (*Achillea millefolium*), clover (*Trifolium* sp), cypress spurge (*Euphorbia cyparissias*),



Ribwort plantain (*Plantago lanceolata*), Breckland thyme (*Thymus sp.*), hedge woundwort (*Stachys sp.*), Mouse-ear-hawkweed (*Hieracium pilosella*), Common hop (*Humulus lupulus*), Old man's beard (*Clematis vitalja*), Wall germanderhy (*Teucrium chamaedrys*), Flatweed (*Hypochoeris radicata*), Kentucky bluegrass (*Poa pratensis*).

The dominant trees, depending on the places where they are located, are the black pine (*Pinus nigra*), black hornbeam (*Carpinus orientalis*), field maple (*Acer campestre*), Ash (*Fraxinus ornus*), Common hazel (*Coryllus avellana*), Common hawthorn (*Crataegus monogyna*), Cornelian cherry (*Cornus mas*), Turkey oak (*Quercus cerris*), downy oak (*Quercus pubescens*) and the Hungarian oak (*Quercus frainetto*).



Pic. 75. Primrose (*Prinula vulgaris*)



Pic. 76. Dogtooth violet (*Erythronium dens-canis*)

### 11.2.2. Fauna

The “Shkugëza” Protected Landscape is an important habitat for different species of butterflies (Lepidoptera), endangered chafer (*Lucanuscervus*), Wall lizard (*Lacerta muralis*), Turtle (*Testudo hermanni*), Hazel dormouse (*Muscardinus avellanarius*), lesser blind mole-rat (*Spalax leucodon*), wolf (*Canis lupus*), fox (*Canis vulpes*), wildcat (*Felis silvestris*), badger (*Meles meles*), European pine marten (*Martes martes*), least weasel (*Mustela nivalis*), wild board (*Sus scrofa*), etc.

The biodiversity of the Shlepica river is limited because of pollution. There are registered species like the smooth newt (*Triturus vulgaris*), yellow-bellied variegata (*Bombina variegata*), the edible frog (*Rana esculenta agg.*), the grass snake (*Natrix natrix*) etc.

The most present bird species are the green woodpecker (*Picus viridis*), the nightingale (*Luscinia megarhynchos*) etc.

### 11.2.3. The current situation

Monitoring of the “Shkugëza” Protected Landscape during 2018 - 2021 revealed the development of several economic activities within the protected area such as: construction of restaurants and their accompanying facilities, playgrounds and parking lots. Another issue is the lack of waste management, risk of fires, concrete trails, discharge of wastewaters, and uncontrolled picnic activities. Furthermore, there are also car washes with accompanying

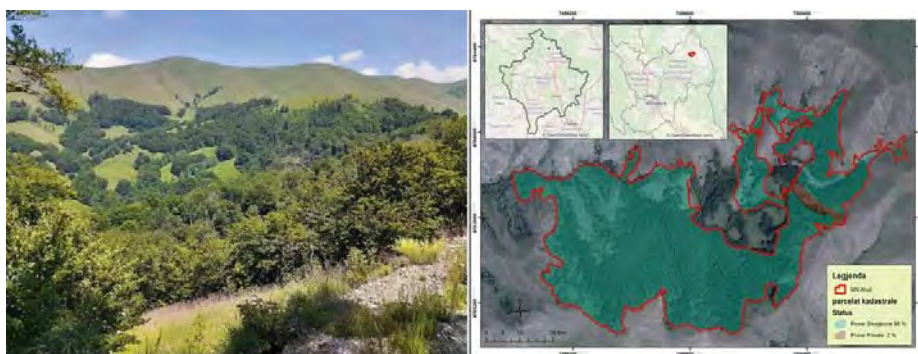
equipment operating in the area of the landscape, which has negatively affected the values of “Shkugëza” Protected Landscape.

#### 11.2.4. Recommendations

1. Develop a Management Plan for the “Shkugëza” Protected Landscape;
2. Ban illegal construction;
3. Ensure better waste management (strictly prohibit the waste burning);
4. Stop illegal logging and conduct the sanitary cleaning of the area;
5. As the area has been turned into a recreational center by the residents, it should be equipped with appropriate infrastructure according to the nature conservation principles;
6. Signalize trails and the external border of the “Shkugëza” Protected Landscape;
7. All activities in the “Shkugëza” Protected Landscape should have an educational, tourist and recreational character and be in line with the Law on Nature Conservation.

### 11.3. “Ahishtat e Llomovës” Protected Landscape

The “Ahishtat e Llomovës” Protected Landscape (Eng. Llomova beech forest) is located in Selac village, in the municipality of Mitrovica, in the place called Llomove. These forests are located in parcels 28, 29 and 30 according to the Forest Management Plan 2014/2024, which are mainly beech forests. Taking into account the vitality, age and importance of beech forests for the environment, in 2019 this area was declared a "Protected Landscape" by the Municipal Assembly of Mitrovica with an area of 93 ha.



Pic. 77. “Ahishtat e Llomovës” Protected Landscape, Map 7. “Ahishtat e Llomovës” Protected Landscape

There are also many water sources as well as different types of alpine and sub-alpine ecosystems in these forest massifs<sup>23</sup>. The natural heritage values of the landscape are also considered to be of geomorphological importance in terms of extent and shape.

The protected landscape "Ahishta e Llomoves" is rich in floristic and vegetative aspects such as: clustered bellflower (*campanula glomerata*), peach-leaved bellflower (*campanula persicifolia*), the golden flax (*linum flavum*), deptford pink (*dianthus armeria*) etc.

<sup>23</sup> Proposal on the declaration of the protected area, No. 3530, dated 17.10.2016, MAFRD



The types of forest vegetation have natural and scientific value and consist of the types of the European Beech (*Fagus sylvatica*), which covers the largest area, while the eastern part of includes an autochthonous area with forests of the Scots pine (*Pinus sylvestris*), etc.



Pic. 78. The clustered bellflower (*campanula glomerata*)      Pic. 79. The golden flax (*linum flavum*)

The landscape represents a wildlife habitat, including the wolf (*Canis lupulis*), deer (*Capreolus capreolus*), fox (*Canis vulpes*), the European hare (*Lepus europenas*), wild boar (*Sus scrofa*), brown bear (*Ursus arctosa*), badger (*Meles meles*), wildcat (*Feslis sylvestris*), while birds are represented by: the northern gowshawk (*Accepiter gentilis*), golden eagle (*Aquilla chrysaetos*), rock partridge (*Alectoris graeca*), lesser kestrel (*Falco naummani*), western capercaillie (*Tetrao orogallus*), grey partridge (*Perdix perdix*), northern goshawk (*Accipiter gentilis*) etj.

### 11.3.1. The current situation

The monitoring visit for the time period 2018-2021 revealed that the human factor caused a series of negative actions on the landscape, such as logging for economic benefits, littering, fires, etc. These impacts are causing the direct degradation of beech forest vegetation while endangering many types of natural habitats. Degradations of forests are also caused by natural factors (such as snow avalanches during the winter in earlier periods). Such actions are endangering the existence of various species of flora and fauna that have their habitats within the landscape. Such phenomena also reflect negatively on the tourism values offered by the landscape. Eco-tourism in this area offers visitors a trip to untouched and special places such as old and rare Beech (*Fagus sylvestris*) and Pine (*Pinus sylvestris*) forests. Therefore, preserving these values will make a special contribution to minimizing negative impacts on the environment.



Pic. 80. Beech logging in the “Ahishtat e Llomovës” Protected Landscape

### 11.3.2. Recommendations

1. Establish a Management Body by the Municipality of Mitrovica;
2. Develop a management plan for the “Ahishtat e Llomovës” Protected Landscape;
3. Conduct continuous research for the purpose of inventorying the species and habitats;
4. Signalize trails and the external border of the “Ahishtat e Llomovës” Protected Landscape;
5. Ban logging and conduct sanitary cleaning of the area;
6. Apply sanitary measures to recover the damaged forests from the biotic and abiotic factors;
7. Conduct continuous inspection by the Municipal Inspectorate;
8. Ensure an educational, touristic and recreational character for all activities in the protected area.
9. Ban illegal logging and littering

### 11.4. “Llapushnik River Valley” Protected Landscape

The “Llapushnik River Valley” Protected Landscape is located in the mountains of Pogragje village, in the municipality of Gjilan. In 2020, it was announced a protected area in the landscape category by the Municipal Assembly of Gjilan, with an area of 76 ha.

The types of forest and herbaceous vegetation that are found in this area have natural and scientific values and as such give a very beautiful view to this part. The forest vegetation includes the following species: Field maple (*Acer campestre*), European hornbeam (*Carpinus betullus*), Cornelian cherry (*Cornus mas*), common hawthorn (*Crataegus monogyna*), accacia (*Akacia*) etc. Fauna includes species such as: Wolf (*Canis lupus*), fox (*Ursus arctos*), wild boar (*Sus scrofa*), wildcat (*Felis silvestris*), badger (*Meles meles*), pine marten (*Martes martes*), common cuckoo (*Cuculus canorus*), great spotted woodpecker (*Dendrocopos major*), black woodpecker (*Dryocopus martius*) etc.



Pic. 81. "Llapushnik River Valley" Protected Landscape

#### **11.4.1. Recommendations**

1. Establish the management body by the Municipality of Gjilan;
2. Develop a Management Plan for the "Llapushnik River Valley" Protected Landscape;
3. Conduct continuous research for the purpose of inventorying species and habitats;
4. Signalize the "Llapushnik River Valley" Protected Landscape";
5. Ban illegal logging and littering.

## **XII. OTHER PROTECTED AREAS**

### **12.1. Hunting areas of special importance**

Activities of the Kosovo Forest Agency, namely the Directorate for management of wildlife, hunting and eco-tourism in the HASI are developed based on the Strategy of Management of Wildlife and Hunting in Kosovo (2012-2022), as a strategic document for the preservation of the entirety of the ecosystem and ecological balance, adequate wildlife protection, ensuring the welfare and conditions for their economic exploitation, Law on Hunting No. 02/L-L53 and other bylaws complementing this law.

During the period 2015-2017, the focus was also on sustainable management of wildlife and hunting at HASI Blinaja and Dubočaku, with special emphasis on:

- Conservation of habitat,
- Achieving the optimal number for all game animals,
- Maintaining the optimal population structure by gender and age,
- Good health conditions of game animals,
- Protection and conservation of rare and endangered species,
- Achieving planned objectives in hunting areas management in line with the management program and the ten-year long-term plan.

### 12.1.1. Hunting area of special importance “Blinaja”

Blinaja lies in three municipalities, Lipjan, Drenas and Shtime and occupies an area of 2795 ha. This closed-type hunting area consists of 40 hectares of meadows, 32 artificial lakes, 88 observation and monitoring posts, 12 pig traps, while the feeding area for large animals consists of 150 feed stores, 26 concrete flooring for pigs, 2 for reproduction, 32 areas for water, 15 for salt, 1 training area for hunting dogs etc. In total there are 2100/ha of state forests and 600/ha of privately owned forests. The other 95/ha is agricultural area (meadows) and 5/ha water surface.

In order to increase the efficiency and functionality, considerable investments have been made in the last three years aiming at renovation and revitalization of infrastructure such as: renovation of forest roads, renovation of the external fencing, renovation of the Hunting Facility and the Training Facility, renovation of the auxiliary facility (additional food warehouse for wild animals, agricultural tools and equipment warehouse, a mini-slaughterhouse for wildlife treatment after hunting and collecting samples for analyses), providing food for wild animals during the winter season, setting up troughs for food and salt, etc. This habitat is in good condition thanks to the commitment and continuous engagement of the staff in protecting, cultivating, caring and ensuring food for the wildlife.

The main species of wild fauna that are cultivated in Blinaja include: Deer (*Capreolus capreolus*), Red deer (*Cervus elaphus*), Brown deer (*Dama dama*), wild boar (*Sus scrofa*), In addition to these species, Blinaja is also habitat to the badger (*Meles meles*), beech marten (*Martes sp.*), European pine marten (*Martes sp.*), European hare (*Lepus europeus*), raven (*Corvus corax*), magpie (*Pica pica*), common buzzard (*Buteo buteo*), garganey (*Anas querquedula*), wildcat (*Felis sylvestris*), red squirrel (*Sciurus vulgaris*), etc.

According to the Forest Management Plan 2014-2023, in the HASI in Blinaja the volume of the present wood mass is 332325 m<sup>3</sup>, with an annual increase of 2.93%, i.e. 9737 m<sup>3</sup>/year. The HASI in Blinajë is under KFA management and there are no illegal actions despite the occasional attempts for illegal hunting that are prevented by the Forestry and Hunting Protection Staff, in some cases supported by the Kosovo Police.



Pic. 82, 83 and 84. Fauna in HASI “Blinaja” (Photography: A. Mavriqi, A. Llapashtica, L. Demaj 2021)

### **12.1.2. Hunting area of special importance “Dubočaku”**

This hunting area lies in three municipalities, Skenderaj, Zubin Potok and Mitrovica and occupies an area of 6805.05 ha, of which 2470 ha are public property and the rest is privately owned. This is an open-type hunting area. According to the Forest Management Plan 2011-2021, Dubočak has a wood mass volume of 46954.40 m<sup>3</sup>, with an annual increase of 2.2%, i.e. in amount of 1693.00 m<sup>3</sup> and lies in an altitude of 320 m to 1050 m. Hydrologic conditions are favorable because it is rich with many streams and water springs that are widespread throughout the hunting area and do not drain throughout the year, i.e. there are no water related issues for wild fauna.

No inventory of the number of wild animals present in this area has been conducted, but based on the recordings made with fixed camera and based on the footprints we know that there are different types of wild animals that live in the area, such as Brown Bear (*Ursus arctos*), Wolf (*Canis lupus*), Wild boar (*Sus scrofa*), Roe deer (*Capreolus capreolus*), Red deer (*Cervus elaphus*), European hare (*Lepus europeus*), Squirrel (*Sciurus vulgaris*) etc.

During the last three years, infrastructure investments have been made, such as: renovation of the facility and offices, provision of additional food for winter season (grain and rock salt), setting up troughs for food and salt etc.

In this hunting area there is a tendency for illegal activities for illegal logging and hunting with a declining trend over the past two years thanks to the engagement of the HASI staff in Dubočak, while another problem is also the limited access to the areas stretching in the municipality of Zubin Potok. During this period, the electricity supply network has been constructed in this hunting area, and the municipality of Zubin Potok renovated the road that leads to the vicinity of the HASI facility in Dubočak.

### **12.1.3. Common hunting places**

Pursuant to Law No. 02/L53 on Hunting, and the 2014-2023 National Strategy on Sustainable Wildlife Management goals, the municipalities have established 33 common hunting areas during this period, with a total area of 598686.01/ha, of which 19 common hunting areas have been granted for management (through public auctions) (Gjilan 3, Dardanë 1, Shtime1, Hani i Elezit 1, Kaçanik 1, Mitrovicë 1, Vushtrri 2, Therandë 1, Malishevë 1, Lipjan 2, Kastriot 1, Fushë Kosovë 1, Graçanicë 1, Besianë 1 and Deçan 1) with a total area of 375861.34 ha , while the value of contracts concluded between the municipalities and JHS managing operators is 313,146.96 €.





Pic. 85 and 86. Fauna in HASI in the Municipality of Theranda (2021)

#### 12.1.4. Recommendations

1. Issue a Regulation (AI or price list) for the management of HASI in Blinaja for revenue collection from the provided services;
2. Continuously repair and maintenance of forest roads;
3. Ensure adequate machinery for the maintenance of forest trails;
4. Open water drainage channels, including water outflow from the lakes;
5. Construct the new external fence of HASI in Blinaja (the old one has undergone serious damage during the last war and has worn off to a significant extent),
6. Complete the hunting museum with exhibits, build a relief model with all terrain information, and install guiding signals in trails/roads of Blinaja and Dubočak, and provide guiding maps to visitors;
7. Prevent illegal hunting and illegal logging in the hunting areas,
8. Increase the legal responsibility level and cross-institutional cooperation (MAFRD-DF, APK, MESPI, Municipalities, Courts, NGOs, and other stakeholders, for the purpose of implementing the National Strategy on Sustainable Wildlife and Hunting Management;
9. Functionalize the monitoring, information and reporting system - MIRS (KFIS);
10. Education, training and professional capacity building;
11. Information, communication and cooperation with the media, and distribution of brochures, leaflets and posters on the importance of wildlife;
12. National wildlife inventory;
13. Increase regional and international cooperation level (exchange experiences),
14. Continuously conduct studies on the values of biodiversity in the hunting areas of “Blinaja” and Dubočak

## 12.2. Natura 2000

The Natura 2000 ecological network is the largest coordinated network of EU protected areas. It covers more than 18% of the land and more than 8% of the maritime territory of the EU. This network of areas for the preservation and breeding of rare and endangered species extends to all EU countries, with the intention of extending to the candidate countries as well. The Natura 2000 network was established in 1992, with the adoption of the EU Habitats Directive, which protects wildlife and natural habitats in Europe, whereas the EU Wild Birds Directive was adopted in 1979 with the aim of protecting wild bird species and their most important habitats in the European Union.

After considerable work by various institutions and scientists, candidate countries prepare lists of areas proposed to become part of Natura 2000. After the country becomes an EU member, they are approved by the European Commission and become official parts of the Natura 2000 network. The aims of the Natura 2000 ecological network are to ensure the long-term survival of rare and endangered species and habitats in Europe.

Natura 2000 is not only about the protection of nature, but is also based on a much broader principle of protection and sustainable use, where people and the living world can coexist in harmony.

The main goal of the Natura 2000 network is to manage the areas in a sustainable economic and ecological way, thus improving the protection and preservation of species and habitats.

Natura 2000<sup>24</sup> is the main pillar of the European Green Infrastructure, which provides ecosystem services (food, raw materials, clean air and water) as well as ensuring current and future development.



Pic. 3. Natura 2000

<sup>24</sup> [https://ec.europa.eu/environment/nature/natura2000/index\\_en.htm](https://ec.europa.eu/environment/nature/natura2000/index_en.htm)

The process of establishing the Natura 2000 Network in Kosovo is in the initial phase, however, a legal framework and policies that support the establishment of the Natura 2000 ecological network have been established. The Strategy and Action Plan for Biodiversity 2011-2020 has identified the need for an inventory of protected areas in accordance with the requirements of Nature 2000.

In order to implement the Natura 2000 ecological network, during the period 2018-2021, the following actions were taken:

- The inventory of flora and fauna has been continuously made by the Kosovo Institute for Nature Protection. (an activity that was carried out during this period that is worth mentioning is the publication of the Red Book of Fauna).
- Maps have been drawn up with data on natural habitats of flora and fauna (the "Inventory of types of plants, animals, types of natural habitats and their cartographic presentation" project was developed).
- Identification of all important areas and provision of funds for the implementation of Natura 2000; currently an action plan has been drafted titled "Capacity building for the implementation of the acquis in the field of nature conservation - Nature 2000" which is included in the list of potential preliminary proposals for IPA III (2023-2024).

#### **12.2.1. Recommendations**

1. Identify all potential areas for Natura 2000 in Kosovo;
2. Inventory of species and habitats;
3. Ensure funds and projects for identifying areas of Natura 2000;
4. Apply for IPA and EU programs for the implementation of Natura 2000 in the future;
5. Cooperate with regional countries which have established the Natura 2000 Ecological Network.

#### **12.3. Bear Sanctuary Prishtina**

The Bear Sanctuary is located in Marmor village, 20 km from Prishtina, and was opened in 2013, with the support of FOUR PAWS from Austria.

The area of 16 ha was granted for usage by the Municipality of Prishtina for 99 years. There are currently 20 bears living in the Bear Sanctuary Prishtina, 17 of them rescued in Kosovo and 3 brought from Albania.

Thanks to the health care, available space and feeding program, all bears enjoy good health. Since their arrival at the shelter, their condition has steadily improved, they now show much less abnormal behavior caused by long life in captivity and all have almost completely reverted to their natural instincts, such as opening caves and hibernation process.



### 12.3.1. The current situation

In 2018, with the support and funding of the FOUR PAWS organization, the "Treasures of Nature" Environmental Education Center was built in the Bear Sanctuary in Pristina. This center's main goal is to offer a unique environmental educational program. This program is implemented in cooperation with schools, kindergartens and visitors who, with groups of children and students, conduct environmental lessons related to the protection and well-being of animals and other environmental issues. Inside and outside the center, various educational activities are continuously developed with children:



Pic. 87, 88 and 89. Children attending the "Hunting for Treasures" educational program

During the period 2018-2021, the number of visitors has varied over the years, as a result of the pandemic (Covid-19).

*Table no. 8 Number of visitors over the years 2018 - 2021*

Year	2018	2019	2020	2021
Number of visitors	40,553	44,086	19,679	36,620

Source: Bear Sanctuary Prishtina

### 12.3.2. Green Projects

Within the framework of the Pristina Bear Forest, in the period 2018-2021, many green projects have been developed and continue to be developed, with the aim of preserving the environment and providing environmental education to visitors and children for the preservation of the environment. These projects are mainly focused on the following areas: recycling, composting, renewable energy (43 kW solar panels), electric bus for transporting visitors from the main road to the Bear Forest in Pristina.



Pic. 90, 91 and 92. Green projects

### **12.3.3. Recommendations**

1. After their treatment and rehabilitation, young bears (rescued bears) should be let free in nature;
2. Forestation of the area in the Bear Sanctuary Prishtina should be done with indigenous tree species;
3. Develop educational campaigns in schools for wildlife protection;
4. Develop joint activities with central, local and international institutions for the protection and promotion of natural values;
5. Annually report to MESPI on the condition of bears.



### XIII. BIODIVERSITY

**“Variability among living organisms from all sources, including, inter alia, terrestrial, marine, and other aquatic ecosystems, and the ecological complexes of which they are part: this includes diversity within species, between species and of ecosystems”<sup>25</sup>.**

Geographical position, geological, pedologic, hydrological factors, relief and climate, are some of the factors that have enabled Kosovo to have a rich diversity in biological and landscape terms.

Despite being a small country (10.908 km<sup>2</sup>), Kosovo is quite rich in terms of plant and animal variety. The flora of Kosovo consists of algae, lichens, fungi, ferns, gymnosperms and angiosperms. Although there have been research studies of the flora, vegetation and fauna of Kosovo by local and international authors, a complete inventory has not yet been made and the exact number of plant and animal species in Kosovo is unknown. According to the notes of various authors, it is believed that there are approximately 2800-3000 types of vascular flora in Kosovo.<sup>26</sup>



Pic. 93. Balkan peony (*Paeonia peregrina decora*)

#### 13.1. Flora and Vegetation

The flora of our country is rich in rare and endemic plant species, herbaceous, shrubby and woody forms. The indigenous plants of Kosovo are widespread in certain places and mainly with small spatial extent and often there are few species. In addition to the above-mentioned

<sup>25</sup> UN Convention on Biological Diversity

<sup>26</sup> The red book of Vascular Flora of the Republic of Kosovo

forms, there are also aromatic medicinal plant species and wild fruit trees. The regions richest in medicinal-aromatic plants and wild fruit trees are: Sharri Mountains, Albanian Alps of Kosovo, Pashtriku<sup>[1]</sup> etc.



Pic. 94. Albanian tulip (*Tulipa albanica*) Photography: XH. Mala

The vegetation of Kosovo is classified into: 139 associations or phytocenoses, 63 alliances, 35 ranks and 20 classes, which represent characteristic ecosystems, which are also habitats for many animal species. The vegetation of lowland meadows is classified into: 4 associations belonging to one alliance, one rank and one class, while the vegetation of subalpine and alpine meadows is classified into: 65 associations, 33 alliances, 22 ranks and 13 classes.



Pic. 95. *Saxifraga sempervivum*

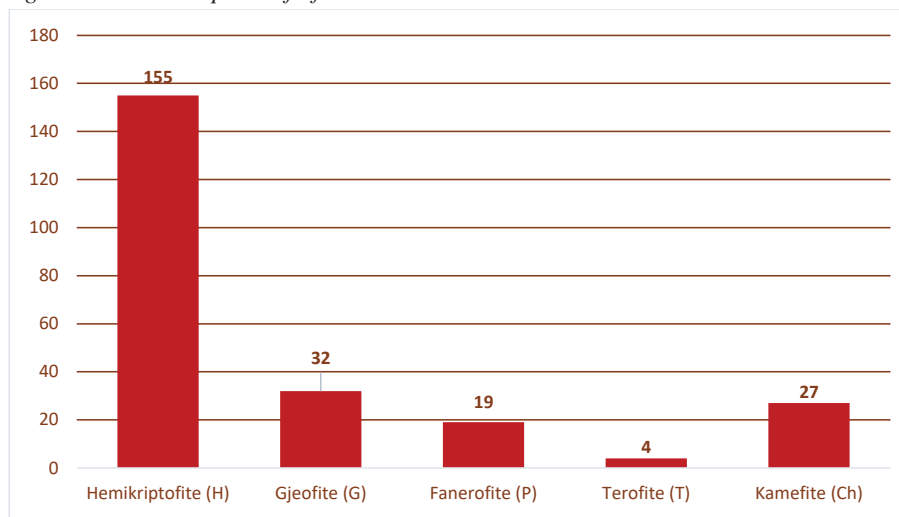


Pic. 96. *Sempervivum macedonicum*

<sup>[1]</sup> Inventory of aromatic medicinal plants and wild fruit trees, developed by Prof. Dr. Fadil Millaku

The number of taxa included in the Red Book of the Vascular Flora of Kosovo according to Raunkiær is presented in figure no. 4, which shows that Hemicryptophytes dominate with 155 taxa, then Geophytes with 32 and Chamaephytes with 27. In smaller numbers are Phanerophytes with 19 taxa and the least Therophytes with only 4 taxa

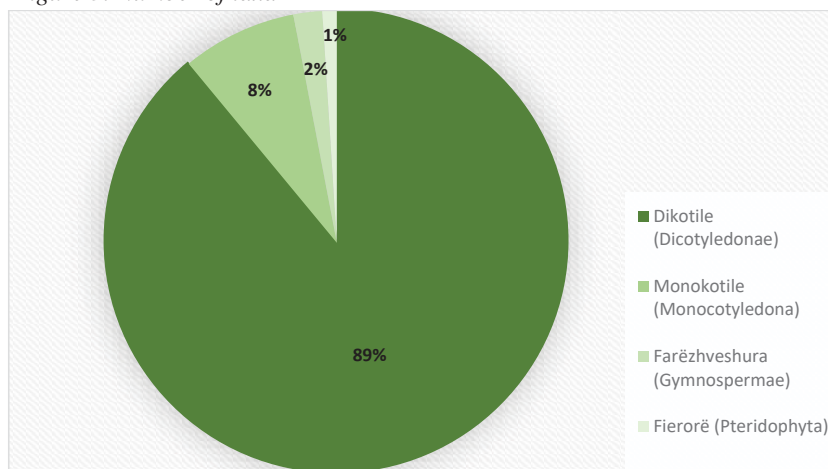
*Figure 4. Raunkiær plant life-form*



Source: Red Book of Vascular Flora of the Republic of Kosovo

Of the 237 taxa listed in the Red Book, there are 3 species of Fieraceae, 4 species of Angiosperms, 210 taxa of Dicotyledons and 20 taxa of Monocotyledons.

*Figure 5. Number of taxa*

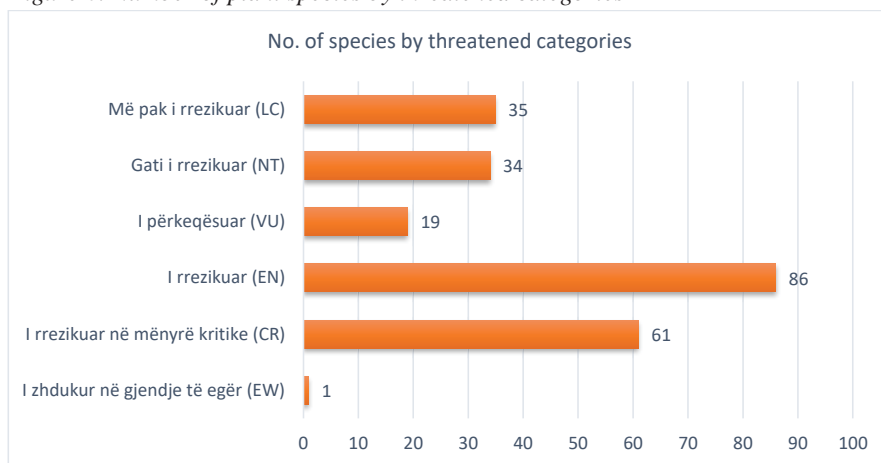


Source: Red Book of Vascular Flora of the Republic of Kosov

### 13.1.1. Status of evaluated species

A total of 237 taxa have been included in the Red Book of Vascular Flora of the Republic of Kosovo, of which, based on the IUCN criteria (Based on the "Guide for the use of IUCN Red List Categories and Criteria" Version 8.1 (August 2010) the following were assessed and categorized: Extinct (EX) 1 species, Extinct in the Wild (EW) 1 species, Critically Endangered (CR) 61 taxa, Endangered (EN) 86 taxa, Vulnerable (VU) 19 taxa, Near Threatened (NT) 34 taxa and Least Concerned (LC) 35 taxa (Tab. 2), while in the Data Deficient (DD) and Not Evaluated (NE) categories we have not included any taxa. Figure 6 shows the number of plant taxa included in the Red Book and belonging to different categories of threat.

Figure 6. Number of plant species by threatened categories



Source: Red Book of Vascular Flora of the Republic of Kosovo

Of the 237 plant taxa evaluated in accordance with the IUCN Red List criteria, 0.4% fall in the Extinct category (EX) (1 species), 0.4% (1 species) are extinct in the wild (EW), 26% (61 species) are critically endangered (CE), 36% (86 taxa) are endangered (EN), and 16% (35 taxa) are Least Concern (LC).

Table 9. Number of plant species by IUC Red List categories

IUCN Red List Categories	Number of species	Number of endemic Balkan species	Number of species included in the Global Red Book	Number of species included in the European Red Book
<b>Extinct (EX)</b>	1	/	/	/

<b>Extinct in the Wild (EW)</b>	1	/	/	/
<b>Critically Endangered (CE)</b>	61	32	3	6
<b>Endangered (EN)</b>	86	45	9	6
<b>Vulnerable (VU)</b>	19	11	3	3
<b>Near Threatened (NT)</b>	34	23	5	1
<b>Least Concern (LC)</b>	35	21	4	1
<b>Total number of species</b>	237	132	24	17

Source: Red Book of Vascular Flora of the Republic of Kosovo

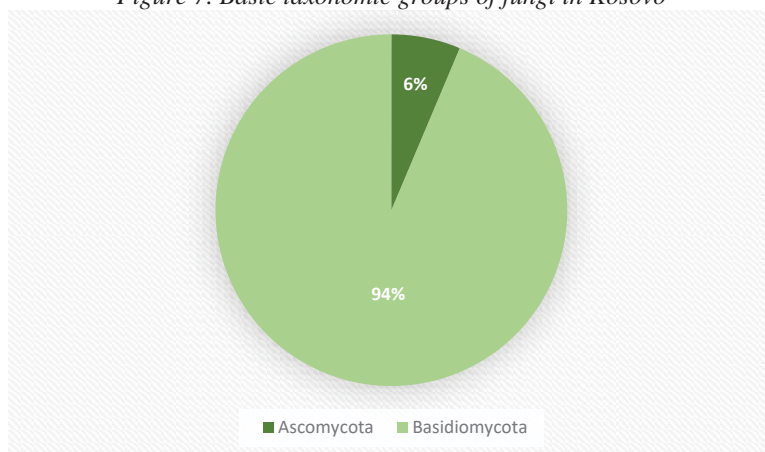
### 13.1.2. Fungi

The latest study provides detailed data on the identification of fungus species from oak forests. The fungi identified belong to two main taxonomic ranks, namely *Ascomycota* and *Basidiomycota* in oak forests, as these forests cover the majority of the country. A total of 220 fungus taxa (219 species and one form) have been identified so far in oak forests in Kosovo, out of 14 species belonging to the *Ascomycota* group, and 206 species belonging to the *Basidiomycota*. A total of 166 fungus species were reported for the first time in Kosovo, as some of the species were already known in the Kosovo territory. Of the 220 identified fungi species only in the oak forests, the division with the largest number of species is that of *Basidiomycota*, with 206 species, 120 genera classified into and 56 families, and the division of *Ascomycota* with 14 species, 13 genera classified into 10 families.<sup>27</sup>

<sup>27</sup> Qendrim Ramshaj, Katarina Rusevska, Slavica Tofilovska, Mitko Karadelev (2021) , Checklist of macrofungi from oak forests in the Republic of Kosovo, Czech Mycology 73(1): 21- 42, Febuary 12, 2021 (Online Version, Issn 1805-1421).



Figure 7. Basic taxonomic groups of fungi in Kosovo



### 13.2. Fauna

Kosovo is among the countries with the richest and most heterogeneous fauna of the Balkan Peninsula. This faunal richness is the result of the numerous influences of the Mediterranean, Euro-Siberian and Nordic-Alpine regions, as well as frequent changes in ecological conditions from the past.

Our country is habitat to types of mammals and birds that are quite rare for the Balkan region and beyond. Some of them are relics and threatened with extinction and therefore are on the lists of international conventions.

Based on the existing studies and literature, over 300 wild species of vertebrates live in Kosovo, of which about 30 species of fish, 10 species of terrestrial water, 20 species of reptiles, over 220 species of birds and about 40 species of mammals.



Pic. 97. Levant sparrowhawk (*Accipiter brevipes*) Photography: A. K

High forest and mountain ecosystems provide favorable conditions for important populations of large mammals such as: The brown bear (*Ursus arctos*), lynx (*Lynx lynx*), deer (*Capreolus capreolus*), wildcat (*Rupicapra rupicapra*), and many bird species of prey and songbirds, very important for the ornitofauna of Kosovo, the Balkans and Europe. The golden eagle (*Aquila chrysaetos*), lesser kestrel (*Falco naummani*), Western capercaillie (*Tetrao urogallus*) are some of the most representative species of the country, which also have an international protection status. They are in the IUCN (International Union for Conservation of Nature) list, EU-RL (European Red List), WR-RL (World Red List).

**Fish (Pisces):** The rivers of Kosovo belong to three sea basins (the Adriatic Sea, the Aegean Sea and the Black Sea), where it can be said that our country has a special importance in the description of the ichthyofauna of the Balkans. The mountainous areas are cut by numerous streams that according to the ichthyological characteristics, these streams belong to the type of Salmonid waters, whose habitat consists mainly of the population of two types of trout: the brown trout (*Salmo trutta m. fario L.*) and the marble trout (*Salmo marmoratus C.*).

**Amphibians (Amphibia):** Two orders are present within the aquatics: the tailed amphibians (Urodela) represented by one family, 2 genera and 6 species. The most characteristic species of the Salamandridae family are the Fire salamander (*Salamandra maculosa*), Alpine salamander (*Salamandra atra*), smooth newt (*Triturus vulgaris*).

**Frogs (Anura):** This order consists of 5 families, and approximately 7 species. The most representative frog species are: the toad (*Bufo bufo*), green toad (*Bufo viridis*), tree frog (*Hyla arborea*), common frog (*Rana temporaria*), agile frog (*Rana dalmatina*), stream frog (*Rana graeca*) etc.

**Reptiles (Reptilia):** The reptile group present in the country consists of 5 families with 10 species, among them the pond turtle (*Emys orbicularis*), the Greek tortoise (*Testudo graeca*), green lizard (*Lacerta viridis*), wall lizard (*Lacerta muralis*), sand lizard (*Lacerta agilis*), grass snake (*Natrix natrix*), dice snake (*Natrix tessellata*), horned viper (*Vipera ammodytes*), common viper (*Vipera berus*), slow worm (*Anguis fragilis*) etc.



Pic. 98. Fire salamander (*Salamandra salamandra*)



Pic. 99. Green lizard (*Lacerta viridis*)

**Birds (Ornitofauna):** The country's natural habitats provide shelter for many species of birds, many of which have unfavorable conservation status in the Balkans and Europe. Over 220 species have been observed to date, but there are thought to be over 300. Most bird species have extremely wide ranges, while a small number are confined to narrow localities. Important species of birds are: golden eagle (*Aquila chrysaetos*), imperial eagle (*Aquila heliaca*), lesser kestrel (*Falco naumanni*), Western capercaillie (*Tetrao urogallus*), corn crake (*Crex crex*), rock partridge (*Alectoris graeca*), etc.



Pic. 100. Rock partridge (*Alectoris graeca*), (B.H)



Pic. 101. Wallcreeper (*Tichodroma muraria*) (B H)



Pic. 102. Black stork (*Ciconia nigra*) Photography: A. Mavriqi

**Mammals (Mammalofauna)** are represented by almost all species living in the Balkan Peninsula. The most represented mammal group in terms of the number of species are the rodents. The mammal class consists of 3 insectivores species: hedgehog (*Erinaceus europaeus*), European mole (*Talpa europae*), Common shrew (*Sorex araneus*), 19 rodent species:



European hare (*Lepus europaeus*), muskrat (*Ondatra zibethica*), water vole (*Arvicola terrestris*), house mouse (*Mus musculus*), striped field mouse (*Apodemus agrarius*), wood mouse (*Apodemus silvaticus*), edible dormouse (*Glis glis*) etc., 11 carnivore species: lynx (*Lynx lynx*), brown bear (*Ursus arctos*), wolf (*Canis lupus*), fox (*Canis vulpes*), wildcat (*Felis silvestris*) etc., 1 non-ruminant species: wild boar (*Sus scrofa*) and 3 ruminant species: deer (*Capreolus capreolus*), chamois (*Rupicapra rupicapra*) etc. Bats (*Chiroptera*) are much less studied therefore their number is unknown.



Pic. 103. Brown bear (*Ursus arctos*),



Pic. 104. Deer (*Capreolus capreolus*)



Pic. 105. Balkan lynx (*Lynx lynx*), Photography ERA

A more specific assessment of the state and density of populations of wild mammal species in forest ecosystems, through camera trap monitoring, has been made within the project: *Development of a method for measuring the national distribution and density of wild mammals using cameras trap: A Kosovo Study.*

Table 10 presents data on the average density of several wild mammal populations in Kosovo, based on measurement results from 10 monitoring points of the abovementioned project.

Table 10. Average density of population for several types of wild mammals<sup>28</sup>

Species	Density (individual / km)		Forest population size	
	Average	Distance	Average	Range
Fox ( <i>Vulpes vulpes</i> )	1.03	0.58-1.55	4935	2778-7433
Wolf ( <i>Canis lupus</i> )	0.08	0.04-0.12	374	202-584
Wild boar ( <i>Sus scrofa</i> )	1.34	0.78-1.97	6469	3754-9460
Deer ( <i>Capreolus capreolus</i> )	3.19	1.90-5.00	15334	9126-24059
Badger ( <i>Meles meles</i> )	0.08	0.03-0.14	364	146-656
European hare ( <i>Lepus europeus</i> )	1.81	0.94-2.82	8728	4524-13572
Beech marten ( <i>Martes foina</i> )	0.36	0.16-0.59	1720	789-2831
Wildcat ( <i>Felis sylvestris</i> )	0.08	0.03-0.13	381	152-648
Brown bear ( <i>Ursus arctos</i> )	0.25	0.12-0.41	1190	596-1966

### 13.2.1. Red Book of Flora

Within the Kosovo Environmental Program (KEP) financed by the Swedish Government - SIDA, the project (second component) "Inventory of biodiversity through the Red Book of Fauna" was developed. The development of this project is of great importance, since it provided an inventory of the fauna in Kosovo for the first time, which will inform policies and strategies for the protection and conservation of the fauna in Kosovo.

Table 11. Distribution of species included in the Red Book of Fauna of the Republic of Kosovo according to IUCN

Groups	Critically Endangered CR	Endangered EN	Vulnerable VU	Near Threatened NT	Least Concern LC	Data Deficient DD	Total
Gastropoda			10	10			20
Bivalvia		1					1
Oligochaeta		1		2	2	7	12
Hirudinea						2	2
Arachnida					1	8	9
Araneae					1	7	8
Mesostigmata						1	1
Malacostraca			1			1	2
Diplopoda			3			6	9

<sup>28</sup> Developing methods for measuring national distributions and densities of wild mammals using camera traps: A Kosovo study; Sarah E. Beatham et al, 2020.



<b>Insecta</b>	20	11	19	42	13	35	<b>140</b>
<i>Ephemeroptera</i>		4		4	2	2	<b>12</b>
<i>Plecoptera</i>	5	1					<b>6</b>
<i>Odonata</i>				4	1	7	<b>12</b>
<i>Coleoptera</i>			3	2	4	17	<b>26</b>
<i>Mecoptera</i>						1	<b>1</b>
<i>Diptera</i>						2	<b>2</b>
<i>Trichoptera</i>	15	1	7	20	1	2	<b>46</b>
<i>Lepidoptera</i>		5	9	12	5	4	<b>35</b>
<i>Cyclostomata</i>				1			<b>1</b>
<i>Actinopterygii</i>	1	1	1	4	2	5	<b>14</b>
<b>Amphibia</b>		2	1		3	7	<b>13</b>
<b>Reptilia</b>			1	8	8	3	<b>20</b>
<b>Aves</b>	3	6	4	4		7	<b>24</b>
<b>Mammalia</b>	1	2	1	9	17	9	<b>39</b>
<b>Totali</b>	<b>25</b>	<b>24</b>	<b>41</b>	<b>80</b>	<b>46</b>	<b>90</b>	<b>306</b>

Source: Red Book of Fauna of the Republic of Kosovo

The Red Book of Fauna of the Republic of Kosovo includes 306 species, belonging to the following animal groups: *Gastropoda*, *Bivalvia*, *Oligochaeta*, *Hirudinea*, *Arachnida* (*Araneae*, *Mesostigmata*), *Malacostraca*, *Diplopoda*, *Insecta* (*Ephemeroptera*, *Plecoptera*, *Odonata*, *Coleoptera*, *Mecoptera*, *Diptera*, *Trichoptera*, *Lepidoptera*), *Cyclostomata*, *Actinopterygii*, *Amphibia*, *Reptilia*, *Aves* and *Mammalia*.

The largest number of species included in the Red Book of Fauna of the Republic of Kosovo belongs to the following groups: Insects (140 species), mammals (39), birds (24), reptiles (20) and shells (20), while other groups are represented by a smaller number of species.

The largest number of species included in the Red Book of Fauna of the Republic of Kosovo belong to the following categories: data deficient (total 90) and near threatened (total 80), while the smallest number of species belong to the endangered (24) and critically endangered (25) categories.

### 13.3. The current situation

Different activities such as: illegal logging, illegal hunting, habitat degradation, opening new roads in the protected areas (National Parks “Bjeshkët e Nemuna” and “Sharri”, “Ujëvarat e Mirushës” NMSI etc.), fires, urbanization (illegal constructions in protected areas), river beds degradation (constructions in river beds without concrete projects), global climate change, etc., are factors that directly affect plant and animal species to face the risk of extinction. Important habitats are being damaged as a result of these actions, and ecosystems are being degraded as a result of the human factor interventions in the last decades. As a result of logging with no criteria, large areas of the ecosystems and various plant and animal species risk losing their natural habitat. Consequently, invasive species emerge, which often manage to change the floristic structure of indigenous ecosystems.



Pic. 106 and 107. Damaged vegetation in “Bjeshket e Nemuna” National Park



Pic. 108. Fragmented habitats in “Bjeshkët e Nemuna” National Park

Medicinal and aromatic species are threatened with extinction by their uncontrolled collection. Especially concerning is their collection in their flowering stage as well as the collection of tubers and other reproductive parts. This illegal activity of medicinal plants collection is often carried out in the border area with Albania, as well as by companies and associations that deal with the processing of medicinal and aromatic plants.

As part of the regular activities of biodiversity monitoring and inventory, the Kosovo Institute for Nature Conservation continued developing monitoring activities of the wild fauna in 2018-2021. This activity was developed in cooperation with officials of National Parks and NGOs. During this time, trap cameras were installed, mainly in the parts which are believed to be potential movement areas of wild animals.

In the areas where cameras were installed, various mammal species were photographed and recorded such as: Brown bear (*Ursus arctos*), lynx (*Lynx lynx*), deer (*Capreolus capreolus*), chamois (*Rupicapra rupicapra*), wolf (*Canis lupus*), fox (*Vulpes vulpes*), marten (*Martes martes*), Badgers (*Meles meles*), wild boar (*Sus scrofa*), European hare (*Lepus europaeus*), wildcat (*Felis sylvestris*) etc. The data on the presence of wild fauna species reflect the actual situation in animal diversity research in Kosovo, where there is still an essential lack of a large number of species in terms of data about populations, the number of individuals, their trends and factors that threaten them.

The general condition of the fauna is deteriorating as a result of the illegal activities that occur in the spaces of the protected areas and in their habitats. The main threats to fauna are: illegal hunting, industrial development, urbanization, fishing, illegal landfills, transport and tourism, which is a growing phenomenon in recent years even in protected areas.

The most endangered from illegal hunting are roe deer, wild goats, Balkan lynx, bear, wild boar, field partridge, rock partridge. These are just some of the wild animals that are the target of hunters in National Parks and other protected areas.

Other factors of biodiversity loss are also anthropogenic activities, such as deforestation and desertification of arable land, destruction of meadows and pastures, fires and waste disposal. Construction and expansion of roads, changes in water flow, construction of dams, pipelines, hydropower plants, various pollutions, fires, etc., are some of the factors of degradation and fragmentation of habitats and biodiversity in general.

#### **13.4. Conclusions**

1. Monitoring of fauna through trap cameras has provided information on the presence of several rare fauna species in Kosovo;
2. Fauna is threatened by illegal hunting, constructions and degradation, and fragmentation of habitats in the protected area;
3. The accurate number of plant and animal species in Kosovo is unknown;
4. The Red Book of Vascular Flora of Kosovo and the Red Book of Fauna of Kosovo has been developed and a situation assessment of plant and animal species has been conducted;
5. There is a lack of special monitoring programs for biodiversity in general or specific species in particular;
6. Kosovo has a very rich biodiversity;
7. Lack of staff in KNPI and management bodies of protected areas for fauna monitoring;
8. Lack of funds for a complete biodiversity inventory, etc.

#### **13.5. Recommendations**

1. Ensure alignment with and implementation of the EU *acquis* in the area of nature conservation.
2. Continue studying, recording and monitoring natural values and inventory of plant, animal species and natural habitats.
3. Take measures to protect the endangered flora and fauna species in line with the recommendations and findings of the Red Book of Flora and Fauna of Kosovo.
4. Conduct continuous monitoring of the situation of rare and endangered plant and animal species.
5. Develop a moratorium on hunting throughout Kosovo for a period of at least 5 years.

6. Initiate the rehabilitation of degraded areas through conservation and restorative activities (drafting and implementing plans for special species and their habitats),
7. Protect rare and endangered species and habitats as well as draft professional rationale on the declaration of protected areas of birds and habitats in accordance with Natura 2000 ecological network;
8. Develop a reference list;
9. Protected Areas Administration Bodies and MESPI Inspectorate should monitor and prevent illegal activities, including hunting;
10. Ensure financial means for the full biodiversity inventory;
11. Build a nature museum (presenting flora and fauna diversity collections);
12. Establish protected areas management bodies to protect the biodiversity (flora and fauna) of special importance.

#### **XIV. HYDRO POWER PLANTS IN PROTECTED AREAS - ENDANGER FOR BIODIVERSITY**

Biodiversity is fundamental for life on Earth and for human survival itself, which includes all biological species with their genetic content, as well as the various ecosystems where they live and fulfil the normal function of natural systems and life itself. With the current trend of economic development, biodiversity is seriously threatened. In this case, it should also be mentioned the fact that many of these species and habitats which will be part of the directives and conventions will be attacked by the construction of hydropower plants within the National Parks. This phenomenon will affect the destruction of flora and fauna habitats that live in these environments.

Construction of hydropower plants within protected areas in general and in National Parks in particular, is accompanied by direct impacts on general natural values, aquatic and terrestrial flora and fauna, landscape and specific habitats, and especially on fauna, where the most endangered species are aquatic, such as fish, aquatic vertebrates, etc. From the actions of the hydropower plants in the protected areas, the living world found in the river will be directly endangered and at the same time there will be a disturbance of their species and habitats.

Disconnection of water flows in rivers or streams through the construction of dams, canals and pipelines of hydropower plants are very harmful to the living world, which are considered as national natural heritage.

Water flow is a defining element of the physical environment in rivers and is the main determinant of the biotic composition: influencing the change of habitats for aquatic plants and those around the river bed, the change of habitats for invertebrates, fish and aquatic vertebrates, etc.

Water rerouting from the natural flow for the needs of hydropower plants will affect the change in air humidity and microclimate, which will consequently bring a chain reaction for many types of aquatic animals such as fish, water insects, molluscs, butterflies, frogs, newts, waterfowl, but also for the plants found around and in the river bed itself. Also, this would directly affect some important habitats of flora, fauna, natural landscape, as well as other related phenomena, such as erosion or massive landslides of rocky parts of the mountains along the river valley.

Water level decrease in the riverbeds, accompanied by the increase in temperature and the decrease in dissolved oxygen, leads to a decrease in fish populations, while the river trout can hardly survive in such circumstances. Therefore, the interventions during the construction of the hydropower plant, in addition to the impacts on the disruption of the ecological balance with consequences for biodiversity and other natural values go along also with an impact on the local climate of the area.

An example of the destruction of natural values is the operation of the hydropower plant in the "Bjeshkët e Nemuna" National Park, specifically in the deep canyon of Decan, where the source bed of the river has been degraded and it can be stress out that almost all the fauna associated with the flow of the Lumbardhi of Decan has been destroyed. The same situation



is in the river Selac in Shale of Bajgora, known for the presence of indigenous trout, on whose bed two hydropower plants have been built so far, while other are expected to be built.

A very severe situation is also in the Lepenci river and its branches, where a significant part of the water quantity has been put into the pipes, method which is being used in all newly built hydropower plants. Also, a hydropower plant has been built near the village of Firajë, and several others are expected to be built downstream of the river, in which case the natural flow of the river has been completely destroyed along with the living world.

Along the river valleys where the hydropower plants are built, there are many types of rare and endangered vegetation, such as: *Pinus peuce*, *Pinus heldreichii*, *Abies alba*, *Picea excelsa*, *Cerastium alpinum*, *Saxifraga stellaris*, *Saxifraga aizoides*, *Nartecium scardicum*, *Valeriana tripteris*, *Malva moschata*, *Cirsium candelabrum*, *Gnaphalium sylvaticum*, *Lychnis flos-cuculi*, *Lychnis coronaria*, *Tanacetum vulgare*, *Angelica pancicii*, *Acer intermedium*, *Achillea grandifolia*, *Saturea subspicata*, *Salix eleagnos* etc.

Among the animal species present in these areas included in the Annexes of the EU birds and habitats Directives, it is worth mentioning: the otter (*Lutra lutra*), the wild goat (*Rupicapra rupicapra*), the brown bear (*Ursus arctos*), The roe deer (*Capreolus capreolus*), the wild cat (*Felis sylvestris*), the lynx (*Meles meles*), and also the Balkan lynx (*Lynx lynx balcanicus*), observed for the first time in Kosovo after many years, that too in the territory of the National Park "Bjeshket e Nemuna" and in NP "Sharri", then, birds such as the wild turkey (*Tetrao uragullus*), the mountain partridge (*Alectoris graeca*), the mountain eagle (*Aquila chrysaetos*), the water thrush (*Cinclus cinclus*), as well as the fish such as the brook trout (*Salmo trutta m. Fario*), marble trout (*Salmo marmoratus*) etc.

Presence of the aforementioned species, as well as other species on the Red List that are protected on a national and international scale, is a reason to prohibit the construction of hydropower plants in protected areas, respectively in National Parks and other areas enriched in biodiversity.

Decision-making institutions shall take over to ensure the protection of natural resources, biodiversity and nature as a whole, through the creation of protected areas, respectively National Parks which are declared to ensure the preservation and renewal of natural habitats, biological species and natural landscapes. In this case, we can mention the "Sharri" and "Bjeshket e Nemuna" National Parks, which are habitats for plant and animal species that would not survive in other environments due to changed natural conditions and human intervention.

Hydropower plants within National Parks are also in violation of international Directives and Conventions such as: the Berne Convention, the Convention on Biological Diversity, the Natural Habitats Directive, the Water Framework Directive (2000/60/EC), the Directive on the conservation of natural habitats and of wild fauna and flora (92/43/EEC), Directive on the conservation of wild birds (2009/147/EC) etc.<sup>29</sup>

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<sup>29</sup> Clarification: Resolution of the European Parliament, February 15, 2017, Report No. 2016/2312 - INI, very harshly criticizes the Government of Albania and demands the immediate ban on the construction of hydropower plants on the Vjosa River and the declaration of the Vjosa River as a National Park.

Having that Kosovo in a short period of time will be a signatory of international directives and conventions, the Institutions of Kosovo need to be engaged to align the legislation on the protection of nature with the Directives of the European Union, so all the intellectual potential should be focused on the completion and approval of the list of species and habitats, which is also a requirement set by the European Union.



Image 109. Degradation of the Berovec river bed



Image 110. Degradation of the Lumbardhi river bed in Deçan

#### 14.1. Recommendations

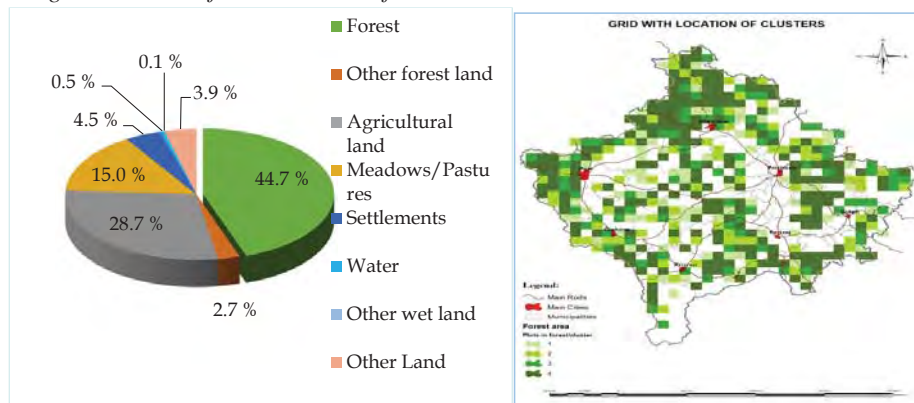
1. Prohibited construction of hydropower plants in all protected areas;
2. Production of energy through hydropower plants should be replaced by the construction of other renewable energy facilities, such as the use of wind, solar energy, etc., which do not have a negative impact in the environmental, social and economic aspects;
3. Undertaking all the measures so that the areas degraded by the activities of the hydropower plants are rehabilitated and returned to their former state;
4. Carrying out studies on the quantity of water resources in Kosovo and on the basis of them to draw up policies and strategies for the use of water;
5. Utilization of water for different purposes should also be in line with local community;
6. Continuously inspect the rivers by the Inspectorate of MESPI and the municipalities, where they act according to the laws into force;
7. MESPI and municipal inspectorate to prohibit all river degrading activities such as: throwing solid waste, discharging sewage, throwing pesticides, changing river flows, dams, constructions near rivers, etc.

## XV. FORESTS

Based on the Law No. 2003/3 on Forests, forest resources are considered national assets of general interest. Forests are important in fulfilling ecological-environmental, economic and social goals. The social role of forests is one of the other main factors, which today around the globe is treated as essential for reasons related to the provision of food and the creation of job positions. Therefore, future national or international policies, in addition to the approach to the role of forests in the ecological-environmental and economic aspects, have focused too much on the creation of jobs in deep rural areas, with the aim of keeping the population in these areas, as a basis to secure food through diversification and expansion of values.

Based on the National Forest Inventory / NFI in 2012, Kosovo is covered with 44.7% of forests, which is considered a sustainable potential for the country development out of which about 62% are public forests while about 38% are considered private forests. Based on the forest inventory, protected areas or forests cover about 12% of their total area and in themselves include about 36% of the overall volume. The impact for economic access is limited, based on the above fact of the summarization in volume, but also on the fact that the forests with the greatest economic value (high forests-truncated) are located within the two National Parks "Sharri" and "Bjeshket e Nemuna" ".

*Image. 8. Classes of land use in % of the total area*



Source: MAFRD. National Forest Inventory, 2012.

Kosovo forests are dominated by broad-leaf forests, covering 93% (449,400 ha) of forest areas, where more than half are even-aged. While 5% (23,800 ha) of forest areas is covered by coniferous forests which are equally distributed among different structural classes. In total, about 50% of the forest area is considered even-aged.

Table no. 12. Forest area according to the composition and structure of stands, (ha)

Forest composition	Regeneration	Even-aged	Two-storied	Uneven-aged		Total
Coniferous	2,200	6,600	6,200	8,800		23,800
Mixed	0	400	3,200	4,200		7,800
Deciduous	45,400	236,000	123,600	44,400		449,400
<b>Total</b>	<b>47,600</b>	<b>243,000</b>	<b>133,000</b>	<b>57,400</b>		<b>481,000</b>

Source: MAFRD. National Forest Inventory, 2012

Most of the forest area consists of mixed forest stands (21% of the forest area consists of 4 - 5 different types of wood). About 85% of forests regenerate vegetatively through stump shoots. According to NIF results, annual sustainable logging is estimated to be 1.45 million m<sup>3</sup>/year, with approximately 630 000 m<sup>3</sup> in high-quality forests and 815 000 m<sup>3</sup> in low-quality coppice forests. However, currently the annual timber harvest amounts to 1.6 million m<sup>3</sup>, which is about 1/4 higher than the recommended long-term level. Moreover, only 10 – 15 % of the forest volume is currently harvested according to the existing regulations, which means that the MAFRD - Kosovo Forestry Agency uses nearly 200 000 m<sup>3</sup> per year. The main reasons for this are illegal logging and informal forest activities, fragmented and small private forest holdings (one/two hectares on average), as well as the low implementation rate of forest management plans.

Potential of forest resources is not fully utilized due to the limited availability of appropriate technology and trained personnel, the weaknesses of organizational structures and the implementation of legislation related to the protection and management of resources. The data according to the last NFI show that a total of 58,200 ha of forests are negatively affected by biotic and abiotic factors, where about 5.8 million m<sup>3</sup> are damaged as a result of these factors. Insects and diseases are responsible for the damage of 14,600 ha of this surface. Illegal logging is one of the main factors affecting forest damage. Poor villagers living near forest areas cut trees for a living. According to the latest forest inventory, 40% of public forests and 29% of private forests in Kosovo have been damaged by uncontrolled activities or illegal logging. High volumes of forest residues are often left in the forest after logging, which leads to the loss of biomass that could be used for bioenergy and increases the risk of insect damage and increased risk of forest fires.

Establishment of new forests and the improvement of forest health are addressed through: the National Forestry and Reforestation Program of Kosovo (NFRP) 2018-2027 and the National Forest Health Program (NFHP) 2018-2027. The NFRP aimed to increase Kosovo's forests by 5%, but it has been assessed as a very ambitious and difficult to implement program.

Meanwhile, the NFHP aimed at improving the health of forests, but its implementation remains a challenge for the responsible institutions of forest administration and management due to the lack of human capacities and financial resources.

Afforestation was done mainly with coniferous species, a trend which continued until 2018 when the National Plan for Afforestation and Reforestation 2018-2027 was approved, which favours deciduous forests. Afforestation with non-native species, which pose a threat to natural forests, covers 0.6% of forests.

The main species is acacia originating from the southeast of the USA, which was first brought to Europe, then to Kosovo, in order to control erosion. Acacia covers 2400 ha and together with Larch and Pseudocuga, the total area with non-native species is about 3200 ha. Forestry activities are carried out according to Law no. 2003/3 on Forests, while the Ministry of Agriculture, Forestry and Rural Development is in the process of drafting a new law on forests. There are 45 sub legal acts (administrative instructions) related to forestry and hunting and some of them have been amended and supplemented. In addition to the Law on Forests, there are about 13 laws that directly or indirectly relate to Kosovo forests. Kosovo Forestry Agency (KFA) within the MAFRD is responsible for the administration and management of forests and public forest lands and the control of the management of private forests and forest lands, including the collection of non-timber forest products. The Department of Forestry within the MAFRD is responsible for the policies and strategies of the forestry sector. Municipal forestry authorities are responsible for forest protection and issuing permits for logging.

### **15.1. Forest management activities**

During the period 2018-2020, the forests were covered with long-term plans of 14 management units, during which they were monitored and checked the whole time of collecting records based on field taxes, as well as reporting in three phases on the work performed.

Phase I – set up the database and digitization of management unit.

Phase II - collection of detailed field notes, and

Phase III - data processing based on notes such as the textual, tabular and cartographic part.

During the period 2018 - 2020, Management Plans for Management Units (MU) have been prepared:

- 2018 - Bellosica 4185 ha (Podujeve), Koritnik II 970 ha (Dragash), Duboçak 500 ha (Zubin Potok), (Peja), Maja e Zeze 6601 ha (Peja), Gnjzhansk 2719 ha (Leposaviq), Guri i zi 2100 ha (Kamenica), Bodoshnjak 4957 ha, (Kaçanik - Hani i Elezit), a total of 22032 ha.
- 2019 - Bjeshkët e Moknës 5351 ha (Zubin Potok), Kodra e bardhë - Lokva 4426 ha (Leposaviq), total 9777 ha,
- 2020 - Lugu i Butë 3446 ha, (Istog), Ahishta 823 ha (Kaçanik), Goshtce, 2310 ha (Viti), Bredhiku 1262 ha (Dragash), Opojë 2927 ha, (Dragash), a total of 10768 ha.

### **15.2. Forest protection activities**

Various activities took place for the protection of forests, such as setting up minor offences and criminal procedures, controls in forest areas, markets, and forest roads. The municipal authorities have reported on the number of criminal charges and minor offences were reported. At the same time the quantity of wood material reported as forest damage and damaged value incurred.



In terms of protecting forests from illegal logging, the amount of confiscated wood material that was cut and transported irregularly was also reported.

*Table no. 13. Criminal charges – minor offences, 2018 - 2020*

Forest damage		Piece	m <sup>3</sup>	Total €
2018	File minor offence	4,501	7,589	992,320
	File criminal charge	1,147	6,430	829,427
	<b>Total</b>	<b>5,648</b>	<b>14,019</b>	<b>1,821,747</b>
2019	File minor offence	3,099	16,875	713,203
	File criminal charge	664	3,143	381,307
	<b>Total</b>	<b>3,763</b>	<b>20,019</b>	<b>1,094,510</b>
2020	File minor offence	2764	4,715	569,551
	File criminal charge	610	2,683	343,258
	<b>Total</b>	<b>3374</b>	<b>7,398</b>	<b>912,808</b>

Source: MAFRD

### 15.3. Forest fires during 2018-2020

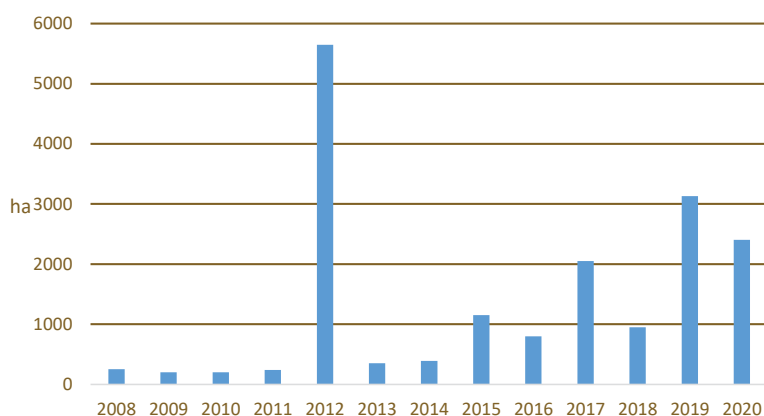
Forest fires present one of the biggest challenges for institutions, especially during the early spring and summer. According to various analyses and statistics, over 99% of fires in forests and forest lands are caused by the human factor, while only 1% of them are caused by other abiotic causes. During the summer drought period of 2020, the number of cases and the involvement of forest areas by forest fires has marked a continuous increase. This is due to high temperatures and carelessness of people.

*Table 14. Number of forest fires and area in ha, 2018-2020*

Region		Prishtina	Mitrovica	Peja	Prizren	Ferizaj	Gjilan	Total
Year								
2018	No. of cases	25	2	9	32	5	10	83
	Total (ha)	576	3	47	211	8	104	949
2019	No. of cases	62	17	18	51	17	53	218
	Total (ha)	472	452	1403	194	86	526	3133
2020	No. of cases	59	17	6	58	19	11	170
	Total (ha)	371	618	322	762	84	247	2404

Source: MAFRD

Figure 9. Burned forest area in ha (2008-2020)<sup>30</sup>



Source: Kosovo Forest Agency<sup>31</sup>

The Kosovo Forest Agency is continuing cooperation with rule of law, emergency and security institutions in cases of forest fires. This cooperation creates the possibility of reducing the spread of fires in the forest areas and in the lands around the forests. During the year 2020, KFA in cooperation with MESPI in the six regions has engaged about 290 seasonal workers for the protection of forests from fires. From KFA and EMA, 240 workers were trained and certified for protection of forest from fires.

#### 15.4. Afforestation activities

Based on the annual forest management plan, afforestation of forest lands has been carried out throughout the territory of Kosovo. During 2018, around 136 ha were afforested in the region of Prishtina, Mitrovica and Peja, while around 160 ha were afforested in the region of Prizren, Ferizaj and Gjilan. While during the year 2019 - 2020, about 800 ha were afforested, as can be seen in the following table.

Table 15. Afforestation, 2019-2020

Region	Prishtina	Mitrovica	Peja	Prizren	Ferizaj	Gjilan	Total
Year							
2019	65	74	50	95	65	71	419
2020	58	69	55	65.20	69.40	64	380.60

Source: MAFRD

<sup>30</sup> Kosovo Forest Agency

<sup>31</sup> Kosovo Forest Agency

## XVI. INSPECTION AND LEGAL PROCEEDINGS UNDERTAKEN IN THE FIELD OF NATURE PROTECTION

Within the ex officio competences of control in the Inspectorate of Environment, Water, Nature, Spatial Planning and Construction, the Ministry of Environment and Spatial Planning during the exercise of inspection supervision and control through nature inspection in the framework of the implementation of laws in the field of nature protection, during the period 2018 - 2021, has carried out 361 different activities, which are reflected in Table No. 16.

*Table No. 16. Actions undertaken in the field of nature*

<b>Inspection activities in the field of nature</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Decision	-	1	7	7
Mandatory fines	-	20	-	4
Administrative fines	-	-	-	2
Judicial / Offense Procedure	2	2	-	-
Inspection supervision with minutes	34	34	25	17
Supervision with inspection teams	-	-	-	142
Recommendations, orders and information	32	12	-	20

Source: MESPI Inspectorate

The main challenge that appears in the implementation of supervisory inspections and the undertaking of legal actions in the field of nature remains the implementation of Law No. 04/I-175 on the inspectorate of environment, water, nature, spatial planning and construction. This law stipulates that the Nature Protection Inspectorate must exercise inspection supervision and control through field inspection in the implementation of this law as well as laws and by-laws related to nature protection. He must also exercise his duties and responsibilities in the protection of nature, harmonizing his activity with the requirements of the European Union for the "Nature 2000" network".

With the Regulation (GRK), No. 05/2017 for the internal organization and systematization of job positions in the Ministry of Environment and Spatial Planning, it is foreseen that the Department for Inspection of the Environment, Nature, Water, Construction and Spatial Planning will employ thirty-one (31) employees, but that actually the existing situation is different. Only one (1) nature inspector is employed in this Department at the central level. Considering the legal obligations and the percentage of the territory of Kosovo which is protected for its nature, it is impossible for the supervisory inspection of the nature field to be done by only one inspector. Also at the local level, there are no inspectors employed within the municipalities who specialize only in the field of nature.

In general, in the forbidden interventions in the field of construction, environment and water, the rest of the inspections were carried out through 4 897 activities, as in table no. 17.

Table no. 17. Inspections in the field of environmental protection, water, spatial planning and construction

Type of inspection activities in the field of environmental protection, water, spatial planning and construction	2018	2019	2020	2021
Inspection supervision with minutes	763	796	250	561
Decisions	131	126	64	212
Mandatory fine	4	148	11	231
Administrative fine	-	-	67	228
Recommendations, orders and remarks	522	500	86	-
Initiations of Court proceedings	62	63	30	6
Enforcement procedure	-	-	-	36

Source: MESPI Inspectorate

During the field work for the protection of nature, the MESPI Inspectorate has assessed that it is necessary to do the following:

- Review of decisions in National Parks in relation to the granting Construction Permits;
- Avoiding the conflict of competences between the central and local levels for the issuance of building conditions and permits as well as the implementation of inspection supervision for facilities with permits;
- Prevention of unauthorized constructions and any other illegal activity in protected areas;
- Lacking legal act on the competences and procedures for issuing and executing decisions on the demolition of buildings without permission;
- Absence of a legal officer within the Inspectorate, for the preparation of legal acts which are required by the Law of the Inspectorate and representation in the courts regarding the initiations for the detected violations;
- Increasing human capacities to speed up procedures for issuing documentation from MEPSI;
- Prevention of illegal actions for the use of natural resources such as river inert, limestone, coal, etc.;
- Untreated discharge of water into rivers - lack of water treatment plants mainly from households but also from other activities;
- Interventions in water properties and protected water areas;
- Constructions on water properties in the vicinity of river flows and other water flows as well as in the protected areas of accumulations - artificial lakes such as Lake Batllava, Badovci, Radoniq, etc.;
- Producers and bottlers of water and liquids are obliged to pay water taxes, there are more than 50 operators who produce water and liquids and who operate without relevant documentation, due to the expiration of water permits and obligations for environmental permits, failure to fulfil the obligations of payments due to the high rate of the water tax, refusal to pay, administrative procedures for changing the administrative instruction for water taxes, the Government's decision on debt forgiveness, etc.;

- Levitating cooperation between the central and local level, being aware that there is a lack of local inspectors in the field of environment and water, etc.

Directorates for Administration of the National Parks "Sharri" and "Bjeshkët e Nemuna" in accordance with the responsibilities of the laws on national parks, nature and other relevant legislation in the administrative, criminal, criminal, civil and enforcement field during the period 2018-2021, has undertaken actions necessary for the implementation of obligations. These actions are presented in table no. 18 for the Directorate for the Administration of the National Park "Bjeshket e Nemuna", while in table no. 19 for the Directorate for the Administration of the "Sharri" National Park..

*Table No. 18. Actions of the National Park Administration Directorate "Bjeshkët e Nemuna"*

<b>Activities of the National Park Administration Directorate "Bjeshkët e Nemuna"</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Criminal reports at the Basic Prosecutor's Office in Peja	67	78	39	25
Criminal charges at the Basic Prosecutor's Office in Gjakova	3	-	1	-
Minor offence action request at the Basic Court in Pejë – Minor Offence Division	6	8	-	-
Minor offence action request in the Court Branch in Deçan	6	1	-	-

Source: MESPI Inspectorate

*Table No. 19. Actions of the National Park Administration Directorate "Sharri"*

<b>Activities of the National Park Administration Directorate "Sharri"</b>	<b>2018</b>	<b>2019</b>	<b>2020</b>	<b>2021</b>
Criminal charges at the Basic Prosecution Office in Ferizaj	132	198	63	13
Criminal charges at the Basic Prosecution Office in Prizren	3	5	9	3
Minor offence action request in the Basic Court in Prizren	-	1	-	-
Minor offence action request in the Court Branch in Shtërpce	6	1	-	-
Minor offence action request in the Court Branch in Kaçanik	3	3	-	-
Minor offence action request in the Court Branch in Dragash	-	1	-	-

Source: MESPI Inspectorate



## XVII. SOME IMPORTANT PROJECTS AND ACTIVITIES FOR NATURE PROTECTION 2018 - 2021

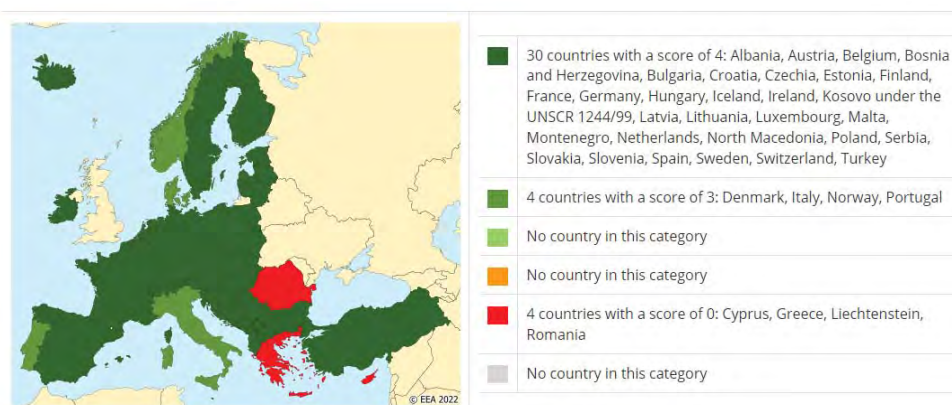
During the period 2018 - 2021, the Kosovo Protection Nature Institute, in cooperation with other institutions, has carried out several important projects and activities that have directly influenced the improvement of the state of biodiversity, protected areas and nature in general. The Institute is also engaged in establishing cooperation not only with relevant national institutions responsible for nature conservation, but also with international ones, academic and research institutions, as well as with civil society organizations, in order to achieve the common goal of protection of biodiversity and natural heritage

### 17.1. Reporting to EEA/EIONET

Since 2011, in the frame of cooperation and reporting in the European Environment Agency - EEA and in the European Environment Information and Observation Network (EIONET), the Kosovo Protection Nature Institute reported before these institutions.

In the framework of activities and commitments in the process of reporting on biodiversity indicators, KNPI also during the period 2018 - 2021 has successfully reported to EIONET on the indicator of protected areas (Common Database on Designated Areas - CDDA).

It is worth noting that even during this period, as previous years, this report was exceedingly well-regarded by the EEA.



Map No. 8. Overall performance of states in 2020 reporting

## 17.2. International Waterbird Census 2021 in Kosovo

In (2021) – in the frame of activities for inventorying and monitoring biodiversity, the Kosovo Protection Nature Institute with the help of volunteers from Wildlife Albanian Photographers - WAPH, Kosova Wildlife Care - KWC, for the third time consecutively have carried out the International Waterbird Census. This counting was carried out in almost all areas where there are water basins as well as in some parts of river flows. The activity was carried out within the framework of the IWC 2021 (International Waterbird Census), which has been organized worldwide, for 55 years, by Wetlands International.

From the gathered results, it can be ascertained that a total of 19 species of waterbirds were observed with a total number of 8,250 individuals. Also, this time, the majority of waterbirds counted on this occasion were the Mallard (*Anas platyrhynchos*) with 5,477 individuals and the Mallard (*Anas crecca*) with 1,985 individuals, which constituted over 90% of the total number of birds.

## 17.3. Declaration of protected species

In (2021) -with the initiative of the Institute for Nature Protection, the Minister of MESPI, through separate decisions, has protected several indigenous breeds of pigeons of Kosovo in the frame of activities for protection of nature.

By approving these decisions, the autochthonous types of pigeons: *Pëllumbi* and *Pelikan* of Peja, *Kryemusmi* of Gjakova, *Gjylia* of Prizren, *Akrobatiku-Dyneku* of Kosova, and *Kuti* of Drenica have been added in the Register of Protected Natural Values, which is maintained by the Kosovo Protection Nature Institute .

The main purpose of issuing these decisions is to protect these species according to the law and to determine the conditions of keeping. Also, through these decisions, it is intended that these species are protected from the risk of genetic mixing with foreign breeds and from the risk of taking these breeds out of the country for the purpose of crossbreeding with other breeds.

The decisions also contain the professional rationale for taking protection of these species as well as the description of their basic characteristics, which were drawn up by an inter-institutional working group led by the Kosovo Protection Nature Institute . The institutional protection of these indigenous breeds of pigeons is of special importance also due to the fact that these breeds will now be presented internationally as indigenous breeds of the Republic of Kosovo, local tamed species, through which the wealth of values will be presented of the country's biodiversity.



Image No. 111. Indigenous species of pigeons

#### 17.4. Atlas of Kosovo Plants

In (2021) - The Ministry of Environment, Spatial Planning and Infrastructure, through the Kosovo Protection Nature Institute, has supported the publication of the Kosovo Plant Atlas. This atlas is the result of several years of research work by local botanical experts and represents a very important publication in this field.

The team of experts that participated in the design of this atlas, during field work collected 1130 plant species, including about 1/3 of Kosovo's plants. This document is important for central, local and academic institutions, because it contains important scientific data about the flora of Kosovo. These data are of special value for the Kosovo Protection Nature Institute, as they enable the completion of the database and the creation of a detailed inventory of plant species.

In the frame of plant species included in this atlas, there are endemic plant species of the Balkans and Kosovo, as well as rare and endangered species. This document is also a good basis for the design of policies, strategies and plans for the protection of endangered plant species and habitats.

Similar publications contribute to increasing the awareness of all levels of society for the recognition and protection of the biodiversity of the plant species of our country. Also, this atlas will be at the service of educational institutions of different levels that will enable to be familiar with the plant species of Kosovo and their diffusion.

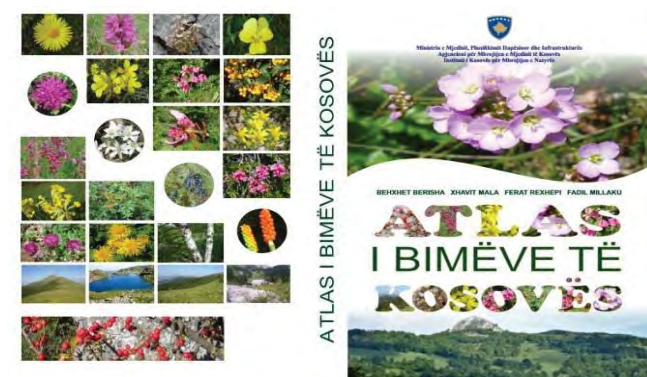


Image No. 112. Atlas of Kosovo Plants

### 17.5. SPELEOMEDIT a monograph on Speleology of the Mediterranean countries

In (2021) - In the framework of the activities to mark the year 2021 as the International Year of Caves and Karst, the International Union of Mediterranean Speleology has published the monograph "Speleomedit - *Panoramic view of caves and karst of the Mediterranean countries*", which includes a summary of the works presenting the caves and the karst phenomena of the Mediterranean countries.

This monography makes an important contribution to common awareness and to strengthen the links between speleological groups and research institutions in Mediterranean countries, in order to increase the capacities and actions to support the protection of karst and caves.

The monograph is structured with general articles that give a panoramic view of karst, geomorphology, hydrology, bio-geography, biology, archaeology, underground as well as history and cults associated with caves in Mediterranean countries. In one of the articles of this publication, speleology of Kosovo is also presented.



## 17.6. The habitat of the Boshtra endemic species, an added value of the register of protected areas

In (2021) - The Kosovo Protection Nature Institute has highlighted the value of nature - the habitat of the endemic species *Forsythia europaea* (Boshtra) found on Goleshi hill, an area that includes the territory of the Municipality of Fushe Kosova, Drenas and Lipjan.

The working group composed of representatives of the MESP, the University of Pristina and the relevant municipalities has drafted the professional rationale as a basic document for the protection of this natural value. The assemblies of these municipalities have issued the decisions on the declaration of their territories separately as Boshtra (*Forsythia europaea*) protected area. The total area of this zone is 123.54 ha (51.92 ha in Fushe Kosove, 38.42 ha in Drenas and 33.2 ha in Lipjan). The data presented in the professional rationale were collected from the archives of the Kosovo Protection Nature Institute, but also during field research expeditions carried out by the working group and experts in the relevant fields.

*Forsythia europaea* (Boshtra) is a woody plant - shrub, endemic and tertiary relict of Kosovo and Albania. This species in Kosovo grows in rocky-serpentine areas, creating rare forests or bushes.

This species has been evaluated in the Red Book of the vascular flora of Kosovo in the LC category (least endangered) since the species is currently not threatened to the extent that it should be placed in a higher category. The habitats where this species grows are also rich in other endemic and relict species that are of scientific importance



Image No. 113. *Forsythia europaea* (Boshtra) Map no. 9. Habitat of endemic species *Forsythia europaea*

## 17.7. Representatives of National Parks discuss to coordinate activities within the Dinaric Parks network

In (2021) - Representatives of the protected areas of Kosovo, members of the network of protected areas of the Dinarides, the director of DANP "Sharri", the director of DANP "Bjeshket e Nemuna", and the managing body of the Protected Landscape "Gërmia", have met to discuss regarding the coordination of actions within the framework of participation in the activities of the Dinaric Parks project. At the same time, in this case they also received the membership certificates in this network of protected areas.



Since 2014, Kosovo Parks are members of the Dinarid Parks network with full rights. The Dinarid Parks Network consists of 95 protected areas from Albania, Kosovo, Bosnia and Herzegovina, Montenegro, North Macedonia, Slovenia, Croatia and Serbia. The goal of the network is to improve the management and protection of natural resources in the respective protected areas of the network through active participation in joint activities.



#### **17.8. Ringing of two individuals of the Black Stork species (*Ciconia nigra*).**

In (2021) Two individuals of the Black Stork (*Ciconia nigra*) species were ringed for the first time in Kosovo. These are the first birds of this type to be ringed in Kosovo and their ringing was carried out in their nest located in a locality in the Municipality of Kamenica. This activity was carried out as a collaboration between the Kosovo Protection Nature Institute and the Association of Wildlife Photographers in Kosovo.

The ringing of storks is an important activity because based on the numbers (codes) that bear the rings, it is confirmed that these are Kosovo storks. The rings used for this activity are a donation from the Max Planck Institute for Ornithology in Germany, with which KNPI has cooperation in this field. In the future, it is planned that these birds will also be fitted with GPS to track their movements and journeys.



Image No. 114. Photo Ringing of individuals of the Black Stork type

### 17.9. Cooperation with UP- FNMS - Department of Biology

In (2021) Students of the Department of Ecology and Environmental Protection from UP have visited the Kosovo Protection Nature Institute .

During this visit, the students had the opportunity to see closely the work of the Kosovo Protection Nature Institute and get to know the opportunity to engage in practical work at the Environmental Protection Agency of Kosovo, namely within the framework of the research that the Institute of Nature carries out in the field of nature protection and biodiversity.



Image No. 115. Cooperation with UP - Department of Biology

### 17.10. National Park "Sharri", an habitat of a very rare fungal

(2020) - *Zeus olympius*, is a very rare species of fungal genus found in Kosovo, which is known only from two other countries in the world. The fungal genus was discovered for the first time in Kosovo by a team of mycologists from North Macedonia in 2018 during a research in Prevalle at an altitude of about 1,600 m.

*Zeus olympius* it was first found in 1986 on Mount Olympus in Greece, while in 2012 it was also found on Mount Pirin in Bulgaria. The fungus grows in small clusters on dead parts of small branches of Bosnian pine (*Pinus heldreichii* syn.) The species is part of the Global Fungal Red List Initiative, in which it is designated as "potentially critically endangered". The data for Kosovo have already been incorporated into the database of the Global Fungal Red List Initiative.

The fungal was found and identified by the team of mycologists from the Faculty of Natural Sciences in Skopje, within their project "Fungal of Kosovo". Until now, the fungal of Kosovo have been scarcely studied and there was insufficient official data available. The project has produced data on over 380 different species, including them in a specially created online database Fungi of Kosovo. The list, prepared in line with the IUCN criteria, will be a basis for the compilation of an Official Red List of Fungi and the preparation of legislation for the protection of fungal.



Image No. 116. Fungal (*Zeus olympius*)

#### 17.11. Marking of strict nature reserves

In (2020) – Having the importance of Strict Nature Reserves for the protection of natural values, rare ecosystems and special species of flora and fauna, KEPA/KNPI during 2020 marked the Strict Nature Reserves, in the frame of the project for the marking protected areas.

The project was carried out in the strict reserves that lie in the two national parks "Sharri" and "Bjeshket e Nemuna", as well as in other parts of the territory of Kosovo and was aimed at raising awareness of the importance of the protection and preservation of natural heritage through placing official notices in these areas for the general public.



Image No 117. Marking strict nature reserves

#### 17.12. With motto "it's time for nature", KEPA marked the World Environment Day

In (2020) – on the World Environment Day, KEPA, through the Directorate for Administration of National Park "Sharri", and in cooperation with the organization WWF Adria Office in Pristina, marked 5<sup>th</sup> of June- World Environment Day.

The main activity took place in the tourist area of Prevalle, on the Prevalle-Brezovica road, where an action was taken to clean up garbage along the road and the course of the river, as well as a walk-in nature to the Burimi i Madh location or otherwise known as the House of Observers. World Environment Day is marked with the motto "Time for nature". Knowing the fact that all material goods, food, the air we breathe, the water we drink and the climate that surrounds us, come from nature. The motto aims to promote activities that promote the protection of nature and its role for public health and well-being.



Image No. 118. Marking the World Environment Day

### 17.13. International Waterbirds Census

In (2020) - Within the activities for monitoring and inventorying biodiversity, the Kosovo Protection Nature Institute with the help of volunteers from "Wildlife Albanian Photographers - WAPH", "Kosova Wildlife Care - KWC" as well as experts and fans of nature have carried out for the second time consecutively in Kosovo the International Waterbirds Census.

This activity, carried out within the framework of the IWC 2020 (International Waterbird Census), which has been organized worldwide, for 54 years, by Wetlands International, has included almost all the countries where there is a presence of water basins is available.

Considering the cold winter of January, Lake Livoqi and Lake Prelepnica were completely frozen. Lake Vasileve as well as Henc Wetland, although frozen, were visited by the field team, in which case only a few species of non-aquatic birds were recorded.

Only Lake Badovci, Lake Batllava and Lake Radoniq were with partially frozen areas where there were waterbirds. From the collected results, it can be concluded that 12 species of waterbird were observed with a total number of 9,334 individuals. Most of the waterfowl counted on this occasion were *Anas platyrhynchos* with 7315 individuals, *Anas crecca* with 1330 individuals and *Chroicocephalus ridibundus* with 453 individuals which together constituted 97.49% of the total number of birds.



#### 17.14. Kosovo flora is also enriched with a new genus and species of plant

In (2020) - Officials from the Directorate National Park “Sharri” and the Kosovo Protection Nature Institute have discovered a new genus and species for Kosovo flora - *Sternbergia colchiciflora* Waldst. et Kit. (*Amaryllidaceae*). The results have been published in the prestigious journal of the field of botany - *Acta Botanica Croatica*. Almost 30 adult individuals of this species were recorded for the first time in southwestern Kosovo, in the locality of White Drin Canyon near Fshajt Bridge.

Considering the low number of individuals and very limited distribution, this species should be treated as a critically endangered taxon in Kosovo.

*Sternbergia colchiciflora* is a species on the Red List of endangered, deteriorated and near threatened species in many European countries. This species is also listed in Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The determination of the level of danger of the species was made based on the IUCN criteria.



Image No. 119. *Sternbergia colchiciflora* Waldst. et Kit. (*Amaryllidaceae*)

#### 17.15. Kosovo Red Book of Fauna

In (2019) - Publication of Kosovo Red Book of Fauna was carried out within the project "Inventory of biodiversity through the Red Book of Fauna" as part of the Kosovo Environmental Program (KEP) funded by the Swedish Government - SIDA

In the framework of the project for the drafting of the Red Book of Fauna, other activities were carried out, such as: the preparation of the work methodology for the drafting of the Red Book of Fauna based on the IUCN criteria, research work in the field and the organization of workshops with relevant institutions.

The finalization of this project is of great importance for MESPI, MAFRD, UP, NGOs and other institutions in the biodiversity protection sector because for the first time in Kosovo the inventory of fauna has been made and based on the Red Book of Fauna data, it will to design policies and strategies for the protection and conservation of fauna in Kosovo.



A total of 306 species are included in the Red Book of Fauna of the Republic of Kosovo, which belong to these groups of animals: *Gastropoda*, *Bivalvia*, *Oligochaeta*, *Hirudinea*, *Arachnida* (*Araneae*, *Mesostigmata*), *Malacostraca*, *Diplopoda*, *Insecta* (*Ephemeroptera*, *Plecoptera*, *Odonata*, *Coleoptera*, *Mecoptera*, *Diptera*, *Trichoptera*, *Lepidoptera*), *Cyclostomata*, *Actinopterygii*, *Amphibia*, *Reptilia*, *Aves* and *Mammalia*.

During the implementation of the project for the Red Book within the framework of the Kosovo Environmental Program in animal research activities, the presence of a new species in Kosovo has also been identified for the first time. This species belongs to the group *Insecta*, order *Trichoptera* and genus *Potamophylax*, Juliani group, which is an endemic group of the Balkans with narrow distribution.

The largest number of species included in the Red Book of Fauna of the Republic of Kosovo belongs to the groups: *Insecta* (140 species), *Mammalia* (39), *Aves* (24), *Reptilia* (20) and *Gastropoda* (20), while the groups others are represented with a smaller number of species.



Image No. 120. Red Book of Fauna

#### 17.16. A new species for Kosovo fauna is discovered

In (2019) - In the framework of the process for the drafting of the Kosovo Red Book of Fauna, carried out within the Kosovo Environmental Program, KEP 2016, among many rare and endangered species of fauna, a type of snail has been discovered that for the first time is included in the list of Kosovo animal species.

*Vertigo moulinsiana*-species of snail was found in the flooded areas of the Lepenc River in the village of Drekovc in Ferizaj, in a moist meadow ecosystem surrounded by farmland and poplar forests. According to the sources up to now and following the research carried out in Kosovo this species has not been identified earlier in our country. As for the degree of danger at the European level, according to the categorization by the International Union for Conservation of Nature (IUCN), the species has been assessed as belonging to the "Deteriorated" category (Vulnerable A2ac) when it comes to the level of danger at the European level. During research carried out in Kosovo by Hungarian experts in cooperation with the Kosovo expert from the Faculty of Natural Sciences of the University of Pristina this species was identified. This activity was part of the research for the drafting of the Red Book of the Fauna of Kosovo, which was carried out by the Institute for Nature Protection within the Kosovo Environmental Program KEP 2016.<sup>32</sup>

<sup>32</sup> More detailed data on the species are presented in the paper published in the February 2019 edition of the IUCN Bulletin by the Shellfish Specialist Group, which you can find at the following link [https://www.hawaii.edu/cowielab/Tentacle/Tentacle\\_27.pdf](https://www.hawaii.edu/cowielab/Tentacle/Tentacle_27.pdf).

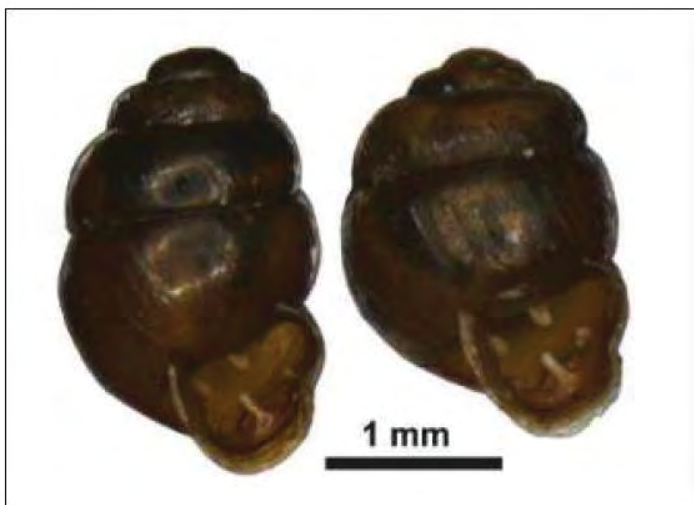


Image No. 121. *Vertigo moulinsiana*, new species for the fauna of Kosovo

#### 17.17. Kosovo joined international organization IUCN

In 2019, the Republic of Kosovo joined the International Union for Conservation of Nature (IUCN), whose headquarters is located in Switzerland. The process of membership in this organization was led by the Ministry of Foreign Affairs in close coordination with the Ministry of Environment and Spatial Planning., Kosovo, with this membership strengthens further its international subjectivity. While the benefits for the country will be multifaceted in matters related to the activity and mandate of the organization.

IUCN is the only organization for the protection of nature, thus ensuring that the issue of nature conservation has its voice at the highest level of international governance.



Figure No. 10. IUCN

### **17.18. Training of National Parks staff for wildlife monitoring**

In (2018) - This training was organized within the second component of the KEP Program 2016, "Monitoring biodiversity through the Red Book of Fauna".

The Environmental Program for Kosovo, proposed by the Ministry of Environment and Spatial Planning is a support provided by SIDA and managed by the Swedish Embassy in Kosovo. Participants of the training are mainly the staff of the national parks "Sharri" and "Bjeshket e Nemuna" and other officials from central institutions whose work is related to the management, monitoring and control of protected areas or even the drafting of policies for the nature sector. Local experts of the relevant fields of expertise demonstrated techniques and methods for wildlife monitoring to the participants.



Image No. 122. Training of National Parks staff for wildlife monitoring

### **17.19. Installation of nesting platforms for storks**

In (2018) KNPI, in cooperation with the Kosovo Electricity Distribution and Supply Company (KEDS), have installed platforms for storks' nests on some electric poles, in some localities in the Municipality of Kaçanik. Installation of these nesting platforms, prepared by KEDS, with the guidance and recommendation of KNPI, is applicable in many European countries but also in the region and aims to move the nest at least half a meter above the power lines with high voltage avoiding touching the wires with the socket materials. One of the goals of this activity, in addition to creating conditions for the protection of this rare species of our fauna, is to promote a positive example to protect the white stork and its habitat.



Image No. 123. Installing a platform for stork nests

### 17.20. Speleological research expedition

In (2019) The Kosovo Protection Nature Institute in cooperation with the Bulgarian speleological association have carried out a research expedition in the caves of Kosovo. During this expedition, measurements were made of the corridors and galleries of several caves on Mokna Mountain (Big Gollostena Cave, Small Gollostena Cave, Twin Caves, Bad Cave, etc.), specifically in municipality of Istog, as well as maps (profile) for the investigated caves were also designed.



Image No. 124. Speleological research expedition

### 17.22. Cooperation with the European Association "European Green Belt"

The initiative for the European Green Belt has been initiated since 2003, continued from there on September 24, 2014, in Slavonice, Czech Republic, where the European Association "Green Belt" was founded, while its official registration was made in February 2015.

Up to now, 27 governmental and non-governmental organizations from a total of 14 European countries have joined it, and its Board has been established, in which 7 organizations participate, and it has been decided that the EURONATYRA foundation from Germany will be the leader.

In addition to the 16 member states of the European Union, this Association also includes some non-member states, such as: Kosovo, Albania, Montenegro, Serbia, North Macedonia, Turkey, etc. Kosovo joined the "European GreenBelt in 2015 and is represented by the Kosovo Nature Protection Institute".

While the areas included within it are the parts of the National Parks "Sharri" and "Bjeshket e Nemuna", as well as the Nature Park "Pashtriku".



Map No. 10 Map of Green Belt extent

### 17.23. Activities organized by MESP to mark the International Biodiversity Day and promoting values of nature 2018 - 2021

In (2018) MESP, in cooperation with other relevant organizations and institutions such as municipalities, NGOs "ERA", "FINQ", "KERRC", civil society and the University of Peja "Haxhi Zeka" have marked May 22 - World Biodiversity Day in the premises of this university, where the main topic was the integration of biodiversity, support for people, as well as the livelihood of communities



Image No. 125 and 126. Marking of World Biodiversity Day (2018)

In order to raise awareness about biodiversity, the Ministry during 2019 marked the Biodiversity International Day, in the Limth location, in the spaces of the "Sharri" National Park, with the motto "Our biodiversity, our food, our health".





Image No. 127. Marking the World Biodiversity Day (2019)

According to the environmental calendar, the MESPI in co-organization with the UP, the Municipality of Pristina and the NGOs "Era" and Kosova Environmental Education & Research Center, in 2021 marked the International Day of Biodiversity in the protected landscape "Gërmia" in Prishtina. The international motto for International Biodiversity Day 2021 was: "We are part of solution"



Image 128. Marking the World Biodiversity Day (2020)

## **XVIII. CONCLUSIONS AND RECOMMENDATIONS**

The state of protected areas and biodiversity in Kosovo is unsatisfactory and conditioned by biotic and abiotic factors. Notwithstanding the continuous increase in the number of protected areas and their surface, the efficient management of protected areas and the prevention of illegal actions in these areas continue to remain a problem for local institutions.

### **Conclusions**

1. Partial implementation of the laws into force related to the issues of preserving natural and biodiversity values;
2. Lacking adequate institutions for protection of nature;
3. Insufficient number of staff in the KNPI areas;
4. Insufficient number of inspectors for Nature Protection
5. Lacking staff in the Directorates of National Parks and other management bodies for protected areas
6. Not approving spatial plan for National Park "Bjeshkët e Nemuna"
7. Lacking management plan for the National Park "Bjeshket e Nemuna" and other protected areas (PM. "Germia", NMSI, Gadime Cave, Nature Park " Pashtrik Mountain and Vermica Lake" and landscapes), etc.;
8. Lacking Regulatory Plans for third areas in National Parks;
9. Not founding management bodies for the protected areas foreseen by law (NMSI "Gadime Cave" and "Mirusha Waterfalls", PN " Pashtrik Mountain and Vermica Lake", SPA "Ligatina e Henci" and Protected Landscapes, etc.
10. Unrestrained use of natural resources in protected areas;
11. Unrestrained use of mineral resources (limestone by stone quarries);
12. Unrestrained use of inert in the river bed;
13. Large number of illegal constructions in protected areas;
14. Lacking scientific research on biodiversity;
15. Incomplete inventory of flora, fauna and their habitats;
16. Insufficient funds for nature protection;
17. Interventions in protected areas (asphalting and widening of roads, illegal constructions, deforestation, opening and widening of new roads, infrastructural constructions, fires, garbage, etc.);
18. Unrestrained tourism in protected areas
19. Illegal hunting in protected areas.

## Recommendations

To improve the state of nature in Kosovo, it is needed to undertake measures, which as a most distinct are:

1. Approval of the Spatial and Management Plan of the National Park "Bjeshket e Nemuna";
2. Drafting Management Plan for the National Park "Bjeshket e Nemuna";
3. Prohibition of unrestrained exploitation of natural resources in protected areas and river beds;
4. MESPI, to issue a decision on the prohibition of all illegal activities (construction, opening and widening of roads, etc.) in the National Park "Bjeshket e Nemuna" until the Spatial Plan and Management Plan of the park are being approved;
5. Prohibition in granting of environmental consents and construction permits for hydropower plants;
6. Prohibition in granting of environmental consents and permits for stone quarries in protected areas and in their vicinity;
7. Founding and operationalizing Directorate for Management of Natural Monuments of Special Importance "Gadime Cave and Mirusha Waterfalls";
8. Founding Directorate for Management of the Nature Park "Pashtrik Mountain and Vermica Lake";
9. Establishment of the National Agency for Protected Areas
10. Founding Directorate for the Management of the Special Area for Birds, (Ligatina e Henc - Radeves) and to drawing up the management plan;
11. Continuation of activities for declaration new protected areas;
12. Research and inventory of species and habitats;
13. Research and inventory of geoheritage;
14. Increasing the number of professional staff at the Kosovo Protection Nature Institute ;
15. Increasing the number of Inspectors for nature protection in MMESPI
16. Continuous examination of the areas protected by the MESPI inspectorate;
17. Prohibition of illegal constructions, opening and widening of roads, use of natural resources, dumping of waste in all protected areas;
18. Increasing the number of staff in the directorates for the administration of protected areas (NP. Sharri, NP. Bjeshket e Nemuna, NMSI Gadime Cave and Mirushe Waterfalls" etc.
19. Undertaking measures to secure visitors in the Gadima Cave;
20. Peja Municipality to found Directorate for the Administration of the Radacvit Cave, as well as to make the decisions on the monuments Rugova Canyon and White Drin Waterfall and Radavci Cave in conformity with the Law (No. 03/L-233 - 2010); on Nature Protection;
21. Capacity building of employees in the administration of protected areas;
22. Marking and digitization of protected natural areas

23. Any intervention in protected areas (all projects) shall undergo environmental impact assessment;
24. Intensifying cooperation with local and international institutions in the field of nature protection;
25. A moratorium on the prohibition of hunting in the entire territory of Kosovo, for a period of at least 5 years shall be introduced.
26. Preparation of regulatory plans for third areas in National Parks;
27. Reassessment of the state of strict nature reserves to take place;
28. Extension of the National Park "Bjeshket e Nemuna" national park, including Mount Mokna and Lake Ujman;
29. Prohibition of all constructions in the catchment of water accumulations that are used to supply the population with drinking water;
30. Continuous examination of water reservoirs used to supply the population with drinking water by the central and municipal inspectorates;
31. Undertaking measures to prevent illegal logging of forests in protected areas;
32. Application of sanitary measures for the rehabilitation of forests damaged by biotic and abiotic factors presented in the relevant plans;
33. Provision of funds for nature protection
34. Harmonization of the current Law no. 03/L-233 on Nature Protection with the relevant laws on nature issues;
35. Drafting Strategy and Action Plan for Biodiversity 2022-2031;
36. Registration of companies that keep protected wild animals interned for recreational purposes and their licensing in accordance with the legal acts into force;
37. Directorates of National Parks shall be equipped with tools as well as terrain vehicles for extinguishing forest fires;
38. Applying for membership in international organizations such as: Convention on Biological Diversity (RIOS), Ramsar Convention, Cites, etc.;
39. Implementation of projects and declaration of cross-border areas for nature protection (Kosovo-Albania, Kosovo-Montenegro and Kosovo-North Macedonia);
40. Applying to IPA funds for the Nature 2000 ecological network;
41. Drafting programs and projects for raising awareness and sensitization for the protection of nature;

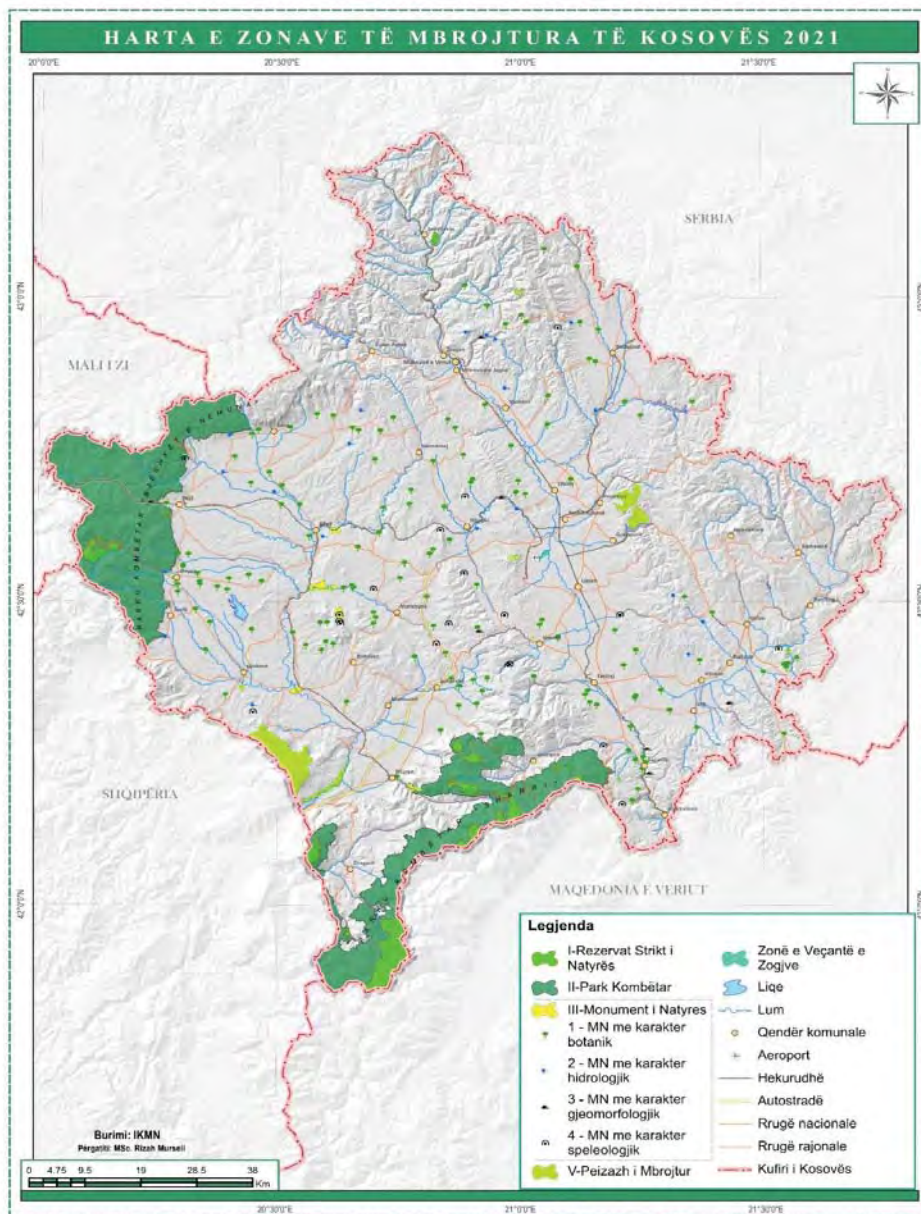
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## XX. Annex 1. Map of Protected Areas 2021



**Annex 2. Table of protected areas 2021**

Code	Name of area/ facility	Municipality / Area	Surface		IUCN Categ.	Protection year	Brief description of values
			ha	Ares			
STRICT NATURE RESERVES 10882.96 ha)							
RN_001	Kamilja	Leposaviq	228		I	1988	Natural reserves with paleontological features
RN_002	“Lëndina e Shenjtë”	NP. “Sharri”	18		I	2016	Plant nature reserve of Stenoendemic species ( <i>Bornmullera dieckii</i> )
RN_003	Shutman	NP. “Sharri”	5057		I	2016	Plant reserves : <i>Achillea abrotanoides</i> , <i>Achillea chrysocoma</i> , <i>Achillea atrata</i> , <i>Achillea lingulata</i> , <i>Alkana scardica</i> , etc.
RN_004	Bredhik	NP. “Sharri”	123	16	I	2016	Macedonian pine plant reserves ( <i>Abies borisiregis</i> ) and Brown Bear( <i>Ursus arctos</i> )
RN_005	Pashallare	NP. “Sharri”	400		I	2016	Plant reserves of the ecosystem forests of Rrobulli ( <i>Pinus heldreichii</i> ), Armeni ( <i>Pinus peuce</i> ), Mugo pine ( <i>Pinus mugo</i> ), etc.
RN_006	Koretnik	NP. “Sharri”	818		I	2016	Plant reserves of the endmorelic forests of Rrobulli ( <i>Pinetum heldreichii</i> ).
RN_007	Canyon	NP. “Sharri”	104		I	2016	Plant reserves of the Fageto-taxetum baccata community type, important autochthonous forest community of the relict Tertiary tisit ( <i>Taxus baccata</i> )
RN_008	Lumbardhi	NP. “Sharri”	304		I	2016	Plant reserves of karafil i sharrit ( <i>Dinathus scardicus</i> -st. end); draba e korabit ( <i>Draba korabensis</i> - st. end.); herakle e Orfanidhit ( <i>Heracleum orphanidis</i> ) etc.
RN_009	Lubeteni	NP. “Sharri”	202	16	I	2016	Plant reserves of type : <i>Carex laevis</i> - <i>Helianthemum me reliktet glaciale</i> <i>Dryas octopetala</i> , <i>Linaria alpina</i> , <i>Sideritis scardica</i> , <i>Hieracium naegelianum</i> supsp. <i>Lubotenicum</i> , etc
RN_010	Koblica	NP. “Sharri”	199		I	2016	Reserves of endemic plants such as : <i>Hieracium kobilicanum</i> (st. end.); kokëz e shmukerit ( <i>Silene schmucheri</i> - st.end.); lëpjetë bore ( <i>Rumex nivalis</i> ); Albanian lily ( <i>Lilium albanicum</i> ) etc.
RN_011	Dupnica	NP. “Sharri”	484		I	2016	Natural reserves of wild goats and endemic plants such as : klokëz shmukeri ( <i>Silene schmucheri</i> - st. end.), karafil me balluke ( <i>Dianthus superbus</i> ) etc.
RN_012	Bistra	NP. “Sharri”	642	12	I	2016	Plant reserves of endemic plants such as: rrobulli ( <i>Pinetum heldreichii</i> ); armeni ( <i>Pinus peuce</i> ); dredhaku ( <i>Pinus mugo</i> ); drabë e korabit ( <i>Draba korabensis</i> -st. End) etc.
RN_013	Bjeshka e Kuzhnjerit /Maja e Ropsit	NP. “Bjeshkët e Nemuna”	1,110	57	I	2016	Plant nature reserve of pinus peuce, fir tree, pine, beech, and wild goat ( <i>Rupicapra</i> )
RN_014	Malet e Prilepit	NP.	106		I	2016	Plant reserves with a pure

		"Bjeshkët e Nemuna"					composition of mountain maple ( <i>Acer heldreichii</i> ) dhe Arnenit ( <i>Pinus peuce</i> ) etc
RN_015	Gubavci	NP. "Bjeshkët e Nemuna"	77		I	2016	Plant nature reserve of endemo-relict species ( <i>Forzythia europae</i> )
RN_016	Rusenica	NP. "Sharri"	270		I	2016	Animal reserve of Lynx ( <i>Lynx lynx balcanicus</i> )
RN_017	Oshlaku	NP. "Sharri"	550	47	I	2016	Natural reserves of the red Armen ( <i>Pinus heldreichii</i> ) and some endemic plants
RN_018	Maja e Arnenit	NP. "Sharri"	145	48	I	2016	Plant reserves with composition of pure red Armen, ( <i>Pinus heldreichii</i> )
RN_019	Pisha e Madhe (pjesa e Koxha Ballkanit)	PK. "Sharri"	44		I	2016	Plant reserves with a pure composition of red Armen ( <i>Pinus heldreichii</i> )
<b>NATIONAL PARK (115.957 ha)</b>							
PK_001	National park "Sharri"	Prizren Suhareka Kaçanik Shterpce, Dragash	53.46 9		II	2013	Characterized with many relict and endemic species of flora, vegetation, and fauna, with geomorphological heritage, hydrological, speleological, cultural, educational and tourist values.
PK_002	Parku Kombëtar "Bjeshkët e Nemuna"	Peje, Deçan, Istog, Junik, Gjakovë	62.48 8		II	2013	Characterized with many relict and endemic species of flora, vegetation and fauna. With high geomorphological heritage, hidrological, speleological, cultural, educational and tourist values
<b>NATURAL MONUMENTS (6173.35) ha</b>							
MN_001	Mani Sham ( <i>Morus sp.</i> )	Peje		3	III	1957	Botanical Natural Monument
MN_002	Oriental Plane ( <i>Platanus orientalis</i> ) in Marash	Prizren		5	III	1959	Botanical Natural Monument
MN_003	Oriental Plane ( <i>Platanus orientalis</i> ) in Marash	Podujeve		5	III	1959	Botanical Natural Monument (damaged)
MN_004	Lime ( <i>Tilia argentea</i> ), in Isniq	Deçan		2	III	1968	Botanical Natural Monument
MN_005	Lime's trees ( <i>Tilia argentea</i> ), in Isniq	Deçan		5	III	1968	Botanical Natural Monument
MN_006	Cave in Gadime	Lipjan	39		III	2014	Speleological natural monument
MN_007	Minerals - Crystals	Mitrovica		5	III	1970	Geological Natural Monument
MN_008	Water flow of Minusha river	Suhareke, Malisheve	12		III	1983	Hydrological Natural monument
MN_009	Canyon on river Bistrica	Prizren	200		III	1976	Natural monument of geomorphologic speleological, botanic and hydrological character.
MN_010	Spring of White Drin river and the cave in Radave	Pejë	90		III	1983	Nature monument of geomorphologic speleological, botanic and hydrological character.
MN_011	Rugova Canyon	Peje	4301		III	1985	Nature monument of geomorphologic speleological, botanic and hydrological character.
MN_012	The spring of mineral water in Dresnik	Kline		7	III	1985	Hydrological Nature monument
MN_013	Canyon on river Klina	Kline	205		III	1985	Nature monument of geomorphologic speleological, botanic and hydrological

							character.
MN_014	Sessile oak trees ( <i>Quercus petraea</i> ) in Lozice	Malisheve		5	III	1985	Botanical Natural Monument
MN_015	Turkish oak tree ( <i>Quercus cerris</i> ), in Zllakuçan	Kline		5	III	1985	Botanical Natural Monument
MN_016	Canyon of “Drini i Bardhë” at the “Ura e Fshajtë”	Gjakove Rahovec	198	5	III	1986	Geomorphologic and Hydrological Natural monument
MN_017	Cave in Baice	Drenas		11	III	1987	Speleological natural monument
MN_018	Cave in Gilanasellës	Drenas		50	III	1987	Speleological natural monument
MN_019	The spring of termomineral water in Vuqe	Leposaviq	16	6	III	1988	Hydrological Natural monument
MN_020	Mineral water spring in Sallabaje	Podujeve		31	III	1988	Hydrological Natural monument
MN_021	Water spring in Shajkove	Podujeve	1	41	III	1988	Hydrological Natural monument
MN_022	Turkish oak tree ( <i>Quercus cerris</i> ), in Pollate	Podujeve		44	III	1988	Botanical Natural Monument
MN_023	Oak tree ( <i>Quercus cerris</i> ), in Dobratin	Podujeve		7	III	1988	Botanical Natural Monument
MN_024	Common oak tree ( <i>Quercus robër</i> ), in Nekove	Drenas		5	III	2006	Botanical Natural Monument
MN_025	Common oak trees ( <i>Quercus robur</i> ), in Negroc	Drenas		5	III	2006	Botanical Natural Monument
MN_026	Asparagus trunks in Negroc	Drenas		5	III	2006	Botanical Natural Monument
MN_027	Cave in Kishnareka	Drenas	2		III	2006	Speleological natural monument
MN_028	Turkish oak ( <i>Quercus cerris</i> ), in Krajkova	Drenas		5	III	2006	Botanical Natural Monument
MN_029	Rock in Gadine of Llapushnik	Drenas	2		III	2006	Geomorphologic Natural Monument
MN_030	Spring of mineral water in Poklek	Drenas		5	III	2006	Hydrological Natural monument
MN_031	Oak trees - six trees ( <i>Quercus sp.</i> ) in Likoshan	Drenas		5	III	2006	Botanical Natural Monument
MN_032	Oak tree ( <i>Quercus sp.</i> ) in Terstenik	Drenas		5	III	2006	Botanical Natural Monument
MN_033	Oak tree ( <i>Quercus sp.</i> ) in Likoshan	Drenas		5	III	2006	Botanical Natural Monument
MN_034	“Guri i plakes” in Dobroshec	Drenas		5	III	2006	Botanical Natural Monument
MN_035	White pubescent oak tree ( <i>Quercus pubescens</i> Willd.) in Aqarevë	Skenderaj		5	III	2007	Botanical Natural Monument
MN_036	Oak tree ( <i>Quercus sp.</i> ) in Polac	Skenderaj		5	III	2007	Botanical Natural Monument
MN_037	Oak tree ( <i>Quercus sp.</i> ) in Likoc	Skenderaj		5	III	2007	Botanical Natural Monument
MN_038	Spring of thermal water in Banje	Skenderaj		99	III	2007	Hydrological Natural monument
MN_039	Oak tree ( <i>Quercus sp.</i> ) in Prellov	Skenderaj		5	III	2007	Botanical Natural Monument
MN_040	Complex of oak trees ( <i>Quercus sp.</i> ) in Rrezallë	Skenderaj		99	III	2007	Botanical Natural Monument
MN_041	Complex of pubescent oak ( <i>Quercus pubescens</i> Willd.) në Klladernicë	Skenderaj		99	III	2007	Botanical Natural Monument
MN_042	Turkish oak tree ( <i>Quercus cerris</i> L.) in Kotorr	Skenderaj		5	III	2007	Botanical Natural Monument
MN_043	Turkish oak tree ( <i>Quercus cerris</i> L.) in Padalishtë	Skenderaj		5	III	2007	Botanical Natural Monument
MN_044	Pubescent oak tree ( <i>Quercus pubescens</i> Willd.) in Çitak	Skenderaj		5	III	2007	Botanical Natural Monument



MN_045	Turkish oak tree ( <i>Quercus cerris</i> L.) in Runik	Skenderaj		5	III	2007	Botanical Natural Monument
MN_046	Spring of salty water in Leqinë	Skenderaj		5	III	2007	Hydrological Natural monument
MN_047	Sessile oak tree ( <i>Quercus petraea.</i> ), in Lubovec	Skenderaj		5	III	2007	Botanical Natural Monument
MN_048	Common oak tree ( <i>Quercus robur</i> ), in Deiq	Kline		3	III	2007	Botanical Natural Monument
MN_049	Complex of common oak ( <i>Quercus robur</i> ), in Gllarevë	Kline		28	III	2007	Botanical Natural Monument
MN_050	Turkish oak tree ( <i>Quercus cerris</i> ), in Nagllavkë	Kline		12.5	III	2007	Botanical Natural Monument
MN_051	Spring of mineral water, in Rudicë	Klinë		7.6	III	2007	Hydrological Natural monument
MN_052	Sessile oak tree ( <i>Quercus pubescens</i> ), in Ujëmir	Klinë		20	III	2008	Botanical Natural Monument
MN_053	Oak tree ( <i>Quercus sp.</i> ), in Breshanc	Suhareke		5	III	2007	Botanical Natural Monument
MN_054	Complex of oak trees ( <i>Quercus sp</i> ), in Savrove	Suhareke		15	III	2007	Botanical Natural Monument
MN_055	Pine tree ( <i>Pinus sp.</i> ) in Delloc	Suhareke		5	III	2007	Botanical Natural Monument
MN_056	Oak tree ( <i>Quercus sp.</i> ) in Grejkoc	Suhareke		15	III	2007	Botanical Natural Monument
MN_057	Poplar trees ( <i>Populus sp.</i> ) in Reçan	Suhareke		5	III	2007	Botanical Natural Monument
MN_058	Spring of mineral water in Reçan	Suhareke		1	III	2007	Hydrological Natural monument
MN_059	Complex of oak trees ( <i>Quercus sp.</i> ) in Muhlan	Suhareke		15	III	2007	Botanical Natural Monument
MN_060	Service tree ( <i>Sorbus domestica</i> L.) in Budakovë	Suhareke		5	III	2007	Botanical Natural Monument
MN_061	Complex of oak trees ( <i>Quercus sp.</i> ) in Papaz	Suhareke		15	III	2007	Botanical Natural Monument
MN_062	Two sessile oaks ( <i>Quercus petraea.</i> ) in Bllacë	Suhareke		1	III	2007	Botanical Natural Monument
MN_063	Turkish oak tree ( <i>Quercus cerris.</i> ) in Vraniq	Suhareke		5	III	2007	Botanical Natural Monument
MN_064	Macedonian oak tree ( <i>Quercus trojana</i> ) in Biraqe	Suhareke		1	III	2007	Botanical Natural Monument
MN_065	Complex of oak trees ( <i>Quercus sp.</i> ) in Luzhnica	Suhareke		15	III	2007	Botanical Natural Monument
MN_066	Mosque Rock (Guri i Xhamisë) in Luzhnicë	Suhareke		15	III	2007	Geomorphological Natural Monument
MN_067	Two black mulberry trees ( <i>Morus nigra</i> L.) in Cerrcë	Istog		10	III	2008	Botanical Natural Monument
MN_068	Silver lime tree ( <i>Tilia tomentosa Moench</i> ) in Lubozhde	Istog		10	III	2008	Botanical Natural Monument
MN_069	Red lime tree ( <i>Tilia sp.</i> ) in Istog të Poshtëm	Istog		5	III	2008	Botanical Natural Monument (damaged)
MN_070	Pubescent oak ( <i>Quercus pubescens Willd</i> ) in Sinaj	Istog		17	III	2008	Botanical Natural Monument
MN_071	Silver lime tree ( <i>Tilia tomentosa Moench.</i> ) in Upper Shushice	Istog		5	III	2008	Botanical Natural Monument
MN_072	Spring of natural water in Istog	Istog	3	88	III	2008	Hydrological Natural monument
MN_073	Service tree ( <i>Sorbus domestica</i> L.) in Uçe	Istog		7	III	2008	Botanical Natural Monument
MN_074	Silver lime tree ( <i>Tilia tomentosa Moench</i> ) in Kaliqan	Istog		5	III	2008	Botanical Natural Monument(damaged)
MN_075	Thermal water spring in Banje	Istog		85	III	2008	Hydrological Natural monument
MN_076	Common oak tree ( <i>Quercus robur</i> L.) inZallq - Zabllaq	Istog		7.5	III	2008	Botanical Natural Monument
MN_077	Common oak tree ( <i>Quercus robur</i> L.) in Trubuhove	Istog		11	III	2008	Botanical Natural Monument
MN_078	Common oak tree ( <i>Quercus robur</i> L.) in	Istog		7.6	III	2008	Botanical Natural Monument

	Saradran						
MN_079	Common oak tree ( <i>Quercus robur</i> ) in Gurrakoc	Istog		5	III	2008	Botanical Natural Monument
MN_080	Spring of water in Vrelle	Istog		12.5	III	2008	Botanical Natural Monument(damaged)
MN_081	Common oak tree ( <i>Quercus robur</i> L.) in Zallq - Zabllaq	Istog		26	III	2008	Hydrological Natural monument
NN_082	Mirusha Waterfalls	Malisheve Kline Rahovec	598	4	III	2012	Geomorphological, hydrological, speleological, botanical, touristic natural monument
MN_083	Turkish oak tree ( <i>Quercus ceris</i> L.) in Lladrovc	Malisheve		8	III	2014	Botanical Natural Monument
MN_084	Cave in Temeqina	Malisheve		69		2014	Speleological Natural Monument (damaged)
MN_085	Turkish oak tree ( <i>Quercus ceris</i> L.) in Carravranë	Malisheve		8	III	2014	Botanical Natural Monument
MN_086	Pubescent oak tree ( <i>Quercus pubescens</i> Willd) in LLozice	Malisheve		8	III	2014	Botanical Natural Monument
MN_087	Pubescent oak tree ( <i>Quercus pubescens</i> Willd) in LLozice	Malisheve		8	III	2014	Botanical Natural Monument
MN_088	Bozhuri Cave in Damanek	Malisheve	2		III	2014	Speleological natural monument
MN_089	Cave of Lladroviq	Malisheve	2		III	2014	Geomorphological and Speleological Natural Monument
MN_090	Pubescent oak tree ( <i>Quercus pubescens</i> Willd) in Guriq	Malisheve		5	III	2014	Botanical Natural Monument
MN_091	Turkish oak tree ( <i>Quercus ceris</i> L.) in Drenove	Malisheve	1	25	III	2014	Botanical Natural Monument(damaged)
MN_092	Turkish oak tree ( <i>Quercus ceris</i> L.) in Bubel	Malisheve		8	III	2014	Botanical Natural Monument
MN_093	Turkish oak tree ( <i>Quercus ceris</i> L.) in Bubel	Malisheve		8	III	2014	Botanical Natural Monument
MN_094	Turkish oak tree ( <i>Quercus ceris</i> L.) in Bellanic	Malisheve		8	III	2014	Botanical Natural Monument
MN_095	Narrow-leaved ash tree ( <i>Fraxinus angustifolia</i> Vahl) in Javiq	Malisheve		8	III	2014	Botanical Natural Monument
MN_096	Vermica waqf (Vakëfi i Vermicës)	Malisheve		70	III	2014	Botanical Natural Monument
MN_097	Zabeli and Vrella in Javiq	Malisheve		51	III	2014	Botanical Natural Monument
MN_098	Water spring in Carravranë	Malisheve	10		III	2014	Hydrological Natural monument
MN_099	Cave of Ponorc	Malisheve	279		III	2014	Speleological natural monument
MN_100	Nerodime River Bifurcation	Ferizaj	15		III	2015	Morphological and Hydrological Natural Monument
NN_101	Cave of Shullan in Sllatine	Kaçanik	1		III	2015	Speleological natural monument
MM_102	Abysses on the Qenare slope, in Gllloboqice	Kaçanik	1		III	2015	Speleological natural monument
MN_103	Turkish oak tree ( <i>Quercus cerris</i> ) in Kaçanik I vjeter	Kaçanik		3	III	2015	Botanical Natural Monument
MN_104	Long stone in Stagove	Kaçanik		3	III	2015	Geomorphological Natural Monument
MN_105	Black stone in Llanishte	Kaçanik		2	III	2015	Geomorphological Natural Monument
MN_106	Turkish oak tree ( <i>Quercus cerris</i> ) in Kaçanik te vjeter	Kaçanik		5	III	2015	Botanical Natural Monument
MN_107	Turkish oak tree ( <i>Quercus cerris</i> ) in Kovaqec	Kaçanik		3	III	2015	Botanical Natural Monument
MN_108	Sessile oak tree ( <i>Quercus petraea</i> ), in Bob	Kaçanik		6	III	2015	Botanical Natural Monument
MN_109	Complex of oak trees ( <i>Quercus</i> sp.), in Runjeve	Kaçanik		5	III	2015	Botanical Natural Monument
MN_110	White willow ( <i>Salix alba</i> ) in Kaçanik	Kaçanik		2	III	2015	Botanical Natural Monument

MN_111	Oak trees in Ivaje	Kaçanik		6	III	2015	Botanical Natural Monument
MN_112	Turkish oak tree ( <i>Quercus cerris</i> ) in Kotline	Kaçanik		3	III	2015	Botanical Natural Monument
MN_113	“Vrella e Zezë”, in Petrove	Shtime	1		III	2015	Hydrological Natural monument
MN_114	Cave of Imer Devetakut, in Devtak	Shtime	1		III	2015	Speleological Natural monument
MN_115	Oak trees ( <i>Quercus sp.</i> ) in Mollapolc	Shtime		15	III	2015	Botanical Natural Monument
MN_116	“Lisi i Sahitit”, in Godanc te Epërm	Shtime		5	III	2015	Botanical Natural Monument
MN_117	“Lisi i Alushit”, in Rashince	Shtime		5	III	2015	Botanical Natural Monument
MN_118	Cave of Pjetershtice, in Pjetershtice	Shtime		99	III	2015	Speleological natural monument
MN_119	“Lisat Binjak”, in Upper Gadane	Shtime		5	III	2015	Botanical Natural Monument
MN_120	Gështenjat e Shtimës, në Shtime	Shtime		10	III	2015	Botanical Natural Monument
MN_121	Cave of Devetakut and the water spring in Devetak	Shtime	1		III	2015	Speleological and hydrological Natural monument
MN_122	Pine complex in Shtime	Shtime	20		III	2015	Locality, with floristic, educational and touristic values
MN_123	Hungarian oak tree ( <i>Quercus frainetto</i> ) in Dyz	Podujeve		5	III	2015	Botanical Natural Monument
MN_124	Oak tress ( <i>Quercus sp.</i> ) in Llapashtice te Epërme	Podujeve		10	III	2015	Botanical Natural Monument
MN_125	Oak tress ( <i>Quercus sp.</i> ) in Llapashtice te Epërme	Podujeve		5	III	2015	Botanical Natural Monument
MN_126	Vrella and beech tree in Dobratin	Podujeve		10	III	2015	Botanical Natural Monument dhe hidrologjik
MN_127	European aspen ( <i>Populus tremula</i> ) in Murgulle	Podujeve		5	III	2015	Botanical Natural Monument
MN_128	European aspen ( <i>Populus tremula</i> ) in Gerdac	Podujeve		5	III	2015	Botanical Natural Monument(damaged)
MN_129	European aspen ( <i>Populus tremula</i> ) in Orllan	Podujeve		5	III	2015	Botanical Natural Monument
MN_130	Hungarian oak tree( <i>Quercus frainetto</i> ) in Zhilivode	Vushtri		10	III	2016	Botanical Natural Monument
MN_131	Oak tress ( <i>Quercus sp.</i> ) in Druar	Vushtri		10	III	2016	Botanical Natural Monument
MN_132	Complex of oak trees ( <i>Quercus sp.</i> ) in Galice	Vushtri		15	III	2016	Botanical Natural Monument
MN_133	Sessile oak tree( <i>Quercus petraea</i> ) in Shitarice	Vushtri		5	III	2016	Botanical Natural Monument
MN_134	Common oak tree( <i>Quercus robur</i> ) in Dunnice e LLuges	Vushtri		5	III	2016	Botanical Natural Monument
MN_135	Thermo-mineral water spring in Gjelbishte	Vushtri		10	III	2016	Hydrological Natural monument
MN_136	Turkish oak tree ( <i>Quercus cerris</i> ) in Ceceli	Vushtri		5	III	2016	Botanical Natural Monument
MN_137	European ash ( <i>Fraxinus excelsior</i> ) in Kaznik	Rahovec		8	III	2016	Botanical Natural Monument
MN_138	Hungarian oak tree ( <i>Quercus frainetto</i> ) in Kaznik	Rahovec		3.5	III	2016	Botanical Natural Monument
MN_139	Oak tree ( <i>Quercus sp.</i> ) in Dobidol	Rahovec		13	III	2016	Botanical Natural Monument
MN_140	Hungarian oak tree ( <i>Quercus frainetto</i> ) in the neighbourhood of Berishaj in Drenoc	Rahovec		4	III	2016	Botanical Natural Monument
MN_141	Hungarian oak tree ( <i>Quercus frainetto</i> ) in the neighbourhood of Mehovce - Drenoc	Rahovec		4	III	2016	Botanical Natural Monument
MN_142	Sessile oak tree ( <i>Quercus petraea</i> )Nagavc	Rahovec		5	III	2016	Botanical Natural Monument
MN_143	Turkish oak tree ( <i>Quercus cerris</i> ) and elm tree ( <i>Ulmus minor</i> ) in Bratotin	Rahovec		7	III	2016	Botanical Natural Monument
MN_144	Hungarian oak tree ( <i>Quercus frainetto</i> ) in Bratotin	Rahovec		4	III	2016	Botanical Natural Monument
MN_145	Caveof“Bali Agës”in Zatriq	Rahovec	1		III	2016	Speleological natural monument
MN_146	Caveof“Peshterr”,in Zatriq	Rahovec		30	III	2016	Speleological natural monument
MN_147	Sessile oak tree ( <i>Quercus petraea</i> ), in Cërmille	Ferizaj		5	III	2017	Botanical Natural Monument
MN_148	Pubescent oak tree ( <i>Quercus pubescens</i> ),	Ferizaj		5	III	2017	Botanical Natural Monument

	in Greme						
MN_149	Sessile oak tree ( <i>Quercus petraea</i> ), in Greme	Ferizaj		5	III	2017	Botanical Natural Monument
MN_150	Turkish oak tree ( <i>Quercus cerris</i> ) in Jezerc	Ferizaj		9	III	2017	Botanical Natural Monument
MN_151	Sessile oak tree ( <i>Quercus petraea</i> ), in Komogllave	Ferizaj		5	III	2017	Botanical Natural Monument
MN_152	Sessile oak tree ( <i>Quercus petraea</i> ), in Lloshkobare	Ferizaj		5	III	2017	Botanical Natural Monument
MN_153	Turkish oak tree ( <i>Quercus cerris</i> ) in Pajat	Ferizaj		5	III	2017	Botanical Natural Monument
MN_154	Turkish oak tree ( <i>Quercus cerris</i> ) in Rahovice	Ferizaj		5	III	2017	Botanical Natural Monument
MN_155	Turkish oak tree ( <i>Quercus cerris</i> ) in Rahovice	Ferizaj		5	III	2017	Botanical Natural Monument
MN_156	Turkish oak tree ( <i>Quercus cerris</i> ) in Zaskok	Ferizaj		5	III	2017	Botanical Natural Monument
MN_157	Pubescent oak tree ( <i>Quercus pubescens</i> ), in Zaskok	Ferizaj		5	III	2017	Botanical Natural Monument
MN_158	Bungu trunk ( <i>Quercus petraea</i> ) in Bec	Gjakove		5	III	2018	Botanical Natural Monument
MN_159	<i>Quercus pubescens</i> trunk in Hareq	Gjakove		0.7	III	2018	Botanical Natural Monument
MN_160	Trunk complex, in Jabllanic	Gjakove	7	21	III	2018	Botanical Natural Monument
MN_161	Trunk complex, in Zhabel	Gjakove		19	III	2018	Botanical Natural Monument
MN_162	Trunk of the oak ( <i>Quercus pubescens</i> ) in Rrypaj	Gjakove		0.5	III	2018	Botanical Natural Monument
MN_163	Trunk complex in Muliq	Gjakove	1	12	III	2018	Botanical Natural Monument
MN_164	Source of water, in Mulliq	Gjakove		2.5	III	2018	Hydrological Natural monument
MN_165	Caves of Kusar 1 and 2	Gjakove	5		III	2018	Speleological natural monument
MN_166	Water source in Kusar	Gjakove	1		III	2018	Hydrological Natural monument
MN_167	Oak tree ( <i>Quercus cerris</i> ) in Vogov	Gjakove		5	III	2018	Botanical Natural Monument
MN_168	Beech ( <i>Fagus sylvatica</i> ) trunks in Bajgore	Mitrovica		5	III	2019	Botanical Natural Monument
MN_169	Beech ( <i>Fagus sylvatica</i> ) trunks in Bajgore	Mitrovica		5	III	2019	Botanical Natural Monument
MN_170	Beech ( <i>Fagus sylvatica</i> ) trunk in Bare	Mitrovica		5	III	2019	Botanical Natural Monument
MN_171	Caves of Kaçandoll, in Kaçandoll	Mitrovica	1		III	2019	Speleological natural monument
MN_172	The source of mineral water, in Mazhik	Mitrovica		5	III	2019	Hydrological Natural monument
MN_173	Trepçalve waterfall, in Milenica	Mitrovica		25	III	2019	Hydrological Natural monument
MN_174	The Beech Trunk with the Water Source under the Root, in Ovçar	Mitrovica		5	III	2019	Hydrological and botanical Natural monument
MN_175	Crown of Ice, in Rahovo	Mitrovicë		5	III	2019	Hydrological Natural monument
MN_176	Oak trunks ( <i>Quercus cerris</i> ) in Zabërgja	Mitrovica		5	III	2019	Botanical Natural Monument
MN_177	Beech trunk ( <i>Fagus moesiaca</i> ) in Zabërgja	Mitrovica		5	III	2019	Botanical Natural Monument
MN_178	Oak tree ( <i>Quercus cerris</i> ) in Zabërgja	Mitrovica		5	III	2019	Botanical Natural Monument
MN_179	Root stumps ( <i>Quercus robur</i> ) in Sibovc	Obiliq		11.4 9	III	2019	Botanical Natural Monument
MN_180	Trunk of the sturgeon ( <i>Tilia argentea</i> ) in Sibovc	Obiliq		2.61	III	2019	Botanical Natural Monument
MN_181	Mulberry trunk ( <i>Morus nigra</i> L.) in Mazgit	Obiliq		10.4 5	III	2019	Botanical Natural Monument
MN_182	Source of mineral water, in Upper Graboc	Obiliq		3.14	III	2019	Hydrological Natural monument
MN_183	Oak logs ( <i>quercus cerris</i> ) in Binca	Viti		13.9 7	III	2020	Botanical Natural Monument
MN_184	Source of thermomineral water in Ballance	Viti		3.18	III	2020	Hydrological natural monument
MN_185	The oak forest ( <i>Quercus</i> sp.), in Upper Slatina	Viti		13.7 0	III	2020	Botanical Natural Monument
MN_186	The oak trunk ( <i>Quercus cerris</i> ) in Germovo	Viti		5	III	2020	Botanical Natural Monument

MN_187	The complex of oak stumps ( <i>Quercus sp.</i> ) in Lower Slatina	Viti	2		III	2020	Botanical Natural Monument
MN_188	The trunk of the bungbuta ( <i>quercus pubescens</i> ), in Zhiti	Viti		5	III	2020	Botanical Natural Monument
MN_189	Blin stone in Gjylekar	Viti		20	III	2020	Geomorphological Natural Monument
MN_190	Boshtra locality ( <i>Forsythia europea</i> ) in the area of Goleshi, in the village of Sankoc	Drenas, Fushe Kosove Lipjan	123	54	III	2021	Botanical Natural Monument
MN_191	Oak tree ( <i>Quercus frainetto</i> ) in the village of Bresalc	Gjilan		5	III	2021	Botanical Natural Monument
MN_192	Trunk of the hornbeam ( <i>Acer monspessulanum</i> ) in the village of Burincë	Gjilan		5	III	2021	Botanical Natural Monument
MN_193	Trunk of the oak ( <i>Quercus pubescens</i> ) in the village of Burinca	Gjilan		5	III	2021	Botanical Natural Monument
MN_194	Trunks of wild pear ( <i>Pyrus communis</i> ) in Burincë village	Gjilan		5	III	2021	Botanical Natural Monument
MN_195	Oak trunk ( <i>Quercus petraea</i> ) in Dunav village	Gjilan		5	III	2021	Botanical Natural Monument
MN_196	Oak tree trunk ( <i>Quercus cerris</i> ) in the village of Lipovice	Gjilan		5	III	2021	Botanical Natural Monument
MN_197	Oak tree trunk ( <i>Quercus cerris</i> ) in the village of Llashticë	Gjilan		5	III	2021	Botanical Natural Monument
MN_198	Trunk of the oak tree ( <i>Quercus frainetto</i> ), in the village of Llovce	Gjilan		5	III	2021	Botanical Natural Monument
MN_199	Mineral water source in Ponesh village	Gjilan		5	III	2021	Hydrological natural monument
MN_200	Big cave in the village of Uglar	Gjilan	2	63	III	2021	Speleological natural monument
MN_201	Source of water in the village of Zhegoc	Gjilan		5	III	2021	Hydrological natural monument
MN_202	Oak trunk ( <i>Quercus frainetto</i> ) in the village of Zhegoc	Gjilan		5	III	2021	Botanical Natural Monument
MN_203	Lukë Glen ( <i>Pinus nigra</i> ) Lower Luke	Deçan		5	III	2021	Botanical Natural Monument
MN_204	Trunk of the sturgeon, ( <i>Tilia caucasica</i> ) Kodrali	Deçan		5	III	2021	Botanical Natural Monument
MN_205	Quercus pubescens ( <i>Quercus pubescens</i> ) Kodrali	Deçan		5	III	2021	Botanical Natural Monument
MN_206	Trunk of sturgeon, ( <i>Tilia platyphyllos</i> ) Lower Strelle	Deçan		5	III	2021	Botanical Natural Monument
MN_207	The sturgeon trunk, ( <i>Tilia platyphyllos</i> ) Upper Strelle	Deçan		5	III	2021	Botanical Natural Monument
MN_208	Mineral water source, Deçan	Deçan		17	III	2021	Hydrological natural monument
MN_209	Sturgeon trunk, ( <i>Tilia platyphyllos</i> ) Deçan	Deçan		5	III	2021	Botanical Natural Monument
MN_210	Quercus pubescens trunk, Maznik	Deçan		5	III	2021	Botanical Natural Monument
MN_211	Quercus pubescens, Dashinoc	Deçan		5	III	2021	Botanical Natural Monument
MN_212	Trunk (buffet) of Mrizi ( <i>Quercus pubescens</i> ), Lower Ratish	Deçan		5	III	2021	Botanical Natural Monument
MN_213	Bung trunk, ( <i>Quercus petraea</i> ), Upper Ratish	Deçan		5	III	2021	Botanical Natural Monument
MN_214	Complex of trunks, ( <i>Quercus sp.</i> ), Upper Ratish	Deçan	1	30	III	2021	Botanical Natural Monument
MN_215	Complex of trunks, ( <i>Quercus sp.</i> ), Shaptej	Deçan	1	40	III	2021	Botanical Natural Monument
MN_216	Jagozi ( <i>Quercus sp</i> ) logrunks-cemetery complex, Gramacel	Deçan	1	40	III	2021	Botanical Natural Monument
MN_217	Oak tree ( <i>Quercus cerris</i> ) in Upper Carrabreg	Deçan		5	III	2021	Botanical Natural Monument
MN_218	Trunks of the linden ( <i>Tilia argentea</i> ) and the trunk of the pine ( <i>Picea abies</i> ), Drenoc	Deçan		70	III	2021	Botanical Natural Monument
MN_219	Trunk of bungbuta, ( <i>Quercus pubescens</i> ), Rastavicë	Deçan		5	III	2021	Botanical Natural Monument
NATURAL PARK (5.934 ha)							



PN_001	Pashtrik Mountain and Vermica Lake	Prizren Gjakove	5.934		V	2015	Natural Park with biological, geomorphological, hydrological, cultural and touristic values, etc
<b>PROTECTED LANDSCAPE ( 2227. 85 ha)</b>							
PM_001	Skugza	Gjakove	70		V	2011	Landscape with floristic, educational and touristic values
PM_002	The pines of Deçan	Deçan	15		V	1969	Landscape with floristic, educational and touristic values
PM_003	The pine complex, in Strazhë	Kaçanik	25		V	2015	Landscape with floristic, educational and touristic values
PM_004	Germia	Prishtina	1949		V	2016	Landscape of scientific, educational, cultural and tourist importance
PM_005	Ahishta of Llomova, in Selac	Mitrovica	93		V	2019	Botanical protected landscape
PM_006	The valley of the Lapushnik River in the village of Pogragja	Gjilan	75	85	V	2021	Botanical protected landscape
<b>SPECIAL PROTECTED BIRDS AREA (109.5 / ha)</b>							
ZVM_001	Special Birds protected area	F. Kosove Graçanica, Lipjan	109	5	V	2014	Localities with ornithological, ichthyological, hydrogeological, botanical and landscape values.



**Republika e Kosovës**  
**Republika Kosova - Republic of Kosovo**  
*Qeveria - Vlada - Government*

Nr. 26/112

Datë: 13.12.2022

Në mbështetje të nenit 92 paragrafi 4. dhe të nenit 93 paragrafi 4 të Kushtetutës së Republikës së Kosovës, të nenit 142 të Ligjit Nr. 03/L-233 për Mbrojtjen e Natyrës, duke u bazuar në nenin 4 të Rregullores Nr.02/2021 për Fushat e Përgjegjësisë Administrative të Zyrës së Kryeministrit dhe Ministrive e ndryshuar dhe e plotësuar me Rregulloren Nr. 04/2021 dhe me Rregulloren Nr. 03/2022, në pajtim me nenin 19 të Rregullores së Punës së Qeverisë së Republikës së Kosovës Nr. 09/2011, Qeveria e Republikës së Kosovës, në mbledhjen e mbajtur më 13 dhjetor 2022, merr këtë:

**V E N D I M**

1. Aprovohet Raporti për Gjendjen e Natyrës 2018 – 2021.
2. Obligohet Sekretari i Përgjithshëm i Zyrës së Kryeministrit që Raportin nga pika 1. e këtij Vendimi t'ia dërgoj për informim Kuvendit të Republikës së Kosovës.
3. Vendimi hyn në fuqi ditën e publikimit në Gazetën Zyrtare të Republikës së Kosovës.

Albin KURTI

Kryeministër i Republikës së Kosovës

**Tu dërgohet:**

- Zëvendëskryeministrave
- Të gjitha ministrive (ministrave)
- Sekretarit të Përgjithshëm të ZKM-së
- Arkivit të Qeverisë

## **Report, State of Nature 2018-2021**

Report is prepared by Kosovo Protection Nature Institute  
Report is prepared in cooperation with experts of Kosovo Environmental Protection Agency,  
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