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Approve:.....
Minister of environment and waters

Management Plan (updated) Of Rusenski Lom Nature Park

JUNE 2020

Project co-funded by The European Union and The National funds of the participating countries

ROMANIA - BULGARIA

Interreg

EUROPEAN UNION

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SUMMARY

The vision for the next years includes preservation of all that is connected with the use of nature in a sustainable and friendly way so that the nature remains and be preserved for the generations ahead – for the children and grandchildren of the today people.

The goal is everybody to be able to plan his actions as well as their impact upon nature, and alongside upon the future of their family and children.

The power of people, who live near the Rusenski Lom Nature Park, is in their uniting so that the visitors find something interesting for themselves in each populated settlement. That is why the inclusion of the active people and groups from each populated settlement that has border with the park is necessary.

The present Management plan institutes **the vision for land use, natural protection and ecologically sustainable social-economic development**, in compliance with the best international practices and the requirements of the European and Bulgarian legislation, shared by the major stakeholders within the protected territory as well as the adjacent territories.

Therefore, number of meetings and actions were undertaken in the process of planning the management, including:

administration, which is capable of implementing the Management plan, in the meaning of competent staff (like number and skills) and resources (equipment, current expenses, capital expenses);

mechanism for wide and active stakeholders' participation that engages all levels of state and local governing and civil society;

encouraging the medium and small enterprises community, which to organize the use of natural resources on the territories in an ecologically sustainable way;

stable system for internal and external monitoring, which to use key ecological and social-economic indicators as well as ones from the field of environment for evaluating the achieving of the managerial vision for the park as well as whether the latter corresponds to the national and international perspectives.

Management planning is not an isolated process. The park has been established in 1970 in order to preserve the unique nature of the picturesque canyon-like valleys of Lomovete, in combination with the cultural-historical complex of Cherven-Ivanovo.

That is why the management plan is in complete conformity to the lay of the locality in a border region and to the cross-border cooperation with the neighboring institutions in the Republic of Romania. In pursuance of many international, national and local engagements taken by Bulgaria in the recent years and particularly after 2007, already as member of the European Union, suggestions are elaborated for access to complementary EU funding for the places, being Specially protected zones, are part of the NATURA 2000 network.

At a local level, the management plan reviews problems such as, for example, programmes for regional development, for sustainable agriculture, application of forestry practices, pollution reduction, cultural heritage preservation as well as for the development of tourism and recreation.

TASK

The Plan elaboration is preceded by a Task, approved by the Ministry of Environment and Water in 2016. It defines its scope and contents. The Plan's contents and structure are in compliance with Regulation for protected areas management plans elaboration, (Government Decree of February 8th 2000, promulgated in State Gazette in issue 13/15.02. 2000, amended and complemented SG issue 55/20.07.2012) and is in compliance the all-European standards for the planning of protected territories that are part of the European ecological network of Natura 2000.

STUDIES AND STAKEHOLDERS PARTICIPATION

The Management plan is result of purposeful pre-plan studies and planning in the period April 2019 – November 2019.

The process of the overall planning of the Rusenski Lom NP management put a strong focus on involving the stakeholders in all planning phases – the major users of the procurement results are: Rusenski Lom Nature Park Directorate, specialized structure of the Executive Forest Agency; Executive Forest Agency; Regional Directorate of Forestry – Ruse; North Central State Enterprise, State Enterprise – Gabrovo; TU "SHR Dunav" Ruse; Ministry of Environment and Water; Regional Inspectorate of Environment and Water – Ruse; Danube Region Basin Directorate – city of Pleven; Municipality of Ivanovo; Municipality of Vetovo; Municipality of Ruse; Regional Administration of Ruse; Bulgarian Academy of Sciences; Academic communities; Tourist, cultural and educational institutions, NGOs, etc. Owners and users of property located in the park also participated as well as representatives of tourist, conservation non-government organizations, etc.

The Rusenski Lom Nature Park Management Plan aims to contribute to increasing the added value from the park as result of the tourism development, of the efforts put in children's and young people's ecological education, of providing ecosystem services from the forests – pure water, preserved biodiversity, clear air.

MAIN CHARACTERISTICS AND EVALUATIONS

ABIOTIC FACTORS

This part includes data about climate, geology and geomorphology, hydrology and hydrobiology, and soils. Mainly existing studies are used for the characteristics of the abiotic factors.

ECOSYSTEMS AND BIOTOPES

The EUNIS classification scheme is used for the ecosystems classification, and the vegetative coenoses are presented through the floristic method.

Suitable types of natural habitats are included in inventory aiming setting monitoring connected with the climate changes.

VEGETATION

The starting information for characterization of the forest ligneous vegetation is after the data of the FP of TU "SHR Dunav“ Ruse and the GIS data base of Rusenski Lom NP.

FLORA

Flora’s phytogeographic structure reflects the specific geographic location, the main rock’s impact upon environment forming factors and the vegetation’s historical development in the region.

FAUNA

The conducted studies, analyses and evaluations of the faunistic species and their habitats are the base for defining territories of significance for the preservation of the corresponding group of animals, which, in its turn, contributed to the proper definition of regiments and regulations for preserving the species on the park’s territory.

CULTURAL AND SOCIO-ECONOMIC CHARACTERISTIC

This characteristic is directly connected with resources use on the park’s territory, respectively with the mentality and the lifestyle of the people in the region. Within the frame of this task’s performance, an approach for a long-term vision for the park’s future is chosen that includes the following: (a) support of local, national and international conservation principles and standards; (b) clarifies what particularly is preserved and shows how park’s condition and quality would be preserved and improved; (c) it is adopted by all, who use the territory in social, economic and conservational aspect; (d) shows how the protected territory would contribute to the improvement of local people’s lives.

LONG-TERM GOALS AND CONSTRAINTS

LONG-TERM GOALS

The goal setting in the present update is made on the grounds of the potential territory's possibilities, described in item 2.4. The formulated ideal goals could be used for indicators at achieving these possibilities (Section 5). The evaluations of the experts from the project team are also taken into consideration as well as the results from the discussions with the stakeholders, discussed during the conducted meetings.

The following long-term goals are set with the present Rusenski Lom NP plan for development to 2030:

Preserving and maintaining of biological and landscape diversity.

Achieving balance between preservation and sustainable use of resources.

The goals on their turn (and the sub-goals) and the constraints are formulated so to direct the managerial decisions and to prognosticate specific activities for the next 10 years. Series of programmes and projects are elaborated for the achievement of the set goals. Each project is defined from the point of view of (a) scope, (b) expected result, (c) methodology.

REGULATIONS, REGIMENTS, CONDITIONS AND RECOMMENDATIONS FOR THE ACTIVITIES IMPLEMENTATION

The suggested regiments and regulations aim overcoming or limiting the impact of the identified threats as well as ensuring conditions for control and managerial decisions taking.

TERRITORY'S FUNCTIONAL ZONING

The following zones are specified by the Ruse ski Lom NP Management Plan:

№ of the zone	Name of the zone, scope	According to Protected Areas Act Article 19	Area ha	% of the park's territory
I	Zone for tourism and preservation of cultural and natural heritage	**item 2**	**3059.1**	**87.3**
II	Zone of buildings and facilities	**item 3**	**446.8**	**12.7**
totally			**3505.9**	**100**

OPERATIVE TASKS AND PRESCRIPTIONS FOR PRESERVATION AND USE

PROGRAMMES AND PROJECTS

The goal of defining the programmes and projects is to establish a wide lobby of the park as well as to motivate responsible and conservational behavior among all owners and users.

The following programmes are planned for implementation within the term of the Plan's action, on the grounds of the Park's Directorate responsibilities assessment:

I. Programme:	Long-term monitoring of biological and landscape diversity in Ruse ski Lom NP.
II. Programme:	Forests and farmland management directed towards preservation of biological diversity in Ruse ski Lom NP
III. Programme:	Increasing of economic benefits for the local population through balanced use of the resources in Ruse ski Lom NP.
IV. Programme:	Creating conditions for the development of sustainable tourism in Ruse ski Lom NP and its adjacent territories.
V. Programme:	Improving the management policy and the specialized guarding of the park.

Part of the planned projects and activities that are to be performed directly by officers from the Directorate within the frame of their official obligations, are included in item 4.4. "Operative Tasks".

WORK PLAN

Priority projects that are to be implemented yet from the start of the Management Plan's action are included in the medium-term work plan /for 3 years/. There are also priority projects from the programmes, for which NPD should look for co-financing included.

REVIEW OF THE GOALS AND TASKS FULFILLMENT

There is a planned review of the set park's management goals in the fourth year after its coming into force. It would be made on the grounds of constant monitoring, performed by the park's officers and on the grounds of the annual reports. A scheme for performing that revision is suggested, which defines the participants in the review, the way of public participation in the process of review, List of indicators for projects and activities from the MP that should obligatory be subject of assessment of the set goals achievement.

SECTION: 0

INTRODUCTION

0.1. GROUNDS FOR DRAWING UPDATED MANAGEMENT PLAN (PLAN II) OF RUSE SKI LOM NATURE PARK

0.1.1. Legal and regulatory grounds:

- Protected Areas Act (PAA) – promulgated in State Gazette (SG), issue 133 of November 11th 1998 and occurred following amendments;
- Regulation on elaboration of plans for management of protected areas – promulgated in SG, issue 13 of February 15th 2000;
- Assignment, developed in 2014 and approved by the Minister of environment and water (MOEW) in 2016.
- Contract №9/15.04.2019, concluded between Rusenski Lom NPD as ASSIGNOR and EKO-INOVATSII OOD as ASSIGNEE of procurement for elaboration of Management Plan (updated) of Rusenski Lom NP.

0.1.2. Changes occurred after year 2005, connected with the Rusenski Lom NP's territory:

⇒ Changes in the territory of Rusenski Lom NP:

The area of Rusenski Lom NP is constituted with re-categorization order № РД-794/19.08.2002. Since 2005 until the present time of elaborating the plan, there are no changes connected with Rusenski Lom NP territory to have occurred;

⇒ Implemented projects, plans and programmes (see item 1.24.);

⇒ Site development plans, approved reports on ecological assessments and assessments for compatibility and statements on ecological assessments and on assessments for compatibility that refer to the park's territory;

The main site development plan referring to Rusenski Lom Nature Park that came into force in 2012 is Forestry Plan of TU "SHR Dunav" – Ruse.

General site development plan of the Municipality of Ivanovo of 2016, conformed to statement on Ecological Assessment /EA/ of Regional Inspectorate of Environment and Water – Ruse № РУ 2-3/2016.

Conducted procedures on Environment Impact Assessment of 2005 until present for Investment proposals and ecological assessments of plans and programmes that refer, are connected with and have impact on Rusenski Lom NP are presented in **Annex 0.1.2.**

⇒ Completed studies and scientific observations after 2005:

1. All types of bats inhabiting the Nature park
2. Hamster (Spermophylus citillus)
3. Thorn /spur-thighed/ and spiny-tailed /Hermann's/ tortoises
4. The fish
5. The birds of prey
6. Egyptian vulture
7. Black stork
8. The butterflies
9. Polygala Sibirica
10. All types of orchids
11. Vegetative invasive species

The results from the indicated studies and scientific observations are available in Rusenski Lom NPD

⇒ Management structure changes.

Rusenski Lom NP Directorate structure of management, indicated in RLMP 2005 consists of 5 positions - director, expert in management plant and organization projects implementation, and park's organization and order, expert in conservation and scientific activities, expert in public relations and educational programmes, tourism and recreation, one position allocated part-time for accounting, administration and utilities – chief accountant, driver, hygiene officer.

As of January 2020, the NP Directorate commands 7 positions, including director, one chief expert Biodiversity and 5 chief specialists (chief accountant, public relations, projects management, IT equipment and VC and CSESA.

In 2012, after the adoption of the new forestry act, the common regulation for the activity of the directorates of all nature parks is replaced by individual ones. The Organic rules of Rusenski Lom Nature Park Directorate is promulgated in State Gazette issue 12 of February 10th 2012, and later has been amended and complemented in issue 28 of March 19th 2013 and in issue 77 of September 16th 2014.

As of the time of elaborating the present plan, the structure of management is presented in details in item 1.5.

0.1.3. Requirements of the European legislation.

Convention on Biological Diversity – parties oblige to integrate the biological diversity preservation and sustainable use in the relevant specialized plans, programmes and policies.
European Landscape Convention – each party should: legally define the landscape as significant components of people's living environment.
Convention on the Conservation of European Wildlife and Natural Habitats /of Berne/ - the contracting parties oblige to pay special attention to the protection of regions that are important for the migrating species such as regions for hibernating, gathering, feeding and reproduction.
Convention on the Conservation of Migratory Species of Wild Animals /of Bonn/ - requires conservation and restoration of migratory species habitats.
Water Framework Directive 2000/60/EU – specifies framework for all waters protection (including internal surface water, transit water, coastal water and ground water).
Directive 92/43/ EU for conservation of natural habitats and of wild flora and fauna – indicates the states' responsibility to conserve priority natural habitats in their natural condition.
Directive 79/409/EU on conservation of wild birds – the oldest European directive on conservation for the states to undertake the necessary measures for all types of birds conservation.

0.2. PROCESS OF PLAN II ELABORATION – PARTICIPANTS, PUBLIC HEARINGS

0.2.1. Participants

The team of experts and their responsibilities at elaborating Plan II includes:

Lyudmila Dimitrova	***Team leader***: Prevents or removes mistakes of project consultants' work; Identifies and solves the problems connected with the quality of work; Controls the process of removing the mistakes and lapses.
Evgeniya Tarasova	***Expert Abiotic factors*:** Climate – Factors for the local climate forming; Climate elements; Geology and geomorphology – Geological structure, morphostructures and morphometrics; Relief geomorphology; Hydrology and hydrobiology – Hydrology and Hydrography; Hydrochemistry; Hydrobiology; Soils – Soils distribution and characteristic. Soil processes
Dobromira Dimova	***Key expert Biological characteristic***

	– Ecosystems and biotopes (natural habitats) Natural habitats classification after EUNIS Natural habitats types, according to Annex 1 of the Biological Diversity Act. Balance by habitats. Conservation status of natural habitats, according to Annex 1 of the Biological Diversity Act Assessment of the functional Relation between the habitats in the park and the Natura 2000 protected zones around the park's territory. – Vegetation – Vegetation classification; Forest ligneous vegetation characteristic – Flora – Lower /Non-vascular/ plants; Higher plants; Medicinal plants.
Ivan Hristov	***Key expert Fauna*** – Invertebrate animals – Vertebrate animals – Fish (freshwater ichthyofauna) – Amphibians and reptiles – Birds – Mammals
Emil Vuchkov	***Key expert socio-economic characteristic*** – Territory use and socio-economic aspects – Adjacent territories current use – Cultural heritage – Landscape
Rayna Nacheva	***Key expert GIS*** Ensures the technical conditions necessary for the experts' field work as well as the coordination of the activities on the plan elaboration with the GIS performers for the park's territory.
Simana Markovska	***Expert Tourism*** Tourism, recreation, sport, services Cultural heritage
Stoyan Stoyanov	***Expert Biological characteristic*** Biological characteristic – ecosystems and biotopes (natural habitats), flora and vegetation

Other participants in the process of elaborating Plan II:

Rusenski Lom NP Directorate (Rusenski Lom NPD),

National Nature Protection Service Directorate - MOEW;

Ministry of Agriculture and Food – Executive Forests Agency

District with administrative center Ruse

Regional Inspectorate of Environment and Water - Ruse

Regional Directorate of Forestry – Ruse

North Central State Enterprise Gabrovo /NCSE Gabrovo/

Basin Directorate

Municipality of Ruse

Municipality of Ivanovo

Municipality of Vetovo

Municipal Office Agriculture and Forestry

Territorial Unit State Hunting Reserve Dunav Ruse

Friends of Rusenski Lom People's Park Club

Regional Historical Museum

Velo-Ruse Association

Tourist Association Prista-Ruse

Ruse club for trips Byala Zvezda

Akademik Sports tourism and conservation company

Bulgarian Biodiversity Foundation

Bulgarian Society for the Protection of Birds

Worldwide Wildlife Fund

Mayoralties of all populated settlements

Owners of forests and land

Carried out meetings and discussions with public participation, connected with the elaboration of the Management Plan:

May 14th 2019, city of Ruse

WORKING MEETING for presenting the Plan II elaboration process before the local authorities and communities with topic Stakeholders' expectations regarding their contribution and participation in the process of elaborating Rusenski Lom NP Management Plan

January 22nd 2020, village of Ivanovo

WORKING MEETING for discussing the results of an ecological, social and economic assessment and the potential value /Part 1 and Part 2/ in the management plan (updated) of Rusenski Lom NP

March 5th 2020, town of Vetovo

WORKING MEETING for discussing Parts 3, 4 and 5 of the updated management plan of Rusenski Lom NP.

The protocols from the described meetings as well as the results from the mandatory public hearing are presented in VOLUME III– „***Public hearing: Protocol and Reference for the not included notes and recommendations*** "

0.2.2. Stages and public hearings on Plan II elaboration

STAGE	Activities
FIRST STAGE	
First sub-stage	Presentation of the process of Plan II elaboration before the local authorities and communities; Collection, procession and discussion of the available information; Presentation of detailed reports for the assigned tasks by the contractor.
Second sub-stage	Conduction of field and other studies, set in the assignment; Defining the sample types of monitoring; Presentation of detailed reports for the assigned tasks by the contractor.
Third sub-stage	Preparation of Project Parts 1 and 2 of Plan II; Organization of working meetings for presenting Part 1 and 2 of Plan II; Taking into consideration the reasonable suggestions and reasoning for the unaccepted; Presentation of detailed reports for the assigned tasks by the contractor.
SECOND STAGE	Preparation of Project Part 3, 4 and 5 of Plan II; Organization of discussion of Parts 3, 4 and 5 of the updated management

	plan; Organization of presentation of the entire Plan II; Taking into consideration the reasonable suggestions and reasoning for the unaccepted; Organization of mandatory public hearing of Plan II; Taking into consideration the reasonable suggestions and reasoning for the unaccepted; Submitting the Plan II Project before the Assignor and presentation of detailed reports for the assigned tasks by the contractor.

NOTE: The described stages are in compliance with the requirements of the procurement for elaboration of Management Plan (updated) of Rusenski Lom NP and in pursuance of Contract №9/15.04.2019, concluded between Rusenski Lom NPD as Contracting Authority, and EKO-INOVACII OOD as Contractor.

0.3. MANAGEMENT PLAN PURPOSE AND CHARACTERISTICS

0.3.1. Plan II purpose, as tool for achieving the main goals:

The present Management Plan follows the vision for land use, conservation and ecological sustainable socio-economic development, shared by the main stakeholders within the borders of the protected area as well as the adjacent territories, in compliance with the best international practices and European and Bulgarian legislation requirements:

Ecosystems diversity maintenance and preserving the biological diversity in them;
Improving the possibilities for scientific, educational and recreational activities development in them;
Sustainable use of renewable natural resources, while preserving traditional forms of means of living as well as ensuring conditions for development of tourism.
Preparation of operative working plans and a frameworkи for the process of adapting the Management Plan in compliance with the changes in the general conditions (e.g. legislation, changes in the policy, biological trends);

0.3.2. Plan II characteristics

The present Management Plan follows the vision for land use, conservation and ecological sustainable socio-economic development, shared by the main stakeholders within the borders of the protected area as well as the adjacent territories, in compliance with the best international practices and European and Bulgarian legislation requirements.

That is why number of meetings, actions and investments were initiated in the process of management planning, including:

- **administration**, which is capable to implement the Management Plan, meaning competent staff (as number and skills) and resources (equipment, current expenses, capital expenses);
- **mechanism for stakeholders' broad and active participation**, engaging all levels of state and local governing and the civil society;
- **encouraging the medium and small enterprises community**, which to organize the natural resources use on the territories in an ecologically sustainable way;
- **stable system for internal and external monitoring**, which to use key ecological and socio-economic indicators as well as ones from the field of environment, for assessing the achieving of the managerial vision for the park as well as whether it corresponds to the national and international perspectives.

Management planning is not an isolated process. The park has been established in 1970 with the goal to preserve the unique nature of the picturesque canyon-like valleys of Lomovete, in combination with the cultural-historical complex of Cherven-Ivanovo.

This is the reason for the management plan to be completely conformed to its disposition in a border area and the cross-border cooperation with the neighboring institutions in the Republic of Romania. In pursuance of many international, national and local engagements taken by Bulgaria in the recent years and particularly after 2007, already as member of the European Union, suggestions are elaborated for access to complementary EU funding for the places, being Specially protected zones, are part of the NATURA 2000 network.

At local level, the management plan reviews problems such, for example, as programmes for regional development, sustainable agriculture, forestry practices application, pollution reduction, cultural heritage preservation as well as for tourism and recreation development.

SECTION 1:
DESCRIPTION AND ASSESSMENT

1.0. LOCATION AND BORDERS

1.0.1. Location

The Nature park belongs to an area of the Danube plain, Ludogorsko-Dobrudzhanska sub-area, Popovsko-Razgradski region of Northern Bulgarian (Ponto-Caspian) province from the

geomorphologic zoning of Bulgaria (Geography of Bulgaria – physical and socio-economic, Sofia, 1997, AI prof. M. Drinov).

According to the Republic of Bulgaria administrative division, territorially, the Rusenski Lom NP areas belong to one district Ruse, and two municipalities-Ivanovo and Vetovo.

Table 1.0.1 Land of villages included in the Rusenski Lom cadastral map:

Populated settlement's land	EKATTE	Area, ha
Ivanovo	32095	142,2
Koshov	39205	584,7
Nisovo	51768	696,1
Pisanets	56441	307,6
Svalenik	65509	837,6
Tabachka	72028	71,6
Cherven	80443	304,7
Shtraklevo	84049	463,5
Totally		**3408,0**

The NP location in regard to the Republic of Bulgaria borders is shown in **Overview Map**, enclosed after the Plan II contents.

1.0.2. Borders

The digitalized border described with actual geodetic coordinates) is presented by the contractor MAKROPLAN EOOD of the project**:** *Making of Geographic information system (GIS) for Rusenski Lom Nature Park.*

The parameters when defining the scope of the adjacent territories are specified from ecological and socio-economic point of view, and they are different for the particular plan's components.

1.1. AREA OF NP AND THE INCLUDED IN IT PROTECTED AREAS

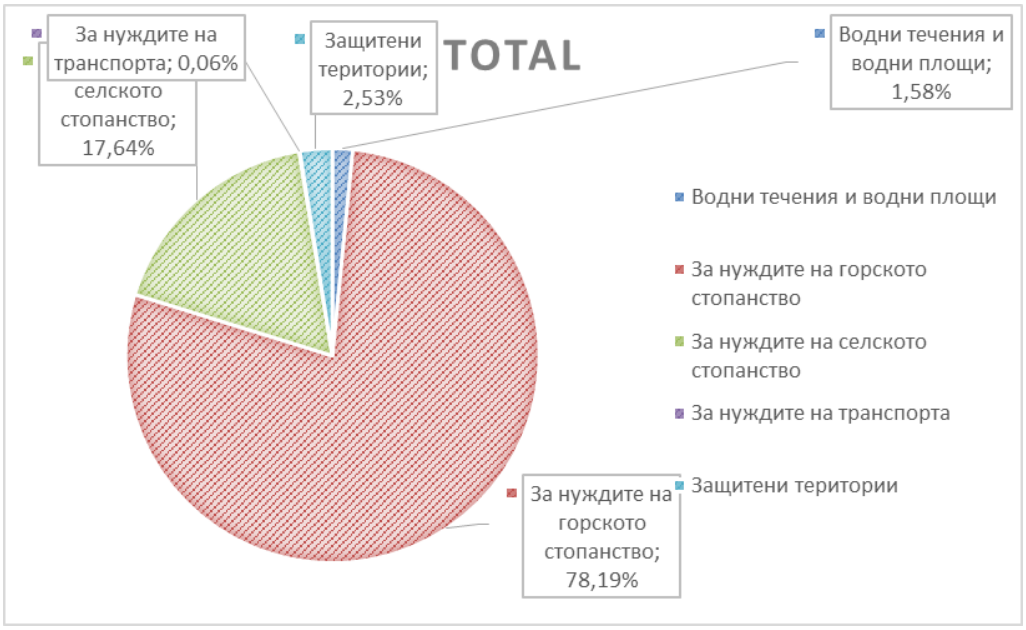
According to Order № РД-794 of August 19th 2002 of MOEW, the area of Rusenski Lom NP is 3,408.00 ha.

Map №1 The existing territorial distribution is elaborated to the present plan, as base for all the rest of the maps.

The villages land included in the Rusenski Lom Nature Park cadastral map with the area they participate with in the total park's area is presented in table 1.0.1.

1.2 PARK'S FUND AND ADMINISTRATIVE BELONGING

Fig. 1.2. (1) Park's areas by purpose



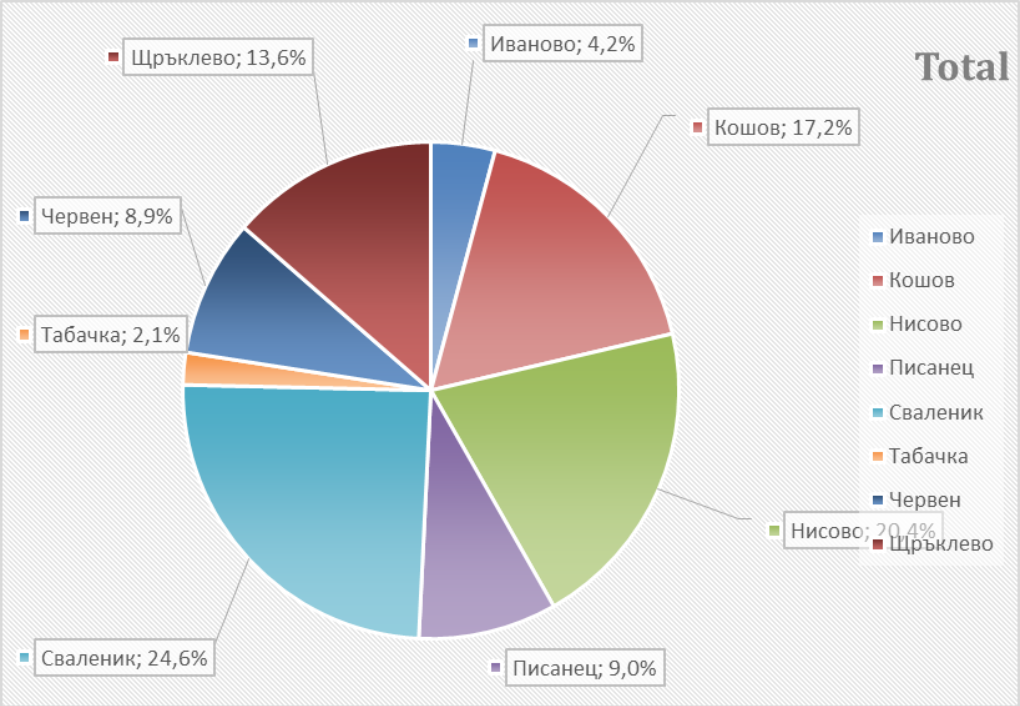
- Protected territories – 2,53%; Water streams and areas – 1,58 %; Forest management and administration – 78,19 %; Agriculture – 17,64 %; Transport needs – 0,06 %.

Table 1.2.(1) Park's area distribution by way of permanent use

WAY OF PERMANENT USE	Area, ha
Other registered road /without field and forest roads/	0.2
Water stream	24.8
Temporary unused natural meadow because of other reasons	0.4
Temporary unused natural meadow	1.2
Internal river	29.5
Forests in farm land	22.2
Game field	6.8
Other territory occupied by production bases of farmers	0.1
Woodproduction forest area	466.2
Electric wiring and facilities to it	0.1
Natural meadow	218.9

Stock-breeding complex and farm	2.2
Afforested forest territory	1 412.2
Afforested field	21.4
Vegetable crop	33.8
Used natural meadow	33.7
Countryside road transport network	1.9
Local road	1.3
Non-woodproduction forest area	741.1
Field	59.8
Fruit plantations /terraced/	0.4
Parking	0.1
Pasture with frutices	8.6
Pasture, common land	108.0
Field crop	2.5
Field road	27.6
Recreational home	0.9
Reserve	87.1
Rock	97.4
Rock formation	1.6
Farmyard	9.0
Territory of water-utilization, hydromeliorative facilities	1.0
Frutices	1.7
Deciduous ligneous species	82.1
Totally	**3 408.0**

Fig. 1.2(2) Percentage areas' participation in the park by land belonging to villages.



- Ivanovo - 4,2 %; Koshov – 17,2 %; Nisovo – 20,4 %; Pisanets – 9 %; Svalenik – 24,6 %; Tabachka – 2,1 %; Cherven – 8,9 %; Shtraklevo – 13,6 %.

Table 1.2(2) Type of forests under Regulation 18

Type of forest - code	Type of forest -	Sub-type of forest - code	Sub-type of forest - name	Area, ha
1	Forests of white pine	1.3	Cultures of white pine outside the area	9.7
1 Totally				**9.7**
2	Forests of black pine	2.2	Cultures of black pine in the area	56.8
2 Totally				**56.8**
13	Mixed oak forests	13.1	Natural seed mixed oak forests	47.6
		13.2	Cultures of oak	9.8
13 Totally				**57.4**
16	Riverside forests	16.2	Cultures of hybrids	12.5
16 Totally				**12.5**
17	Dense forests	17	Dense forests	42.1
17 Totally				**42.1**
20	Lime-tree forests	20.1	Natural forests of lime-tree	219.3
		20.2	Cultures of lime-tree	16.9
20 Totally				**236.2**
23	Sprout ones for	23.4	Sprout mixed oak forests	626.6

	transformation			
		23.6	Sprout hornbeam forests	3.3
		23.8	Sprout hairy oak forests	18.0
23 Totally				**647.9**
24	Forests of acacia	24	Forests of acacia	517.9
24 Totally				**517.9**
25	Forests of Oriental Hornbeam	25.1	Forests of Oriental Hornbeam	797.6
25 Totally				**797.6**
26	Fruit-bearing forest cultures	26	Fruit-bearing forest cultures	3.3
26 Totally				**3.3**
29	Other deciduous cultures	29	Other deciduous cultures	36.7
29 Totally				**36.7**
30	Mixed deciduous	30	Mixed deciduous	64.7
30 Totally				**64.7**
Non-afforested FT				**370.6**
TOTALLY				**2 853.3**

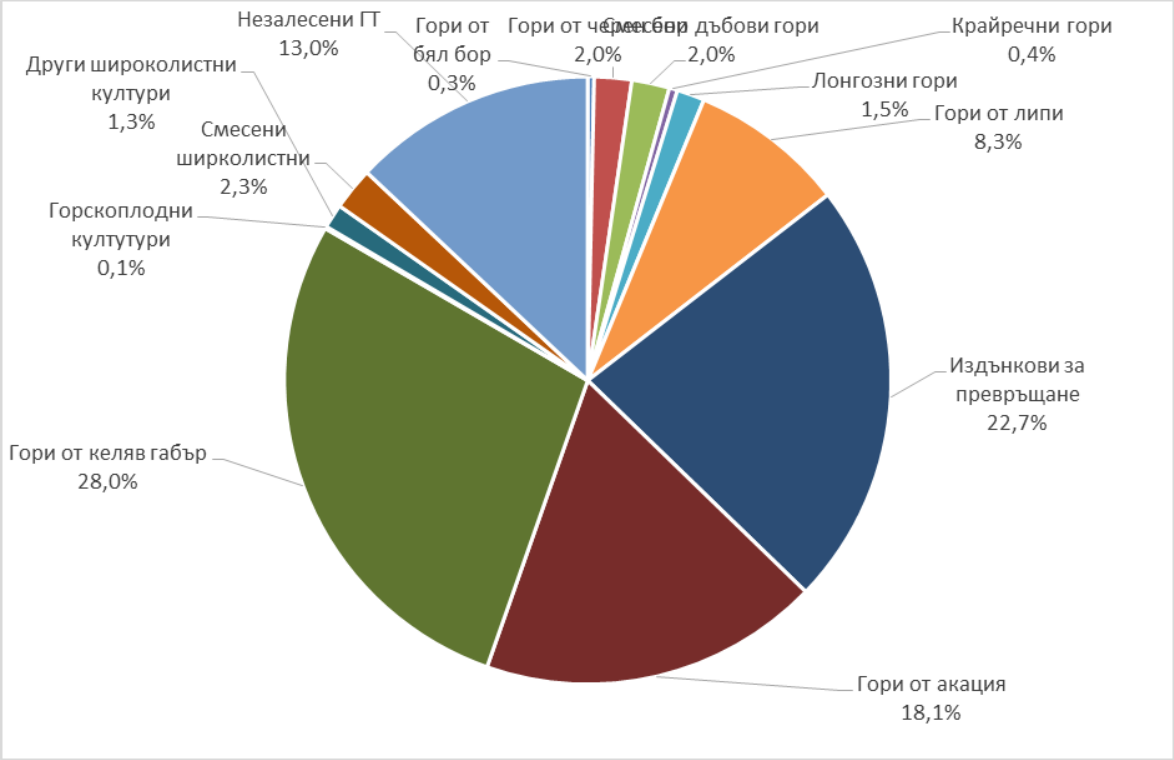


Fig. 1.2(3) Forest types' percentage participation

The areas in the park by type of ownership and way of permanent use are presented in ***Annex 1.2.(1)***

The areas of forest territories (FT) by the type of forests and land are presented in ***Annex 1.2.(2)***

Administrative belonging

According to the administrative division of the Republic of Bulgaria, the territory of the park belongs to the following administrative units:

- District of Ruse

- Municipality of Ivanovo – part of the land of the village of Ivanovo, village of Koshov, village of Nisovo, village of Cherven, village of Shtraklevo, village of Tabachka, village of Svalenik.
- Municipality of Vetovo – part of the land of the village of Pisanets

Map № 3 Type of territory, fund and administrative belonging is elaborated to the present plan. It reflects administrative borders – district, municipal, village belonging and fund belonging.

1.3 LEGAL STATUTE

Rusenski Lom Nature Park regiment of use and management is specified with the Protected Areas Act, The Ordinance for establishing the park, issued by the Minister of environment and water as well as the present Management Plan.

Article 29.

(1) Areas hosting various ecosystems with diverse plant and animal species and the habitats thereof, with typical and remarkable landscapes and non-living natural features, shall be designated natural parks.

(2) Natural parks shall be managed for the purpose of:

1. maintenance of the diversity of ecosystems and conservation of biological diversity therein;

2. provision of opportunities for pursuit of scientific research, education, and recreation;

3. sustainable use of renewable natural resources while preserving traditional forms of livelihood, and ensuring conditions for the development of tourism.

PAA SG., issue 133/11.11.98, last amended SG., issue 98.28.11.2014

Rusenski Lom Nature Park management is carried out by the Nature Park Directorate, which is subdued to the Executive Forests Agency to the Ministry of Agriculture and Food.

1.3.1. Legal framework for management of Rusenski Lom NP.

⇒ Historical review

The forest territories areas are managed in compliance with the Forest Act (promulgated pub., issue 89 of 1958; amended SG, issue 26 of 1968) till part of the Lomovete territory was announced protected nature site (Nature Protection Act, SG, issue 47 of 1967). The agricultural fund is used in a traditional way, mainly as meadows and cultivated areas. (Working land protection act, promulgated in State Gazette, issue 47 of June 16th 1967)

The first well-grounded proposal for announcing the region of Lomovete protected region in front of the Commission on Nature Protection to the Ministry of Forests and Forestry was made in 1965 (Historical museum-Ruse, E. Undzhiyan – curator in section Nature and T. Michev – chief of Srebarna biological station).

In 1970 Rusenski Lom People's Park is announced protected natural site as a result of the joint efforts of state institutions – District People's Council (chief architect Stoev), District museum of Ruse, Hygienic and Epidemiologic Inspection, Regional Forests Directorate, Parkstroy (N. Valkova) and individuals – D. Brown,1968-1969 chief lecturer in the English language school in Ruse – amateur ornithologist, V. Doykov – author of a book about Lomovete, M. Halvadzhiev, E. Undzhiyan, T. Michev. After the proposal of the Ditsrict People's Council of Ruse and the conservation circles, the Ministry of Forests and Forestry announced Rusenski Lom People's Park with an ordinance of its № 567/26.02.1970 (SG issue 30/14.04.1970) with total area of 2 226, 7 ha.

Rusenski Lom People's Park territory has been updated twice till 2004:

1. Area reduction by Ordinance No.РД-586 of June 8th 1983 of the MOFF, issue 52/1983 of the State Gazette to 2 161, 4 ha

2. Increase by Ordinance No.580 of June 17th 1986 of the Committee on Conservation of Natural Environment, issue 62/1986 of State Gazette to 3259,8 ha

The rock churches by the village of Ivanovo and the adjacent terrain are announced museum reserve by Resolution of the Committee on Culture and Art of March 30th 1965 (SG issue 84 of 1965) and for archeological reserve by Resolution of the Council of Ministers № 953 of November 4th 1997. According to an Annex to Article 50, Paragraph 3 of the Cultural Heritage Act, the rock churches by the village of Ivanovo and the adjacent terrain occupy statute of archeological reserve. The actions within its territorial scope are conducted in compliance with the CHA provisions. Guarded area of the National Archeological Reserve Rock Churches by the village of Ivanovo and temporary regime for its conservation are declared by letter ref. № 9860/30.07.2003 of the National Institute for Monuments of Culture.

The Middle Ages Town of Cherven and the adjacent terrain, the village of Cherven, are announced museum reserve by Resolution of the Committee on Culture and Art of March 30th

1965 (SG issue 84 of 1965) and for archeological reserve by Resolution of the Council of Ministers № 953 of November 4th 1997.

Four development documents regarding the people's park territory are elaborated within the period 1984-1989:

1. Territorial programme Ivanovo-Cherven, NIMC, Complex scientific-study and design institute on territorial development, urban development and architecture CSSDITDUA/ КНИПИТУГА/,1984. The Ivanovo-Cherven Territorial Programme is elaborated in 1983 and is approved by letter К- № 1897/28.06.1984 of the Committee on Culture.

2. Ecologic-recreational development of Rusenski Lom People's Park – phase Preliminary project, Agrolesproekt Study and Design Institute, 1986, Investor Association of Forestry and Forest Industry AFFI, with diagrams by sections: Water supply and Sewerage, Electicity, Communication facilities.

3. Ecologic-recreational development of Rusenski Lom People's Park – phase Final project, Agrolesproekt Study and Design Institute, 1987, Investor AFFI, with diagrams for: Water supply and Sewerage, Electicity, Communication facilities and Plan of the places for exporting the unusual for the park activities.

4. Park development project for Ruse ski Lom People's park – phase Technical, section Green Building, Agrolesproekt Study and Design Institute, 1989 r, Investor AFFI. Four functional zones are planned: Reception zone, Zone for popular recreation with an area of 1572.8 ha - 48.2% of the Park's area, Historical zone with an area of 647.6 ha - 19.9%, Zone of special (strict) regime of an area of 1039.4 ha - 31.9% of the protected territory's area.

The projects are implemented by Forestry Administration Ruse. Directorate of Rusenski Lom PP is established by Ordinance РД 65/February 15th 1996 of the National Forestry Management to the Ministry of Agriculture, Forestry and Agrarian Reform. Par's management is transformed into Directorate of Rusenski Lom PP by Ordinance № 199 /July 17th 1998 of NFM - MAFAR, as a legal body directly subdued to NFM. Beside the ordinances for establishing and transformation, the structure functions are designated also in Rules for the structure, functions and activity of the nature parks directorates to NFM by the NFM head /March 25th 1999/.

After the adoption of the specialized Protected Areas Act, the minister of environment and water pre-classify the people's park into nature park (Ordinance No.РД-794 of August 19th 2002, issue 86/2002) updating its area to 3 408 ha.

State Forestry Management to RFM Ruse is the master of the forest territories until June 17th 2002. State Forestry Board Ruse was closed down by Ordinance № 547/June 11th 2002 and the State Game Station /SGS/ Dunav – Ruse territory of activity was extended by the region of the closed SFM Ruse.

A Plan for the nature park's management is elaborated in the period January 2001 – October 2002 with financing from the National Forestry Management to the Ministry of Agriculture and Forest, approved by Resolution for adopting Management Plan for Rusenski Lom Nature Park № 539 of the Council of Ministers of June 6th 2005.

⇒ Legal framework changes after 2005

Some significant changes in the managerial conservation goals, territory development and the natural resources management occurred after the management plan adoption in 2005.

Rusenski Lom Nature Park's territory gets within the borders of two protected zones of the European ecological network Natura 2000 in pursuance of the Biological Diversity Act.

Protected zone Lomovete BG0002025 after Directive 79/409/EEC on the conservation of wild birds is approved after proposals of the Bulgarian Society for the protection of Birds and the Institute of Biodiversity and Ecosystem Research at the Bulgarian Academy of Sciences with Resolution № 122/March 2nd 2007 of the Council of Ministers (SG, issue 21/2007) with total area of 3408 ha and announce by Ordinance of the Minister of Environment and Water for announcing protected zone № РД -562/September 5th 2008 (SG issue 84/2008). With its own Resolution № 335/May 25th 2011 (SG issue 41/2011), the Council of Ministers increases the zone's area to 33 451,13 ha, which is also indicated in Ordinance of the Minister of Environment and Water № РД-382/ April 19th 2013 (SG issue 50/2013)

Protected zone Lomovete BG0000608 after Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora is approved after proposals of Balkan Wildlife Society with Resolution № 122/March 2nd 2007 of the Council of Ministers (SG, issue 21/2007) with total area of 32 488,93 ha.

According to the requirement of the Act on Waters and to Article 13 of the Water Framework Directive, the following are elaborated by Danube Region Basin Directorate and adopted:

- River Basins Management Plan (RBMP) in the Danube region 2010-2015 is endorsed by the minister of environment and water by Ordinance № РД-293/March 22nd 2010.
- Danube Region River Basins Management Plan 2016-2021 adopted with RESOLUTION № 1110 / December 29th 2016 of the Council of Ministers

The main goal of the Plans is achieving good state of the waters in the Danube region for basin management.

The town council in the village of Ivanovo approved general development plan of the Municipality of Ivanovo, Ruse district (SG issue 11/ 2017) with its Resolution № 184 of December 22nd 2016 on the grounds of Article 21, Paragraph 1, item 11 and Paragraph 2 in Relation with Article 27, Paragraph 3 Local Government and Local Administration Act, Article 127, Paragraph 6 in Relation with Article 105, item 1 Spatial Development Act.

In September 2010, a contract is concluded between MOEW and Executive Forests Agency, with which MOEW gives the facilities for water management in the protected area of Kalimik-Brashlyan for management to Rusenski Lom NPD.

In 2012, after the new forestry act adoption, the general rules for all nature park directorates activity is replaced with individual ones. The Rusenski Lom Nature Park Directorate Organic Rules is promulgated in State Gazette issue 12 of February 19th 2012, and is subsequently amended and complemented in issue 28 of March 19th 2013 and in issue 77 of September 16th 2014.

Regiments under Article 79 of the Cultural Heritage Act for NAR Rock Churches by the Village of Ivanovo conservation are defined by Protocol of September 15th 2015 of the joint committee,

appointed with Ordinance № РД 9К-90/September 12th 2015 of the Minister of culture – borders of the archeological site and directions for its conservation; borders of guarded zone I – reception-service zone, and directions for the guarded zone preservation; borders of guarded zone II – zone for landscape guarding and directions for the guarded zone preservation.

1.3.3. Institutional framework changes after 2005

Rusenski Lom Nature Park Directorate's Organic Rules is promulgated in State Gazette issue 12 of February 10th 2012, and is subsequently amended and complemented in issue 28 of March 19th 2013 and issue 77 of September 16th 2014. According it, the Rusenski Lom Nature Park Directorate is a specialized territorial unit of the Executive Forestry Agency (EFA), established by ordinance of the EFA executive director on the grounds of Article 159 of the Forest Act. The Directorate has been established for execution of the ordinance for announcing and of the Rusenski Lom Nature Park Management Plan; protected countryside Kalimok - Brashlen; protected zones under EU Directive on the conservation of wild birds – BG0002025 „Lomovete" (Ordinance № РД-562 of September 5th of MOEW), BG0002030 „Kompleks Kalimok" (Ordinance № 831 of November 17th 2008 of MOEW) and protected zones under Directive on the conservation of natural habitats and of wild fauna and flora BG0000608 „Lomovete" and BG0000377 „Kalimok – Brashlen" (Government decree № 122 of March 2nd 2007), where the protected zones coincide with the park's territory. The Directorate is an independent legal body on budget support – an EFA structure.

In 2018 the Minister of environment and water issues new Rules for the organization and the activity of the Regional Inspectorates of Environment and Water (promulgated SG issue 49 of June 12th 2018). According the latter, Regional Inspectorate of Environment and Water – Ruse (RIEW) is a regional body of the Ministry of Environment and Water that ensures the implementation of the state policy on environment conservation on the territories of the Districts of Ruse, Razgrad and Silistra. RIEW-Ruse has control, regulative and information functions in the fields of

- Conservation and protection of air, water and soil from pollution and damage;
- Conservation and ecologically friendly use of the bowels of the Earth and the underground natural resources;
- Conservation of biological diversity, protected territories and forest ecosystems;
- Waste management;
- Environmentally friendly building of the settlements surrounding area;
- Collection and provision of information about the environment and water state.

Implementing its control functions, RIEW-Ruse conducts preventive, routine and subsequent control in regard to the application of regulative acts regulating environment components quality and the factors with impact on it.

The existing forests management system has totally changed and few groups of bodies formed with the adoption of the new Forest Act in 2011. State policy in the field of forestry is conducted by the minister of agriculture, food and forest through the Executive Forestry Agency. The Executive Forestry Agency, in the field of protected territories and through the regional forest directorate, has functions so to organize the forest territories inventory, to control the forestry plans elaboration and implementation, to organize the elaboration and to

control the implementation of nature parks management plans, to control the law implementation and to exercise general supervision and methodic management over the activity of all bodies and individuals, whom obligations are assigned under it. State enterprises are established to manage the state owned forest territories, with functions for implementation of the forestry plans for the state owned forest territories; implementation of the hunting plans in the state owned hunting reserves and in the state owned forestries; conduction of maintaining and/or restorative activities in the state owned forest territories, set in protected territories management plans; organization and conduction of events on the state owned forest territories protection; organization and conduction of antierosion measures; ecosystems diversity maintenance and biological diversity conservation inside them; organization and assigning planning and building in the forests and land in the state owned forest territories and state owned forest territories conservation.

The institutional framework for NP management, including the main functions ensuing from various legal and regulative documents action is presented **in item 1.5.1.**

Historical review of the statute and the purpose of the NP territory – announcing the Protected Territory /PT/ and the reasons for subsequent changes in the territory's statute, including chronogram of the laws and secondary legislation in action within their time scope that concern the management of forest and farm property in Rusenski Lom NP and their regulation and management are presented in ***Annex № 1.3.***

⇒ **According to the National conservation and resource legislation** the statute of the protected territory is Nature Park. The following could be designated as most significant in this aspect:

1.3.1.1. Protected Areas Act

The purpose of this act is biological diversity conservation through building a network of protected territories such as:

designates the protected territories categories, their purpose, regiments of conservation and their management main objectives;

regulates the procedures for announcing protected territories;

introduces the management plans as modern tool for the protected territories management and the procedures for their elaboration and adoption;

defines the institutions responsible for the management, guarding and control in the protected territories;

The Act is applied by MOEW and the Ministry of Agriculture and Food /MAF/, including Executive Forestry Agency /EFA/ and their specialized structures-directorates as well as by municipalities;

1.3.1.2. Forest Act

The Act arranges the public relations connected with the conservation, management and use of forest territories in the Republic of Bulgaria, aiming guaranteeing multifunctional and sustainable management of forest ecosystems. Regarding the present plan's objectives, the act contributes to:

Forests state maintenance and improvement;

Guaranteeing and maintenance of ecosystems, of social and economic functions of forest territories;

Guaranteeing and increasing the production of wood and non-wood forest products through nature friendly management of forest territories;

Biological and landscape diversity maintenance and improving the state of the population of wild flora, fauna and mycota species;

Ensuring possibilities for people's recreation and improving the conditions for recreation;

Achieving balance between the interests of society and of forest territories' owners;

Observing international and European engagements for forest habitats conservation.

The Act is applied by the Ministry of agriculture and food, the state enterprises under Article 163 of the FA and their subdivisions, the Executive Forestry Agency and its specialized structures as well as by the municipalities.

1.3.1.3. Agricultural Land Protection Act and Rules for its implementation

It contains the legal order of the change of purpose of agricultural land into one for non-agricultural needs. Most of the elements of the special administrative procedure-subject of the act, are affected by the last Law for amendment and supplement of the Agricultural Land Protection Act (ALPA), in force since 2015, in pursuance of the constitutional requirement agricultural land to be used for agricultural purposes and the change of its purpose to be allowed only as an exception (Article 21, Paragraph 2 of the Constitution of the Republic of Bulgaria).

As reason for the amendment, the motives to the bill emphasize the increased interest for agricultural land purpose change aiming building up, prompted not by actual investment intensions but by the expectations for increase of the price of the changed land purpose at future efficient deals.

1.3.1.4. Law for Hunting and Protection of the Game

The Law for Hunting and Protection of the Game regulates the game property rights, the protection, management and organization of the game reserves as well as the right for hunting and game trade. Game conservation is a basic approach for game management that includes:

- biodiversity conservation;
- stability increase of the hunting resources use;
- ecological balance preservation and habitats protection.

The Law is applied by the Ministry of Agriculture and Food.

1.3.1.5. Fisheries and Aquaculture Act

This Act regulates the management, use and protection of fish resources in the Bulgarian water systems and basins as well as the trade with fish and other water organisms. The law aims to provide for:

- Sustainable use of fish resources, including biological equilibrium restoration and protection in the water systems;
- Sustainable development of fishing sector (industrial and entertaining fishing, fish and aquacultures breeding);
- Fishing practices rights' implementation;
- Fish and fish products consumption increase.

The Act is applied by the Ministry of agriculture and food, EAFA /Executive Agency of Fisheries and Aquaculture/, local authorities, regional administrations

1.3.1.6. Biological Diversity Act

This Act regulates the relations between the state, the municipalities, legal and physical bodies in the field of biological diversity conservation and sustainable use in Bulgaria through:

- Conservation of characteristic habitats at national and European level through National Ecological Network
- Conservation of protected species as well as of the species of trade significance
- Regulating the introduction of non-local species or the second introduction of local species
- Regulating the trade with endangered species
- Conservation of venerable or remarkable trees

The Act is applied by the Ministry of Environment and Water, Ministry of Agriculture and Food, Ministry of Regional Development, Ministry of Finance and the Municipalities

1.3.1.7. Medicinal Plants Act

The Medicinal Plants Act regulates the management of medicinal plants resources, including the protection, sustainable use, collection and trade with medicinal plants.

There is an official list (Annex I) containing all medicinal plants in Bulgaria. These natural resources use requires special permits and charges for use payment.

The Act is applied by the Ministry of Environment and Water, the Ministry of Agriculture and Food, local authorities, district administrations.

1.3.1.8. Act on Waters

This Act regulates the management of waters in Bulgaria as an inseparable part of state's natural resources and the right of ownership of the water systems and basins. The Act on Waters, generally, is harmonized with the European Union Water Framework Directive 2000/60/EC.

Its goal is to ensure integral balanced management of waters in public interest, society's health protection and sustainable development of Bulgaria, through:

- water resources effective use;
- Development and protection of water resources in order to meet the needs of current and future generations;
- Water quality restoration and water protection from pollution, exhaustion and other effects;
- Conservation and protection of water ecosystems and their surrounding environment.

The Act is applied by the Ministry of Environment and Water, the Ministry of Agriculture and Food, the Ministry of Regional Development, Ministry of Health, the local authorities, etc.

1.3.1.9. Other laws having relation to the park management:

The Spatial Development Act /SDA/, Aste Management Act /WMA/, Atmospheric Air Purity Protection Act /AAPPA/.

⇒ **International legislation**

Rusenski Lom Nature Park corresponds to category V in compliance with the criteria and indicators of IUCN (International Union for Conservation of Nature)

Protected Landscapes and Nature Parks – protected territory, preserved mainly with the goal of landscape conservation and recreation.

Number of international Conventions, under which Bulgaria is party, pay special attention to the issues of biological diversity and the necessity of its preservation and restoration:

- Council Directive 92/43/ EEC of May 21st 1992 on the conservation of natural habitats and of wild fauna and flora
- Directive 79/409/EEC (Directive 2009/147/EC) on the conservation of wild birds
- Convention on Biological Diversity
- Convention on the Conservation of European Wildlife and Natural habitats /of Berne/
- Convention on the Conservation of Migratory Species of Wild Animals /of Bonn/
- United Nations Framework Convention on Climate Change, ratified with a law, adopted by the 37th National Assembly on March 16th 1995.
- Water Framework Directive 2000/60/EC
- NATURA 2000

The indicated conventions and European directives are the starting point for defining the main goals and measures, on which the present Management Plan is grounded. They are presented in ***Annex 1.3.***

1.4 OWNERSHIP

Areas of various ownership participate within the borders of Rusenski Lom NP, and the areas of state public ownership have the biggest share – over half of the park's area, followed by the ones of municipal, public and state private ownership.

Table 1.4. Distribution of park's area by type of ownership:

TYPE OF OWNERSHIP	Area, ha	%
State public	1860,5	55,63
State private	233,5	6,8
Public organizations	90,2	2,5
Municipal public	896,7	26,23
Municipal private	35,4	1,1
Religious organizations	2,6	0,08
Managed by the municipality	54,4	1,5
Ownership	0,8	0,02
Private	233	6,12
Foreign physical and legal bodies	0,9	0,02
Totally	**3 408.0**	**100**

The percentage participation of areas in the park by villages land is shown *on Fig. 1.2(2).*

The ownership by type and way of permanent use by municipalities and villages land is presented in ***Annex 1.2(1)***

Lists and balances by municipalities and villages land, by land properties are presented in ***Annex 1.4(1)***

Map №4 Ownership is enclosed.

Legal analysis of ownership and use /building, illegal sites and facilities, etc./ on the protected territories is presented in ***Annex № 1.4(2)***

There are no legal disputes regarding the ownership of areas and sites on the park's territory as of the time of the present plan elaboration, according to data from RL NPD.

1.5. MANAGEMENT STRUCTURE

1.5.1. Organizational structure and administration

The main state and local institutions, non-governmental organizations and others having relation to the park's territory management, are as follows:

Ministry of Environment and Water - MOEW, and particularly the Directorate of National Bureau for Nature Conservation together with the Regional Inspectorates of Environment and Water elaborates and applies the entire national policy in the field of biodiversity conservation, endangered species and protected territories, while preparing regulative and planning documents, conducts procedures on assessing compatibility of investment proposals and plans, programmes and projects with the subject and goals of protected zones, including through the procedures on environmental impact assessment and ecological assessment, provides methodological support to the regional inspectorates on the regulations application in the sector of nature conservation, maintains registries, provides information, etc.

Danube Region Basin Directorate (DRBD) – water bureau, city of Ruse. Danube region for basin management with centre in the city of Pleven includes also the catchment regions of Rusenski Lom and Danube Dobrudzha rivers. The main functions connected with Rusenski Lom NP management are:

The River Basin Management Plan and the Flood Risk Management Plan (item 1.7.);

Permission procedures. Manage water bodies.

Control activities in regard to non-admission and prevention of the consequences of harmful impact upon waters, the preservation and conservation of water ecosystems and the connected with them ecosystems;

Ensuring information about the waters state for the public.

Ministry of Agriculture, Food and Forestry, as well as the physical and legal bodies and the municipalities – owners of forests, land and water areas in the protected territories beside the ones that are object of exclusive state property, conduct their management and guarding in compliance with the provisions of the Protected Areas Act, the Forest Act and other special acts.

Rusenski Lom park's territory belongs within the borders of RDF-Ruse.

The municipal and private forests management is exercised by their owners after forestry projects, plans and programmes approved by EFA and coordinated with MOEW, respectively their branches.

NCSE – North Central State Enterprise.

The enterprise manages the state forest territories in five administrative districts – Gabrovo, Veliko Tarnovo, Ruse, Silistra and Razgrad.

The main subject of activity is connected with the management and mastering of state owned forests. The main income comes from wood sale and organized hunting tourism. Number of

actions connected with forest territories and game settling are annually conducted for the maintenance of eco-balance and biodiversity.

TU State Hunting Reserve Dunav – Ruse State Game Farm Dunav It spreads on the territories of the municipalities of Ruse, Ivanovo, Slivo pole and part of the municipality of Vetovo. Hunting measures for feeding the game are conducted on the park's territory: racks and salt baits.

Regional Directorate of Forestry – Ruse covers the Northeastern part of Bulgaria, having border to the North with the Danube River stream and the Republic of Romania, for the Southeast with RDF Varna, and to the South with RDF Shumen and to the West with RDF Veliko Tarnovo.

RDF Ruse manages the forest fund on the territory of the district of Ruse, conducting organization, coordination and control of the activities of: forest reproduction in the forest fund; use of forests and land of the forest fund; conservation of forests and land of the forest fund; planning and building in the forest fund; hunting ground.

Rusenski Lom NP Directorate is subdivision of EFA for management plans implementation, conducts coordination, methodological management and control on forestry plans implementation, planning and organization of scientific studies, educational programmes, popularization activities; organization of visitors' and information centres; organization of measures on biological and landscape diversity conservation and restoration; development of tourism and recreation; maintenance of archive and database for the parks' territories.

Ministry of Culture runs and coordinates the cultural objects on the territory of the state and conducts its cultural policy. The cultural heritage objects, museums, historical landmarks, etc. are under its jurisdiction. The Ministry provides the international cooperation in the field of culture, issues licenses for copyright and the similar rights protection, controls the Bulgarian cultural institutes abroad.

Functions of the structures in the district and municipal administrations that are related to the park, are presented in item 1.5.2.3.

Tourist Information Centre - Ivanovo is organized in 2000 under the Danube Initiative Programme of the Foundation for Local Government Reform /FLGR/. Its management is subdued to the Ministry of Tourism.

The Centre provides up-to-date information about the tourist attractions, infrastructure and services on the territory of the municipality; it offers specialized tourist product and tourist services, advertising materials and souvenirs dissemination; organization of tourist tours and routes – accompanying of group and individual visitors; participation in the organization of cultural, folklore and other programmes for the municipality's inhabitants and guests.

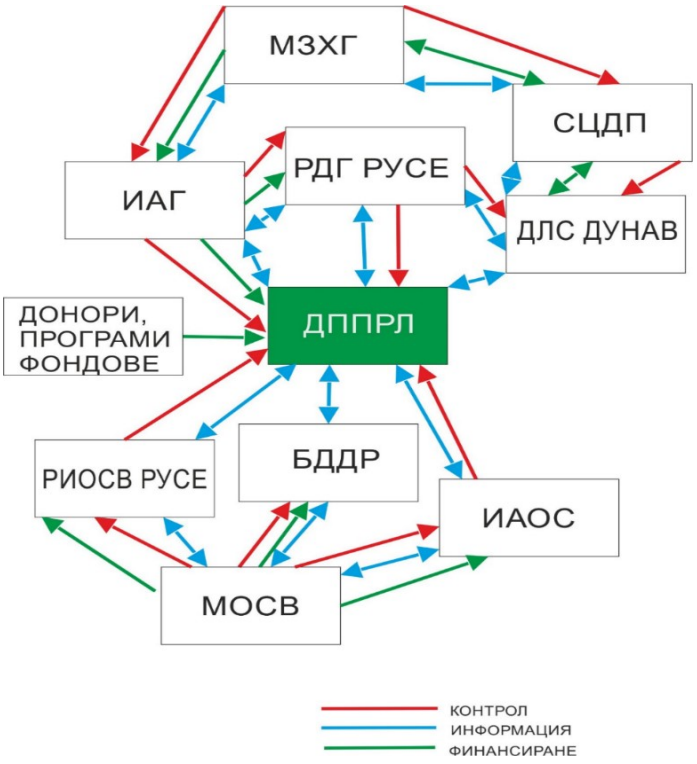
Tourist Society Prista – Ruse is part of the Bulgarian Tourist Union. The Society is partner of and works actively with various organizations in the district of Ruse - municipalities, nature conservation non-governmental organizations, sports and adventure clubs, similar tourist organizations, RIEW Ruse, Rusenski Lom Nature Park Directorate

The main regions, where the Society is active, are situated along the Danube River, the Polomie (the valleys of the Rusenski Lom River and all its tributaries), manages several chalets in the region of the city of Ruse,

The Regional Historical Museum in Ruse conducts its cultural activity on the territory of the districts of Ruse, Razgrad and Silistra. It develops its activity regarding conservation and exhibiting movable cultural valuables, material and immaterial cultural heritage, studying the history and nature of Northeastern Bulgaria. RHM – Ruse presents seven exhibitions, three of which in the open – Sexaginta Prista Roman fortress, Ivanovo rock churches and Middle Ages town of Cherven.

Chief Directorate Fire Safety and Civil Protection performs activities on providing fire safety and protection at fires, disasters and extraordinary situations; it is conducted by the fire safety and civil protection bodies under the conditions and according to the order of the Ministry of Interior Act /MoI/ and the Disaster Protection Act. The national specialized structure of the MoI for conducting the activities on providing fire safety and protection in case of fires, disasters and extraordinary situations as well as information, control and preventive activity. Park's territory is mostly connected with the prevention from fires and floods. Rescue activities are organized and held independently or together with the specialized forces and means of the executive power bodies, the organizations, the legal bodies and the civilians.

The non-governmental organizations Friends of Rusenski Lom People's Park Club, Velo-Ruse Association, BBDF /Bulgarian Biodiversity Foundation/, Bulgarian Society for the Protection of Birds /BSPB/, WWF, **all mayors of settlements,** as well as **owners of forests and land in the park** are partners of Rusenski Lom NPD, are interested and actively participate in the park's management.



Abbreviations used in Fig.2

МЗХГ– Ministry of Agriculture, Food and Forestry /MAFF/

ИАГ – Executive Forestry Agency /EFA/

РДГ – Regional Directorate of Forestry /RDF/

ДЛС - State Hunting Reserve /SHR/

ДППРЛ - Rusenski Lom Nature Park Directorate /RLNPD/

МОСВ – Ministry of Environment and Water /MOEW/

РИОСВ – Regional Inspectorate of Environment and Water /RIEW/

БДДР – Danube Region Basin Directorate /DRBD/

ИАОС – Executive Environment Agency /EEA/

СЦДП – North Central State Enterprise /NCSE/

Fig.1.5.1(1) Functional structure, organizational Relations and Relations of co-subordination between Rusenski Lom NPD and other structures

Fig.1.5.1(2) . Responsibilities on guarding the land, forests and water areas.

1.5.2. Staff — functions.

The functions, activity and organization of work of the Rusenski Lom Nature Park Directorate are arranged by Organic Rules of Rusenski Lom Nature Park Directorate – ***Annex 1.5.2.***

http://dv.parliament.bg/DVWeb/showMaterialDV.jsp;jsessionid=FF66D5715F47729894570CC518E9DB5A?idMat=61118

Rusenski Lom NPD staff's job descriptions are described in ***Annex 1.5.2.1.*** *after data from NPD as of July 2019.*

POSITION STAFF PLAN

DIRECTORATE OF NATURE PARK RUSENSKI LOM

approved on 01.01.2019

№	Structural units and job titles	Education degree	Classifier of the positions in the public administration	Name of the positions in the public administration	Type of legal relationship	Working hours	Rank	Code of the National classification of occupations and positions	Level of the basic month salary	Degree of the basic month salary
1	2	4	5	6	7	8	9	10	11	12
MANAGEMENT										
1	Director	master		Management level	labor legal relations	8		11127028	4	4
MAIN ADMINISTRATION										
2	Chief expert - biodiversity	bachelor	9	Expert level 5	official legal relations	8	IV m	24226041	20	2
3	Chief specialsit - project cordinator	secondary	11	Specialsit level 1	labor legal relations	8		3359026	23	2
4	Ch. Accountant	secondary	11	Specialsit level 1	labor legal relations	8		3359026	23	4
5	Ch. Spec. - PR and record	secondary	11	Specialsit level 1	labor legal relations	8		3359026	23	2
6	Ch. Spec. - maintenance and operation of VC	secondary	11	Specialsit level 1	labor legal relations	8		3359026	23	2
7	Ch. Spec. - maintenance and operation of CSESA	secondary	11	Specialsit level 1	labor legal relations	8		3359026	23	2

1.5.2.1. Structure of management, staff and functions of Dunav SHR on the territory of the Park.

SHR does not have structured managing unit responsible for Rusenski Lom NP. The territory of the park is managed and mastered as part of the reserve, subdued to the corresponding hierarchy – Director, Deputy Director, Chief Forester, specialists, experts, inspectors and forest-guards.

Hunting measures for feeding the game are conducted on the park's territory: racks and salt baits.

Dunav SHR-Ruse officers have the obligation, according to Article 77, Paragraph 3 and Article 85, Paragraph 1 of the Protected Areas Act, to suspend activities and building in the forest territories managed by them and belonging to Rusenski Lom NP, conducted in violation of the Management Plan and the Forestry Plan.

1.5.2.2. Functions of the structures in the district and municipal administrations that are related to the park.

District administration of Ruse District of Ruse is situated in Northern Bulgaria and together with the districts of Veliko Tarnovo, Gabrovo, Razgrad and Silistra (NUTS 3 level) belongs to the territorial scope of North Central Region (NCR) (NUTS 2 level), in compliance with Regulation 1059/2003 of the EU. The district has area of 2 803.41 km ^{2} and, as of December 31st 2011, numbers 233 767 inhabitants. It consists of 8 municipalities – Borovo, Byala, Vetovo, Dve mogili, Ivanovo, Ruse, Slivo pole and Tsenovo, where totally of 67 mayoralties function. The settlements are 83, 9 of which towns and 74 - villages.

The district governor issues permit for use of medicinal plants from state owned property – farm land within the borders of the villages and the land fund.

Municipal administration of Ruse is the local administrative body managing the municipality of Ruse. Municipality of Ruse is situated in Northeastern Bulgaria. To the North it borders the Danube River, which is state border with the Republic of Romania. Ruse is the biggest Bulgarian city along the Danube, the most important transport, logistic, economic and cultural centre for Northern Bulgaria. The city is situated 300 km from the capital city of Sofia and 70 km from Bucharest. The population numbers over 160 000 inhabitants. The Danube River connects Ruse with ten states: Germany, Austria, Slovakia, Hungary, Croatia, Serbia, Romania, Moldova and Ukraine.

City of Ruse is part of the Danube strategy, called upon solving the post-totalitarian problems of United Europe.

RL NP is a substantial part of the Danube space, which symbolizes the wealth and multi-cultural nature and in partnership with the Romanian twin town of Giurgiu, Ruse intends to establish itself as European centre and leader of cross-border cooperation.

Municipality of Ivanovo – http://www.ivanovo.bg/

Municipality of Ivanovo maintains Information centre for at the Ivanovo rock churches. The municipality manages municipal farm land and forests within the park's borders. The mayor of the municipality has the obligation to suspend activities and building in granted for use forests, land and water areas in protected territories – state, municipal and private property, conducted in violation of the approved management plans, and site development and technical plans and projects. The violation under Articles 81 and 83 of PAA is ascertained by official's act, appointed by him, and him or an authorized by him individual issues penal rulings.

Municipality of Ivanovo has obligation, according to Article 77 Paragraph 3 and Article 85 Paragraph 1 of PAA to suspend activities and building on the territories belonging to Rusenski Lom NP, conducted in violation of the Management Plan and Municipality's General Site Development Plan.

Municipality of Vetovo - http://vetovo.com/

The municipality manages the municipal farmland and forests within the borders of the park. The mayor of the municipality has obligation to suspend activities and building on granted for use forests, land and water areas in protected territories - state, municipal and private property, conducted in violation of the approved management plans, and site development and technical plans and projects. The violation under Articles 81 and 83 of PAA is ascertained by official's act, appointed by him, and him or an authorized by him individual issues penal rulings. Municipality of Vetovo has obligation, according to Article 77 Paragraph 3 and Article 85 Paragraph 1 of PAA to suspend activities and building on the territories belonging to Rusenski Lom NP, conducted in violation of the Management Plan and Municipality's General Site Development.

1.5.3. Material-technical provision

Complete list of the available material-technical provision used for the management of Rusenski Lom NPD as of July 2019 is presented in ***Annex № 1.5.3***

1.5.4. Financing

Expenses in leva, connected with conduction of activities under signed contracts with external financing of Rusenski Lom NPD

Year	Worldwide Wildlife Fund Danube-Carpathian	Worldwide Wildlife Fund Danube-Carpathian	Worldwide Wildlife Fund Danube-Carpathian	Operational Programme Environment 2	Operational Programme Environment 3	Danubian Parks 2 Establishing the network	SFEDA- Forest monitoring system

	Programme LIFE08 NAT/BG/000281	Programme LIFE "Free Fish"	Programme LIFE „Kalimok-Brashlen"	Habitats Conservation	Acitivities on Rusenski Lom NP sustainable management	of Protected territories	
2014	64 727	5 528	-	-	1 052 294	57 457	-
2015	-	6 160	-	303 568	2 472 083	-	-
2016	-	4 782	-	-	677 324	-	-
2017		49 615	-	-	-	-	1 578
2018	-	-	3 557	-	-	-	123 110

Expenses in leva of Rusenski Lom NPD by years, provided by the State budget, granted through the Executive Forestry Agency

В лв.

Year	Funds for measures and actions	NPD equipment	NPD repairs
2014	-	-	-
2015	1 710	-	1 312
2016	13 025	2821	-
2017	7 860	2 127	500
2018	-	-	37 519

Note: The data used for analyses and assessments in the present plan are for the period 2014-2018. The proposal is approved by the Contracting Authority on July 19th within the framework of a three-month report with Schedule of the order fulfillment, in compliance with fulfillment of Contract № 9/April 15th 2019.

1.6 EXISTING PROJECT DEVELOPMENTS

Implemented projects or ones in process of implementation by other institutions that have relation with the park directorate's activity:

RUSENSKI LOM NATURE PARK MANAGEMENT PLAN for the period 2003-2013, elaborated by Proles-engineering OOD, financed by the National Forest Management /NFM/ to the Ministry of Agriculture and Forest /MAF/. This plan is the base for updating all parts of the present Plan-2.

Flood Risk Management Plan has been elaborated within the period of Plan 1 action, which regards the Park's territory. It has also been used at the elaboration of Climate Change Consequences Relief Programme in section IV of the present plan.

http://www.bd-dunav.org/content/upravlenie-na-vodite/upravlenie-na-riska-ot-navodneniia/plan-za-upravlenie-na-riska-ot-navodneniia/

River basin management plan in the Danube Region for Basin Management 2016 -2021, including the third six-year water management cycle from 2022 to 2027.

http://www.bd-dunav.org/content/upravlenie-na-vodite/plan-za-upravlenie-na-rechniia-baseyn/aktualizaciia-na-purb/

TU SHR Dunav forestry plan https://dlsdunav.scdp.bg/za-nas/dokumenti

The plan makes detailed analysis of the current plantations state, of the conducted fellings, afforestations and other forestry and hunting measures' results of forests' management within the inspected period, on the grounds of field research works completed in 2011. The necessary forestry and hunting activities for the coming ten-year period are planned generally for the reserve and for each particular plantation or bare forest area, in regard to achieving maximum quality and quantity effect from the economic activity from wood production point of view as well as from view to the use of all the rest forests useful functions.

All projects that are implemented or in process of implementation by the park's directorate as direct beneficiary or partner are described in ***Annex 1.24****.*

1.7 EXISTING FUNCTIONAL ZONING AND REGIMENTS ON THE NP TERRITORY

Distribution of zones in Rusenski Lom NP by area and percentage participation of the total area:

Z O N E	area ha	% of the total park's area
Zone for conservation of riverside and rock biotopes with priority habitats and species of high nature Conservation status	1182.7	35
Zone for conservation and improvement of the habitats of hunting mammal species and species of high nature Conservation status	435.5	12
Zone for conservation of site of Cultural-historical heritage and habitats of species of high nature Conservation status	662.9	19
Zone for forest resources and farm land sustainable use	2059.1	60
Zone of the specialized routes, regulated by the Plan – region for recreation and sport	185.4	7

The total percentage exceeds 100 because of zones parts' overlapping.

Description of the Management Plan 2005 defined zones and regiments in them, and a Map of the existing functional zoning is presented in ***Annex 1.7.***

CHARACTERISTIC OF ABIOTIC FACTORS

1.8 CLIMATE

1.8.1. Factors for forming the local climate

Regarding its climate features the region of the park belongs to Ludogorsko-Dobrudzhanska moderate continental area (Penin, 2007). The continental climate, which is characterized by cold winter and warm summer at bigger annual temperature amplitude, is well manifested.

Main factors defining the local climate in the park's region are: geographic location, the predominant atmospheric transmission and the related air masses (atmospheric circulation), the relief and the water basins. The geographic location is major climate factor as far as it defines the sun radiation, the atmospheric transmission with its seasonal changes and forms the type of climate in the corresponding climate zone.

1.8.1.1. Characteristic climatic deviations determining local climate

The potential evapotranspiration that reflects the possible natural evaporation from the active soil layer and the transpiration from the plants the watering regime parameters depend on (number of waterings, inter-watering period, etc.) in the region, is calculated after Thornthwaite in mm. It is 112.4-132.5 mm for the Northern region in the summer, and during the winter period (December-February) reaches 0 mm. The annual evapotranspiration for the region is about 689 mm (Tsekova 2000).

The aridity index of De Martonne-I is used for assessment of dryness, which presents the ratio p/(t+10), where p is the mean annual amount of precipitation, and t is mean annual temperature of air, by climatic regions. I's annual value is 23.2, which defines the region as moderately arid with values of I under 20 for four of the months throughout the year (from July to September).

Pette Index is also used for defining aridity. Its average values are under 1, which points the region is not highly arid.

1.8.1.2. Relief forms impact on the local climatic conditions.

There are conditions for cold air masses invasion from North and Northeast because of the Danube plain openness to the North and Northeast, which defines winter as cold. The average annual temperature amplitude is 24,5ºC and 26ºC and is the biggest for the country. The low

parts situated around the rivers have winter precipitation minimum and summer maximum. The total annual sum of precipitation is about 550-600 mm.

The terrain consists of vast river valleys and not high hilly and multiple flat heights situated among the river valleys. The lowest valleys' parts are situated around the rivers and are of 30-40 m altitude, and the highest – of about 200 m altitude. Temperature inversion, fog and frost are frequent phenomena in the low valley parts throughout the cold half-year.

The slopes exposure to the following is of significance for the local climatic features:

- the predominant winds bringing precipitation, warm and cold spells,
- the four cardinal points the quantity of the received sun radiation depends on. The differences in the received radiation on the southern and northern slopes are great, which creates sensible differences in the earth surface and ground atmosphere air temperatures.

1.8.2. Climate elements

Climate diagrams of **meteoblue** based on hourly meteorological simulations for a period of 30 years back in time are used for analysis of the region's climate elements. They provide good information about climate events and meteorological indicators such as temperature, precipitation, sunny periods, wind, etc. for certain region. Meteorological data simulation is conducted at spatial resolution of 30 km. In this case, meteorological data simulations for the village of Vetovo, situated within the park's borders, are used.

(https://www.meteoblue.com/bg/%D0%B2%D1%80%D0%B5%D0%BC%D0%B5%D1%82%D0%BE/historyclimate/climatemodelled/%d0%9d%d0%b8%d1%81%d0%be%d0%b2%d0%be_republika-b%c5%adlgariya_728774)

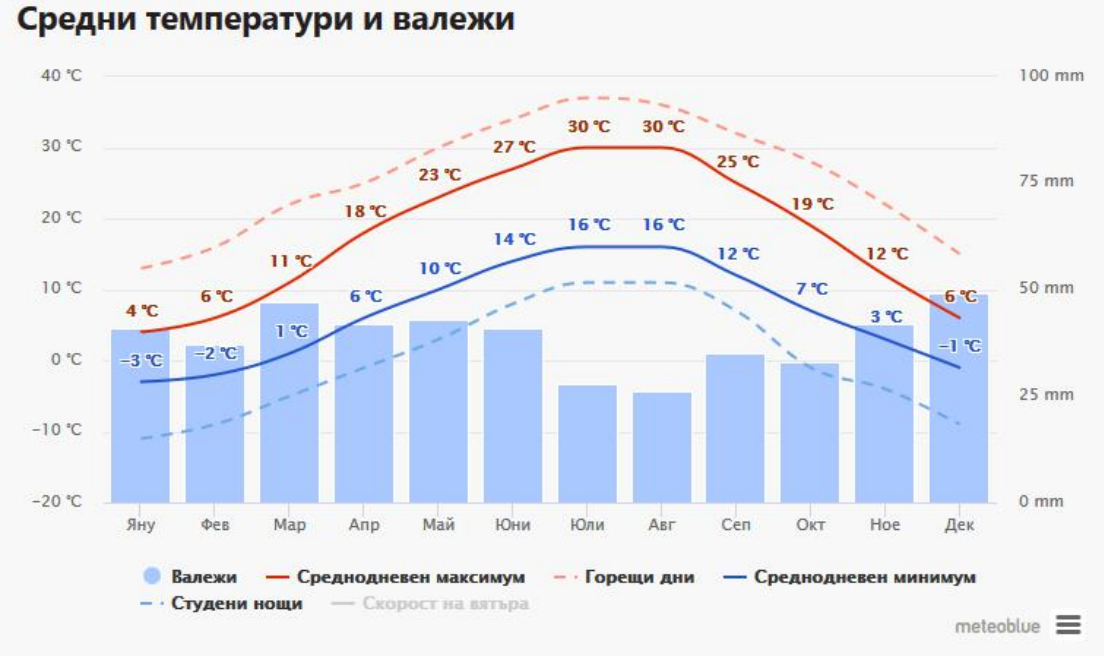


Fig. 1.8.2(1). Diagram of average temperatures (^{0}C) of air and precipitation (mm) in the region of the village of Nisovo.

On the diagram of *Fig. 1.8.2(1),* the thick red line shows the average daily maximum of the average maximum daily air temperature for each month, the thick blue line shows the average minimum daily temperature, and the histogram in blue shows the quantity of precipitation during the month. The hot days (with red dotted lines) and the cold nights (with blue dotted lines) show the average daily temperature in the warmest days and the average night temperature in the coldest nights of the month for the last 30 years. It is visible on the diagram that the coldest are December, January and February, and the hottest it is in July and August. The difference between the average daily minimum and maximum is 14^{0}C for the summer months and up to 7^{0}C in the winter ones. The greatest annual temperature amplitude is 24^{0}C.

The least quantity of precipitation is in August - 26 mm, and the biggest is in December - 49 mm.

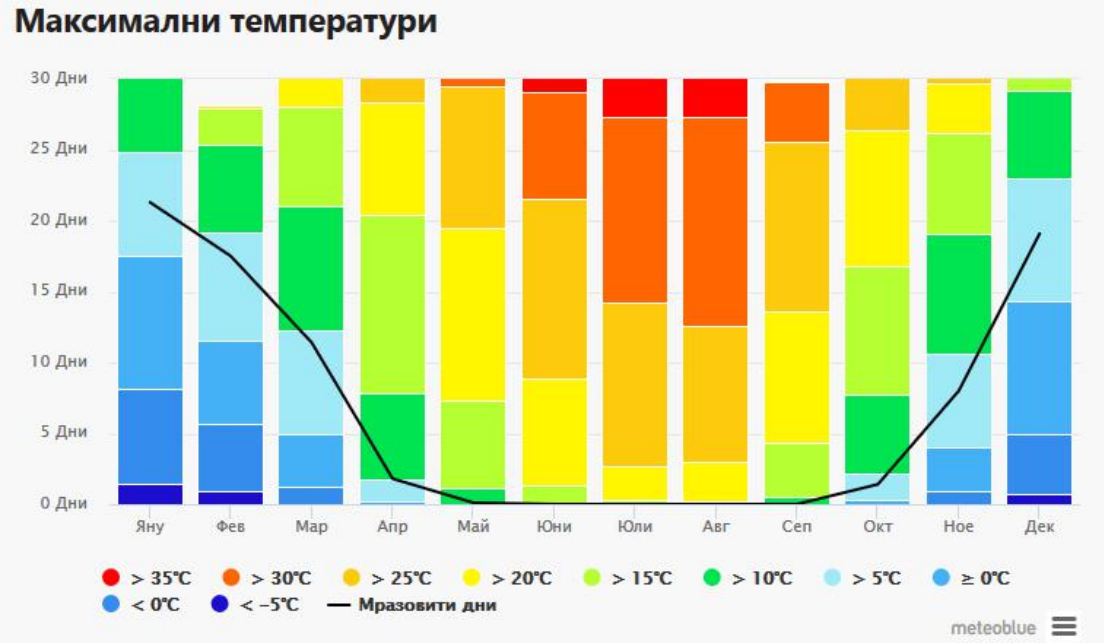


Fig. 1.8.2(2) Diagram for the distribution of the number of days with certain range of temperature by months for the region of the village of Nisovo

The air temperature is consequence of the radiation and calorific balance. It changes, following the alterations of that balance through the certain seasons. The enclosed diagram of the maximum temperatures (*Fig. 1.8.2(2)*) shows the days (on monthly base), when certain temperature values are reached. Highest temperatures - > 35 ^{0}C continue for up to 5 days in July and August, and lowest temperatures - < - 5^{0}C are registered in January.

Winter in the region has duration of 110-120 days and unstable snow cover. The first snowfalls start in November, and the last ones are in April. A lot of low temperatures ca < - 5^{0}C are also observed. Spring comes early because of the low altitude, around the middle of March, and continues for about 55 days. Summer comes early, around May 2nd, with stable hold of temperatures of 15^{0}C. The duration of the period is some 150 days. High temperatures are observed during the summer, higher than the average for the same latitude. Cases of hail that cause significant damages on agricultural crops are frequent in spring and summer. Autumn, with continuous temperatures under 15^{0}C, starts average around October 2nd. Frost is observed earliest on October 10th and latest on May 12th. The first autumn chill starts in the end of October.

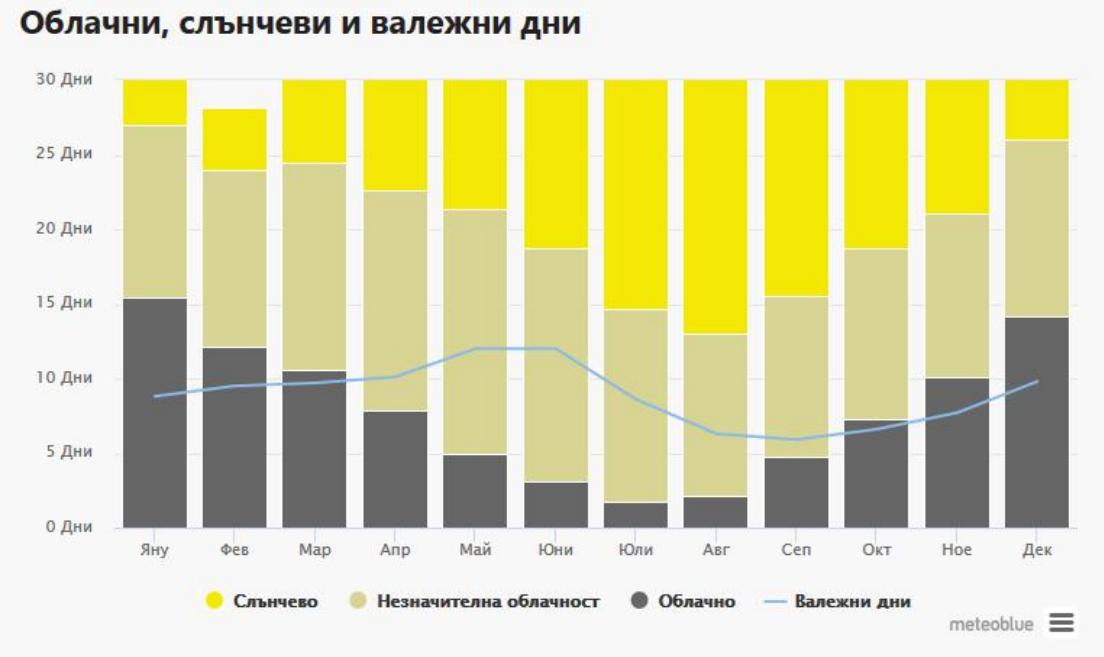


Fig. 1.8.2(3) Diagram of the number of cloudy, sunny and precipitation days in the region of the village of Nisovo.

Danube plain is characterized with maximum sun radiation for the country. August has the sunniest days in the region of the park.

Cloudiness is among the main climatic elements and a factor precipitation, the quantity and type of sun radiation and the radiation balance depend on. Cloudiness depends of the predominating atmospheric circulation during the various seasons, the vertical air stratification in the atmosphere, the relief, etc. It is seen from the diagram on Fig. 3 that January has the cloudiest days and the least are in July.

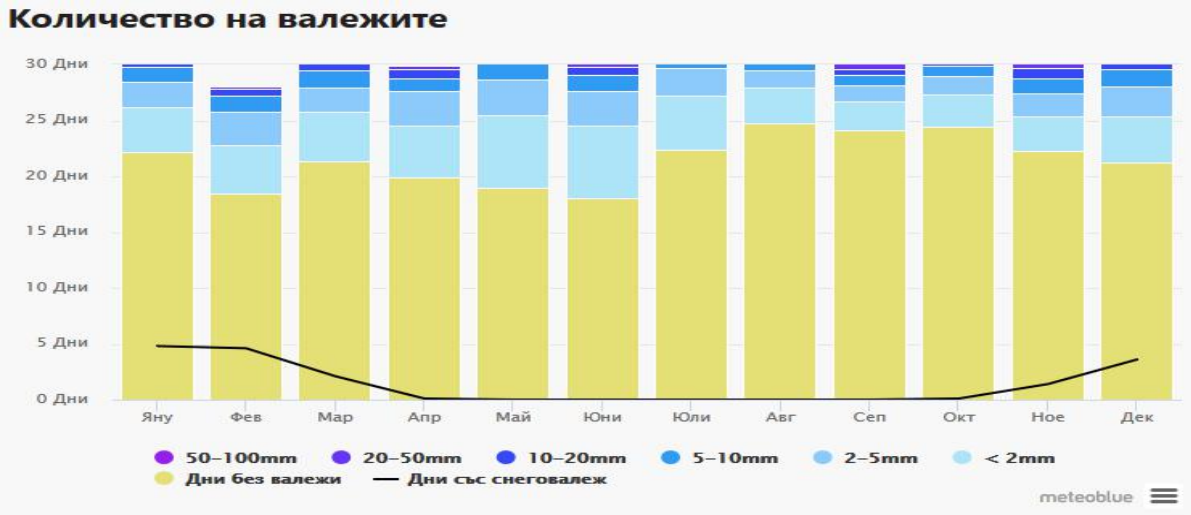


Fig. 1.8.2(4) Diagram of the quantity of precipitation for the region of the village of Nisovo.

Precipitation is an important climatic element, which depends on the peculiarities of atmospheric circulation and is result of air humidity and cloudiness. The most numerous precipitation days in the region are in June, and least in February (*Fig. 1.8.2(3)*). The diagram from *Fig. 1.8.2(4)* shows the number of days of a month, when a certain quantity of precipitation is reached.

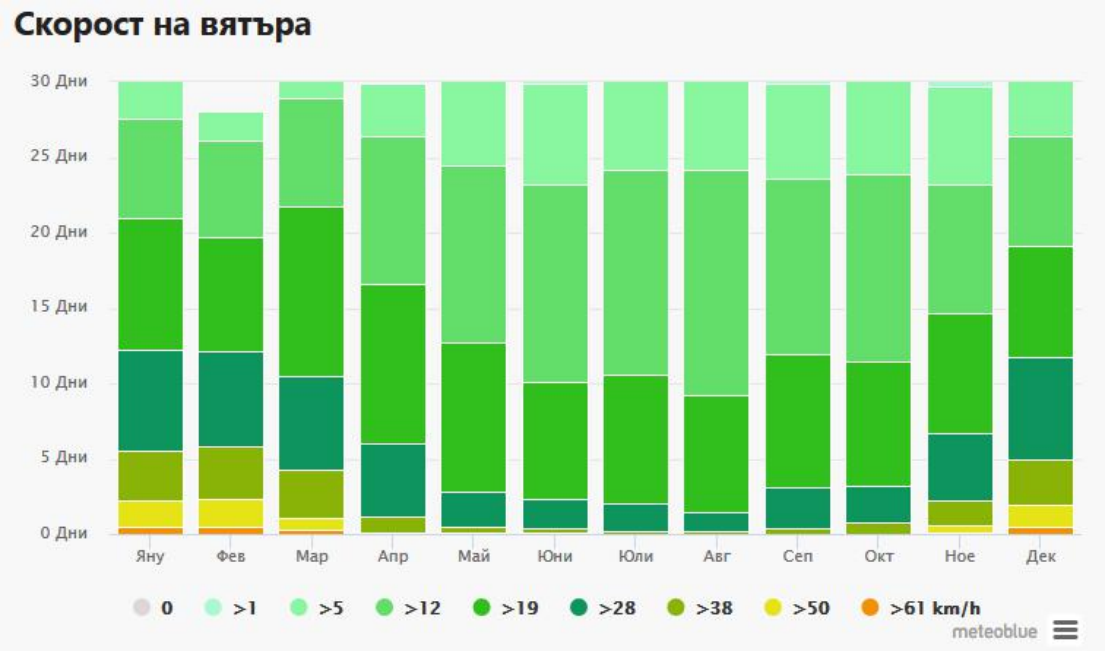


Fig. 1.8.2(5) Diagram for the speed of wind (km/h) for the region of the village of Nisovo.

There are conditions for cold air masses invasion from North and Northeast in the region of the park because of the Danube plain openness.

The diagram on *Fig. 1.8.2(5)* shows the number of days in a month, when the wind reaches certain speed. Winter months are characterized with the highest speed of wind.

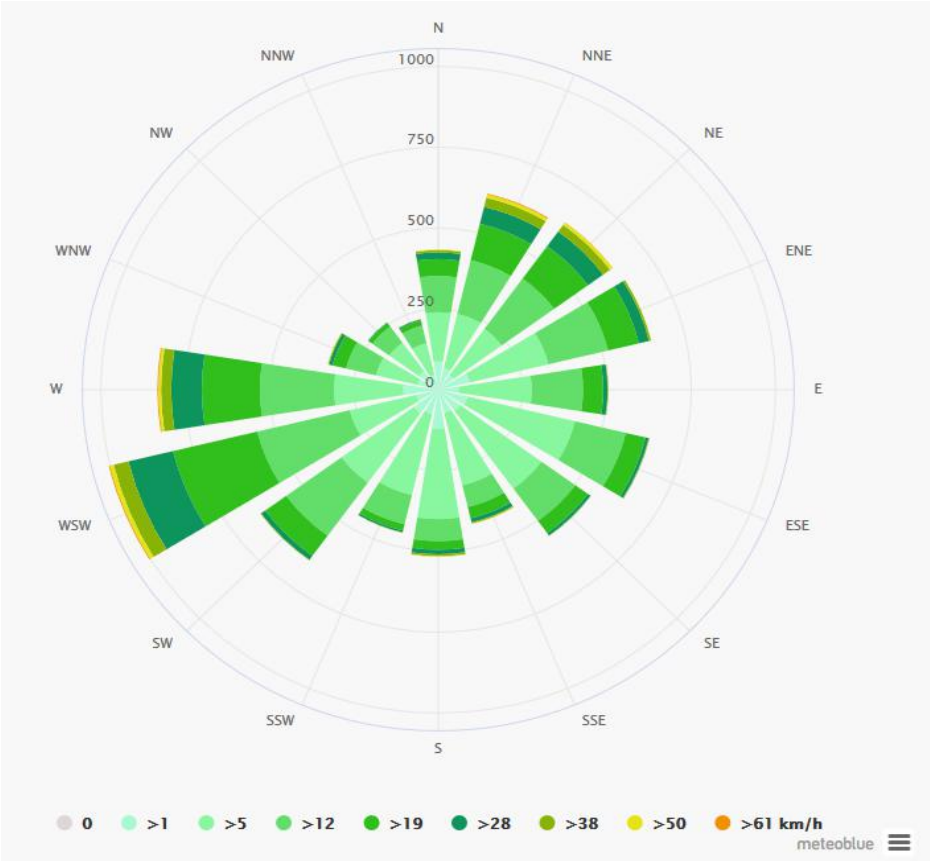


Fig. 1.8.2(6) Wind rose for the region of the village of Nisovo

The wind rose (*Fig. 1.8.2(6)*) shows the direction and the speed of predominant winds. The predominant winds in the park's region have Southwestern direction. Western and Northeastern winds have almost equal share.

1.8.2.1. Climatic zone and climatic conditions

Climatic zone

The region of the park belongs to the Northern climatic zone of the Danube plain and covers its lowest parts, where its Southern border is 30-40 km away from the Danube River.

Climatic conditions

The climate in the region is of well manifested continental nature, characterized with cold winter and hot summer. The annual sum of precipitation is average between 550-600 mm. The difference of 17 % between the winter and the summer precipitation emphasizes climate's continental character. The annual temperature amplitude is significant – average between 23 and 25^{0}C. The predominant winds in winter have Northeastern direction, and in the summer - Southwestern. Speed's maximum is in the spring and the minimum in the autumn.

Great number of days – 25 – 35 with continuous and intensive fog (often wetting) with big vertical power and very stable twenty-four-hour motion is very typical for the region of the park, particularly for the low shapes and along the Rusenski Lom river canyon for the months from November to February. Because of the streaming of colder and thicker air towards the lower places during the night, there the minimal temperatures additionally decrease, and this in turn also eases the forming of fog and frost generating from.

In the conditions of sharply manifested continental climate in the region, frost is most typical for the transitional seasons and partly for the winter months, particularly for the end of autumn – the beginning of winter and the end of winter – the beginning of spring (the first ten days of March). Despite that, frost is also registered in late spring or early autumn, when it has quite an unfavorable effect on agriculture and transport. The average date for the earliest frost is October 10th, and the latest – May 12th. The first autumn chilly weather starts in the end of October. When frost occurs in the period March 31st – May 15th inclusive (late spring) or September 20th – October 31st (early autumn), it is accepted as dangerous/particularly dangerous phenomenon.

The period of vegetation, as a rule, continues from the last spring to the first autumn frosts May - October. The period, when the temperatures in the region keep steadily above 10^{0}C is 201-209 days in the period April - October.

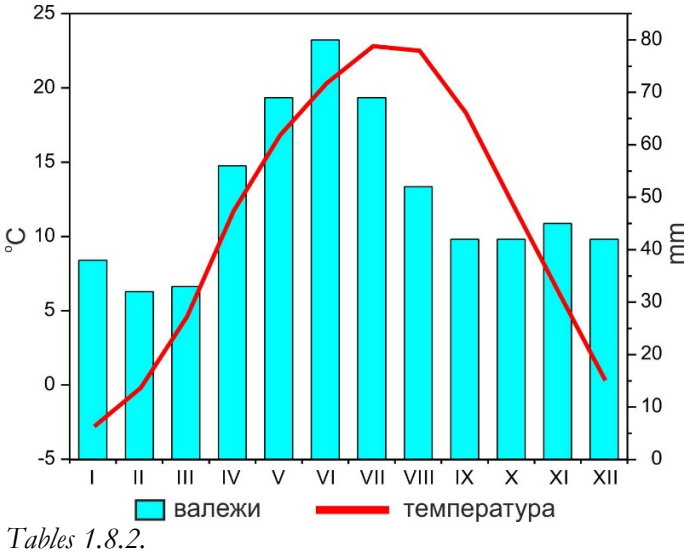


Fig. 1.8.2.(7) Climograph of the region of the park (after Obraztsov chiflik station's data).

Tables 1.8.2.

Average monthly and yearly air temperature – ^{0}C (Obraztsov chiflik station)

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Год.
-2.8	-0.2	4.6	11.7	16.8	20.3	22.8	22.5	18.3	12.2	6.2	0.3	11.1

Average monthly maximum air temperature – ^{0}C (Obraztsov chiflik station).

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Год.
0.8	3.8	9.9	17.9	23.1	26.8	29.1	29.4	25.3	18.2	10.4	3.7	16.5

Average monthly minimum air temperature – ^{0}C (Obraztsov chiflik station).

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Год.
-6.0	-3.9	0.0	5.9	10.8	14.3	16.4	16.0	12.3	7.2	2.7	-2.6	6.1

Absolute maximum air temperatures – ^{0}C (Obraztsov chiflik station).

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Год.
18.6	21.4	30.6	35.2	38.4	40.1	41.8	42.4	41.8	37.0	28.7	20.6	42.4

Table. Absolute minimum air temperatures – ^{0}C (Obraztsov chiflik station).

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Год.
-24.3	24.6	18.4	-4.2	1.5	5.6	8.6	8.3	0.5	-4.0	-13.9	-22.5	-24.6

Average duration (in number of days) of maximum non-precipitation period from January to December (Obraztsov chiflik station).

I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
8	5	8	11	9	8	10	11	13	10	5	6

1.8.2.2. Region's climate characteristics by seasons

Winter. The winter in the region has duration of 110-120 days. The coldest month is January with average temperature (T) of about -1.5^{0}C to 2.5^{0}C. Winter cold is accompanied by Northeastern wind. The number of warm days with average twenty-four-hour T above 5^{0}C, totally for the three winter months is 10-12, and the number of the days with average twenty-four-hour T below 0^{0}C is about 46-48. Winter months are characterized by alternation of days with T below zero, with or without snow cover, and warm days and snow melting. Relatively great variability of winter conditions from one year to another is also characteristic – winters with low T and a lot of snow exchange in turns for warm snowless winters. Snow cover is unstable. It forms in the beginning of December and rarely endures longer time. The last snow cover melts in the middle of March. Totally, the average number of days with snow cover is 48 days, and its average height is 16 cm. The total quantity of snowfall is 159 mm. Each day of snowfall contributes some 6 mm. The sum of winter precipitation is the smallest compared to the other seasons. The predominant winds in winter have Northeaster direction.

Spring. The spring in the region has duration of 55 days. It comes comparatively early thanks to the small altitude. Yet in the beginning of the second ten days of March T exceeds 5^0C, and in the first ten days of April exceeds 10^0C. The frequency of early and late springs is 27-28% each. Spring colds are frequent phenomenon but they stop after April 18th–20th. In spring, there are average 1-2 days with average twenty-four-hour T below 5^0C and the same number with T below 0^0C. Precipitation during astronomic spring is around 135-175 mm, and for the biological one around 73. Each day with precipitation contributes with about 7-8 mm of precipitation.

Summer. The summer continues for 148-150 days. The average date of T keeping stable above 15^0C occurs around Mat 2nd. The average July T is 22.5-23.5^{0}C, the maximum temperatures reach 36^0C, rarely 42-43^{0}C. The number of days with average twenty-four-hour T above 25^0C for the whole season is about 15-20 days. For the period June-August, 80-85% of the days have maximum T above 25^0C, and about 40-45% are with T above 30^0C. Precipitation is the biggest in the summer and are 190-250 mm, and usually falls in the first half of the summer. The average number of dry spells in the summer is 19-22 days, which makes the region dryable.

Autumn. Autumn continues 47 days. The beginning is the stable transition of the air T below 15^0C average around October 2nd, and the end of the season is its decreasing below 5^0C towards November 15th. The first autumn frosts occur yet in the end of October or the beginning of November. The precipitation sum for climatic autumn is around 115-150 mm, and for the biological is 66 mm. Each day with precipitation has average of 4-5 mm fall.
The average annual duration of sun radiation is from 450 h to 1 750 h - 1 550 kWh/m2 a year.

The main flow of total sun radiation is in the hours around noon, and more than 70% of the sun radiation flow is within the interval from 9 a.m. to 3 p.m., which is accepted as the most active regarding sun radiation. An average value of sun radiation for this period could be accepted as around 1 080 h, average resource of sun radiation – 1 437 kWh/m2.

As of the time of the present plan elaboration and after 2005, there is no ascertained thermal conditions impact on the vegetation development on the park's territory. A project in Section 4 is planned for the expected climate changes impact on vegetation – Climate Changes Monitoring, which goal is outlining measures for overcoming the climate change consequences through studies on the grounds of geo-referred color photographic images and satellite pictures, samples from permanent sample areas and transects, permanent monitoring points, through which to trace the occurred changes in the ecosystems and the species populations.

1.9 GEOLOGY AND GEOMORPHOLOGY

1.9.1. Geological structure, morphostructures and morphometrics.

1.9.1.1. Palaeogeographic evolution and main morphostructures.

Rusenski Lom NP territory belongs to the Moesian plate, which is the forts-order morphostructure, embracing the greater part of the Low Danubian plain (Zh. Ivanov, 2017). The platform's lithosphere thickness is about 30-35 km. The platform is constructed in its base of Precambrian and Palaeozoic rocks, upon which Mesozoic and Neozoic sediments are situated (limestone, marl, clay) with power of 2000 m. On top, loess cover has formed (Penin, 2007).

1.9.1.2. Seismicity and present tectonic behavior.

According to the seismotectonic map of Bulgaria, park's territory belongs to a region of stable erection that continues also today. The lithosphere's vertical movements speed is 0.5-1.0 mm/year. According to the prognostic map for the possible earthquakes, the park's territory belongs to a region with prognosticable intensity up to VIII degree according to the Medvedev–Sponheuer–Karnik scale (Geography of Bulgaria, 2004)). The closest earthquake centre is in the Vrancha Mountain in Romania (the earthquake of 1977) and the Shabla earthquake centre (last strong earthquake in 1901).

1.9.1.3. Rock foundation and mineral resources.

The nowadays rock foundation in the region of the park is presented by Lower Cretaceous limestone, accumulative Quaternary loess and alluvial-deluvial formations. The deeply jutted canyon-like river valleys reveal Lower Cretaceous (Hauterivian-Apt) limestone rocks from the Ruse lithostratigraphic unit (Filipov, 1994). In the region of the park, the Ruse unit is presented by porcelain-like, organogenic and granular limestone, which turn into each other, in horizontal direction as well as in vertical. Porcelain-like limestones are white to cream in color, strong and thick, with pre-crystallized remains of Foraminifera. Organogenic limestone does not differ in color from the porcelain-like one. They are thick layered, comparatively strong and with massive view. Weathering, they become softer and porous. Granular limestone is with limited distribution. It is chalk-white and often contains detritus. Weathering it acquires yellowish shade, becomes loose and stain fingers. It is found between the valleys of the Cherni Lom and Beli Lom rivers. Limestone in the region is highly karsted and a lot of niches and caves are observed in it. Ruse unit's thickness changes in wide range and is from 50 to 410 m.

The high interfluves and dry valleys are covered by Quaternary (Pleistocene) loess complex, formed by alternating loess horizons and buried soils (paleo soils). The loess complex thickness is from 5 to 20 m. Loess is characterized by change of facial composition from predominantly clayey to predominantly sandy. Its origin is eolian, and its probable formation source is the Danube river floods.

Alluvial-deluvial-proluvial mixed sediments, presented by gravel, sand, clay and sandy clay and others are formed in the flood terraces and the wide flat beds of river valleys.

1.9.1.4. Morphometric characteristics.

Table. Distribution of park's areas by altitude

Altitude (m)	Area (ha)	% of the park's area
25 - 50 m	84.9	2.6
50 - 100	660.5	**20.3**
100 – 150	404.9	12.4
150-200	1859.4	**57.0**
200 - 250	181.7	5.6
over 250	68.4	2.1
Totally	3259.8	100

It is seen from the adduced data that the areas with altitude of 150 to 200 m are predominant, occupying 1859,4 ha or 57 % of the total park's area. These are denudation levels placed between the canyon-like valleys and their tributaries' ravines. The belt from 50 to 100 m of altitude is second ranking in distribution or 20.3% of the park's area, which present flood terraces and surrounding heights.

Areas' exposure, as an element of relief, exercises strong impact on soils and rocks erosion processes and has important significance for agriculture. It is seen from the table that the terrains with northern and western exposure predominate. The ones with eastern and southeastern exposure are of least distribution.

Table. Park's areas terrain exposure.

Terrains' exposure	% of the park's territory
Northern	17
Northeastern	16
Northwestern	12
Eastern	7
Southern	10
Southeastern	5
Southwestern	16
Western	17

Areas slopes' vary in wide range. They are around 0^0 for the denudation flatnesses and the flood terraces and reach up to 90^0 for the canyons. Rock verticals, under the edge of which rock caves and niches formed, have inclination of up to 95^0.

Because of the sharply cut through river valleys, relief is characterized by wide range of segmenting. Horizontal segmenting is 0.4 до 1,3 km/ km^2, and the vertical is from 40 to 180 m/km^2. The topographic surface of the studied region has slight regional bias of North-Northwest, to the Wallachian Depression axis.

1.9.2. Geomorphology of relief

The Danube hilly plain is the most Northern geomorphologic region on the territory of Bulgaria. The nature of its nowadays relief, the geological and geomorphological features determine it division into three parts - Western, Middle and Eastern. Park's territory belongs to the Eastern Danube plain and characterizes with typical plateaulike-hilly terrain, intersected by the canyonlike cut river valleys.

1.9.2.1. Forms in the nowadays relief and characteristic relief-changing processes.

1.9.2.1.1. Denudation forms.

Sarmatian-Pontic denudation leveling in the Eastern Danube plan is accepted being the oldest from geomorphological point of view, which height decreases in direction from South to North. This leveling is accepted being the initial in the nowadays region's relief evolution and forming. The flat relief parts in-between the Lomovete valleys are remains of that leveling.

1.9.2.1.2. Denudation-erosion forms.

River valley network. The valley network of Rusenski Lom river and its tributaries – Beli Lom and Cherni Lom, as denudation-erosion form, is oriented in Northwestern direction towards the Danube river. The river valley network is cut into the leveled limestone surfaces and forms deep valleys.

Meanders. Because of the small stream bias (0,62 m/km), rivers form many meanders that present river bed's picturesque turns in the form of a horseshoe.

Karst forms. The wide distribution of limestone in the region is a precondition for the forming of karst geomorphological shapes. The canyon-like river valleys are the most impressive regarding the size, with a depth of 120 m, formed at the rivers cutting through the limestone. Caves and cave niches are widely spread and are more than 200 in the region of Polomie. The caves and niches are shallow, 10-30 m deep, and are formed under the edges of the rock verticals. Cairns, grooves, funnels, pot-holes and others are also spread, and karst springs are seen at the limestone cuts feet.

The karst surface is covered by loess-like materials, where suffusion processes, characteristic of loess spaces with forming steppe saucers, beams and suffusion funnels evolve. Landslipping-talus processes evolve along the steep slopes of loess and clay.

Map №5 Relief is enclosed.

1.10 HYDROLOGY AND HYDROBIOLOGY

1.10.1. Hydrology and Hydrography

Within its present limits, Rusenski Lom NP includes parts of the Rusenski Lom river valley and its tributaries Cherni, Mali and Beli Lom, among the settlements of Ivanovo, Cherven, Pisanets

and Svalenik. Initial tributary is the Beli Lom river, which stream starts from the Razgrad heights.

1.10.1.1 Water resources characteristic.

Together with it both main tributaries, Rusenski Lom river is 196.9 km long and is ranks 8th among the Bulgarian rivers. Its catchment area is 2946.9 km^2 and presents 0.4% of the Danube river catchment area. According to the catchment area, Rusenski Lom river ranks 10th among the Bulgarian catchment areas. The total water amount formed in the catchment area of the Rusenski Lom river in wet years, at outflow security of 50 % amounts 202 million m^3 annually, with capacity of 6,4 dm^3/s, at usability 76,7 % (Ignatova, 1992). The surface water flow in the park's territory varies within the range from 0,5 to 5,0 dm^3/s.km^2 (Stoychev, 1988). Nine water bodies from category river (including seven natural and two highly modified) are included within the boundaries of the Rusenski Lom river valley (Lomsko, Lomeya, Polomie). They belong to the type of small and medium karst rivers with total length of 1595.53 km and present 23.8% of the total length of water bodies; including 364.650 km natural and 236.7 km highly modified. 5 water bodies from category lakes are also differentiated, all of them highly modified. Some reservoirs situated in the river basin upper part, at the main river tributaries, also belong to the surface water bodies in the category of the lakes. The main hydrotechnical facility for water flow regulation is the reservoir of Beli Lom at the Beli Lom river.

Rusenski Lom river valley network is oriented in the direction of North-West and has fan-shaped configuration. Its rivers' average bias is from 1.7% to 13.3%, and its average stream speed is hardly 30 cm/sec.

The rivers from the Rusenski Lom river riverside belong to the moderate-continental type of effluent regime, 1st sub-type (Hristova, 2004, Penin 2007) with predominantly snow-rain feeding of waters. This type of effluent regime is characterized with long spring high water (5 of 6 months – from the middle of February – March to the end of June – the middle of July for the various hydrometric stations). The effluent maximum is in March for the greater part of the riverside. Shallowness is summer-autumn (three or four months), with minimum effluent in August or September. There is also a transitional phase observed during the winter hydrologic season (from the beginning of October).

The karst terrain with its multiple caves and rock niches contributes to a great part of precipitation water transformation into underground water effluent. Underground waters feeding along the Rusenski Lom river valley is predominantly surface, and draining – local, through springs, and flat.

The rivers that from the Polomie have very specific characteristics and are difficult to be classified. Initially, while elaborating the typology of Bulgarian water bodies of river type, Rusenski Lom was classified as peculiar case within the frame of type R7 – Big tributaries of the Danube river. Applying approach with exclusions was imposed by the fact that Rusenski Lom river and its tributaries differ significantly from the other 5 river streams this type. That's why it is impossible to elaborate general classification system for defining the state in compliance with

the Water Framework Directive, applicable for all water bodies of that type in Bulgaria. The rivers in Polomie are pre-categorized in type R8 – Small and medium Danube rivers, in the present Danube Region River Basins Management Plan 2016-2021. This type is highly heterogeneous and includes various rivers with small catchments. Even within this type, Polomie stands as a separate peculiar case, which would probably impose the elaboration of an independent classification system for defining the state in the future.

Some of the specific characteristics of the Polomie river streams are:

Double meandering with high percentage of curving. Cut into meanders of great radius are formed at first level. At the second level, small meanders are formed in the alluvial material. Small meanders are relatively dynamic forms.

Fine sediments are the river bed predominant substratum. In Relation to that, the river bed predominant profile is deep „U"-shaped. The other substratum, characteristic of Polomie, is transitions of gravel bottom and bottom with large stones. The second type of substratum is of key significance for the species variety and the hydrobionts abundance.

High turbidity. The rivers in Polomie are characterized with all year round high turbidity, which is due to unusually high concentration of suspended fine sediments. Arable land in the catchment and alluvial deposits accumulated in the river valley are sources of suspended sediments. This phenomenon is defined as natural terrigenous pollution of water in some literature sources. This term should be accepted critically, because the solid flow is mainly formed by anthropogenically released water erosion. The Rusenski Lom river catchment is transformed from territories with dominating forest plantation into territories with predominating arable land within comparatively short period. As a result intensive water erosion and volleys introduction of fine sediments in the Polomie valley is observed – process that continues today, too. High turbidity appears to be key limiting factor for the water biota.

High shading. High shadiness of the rivers in Polomie is defined by: narrow water bed (the average width is under 10 m); varied exposure to the four cardinal points; availability of wood riverside vegetation (such vegetation is not available only in part of the corrected and recently cleaned river sections outside the park territory); the availability of steep and high riverside slopes. High shading is a leading factor for maintaining the water temperature and the dissolved oxygen within optimum limits.

1.10.1.3. Hydrologic conditions review

A project in Section 4 is planned for the expected climate changes impact on the water resources – Climate Changes Monitoring, which goal is outlining measures for climate changes potential impact overcoming.

Main catchments areal distribution of surface water bodies-river type on the park's territory (Danube region) is presented in ***Annex 1.10.1.***

Map №6 of Hydrographic network and catchments in scale 1:25 000, on which the catchments of the more significant water streams are outlined, is elaborated to the Plan

1.10.2. Hydrochemistry

All surface water bodies defined by the Danube Region Basin Management Plan, on the Rusenski Lom NP territory are of type river. No standing waters classified as surface water bodies of type lake are identified. The network of water bodies and the connected water monitoring points in the Rusenski Lom river valley is comparatively dense. This opens possibility for differentiated assessments by particular water streams. The water bodies that directly regard the waters in the park assessment, are as follows:

- Beli Lom river after Dolapdere river flowing at the village of Pisanets, including the tributary Dolapdere river, with code BG1RL900R1112;
- Beli Lom river from Mali Lom river flowing at the village of Nisovo to its flowing into the Rusenski Lom river, with code BG1RL120R1113;
- Cherni Lom river from Baniski Lom river flowing at the village of Shirokovo to its flowing into the Rusenski Lom river, with code BG1RL120R1213;
- Malki Lom river from the Lomtsi dam to the flowing into the Beli Lom river at the village of Nisovo, with code BG1RL900R1212;
- The Rusenski Lom river from Cherni Lom and Beli Lom rivers flowing, to the mouth of the Danube river, with code BG1RL120R1013.

Very small part of the last surface water body (BG1RL120R1013) belongs within the borders of the park, but it is key for the complete assessment. The chemical composition of the water of Beli Lom, Cherni Lom and Mali Lom rivers is formed outside the park's borders and does not experience significant changes to the forming of the Rusenski Lom river. This is connected with the lack of significant pollutants within the park's boundaries and comparatively weak natural self-purifying ability of the reviewed river sections. The quality assessment of the Rusenski Lom river water, to a great extent, could be observed as integral assessment for the entire park's territory. The water quality in that water body is monitored at two points, one near the city of Ruse at the mouth before flowing into the Danube river and the other one near the village of Basarbovo, which is a point from the national monitoring network and alongside from the transnational Danube river monitoring network /TNMN/ with a long series of data.

Danube Region Basin Directorate's last analysis for assessing the state of the surface water bodies embraces the period 2017-2018. This analysis is based on the results of the control and operative surface water monitoring programmes. Water quality assessment by physical-chemical quality elements is elaborated in compliance with the type specific classification systems, included in Regulation № H-4/September 14th 2012 for surface water characterization (Annex

№ 6 tp Article 12, Paragraph 4). Specific pollutants assessment is made in compliance with Annex № 7 – Standards for specific pollutants quality for ecological state assessment of Regulation № H-4/September 14th 2012. Chemical state is assessed in two classes – good and not achieving good state (Annex №8/Regulation № H-4). Annex 2 to Article 1, Paragraph (4) for Regulation for environment quality standards for priority substances and some other pollutants, in operation since November 10th 2010 /amended and supplemented 97 of December 11th 2015 in operation since December 11th 2015/ is applied for priority substances assessment.

According to the indicated analysis, the assessment of the reviewed water body's quality state by physical-chemical indicators has not endured significant changes towards previous periods. The physical-chemical state of the two Beli Lom river water bodies (BG1RL900R1112 and BG1RL120R1113); Malki Lom river (BG1RL900R1212) and Rusenski Lom river (BG1RL120R1213) meets the requirements for moderate state. Only the Cherni Lom river water (BG1RL900R1212) meets the requirements for good physical-chemical state.

The park's surface water bodies' state in the recent years is relatively stable without significant changes. The reviewed water bodies characterize with high values of the following indicators: electric conductivity, Biochemical Oxygen Demand 5 /BOD/, biogenous substances concentration – nitric and phosphorous aggregates (ammonium nitrogen, nitrate nitrogen, general nitrogen, orthophosphates and general phosphorous), etc. Summarized data with basic physical-chemical indicators for the water quality in the region of Rusenski Lom NP in 2019 is included in table 1.10.2.

Table 1.10.2. Physical-chemical indicators for the water quality in the region of Rusenski Lom NP in 2019.

#NAME?		р. Русенски Лом на устие при гр. Русе		р. Русенски Лом при кв. Басарбово		р. Бели Лом при с. Писанец		р. Бели Лом след вливане на р. Малки Лом, след с. Нисово		р. Черни Лом при с. Червен	
Код на пункта		BG1RL00001MS010		BG1RL00001MS020		BG1RL00931MS080		BG1RL09291MS1030		BG1RL02111MS030	
Физикохимични показатели	мерни единици	брой измервания	средна стойност	брой измервания	средна стойност	брой измервания	средна стойност	брой измервания	средна стойност	брой измервания	средна стойност
Температура - t°C	°C	10	14,4	12	13,5	0	-	4	11,8	4	11,8
Активна реакция pH - pH	-	10	8,34	12	8,39	0	-	4	8,35	4	8,32
Електропроводимост	µS/cm	10	769,8	12	759,7	0	-	4	904,3	4	716,5
Разтворен кислород	mg/l	10	7,73	12	8,11	0	-	4	8,81	4	8,78
Наситеност на кислород	%	4	79,4	4	77,0	0	-	4	77,6	4	77,6
Неразтворени вещества	mg/l	10	209,9	12	201,6	0	-	4	61,5	4	55,8
Обща твърдост (сума от калций и магнезий)	mgeq/l	4	7,78	4	7,22	0	-	4	8,27	4	7,94
Алкалност (обща и съставна)	mmol/l	9	7,0	12	7,0	0	-	0	-	0	-
Калциево-карбонатна твърдост	mg CaCO3/l	3	377,7	9	344,7	0	-	9	357,2	3	385,3
Азот амониев - N-NH4	mg/l	10	0,549	12	0,114	0	-	4	0,085	4	0,250
Азот нитритен - N-NO2	mg/l	10	0,043	12	0,036	0	-	4	0,023	4	0,053
Азот нитратен - N-NO3	mg/l	12	6,15	12	5,97	6	6,64	4	6,18	6	6,30
Нитрати - NO3-	mg/l	3	32,4	2	33,8	6	29,4	3	29,7	3	31,1
Общ азот - N-tot	mg/l	10	7,28	12	7,44	0	-	4	8,15	4	7,81
Ортофосфати (като P) - PO4-P	mg/l	10	0,337	12	0,264	6	0,691	3	0,297	4	0,486
Общ фосфор (като P) - P-tot	mg/l	10	0,564	12	0,490	0	-	4	0,377	4	0,570
Хлориди - Cl	mg/l	10	30,0	12	29,4	0	-	4	40,5	4	28,7
Сулфати - SO4	mg/l	4	45,3	4	39,0	0	-	4	46,7	4	41,3
Желязо - разтворено - Fe	µg/l	10	<15.0	12	<15.0	0	-	4	<15.0	4	<15.0
Калций - Ca	mg/l	10	84,1	12	82,6	0	-	4	88,2	4	90,8
Магнезий - Mg	mg/l	10	39,3	12	38,2	0	-	4	47,1	4	41,4
Цианиди - свободни - CN	mg/l	1	<0.005	0	-	0	-	1	<0.005	4	<0.005
Анионактивни детергенти	mg/l	1	<0.013	0	-	0	-	4	<0.05	3	<0.013
Олово - Pb	µg/l	0	-	12	1,52	0	-	9	1,74	0	-
Мед - Cu	µg/l	10	3,77	12	2,15	0	-	4	4,00	4	2,38
Цинк - Zn	µg/l	10	25,2	12	11,2	0	-	4	31,5	3	90,4
Кадмий - Cd	µg/l	0	-	12	0,06	0	-	9	<0.05	0	-
Манган - Mn	µg/l	10	23,65	12	7,61	0	-	4	14,85	4	14,23
Никел - Ni	µg/l	0	-	12	2,04	0	-	9	2,71	0	-
Хром общ - Cr-tot	µg/l	10	1,62	12	1,88	0	-	4	2,25	4	1,78
Арсен - As	µg/l	10	2,11	12	2,03	0	-	0	-	1	1,21
Живак - Hg	µg/l	0	-	12	0,018	0	-	9	<0.01	0	-
Алуминий - Al	µg/l	10	16,0	12	<4.0	0	-	0	-	1	8,6
ХПК - COD (Cr)	mg/l	10	29,8	12	25,0	0	-	4	19,3	4	20,8
БПК5 - BOD5	mg/l	10	3,31	12	3,15	0	-	4	2,95	4	3,27
Общ органичен въглерод - TOC	mg/l	10	10,1	12	8,4	0	-	4	6,2	4	6,5
Перманганатна окисляемост - COD(Mn)	mg/l	9	8,50		8,24	0	-	0	-	0	-

Crack-karst and karst underground water in the Aptian and Barremian sediments along the Rusenski Lom river valley are mainly hydrocarbonate-calcium-magnesium to hydrocarbonate-magnesium-calcium by chemical composition, of neutral nature (pH = 7-8). Their mineralization is from 0.3-0.4 g/l to 0.9-1.0 g/l and predominantly 0.6-0.8 g/l. Their average temperature is 12-14°C, and their change amplitude is +/- 2-3°C, i.e. these are mainly fresh, cold waters. There are no particular data and observations of karst springs on the Rusenski Lom NP territory.

1.10.3. Hydrobiology

As it is mention in the previous item 1.10.2., only running water is detected within the park's boundaries, grouped in five surface water bodies of type river. These water bodies are assessed by the following biological elements for quality (BEQ):

- Macrozoobentos (MZB) – for all water bodies;
- Macrophytes (MP) – Beli Lom river after Dolapdere river flowing in at the village of Pisanets (BG1RL900R1112);
- Phytobenthos (PB) – Beli Lom river from Malki Lom river flowing in at the village of Nisovo to flowing into Rusenski Lom river (BG1RL120R1113) and Malki Lom river to its flowing in Beli Lom river at the village of Nisovo (BG1RL900R1212);
- Fish – Rusenski Lom river from Cherni Lom and Beli Lom rivers flowing in to mouth (BG1RL120R1013).

The surface waters analysis mentioned in item 1.10.2. assesses the water quality after BEQ in compliance with Ordinance № 591/July 26th 2012 of the Minister of environment and water, which establishes the hydrobiological monitoring methodologies and with Regulation № H-4/September 14th 2012 for surface water characterization (Annex № 6 to Article 12, Paragraph 4), which includes the assessment classification systems according to the particular biological elements for quality (Macrozoobentos, Macrophytes, Phytobenthos and Fish). Assessment is type specific – the class's limits between the particular states (excellent, good, moderate, bad and very bad) are considered regarding the type R8-Small and medium Danube rivers (the type of rivers in Polomie). The biotic indexes for each BEQ are made equal to unified 5-stage scale for the state.

Water bodies assessment after BEQ for the period 2016-2018 is presented in table 1.10.3.

Table 1.10.3
Assessment of surface water bodies in Rusenski Lom NP for the period 2016-2018 by particular biological elements for quality.

Код на повърхностното водно тяло	Географско описание на повърхностното водно тяло	Дължина на реките, km	Водосборна площ, km2	Оценка по отделни биологични елементи за качество (БЕК)				Обща оценка по биологичните елементи за качество
				МЗБ	МФ	ФБ	Риби	1-5,U
BG1RL120R1013	р. Русенски Лом от вливане на реките Черни Лом и Бели Лом до устие	41,304	121,970	3			3	3
BG1RL120R1113	р. Бели Лом от вливане на р. Малки Лом при Нисово до вливане в р. Русенски Лом	10,150	21,458	3		2		3
BG1RL120R1213	р. Черни Лом от вливане на р. Баниски Лом при Широково до вливане в р. Русенски Лом	42,007	157,112	3				3
BG1RL900R1112	р. Бели Лом след вливане на р. Долапдере при Писанец, вкл. приток р. Долапдере	35,184	152,779	3	3			3
BG1RL900R1212	р. Малки Лом от яз. Ломци до вливане в р. Бели Лом при Нисово	39,186	242,931	3		2		3

Легенда:	
състояние	клас
1	отлично
2	добро
3	умерено
4	лошо
5	много лошо
U	неизвестно

Up-to-date surface water bodies' ecological/potential state and chemical state assessment for the park's territory is presented in Annex 4.1.2.1 from the Danube Region River Basin Management Plan 2016-2021 from line №154 to № 168 at the following address:
http://www.bd-dunav.org/uploads/content/files/upravlenie-na-vodite/PURB-2016-2021-final/Razdel-4/Prilojenia_R4/Pril_%204121.pdf

1.11. SOILS

1.11.1. Soils distribution and characteristic.

According to the soil-geographic division of Bulgaria, the park's region belongs to the Ludogorska soil province of the Low Danube soil sub-region. Several types of soils are distributed, described in compliance with the World Food and Agriculture Organization classification (FAO). According to the assessment of fertility for the needs of agriculture in the countryside, the soils belong to bonity group I and II, class S1 and S2 (Geography of Bulgaria, 2002).

Soil variety in the region is due to complex Relation between the rock base, the hydroclimatic situation, the vegetation, the animal world and human activity. The following soils are recognized:

1. Soils in the forests and the forest fund land:
Class: Black soil
- Type: Carbonate black soil weak – according FAO (Harlic kastanozems)
- Type: Leached black soil – according FAO (Luvic)
Class: Alluvial soils (Fluvisols)
- Type: Alluvial soils (Alluvial Fluvisols)

2. Soils in agricultural land
Class: Alluvial soils (Fluvisols)
- Type: Alluvial soils (Alluvial Fluvisols)
Sub-type: Alluvial-meadow
Sub-type: Alluvial deluvial

1. Characteristic of the soils in the forests and in the forest fund land

Carbonate black soils occupy an area of 1822.1 ha (72.4% of the soils in the forest fund) and are distributed as a strip parallel to the Danube river. A characteristic of them is the carbonates precipitation in them in the form of carbonate pseudomycelium, particularly in the humus-accumulative horizon. Carbonates are contained in the entire soil profile, increasing in depth. These soils are slightly yielding, swell up if moistened, slightly shrink is dried and do not crack. They are distinguished for high perviousness. The humus contents vary from 1.5 to 4.5 %. Soil reaction is slightly alkaline to alkaline.

Leached black soils occupy an area of 685.6 ha (27.3 of the soils in the forest fund) and are formed on the distributed in the region lime stone under the influence of grass vegetation that has been covering significant areas in the Danube plain in the past. In the soil profile, the darkly colored humus-accumulative horizon (layer A) is quite thick and has power of 40-80 cm, and horizon B is lighter and slightly thickened. Horizon C contains significant quantities of limestone pieces of various sizes. The surface layer of these soils contains big quantity of clay – up to 60%.

Alluvial soils occupy an area of 9.5 ha (0.4% of the soils in the forest fund) and are formed on non-soldered gravel sandy alluvial deposits on the rivers flood terraces. They have only one thin surface horizon – darker, up to 10 cm, after which they have layers differing only in the fraction size. They are built in their base by gravel, which up along the section transfer in sandy, sandy-clay, and at some spots, clayey deposits.

Table 1.11.1(1) Area of soils in the forests and the forest fund land.

Soil type	**Area of the soil type, in ha**	**Area of the soil type in the forest fund land, in %**
Alluvial soils	9,3	0,37
Leached black soil	685,6	27,24
Carbonate black soil	1822,1	72,39
TOTALLY	**2517,0**	**100,0**

Indicators for soils assessment:

- by soil profile:

By depth, the soils are: shallow, deep and intermediate. The very deep soils have the greatest share, occupying an area of 994,9 ha (39.5% of the soil areas in the forest fund) (table 2). The medium deep soils are second in distribution in the nature park and occupy a total area of 468,9 ha (18.6 % of the soil areas in the forest fund).

Table 1.11.1(2) Distribution of the very deep soils by soil types.

Soil type	**Very deep soil, in ha**	**Area of the soil type in the forest fund land, in %**
Alluvial	9,3	100
Leached black soil	433,2	63.2
Carbonate black soil	552,4	30.32
TOTALLY deep soils	994,9	39.53

- by mechanic composition and structure:

Regarding the mechanic composition soils are clayey, sandy clayey, sandy and clayey sandy. The sandy clayey predominate, occupying the main share of the territory – 2514,7 ha (99,91% of the soil areas in the forest fund).

- by stoniness:

The non-stony soils are with total area of 979,0 ha (38.9% of the soil areas in the forest fund) and are presented in all soil types (table 2). The medium stony ones are 731,1 ha (29% of the soil areas in the forest fund), the slightly stony are 508,3 ha (20.2% of the soil areas in the forest fund), and the highly stony are 20,7 ha (0.8% of the soil areas in the forest fund).

Table 1.11.1(3) Distribution of the non-stony soils by soil types.

Soil type	Non-stony soil, in ha	Area of the soil type in the forest fund land, in %
Alluvial	9,3	100
Leached black soil	435,5	63.5
Carbonate black soil	534,2	29.3
TOTALLY non-stony soils	979,0	38.9

- by thickness and porosity:

Soils are divided into thick, tightened, crumbly and mixed. The thick ones are the most distributed soils – 1363.4 ha (54,2% of the total area of soils in the agricultural fund) and the tight ones 1105.2 ha (43.1% of the total area of soils in the agricultural fund) (table 4).

Table 1.11.1(4) Distribution of thick soils by soil types

Soil type	Thick soil, in ha	Area of the soil type in the forest fund land, в %
Alluvial	-	-
Leached black soil	406,9	59.35
Carbonate black soil	956,5	52.49
TOTALLY thick soils	1363,4	54.17

- by water features:

Soils water regime is defined by the correlation between the quantity of the entering water and the water leaving the profile, and is expressed by moisture factor (the annual sum of precipitation/annual sum of evaporation). According to their moisture, soils are dry and fresh. The dry soils predominate on the forest fund area 1374.8 ha (54.6% of the total area of soils in the agricultural fund). The leached black soil is 513.8 ha of them (75% of the leached black soil) and carbonate black soil is 861,0 ha (46.2% of the carbonate black soil). The black soils water regime is not very good because of the uneven precipitation distribution.

- by contents of humus, nitrogen, phosphorous, potassium, carbonates

The black soils humus content decreases in profile's depth, where the greatest part of it, 25-35% is in its surface layer A (0-20 cm). The general nitrogen distribution corresponds to the humus distribution. The absorbable nitrogen content is low because of long dry spells. The general phosphorous content is significant. Potassium content in the soils is significant and is connected with potassium containing minerals destruction – feldspar and hydromica, contained in the silt fraction. Potassium biological accumulation in the surface layers is present. Soils stocking with

absorbable forms of potassium are favorable. Carbonates content is high and increases from the top downwards inside the soil profile.

The alluvial soils humus content depends on the soils age and is from 1.5 to 6% in the non-arable areas and from 1-3% in the arable areas. Alluvial soils are poor and sometimes are only presented by gravel and sand.

- by soil solution pH (hydrogen ions concentration)

The black soil reaction to the soil solution is slightly alkaline – 8.2 ÷ 8.5, and in depth – to alkaline. As for the alluvial soils, pH depends on the alluvial material.

2. Characteristics of the soils in the agricultural fund

Soils in the agricultural fund are predominantly alluvial-meadow and the less distributed alluvial-deluvial. Alluvial-meadow soils form along the flood and the first above the flood terraces, upon non-soldered gravel-sandy alluvial deposits along the valleys of the Rusenski, Beli, Cherni and Mali Lom rivers. These soils are azonal and have no differentiated horizons, which are result of pedogenic processes. Their profile consists of weak humus horizon 15-40 cm, under which various in mechanic composition river deposits follow. The greater part of alluvial-meadow soils are distinguished for high fertility. Alluvial-deluvial soils are similar to alluvial-meadow but are formed at the slopes' foot at unstable water current.

Indicators for soil assessment:

- by mechanic composition

By their mechanic composition, alluvial-meadow soils are divided into sandy, heavy sandy and clayey. Pieces of them are present along the whole soil profile depth in the section of distribution.

- by water features

The moisture capacity and the water-retentive ability vary within quite broad limits depending on the alluvial materials. Despite that, their water regime is very good.

- by the contents of humus, nitrogen, phosphorous, potassium, carbonates

Humus contents in the surface horizon vary from 1 to 5% in the new soils and from 1 to 2% in the arable land. By profile depth, humus content decreases or alternates with horizons of higher and lower humus content. General nitrogen quantity varies from 0.04 to 0.30%. Humus layer is absent or has little power on periodically flooded terraces. The organic nitrogen mobilization conditions are good, as a result of which the phosphorous reserve is subject of strong drawing by the plants. Soils are poorly provided with potassium. The ones formed on the limestone rocks have high content of carbonates.

- by the soil solution pH (hydrogen ions concentration)

The non-carbonate alluvial-meadow soils reaction is slightly acid to neutral, and carbonate's one – alkaline.

1.11.2. Soil processes

According to RIEW-Ruse data, in the years after 2005 no damaged areas are detected on the territory of the park as result of erosion, agricultural activity, pollution in the Park and the bordering pieces of land, waste water and radiation.

Natural and anthropogenic factors provoking soil degradation processes are present in the areas of soils from the forest fund and the agricultural land. These processes reduce the usability of soils and are connected with: the wind and water soil erosion, acidification, pollution, soil tightening, etc.

Soils in forest areas are slightly affected by erosion processes. Aproximately 75% are unerosed terrains. Area erosion is of first degree 22,1%. The land is slightly affected by area erosion second (0,9%), second-third degree (0,45%) and third degree (1,62 %). Area erosion of fourth degree is observed in 0,8 ha only in forests in reconstruction.

Alluvial-meadow and alluvial-deluvial soils in agricultural areas are from I to III category. They are not affected by erosion as far as they are situated on the flattest places immediately by the river bed.

No measures for fight against erosion are planned within the boundaries of the nature park and no antierosion facilities have been built.

№ 7 „Soils“ is elaborated to the present plan.

BIOLOGICAL CHARACTERISTIC

1.12 ECOSYSTEMS AND BIOTOPES (NATURAL HABITATS)

1.12.1. EUNIS (European Union Nature Information System) **Natural Habitats Classification** and their statute in compliance with the Red Data Book of the Republic of Bulgaria item 3. EUNIS Natural Habitats Classification

Natural habitats classification follows EUNIS classification hierarchic scheme. A short description of the EUNIS habitats is given and the correlation with the natural habitats types

from the BDA Appendix 1 and with the vegetative coenoses according to floristic approach classification is reflected.

C1. Surface standing waters

C1.3. Permanent eutrophic lakes, ponds and pools

Characteristic: All natural and semi-natural reservoirs and fish ponds with eutrophicated water belong to this type of ecosystems. As for the Rusenski Lom NP, the fish ponds by the village of Svalenik and village of Pisanets belong to this category. The coenoses of attached and freely floating water vegetation from the listed below sub-categories have high conservation value and are included in Annex 1 of BDA within the framework of habitat 3150. This habitat is high degree of rarity and is of high extent of vulnerability. Threats - reservoirs overgrowing with macrophytes, waters pollution and drying up.

C1.32. Freely floating vegetation of eutrophic water bodies

C1.33. Rooted submerged vegetation of eutrophic water bodies

C2. Surface running waters

C2.1. Springs, spring brooks and geysers

C2.12. Hard water springs

Characteristic: Rich of calcium springs, and with active travertine forming in the karst regions. The coenoses formed by these springs are characterized by high moss domination. They usually occupy small areas and have linear or point structure. The following sub-category is found in Rusenski Lom NP:

C2.121. **Petrifying springs with tufa or travertine formations**

These spring coenoses belong to priority natural habitat 7220* Petrifying springs with tufa fomation (*Cratoneurion*), included in Annex 1 of BDA.

C2.3. Permanent non-tidal, smooth-flowing watercourses

Characteristic: Permanent slow water streams, non-overflowing and with no expressed seasonal dynamics. The usual river bed is sandy to clayey. This is the biotope that embraces the water current of Rusenski Lom river and its tributaries, which, within the Rusenski Lom NP envelopment are Beli, Cherni and Mali Lom. This ecosystem appears to be important environment-forming factor. The availability of permanent water stream is an important condition for the riverside gallery forests forming belonging to the priority for conservation habitat of 91E0 Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Pandion, Alnion incanae, Salicion albae*). Vegetation from the union *Magnopotamion* also forms within the range of slow flowing waters in close proximity to the river bank.

C3. Littoral zone of inland surface waterbodies

C3.2. Water belts of reed and high helophytes that differ from the sugar-cane.

All coenoses of macrophytes include in this biotope, where they most often occupy the artificial water basins and fish ponds peripheral parts. These are overgrowing with reed (*Phragmites australis*), rush (*Scirpus lacustris* and *Scirpus tabernaemontani*) and various types of bulrush (*Typha* spp.). they very quickly settle down at hydroregime disturbance, and in

case of drying up they could take over the whole water body basin. These coenoses are found along the periphery of the fish-pond by the village of Svalenik.

C3.21. Reed (*Phragmites australis*) massifs

C3.22. Rush (*Scirpus lacustris*) massifs

C3.23. Bulrush (*Typha*) massifs

E1. Dry grasslands

E1.1. Inland sand and rock with open vegetation

Characteristic: Open thermophilous vegetation on sand and rock out-crops (vegetation on vertical rock walls is not included here). This biotope includes open dry grass coenoses on limestone inland sandy out-crops and vegetation mainly of annual and succulent plants, formed on stony surfaces (chippings) on rock edges, borders and grounds, often subject to erosion. In Rusenski Lom NP, this biotope includes open, xerophilic pioneer grass coenoses on shallow, stony limestone soils with predominance of spring annuals and succulents (*Sedum* spp.) from the union *Alysso alyssoidis-Sedion albi*. These coenoses correspond to the included in BDA Annex 1 natural habitat 6110* Rupiculous calcareous or basophilic grasslands of the *Alysso-Sedion albi*. It has mosaic structure and is observed on small sections with shallow soils or on chippings and out-crops of the limestone rock base among the steppe grass and frutescent coenoses (habitats 40A0, 6210 and 6250). It also forms on the top flatted part of rock verticals, where there is no soil cover. The following EUNIS sub-category is found in Rusenski Lom NP:

E1.11. Euro-Siberian rock debris swards (stony surfaces)

E1.2. Perennial calcareous grassland and basic steppes

Characteristic: Most often dry grass coenoses on calcareous soils belong to the union *Festucion valesiacae*. They present open (on rendzina) to close (on shallow to medium powerful black soils) grass coenoses, with high floristic richness, dominated by tuft cereal grass: yellow bluestem (*Bothriochloa ischaemum*), tussock (*Chrysopogon gryllus*), Volga fescue (*Festuca valesiaca*) and Stipa (*Stipa* spp.). These coenoses are transitional by their nature between meadow and pasture vegetation. They are of significance for the conservation of some medicinal plants populations - *Galium verum*, *Achillea* spp., *Teucrium* spp., etc. The following sub-categories are presented in Rusenski Lom NP:

E1.22. Arid subcontinental steppic grassland

This biotope's coenoses belong to 2 natural habitats from BDA Annex 1: the widely spread 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates (*Festuco-Brometalia*) (important orchid sites*) and the more limitedly spread, predominantly in the Rusenski Lom NP southern parts, 6240* Sub-Pannonic steppic grasslands, the latter is the so called petrophyte steppe and is conservation priority.

E1.2C. Pannonic loess steppic grasslands

This biotope's coenoses are spread in the northern part of Rusenski Lom NP, between the villages Ivanovo and Koshov, and are formed on medium powerful black soils and loess surfaces. They correspond to natural habitat 6250* Pannonic loess steppic grasslands from BDA Annex 1.

E2. Mesic grasslands

E2.2. Low and medium altitude hay meadows

Characteristic: Mesic hay meadows at low altitude, formed on fertile, powerful and well drained alluvial-meadow soils and vertisol by the rivers, in moist ravines and hollow fields. They are dominated by cereals like *Alopecurus pratensis*, *Festuca pratensis*, *Arrhenatherum elatius*, and are of rich variegation. Lowlands hay meadows in Rusenski Lom NP have primary origin and occupy narrow strip on the flatted river terraces. The following sub-category is presented on the Park's territory:

E2.25. Continental meadows

These meadow coenoses belong to habitat 6510 Lowland hay meadows, included in BDA Annex 1.

F3. Temperate and mediterranean-montane scrub

F3.2. Submediterranean deciduous thickets and brushes

F3.24. Subcontinental and continental deciduous thickets

F3.241. Central European subcontinental thickets

Characteristic: Deciduous shrubby coenoses from the union of *Ostryo-Carpinion*, distributed on shallow soils in proximity of rock verticals' edges or in the upper parts of dry stony slopes. They are characterized by more or less open structure and high participation of submediterranean and pontic floral elements. They include the clean shrub formations of Oriental hornbeam or Jerusalem thorn as well as the ones mixed with Mahaleb cherry, Manna ash, Smoke tree, Lilac, etc. Coenoses of low shrubs also belong to that biotope, including *Amygdalus nana*, *Rosa spinosissima*, *Prunus fruticosa* and *Rosa gallica*. The following two sub-categories are found in Rusenski Lom NP:

F3.2412. Subcontinental peri-Pannonic scrub

Coenoses of small shrubs, dominated by *Amygdalus nana*, *Rosa spinosissima* and *Prunus fruticosa*. They belong to natural habitat 40A0* Subcontinental peri-Pannonic scrub, included in BDA Annex 1. It is very rarely seen on the territory of Rusenski Lom NP and has spotted structure, because of which has been chose for one of the priorities for conservation.

F3.2431. Moesian oriental hornbeam thickets

This biotope is widely spread in Rusenski Lom NP and includes clean shrub formations of Oriental hornbeam or mixed with Mahaleb cherry, Manna ash, Smoke tree, Lilac, etc. Clean strips of lilac that belong to the sub-category F3.2432 Moesian lilac thickets, which can be reviewed as mosaic among F3.2431 form on small patches hard to be differentiated in mapable polygons, in proximity to the rock edge.

FB. Shrub plantations

FB.4. Vineyards

Characteristic: Artificial habitat. Most often, vineyards are close to settlements, some of them are desolated, for example the ones to the North of the village of Cherven.

G1. Broadleaved deciduous woodland

G1.1. Riparian and gallery woodland with dominant alder, birch, poplar or willow

Characteristic: Riverside gallery forests in the lowlands and mountains, forming narrow and very often broken strip along the river beds and along the river terraces. They unfold on rich alluvial soils, periodically flooded with the seasonal river water dynamics. Riparian coenoses of the union *Salicion albae* are of high conservation value and are included as priority for conservation habitat in Annex 1 of the BDA within the frame of habitat 91E0* Alluvial forests with *Alnus glutinosa* и *Fraxinus excelsior* (*Alno-Pandion, Alnion incanae, Salicion albae*). It is of high rank of rarity and high rank of vulnerability. It is limitedly spread and forms narrow strip between the river bed and the river terrace. Its structures are preserved best in the valley of the Beli Lom river, between the villages of Pisanets and Nisovo and in the valley of Mali Lom river, between the villages of Nisovo and Svalenik. Anthropogenic pressure and amorphous invasion appear to be main threats for this biotope. River valleys' forests in Rusenski Lom NP belong to the following sub-categories:

G1.11. Riverine willow woodland

G1.111. Middle European white willow forests

G1.1112. Eastern European poplar-willow forests

G1.7. Thermophilous deciduous forests

Characteristic: Broad-leaved forests in the submediterranean climate zone and in the western Eurasian steppe zone, often dominated by thermophilous species *Quercus* of other thermophilic wood species like *Carpinus orientalis* and *Ostrya carpinifolia*. Sometimes these forests have variated species composition without clearly expressed dominants. In Rusenski Lom NP, forests with participation of *Carpinus orientalis*, *Quercus* spp., *Tilia tomentosa*, *Acer campestre*, *Ulmus glabra* form in the bottom part of valley slopes, where they set up a smooth transition between the riparian forests and the oak forests in the slopes' upper parts. Some of the broad-leaved forests in Rusenski Lom NP are put in that category because of their unclearly expressed dominants.

G1.73. Eastern *Quercus pubescens* woods

G1.737. Eastern sub-Mediterranean white oak woods

G1.7372. Moesian white oak woods

Characteristic: Light, thermophilic mixed oak forests with white oak (*Quercus pubescens*) domination, mainly on limestone heights, where they occupy the driest and warmest spots on slopes with predominantly southern or western exposure. Soils are arid, shallow, skeletal and with various degree of erosion. These forests are fragmented and often have shrubby appearance because of the continental circumstances they grow in, the poor soils and the anthropogenic impact. Oriental hornbeam appears being co-dominant in them the places with shallower and stony soils. Fragments of these forests in Rusenski Lom NP are preserved

between the villages Ivanovo and Koshov, where sometimes they form complexes with the Subcontinental peri-Pannonic scrub (40A0). This biotope belongs to natural habitat 91H0* Pannonian woods with *Quercus pubescens*, included in BDA Annex 1.

G1.76. Balkan-Anatolian thermophilous oak forests

Characteristic: Xerophilous to meso-xerophilous mixed oak forests, dominated by Turkey oak (*Quercus cerris*), Hungarian oak (*Quercus frainetto*), Sessile oak (*Quercus petraea*) and with the participation of Common (*Quercus pedunculiflora*) and White (*Quercus pubescens*) oak in the subcontinental central and eastern parts of the Balkan peninsula. These forests for the oak belt to 800 m in the whole country, the regions with continental and transitional-continental climate. They belong to natural habitat 91M0 Pannonian-Balkanic turkey oak-sessile oak forests from BDA Annex 1. The following subcategory is presented on the Rusenski Lom NP territory:

G1.768. Moesio-Danubian thermophilous oak forests

In Rusenski Lom NP, this biotope occupies the middle and the upper part of slopes with southern, western and eastern exposure. These oak forests grow on deep to medium strong black soils, and the Oriental hornbeam settles on the spots with shallower soil.

G1.7A. Steppe oak woods

Characteristic: Xerothermic oak forests evolving in the conditions of typical continental climate, in the forest-steppe zone of the Pannonian and the Ponto-Sarmatian region. These forests in our country are dominated by *Quercus cerris* in the Danube plain and Ludogorie, and by *Quercus pedunculiflora* in the region of the Dobrudzha plateau. They are usually mono-dominant and are situated on ridges, neighboring arable land or on slant slopes with loess hills sunny exposure to around 300 m of altitude. Because of the easy accessibility, the steppe oak forests have been subject of strong anthropogenic influence – fellings, burning down, livestock pasture. The following subcategory is presented in Rusenski Lom NP:

G1.7A1. Euro-Siberian steppe *Quercus* woods.

This biotope belongs to natural habitat 91I0* Euro-Siberian steppic woods with *Quercus* spp., included in BDA Annex 1. Steppic oak woods in Rusenski Lom NP are seen mainly along the left valley slope of the Mali Lom river, where the most compact and preserved areas are situated to the North of the village of Svalenik.

G1.7C. Mixed thermophilous woodland

Characteristic: The coenoses of the union *Aceri tatarici-Quercion* are of high conservation value and are included in the BDA Annex 1 within the frame of habitat 91Z0. All clean and mixed forests of Silver linden that probably belong to the described associations *Tilio tomentosae-Carpinetum betuli* Donita 1970 (from Romania) and *Staphyleo-Tilietum tomentosae* Tzonev 2003 (from Bulgaria), come into this code. Beside the Silver linden, the composition includes also *Quercus*

frainetto, *Acer campestre*, *A. tataricum*, *Carpinus betulus*, and in the wettest and most shady parts, *Staphylea pinnata*, *Corylus avellana* and others, too. The biotope is important for the conservation of the populations of number of medicinal and forest-fruit species.

The Oriental hornbeam in Rusenski Lom NP belongs to the following subcategory:

G1.7C2. *Carpinus orientalis* woods

G1.7C22. Helleno-Balkanic oriental hornbeam woods

Linden forests in Rusenski Lom NP belong to the following subcategory:

G1.7C4. Thermophilous lime woods

G1.7C41. Silver lime woods

G1.A. Meso- and eutrophic *Quercus*, *Carpinus*, *Fraxinus*, *Acer*, *Tilia*, *Ulmus* and related woodland

G1.A1. *Quercus-Fraxinus-Carpinus betulus* woodland on eutrophic and mesotrophic soils

G1.A1C. Southeastern European *Quercus-Carpinus betulus* forests

G1.A1C3. Moesian oak-hornbeam forests

Characteristic: Mesophilic mixed forests, dominated by the Common hornbeam (*Carpinus betulus*) and the Sessile oak (*Quercus dalechampii*) on fresh, shallow soils on limestone base. They are included in BDA Annex 1 within the frame of habitat 91G0* Pannonian woods with *Quercus petrea* and *Carpinus betulus*. Beside the dominating hornbeam and sessile oak, also single trees of Turkey oak, Hungarian oak, Elm, Linden, Maple are seen. These forests in Rusenski Lom NP are formed in the bottom part of shady moist slopes and in ravines. They are seen on small spots and very often form complex with the oak and linden habitats.

G1.A4. Ravine and slope woodland

Characteristic: Mixed secondary forests, evolving in the lowlands of precipitated soils and screes and steep slopes, most often limestone and more rarely silicate, at bias of more than 20 degrees. This natural habitat is with interzonal disposition in the beech belt and more rarely in the oak belt. The species composition is mobile and is combination of wood species of various predominance. These forests are secondary and their composition includes *Tilia tomentosa*, *Tilia platyphyllos*, *Ulmus glabra*, *Acer pseudoplatanus*, *Fraxinus excelsior*, *Carpinus betulus* and belong to the union *Tilio–Acerion*. A sub-type of Xerothermophilic forests is presented in Lomovete, typical for dry and warmer screes, dominated mainly by linden. They are included in BDA Annex 1 within the frame of habitat 9180* *Tilio-Acerion* forests of slopes, screes and ravines.

G1.C. Highly artificial broadleaved deciduous forestry plantations. The cultures of Honey locust on the park's territory also belong here.

G1.C1. Poplar (*Populus*) plantations

Characteristic: Poplar cultures occupy small area in Rusenski Lom NP. They occupy some wider river terraces situated on the spot of destroyed gallery forests of the habitat 91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Pandion, Alnion incanae, Salicion albae*). The places occupied by poplar cultures are potential habitats for the riparian poplar-willow forests restoration.

G1.C3. False acacia (*Robinia*) plantations

Characteristic: Mono-dominant cultures of Black locust (*Robinia pseudoacacia*), occupying big areas in Rusenski Lom NP. The spots occupied by acacia cultures are potential habitats for restoring the typical for the region oak forests.

G1.D. Fruit and nut tree orchards

G1.D2. Walnut (*Juglans*) groves

G3. Coniferous woodland

G3.F. Highly artificial coniferous plantations

G3.F1. Native conifer plantations

G3.F12. Native pine (*Pinus*) plantations

H1. Terrestrial underground caves, cave systems, passages and water bodies

H1.2. Cave interiors

H1.22. Ground caves, habitat of subtroglophile vertebrates (bats)

H1.221. Continental ground caves, habitat of subtroglophile vertebrates (bats)

Characteristic: Caves of the main Eurasian land massifs, of substantial significance for part of the vertebrates' subtroglophile life cycle.

H3. Inland cliffs, rock pavements and outcrops

H3.2. Basic and ultra-basic inland cliffs

H3.2A. Illyrio-Helleno-Balkanic *Potentilla* cliffs

H3.2A1. Helleno-Balkanic calcicolous chasmophyte communities

H3.2A13. Balkan Range calcicolous chasmophyte communities

Characteristic: Vegetation on vertical limestone rocks in the foothills and the mountains, characterized by a great local variety and by participation of endemic species. This biotope belongs to natural habitat 8210 Calcareous rocky slopes with chasmophytic vegetation, included in BDA Annex 1. It is uniformly observed on the whole Rusenski Lom NP territory, independently or forms complex with the habitats 40A0 and 6110. The canyon nature of the landscape in the Lomovete valley is precondition for this biotope to occupy big area and to play leading aesthetic role.

H5. Miscellaneous inland habitats with very sparse or no vegetation

H5.6. Solid rock surfaces, rock mixture, loose material depositions, soils, occupied by lichen and moss or colonized by specialized, comparatively rare grass or shrub coenoses (Recent volcanic features)

H5.61. Unsurfaced pathways

I1. Arable land and market gardens

I1.1. Intensive unmixed crops
I1.2. Mixed crops of market gardens and horticulture
I1.3. Arable land with unmixed crops grown by low-intensity agricultural methods

J1. Buildings of cities, towns and villages

J1.2. Residential buildings of villages and urban peripheries
J1.3. Urban and suburban public buildings

J2. Low density buildings

J2.1. Scattered residential buildings
J2.3. Rural industrial and commercial sites still in active use
J2.4. Agricultural constructions

J4. Transport networks and other constructed hard-surfaced areas

J4.2. Road networks

J5. Highly artificial man-made waters and associated structures

J5.3. Highly artificial non-saline standing waters

Annex № 1.12.1(1) *List of EUNIS Natural habitats in Rusenski Lom NP and their statute according to Red Data Book of Republic of Bulgaria item 3*

Annex № 1.12.1.(2) *List of Natural habitats for monitoring with the corresponding monitoring sites coordinates*

Map № 15 EUNIS natural habitats map is elaborated to the present plan

1.12.2. Natural habitats type in accordance with BDA Annex 1.

17 types of natural habitats after BDA Annex 1 are defined for the Rusenski Lom NP territory, 10 of which are priority for conservation. The priority habitats according to the Habitats Directive 92/43/EEC are marked with *. A short characteristic of the natural habitats type from BDA Annex 1 is given, their distribution in Bulgaria and on the Rusenski Lom NP territory, and the correlation with the EUNIS Classification hierarchy and with the vegetation coenoses according to the floristic approach classification is reflected.

3150 Natural eutrophic lakes with vegetation of the type *Magnopotamion* or *Hydroharition*
EUNIS classification:

C Inland surface waters
C1 Surface standing waters
C1.3 Permanent eutrophic lakes, ponds and pools
C1.32 Free-floating vegetation of eutrophic waterbodies
C1.33 Rooted submerged vegetation of eutrophic waterbodies

General characteristic:
Freshwater riparian lakes and firths mainly with turbid, organic-rich waters, distributed from the sea-level to about 200 m altitude. This habitat includes natural lakes as well as reservoirs of anthropogenic origin, for example abandoned flooded balusters, old beds, fish pond. Variety of hydrophyte coenoses are observed in them.

Distribution in Bulgaria:
Around the whole of Bulgaria, in the flat country, mainly in the Danube plain, the Thracian lowlands and the Black sea coast.

Distribution in Rusenski Lom NP:
The habitats of hydrophyte coenoses from the unions of *Hydrocharition*, *Nymphaeion* and *Magnopotamion* are distributed only in the artificial reservoirs in Rusenski Lom NP, such as the fish ponds to the north of the village of Svalenik and the fish ponds to the west of the village of Pisanets. This habitat is of secondary origin and is formed mainly in basins with poor exploitation or in the abandoned fish ponds.
Outside the Park, habitat 3150 has formed in part of the fish ponds by the village of Basarbovo and the town of Vyatovo.

Characteristic species are:
the coenoses of plants freely floating on the surface (union *Hydrocharition*) - *Lemna* spp., *Ceratophyllum demersum*;
coenoses of attached to the bottom plants with floating on the surface leaves (union *Nymphaeion*) – *Persicaria amphibia*, *Potamogeton crispus*, *Potamogeton natans*;
coenoses of completely submerged plants (union *Magnopotamion*) - *Myriophyllum spicatum*, *M. verticillatum*, *Elodea canadensis*.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
04C1 Natural and semi-natural mesotrophic to eutrophic lakes and swamps with macrophytic vegetation (C1.32 Free-floating vegetation of eutrophic; C1.33 Rooted submerged vegetation of eutrophic waterbodies waterbodies).
Category: *Threatened*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Unfavorable-bad

40A0* Subcontinental peri-Pannonic scrub
EUNIS classification:
F Heathland, scrub and tundra
F3 Temperate and mediterranean-montane scrub
F3.2 Submediterranean deciduous thickets and brushes

F3.24 Subcontinental and continental deciduous thickets
F3.241 Central European subcontinental thickets
F3.2412 Subcontinental peri-Pannonic scrub

General characteristic:
Steppe shrub coenoses with low deciduous bushes, in regions with continental and submediterranean climate, on limestone terrains, on shallow to medium powerful humus-carbonate soils belong to the habitat. They have mosaic structure, and most often they evolve in complex with grass coenoses of steppe type (6210, 6250), but can also form on spots with uncovered basic rock, together with typical chasmophytic (rock) species.

Distribution in Bulgaria:
Northeastern Bulgaria, Northern Black sea coast, Southwestern Bulgaria (Southern Vitosha mountain, Lozenska planina mountain, Golo Bardo, Chepan planina mountain, Zemenska planina mountain, Konyavska planina mountain. etc.) and single deposits in Eastern Stara planina mountain and the Tundzha hilly plain.

Distribution in Rusenski Lom NP:
The habitat is with limited, often spotted distribution and is presented in the Lomovete valley Northern parts, between the villages of Ivanovo and Koshov, along the left valley slope of Cherni Lom, near the Smesite countryside. The coenoses with domination of *Amygdalus nana* occupy narrow strip in proximity to the rock edge or form spots among habitat Sub-Pannonic steppic grasslands (6240). Micro-groups with domination of *Prunus fruticosa* are found to the West of the village of Svalenik, along the way to the village of Nisovo.

Characteristic species:
Amygdalus nana, *Prunus fruticosa*, *Rosa spinosissima*, *Rosa gallica*, *Syringa vulgaris*, *Cotoneaster integerrimus*, *Adonis vernalis*, *Anemone sylvestris*, *Geranium sanguineum*, *Teucrium chamaedrys*, *T. polium*, *Inula ensifolia*, *Phlomis tuberosa*, *Jurinea mollis*, *Salvia austriaca*, etc.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
18F3 Subcontinental steppe shrub (F3.2412 Subcontinental peri-Pannonic scrub).
Category: *Threatened*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Unfavorable-unsatisfying

6110* Rupicolous calcareous or basofilic grassland of the *Alysso-Sedion albi*
EUNIS classification:
E Grasslands and lands dominated by forbs, mosses or lichens
E1 Dry grasslands
E1.1 Inland sand and rock with open vegetation
E1.11 Euro-Siberian rock debris swards

General characteristic:

Open, xerophilic pioneer grass coenoses on shallow linmestone or alkaline soils with domination of spring annual (therophytes) and succulent (*Sedum* spp.) plants of the union *Alysso alyssoidis-Sedion albi* and with characteristic moisaics of lichen and moss (in early spring). They form not big spots in karst regions in the low (up to 700-1000 m altitude) continental parts of the country.

Distribution in Bulgaria:
The low parts of entire Bulgaria – the foothill of the Balkan mountain, the Ludogorie dry valleys, the Danube plain canyons, the low mountains in Western Bulgaria (Sofia region, Pernik region and Kyustendil region).

Distribution in Rusenski Lom NP:
The habitat is distributed on the whole territory of Lomovete, where it occupies bigger areas in the valleys of Cherni and Ruse ski Lom, where open spaces predominate. It has mosaic structure and is observed on small spots with shallow soils or out-crop of the limestone rock base among the steppic grass and shrub coenoses (habitats 40A0, 6210 and 6250). It also forms on the top flatted part of the rock verticals, where there is lack of soil cover, in complex with the chasmophytic (rock) vegetation of habitat 8210. Regarding its conservation value, 6110 is important for preserving the only population of the protected species *Polygala sibirica* (Siberian Polygala, situated on the left valley slope of Cherni Lom, to the North of the village of Koshov. Another important for preservation species in habitat 6110 is *Genista tetragona* (Chetiriraba zhaltuga), distributed on the rock verticals flatted parts, on both slopes of Cherni Lom, to the North of the village of Cherven.

Characteristic species:
Festuca valesiaca, *Poa bulbosa*, *Sedum hispanicum*, *Alyssum alyssoides*, *Paronychia cephalotes*, *Cerastium* spp., *Minuartia glomerata*, *M. setacea*, *Saxifraga tridactylites*, *Achillea clypeolata*, *Teucrium montanum*, *Convolvulus cantabrica*, *Asplenium trichomanes, A. ruta-muraria*, lichen, moss, etc.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
01E1 Pioneer thermophilic herbaceous communities in calcareous rocky end stony places (E1.11 Euro-Siberian rock debris swards).
Category: *Potentially threatened*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Unfavorable-unsatisfying

6210 Semi-natural dry grasslands and scrublands facies on calcareous substrates (*Festuco-Brometalia*) (important orchid sites*)
EUNIS classification:
E Grasslands and lands dominated by forbs, mosses or lichens
E1 Dry grasslands
E1.2 Perennial calcareous grassland and basic steppes

E1.22 Arid subcontinental steppic grassland

General characteristic:
Dry to moderate moist grass coenoses, dominated by tuft-like cereal grass: sadina (*Chrysopogon gryllus*), Yellow bluestem (*Bothriochloa ischaemum*), Volga fescue (*Festuca valesiaca*), etc. They form complexes with the petrophyte steppes on shallow, degraded humus-carbonate soils or sandy clayey screes on slopes with southern exposure. These grass coenoses, by their nature, occupy transitional place between meadow and pasture vegetation. They form pasture territories on the hilly terrains. The habitat is observed in the wood-steppe zone and often has secondary nature. Light shrub coenoses on stony terrains with the participation of *Fraxinus ornus*, *Paliurus spina-christi*, *Carpinus orientalis* that appear important orchid habitats also belong to 6210.

Distribution in Bulgaria:
All over Bulgaria to about 1000 m altitude.

Distribution in Rusenski Lom NP:
Habitat 6210 is observed independently or forms complexes with 6110 and 6250. It is distributed around the entire Lomovete valley, where the bigger part is concentrated in the Cherni Lom river valley, where open non-forest territories predominate. In the Lomovete northern parts the habitat appears to be transition from loess steppes to forest and rock coenoses. In the southern parts, 6210 embraces the zone between the forest coenoses of Oriental hornbeam and Turkey oak, and the petrophyte steppes habitat (6240).

Characteristic species:
Festuca valesiaca, *Chrysopogon gryllus*, *Stipa* spp., *Koeleria macrantha, Teucrium chamaedrys*, *Filipendula vulgaris*, *Galium verum*, *Sanguisorba minor*, *Coronilla varia*, *Dorycnium herbaceum*, *Medicago* spp., *Eryngium campestre*, *Origanum vulgare*, *Orchis purpurea*, *Orchis morio*, *Himantoglossum jancae*, etc.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
11E1 Xerothermic meadows and pastures of sadina (*Chrysopogon gryllus*), Yellow bluestem (*Bothriochloa ischaemum*) and Volga fescue (*Festuca valesiaca*) (E1.22 Arid subcontinental steppic grassland (*Festucion valesiacae*)).
Category: *Potentially threatened*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Unfavorable-unsatisfying

6240* Sub-Pannonic steppic grasslands
EUNIS classification:
E Grasslands and lands dominated by forbs, mosses or lichens
E1 Dry grasslands
E1.2 Perennial calcareous grassland and basic steppes
E1.22 Arid subcontinental steppic grassland

General characteristic:

Varied, petrophyte, calcareous coenoses, syntaxonomically belonging to the unions *Festucion valesiacae* and *Saturejon montanae*. They most often present opened arid grass coenoses of steppe type on the stony, often erosed rock slopes with bias 20-40º, also known as petrophyte steppes. They evolve on shallow limestone soils and on spots with out-crop of limestone and marl but where there is no vertical walls with chasmophytic vegetation. They characterize with great species variety and with comparatively low projective coverage (between 20 and 70%) and are dominated by tuft-like cereals, semi-shrubs and ephemeroids, as well as chasmophytes participation. Typical steppe species as well as submediterranean and endemic species participate in the composition of that habitat. It is observed in the regions with continental climate to about 1000 m altitude.

Distribution in Bulgaria:
Northern Bulgaria (the foothill of the Balkan mountain and in the canyon-like valleys of the Danube plain rivers) and more limitedly in Western Bulgaria.

Distribution in Rusenski Lom NP:
The habitat has limited distribution mainly in the most southern part of Lomovete, where it is observed independently or forms complexes with habitats 6110 and 6210. It embraces the steep right valley slope of Mali Lom river in the region of the village of Svalenik. In the valley of Cherni Lom, the habitat is distributed to the North of the village of Cherven and is important for the preservation of the conservationally significant species Chetiriraba zhaltuga (*Genista tetragona*). The latter is a rare steppe species, included in the Berne Convention, found in Moldova and Ukraine and recently reported as new for Bulgaria.

Characteristic species:
Festuca valesiaca, *Bothriochloa ischaemum*, *Stipa capillata*, *Melica ciliata*, *Carex halleriana*, *Iris pumila*, *Astragalus vesicarius*, *Satureja coerulea*, *Scutellaria orientalis*, *Onosma taurica*, *Linum austriacum*, *L. tauricum*, *L. tenuifolium*, *Achillea clypeolata*, *Cephalaria uralensis*, *Campanula sibirica*, *Gypsophila glomerata*, *Rhodax canus*, etc.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:

04E1 Sub-continental petrophytic steppes (E1.22 Arid subcontinental steppic grassland (*Festucion valesiacae*)).
Category: *Vulnerable*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Favorable

6250* Pannonic loess steppic grasslands
EUNIS classification:
E Grasslands and lands dominated by forbs, mosses or lichens
E1 Dry grasslands
E1.2 Perennial calcareous grassland and basic steppes

E1.2C Pannonic loess steppic grasslands

General characteristic:
Steppe and pasture coenoses in the loess zone of distribution, dominated by tuft-like cereal plants. Loess surface reaches up to 30-50 m thickness and is covered with powerful black soils. The habitat includes closed grass coenoses with projective coverage above 80%, which present isolated pastures on black soils on the loess plateaus, where they border arable terrains, or occupy the slopes of steep loess forms. Many of the typical steppic species are observed within the compositions of these coenoses. They often form mosaic or complex phytocoenoses with shrubs, but the bushes should not exceed 20% of the total habitat's area, because this is a negative trend that leads to habitat's loss.

Distribution in Bulgaria:
In the northern parts of the Danube plain – around Ruse, Byala, Svishtov, Nikopol, Oryahovo, Kozloduy, Lom, etc.

Distribution in Rusenski Lom NP:
The vastest and most representative territories of that habitat are situated in Lomovete northern parts. It is mainly observed on the high plateau-like part bordering arable land, on the left valley slope of the Rusenski and Cherni Lom rivers among the villages of Ivanovo, Koshov and Cherven. Regarding its conservation value, habitat 6250 is important for preserving the populations of the Bulgarian endemite *Chamaecytisus kovacevii* and the Balkan endemite *Verbascum dieckianum*

Characteristic species:
Chrysopogon gryllus, *Bothriochloa ischaemum, Stipa pennata*, *Festuca valesiaca, Koeleria macrantha, Artemisia austriaca*, *Astragalus vesicarius*, *A. onobrychis*, *Dianthus pallens, Nonea pulla*, *Salvia nemorosa, S. nutans*, *Falcaria vulgaris*, *Verbascum dieckianum*, *Galium octonarium*, *G. verum*, *Euphorbia nicaensis*, *Sternbergia colchiciflora*, *Teucrium polium, Teucrium chamaedrys*, *Chamaecytisus hirsutus*, *C. kovacevii*, etc.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
07E1 Danubian loess steppes (E1.2C Pannonic loess steppic grasslands).
Category: *Threatened*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Unfavorable-bad

6510 Lowland hay meadows
EUNIS classification:
E Grasslands and lands dominated by forbs, mosses or lichens
E2 Mesic grasslands
E2.2 Low and medium altitude hay meadows
E2.25 Continental meadows

General characteristic:

Mesophyte hay meadows from class *Molinio-Arrhenatheretea* (unions *Arrhenatherion, Deschampsion*), dominated by cereal grass and with great grass variety. They evolve on powerful alluvial-meadow soils and vertisols by the rivers, in the moist ravines and the hollow fields. Most of them are mowed 1-2 times around the year after the active vegetation period. Two basic types exist: primary (typical) and secondary. The primary hay meadows occupy the riparian terraces and the relief's low places (hollows) in the plains. Secondary ones are formed on the spot of destroyed forests at hay regime of use. Mowing prevents forest vegetation restoration as well as the invasion of annual weeds and is important for their favorable floristic composition maintenance. The lowlands hay meadows are mainly used for hay but often there is also pasture taking place in them, which has negative impact on their species composition.

Distribution in Bulgaria:
They are observed all around Bulgaria to around 1000 m altitude. There are comparatively bigger and well preserved areas of the habitat in the hollows of Western Bulgaria and in the Thracian lowlands.

Distribution in Rusenski Lom NP:
Lowlands hay meadows on the Rusenski Lom NP territory are of primary origin. They are distributed around the whole catchment of Lomovete, but occupy a small part because of the comparatively narrow river terraces. The most representative territories of habitat 6510 are situated in the valley of Mali Lom river between the villages of Nisovo and Svalenik. Abandoning the haymowing regime of use in the last 10 years and the use of fertilizers on the arable areas along the river terraces have led to few negative changes in the structure and the appearance of theses coenoses. They are highly ruderalized and some nitrophilous species appeared within their species composition – *Urtica dioica, Sambucus ebulus, Vicia* spp., etc. The typical species percentage has significantly reduced and dominants change also occurred. And not last, the problem with their fast overgrowing with bushes and trees comes.

Characteristic species:
Main dominants among cereal species in these meadows are *Poa trivialis* ssp. *sylvicola, Alopecurus pratensis*, *Festuca pratensis*, *Elymus repens*, *Arrhenatherum elatius*, *Lolium perenne* и *Bromus commutatus*. Other characteristic for the habitat species are *Cirsium canum*, *Rorippa sylvestris*, *Galium debile*, *Stellaria graminea*, *Trifolium* spp., *Medicago arabica*, *Symphytum officinale*, *Centaurea jacea*, *Althaea officinalis*, *Lotus corniculatus*, *Knautia arvensis*, etc.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
15E2 Lowland hay meadows (E2.25 Continental meadows).
Category: *Threatened*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Unfavorable-bad

7220* Petrifying springs with tufa formation (*Cratoneurion*)
EUNIS classification:
C Inland surface waters

C2 Surface running waters
C2.1 Springs, spring brooks and geysers
C2.12 Hard water springs
C2.121 Petrifying springs with tufa or travertine formations

General characteristic:
Vegetation coenoses with predominating calcareous moss, forming in regions with karst-forming rocks – limestone or marble, with active travertine depositing. Travertine formations accumulate in springs with water having high contents of calcium carbonate, and at spots, where water seeps or flows down rock walls. They are also observed on river flood areas or shoots. These formations could be found in the forests as well as on open countryside. They are small sized, with point or linear shape.

Distribution in Bulgaria:
In the karst regions of entire Bulgaria – Northern Bulgaria (Western foothill of the Balkan mountain, Devetashko plateau, Shumensko plateau, etc.), Black sea coast (to the North of the town of Balchik), Iskar gorge (Lakatnik), Pirin, Rhodopes mountain, etc.

Distribution in Rusenski Lom NP:
Karst springs are spread at rare intervals in the Rusenski Lom river valley and present spot-like (of very small area) sites. Some of them are active throughout the year, and others for short time in the spring and the beginning of summer. Subtype Spring communities of *Equisetum telmateia* is also presented in Lomovete – wetlands around springs or seeping water on limestone terrains with clayey soil in woodlands.
Springs are usually used by the herdsmen for livestock watering place, which significantly worsens the habitat's quality. Trampling down and organic waste pollution are the main threats. Some springs silt up and disappear, others impound and fountains are built by them.
The habitat is mainly observed in the Mali Lom river valley, and one of the biggest springs is in the region of the Big Nisovo monastery, where a rare for Lomovete boggy swamp forms at flooding, rich of hygrophyte species.

Characteristic species:
Eupatorium cannabinum, *Phyllitis scolopendrium*, *Equisetum telmateia*, mosses, etc.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
08C2 Karst springs and stream with travertine formations (C2.121 Petrifying springs with tufa or travertine formations).
Category: *Threatened*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Favorable

8210 Chasmophytic vegetation on calcareous rocky slopes
EUNIS classification:
H Inland unvegetated or sparsely vegetated habitats

H3 Inland cliffs, rock pavements and outcrops
H3.2 Basic and ultra-basic inland cliffs
H3.2A Illyrio-Helleno-Balkanic *Potentilla* cliffs
H3.2A1 Helleno-Balkanic calcicolous chasmophyte communities
H3.2A13 Balkan Range calcicolous chasmophyte communities

General characteristic:
Vegetation on limestone (vertical) rocks in the foothills and mountains, belonging to class *Asplenietea trichomanis,* order *Potentilletalia caulescentis* and union *Ramondion nathaliae.* It is characterized with great local variety and with numerous endemic vegetative species participation. Many variable chasmophytic coenoses with participation of : *Aurinia saxatile*, *Parietaria lusitanica*, *Centaurea affinis*, *Celtis glabrata*, *Seseli rhodopaeum*, *Seseli degenii*, *Minuratia setacea*, *Centaurea orielnatlis* and others form along the vertical rock walls in the lower parts of the country, particularly in the Balkan mountain foothills and the Danube plain (including the Ludogorie).

Distribution in Bulgaria:
The canyon-like valley of the rivers in the Danube plain, the Ludogorie, Balkan's foothills, Pirin, the Rhodopes, Slavyanka and Stara planina.

Distribution in Rusenski Lom NP:
Habitat 8210 is evenly distributed on the whole Lomovete territory, observed independently or forming complexes with habitats 40A0 and 6110. It includes the bare rock verticals and walls, shaping the canyon-like appearance of the Rusenski Lom river valley. Some of the conservationally significant species of plants and animals are attached to it and it is of particular importance for the rock-nesting birds that are priority conservation object.

Characteristic species:
Aurinia saxatile, *Parietaria lusitanica*, *Dianthus noeanus*, *Minuartia setacea*, *Galium lovcense*, *Rhamnus saxatilis*, *Celtis glabrata*, etc. The participation of chasmophytic fern - *Asplenium ruta-muraria, A. trichomanes, Ceterach officinarum* is also characteristic.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
08H3 Calcareous rocks with chasmophytic vegetation (H3.2A13 Balkan Range calcicolous chasmophyte communities).
Category: *Vulnerable*
Included in BDA and Habitats Directive.
Conservation status: Favorable

9180* *Tilio-Acerion* forests of slopes, screes and ravines
EUNIS classification:
G Wood land, forest and other wooded land
G1 Broadleaved deciduous woodland
G1.A Meso- and eutrophic *Quercus*, *Carpinus*, *Fraxinus*, *Acer*, *Tilia*, *Ulmus* and related woodland

G1.A4 Ravine and slope wood land

General characteristic:
Mixed secondary forests, evolving in the lowlands of deposited soils on screes and steep rock slopes, most often limestone and more rarely silicate, at a bias of more than 20 degrees. This natural habitat has interzonal position in the beech belt and more rarely in the oak one. Species composition is movable and is combination of wood species of variable domination. These forests are secondary and include in their composition *Tilia tomentosa*, *Tilia platyphyllos*, *Ulmus glabra*, *Acer pseudoplatanus*, *Fraxinus excelsior*, *Carpinus betulus* and belong to the union *Tilio–Acerio.* Subtype xerothermophilic forests, typical for arid and warmer screes, dominated mainly by linden is also presented in Lomovete.

Distribution in:
Stara planina, the Rhodopes, Rila, Vitosha, Osogovska mountain, Lozenska mountain, etc. It is rarely observed in the lower parts of Bulgaria.

Characteristic species:
Tilia cordata, *Tilia tomentosa*, *Ulmus glabra*, *Acer campestre*, *A. platanoides*, *Fraxinus excelsior*, *F. ornus*, *Carpinus betulus*, *Sorbus torminalis*, *Quercus* spp., *Corylus avellana*, *Euonymus verrucosus*, *Hedera helix*, *Phyllitis scolopendrium*, *Carex pilosa*, *Corydalis* spp., *Arum maculatum*, *Geum urbanum*, *Helleborus odorus*, *Isopyrum thalictroides*, *Anemone ranunculoides*, *Mycelis muralis*, etc.

Distribution in Rusenski Lom NP:
The poly-dominant forests of the union *Tilio-Acerion* are limitedly distributed on the Lomovete territory. They occupy the shady steep stony slopes along the left banks of the Mali and Beli Lom rivers. The small-leaved lime rarely participates in the composition of the stand of trees and in most cases is substituted by the silver lime, which is due to the comparatively low latitude, at which 9180 is observed, and to its contact with the typical for the region Moesian solver lime woods (91Z0).

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
28G1 Mixed forests on screes, steep slopes and mountain ravines (G1.A4 Ravine and slope wood land).
Category: *Threatened*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Unfavorable-bad

91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Pandion, Alnion incanae, Salicion albae*)
EUNIS classification:
G Wood land, forest and other wooded land
G1 Broadleaved deciduous woodland
G1.1 Riparian and gallery woodland, with dominant *Alnus*, *Betula* , *Populus* or *Salix*
G1.11 Riverine *Salix* woodland

G1.111 Middle European *Salix alba* forests
G1.1112 Eastern European poplar-willow forests

General characteristic:
Riparian gallery forests in the lowlands and the mountains that form narrow and often broken strip by the river beds and on the river terraces. They evolve on rich alluvial soils, periodically flooded with the river water seasonal dynamics.
They play crucial protective and antierosian role, and their aesthetic role is not to be underestimated either. On the other hand, these forests exercise favorable impact on the water ecosystems through temperature regulation and creating new habitats. Habitat 91E0 has three subtypes in Bulgaria. Subtype 3 Alluvial forests from the union *Salicion albae* is presented in the Lomovete valley.

Distribution in Bulgaria:
The habitat is distributed along the whole Местообитанието е разпространено по цялото Danube riverside and along its tributaries' low courses.

Distribution in Rusenski Lom NP:
The habitat is distributed around the whole Lomovete territory, but occupies small area and is highly degraded by the human activity at many spots. The riparian willow strips in the Beli Lom river valley in the section between Pisanets and Nisovo, where riparian forests have flood regime, and along the river terrace of Mali Lom river between the village of Nisovo and Svalenik are of highest naturalness and typicalness.
Riparian forests are often subject of negative anthropologic influence, which expresses in use through clear fellings, transformation into intensive cultures and river beds cleaning. These activities lead to destruction of these forests that are exclusively important for the river ecosystems. Another major problem is invasive wood and shrub species penetration (amorphous, ailanthus, mulberry, manitoba maple, green ash, etc.), which results in negative changes in the natural species composition and structure.

Characteristic species:
Salix alba, *S. fragilis*, *S. triandra*, *P. alba*,*Ulmus laevis*, *U. minor*, *Morus alba*, *Cornus sanguinea*, *Rubus caesius, Hedera helix, Clematis vitalba*, *Humulus lupulus*, *Calystegia sepium*, *Solanum dulcamara*, *Urtica dioica*, *Parietaria officinalis*, *Lycopus europaeus*, *Lythrum salicaria*, *Symphytum officinale*, *Cirsium arvense*, *Iris pseudacorus*, *Brachypodium sylvaticum*, *Phalaris arundinacea*, *Phragmites australis*, etc.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
01G1 Riverside poplar-willow forests (G1.1112 Eastern European poplar-willow forests).
Category: *Threatened*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Unfavorable-bad

91G0* Pannonic woods with *Quercus petrea* и *Carpinus betulus*
EUNIS classification:

G Wood land, forest and other wooded land
G1 Broadleaved deciduous woodland
G1.A Meso- and eutrophic *Quercus*, *Carpinus*, *Fraxinus*, *Acer*, *Tilia*, *Ulmus* and related woodland
G1.A1 *Quercus-Fraxinus-Carpinus betulus* woodland on eutrophic and mesotrophic soils
G1.A1C Southeastern European *Quercus-Carpinus betulus* forests
G1.A1C3 Moesian oak-hornbeam forests

General characteristic:
Mesophilic (moderately moist) forests with domination of European hornbeam (*Carpinus betulus*) and winter oak (*Quercus dalechampii*) on fresh, shallow soils on limestone base. Beside the dominating European hornbeam and winter oak, single Turkey oak, linden and sycamore trees are also observed. These forests form in the lower part of shady moist slopes and in the arid and canyon-like river valleys of Northern Bulgaria to about 500 m altitude. They are highly fragmented and the nature of interzonal vegetation in the belt of thermophilic oak forests. Typical mesophilic species, characteristic of the hornbeam forests participate in their composition as well as more xerophyte ones from the neighboring oak forests.

Distribution in Bulgaria:
Only in Northern Bulgaria – the foothills of the Balkan mountain, the Danube plain, the Ludogorie and Dobrudzha (Batova river).

Distribution in Rusenski Lom NP:
The habitat of Pannonic forests with European hornbeam and winter oak is of much limited and spotted distribution on the Lomovete territory. Very often, these forests are observed in complex with the oak and linden habitats (91M0, 91H0 and 91Z0). The habitat had occupied larger areas but as a result of human activity and formation of derivative, predominantly Oriental hornbeam coenoses, it reduced its range.

Characteristic species:
Carpinus betulus, *Quercus dalechampii*, *Q. cerris*, *Acer campestre*, *Ruscus aculeatus*, *R. hypoglossum*, *Hedera helix*, *Carex pilosa*, *Euphorbia amygdaloides*, *Symphytum tuberosum*, *Cardamine bulbifera*, *Glechoma hirsuta*, *Festuca heterophylla*, *Euonymus verrucosus*, *Sorbus torminalis*, *Galium pseudaristatum*, *Viola reichenbachiana*, *Convallaria majalis*, *Galanthus elwesii*, *Lathyrus vernus*, *Corydalis* spp., *Anemone ranunculoides.*

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
26G1 Lowland mesophilic oak and hornbeam forests (G1.A1C3 Moesian oak-hornbeam forests).
Category: *Potentially threatened*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Unfavorable-bad

91H0* Pannonian woods with *Quercus pubescens*
EUNIS classification:
G Wood land, forest and other wooded land

G1 Broadleaved deciduous woodland
G1.7 Thermophilous deciduous woodland
G1.73 Eastern *Quercus pubescens* woods
G1.737 Eastern sub-Mediterranean white oak woods
G1.7372 Moesian white oak woods

General characteristic:
Bright, thermophilic oak forests with predomination of downy oak (*Quercus pubescens*), mainly on the limestone heights, where they occupy the driest and warmest places on slopes of mainly southern or western exposure. These forests evolve in extreme conditions regarding moisture and soil richness. Soils are shallow, arid, skeletal and at different stage of erosion. Because of the continental conditions, the poor soils and the anthropogenic influence, forests are fragmented and often have shrub appearance. Downy oak coenoses species composition is dynamic and variating and often includes species from the neighboring arid pasture. They form complexes with xerothermic pastures and shrub as far as there is a lot of open terrains (meadows, stony areas) in them. Often, particularly at spots with shallow limestone base, *Carpinus orientalis* is also widely observed, and forms second forest level, too.

Distribution in Bulgaria:
Northern Bulgaria (Fore-Balkan and parts of the Danube plain) and in the fore-mountains and the low calcareous mountains of Western Bulgaria.

Distribution in Rusenski Lom NP:
The habitat is limitedly spread in the Lomovete. Fragments of these forests are preserved between the villages Ivanovo and Koshov, where they often form complexes with the Subcontinental peri-Pannonic scrub (40A0). It might be assumed that their distribution is reduced in result of human activity and that they have been substituted by secondary Oriental hornbeam and grass phytocoenoses.

Characteristic species:
Quercus pubescens, *Q. frainetto*, *Q. cerris*, *Fraxinus ornus*, *Carpinus orientalis, Sorbus domestica*, *Cornus mas*, *Pyrus pyraster*, *Geranium sanguineum*, *Carex michelii*, *Buglossoides purpurocaerulea*, *Lactuca quercina*, *Orchis purpurea*, *O. simia*, *Dictamnus albus*, *Scorzonera hispanica*, *Laser trilobum*, *Helleborus odorus*, *Althaea cannabina*, *Chamaecytisus albus*, *Potentilla micrantha*, *Pulmonaria mollis*, *Tanacetum corymbosum*, etc.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
14G1 Moesian forests of White oak (*Quercus pubescens*) (G1.7372 Moesian white oak woods).
Category: *Threatened*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Unfavorable-bad

91I0* Euro-Siberian steppic woods with *Quercus* spp.
EUNIS classification:

G Wood land, forest and other wooded land
G1 Broadleaved deciduous woodland
G1.7 Thermophilous deciduous woodland
G1.7A Steppe *Quercus* woods
G1.7A1 Euro-Siberian steppe *Quercus* woods

General characteristic:
Xerothermic oak forests, dominated by *Quercus cerris* in the Danube plain and the Ludogorie and by *Quercus pedunculiflora* in the region of the Dobrudzha plateau, evolving in the conditions of typical continental climate. Species of xerophyte oak forests participate in their composition as well as wood-steppic elements. The habitat has to subtypes in Bulgaria. Subtype Euro-Siberian Turkey oak forests are presented on the Lomovete territory. They are usually mono-dominant and are situated on the ridge parts around arable land or on slant slopes with burnt exposure on the loess hills to around 300 m altitude. These forests, because of their easy accessibility, have been subject to strong anthropogenic influence – fellings, livestock pasture, and fires.
These forests are predominantly tiller forests of relatively young age. There are single plants aged over 80 years, which are suitable for their setting up in forests in old age. The hawthorn (*Crataegus monogyna*) dominates in the shrub level, and sumach (*Cotinus cogyggria*) is predominantly participating with the plants of lower fondness.

Distribution in Bulgaria:
They are distributed in the Danube plain mainly on loess surfaces and in Northeastern Bulgaria, where they evolve on degraded black soils.

Distribution in Rusenski Lom NP:
Steppic oak forests are mainly observed align the left valley slope of Mali Lom river and the most compact and preserved areas are situated to the North of the village of Svalenik. Because of the limited distribution on the country's territory and of the Euro-Siberisn oak forests priority, Rusenski Lom NP appears to be key place for their conservation.

Characteristic species:
Quercus cerris, *Q. pedunculiflora*, *Acer tataricum*, *Sorbus domestica*, *Cotinus coggygria*, *Crataegus monogyna*, *Pyrus pyraster*, *Euonymus verrucosus*, *Ligustrum vulgare*, *Rhamnus catharticus*, *Buglossoides purpurocaerulea*, *Clinopodium vulgare*, *Dictamnus albus, Dactylis glomerata*, *Festuca heterophylla*, *Helleborus odorus*, *Galium pseudaristatum, Geum urbanum*, *Latyrus niger*, *Lychnis coronaria*, *Pulmonaria mollis*, *Tanacetum corymbosum*, *Crocus flavus*, *Iris sintenisii*, *I. variegata*, *Verbascum phoeniceum*, *Vincetoxicum hirundinaria*, etc.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
18G1 Steppic woods of Turkey oak (*Quercus cerris*) (G1.7A1 Euro-Siberian steppe *Quercus* woods).
Category: *Threatened*
Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Unfavorable-bad

91M0 Pannonian-Balkanic turkey oak-sessile oak forests
EUNIS classification:
G Wood land, forest and other wooded land
G1 Broadleaved deciduous woodland
G1.7 Thermophilous deciduous woodland
G1.76 Balkano-Anatolian thermophilous *Quercus* forests
G1.768 Moesio-Danubian thermophilous oak forests

General characteristic:
Xerophyte to mesophyte oak forests, dominated by Turkey oak (*Quercus cerris*), Hungarian oak (*Quercus frainetto*), with single participation of common oak and downy oak, and in the foothills, of winter oak. They form the oak belt to about 800 m all around the country in the regions with continental and transitional-continental climate. They are observed on variated rock base – silicate as well as limestone, most often grey wood and cinnamon soils and more rarely on black soils and rendzinas. Subtype Moesian mixed thermophilic oak forests is also presented on the Lomovete territory.

Distribution in Bulgaria:
They are distributed in hilly plains and the mountains' foothills all around Bulgaria, except the most southern parts of transitional-mediterranean climate.

Distribution in Rusenski Lom NP:
Oak trees in the Rusenski Lom river valley are situated on not much steep slopes, upon deep black soils. Oriental hornbeam dominates in the upper parts of the valley slopes, where conditions are more unfavorable. In the lower, moist slope sections, micro-climatically influenced by the river proximity, silver linden predominates, secondarily extended its distribution as result of the selective felling of Turkey oak and Hungarian oak.
The habitat is widely spread in the Polomie. The most representative cerris-Hungarian oak forests are situated in the Beli Lom river valley between the villages of Pisanets and Nisovo and the Mali Lom river valley between the villages of Nisovo and Svalenik. In contrast to the Euro-Siberian forests of habitat 91I0, the oak forest of habitat 91M0 occupy comparatively inclined to a higher degree terrains on shallow soils and their grass level is of lower variety.

Characteristic species:
Quercus cerris, *Q. frainetto*, *Q. pubescens*, *Tilia tomentosa*, *Acer campestre*, *Fraxinus ornus*, *Crataegus monogyna*, *Cornus mas*, *Ligustrum vulgare*, *Brachypodium sylvaticum*, *Dactylis glomerata, Festuca heterophylla*, *Melica uniflora, Poa nemoralis*, *Geum urbanum*, *Lathyrus niger*, *Campanula persicifolia*, *Lychnis coronaria*, *Silene viridiflora*, *Helleborus odorus, Tanacetum corymbosum*, *Galium pseudaristatum*, *Bupleurum praealatum*, *Crocus flavus*, etc.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
15G1 Moesian mixed thermophilic oak forests (G1.768 Moesio-Danubian thermophilous oak forests).
Category: *Threatened*

Included in BDA, Berne Convention and Habitats Directive.
Conservation status: Unfavorable-bad

91Z0 Moesian silver lime forests
EUNIS classification:
G Wood land, forest and other wooded land
G1 Broadleaved deciduous woodland
G1.7 Thermophilous deciduous woodland
G1.7C Mixed thermophilous woodland
G1.7C4 Thermophilous *Tilia* woods
G1.7C41 Silver lime woods

General characteristic:
Xerophyte to meso-xerophyte forests with domination of *Tilia tomentosa*, distributed in Northern Bulgaria hilly plains, most often on limestone or loess, in the conditions of typical continental climate. The most representative silver lime forests territories are situated in the Ludogorie. At spots, lime forests have secondarily extended their area in result of oaks (*Quercus cerris*, *Q. petraea* agg., *Q. frainetto*) selective felling, with which they often form mixed coenoses. The grass level is composed mainly of early spring species evolving before the forest coming into leaf.

Distribution in Bulgaria:
Northern Bulgaria – Northern Black sea coast (Zlatni pyasatsi), Ludogories, Dobrudzha (Batova river) and Danube plain.

Distribution in Rusenski Lom NP:
The most representative lime forests are situated in the Beli Lom river valley between the villages Pisanets and Nisovo (Batakliyata forest area). Habitat 91Z0 is observed limitedly in the Cherni Lom river valley, too. The silver lime forests occupy slant shady slopes of mainly northern exposure. On the slopes' steeper sections with out-crops of the main rock, silver lime participates in the building of poly-dominant phytocoenoses of habitat 9180.
Rusenski Lom NP is of significant importance for this natural habitat conservation in regard to its limited geographic distribution.

Characteristic species:
Tilia tomentosa, *Fraxinus ornus*, *Acer campestre*, *A. platanoides*, *Staphylea pinnata*, *Ruscus aculeatus*, *Hedera helix, Carex pilosa*, *Melica uniflora*, *Dactylis glomerata*, *Lamium galeobdolon*, *Geum urbanum*, *Helleborus odorus*, *Corydalis* spp., *Polygonatum odoratum*, *Convallaria majalis*, *Galanthus elwesii*, *Scilla bifolia*, *Anemone ranunculoides*, *Isopyrum thalictroides, Euphorbia amygdaloides*, *Ranunculus ficaria*, *Glechoma hirsuta*, *Potentilla micrantha*, etc.

Relation of the habitats included in the Red Data Book of the Republic of Bulgaria, volume 3 (marked in Bold) with the EUNIS codes (in brackets) and their statute:
23G1 Silver lime woods (*Tilia tomentosa*) (G1.7C41 Silver lime woods).
Category: *Threatened*
Included in BDA, Berne Convention and Habitats Directive.

Conservation status: Unfavorable-bad

Annex №1.12.2 *List of Natural habitats according to BDA Annex N°1 in Rusenski Lom NP and their conservation status".*

Map № 16 Natural habitats according to BDA Annex N°1 has been elaborated to the present plan

1.12.3. Balance by habitats – the natural habitat percentage coverage towards park's total area, extent of representativeness, conservation priority, relative area or the area of the park covered by the particular type of habitat correlated to the total area of national territory covered by this type of habitat.

The percentage coverage of natural habitats included in Annex 1 of the Biological Diversity Act towards the total area of the park amount 1746,35 ha or 51,24 %. The greatest participation is the one of habitat 91M0 Pannonian-Balkanik Turkey oak-sessile oak forest with 16,76 %, followed by 6210 Seminatural dry grasslands and scrubland facies on calcareous substrates with 8,1 %. Habitat 7220* Petrifying springs with tufa formation (Cratoneurion) has the least participation regarding area, because of its specific nature. Despite that, Rusenski Lom NP appears to be one of the significant places for its conservation on national scale.

The extent of representativeness of the area covered by the particular type of habitat, correlated to the total park's area and to the whole national territory covered with this type of habitat is presented in *Table 1.12.3*.

1.12.4. The natural habitats conservation status according to BDA Annex 1 – degree of conservation of the structure and the functions of the particular type natural habitat and possibilities for recovery, overall assessment of park's value for the preservation of the particular type of natural habitat. Comparative analysis of the areas from the natural habitats mapping completed by Rusenski Lom NPD, with the data from the project Mapping and defining the conservation status of natural habitats and species — phase I".

A comparative analysis of the areas from the natural habitats mapping is made completed within the present plan, with the data from the project Mapping and defining the conservation status of natural habitats and species – phase I". Data is presented in *Table 1.12.3*, where the participation of each type of natural habitat within the park's area is indicated in relation to its area within the limits of Lomovete protected area BG0000608. It is found, on the grounds of the received results, those natural habitat 3260 Water courses of plain to montane levels with *Ranunculion fluitantis* and *Callitricho-Batrachion* is not confirmed for the territory of Rusenski Lom NP. On the

grounds of a more precise study, it was found that the areas of three types of natural habitats are bigger within the limits of the nature park in regard to the ones indicated for the protected area as a whole. These are the habitats 40A0* Subcontinental peri-Pannonic scrub, 6110* Rupicolous calcareous or basophilic grasslands of the *Alysso-Sedion albi* and 8210 Calcareous rocky slopes with chasmophytic vegetation. Almost half of the area of habitat 91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Pandion, Alnion incanae, Salicion albae*), indicated for the zone, is situated on Rusenski Lom NP territory.

The conservation status of the natural habitats types is presented in ***Annex 1.12.2.***

3 types are in Favorable conservation status. 4 types are in Unfavorable conservation status. 10 types are in Unfavorable bad conservation status.

The analysis shows that the park's territory is of key importance for the natural habitats conservation and that undertaking measures for improving their conservation status is necessary.

The following habitats, out of the ones, included in BDA Annex 1, are subject to special measures:

40A0* Subcontinental peri-Pannonic scrub
Recommendations:

- fires prevention;
- mapping – it is recommendable for each newly found fragment to be mapped and monitored as far as the habitat is observed on small areas (has spotted structure);
- restricting resettlement of invasive wood species – ailanthus and competitive shrub – Jerusalem thorn, sumach, etc.;

6110* Rupicolous calcareous or basophilic grasslands of the *Alysso-Sedion albi*
Recommendations:

- fire prevention;
- prohibition of taking rock mass from the places the habitat is distributed in;
- restricting resettlement of invasive wood species – ailanthus and competitive shrub – Jerusalem thorn;

6240* Sub-Pannonic steppic grassland
Recommendations:

- fire prevention;
- prohibition for opening quarries for rock mass in proximity to the habitat's grounds of distribution;
- restricting resettlement of invasive wood species – ailanthus and competitive shrub – Jerusalem thorn, Oriental hornbeam, South European flowering ash, etc.

6250* Pannonic loess steppic grasslands

Recommendations:

- fire prevention;
- encouraging moderate sheep pasture;
- fight with shrub overgrowth;
- prohibition for changing lands purpose and their turning into arable land.

91E0* Alluvial forests with *Alnus glutinosa* и *Fraxinus excelsior* (*Alno-Pandion*, *Alnion incanae*, *Salicion albae*).
Recommendations:

- harmonizing FP with the MP;
- prohibition of fellings in the flood forests;
- restricting resettlement of invasive wood species - amorphous, Manitoba maple, green ash, hybrid branches of poplar, etc.;
- increasing the area of alluvial flood forests through gradual reduction of the areas occupied by hybrid poplars and their afforestation with local species.

91Z0 Moesian silver lime woods (*Tilia tomentosa*).
Recommendations:

- harmonizing FP with the MP;
- transformation of cultures through afforestation with local species.

Table 1.12.3.

* Extent of representativeness of the area covered by the natural habitats from BDA Annex 1, correlated to the park's total area, the total area of the national territory and the total area of Lomovete protected area BG000068

	Natural habitat from BDA Annex 1		**The park's area covered by the particular type of habitat**	**Natural habitat's percentage coverage towards park's total area**	**Total area of the national territory**	**Natural habitat's percentage coverage towards national territory's total area**	**Habitat's area in Lomovete protected area BG0000608**	**Natural habitat's percentage coverage towards Lomovete protected area BG0000608total area**
№	Code	Name	ha	%	ha	%	ha	%
1	3150	Natural eutrophic lakes with vegetation of the type *Magnopotamion* or *Hydroharition*	1,30	0,04	20802,06	0,01	0,00	0,00

2	40A0*	Subcontinental peri-Pannonic scrub	4,60	0,13	1655,39	0,28	3,25	141,54
3	6110*	Rupicolous calcareous or basofilic grassland of the *Alysso-Sedion albi*	69,41	2,04	2224,36	3,12	47,76	145,33
4	6210	Semi-natural dry grasslands and scrublands facies on calcareous substrates (*Festuco-Brometalia*) (important orchid sites*)	276,25	8,11	117298,51	0,24	1662,04	16,62
5	6240*	Sub-Pannonic steppic grasslands	5,62	0,16	15391,98	0,04	241,21	2,33
6	6250*	Pannonic loess steppic grasslands	0,90	0,03	14035,88	0,01	606,66	0,15
7	6510	Lowland hay meadows	174,54	5,12	16344,20	1,07	220,40	79,19
8	7220*	Petrifying springs with tufa formation (*Cratoneurion*)	0,05	0,003	79,74	0,14	0,11	45,45
9	8210	Chasmophytic vegetation on calcareous rocky slopes	132,23	3,88	9504,88	1,39	106,32	124,37
10	9180*	*Tilio-Acerion* forests of slopes, screes and ravines	70,72	2,08	22724,89	0,31	146,98	48,12
11	91E0*	Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Pandion, Alnion incanae, Salicion albae*)	78,94	2,32	27679,94	0,29	155,78	50,67
12	91G0*	Pannonic woods with *Quercus petrea* и *Carpinus betulus*	4,57	0,13	82984,36	0,01	240,40	1,90
13	91H0*	Pannonian woods with *Quercus pubescens*	18,00	0,53	19205,63	0,09	64,62	27,86
14	91I0*	Euro-Siberian steppic woods with *Quercus* spp.	121,50	3,57	42513,92	0,29	3041,57	3,99
15	91M0	Pannonian-Balkanic turkey oak-sessile oak forests	571,18	16,76	596175,89	0,10	2716,78	21,02

16	91Z0	Moesian silver lime forests	216,54	6,35	25698,62	0,84	1599,57	13,54
		Totally	1746,35	51,24			10853,45	16,09

**The data about the total area of the national territory and the total area of Lomovete protected area BG000068 are taken from the project Mapping and defining the conservation status of natural habitats and species — phase I", according to the requirements of the Assignment.*

1.12.5. Functional relation between the habitats in the park and the ones in the Natura 2000 protected zones around the park's territory.

Natural habitats on Rusenski Lom NP territory occupy around 16 % of the total area of habitats in Lomovete PZ. In order to improve habitats conservation status and to ensure the functional relation between them, the following measures could be recommended:

- Maintenance of pasture – habitats of small mammals part of the food chain of prey birds and orchids;
- Restoration and maintenance of wet meadows and water areas – habitats of amphibians, food base of waterfowl; habitats of hydrophylic and hygrophylic plant species;
- Maintenance of roadability of rivers and gallery riparian forests;
- Individual approach of use of forests in the subsections with ascertained protected species and priority habitats;
- Conduction of agricultural measures in the forests while preserving biotope trees and leaving dry mass;
- Restriction of resettlement of invasive wood species – ailanthus, and competitive shrub – Jerusalem thorn, sumach, etc.;
- Increasing the area of alluvial flood forests through gradual reduction of the areas occupied by hybrid poplars and afforestation with local species.

1.13 VEGETATION

1.13.1. Vegetation classification

Syntaxons in Rusenski Lom NP according to the floristic approach of vegetation classification (method of Braun-Blanquet)

Syntaxons of the floristic school, called also sygmatic school as well as school of Braun-Blanquet or school of Zurich-Montpellier, have two supreme units: *class* and *order* and two subdued ones: *union* and *association*. Part of the syntaxons in the elaborated classification scheme is probable.

At union level, the relation (correspondence) of syntaxons and the natural habitats types under BDA Annex 1 and under EUNIS is indicated.

I. Water vegetation

1. **Class *Lemnetea* O. de Bolòs et Masclans 1955** (Floating cormophyta communities)

1.1. Order *Lemnetalia minoris* Tüxen ex O. de Bolòs et Masclans 1955

1.1.1. Union *Lemnion minoris* Tüxen ex O. De Bolòs et Masclans 1955 (syn. *Hydrocharition*)

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 3150 Natural eutrophic lakes with vegetation of the type *Magnopotamion* or *Hydroharition*
- C1.32. (Free-floating vegetation of eutrophic waterbodies)

2. **Class *Potamogetonetea* Klika in Klika et Novak 1941** (Communities of freshwater root semi-dipped and floating macrophytes)

2.1. Order *Potametalia* W. Koch 1926

2.1.1. Union *Parvopotamion* (Vollmar 1947) Hartog et Segal 1964

2.1.2. Union **Magnopotamion** (W. Koch 1926) Libbert 1931

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 3150 Natural eutrophic lakes with vegetation of the type *Magnopotamion* or *Hydroharition*
- C1.33. Rooted submerged vegetation of eutrophic waterbodies

II. Vegetation of freshwater springs, riparian strips and swamps

3. **Клас *Montio-Cardaminetea* Braun-Blanq. et Tüxen ex Klika et Hadač 1944**

3.1. Order *Montio-Cardaminetalia* Pawl. 1928

3.1.1. Union *Cratoneurion commutati* W. Koch 1926

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 7220* Petrifying springs with tufa formation (*Cratoneurion*) C2.121.
- Petrifying springs with tufa or travertine formations

4. **Class *Phragmito-Magnocaricetea* Klika in Klika et Novak 1941** (Vegetation of reed and carex-dominants in freshwater and brackish swamps)

4.1. Order *Phragmitetatila* W. Koch 1926

4.1.1. Union *Phragmition communis* W. Koch 1926

Assoc. *Scirpo-Phragmitetum* W. Koch 1926

Assoc. *Veronico anagalis-Typhaetum angustifoli* nom. prov.

Assoc. *Rumo palustris-Phragmitetum australis* nom. prov.

Assoc. *Phragmito-Phalarietum arundinaceae* nom. prov.

III. Chasmophytic (rock) vegetation

5. **Class *Asplenietea trichomanis* (Braun-Blanq. in Meier et Braun-Blanq. 1934) Oberd. 1977** (Chasmophytic vegetation on rock walls, cracks and ledges)

5.1. Order *Potentilletalia speciosae* Quézel 1964

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 8210 Chasmophytic vegetation on calcareous rocky slopes
- H3.2A1. Helleno-Balkanic calcicolous chasmophyte communities

IV. Moderate-continental grass communities

6. **Class *Molinio-Arrhenatheretea* Tüxen 1937** (nutrients rich mesophilic and wet grass communities)

6.1. Order **Arrhenatheretalia elatioris Tüxen 1931**

6.1.1. Union *Arrhenatherion elatioris* Luquet 1926

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 6510 Lowland hay meadows
- E2.25. Continental meadows

Assoc. *Elymeto-Poetum sylvicolae* nom. prov.

Assoc. *Galio-Festucetum pratensis* nom. prov.

Assoc. *Aristolocho-Elymetum repenis* nom. prov.

Assoc. *Geranio pyrenaicae-Arrhenatheretum elatioris* nom. prov.

7. **Class *Festuco-Brometea* Braun-Blanq. et Tüxen ex Soó 1947** (Steppes, steppic rocks and continental sandy grass communities in the moderate and the subboreal regions)

7.1. Order *Brometalia erecti* W. Koch 1926

7.1.1. Union *Bromion erecti* W. Koch 1926

Assoc. *Bromo-Plantaginetum mediae* Ht. 1931

7.2. Order *Festucetalia valesiacae* Braun-Blanq. et Tüxen ex Braun-Blanq. 1949

7.2.1. Union *Festucion valesiacae* Klika 1931

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 6210 Semi-natural dry grasslands and scrublands facies on calcareous substrates (*Festuco-Brometalia*)
- E1.22. Arid subcontinental steppic grassland
- 6250* Pannonic loess steppic grasslands
- E1.2C. Pannonic loess steppic grasslands

Assoc. *Bothriochloetum (Andropogonetum) ischaemi* (Krist. 1937) I. Pop 1977

7.2.2. Union *Chrysopogono-Saturejion* Horvat et Horvatić in Horvatić 1934

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 6240* Sub-Pannonic steppic grasslands
- E1.22. Arid subcontinental steppic grassland

8. **Клас *Koelerio-Corynephoretea* Klika in Klika et Novák 1941**

8.1. Разред *Alysso-Sedetalia* Moravec 1967

8.1.1. Съюз *Alysso-Sedion albi* Oberd. et Müller in Müller 1961

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 6110* Rupicolous calcareous or basofilic grassland of the *Alysso-Sedion albi*
- E1.11. Euro-Siberian rock debris swards (stony surfaces)

9. **Class *Trifolio-Geranietea sanguinei* Müller 1962**

9.1. Order *Origanetalia vulgaris* Müller 1962

9.1.1. Union *Geranion sanguinei* Tüxen in Müller 1962

V. Moderate-continental and boreal wood and shrub communities

10. **Class *Alno glutinosae-Populetea albae* P. Fukarek et Fabijanić 1968** (syn. *Populetea albae* Braun-Blanq. 1962) (Flood valleys hygrophilic forests)

10.1. Order *Populetalia albae* Braun-Blanq. ex Tchou 1948

10.1.1. Union *Populion albae* Braun-Blanq. ex Tchou 1948

10.1.2. Union *Salicion albae* Soo (1930) 1940

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Pandion, Alnion incanae, Salicion albae*)

- G1.1112. Eastern European poplar-willow forests

Salicetum albae-fragilis Soo (1930, 1934) 1958

Salici-Populetum (Tüxen. 1931) M. Drees 1936

11. **Class *Crataego-Prunetea* Tüxen 1962** (syn. *Rhamno-Prunetea* Rivas Goday et Borja ex Tüxen 1962)

11.1. Order *Prunetalia spinosae* Tüxen 1952

11.1.1. Union *Pruno tenellae-Syringion* Jovan. 1979

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 40A0* Subcontinental peri-Pannonic scrub
- F3.2412. Subcontinental peri-Pannonic scrub

12. **Class *Carpino-Fagetea sylvaticae* Jakucs ex Passarge 1968** (syn. *Querco-Fagetea* Braun-Blanq. et Vlieger in Vlieger 1937)

12.1. Order *Fagetalia sylvaticae* Pawl. et al. 1928

12.1.1. Union *Tilio-Acerion* Klika 1955

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 9180* *Tilio-Acerion* forests of slopes, screes and ravines
- G1.A4. Mixed deciduous forests on steep and ravine

13. **Class *Quercetea pubescentis* (Oberd. 1948) Doing Kraft 1955** (Thermophilic oak forests with submediterranean and European distribution)

13.1. Order *Fraxino orni-Cotinetalia* Jákucs 1961

13.1.1. Union *Syringo-Carpinion orientalis* Jákucs 1959

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 91H0* Pannonian woods with *Quercus pubescens*
- G1.7372. Moesian white oak woods

Assoc. *Syringo-Carpinetum orientalis* (Grebensc. 1950) Misic 1967

Assoc. *Syringetum vulgaris* Knapp 1944

13.2. Order *Quercetalia pubescenti-petraeae* Klika 1933

13.2.1. Union *Aceri tatarici-Quercion* Zólyomi 1957

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 91Z0 Moesian silver lime forests
- G1.7C41. Silver lime woods

13.2.2. Union *Carpinion orientalis* Horvat 1958 (syn. *Ostryo-Carpinion orientalis* Horvat 1954 emend 1958)

Assoc. *Violo odoratae-Carpinetum orientalis* nom. prov.

Assoc. *Fraxino orni-Carpinetum orientalis* nom. prov.

Assoc. *Querco frainetti-Carpinetum orientalis* nom. prov.

Assoc. *Querco cerris-Carpinetum orientalis* nom. prov.

Assoc. *Querco dalechampi-Carpinetum orientalis* nom. prov.

Assoc. *Ulmo campestris-Carpinetum orientalis* nom. prov.

Assoc. *Aceri campestris-Carpinetum orientalis* nom. prov.

Assoc. *Tilio tomentosae-Carpinetum orientalis* nom. prov.

13.2.3. Union *Quercion confertae* Horvat 1949 (syn. *Quercion frainetto* Horvat 1958)

Corresponding types of natural habitats from BDA Annex I and under EUNIS:

- 91G0* Pannonic woods with *Quercus petrea* и *Carpinus betulus*
- G1.A1C3. Moesian oak-hornbeam forests
- 91I0* Euro-Siberian steppic woods with *Quercus* spp.
- G1.7A1. Euro-Siberian steppe *Quercus* woods
- 91M0 Pannonian-Balkanic turkey oak-sessile oak forests
- G1.768. Moesio-Danubian thermophilous oak forests

Assoc. *Quercetum frainetto moesiacum* B. Jovanovic (1972) 1976

Assoc. *Quercetum frainetto-cerris* Rud. (1940) 1949

Assoc. *Carpino orientalis-Quercetum frainetto-ceris* B. Jovanovic 1953

Assoc. *Carpino orientalis-Quercetum frainetto* Rizovski 1978

Assoc. *Quercetum dalechampi-frainettis* nom. prov.

Assoc. *Tilio tomentosae-Quercetm frainetis* nom. prov.

Assoc. *Querco-Carpinetum orientalis* (Ganchev 1961) Ksuros et al. 1968

Assoc. *Quercion petreae-cerris* (Lak. 1976) Lak. et Jov. 1980

Assoc. *Quercetum pubesventis-cerris* Rexepi 1985

Assoc. *Aceri tatarico-Quercion* Zolyoni et Jakucs 1957

Assoc. *Querco robori-Tilietum tomentosae* L. St-ic-Vecelicic 1953

Assoc. *Tilio tomentosae-Carpinetum betuli* Soo (1958) 1970

Assoc. *Ulmo campestris-Tilietum tomentosae* nom. prov.

Assoc. *Querco dalechampi-Tilietum tomentosae* nom. prov.

Assoc. *Querco frainetti-Tilietum tomentosae* nom. prov.

Assoc. *Carpineto orientalis-Tilietum tomentosae* nom. prov.

VI. Anthropogenic vegetation

14. **Class *Polygono arenastri-Poëtea annuae* Rivas-Mart. 1975 corr. Rivas-Mart. et al. 1991** (Short-term, trampled ruderal vegetative communities)

Communities of Cynodon dactylon

Communities of Dasypyrum villosum

Communities of Carthamus lanatus

Communities of Elymus repens

15. **Class *Epilobietea angustifolii* Tüxen et Preising ex von Rochow 1951** (syn. *Galio-Urticetea* Passarge ex Kopecký 1969)

15.1. Order *Galio-Alliarietalia* Oberd. in Görs & Müller 1969

15.1.1. Union *Galio-Alliarion* (Oberd. 1957) Lohmeyer et Oberd. in Oberd. et al. 1967

Communities of Urtica dioica

16. **Class *Papaveretea rhoeadis* S. Brullo et al. 2001 nom. conserv. propos.** (syn. *Stellarietea mediae* Tüxen et al. ex von Rochow 1951) (Annual floristically rich ruderal and similar communities)

16.1. Order *Chenopodietalia albi* Tüxen et Lohm. 1950

16.1.1. Union *Sisymbrion officinalis* Tüxen, Lohm. et Prsg. 1950

Assoc. *Daturetum stramoni* nom. prov.

Assoc. *Atriplexo-Hordetum murini* nom. prov.

17. **Class *Artemisietea vulgaris* Lohmeyer et al. in Tüxen ex von Rochow 1951** (Perennial and rich of thorns – Scotch thistle, cirsium, etc. – plants (sub)xerophilous ruderal communities in the moderate and mediterranean region)

17.1. Order *Onopordetalia acanthii* Braun-Blanq. & Tüxen ex Klika 1944

17.1.1 Union *Onopordion acanthii* Braun-Blanq. et al. 1926.

Assoc. *Onopordetum acanthii* nom. prov.

Assoc. *Echio vulgaris-Melilotum albae* nom. prov.

Climate changes have impact upon all types of natural habitats. The measures suggested for mitigating and adapting are presented in Section 4 of the present plan in a separate project *Action plan in unexpected situations, including Measures for climate change consequences overcoming*

1.13.2. Forest ligneous vegetation characteristic

The characteristic of forest ligneous vegetation from Management plan 2005 has been updated.

The used initial information for the characteristic of the forest ligneous vegetation is the forest territories inventories of Dunav State Hunting Reserve Ruse and the GIS data base in Rusenski Lom NP.

1.13.3. Results from the forest territories update

The results from the forest territories update are presented in ***Annex 1.13.3,*** *which includes: Explanatory note and updated taxation.*

The following maps are elaborated to the plan:

Map №8 Types of plant habitats

Map №9 Forests, forest territories and agricultural land

Map №10 Directions for measures and activities for the forest ligneous vegetation and permanent use of agricultural land

Information from the data base for inventory of the forest territories of Dunav TU SHR with period of operation 2012-2022 is used for characterizing the forest ligneous vegetation. The total area of the forest areas in the analysis below is bigger because of overlapping of ligneous species, undergrowth and other wood indicators for one and the same territory.

Distribution of ligneous species by areas and their percentage correlation;

The ligneous species distribution by area and their percentage correlation towards the total afforested area is presented in *Таблица 1.13.3(1)* and *Figure 1.13.3(1).* Oriental hornbeam is the predominant ligneous species with 35,18% participation followed by the Turkey oak with 25,17% participation. The forest fruit species like mahaleb cherry, cherry plum and black mulberry are the least presented with 0,01 % participation.

Table 1.13.3(1) Distribution of ligneous species by area and their percentage correlation towards the total afforested area

Ligneous species	Area, ha	%
Ailanthus	4,02	0,10
Locust	541,36	13,47
Hungarian oak	331,13	8,24
European red pine	10,31	0,26
Common hornbeam	16,82	0,42
Honey locust	25,64	0,64
Hawthorn	9,72	0,24
Cherry plum	0,57	0,01
Cornelian cherry	0,86	0,02
Large-leaved lime	13,61	0,34
Winter oak	37,45	0,93
Oriental hornbeam	1413,84	35,18
European nettle tree	3,4	0,08
Downy oak	39,45	0,98
Hazel	1,1	0,03
Common oak	1,42	0,04
Mahaleb cherry	0,46	0,01
Tatar maple	1,05	0,03
Manna ash	138,19	3,44
Persian walnut	6,7	0,17
European ash	14,28	0,36
Field elm	8,14	0,20
Field maple	36,67	0,91
Narrow-leafed ash	5,38	0,13
Silver linden	255,59	6,36
Poplar I-214	11,38	0,28
Turkey oak	1011,8	25,17
Black pine	70,5	1,75
Black mulberry	0,36	0,01
Norway maple	0,98	0,02
Sycamore	7,04	0,18
Totally	4019,22	100

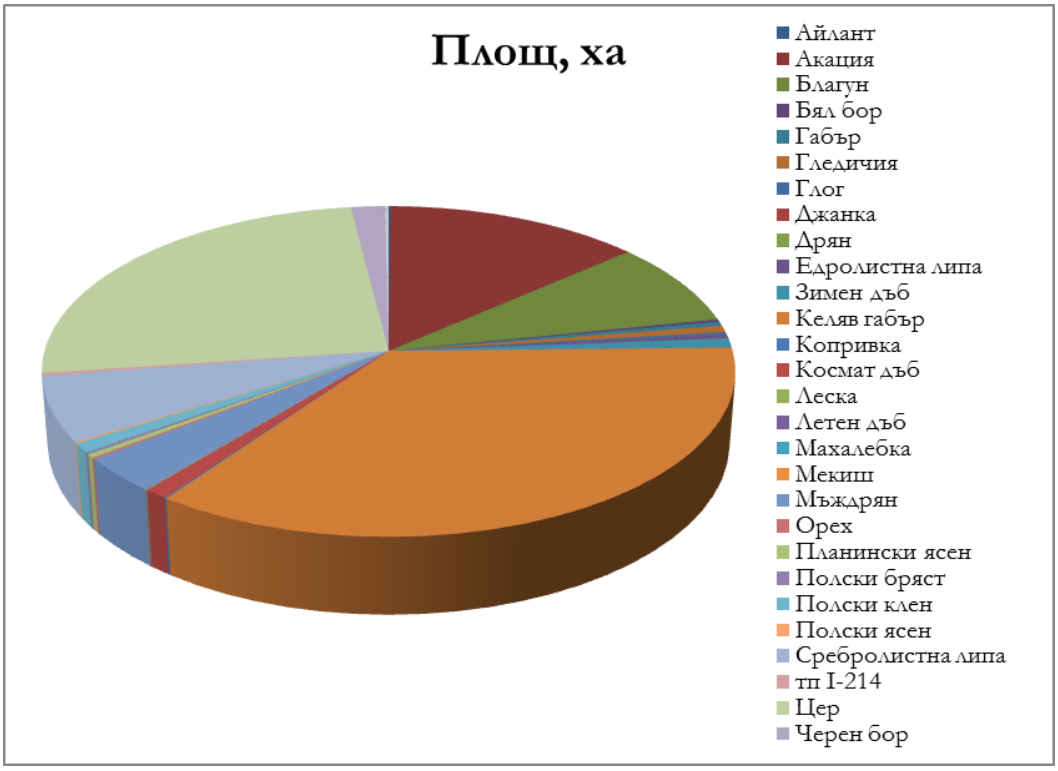


Figure 1.13.3(1) Distribution of ligneous species by area towards the total afforested area

Distribution of ligneous species by age classes by area and their percentage correlation.

The distribution of ligneous species by age classes by area and their percentage correlation towards the total afforested area is presented in *Table 1.13.3(2)* and *Figure 1.13.3(2)*. Age class IV is predominant, presented with 35,42%, and the least presented is age class XXVIII with 0,032%

Table 1.13.3(2) Distributions of ligneous species by age classes by area and their percentage correlation towards the total afforested area

Age class	Area, ha	%
I	938,65	23,35403
II	283,33	7,049378
III	465,72	11,58732
IV	1423,52	35,41782
V	446,44	11,10763
VI	66,01	1,642358
VII	83,44	2,076025
VIII	30,61	0,761591
IX	11,65	0,289857
X	20,26	0,504078
XI	15,6	0,388135
XII	47,08	1,171372

XIII	31,55	0,784978
XIV	72,76	1,810302
XV	1,4	0,034833
XVI	8	0,199044
XVII	44,3	1,102204
XVIII	27,6	0,6867
XXVIII	1,3	0,032345
Totally	4019,22	100

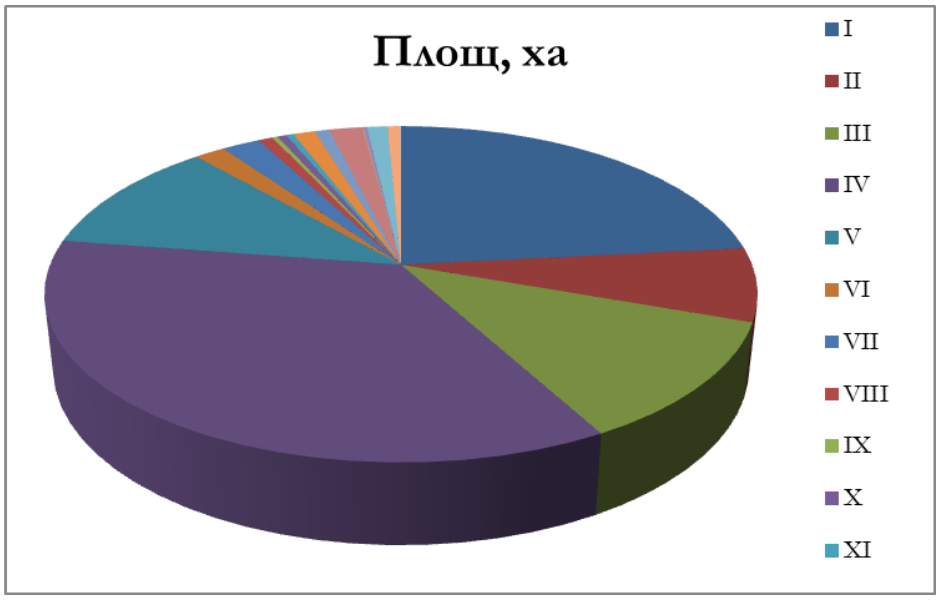


Figure 1.13.3(2) Distribution of ligneous species by age classes by area and towards the total afforested area.

Distribution of ligneous species by origin, including non-local and foreign ones and their percentage correlation;

The distribution of ligneous species by origin, including the non-local and the foreign ones and their correlation towards the entire afforested area is presented in *Table 1.13.3(3)* and *Figure 1.13.3(3)*. The plantations of sprout origin that occupy about 76,51% of the total afforested area are predominant, followed by the plantations of seed origin - 16,35%.

Table 1.13.3(3) Distribution of ligneous species by origin by area and their percentage correlation towards the total afforested area

Origin	Area, ha	%
Auto-vegetative	6,8	0,17
Sprout	3075,27	76,51
Seed natural	657,18	16,35
Seed artificial	279,97	6,97
	4019,22	100

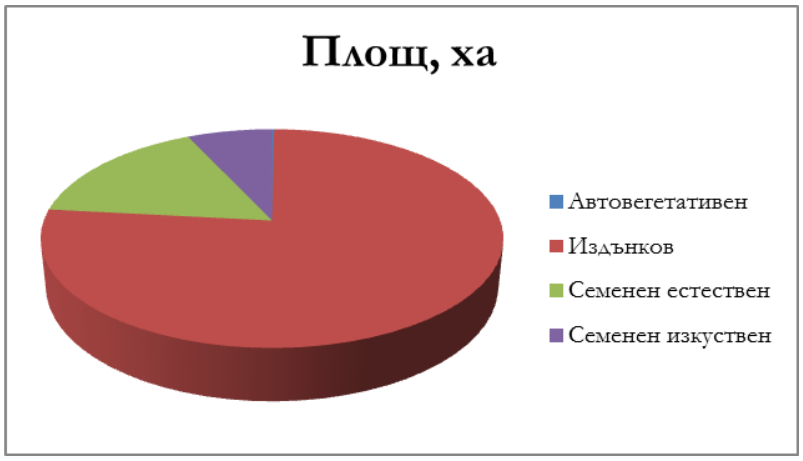


Figure 1.13.3(3) Distribution of ligneous species by origin, by area towards the total afforested area

Regarding the representativeness of local, non-local and foreign species, local ones are with predominant participation - 84,83%. Foreign species present 14,56% of the total afforested area, where the greatest is the locust participation.
The data is presented in *Table 1.13.3(3.1)* and *Figure 1.13.3(3.1).*

Table 1.13.3(3.1) Distribution of ligneous species by representativeness by area and their percentage correlation towards the total afforested area.

Representativeness	**Area, ha**	**%**
Local species	3409,36	84,83
Non-local species	24,59	0,611
Foreign species	585,27	14,56
Totally	4019,22	100

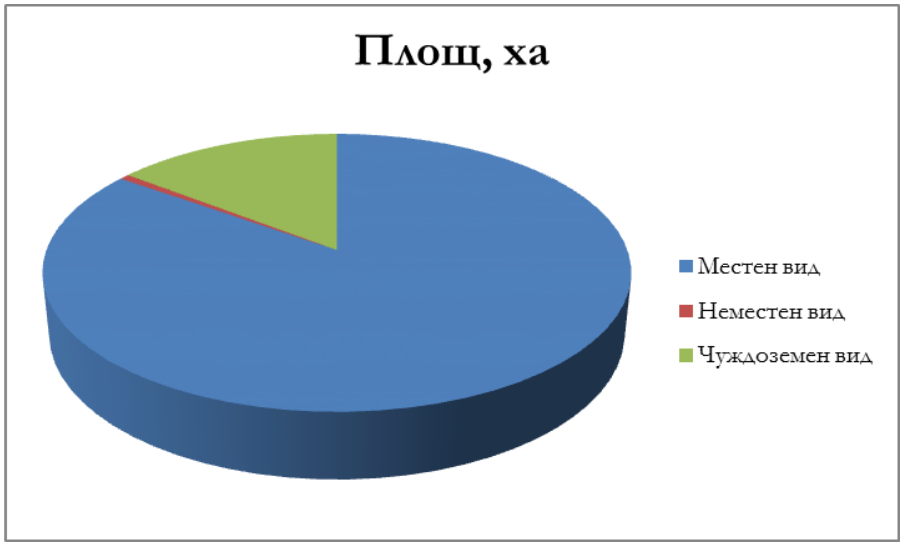


Figure 1.13.3(3.1) Distribution of ligneous species by representativeness by area towards the total afforested area

Distribution of ligneous species by productivity /bonity/ and area and calculation of the average bonity;

As a whole, forest plantations on the Rusenski Lom NP territory are characterized with low bonity - the average bonity is IV. Predominant are bonity IV - 45,99% and bonity III - 23%. The data is presented in *Table 1.13.3(4)* and *Figure 1.13.3(4)*.

Table 1.13.3(4) Distribution of ligneous species by bonity by area and their percentage correlation towards the total afforested area

Bonity	Area, ha	%
I	316,88	7,88
II	527,12	13,11
III	924,55	23,00
IV	1848,34	45,99
V	402,33	10,01
Totally	4019,22	100

Figure 1.13.3(4) Distribution of ligneous species by bonity by area towards the total afforested area

Distribution of ligneous reserve by ligneous species and age classes;

The ligneous reserve distribution by ligneous species is presented in *Table 1.13.3(5)* and *Figure 1.13.3(5).* Turkey oak has the greatest reserve, followed by the silver linden, and with the least is the Tatar maple.

Table 1.13.3(5) Ligneous reserve distribution by ligneous species

Ligneous species	Ligneous reserve, m^3	%
Ailanthus	250	0,101228
Locust	35713	14,46064
Hungarian oak	26333	10,66256
Scotch pine	1801	0,729247
Common hornbeam	2811	1,138209
Honey locust	2965	1,200565
Cherry plum	33	0,013362
Large-leaved lime	47	0,019031
Winter oak	3703	1,499391
Oriental hornbeam	20413	8,265477
Oriental hornbeam	263	0,106492
Downy oak	5074	2,054526
Hazel	35	0,014172
Common oak	156	0,063166
Mahaleb cherry	40	0,016196

Tatar maple	5	0,002025
Manna ash	5177	2,096231
Persian walnut	556	0,225131
European ash	759	0,307329
Field elm	1299	0,525981
Field maple	4578	1,853689
Narrow-leaved ash	775	0,313807
Silver linden	57612	23,32781
Poplar i-214	2218	0,898096
Turkey oak	60352	24,43727
Black pine	13544	5,484134
Black mulberry	40	0,016196
Maple	415	0,168039
Totally	246967	100

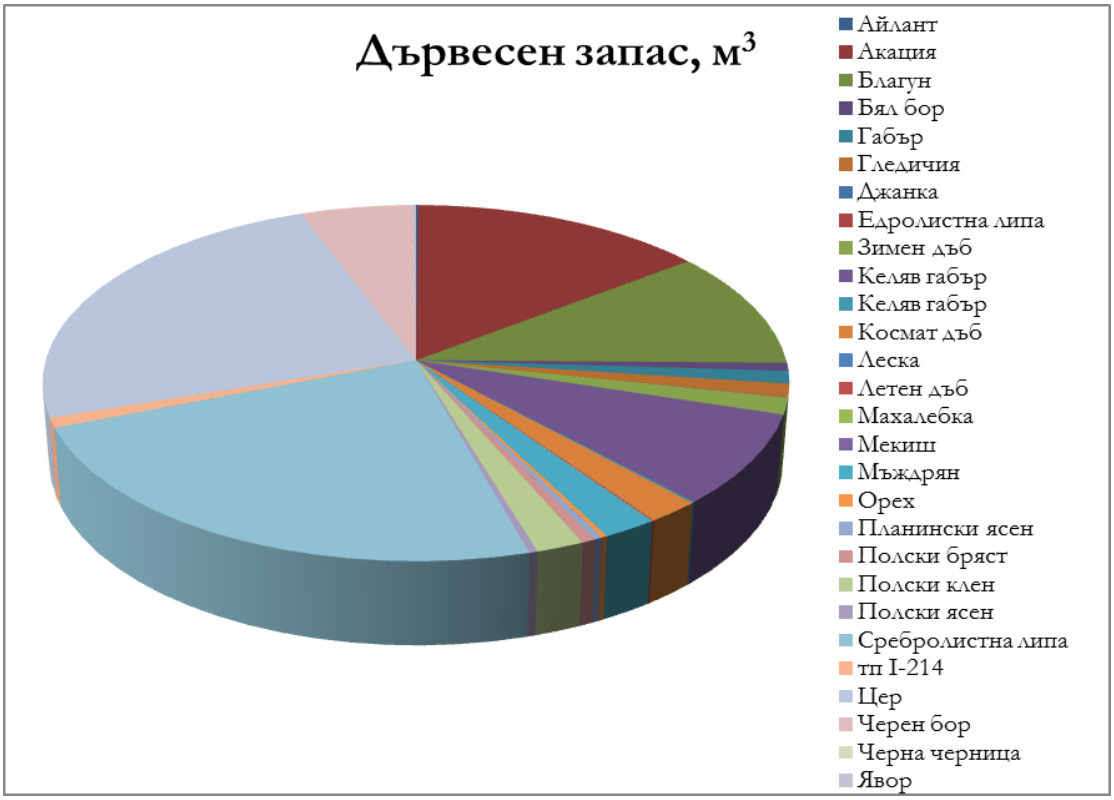


Figure 1.13.3(5) Ligneous reserve distribution by ligneous species

The ligneous reserve distribution by age class is presented in *Table 1.13.3(5.1)* and *Figure 1.13.3(5.1)*. The species included in age class IV have the biggest ligneous reserve, and the least have the ones in age class XXVIII.

Table 1.13.3(5.1) Ligneous reserve distribution by age classes

Age class	Ligneous reserve, m^3	%
I	1633	0,66593
II	12466	5,083578
III	28846	11,76327
IV	129362	52,75323
V	25688	10,47545
VI	7877	3,212205
VII	4999	2,038569
VIII	1965	0,801318
IX	1495	0,609654
X	2180	0,888994
XI	2124	0,866157
XII	3827	1,560633
XIII	7766	3,166939
XIV	5028	2,050395
XV	168	0,06851
XVI	360	0,146806
XVII	4921	2,006761
XVIII	4503	1,836303
XXVIII	13	0,005301

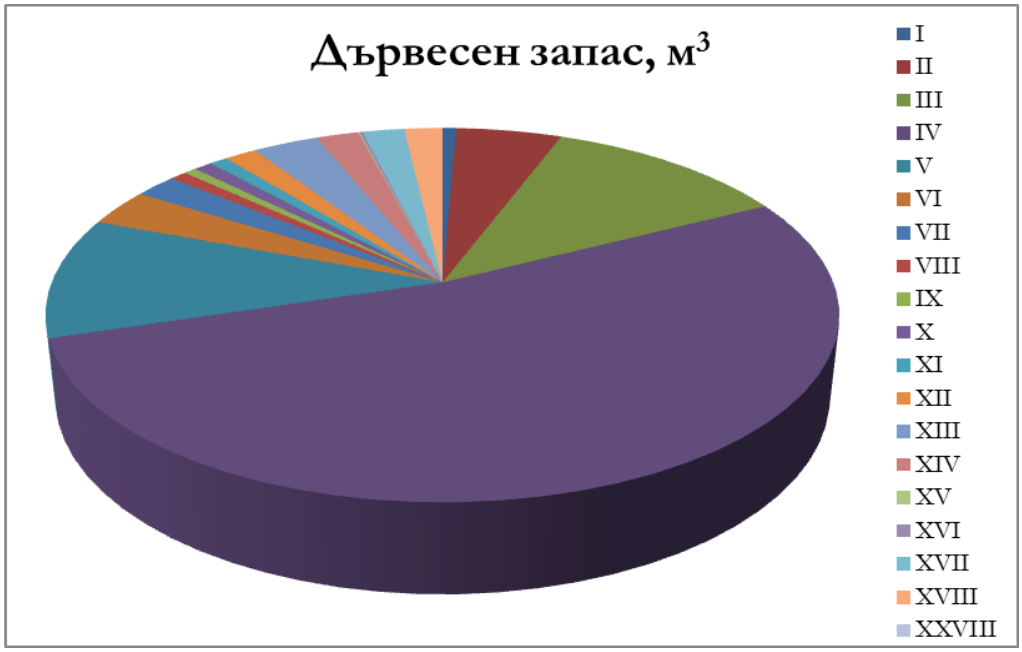


Figure 1.13.3(5.1) Ligneous reserve distribution by age classes

PTotal forest area distribution by forest type;

The total forest area distribution by forest types is presented in *Table 1.13.3(6)* and *Figure 1.13.3(6)*. Analyzing the various categories, there is overlapping of areas depending on the availability or the lack of undergrowth. The analysis shows that sprout and low-stem plantations are dominating on the Rusenski Lom NP territory.

Table 1.13.3(6) Total forest area distribution by forest type

Forest type	Area without undergrowth, ha	Area with undergrowth, ha
Sprout plantation	2085,9	3404,23
Thinned out culture	13,8	14,4
Unsuitable for forest area	105	105
Seed plantation	49,2	191,72
Folded culture	245,2	307,67
Coniferous plantation	70,4	110,44
Low-stem plantation	1389,8	1429,04
Conversion	713,8	1886,9
Poplar	12,5	13,6
Deciduous high-stem	308,4	579,4
TOTALLY	**4994**	**8042,4**

Figure 1.13.3(6) Total forest area distribution by type of forests without undergrowth

Разпределение на залесената площ по видове гори, класове на възраст и пълноти.

Afforested area distribution by forest type towards the age classes is presented in *Table 1.13.3(7)* and *Figure 1.13.3(7).* Analysis shows that the sprout plantations of age class IV predominate on the Rusenski Lom NP territory.

Table 1.13.3(7) Afforested area distribution by age classes

Forest type/age class, ha	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII
Coniferous	0,44	38,78	56,08	0,66	0	1,94	0	3,92	3,12	2,2	0	0
Low-stemmed	74,54	103,27	216,34	583	224,92	40,77	27,14	26,13	8,53	16,44	15,6	21,68
Conversion	749,91	49,06	139,96	644	199,7	23,3	3,1	0	0	0,34	0	5,3
Poplar	1,66	1,1	0	2,64	7,7	0	0,5	0	0	0	0	0
Deciduous high-stemmed	112,1	83,42	50,82	193,22	14,12	0	52,7	0,56	0	1,28	0	20,1
Sprout plantation	823,32	143,31	378,52	1344,99	413,54	64,07	3,14	7,03	3,93	10	10,48	34,59
Thinned out culture	13,2	0	0	0,06	0,6	0	0	0	0	0	0	0
Unsuitable for forest area	0	0	14,6	59,2	26,4	0	0	0	0	0	0	0
Seed plantation	88,7	49,3	0	0,2	0	0	51,1	0	0	0	0	0
Folded culture	13,43	83,02	72,6	19,07	5,9	1,94	29,2	23,58	7,72	16,4	5,12	12,49

….. *continuation*

Forest type/age class, ha	XII	XIV	XV	XVI	XVII	XVIII	XXVIII
Coniferous	0	0	0	0	0	0	0
Low-stemmed	26,7	26	0,28	8	1,5	0	0
Conversion	0,05	40,68	0	0	31,5	0	0
Poplar	0	0	0	0	0	0	0
Deciduous high-stemmed	4,8	6,08	0	0	11,3	27,6	1,3
Sprout plantation	17,67	67,68	0	8	44,3	27,6	0
Thinned out culture	0,54	0	0	0	0	0	0
Unsuitable for forest area	0	4,8	0	0	0	0	0
Seed plantation	0	0	1,12	0	0	0	1,3
Folded culture	13,34	0,28	0,28	0	0	0	0

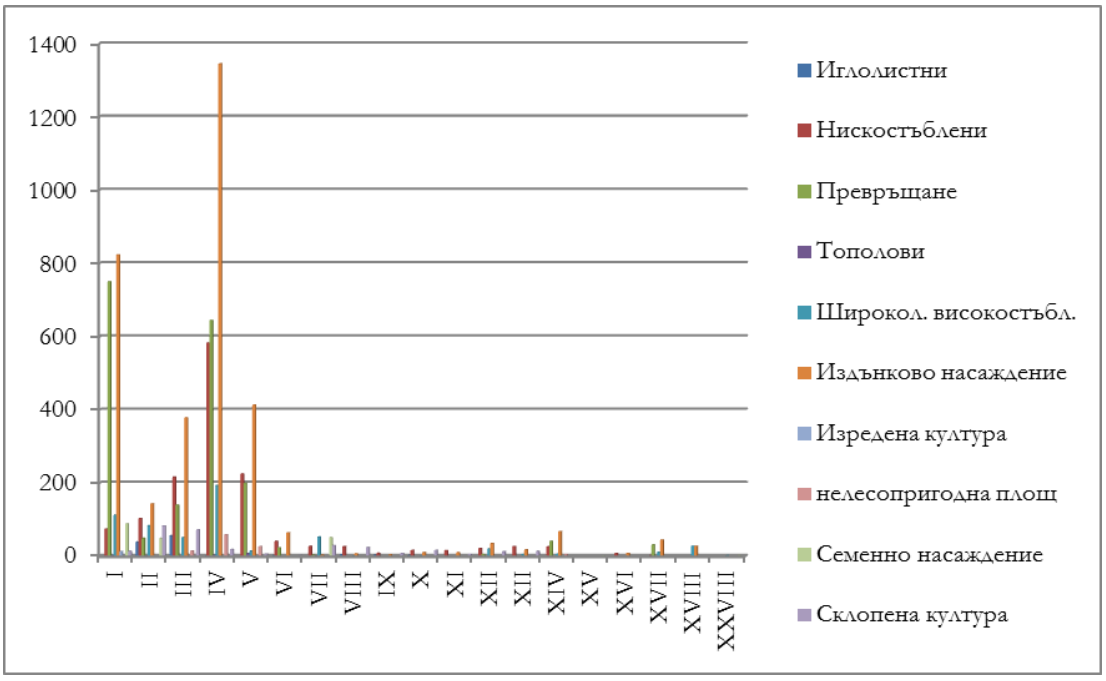


Figure 1.13.3(7). Afforested area distribution by age classes

The afforested area distribution by forests type towards fullness is presented in *Table 1.13.3(7.1).* Analysis shows that sprout plantations with fullness of 5 are predominant for the Rusenski Lom NP territory.

Table 1.13.3(7.1) Afforested area distribution by fullness

Forest type/fullness, ha	10	9	8	7	6	5	4	3	2
Coniferous	18,1	1,5	8,95	13,59	27	19,6	11,9	1,6	4,5
Low-stemmed	115,7	344,58	309,91	260,15	171,9	64,4	89,6	26,6	34,3
Conversion	27	0	63,4	165,3	287	455,5	463,3	274,5	150,9
Poplar	0	1,9	2,3	1,1	3,2	0	4	1,1	0
Deciduous high-stemmed	14,1	14,5	68,6	103,3	44	71,2	60,9	101,1	101,7
Sprout plantation	152,6	335,4	392,33	476,7	478	537	528,7	306	188,7
Thinned out culture	0	0	0	0	3,4	0	0,6	0,6	9,8
Unsuitable for forest area	0	0	0	0	4,4	0	32,4	36,7	31,5
Seed plantation	0	0	1,32	0	0	36,3	42,8	57,2	54,1
Folded culture	25,4	29,6	60,63	66,74	47,3	41,4	21,2	4,4	7,3

Figure 1.13.3(8) Forest territories distribution by type of ownership

Analysis of offences and description of territories offended after 2005

After analysis of the available data base from the forest territories inventory of TU of SHR Dunav in 2012 and of the forest territories status at present, it is found that no significant offences or offences with impact on the goals and purpose of the forest territories belonging to the Rusenski Lom NP as result of anthropogenic influence or natural factors are ascertained.

1.14 FLORA

The information on flora from Management Plan 2005 is updated, specified and supplemented in the present plan.

1.14.1. Lower plants and fungi

1.14.1.1. Algae

The presented results regarding the algae flora composition are based on the studies completed at the elaboration of the initial Rusenski Lom NP Management plan in the studied catchments of Beli, Cherni, Mali and Rusenski Lom rivers. 79 species belonging to 25 sections are found for the water courses and bodies on Rusenski Lom NP territory. Additional and purposeful studies and monitoring activities for the available information periodic update are necessary because of the specific nature of the group.

The main conclusions that could be made are:

1. The following filamentous algae evolve particularly lavishly in Mali Lom river single sections: *Oscillatoria sancta, Vaucheria sp., Cladophora glomerata.*

2. Freshwater red alga *Batrachospermum moniliforme* Roth. (Divisio Rhodophyta) is found in both karst springs, situated under the countryside Byalata stena.

3. The algae flora of the standing basins, situated along the park's border enriches Beli Lom river biodiversity through the algae transfer along the existing channel.

4. Unfavorable trends in the status of Beli Lom river ecosystem are from industrial polluting in the upper river flow and from households' pollution from the smaller settlements. The high extent of anthropogenic eutrophication is confirmed by the increased growth of the attached Filamentous green algae (*Cladophora glomerata)*, which is favored by the biogenic elements' increased concentration in the water.

5. The specified negative trends in the studied river ecosystems development are relatively weaker for Cherni and Malki Lom rivers, and at a more advanced stage for Rusenski Lom river and particularly for Beli Lom river.

Annex №1.14.1.1 *List of algae on the territory of Rusenski Lom NP*

1.14.1.2. Mosses

10 moss species are found on Rusenski Lom NP territory. One of them is also found on the bark of deciduous ligneous species (*Hypnum cupressiforme*), and the rest are found mainly on rocks.

Additional and purposeful studies and monitoring activities for the available information periodic update are necessary because of the specific nature of the group.

Annex №1.14.1.2 *List of mosses on the territory of Rusenski Lom NP*

1.14.1.3. Lichen

7 species of lichen are found on Rusenski Lom NP territory. Four species are found on the bark of deciduous ligneous species, two species are found on soil substrate and one on rocks.

Additional and purposeful studies and monitoring activities for the available information periodic update are necessary because of the specific nature of the group.

Annex №1.14.1.3 *List of lichens on the territory of Rusenski Lom NP*

1.14.1.4. Fungi

The presented results regarding the fungi resources are based on the studies completed at the elaboration of the initial Rusenski Lom NP Management plan, the TU of SHR Dunav Forestry plan, some issued permits for business use and other available information.

95 species of macromycetes belonging to 2 sections (Ascomycetes and Basidiomycetes) are found on Rusenski Lom NP territory. The predominant number of species belong to class Basidiomycetes.

Macromycetes are mainly found in deciduous forests - 83 species, and in grass communities - 15 species. Bigger fungi species variety is found in the mixed deciduous forests, which depends on the varied species composition (*Carpinus betulus* L., *C. orientalis* L., *Quercus cerris* L., *Tilia tomentosa* Moench., etc.). 7 species of macromycete parasitizing on deciduous trees: Honey fungus (*Armillaria mellea), Ganoderma lucidum,* Sulphur polypore *(Laetiporus sulphureus),* Giant polypore *(Meripilus giganteus),* Willow brackect *(Phellinus igniarius),* Cushion brackect *(Phellinus pomaceus)* and Dryad's Saddle *(Polyporus squamosus)* are significant in forestry aspect.

23 species of precious edible fungi are found. The following species are collected for food and trade uses more intensively: Field mushroom *(Agaricus campestris)*, Honey fungus *(Armillaria mellea)*, Summer cep *(Boletus aestivalis)*, Girolle *(Cantharellus cibarius)*, Horn of plenty *(Craterellus cornucopioides)*, Giant puffball *(Langermannia gigantea)*, Parasol mushroom *(Macrolepiota procera)* and Fairy ring mushroom *(Marasmius oreades).*

2 are the found species of conservation significance: Large clubbed Clavaria *(Clavariadelphus pistillaris* (Fr.) Donk*)* – Red list of the fungi in Bulgaria (Gyosheva et al., 2006) and Bitter knight *(Tricholoma acerbum* (Bull. : Fr.) Quel.*)* – Red book of the Republic of Bulgaria (2015).

Additional and purposeful studies and monitoring activities for the available information periodic update are necessary because of the specific nature of the group.

Annex №1.14.1.4. *List of fungi on the territory of Rusenski Lom NP*

No new map material has been drawn up for the lower plants and fungi because of the lack of new data compared to the Management plan of 2005.

1.14.2. Vascular plants

1.14.2.1 Flora of Rusenski Lom NP

Publications and projects on the flora of Rusenski Lom NP for the period from MP 2005 to now:

Stoyanov, S. 2005. The vascular flora of the catchment basin of the river Roussenski Lom in the beginning of the 21st century. — Fl. Medit., **15**: 351-383.

List of the flora in the Rusenski Lom river catchment is presented in the article and a floristic analysis is made. 877 species of vascular plants, belonging to 399 genuses and 87 families are found as of the time the article was presented. The studied territory embraces mainly Rusenski Lom NP as well as territories outside the Park, like: Rusenski Lom valley in the section Ruse-Ivanovo, Cherni Lom valley in the section Cherven-Tabachka-Pepelina-Shirokovo, Beli Lom valley in the section Pisanets-Vyatovo and the Mali Lom valley in the section Svalenik-Kostandenets. So, it should be considered that not all of the found taxons are observed in Rusenski Lom NP.

Project Cross-border Ecologic Corridor Ruse-Giurgiu. Planning the management of protected zones and territories in the cross-border region Ruse-Giurgiu. Integrated management plan of protected zones BG0000608 Lomovete for natural habitats and wild flora and fauna, and BG0002025 Lomovete for wild birds conservation.

Funding: EU Programme Cross-Border Cooperation Bulgaria-Romania, 2007–2013; Contract № ARDF 69185/ 12.10.2010.

Beneficiary: Friend of Peoples Park of Rusenski Lom Club

The studies of flora in the Rusenski Lom and its tributaries valleys (including the Rusenski Lom NP territory) continued within the frame of that project, implemented in 2011. New territories were drawn up an inventory of: Cherni Lom valley in the section Shirokovo-Ostritsa-Katselovo-Garchinovo and Mali Lom valley in the section Kostandenets-Zahari Stoyanovo.

Note: About 1100 species of vascular plants have been found up to now in the Lomovete protected zone, which is almost 10 times bigger than the territory of Rusenski Lom NP

(Stoyanov, personal data). Around 10% of these species are not observed on the territory of Rusenski Lom NP.

Stoyanov, S. 2014. *Genista tetragona* (*Fabaceae*), a neglected species in the Bulgarian flora. – Phytol. Balcan. 20(2-3): 159-170. ISSN: 1310-7771.

A new species for the flora of Bulgaria is announced in that article, Chetiriraba zhaltuga (*Genista tetragona*). The species was known up to now as an endemite for Moldova and Southwestern Ukraine. Chetiriraba zhaltuga is steppe species found in the Rusenski Lom valley and specifically in the Cherni Lom valley (between the villages Katselovo, Ostritsa, Shirokovo, Pepelina, Tabachka and Cherven, district of Ruse) and in the Mali Lom river valley (by the village of Kostandenets, district of Razgrad). Part of the population by the village of Cherven is within the borders of Rusenski Lom NP. Considering its limited distribution in Bulgaria and the fact it is included in the Berne Convention on the Conservation of European Wildlife and Natural Habitats, the Chetiriraba zhaltuga is recently proposed to be included in BDA Annex № 3. The species is selected as conservation priority on the present Rusenski Lom NP Management plan.

Vassilev, K., Stoyanov, J. & Pedashenko, H. 2012. Reports 167–175. In: **Vladimirov, V., Dane, F. & Kit Tan**, New floristic records in the Balkans: 20. Phytologia Balcanica 18 (3): 361–363.

The finding of *Trifolium dalmaticum* as new species for the floristic region of Northeastern Bulgaria with deposit in the region of the village of Cherven is announced.

The Rusenski Lom NP flora list is presented by sections, where the families in each section are arranged in alphabetical order. The range (volume) of the families and genuses, the taxons number and distribution by categories is based on Guide to the plants in Bulgaria (Delipavlov and Cheshmedzhiev 2011) excluding the family of Decompound (Asteraceae), for which volume 11 of Flora of the Republic of Bulgaria (Peev, 2012) is used. Herbarium samples of part of the found in the nature park taxons are deposited in the herbarium in the Institute of Biodiversity and Ecosystematic Studies (SOM) at the Bulgarian Academy of Science.

The following indicators are taken into consideration in the floristic analysis: number of taxons by categories (absolutely and in percentages, towards the total number in Bulgaria), the species richest families and geneses, and the taxons of conservation statute.

991 species of vascular plants belonging to **436 genuses** and **99 families** (***Annex №1.14.2***) are found on the Rusenski Lom NP territory. All autochthonous and foreign (adventitious) species are included here, as well as ones observed naturally on the territory of Bulgaria, but appearing foreign to the region such as, for example, black pine, used in establishing forest cultures.

One part of the adventitious species is naturalized long ago and their presence in the local flora composition is something usual, while others are comparatively new elements and today they continue extending their areal, occupying new territories (e.g. *Ambrosia artemisiifolia*, *Erigeron annuus*, *Parthenocissus quinquefolia*). Part of the adventitious species belong to the group of the so called invasive plants, distinguished foe their ability quickly and successfully to conquer new

territories and to remove the representatives of local flora, among which amorphous (*Amorpha fruticosa*), also ailanthus (*Ailanthus altissima*), Manitoba maple (*Acer negundo*), bur marigold (*Bidens frondosus*) and others are.

26,1% of the species, 50,0% of the genuses and 65,1% of the families observed in Bulgaria, are presented in Rusenski Lom NP. The Horsetails Section is presented with 3 species, 1 genus and 1 family, Ferns are with 11 species, 9 genuses and 6 families, Gymnosperms with 1 species, 1 genus and 1 family. The most numerous group of Magnoliophyta includes 976 species, belonging to 425 genuses and 91 families (*Table 1.14.2(1)).*

The following families are richest concerning species Sunflower family (*Asteraceae*) – 121 species, Legume family (*Fabaceae*) – 87 species, Grasses family (*Poaceae*) – 86 species and the Mint family (*Lamiaceae*) – 62 species. The genuses Speedwell (*Veronica*) – 18 species, Bedstraw (*Galium*) –15 species, Buttercups (*Ranunculus*) – 14 species and Centaury (*Centaurea*) – 13 species are the geniuses with the most representatives.

Table 1.14.2(1). Taxonomic structure of the flora of Rusenski Lom NP

Taxon	number of families for Bulgaria	**number of families for Rusenski Lom NP**	% of the total number of families for Bulgaria	number of genuses for Bulgaria	**number of genuses for Rusenski Lom NP**	% of the total number of genuses for Bulgaria	number of species for Bulgaria	**number of species for Rusenski Lom NP**	% of the total number of species for Bulgaria
Lycopodiophyta Lycophyte	4	**0**	0,0	6	**0**	0,0	8	**0**	0,0
Equisetophyta Horsetail	1	**1**	100,0	1	**1**	100,0	7	**3**	42,8
Polypodiophyta Fern	15	**6**	40,0	23	**9**	39,1	42	**11**	26,1
Pinophyta Gymnosperms	4	**1**	25,0	6	**1**	16,6	17	**1**	5,9
Magnoliophyta: Magnoliophyta	128	**91**	71,1	836	**425**	50,8	3723	**976**	26,2

Totally	152	**99**	65,1	872	**436**	50,0	3797	**991**	26,1

1.14.2.1.1. Vegetative species from Annex 2 and 3 of BDA, Red data book, Conventions and endemites, observed on the territory of Rusenski Lom NP.

25 vegetative species on the Rusenski lom NP territory have conservation statute – including 2 Bulgarian and 6 Balkan endemites, 7 species are subject of conservation under the Biological Diversity Act, 7 species are included in the Red data book of Bulgaria, volume 1 (Peev 2015), 11 species are subject of conservation by the CITES Convention and 1 species is included in the Berne Convention Annex 1 (*Table 1.14.2(2)*)

Table 1.14.2(2) Species of conservation significance in Rusenski Lom NP

№	Family	Taxons	BDA Annex №	Red data book	Conventions	Endemite
1	Ranunculaceae	*Anemone sylvestris*	3			
2	Fabaceae	*Chamaecytisus kovacevii*	3	+		Bulgarian
3	Amaryllidaceae	*Galanthus elwesii*	3	+	CITES	
4	Rubiaceae	*Galium rubioides*	3			
5	Polygalaceae	*Polygala sibirica L.*	3	+		
6	Scrophulariaceae	*Verbascum dieckianum*	3	+		Balkan
7	Orchidaceae	*Himantoglossum jankae*	2 и 3	+	CITES	
8	Fabaceae	*Astragalus suberosus subsp. haarbachii*		+		
9	Ulmaceae	*Celtis glabrata*		+		
10	Orchidaceae	*Cephalanthera damasonium*			CITES	
11	Orchidaceae	*Cephalanthera longifolia*			CITES	
12	Orchidaceae	*Neottia nidus-avis*			CITES	
13	Orchidaceae	*Orchis morio*			CITES	
14	Orchidaceae	*Orchis purpurea*			CITES	
15	Orchidaceae	*Orchis simia*			CITES	
16	Orchidaceae	*Orchis tridentata*			CITES	
17	Orchidaceae	*Platanthera chlorantha*			CITES	
18	Amaryllidaceae	*Sternbergia colchiciflora*			CITES	
19	Fabaceae	*Genista tetragona*			Bern Conv.	
20	Apiaceae	*Seseli rhodopeum*				Bulgarian
21	Asteraceae	*Achillea clypeolata*				Balkan
22	Fabaceae	*Chamaecytisus jankae*				Balkan
23	Caryophyllaceae	*Dianthus noeanus*				Balkan
24	Lamiaceae	*Salvia ringens*				Балкански
25	Poaceae	*Sesleria latifolia*				Балкански

1.14.2.1.2. Sub-Balkan endemites and relict species on the territory of Rusenski Lom NP

The following sub-Balkan endemites are found in the Rusenski Lom NP: Campanula (*Campanula grossekii*), Cephalaria (*Cephalaria laevigata*), Macedonian Scabious (*Knautia macedonica*), *Astragalus suberosus* subsp. *haarbachii*, Common lilac (*Syringa vulgaris*), Bedstraw (*Galium flavescens*) and Easter bedstraw (*Galium paschale*). Only *Astragalus suberosus* subsp. *haarbachii* out of them is species with limited distribution and is of conservation significance. Lilac could also be defined as species great importance from phytocenotic point of view.

The relict element in Rusenski Lom NP flora is poorly presented. It comprises mainly Tertiary relicts, remains of relict steppic flora. Chetiriraba zhaltuga (*Genista tetragona*) and *Celtis glabrata* are the relict plants of conservation significance. Sumach (*Cotinus coggygria*), Common ivy (*Hedera helix*), European bladdernut (*Staphylea pinnata*), Common lilac (*Syringa vulgaris*), Butcher's broom (*Ruscus aculeatus*) and Spineless butcher's broom (*Ruscus hypoglossum*) are other important relict species on the territory of Rusenski Lom NP.

1.14.2.1.3. Vascular plants species priority for conservation

The species presented in *Таблица 1.14.2(3)* are subject of special measures out of the species of conservation statute

Table 1.14.2(3) Species of conservation significance in Rusenski Lom NP

№	Taxon	Population	Habitat (particular place)	Statute	Recommendations and measures
1.	*Polygala sibirica*	threatened	to the North of the village of Koshov, Cherni Lom, left valley slope	BDA Annex 3	Habitat 6110 conservation, fire prevention
2.	*Chamaecytisus kovacevii*	vulnerable	the loess steppes by the villages Ivanovo and Koshov	BDA Annex 3	Habitat 6250 conservation, fire prevention
3.	*Genista tetragona*	vulnerable	to the North of the village of Cherven, Cherni Lom, on both valley slopes	Berne Convention	Habitats 6110 and 6240 preservation; prohibition for rock mass extraction
4.	*Himantoglossum jankae*	threatened	Rusenski Lom, to the North of the Smesite countryside; Mali Lom, to the South of Nisovo; to the North of Batakliyata hunting lodge	BDA Annex 2 and 3	Population monitoring; Restricting of shrub overgrowing

A list of the vascular plants found in Rusenski Lom NP is presented in ***Annex №1.14.2(1).***

A list Vegetative species for monitoring with the corresponding monitoring sites coordinates in Rusenski Lom NP is presented in ***Annex № 1.14.2(2).***

Map № 12 FLORA is elaborated to the present plan

1.14.2.2. Distribution of invasive (non-local) species.

The term invasive species includes the part of foreign for certain flora species, which, getting into the new conditions, distribute quickly (resettle and occupy territories) and alongside bring an element of damage by changing, remove or threaten natural vegetation. The rest of the foreign species that do not have aggressive behavior, are designated by the terms non-local or unnatural, many of them, in most of the cases, are observed as casual elements or only on spots where they have been cultivated. Foreign species are characterized with lavish seed-bearing, seeds high vitality that preserves for years in a row, and have effective mechanisms for resettlement. They quickly adapt to variety of ecological conditions but most often occupy habitats similar to the ones they originate from. Their successful and quick resettlement is most often due to lack of their natural competitors.
The appearance of invasive foreign species is result of human activities – transport, tourism, trade, agriculture, gardening, afforestation. They are excessively aggressive in the local species habitats, where they change the soil composition, the light regime in the habitat and its structure to a significant extent. Some invasive species have quite an impact on human health, causing allergies or other problems related to the poisonous substances they contain. Beside the negative impact on the local flora and vegetation, foreign species also cause great economic losses that reduce agricultural and forestry production and increase the expenses related to their control.

1.14.2.2.1. Invasive foreign species of plants found in Rusenski Lom NP

The availability of numerous settlements within the scope of Rusenski Lom NP and its locality amongst arable land, mastered and exploited by men for a long time, makes is especially vulnerable regarding invasive foreign species penetration. The dense road network, the Rusenski Lom river valley and its connection with the Danube river ensure „favorable“ corridors for invasive species penetration and distribution. An additional element to the foreign for Lomovete flora appears to be the established in the past cultures of Acacia and Honey locust.
7 invasive ligneous and shrub species (*Таблица 1.14.2(4)*) are found on Rusenski Lom NP territory, 4 of which belong to the group of the worst invasive plants, Annex 1, 2007. The other 3 species are conditionally categorized as slightly invasive and are observed as casual elements by roads, in riparian habitats or in proximity of the places they are cultivated.

Table 1.14.2(4) List of invasive ligneous and shrub species in Rusenski Lom NP

№	Species	Origin	Category
1.	*Acer negundo* L.	North America	worst invasive
2.	*Ailanthus altissima* (Mill.) Swingle	China	worst invasive

№	Species	Origin	Category
3.	*Amorpha fruticosa* L.	North America	worst invasive
4.	*Gleditsia triacanthos* L.	North America	slightly invasive
5.	*Lycium barbarum* L.	China	slightly invasive
6.	*Parthenocissus quinquefolia* (L.) Planch.	North America	slightly invasive
7.	*Robinia pseudoacacia* L.	North America	worst invasive

6 invasive grass species (*Table 1.14.2(5)*), are found in Rusenski Lom NP, 2 of which belong to the group of the worst invasive plants. The rest are categorized as slightly invasive, although one of them (*Erigeron annuus*) at regional level should also be taken to the worst invasive plants, because of the fact it is widely spread and worsens to a significant extent the riparian meadows quality.

Table 1.14.2(5) List of invasive grass species in Rusenski Lom NP

№	Вид	Произход	Категория
1.	*Bidens frondosus* L.	North America	worst invasive
2.	*Erigeron annuus* (L.) Desf.	North America	slightly invasive
3.	*Erigeron canadensis* L.	North America	slightly invasive
4.	*Paspalum distichum* L.	Tropic Africa and America	slightly invasive
5.	*Phytolacca americana* L.	North America	slightly invasive
6.	*Symphyotrichum novi-belgii* (L.) G.L. Nesom	North America	worst invasive

1.14.2.2.2. Characteristic of the found invasive foreign species in Rusenski Lom NP – distribution, threaten habitats and species, measures.

***Acer negundo* L.** – Manitoba maple

The Manitoba maple is most often observed by the asphalt roads connecting the villages in the Ruse ski Lom Nature Park. It is found in the section between the village of Svalenik and the village of Nisovo (where it forms the densest population at the road descending just before the village of Nisovo), in the section between the village of Ivanovo and the Ivanovo rock churches and between the village of Cherven and the Cherven fortress. Although more rarely, it penetrates into the natural habitats in the Rusenski Lom valley, where it is found between the village of Nisovo and the Small Nisovo monastery, in proximity of the Park's Visitor's center as well as in the region between Ivanovo and the Smesite countryside. The species is observed along the periphery between the oak forests and the riparian meadows (where the soil moist is favorable), as well as in the composition of the riparian forests of natural habitat 91E0* Alluvial forests of *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*). The first ligneous level of the forests of habitat 91E0 in Rusenski Lom Nature Park is formed mainly by *Salix alba*, which participation is 4 of to 6 tens. The species *Salix triandra*, *Ulmus laevis* and *Ulmus minor* are observed singly in the composition of the stand of trees or with participation up to 10%. The latter are gradually removed by the Manitoba maple, which reaches up to 25% at some spots at the first and second ligneous level, which disturbs the naturalness of the habitat. Another damage of that invasive species, although to a lower extent, is the reduction of the riparian meadows areas of natural habitat 6510 Lowland hay meadows.

Species main vectors of distribution are the road network in Rusenski Lom Nature Park, where the invasion disturbs most often the road's easement. Also, the species quickly occupies the

clearings. Manitoba maple resettlement in natural habitats is carried through the wind as well as, to a certain extent, by the Rusenski Lom river waters.

***Ailanthus altissima* (Mill.) Swingle** – Ailanthus
Most often Ailanthus is observed singly or in strips, by asphalt roads connecting the villages in Rusenski Lom NP or in the settlements' vicinities. It is found in the section between the villages Svalenik and Nisovo, where the most significant is the population at the road descending just before the village of Nisovo, and in the western end of the village of Nisovo above the Beli Lom river bed. Compact independent groups are registered to the south of the village of Cherven (by the dirtroad to the telecommunication operators' antennas), in proximity to the Cherven fortress, at the village of Nisovo exit in the direction to the village of Shtraklevo and along the Mali Lom river (in the beginning of the trail to the Big Nisovo monastery and in the section between the village of Svalenik and the pump facility).Single trees are seen also in the section between the village of Ivanovo and the Ivanovo rock churches and between the village of Cherven and the Cherven fortress.
Ailanthus is often seen as single tree in the composition of the riparian gallery forests as part of natural habitat 91E0* Alluvial forests of *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*). Increasing its participation in these forests composition leads to gradual removing of the typical ligneous species and to change of this habitat natural appearance.
Another habitat directly affected by the ailanthus is 8210 Calcareous rocky slopes with chasmophytic vegetation. The found dense overgrowings in the Mali Lom river valley are on rocky terrains, where the species has settled at the bottom of the rocks but also in the cracks along the rock verticals. The Ailanthus aggressive rootage causes rock masses destruction, and its head overshadows the typical rock plants, most of which are usually heliophytes (sunstroke plants), which changes the habitats composition and natural appearance.
To a certain extent, ailanthus distribution influences also habitat 6110* Rupiculous calcareous or basophilic grasslands of the *Alysso-Sedion albi*, which occupies more or less the flattened stony sections in proximity to the rock vertical's edge. On one hand, the species settling on the open stony slopes leads to shading and alongside, to change in the specific species composition, and on the other hand, a potential threat for some conservationally significant vegetative species observed within the scope of this habitat like *Polygala sibirica*, Mullein (*Verbascum dieckianum*) and Chetiriraba zhaltuga (*Genista tetragona*) exists.
Main vectors of ailanthus distribution are the road network in Rusenski Lom Nature Park, where most often the invasion disturbs the road's easement. Ailanthus resettlement in natural habitats is realized through wind as well as to a certain extent, by the Rusenski Lom river waters.

***Amorpha fruticosa L.* –** Amorphous
Amorphous is one of the widest spread foreign invasive species in Rusenski Lom NP. It is most often observed by the asphalt roads connecting the villages in Rusenski Lom Nature Park. It is found in the section between the village of Svalenik and the village of Nisovo, where it forms, at some spots, dense impassable strips by the road and even hangs over it. Such dense roadside galleries have formed in the section from the village of Cherven to the road fork to Nisovo and Svalenik and in the section village of Nisovo-Batakliyata-village of Svalenik. Amorphous has settled permanently in the composition of some natural habitats in the Rusenski Lom valley, where the riparian galleries of habitat 91E0* Alluvial forests of *Alnus glutinosa* and *Fraxinus*

excelsior (*Alno-Padion, Alnion incanae, Salicion albae*). Singly or in small groups, the species is observed all around the Rusenski Lom river valley. As a photophilous species amorphous very successfully settles by the Lomovete river bed, on spots where there is lack of riparian forest or is with quite a loose structure. The species more rarely is possible to occupy riverside grass coenoses of habitat 6510 Lowland hay meadows, which leads to its area reduction.
The amorphous light fruits are easily carried around by Rusenski Lom river waters and the river appears to be main vector of species distribution on the Rusenski Lom NP territory. The species distributes to a lower extent by the wind and the animals.

***Gleditsia triacanthos* L.** – Honey locust
Honey locust is observed as single trees, most often by the roads connecting the villages in Rusenski Lom Nature Park. It is also observed in the sections Nisovo-Svalenik, Nisovo-Batakliyata-Svalenik, Ivanovo-Koshov and Ivanovo-Ivanovo rock churches. Also as single trees, the species is observed on the riverside meadows and in the riparian forests at many in the Rusenski Lom valley. It is also found along the Mali Lom river in the section from the village of Svalenik to the pump station and from the village of Nisovo to the Big Nisovo monastery, along the Beli Lom river in the region of the Obretenka countryside. This species invasion is of low extent as of now. The habitats 6510 Lowland hay meadows and 91E0* Alluvial forests of *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) are minimally disturbed.
Main vector of Joney locust distribution appears to be birds and mammals, which eat its fruits and carry them at bog distances. Another vector appears to be the man by the cultures of Honey locust, established in the past.

***Lycium barbarum* L.** – Box-thorn, Goji berry
It grows on grassy spots, by roads, rivers and settlements. On the Rusenski Lom NP territory Box-thorn is mainly observed on deserted places in proximity to the settlements, as far as it is has probably been grown in the gardens and has subsequently grown wild. As a whole its invasion is slight. It disturbs to a minimum extent the riparian habitats 6510 Lowland hay meadows and 91E0* Alluvial forests of *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*). It settles in riparian forest galleries with broken structure or low sloping as far as it prefers sunny places.
The main vector of distribution appear to be man, who cultivates the Honey locust in the villages gardens, and secondary vector of resettlement is the animals feeding on its fruits and carrying it at greater distances.

***Parthenocissus quinquefolia* (L.) Planch.** – Virginina creeper, Five-leaved ivy
The Five-leaved ivy is observed in vicinities of forests, abandoned and damaged habitats, rocky spots, over fences and buildings walls, by roads, railways, non-arable terrains.
The species is found in Rusenski Lom NP mainly in proximity to the settlements and mainly on rocky terrains. It disturbs the habitat 8210 Calcareous rocky slopes with chasmophytic vegetation, while preferring sunny rock verticals but could also be observed on shady spots, where it competes with ivy. Dense overgrowths with Five-leaved ivy threaten and gradually remove the local chasmophytic flora. This spices invasion in the Rusenski Lom valley is still poor but timely monitoring is to be made in order to preserve the vulnerable rock terrains.

***Robinia pseudoacacia* L.** – False acacia, Black locust

False acacia is extremely dangerous invasive species that has occupied huge territories in the country, which has led to suppressing the development and the extinction of natural flora and vegetation as well as to the irretrievable loss of the habitats it has occupied. It is the most widely spread invasive species in Rusenski Lom NP. There are big areas on its territory that are occupied by False acacia cultures established in the close past, which are potential for recovering of the autochthonous for the region oak habitats 91M0 Pannonian-Balkanic turkey oak-sessile oak forests and 91I0* Euro-Siberian steppic woods with *Quercus* spp.

False acacia is also lavishly observed by the road network connecting the settlements in Rusenski Lom NP and particularly lot in the sections Svalenik-Nisovo and Nisovo-Shtraklevo. Falsa acacia also invades in the vicinities and within the boundaries of the settlements together ailanthus and honey locust. Soil conditions change in our country and particularly the increased contents of nitrogen in the places False acacia grows or has been growing, makes the recovery of local vegetation extremely difficult.

***Bidens frondosus* L.** – Bur marigold

Bur marigold grows in moist places by canals, rivers, ditches, mars areas, dams, railways and roads, deserted territories.

As a typical hygrophyte, Bur marigold is observed everywhere in the riparian habitats in the Rusenski Lom river valley. It is most often element of the ground cover in the gallery forests of natural habitat 91E0* Alluvial forests of *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*), but as a whole, it prefers bright sections of the river or riparian forests with lower sloping. Sometimes it might penetrate some more moist sections of habitat 6510 Lowland hay meadows. It grows together with the local species *Bidens tripartitus*. As of now, no dense overgrowths are observed the way they are characteristic of the Danube riverside.

The main vector of Bur marigold distribution appears to be the Rusenski Lom river current, which easily carries the light seeds. Thanks to the awns on its fruits, it attaches and resettles with the help of animals and people, who are secondary species distribution vector.

***Erigeron annuus* (L.) Desf.** – Daisy fleabane

Daisy fleabane is observed in thin forest, meadows, pastures, abandoned arable plots, by settlements, roads, railways, embankments, dikes, riparian terraces.

The species is found in Rusenski Lom Nature Park in the moderately moist riparian grass communities of habitat 6510 Lowland hay meadows. The usual species composition of that habitat includes the species *Festuca pratensis*, *Alopecurus pratensis* and *Arrhenatherum elatius*, but at many spots their participation is significantly reduced, to about 30%, while Daisy fleabane reaches sometimes up to 50%. That typical habitat character worsening could be overcome only with these meadows haymaking regime recovery, which would reduce the participation of annual species. Although less numerous and with lower density, Daisy fleabane is observed in some dry grass communities of habitats 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates *(Festuco Brometalia)* (*important orchid habitats) and 6240* Sub-Pannonic steppic grasslands.

Main vectors of Daisy fleabane distribution appears to be the Rusenski Lom river current and the wind, which easily carry around the light seeds. A secondary species distribution vector is the animals and humans. The carrying around by man could happen by transport means as well as

through contraction/ mixing the seeds of cultural plants with the small and imperceptible seeds of Daisy fleabane.

***Erigeron canadensis* L.** – Canadian horseweed
Canadian horseweed is observed mainly in established by man or broken or a significant extent habitats – deserted, abandoned or uncultivated plots, by roads, by railways, settlements, weed in earthable cultures, vineyards, gardens, crops of forage plants, intensively used pastures, sand dunes, riparian flood terraces, etc.
Canadian horseweed in Rusenski Lom Nature Park is mainly observed in the vicinities of settlements as well as in abandoned arable lands. Regarding natural vegetation, it disturbs, even if to a lesser extent than the Canadian horseweed, the riparian meadows of habitat 6510 Lowlands hay meadows. As a more drought-loving and more draught-resistant, the species could also penetrate dry grass phytocoenoses of habitats 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrate *(Festuco Brometalia)* (*important orchid sites) and 6240* Sub-Pannonic steppic grasslands.
Main vector of Canadian horseweed distribution appears to be the wind. Man and animals can also contribute to the seeds resettlement.

***Paspalum distichum* L.** – Water finger-grass
On Rusenski Lom NP territory, Water finger-grass is observed in natural and semi-natural hydro- and hydrophyte grass coenoses. One of the disturbed habitats is 3150 Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*, which occupies the periphery and the water mirror of the fishponds by the village of Svalenik. The second threatened by the Water finger-grass habitat is 7220* Petrifying springs with tufa formation, which has spot distribution in the Mali Lom river valley. The dense overgrowths with Water finger-grass lead to change in the optimal species composition and local species removal, which worsens the quality of these vulnerable water habitats.

***Phytolacca americana* L.** – American pokeweed
The pokeweed is most often observed in the settlements vicinities, where probably it is grown as garden plant, from where it grew wild. In the Rusenski Lom river valley riparian habitats, it is most often element of the ground cover in the gallery forests of natural habitat 91E0* Alluvial forests of *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*), but, as a whole, prefers brightened river sections or riparian forests of lower sloping. Sometimes the pokeweed could also penetrate habitat 6510 Lowland hay meadows, but, as a whole its invasion is poor and usually, it is observed as a single plant or it grows in small groups.
The main vector of distribution appears to be the birds that feed on the pulpy American pokeweed fruits. Man also contributes to its resettlement as far as it has decorative features and people grow it in their gardens. Mechanical removal before ripening appears to be the safest way for fighting this invasive species.

***Symphyotrichum novi-belgii* (L.) G.L. Nesom (syn. *Aster novi-belgii* L.)** – New York aster, New Belgian astra
New York aster is observed by rivers and canals, in grass communities, the vicinities of alluvial forests, ditches, gardens, abandoned arable plots, railways and roads.

As a typical hygrophyte, New York aster is widely observed in riparian habitats in the Rusenski Lom river valley. It is most often element of the ground cover in the gallery forests of natural habitat 91E0* Alluvial forests of *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*), but as a whole it prefers brightened sections of the river or riparian forests of lower sloping. It might sometimes penetrate in some more moist sections of habitat 6510 Lowland hay meadows. No dense overgrowths, characteristic for the Danubian bank, are observed as of now.
The main vector of New York aster distribution appears to be the Rusenski Lom river current, which can easily carry around the light seeds. The fruit seeds, equipped with flyers, are successfully spread around by the wind. Once it settles on a certain spot, the species is very hard to be removed because of the forming of numerous underground stolons, with which help New York aster covers tightly huge areas.

Table 1.14.2(6). Threatened habitats in Rusenski Lom NP as a result of invasive species penetration.

№	Species	Threatened habitats
1.	*Acer negundo* L.	6510, 91E0*
2.	*Ailanthus altissima* (Mill.) Swingle	6110*, 8210, 91E0*
3.	*Amorpha fruticosa* L.	6510, 91E0*
4.	*Gleditsia triacanthos* L.	6510, 91E0*
5.	*Lycium barbarum* L.	6510, 91E0*
6.	*Parthenocissus quinquefolia* (L.) Planch.	8210
7.	*Robinia pseudoacacia* L.	91I0*, 91M0
8.	*Bidens frondosus* L.	6510, 91E0*
9.	*Erigeron annuus* (L.) Desf.	6210*, 6510
10.	*Erigeron canadensis* L.	6210*, 6240*. 6510
11.	*Paspalum distichum* L.	3150, 7220*
12.	*Phytolacca americana* L.	6510, 91E0*
13.	*Symphyotrichum novi-belgii* (L.) G.L. Nesom	6510, 91E0*

1.14.2.2.3. General measures for control and restriction of ligneous and shrub invasive species impact upon natural ecosystems and local species:

The major way for fight is felling with subsequent invasive species' logs and roots uprooting and mandatory conduction of long-term monitoring.

The long-term annual monitoring conduction and on its base, annual agro-technical and forestry actions (felling, uprooting, inhibiting through monthly annual shoot cutting) to fight and restrict invasive species distribution.

The following principles are to be observed when conducting forestry actions to fight the ligneous invasive species (at the availability of established forest cultures and wind-protecting belts):

It is necessary that the established mono-cultures of common locust and honey locust, through gradual fellings, the variety of autochthonous ligneous, shrub and grass vegetation to be smoothly restored. It is recommendable the remaining (branches, loppings and others) from the

forestry activities not to be collected and set on fire because of common locust and honey locust reproduction specific (is heated, the seed cover cracks and germinating is spontaneous, thus, these species have built mechanism for survival in the often fires in their areals of distribution), and this way to restrict their seed production.

It is recommendable the conducted fellings to be planned the way so autochthonous ligneous species be tolerated.

It is recommendable uprooting the invasive ligneous species, part of the affected area not to be afforested but to be left to natural succession. That would contribute to increasing structural and species variety on the territory.

The plantations changes should not be drastic regarding ensuring time for adaptation for the rest of the organisms. This means low fellings intensity (up to 20-25 %), concentrated on small areas or groups. Oak trees (where they exist) to be held at root longer in order to guarantee their future participation in the stand of trees. About 8-10 % of dead woods to be maintained while conducting forestry activities.

Not to allow activities (including forestry ones) that increase anthropogenic fragmenting on the territory. Planning roads and infrastructure, it is necessary to keep the integrity of landscape to the maximum.

A buffer zone of at least 15 m to be formed around the constant water currents, where invasive speciesfellings and uprooting logs to be conducted every year with mandatory long-term monitoring conduction.

The established cultures to be managed with the goal to conduct smooth and long-lasting transformation and returning of original species. This means conduction of regular forestry measures, which support and preserve the appeared representatives of original ligneous flora.

1.14.2.2.4. General measures for control and restriction of grass invasive species impact upon natural ecosystems and local species:

The major way to fight the annuals in riparian meadow communities is by restoring the hay-mowing regime, which is to be done annually. This would prevent from forming new seeds and would lead to the gradual exhaustion of seed reserve accumulated through the years.

Mechanic removal of perennial species such as New York aster, American pokeweed and the Water finger-grass, is labour-consuming approach and not much effective but concerning the impossibility to use preparations for chemical fight in the protected territories, this method remains the only acceptable one.

Conduction of long-term annual monitoring of the areas affected by invasive grass species.

Map № 11 Invasive species has been elaborated to the present plan

1.14.3. Medicinal plants

1.14.3.1. Legal framework

The Medicinal Plants Act provisions are applies for species that are included in the act's Annex. Some important medicinal and officinal plants are left outside its scope (dog rose, nettle /Utica/, hop /cumulus/, etc.), and some of them are under the protection of the Biological Diversity Act. These are species and genuses, included in BDA Annex № 4, which regulates their controlled use from nature.

356 species of medicinal plants from the MPA Annex are found on the Rusenski Lom NP territory, or around 35% of the species observed in the park, are medicinal. They belong to 79 families. The Composite (Asteraceae) family, the Mint (Lamiaceae) family and the Legume (Fabaceae) family have the most representatives, with respectively 43, 42 and 27 species.

The studies held on medicinal plants populations status showed that there are conditions in the region for increasing the yield of some medicinal plants from the natural habitats – for example, fanwort, thyme, linden, common hawthorn and others. The plan should regulate restrictions for some species of low reserve, particularly for medicinal plant species that are protected and are subject of the BDA.

1.14.3.2. Medicinal plants regiments of use

1. Collection of medicinal plants species under the protection of the Biological Diversity Act (Annexes № 2 и № 3) is prohibited:

№	Family	Taxon	Bulgarian name
1	Orchidaceae	*Himantoglossum jankae*	Пърчовка - Parchovka /Lizard orchid/
2	Ranunculaceae	*Anemone sylvestris*	Горска съсънка - Gorska sasanka /Snowdrop anemone/

2. The taxons included in BDA Annex № 4 are under regiment of conservation and regulated use from nature.

№	Family	Taxon	Bulgarian name
1	Apiaceae	*Bupleurum* sp. div.	Rod Uroka /Род Урока/
2	Asparagaceae	*Asparagus* sp. div.	Rod Zaycha syanka /Род Зайча сянка/
3	Asparagaceae	*Ruscus hypoglossum*	Podezichen zalist /Подезичен залист/

4	Asteraceae	*Echinops* sp. div.	Rod Chelyadnik /Род Челядник/
5	Iridaceae	*Crocus* sp. div.	Rod Minzuhar /Род Минзухар/
6	Liliaceae	*Lilium martagon*	Petrov krast /Петров кръст/
7	Liliaceae	*Polygonatum odoratum*	Mirizliva momkova salsa /Миризлива момкова сълза/
8	Liliaceae	*Scilla bifolia*	Obiknoven sinchets /Обикновен синчец/
9	Orchidaceae	*Orchis* sp. div.	Rod Salep /Род Салеп/
10	Poaceae	*Stipa* sp. div.	Rod Koilo /Род Коило/
11	Rosaceae	*Prunus fruticosa*	Hrastovidna vishna /Храстовидна вишна/

Considering the populations status and the available reserves for the species from BDA Annex № 4, two regiments of use are arranged for the time of the Management Plan operation:

Prohibiting – *Ruscus hypoglossum*, *Lilium martagon* and *Orchis* sp. div.

Restrictive – for all the rest taxons of Annex № 4 the use of resources to be regulated according to reserves and in compliance with the provisions of BDA and MPA.

3. The following medicinal plants observed singly, in single deposits or of very low reserve are under prohibiting regime of use on Rusenski Lom NP territory:

№	**Bulgarian name**	**Latin name**	**Family**
1	Debryanka Evrpoeyska /Дебрянка европейска/	*Sanicula europaea*	Apiaceae
2	Enyovche aromatno /Еньовче ароматно/	*Galium odoratum*	Rubiaceae
3	Zlatista paprat /Златиста папрат/	*Ceterach officinarum*	Aspleniaceae
4	Zarnika Slabitelna /Зърника слабителна/	*Rhamnus cathartica*	Rhamnaceae
5	Laykuchka vlaknesta /Лайкучка влакнеста/	*Matricaria trichophylla*	Asteraceae
6	Medunitsa meka /Медуница мека/	*Pulmonaria mollis*	Boraginaceae
7	Momina salsa /Момина сълза/	*Convallaria majalis*	Liliaceae
8	Platantera zelenotsvetna /Платантера зеленоцветна/	*Platanthera chlorantha*	Orchidaceae
9	Runitsa grudesta /Руница грудеста/	*Phlomis tuberosa*	Lamiaceae
10	Skorusha /Скоруша/	*Sorbus domestica*	Rosaceae

4. The Medicinal Plants Act's provisions regulate the sustainable use of the medicinal plant species resources that are not under the regimes of items 1, 2 and 3, and 4.

1.14.3.3. Distribution of medicinal plants in Rusenski Lom NP

Medicinal plants distribution is reviewed according to the habitat they are attached to, where the units of natural habitats from BDA Annex 1 are used. Some of the species are observed in more than one habitat but for convenience the one they are seen most often is adopted.

1. About 27% (96 species) of the medicinal plants belong to the group of the so called weed or ruderal species and their distribution is concentrated mainly in the settlements vicinities and around arable lands, or these are places more or less influenced by human activity. The species from the following genuses are with good reserves mugwort (*Artemisia* spp.), goosefoots (*Chenopodium* spp.), hedge mustard (*Sisymbrium* spp.) and cottonthistle (*Onopordum* spp.) as well as greater celandine (*Chelidonium majus*), danewort (*Sambucus ebulus*), common mallow (*Malva sylvestris*) and hemlock (*Conium maculatum*). Some species that have their application for personal uses by the local inhabitants are found around the settlements and the arable land are mayweed (*Matricaria trichophylla*), common chicory /blue daisy/ (*Cichorium intybus*), broadleaf plantain (*Plantago major*), field eryngo (*Eryngium campestre*), etc.

2. The dry grassy places that belong to natural habitat 6210 are the natural habitats with the greatest conservation value for conservation of the natural medicinal plants deposits. There about 25% (87 species) of medicinal plants are observed. Thyme (*Thymus glabrescens*) and the species from the milfoil genus (*Achillea* spp.) and germander (*Teucrium* spp.) have the greatest reserves. Important species that have application for personal uses of local people are distributed in these grass habitats, such as the St John's wort (*Hypericum perforatum*), oregano (*Origanum vulgare*), wild basil (*Clinopodium vulgare*) and others, as well as important nectiferous plant as Trevisto zvezdiche (*Dorycnium herbaceum*), species from the clover genus (*Trifolium*), etc.

3. The third most important habitat is the Moesian silver lime woods (code 91Z0), where about 13% (45 species) of Rusenski Lom NP medicinal plants are observed. The linden forests contain the main resources of the so called forest-fruit ligneous and shrub species – cornel-tree, chequers, sorb tree, hazelbush, etc. The potential of obtaining linden bloom is also high. Some types of medicinal plants under restrictive of prohibiting regime are also distributes in the linden forests - *Sanicula europaea*, *Galium odoratum*, *Convallaria majalis*, etc.

4. About 11% (38 species) of medicinal plants are distributed in the alluvial riparian forests of habitat 91E0, for which limiting factor appears to be the duration of spring waters standing. Great reserves in these forests have the traveller's joy (*Clematis vitalba*) and the European dewberry (*Rubus caesius*). Some species that are not included in the MPA Annex like the common grape vine (*Vitis vinifera*) and common hop (*Humulus lupulus*) also have significant resources.

5. About 10% (36 species) of the medicinal plants in the Park are observed in the riparian hay meadows that belong to habitat 6510. The species of the genuses clover (*Trifolium* spp.), dock (*Rumex* spp.) and mint (*Mentha* spp.) have big reserves in these communities.

6. Hygro- and hydrophyte communities embracing the swamps, the artificial reservoires and fishponds and their riparian parts, belonging to habitat 3150 (Natural eutrophic lakes with *Magnopotamion* or *Hydrocharition*-type vegetation), where only 2 species are found – common duckweed (*Lemna minor*) and lesser bulrush (*Typha angustifolia*) are the poorest regarding availability of medicinal plants.

The conservation of Rusenski Lom NP natural habitats and the maintenance of favorable conservation statute (main objective of the Plan) increase the stability of their components like the medicinal plants, and guarantee the sustainable use of resources in the natural habitats.

Climate changes have impact on all vegetative species to a different extent. The suggested softening and adapting measures are presented in the present plan's Section 4, in a separate project, **Action plan for unforeseen situations, including Measures for climate change consequences over coming.**

Annex №1.14.3 *List of the medicinal plant found in Rusenski Lom NP*

Map № 13 Medicinal plants is elaborated to the present plan

1.15 FAUNA

The information on fauna from Management Plan 2005 is updated, specified and supplemented in the present plan. The newly entered information from the following sources is analyzed:

Activities on building the European ecological network Natura 2000 – documentation on announcing the Natura 2000 zones for birds and the habitats Lomovete, project Mapping and Defining the Conservation State of Natural Habitats and Species - Phase I and integrated management plan of Protected zones BG0000608 Lomovete for preservation of natural habitats and of wild flora and fauna and BG0002025 Lomovete for preservation of wild birds;
Rusenski Lom NPD projects;
Explorative and direct conservation activities of scientific and non-governmental organizations;
National action plans for animal species, where the data from the plans in operation, the plans with expired term of operation and he ones in process of adoption are taken into consideration;
Data from own observations on park's ornithofauna, completed in the period of 2007-2019.
Changes in national legislation, result of birds and habitats directives transponation have occurred in the period after Management Plan 2005 adoption. A new edition of the Red Data Book of the Republic of Bulgaria with revised lists and status of the included taxons has been prepared. New views about the systematics of fish, amphibians and reptiles are imposed as a result of scientific studies. Some of the observed in the park taxons of amphibians and reptiles considered earlier for sub-species, are raised to the rank of species.

Updated lists of the particular groups of animals, observed in the park, have been elaborated. New species are included, which is result of accumulating of additional scientific information. Few species (invertebrates, fish and mammals), considered probable for the park, are excluded from the lists. The conservation status changes have been reflected in compliance with the national legislation and the Red Data Book of the Republic of Bulgaria.

1.15.1. Invertebrate animals

The Rusenski Lom NP territory has not been object of extensive faunistic studies regarding invertebrate animals up to now and the information about this group of animals is comparatively limited. Analyses of the ecological groups of invertebrates observed in the park and presence at level taxons of high rank have been made in Management Plan 2005. No changes have occurred regarding that information, so it is up to date. Information about 9 species of invertebrates with conservation status – 7 species of beetles, one species of a butterfly and one species of an aunt is included at species level. As result of the activities on building the European ecological network Natura 2000 in Bulgaria, information for 9 more species of invertebrates with conservation status entered (species included in Directive 92/43 of the EU EC):

2 species of beetles – unicorn bolbelasmus (*Bolbelasmus unicornis*), hermit beetle (*Osmoderma eremita*);
4 species of butterflies - *Dioszeghyana schmidtii, Lycaena dispar, Vertigo moulinsiana, Euplagia quadripunctaria;*
1 species of a dragonfly – green gomphid (*Ophiogomphus cecilia*)
1 species of water snail – striped nerite (*Theodoxus transversalis*) and
1 species of freshwater mussel – thick shelled river mussel (*Unio crassus*).
Initially, the beetle Alpine longhorn beetle (*Rosalia alpina*) has been included in the standard Natura 2000 zone BG0000608 Lomovete form. As a result of the work on the project Mapping and Defining the Conservation State of Natural Habitats and Species - Phase I, a standpoint is expressed that there is lack of appropriate habitats for the species in BG0000608 Lomovete and it is to be excluded from the standard form to the finding or proving material. The butterfly Clouded Appolo (*Parnassius mnemosyne*) is pointed as probable for the park but there is lack of direct data for the species presence.

Updated list of the invertebrate animals observed on Rusenski Lom NP territory is included ***Annex №1.15.1.***

The invertebrate animals included in **Annex №1.15.1** have comparatively wide distribution on national scale as well as at EU level. These are sensitive species regarding natural habitats and are indicatory for the environment status and indirectly, for the state of the rest of invertebrate animals species with similar biology.

Assessment of the conservation status of 10 vertebrate animal species **(Annex №1.15)** is conducted within the frame of the project Mapping and Defining the Conservation State of Natural Habitats and Species - Phase I. The conservation status general assessment for three species (*Euplagia quadripunctaria, Lycaena dispar* и *Dioszeghyana schmidtii*) is "Favorable" and for one species (*Vertigo moulinsiana*) is "Unfavorable-Unsatisfying" out of the 4 species of butterflies included in the assessment. Regarding the assessed all 4 species of beetles (*Bolbelasmus unicornis, Cerambyx cerdo, Lucanus cervus* and *Morimus asper funereus*), the conservation status assessment is "Unfavorable-Unsatisfying". This assessment is, above all, reflection of the forest habitats status, with which the pointed species of beetles are associated. The conservation status assessment is "Unfavorable-Unsatisfying" with the hydrobionts striped nerite and thick shelled

river mussel. These assessments are passing ones, as of 2012, based on limited field data and are expected to experience changes with their update.

The thick shelled river mussel's state is indicative of the quality of water and riparian habitats in Polomieto, including Rusenski Lom NP. According to the distribution models, elaborated under the above mentioned project the thick shelled river mussel is to be observed in all Polomieto rivers. Only two shells of the species, without living specimen, have been found at field mappings in 17 target transactions.

Studies of the river conditions in the Lomovete zone are completed within the framework of project LIFE12 NAT/BG/001011 Conservation and restoration of Natura 2000 hemophilic species and their migration ways in key protected zones in Bulgaria, implemented by WWF in partnership with Rusenski Lom NPD in the period 2015-2017. One of the goals of these studies is determining the possibilities for restoring the species Thick shelled river mussel in the zone through transfer of specimen from other rivers from the Danube river basin, where there are preserved populations of that mussel. It is indicated in the study's results that „because of the strong pollution with biogenic substances and of the high water turbidity caused by the river banks erosion, the Rusenski Lom river, within the limits of Lomovete PZ, through most of the year, is inappropriate for habitation by any of the target species under the project (including the thick shelled river mussel). Nitrates are stably over 20 mg/l, which is exceeds the limits of all studied species. The current in most of the river is from slow to moderate. Oxygen contents is comparatively low – 5-7 mg/l. The bottom is covered with thin layer of clay in most sections, and pollution is the limiting factor with the sections of stony bottom and comparatively high transparency".

Regarding fauna in the park, invertebrate animals are the group with the highest risk of non-local species penetration, including invasive species. Water zoocoenoses are particularly vulnerable. There is no data as of today on which grounds to assess that risk.

1.15.2. Vertebrate animals

1.15.2.1. Fish (freshwater ichthyofauna)

Fish is comparatively the most poorly studied group among the vertebrate animals observed in the park. 25 fish species are indicated in the Management Plan 2005, only 10 of which with direct data for presence in the park. Finding the species in neighboring river sections or in literature sources is the grounds for most of the fish species to be included in the park's species list. Kessler's gudgeon (*Gobio kessleri*) is also indicated in the park's species list, and, while the species had been probably extinct yet before the Management Plan 2005 elaboration.

New information about additional fish species in the Lomovete zone that could be accepted for probable for the park's territory has entered as a result of the work on Natura 2000 European ecological network.

A revision of the list with the fish species in the park has been made, where systematics changes have been reflected. Some species, indicated for neighboring territories, are excluded, as well as some probably extinct species. New species from Directive 92/43 of the EU **(Annex №1.15.2.1)** are included. Because of insufficient information, the status of practically all fish species in the park is relative and needs additional on site verification.

Characteristic of target fish species habitats has been completed and the suitability of potential places for their reintroduction has been assessed in the period 2015-2017 under project LIFE12 NAT/BG/001011 Conservation and restoration of Natura 2000 rheophilic species and their migration ways in key protected zones in Bulgaria. The following are among the target fish species - Kessler's gudgeon (*Romanogobio kessleri*), Danube gudgeon (*Romanogobio uranoscopus*), European bullhead (*Cottus gobio*), Stone loach (*Barbatula barbatula*), European bitterling (*Rhodeus amarus*), Bolkan loach (*Cobitis elongata*) and Golden loach (*Sabanejewia balcanica*). The Lomovete zone is one of the assessed sites. The summarized conclusion about these species is similar to the one for the Thick shelled river mussel (see item 1.15.1.) and indicates that the conditions in the zone as of now are unfavorable for conducting reintroductions. An analysis of the migration barriers in Polomieto that have direct or indirect impact on all fish species in Rusenski Lom NP has been completed as a part of the pointed project.

Direct conservation activities with effect on the fish in the park, conducted within the mentioned project, are: two migration barriers removal by the village of Cherven and by the village of Koshov (old water-mills water-catches), construction of fish pass of water-catch for fishponds by the village of Basarbovo and recovery of river habitat with gravel bottom by the village of Ostritsa.

Assessment of 7 fish species conservation status **(Annex №1.15)** is completed within the framework of project Mapping and Defining the Conservation State of Natural Habitats and Species - Phase I. The conservation status assessment of 5 of these species is „Unfavorable-Unsatisfying“, which is related to the water quality, river beds correction, riparian vegetation destruction, etc. Spined loach (*Cobitis taenia*) and Mediterranean barbel (*Barbus meridionalis*) are with conservation status assessment „Favorable“.

Two non-local, invasive fish species are found in the park's region – stone moroko (*Pseudorasbora parva*) and pumpkinseed (*Lepomis gibbosus*). There is no data on the extent of these two species contribution on the autochthonous ichthyofauna.

1.15.2.2. Amphibians and reptiles

The scientific data available to the period Management plan 2005 was prepared allowed the elaboration of comparatively extensive lists of the amphibian and reptiles species within the park's limits. No changes have occurred in the species list regarding the reptiles.

A list of the reptile species on the territory of Rusenski Lom NP with updated conservation status and names is included in ***Annex №1.15.2.2.***

4 new taxons of amphibians are added to the park species' list – Syrian spadefoot (*Pelobates syriacus balcanicus*), Danube crested newt (*Triturus dobrogicus*), Smooth newt (*Triturus vulgaris*) and edible frog (*Pelophylax kl.esculenta*) – **Annex №1.15.3** on the grounds of sampling and field data under project Mapping and Defining the Conservation State of Natural Habitats and Species - Phase I.

Regarding the reptiles observed on the territory of the park, the species for which Polomieto appears to be isolated deposit, being situated far northwards from their areals' main parts, are of particular interest. Kotschy's gecko (*Cyrtopodion kotschyi*) and the European legless lizard (*Pseudopus apodus*) are such species. It is the only isolated deposit in North Bulgaria for the Kotschy's gecko (except a narrow strip along the Black sea coast by the city of Varna). This is also the most Northern deposit for that species on the Balkan peninsula. As for the European legless lizard, Mali Lom river valley appears to be the only known deposit of the species in Northern Bulgaria (except a narrow strip along the Black sea coast), but after 1964 the species has not been confirmed. The Mali Lom valley is studied many times, including by herpetologists. Considering that this is species comparatively easily accessible for finding in the nature and having in mind the long period without data, it can be concluded the species is extinct for this former deposit of its off for the entire region of Polomieto.

The blotched snake (*Elaphe sauromates*) is another rare species of problematic statute. This species is considered to be extinct for the region of Polomie, but having in mind its hidden way of life, this statute is to be accepted relatively. According data from Rusenski Lom NPD, in 2009 blotched snake was found in some food left-overs of an Egyptian vulture nesting on the park's territory. This is an indicator the blotched snake is probably still observed in the region, including within park's limits, but is too scanty.

After adopting Management Plan 2005, outside the work on Natura 2000, no target studies and conservation activities directed to amphibians and reptiles have been undertaken. Two of the park administration's and its partners' activities have probably has positive impact on amphibians. These are the activities on restoring Rusenski Lom river by the village of Ivanovo and creating a wetland in the Batakliyata countryside in relation to ruddy shelduck resettlement in the park.

The lack of target data does not allow assessing the trends regarding the number and status of these groups of animals populations.

The management of fish-breeding basins situated within the park's limits is a specific problem for the park's management related to amphibians. These are artificially created habitats that substitute the natural wetlands (river floods, old river beds, etc.). The observed fish-breeding places abandoning has two-way impact on amphibians. In some cases (the fishponds by the village of Ivanovo) the fishponds abandoning leads to their total drainage and loss of amphibian's habitats. In the rest of the cases, fish-breeding basins abandoning leads to the formation of water sites with changeable water regime, lavish water plantation and poor predators (mainly fish) press, which favors amphibians.

The presence of the invasive species Red-eared slider (*Trachemys scripta elegans*) is possible on the territory of the park. The species should be subject of target monitoring.

1.15.2.3. Birds

Updated list of the birds in Rusenski Lom NP with included 214 species is elaborated ***Annex №1.15.2.3.***

The list comprises all bird species about which there is information they have been found within the Rusenski Lom NP limits or within its adjacent territories.

18 species are defined as species of highest rank of vulnerability: Egyptian vulture (*Neophron percnopterus*), black stork (*Ciconia nigra*), booted eagle (*Hieraaetus pennatus*), lesser spotted eagle (*Aquila pomarina*), short-toed snake eagle (*Circaetus gallicus*), long-legged buzzard (*Buteo rufinus*), osprey (*Pandion haliaetus*), Eurasian eagle-owl (*Bubo bubo*), European roller (*Coracias garrulus*) and middle spotted woodpecker (*Dendrocopos medius*). 8 bird species that have been typical for Polomieto but extinct for permanently in the second half of the 20th century, also belong to this group. These are cinereous vulture (*Aegypius monachus*), griffon vulture (*Gyps fulvus*), Eastern imperial eagle (*Aquila heliaca*), stock dove (*Columba oenas*), lesser kestrel (*Falco naumanni*), saker falcon (*Falco cherrug*), golden eagle (*Aquila chrysaetos*) and ruddy shelduck (*Tadorna ferruginea*). Other 50 bird species are identified as species of medium vulnerability. These species are conditionally accepted for being less vulnerable because of higher ecological flexibility, smaller individual nesting territories or more numerous populations but the threats are identical to the described above for the species of high rank of vulnerability.

The strongest negative trends regarding distribution and number are reported with the birds out of all animal and plants species in Rusenski Lom NP. As of 2019, there is no data of available birds in the park, with which positive changes are reported towards their status as of 2005. General trend for the birds is towards population's reduction, including for species like the black stork and the long-legged buzzard, which were in favorable conservation status as of Management Plan 2005 elaboration.

The day birds of prey are the most affected. The observed changes in this group populations could be defined as catastrophic collapse. The Egyptian vulture status is an indicative example for the occurred hard changes. As of the period 2000 – 2004, when the first management plan was elaborated, Polomieto is the second most important nesting deposit for the species around the country. On the grounds of direct field data from the entire territory, the population is assessed to 7-9 nesting braces, 3 of which are within the limits of the park (Shurulinkov, P. & Nikolov, I. 2005). As of the period 2003 – 2007, the number is assessed to 6-7 nesting braces (Kurtev, M. and others, Action plan for the Egyptian vulture preservation in Bulgaria 2009 – 2018). The reports on the species status elaborated by Rusenski Lom NPD and partners during the period of the Management Plan 2005 operation point species number sustainable reduction. According to BSPB data, in 2012 the braces are only two. In 2013 there is only one brace and the male bird disappeared in the period of hatching and as a consequence nesting is compromised and unsuccessful. In the following 2014, there is only one female bird, hatched

and ringed in 2010 in a neighboring nesting territory. From 2015 to 2020 including, there is one reproducing brace, set by the same birds.

Series of measures for preservation of the Egyptian vulture are undertaken in the period of the first management plan operation. In 2007 the construction of the first ground for artificial feeding of the species by the village of Koshov started. Further on, two more grounds are constructed – by the village of Tabachka and the village of Nisovo. Soon after the construction, the ground by the village of Tabachka is abandoned, because of difficulties with the maintenance and the extinction of the birds. Later, the maintenance of the grounds by the villages of Nisovo and Koshov is also halted. The ground by the village of Koshov functions longest, with actual activities, being started in 2008. This is probably the reason for the last Egyptian vultures, including the last nesting braces, to be concentrated apparently in the region of the village of Koshov.

Other direct conservation activities for this species, conducted in the park, are:

- Individual feeding by the birds' nests, which continues also today but is irregular, supported also within LIFE projects of BSPB in the period 2012-2019;
- Releasing 3 zero-aged Egyptian vultures from hack;
- Making electricity poles safe;
- Nests guarding;
- Young birds medical treatment;
- Limiting the threats from poisons use, etc.

The conducted measures cover part of the identified major threats for the Egyptian vulture. The threats with habitats and food-base loss are not addressed as of now.

The species would have extinct the Polomie yet before 2015 without the conducted up to now measures, considering the population crisis on international scale.

The restoration of Egyptian vulture in the park and in Polomieto as a whole is possible and should be major priority in the Rusenski Lom NPD work. Considerable experience is accumulated up to now as well as good base on practically all aspects of species protection in the region. Restoration of the started activities and their continuation is necessary.

Observations indicate that poisons use is the main limiting factor for the Egyptian vulture in the region. Up to now, the activities on limiting the threats from using poisons have lagged behind compared to the others, and they are of crucially significant importance and are to be a focus in the future work. The so called postponed release of birds raised in artificial circumstances is an additional measure, which hasn't been applied yet in Rusenski Lom NP. It is a comparatively successful method, where 1-year old and 2-year old birds are most often released.

The activities on the Egyptian vulture preservation and restoration directly and indirectly support the whole group of day birds of pray.

1.15.2.4. Mammals

The mammals species richness in Rusenski Lom is remarkable. A list of 69 mammal species is elaborated for the region of the park in Management plan 2005. 2 species are taken out and 3 new species are added during the revision of the list in 2019, with which the total number of species is increased to 70 (**Annex №1.15.2.4**) – 74% of the wild mammals species observed in Bulgaria. The completed revision reports change of the available scientific information and does not reflect the factual change of species richness in the period of Management plan 2005 operation. 2 species of rodents – bank vole (*Clethrionomys glareolus*) and European pine vole (*Microtus subterraneus*) are excluded from the park's species list, because of lack of direct data for presence in the region and taking into consideration their distribution in Bulgaria. The following species are added to the list: grey dwarf hamster (*Cricetulus migratorius*), Mediterranean water shrew (*Neomys anomalus*) and Nathusius' pipistrelle (*Pipistrellus nathusii*).

Mammals study is one of the focuses of the work during the period of Management plan 2005 operation. The most significant scientific-exploration activity that has been started in the period of Management plan 2005 operation, is the establishment of an international scientific-exploration field station for bats study Siemers in the village of Tabachka. The station is found in 2007 by dr. Björn Siemers and is result of a partnership between Max Planck Institute for Ornithology and Rusenski Lom NPD. The field station main activity is to investigate fundamental questions on the sensory ecology, behavior and biology of bats (as well as of other animals). The station activity provides scientific information necessary for the preservation of local bats and ecosystems. 24 bat species are known for the region of the park (out of 29 for the country) as result of the studies.

Studies on the status of several mammal species related to the grass communities in the part are conducted within the project Conservation of Dobrudzha (medium) hamster, ground dormouse, European ground squirrel and Southern birch mouse in the region of Rusenski Lom Nature Park. The project has provided the base for important conclusions regarding the trends in the conservation status of key for the park mammal species.

As for the mammals, the most significant are the changes in the status of species related to open grass habitats. The status of an indicatory for this ecological group species, European ground squirrel (*Spermophilus citellus*), is an indication for the trends. Significant reduction of the occupied areas and reduction of populations' density is reported in all studied deposits. The species is not found in several of the known deposits and is most probably extinct.

Map №14 FAUNA is elaborated to the present plan.

CULTURAL AND SOCIO-ECONOMIC CHARACTERISTIC

1.16 TERRITORY USE AND SOCIO-ECONOMIC ASPECTS

1.16.1. Population and demographic characteristic.

1.16.1.1. Demographic characteristic and the trends of employment of the population of the settlements bordering the NP.

The data below is taken from the municipal development plans.

Municipality of Ivanovo - http://www.ivanovo.bg/

The following villages bordering the Rusenski Lom NP belong to the municipality of Ivanovo:

The village of Ivanovo has population of 854 people.
The village of Koshov has population of 315 people
The village of Cherven has population of 239 people
The village of Tabachka has population of 110 people
The village of Shtraklevo has population of 2714 people
The village of Nisovo has population of 110 people
The village of Svalenik has population of 887 people

Municipality population's ethnic structure: Bulgarians predominate (83,5 %), followed by the Turkish (9,4 %), Romas (5,9 %)
The population by sex is as follows: males - 49,2 %; females - 50,8 %
4 primary schools and 1 all-day kindergarten with 5 branches function in the municipality of Ivanovo.

There is a firm trend of population reduction in the municipality and negative population growth.
The objective demographic process for reduction of the number of children in school age would continue in the next years, too.
In two of the settlements, the village of Ivanovo and the village of Shtraklevo, student of Roma origin predominate, 80-90%. Low literacy of that group arises serious problems for its integration in society.
Educational institutions on the municipality territory are situated in the bigger settlements.

Municipality of Vetovo - http://vetovo.com/

The village of Pisanets has population of 365 people

The main part of the population is active – 60% (for 2012) of the municipality of Vetovo total population, where the distribution by sex is as follows - 65,7% of the men are in active age, and 54,3% is the percentage of active women

The most numerous ethnic community in the municipality of Vetovo is the Turkish one – 53,4 %. Bulgarian ethnicity is the second most numerous in the municipality – 27,8%. The third most numerous ethnicity on the territory of the municipality is the Roma one – 15,4 %.

The age structure of population in the municipality of Vetovo is favorable from point of view of forming labour resources. The conditions for local socio-economic progress in the municipality of Vetovo would improve in the next years if measures for population employment are introduced.

1.16.1.2. Trend in employment after 2005

The settlements, which land is within the limits of Rusenski Lom NP, are the following:

from the Municipality of Ivanovo - Ivanovo, Koshov, Cherven, Svalenik, Shtraklevo and Nisovo

Most of the active population is employed in agriculture. The unemployment average level in 2019 reduces compared to 2018. The average unemployment rate in the Municipality of Ivanovo for the first nine months of 2019 is 6,8%. The trend is the labour force demand, mainly on the primary labour market, to be determined by number of factors like:

1. Absence of investments and discrepancy of unemployed individuals qualification and the requirements, because of which the share of subsidized employment increases.

2. The unemployed people low level of education and qualification is a serious obstacle for their realization on the labour market.

The trend agricultural producers to use the provided possibilities for financing through the Rural Regions Development Programme is positive.

Still the practice of employers to invest in young workers and officers education and qualification hasn't established. Great part of the young people are demotivated by the offered payment as well as by the work conditions. Young people turn into potential employment resource in the grey part of economy. The insufficient professional skills and practices in actual environment and the impossibility for professional choice of students since early age force part of the people finishing school to start "the first possible work", most often in the field of services, trade and servicing, without requirements towards the conditions of work.

from the Municipality of Vetovo - Pisanets

The stable negative population growth of the Municipality of Vetovo for the period 2007- 2012 finds expression in drop of the three groups of population's number, distributed by age - under, over and within active age. As of 2012, 59,9% of the population is in active age (7324 individuals), under active age - 14,7% (1800 individuals) and over active age respectively 25,2% (3086 individuals). The percentage of population reduction for the reviewed period in „over active age" is about 12,9%, and for the group of „in active age", it is about 22,2%.

1.16.1.3. Current activities of population (in the settlements, which land belong within the Park's limits), related to the NP and to the tourism development in the region and the Park's conservation and maintenance.

A. Restaurant business

There is one categorized place for eating with a capacity of 30 seats, where 2 to 3 persons are employed, in the village of Pisanets, Municipality of Vetovo.

There are two categorized places for eating in the village of Ivanovo out of the places of interest (with 50 seats each), and one in Cherven (50 seats) and one in Shtraklevo (30 seats), where the employed people are between 6 and 10 in number. In addition, there are categorized places for eating as part of 5 of the places for accommodation listed below, their staff been reported in item B.

B. Hospitality business, including guest houses

There is one categorized guest house, Slanchevo, in the village of Pisanets, with which between 2 and 4 people are employed.

There are 9 categorized places for accommodation in the settlements of interest in the Municipality of Ivanovo (4 in the village of Ivanovo, 2 in the village of Koshov and 1 in each of the villages of Cherven, Tabachka and Nisovo). The employed local individuals are between 25 and 27 individuals.

C. Guideship

Ministry of Tourism maintains official registry of individuals, who have the right to exercise the professional activities of Tour Guiding and Mountain Guiding in Bulgaria. There are no people registered in some of the eight listed above villages, present in these registries as tour guides or mountain guides. The closest settlement, where there are registered ones, is the city of Ruse – 61 registered tour guides and 3 registered mountain guides. Trainings for guides for 12 representatives of the local communities are conducted under a NPD's project, financed by the Operational Programme Environment 2007-2013, but they do not practice guiding as of now.

D. Occupations related to traditional crafts and souvenirs production

According to available data, there are no people engaged with traditional crafts and souvenirs production in the eight villages around Rusenski Lom NP. Souvenir items are exhibited by the National Architecture-Historical Reserve Ivanovo Rock Churches but the authors live in the city of Ruse. Stands with local products are organized also during various events in the Park, but it could not be actually classified as „souvenirs production".

E. Occupations related to animation and interpretation

We can conditionally define as such the participants in the groups for authentic folklore to the community homes/chitalishta/ in the villages of interest. „Conditionally", because they possess potential for folklore and other type of demonstrations but they do them now for official guests or for participation in folklore festivals. The number of these people could be defined like totally some 160 individuals.

1.16.2. Settlements network

The up-to-date urban-planning solutions for the settlements and the villa zones along the Park's boundaries:

http://ivanovotsu.bulplan.eu/map_default.phtml?mode=public

1.16.3. Technical infrastructure, built-up areas and buildings.

1.16.3.1. Electrification, water supply and sewerage.

No sites of electrification, water supply and sewerage belong to the park's territory. Such sites are situated on the border of the park and the settlements.

The company MAKROPLAN EOOD has the assignment to map all sites of technical infrastructure in a separate procurement.

The sites according to the company MAKROPLAN EOOD data are presented in **Annex 1.16.3.1**.

1.16.3.2. Transport infrastructure

Hiking trails and cart-ways cross the Park's territory. There are remains of an old Roman road covered with slab-stones along the Cherni Lom river valley between Cherven and Koshov.

Part of the asphalt road from Ivanovo to the Rock churches and parts of the asphalt roads connecting Nisovo with Shtraklevo and Katselovo are also within the Park's limits.

Possibilities for access with automobile transport to the Rock churches by the village of Ivanovo and to the Middle Ages town of Cherven along fourth-grade roads exist, which finish with parking lots for 15 cars each.

The provision of access for visitors to Rusenski Lom NP is through the main road motorways E-85 (Ruse-Byala-Sofia) and E-70 (Ruse-Razgrad-Varna) and the railways Ruse-Sofia and Ruse-Varna. The second-, third- and fourth-class roads of the Republican road network also serve as communication connections, connecting Shtraklevo-Nisovo-Svalenik; Pisanets-Svalenik; Nisovo-Katselovo; Ruse-Basarbovo-Ivanovo-Koshov-Cherven.

There is a railway and railway-station in the village of Ivanovo.

Map № 2 Existing road infrastructure has been elaborated to the present plan

1.16.3.3. Hiking and tourist trails.

Available hiking and tourist trails, available recreation sites are presented in **Map №18 Tourist routes and sites.**

1.16.3.4. The constructed specialized routes (informative, interpretative, etc.) are described in item 1.16.7.

1.16.3.5 Built-up areas

The following buildings exist on the territory of the Park as of July 2009, according to RL NPD data:

In the Batakliyata countryside: unfinished three-storied building, one hunting lodge and four hunting bungalows, owned by SHR Dunav.

Visitor's Center in the village of Ivanovo, owned by the Municipality of Ivanovo.

Visitor's Center in the village of Nisovo, owned by Rusenski Lom NPD.

Ivanovo rock churches: owner is the state, Ruse historical museum administers.

Cherven fortress: owner is the state, Ruse historical museum administers.

Pump station in the village of Svalenik, owned by Water Supply and Sewerage.

Pump station in the village of Pisanets, owned by Water Supply and Sewerage.

Villa in the Obretenka countryside – built by Pretsiz-Inter AD, unspecified ownership

Villa and water-mill in the Obretenka countryside – privately owned

Farmyard in the village of Nisovo

Cattle ranch in the village of Koshov

There are no interests for new building as of the moment of the present plan elaboration.

Note: Making-up layers for park's CM /LIM/ for technical infrastructure objects is assignment for a separate procurement with company „Makroplan" EOOD.

1.16.4. Agriculture

Agricultural land distribution in the Park by type of use is presented in ***Annex 1.2(1).***

There is no information in the District Department of Agriculture about the park's territory on quantity parameters and their dynamics, related to agricultural lands use, for the last 10 years. Generally, the use of the park in the last years for pasture and hay yielding is very poor, which has led to pastures type change.

Hay yielding – Hay yielding is agricultural activity, allowed on the park's territory. the biggest quantities of hay are yielded in MP Svalenik and on a smaller scale in MP Koshov, Cherven and Nisovo. It is supposed this is due to bigger number of live-stock concentration in the pointed places, but there is no data about the number.

Live-stock pasture – Pasture of live-stock (sheep, cattle and horses) is allowed in the woodless zone yet with the Park announcing, excluding goats. At the moment, the allowed agricultural uses on the Park's territory continue being live-stock pasture and hay-mowing.

Map № 3 Type of territory, fund and administrative belonging is elaborated to the present plan, where agricultural land is depicted.

1.16.5. Forestry

1.16.5.1 Historical review of the forests in the park management and use until 2018 (for the last 5 years).

Park's forests and forest territories management is performed according to ownership. The specified types of ownership until 2018 are as follows:

Name	Management
State	North Central state enterprise, TU SHR Dunav - Pyce
Municipal	Municipal forestry structure
Private (physical bodies)	Owners of land in forest territories FT ГТ
Public organisations	Owners of land in FT
Foreign	Owners of land in FT
Religious	Owners of land in FT

The forest use in the park is specified on the grounds of data presented through the information product 5 GF – report for the yield mass.

The summarized data is for the period 2014 – 2018 and is presented in ***Annex 1.16.5.1.***

1.16.5.2 Forest cultures of non-typical for the NP territories wood species, including foreign ones.

Non-typical wood species are found on the park's territory, including foreign ones, and they are presented in a table form.

Name	**Note**
European red pine	non-typical
Black pine	non-typical
Northern red oak	foreign
Acacias	foreign
Ailanthus	foreign
Honey locust	foreign
Black mulberry	foreign
American ash	foreign
Poplar I-214	hybrid species
Manitoba maple	foreign

Except the aggressive species like American ash, Manitoba maple, honey locust, ailanthus and amorphous, the rest contribute to a number of important functions on forest territory within the park, which are of significance for the landscape, the tourists, the biodiversity, the bee keepers, the agricultural activities in the forests, satisfying local population with firewood, economic and ecological functions.

1.16.5.3. Summarized quantity indicators for forestry activities and their dynamics for the period until 2018

Afforestation: The total afforestation area is 161 decares, including silver linden - 58 decares, elm-tree - 58 decares, Turkey oak - 45 decares;
Area and quantity of yielded wood from:
Plantations growing - 963 decares, 1 283 m^3;
Restorative actions - 3 581 decares, 16 375 m^3;
Sanitary and other campaigns - 50 decares, 20 m^3.

Total volume of yielded wood by groups of assortment, including for the local population (m^3);

	Coarse building wood	Medium size building wood	Small building wood	Firewood	Loppings	laving mass
Totally	2 011	3 115	270	11 970	312	17 678
Including for the local population	7	68	10	690	312	1 087

Assessment of natural renewal;

The results of the naturally grown undergrowth after conducting the gradual felling in number of plantations are good although the support of natural renewal through loosening, planned to be undertaken on the park's territory is not conducted. Natural renewal has been difficult in some plantations, because of smoketree, manna ash, cornel-tree and other undergrowth appearing after the felling, which cutting was necessary, especially during seed-bearing years.

Assessment of pasture and damages description;

Pasture of cattle and live-stock is allowed. Although being region with developed stock-breeding, according to the data for the pasture use as a resource, the interest on behalf of population is not high, while there is enough supply of terrains for that use under FP. Smaller than the planned number of live-stock has been let for pasture annually, and the number of cattle and live-stock that has been let for pasture in the recent years reduced. The reason for that is the highly reduced number of live-stock and correspondingly of the ones left for pasture.

Pasture has been allowed only in the areas planned under the FP. Minimal amount of hay has been collected almost every year (far less than the planned) from the available in the forest territories meadows. There is no data for collected leaf fodder.

Forest diseases and undertaken/applied measures;

Forests sanitary status during the reviewed period is good. The damages of I degree (slight) and II degree (medium) predominate, respectively about 2% and 3%, but damages of III degree (irrevocable) are not few either – about 1%. Damages of II and III degree are of greater economic significance. Such damages with the biggest reduced area are mainly observed with the acacia and to a lower degree with the Persian walnut.

The damaging effects on forest wood plantation are of abiotic and biotic origin. The damaging abiotic effects are provoked mainly by extreme climate deviations. Damages of biotic origin are due to various pathogenic microorganisms and animal organisms. No significant forest damages result of diseases and pest are observed during the reviewed period.

Forest fires, extinguishing, restoration, fire safety measures;

According to the EFA information system - system.iag.bg, the forest fires arisen on ТП SHR Dunav-Ruse territory, where the park belongs, for the period 2007-2019 (July) are as follows:

NUMBER OF FIRES BY MONTHS FOR TU SHR Dunav-Ruse

Year	I	II	III	IV	V	VI	VII	VIII	IX	X	XI	XII	Totally
2007	0	0	0	0	0	0	2	0	0	0	0	0	2
2008	0	0	1	0	0	0	0	1	1	0	0	0	3
2009	0	0	0	0	0	0	0	1	0	0	0	0	1
2010	0	0	0	0	0	0	0	0	1	0	0	0	1
2011	0	0	0	0	0	0	0	1	1	0	0	0	2
2012	0	0	2	0	0	0	1	1	2	0	0	0	6
2013	0	0	0	0	1	0	0	0	0	0	0	0	1
2014	0	0	1	0	0	0	0	0	0	0	0	0	1
2015	0	0	0	0	0	0	0	0	0	0	0	0	0
2016	0	0	0	0	0	0	0	0	0	0	0	0	0
2017	0	0	0	0	0	0	0	0	0	0	0	0	0
2018	0	0	0	0	0	0	0	0	0	0	0	0	0
2019	0	0	0	0	0	0	0	0	0	0	0	0	0
Totally	0	0	4	1	5	1	14	13	6	0	0	0	44

The availability of data on the territories caught by forest fires within Rusenski Lom Nature Park limits for the period from 2007 to 2014. Forest fires have caught forest subsections during the respective year, as follows:

Section	Subsection	Year	SHR	NP
46	н	2007	SHR Dunav-Ruse	Rusenski Lom
85	а	2007	SHR Dunav-Ruse	Rusenski Lom
209	ж	2007	SHR Dunav-Ruse	Rusenski Lom
200	а	2007	SHR Dunav-Ruse	Rusenski Lom
23	а	2007	SHR Dunav-Ruse	Rusenski Lom
72	л	2007	SHR Dunav-Ruse	Rusenski Lom
5	б	2007	SHR Dunav-Ruse	Rusenski Lom
197	г	2007	SHR Dunav-Ruse	Rusenski Lom
196	з	2007	SHR Dunav-Ruse	Rusenski Lom
212;36	в,г; а		SHR Dunav-Ruse	Rusenski Lom
КЗС		2007		
205	к	2007	SHR Dunav-Ruse	Rusenski Lom
30 КЗС	л	2007	SHR Dunav-Ruse	Rusenski Lom
78	д	2007	SHR Dunav-Ruse	Rusenski Lom
139	2	2007	SHR Dunav-Ruse	Rusenski Lom
184	г	2007	SHR Dunav-Ruse	Rusenski Lom
237	в	2007	SHR Dunav-Ruse	Rusenski Lom

10 КЗС	д	2007	SHR Dunav-Ruse	Rusenski Lom
146	е	2007	SHR Dunav-Ruse	Rusenski Lom
207	ж	2007	SHR Dunav-Ruse	Rusenski Lom
9 КЗС	2	2007	SHR Dunav-Ruse	Rusenski Lom
196	а	2007	SHR Dunav-Ruse	Rusenski Lom
30 КЗС	о	2007	SHR Dunav-Ruse	Rusenski Lom
155	е	2007	SHR Dunav-Ruse	Rusenski Lom
79	е	2007	SHR Dunav-Ruse	Rusenski Lom
56	а	2007	SHR Dunav-Ruse	Rusenski Lom
212	г	2007	SHR Dunav-Ruse	Rusenski Lom
36 КЗС	в	2007	SHR Dunav-Ruse	Rusenski Lom
234	з	2007	SHR Dunav-Ruse	Rusenski Lom
48	з	2007	SHR Dunav-Ruse	Rusenski Lom
273	6	2008	SHR Dunav-Ruse	Rusenski Lom
198	4	2008	SHR Dunav-Ruse	Rusenski Lom
5	с	2008	SHR Dunav-Ruse	Rusenski Lom
13	6	2009	SHR Dunav-Ruse	Rusenski Lom
180	а	2010	SHR Dunav-Ruse	Rusenski Lom
13	б	2011	SHR Dunav-Ruse	Rusenski Lom
21	г	2012	SHR Dunav-Ruse	Русенски Лом
255	а	2012	SHR Dunav-Ruse	Rusenski Lom
20	в	2012	SHR Dunav-Ruse	Rusenski Lom
86	в	2012	SHR Dunav-Ruse	Rusenski Lom
59	к	2012	SHR Dunav-Ruse	Rusenski Lom
269	т	2012	SHR Dunav-Ruse	Rusenski Lom
1	к	2013	SHR Dunav-Ruse	Rusenski Lom
12	в	2014	SHR Dunav-Ruse	Rusenski Lom

The conducted activities on forest fires extinguishing are completed in compliance with the requirements of Regulation № 8 of May 11th 2012 for the conditions and order for forest territories fire protection, where no significant difficulties on forests restoration are registered. In case of large-area natural damages arising (wind throws, calamities and fires), it is recommendable part of the affected area not be afforested but to be left to natural succession. That contributes to increasing territory's structure and species variety.

Revenues from wood industry on the park's territory and the expenses for staff, maintaining activities, forest ways repair and territory guarding;

TU SHR Dunav does not have separate financial account that reflects revenues and expenses for the Rusenski Lom NP territory.

1.16.5.4 Description of the practiced technologies at conducting forestry activities:

The territory of the park belongs to protected zone BG0002025 Lomovete under the Birds Directive and to BG0000608 Lomovete under the Habitats Directive. In relation to that, the regiments for sustainable forests management in NATURA 2000 are applicable.

TU SHR Dunav, within which limits the park belongs, is certified under the National standard under FSC® for sustainable forests management and the accepted rules for forestry activities, soil preparation, afforestation and cultures growing are observed.

Methods of soil preparation and afforestation;

Species variety restoration is performed if necessary. The prohibition for afforestation with foreign species and/or origins as well as for afforestation of the natural opened spaces is applied, except activities for flood and erosion process control.

Afforestation is performed with only local species, for restoration support and for increasing the young plantations density, after more serious areal damages (wind throws, fires) or for fragmentation decrease. Special attention is paid to establishing mixed plantation and to soil conservation at the preparation for afforestation (no complete procession – deep ploughing, wide tractor terraces and others) is allowed.

Forest roads construction;

No activities (including forestry ones) that would increase anthropogenic fragmenting of territory are allowed at forest roads constructing. Landscape's integrity is preserved to the maximum while planning the roads and infrastructure. Suitable elements reducing the effect of territory's fragmenting, which support organisms movement, have been ensured – for example the possibility for moving, connections and zones of animals' calmness.

Used techniques for supply and disposal - train, airlifts, tractors, etc.

Animal power is used for taking out the fellings, and in case of even and sloping terrains (to 10°), light wheel tractors are used. Wood transportation is performed by wheel transport vehicles (trucks). Such ways of work are determined as environmentally friendly and are proper for application within the protected territories and zones from the NATURA 2000 network.

1.16.5.5. Information about the forest roads status, including from control and fire safety point of view, where at the construction of new roads embracing the park from all the corners is planned, as well as fire safety equipment movement (conformed with the requirements of Regulation № 8 of May 11th 2012 for the conditions and order of forest territories fire protection).

Forest roads general status within park's territorial area of operation is good. The access to the park's territory is relatively easy because of lack of significant rugged terrains and availability of predominantly plain terrain.

All roads from the existing road network, connecting villages within the limits of the park as well as many agrarian roads, are accessible for fire safety tank-trucks. Forest automobile roads, passable for fire safety tank-trucks are in good shape, where part of them cross agrarian territories.

1.16.5.6. Breaches ascertained in the last years — number, type, hot pints, etc.

No breaches are registered on the park's territory related to forestry activities.

1.16.5.7. Fire prevention and fight.

Monitoring tower has been built within the park, presenting integrated system for early fire detection. The availability of such facility guarantees timely finding and reaction in case of fires in compliance with Regulation № 8 of May 11th 2012 for the conditions and order of forest territories fire protection.

1.16.6. Hunting, fishing, nature products collection.

1.16.6.1. Number and dynamics of game populations by species for the last 10 years.

Hunting and fishing in the regions around the Park is exercised in compliance with Law for Hunting and Protection of the Game (LHPG) and the Law on Fisheries and Aquaculture (LFAC). Hunting territories are divided into hunting regions and are managed by hunting parties. Control on the protection and use of game resources activities all around the country is conducted by the structures of the Executive Forestry Agency. Depending on spring game counting for each hunting region, annual plan for use is drawn. Main species of hunting is the wild boar, which is the most numerous. Hunting is conducted in groups with hound dogs. Another basic species is the reindeer. Roe is also object of hunting but selectively and limitedly.

Certain hunting measures are taken in the region of Rusenski Lom NP, such as: feeding the game with coarse and concentrated fodder, providing salt, putting vaccines against classic swine fever with the wild boar, depending on the State Enterprise State Hunting Reserve Dunav-city of Ruse budget.

The populations of hunting species of mammals (predatory animals, cloven-footed and hares) tend to preserve the main resource species in the last years: cloven-footed – rein deer,, wild boar, roe and hare; predatory – wolf, jackal, fox and wildcat.

The relatively constant balance of these two biologically related groups of predators and victims shows the availability of a harmonic dynamic equilibrium, characteristic for the climax ecosystems. 14 mammal species object of hunting inhabit the Rusenski Lom NP territory. 4 species of them are in a conditionally determined group of resource species: reindeer, roe, wild boar and hare.

1.16.6.2. Hunting sections and places, allowed for recreational fishing.

Part of SHR Region Batakliyata belongs to the Nature park's territory. The entire SHR Region Batakliyata territory is 2350.10 ha, 1523.8 ha of which are forest territories and 826.3 ha are agricultural territories. The land of the villages in the Nature park are parts of the hunting fields of Granted Hunting Reserve Region /GHRR/ Ivanovo, GHRR Shtraklevo, GHRR Svalenik, GHRR Cherven, GHRR Koshov, GHRR Pisanets, GHRR Nisovo, which are regions of Hunting and Fishing Association Filip Totyu – Ruse – city of Ruse.

The TU SHR Dunav – Ruse forestry plan for 2012 includes measures for fauna preservation, measures and regiments for the agricultural land are set as well as removing objects and unusual activities out of Park's territory to places coordinated with the responsible institutions.

Forestry measures for feeding the game are undertaken on the park's territory: feeding racks and salt baits.

Fishing has become possible in the recent years after a substantial change in the rivers' cleanliness. Fishing is rarely practiced in the river meanders calm waters on the park's territory as form of recreation.

1.16.6.3. Natural products collection on the NP's territory.

12 permits are issued for the period 01.01.2018 – 31.12.2018 for non-wood forest products use under Annex 1, Article 81, Paragraph 1, item 3 in accordance with „REGULATION for the conditions and order for assigning the execution of activities in forest territories – state and municipally owned, and for the use of wood and non-wood forest products". No permits are issued in 2018 for non-wood forest products use under Annex 1, Article 81, Paragraph 1, item 3.

4 transport ticket-forms are issued for transport of non-wood forest products. 51 permits for bee-gardens are issued in 2018 on the grounds of Article 70, Paragraphs 6 and 7 of the Forestry Act.

9 permits are issued for the period 01.01.2017 – 31.12.2017 for non-wood forest products use. Totally 3 permits are issued for non-wood forest products use under Annex 2, Article 81, Paragraph 1, item 3. 51 permits are issued in 2018 for bee-gardening on the grounds of Article 70, Paragraph 6 and 7 of the Forestry Act.

https://dlsdunav.scdp.bg/za-nas/dokumenti

There are no registered breaches in the recent years regarding game, fish and other natural products.

1.16.6.4. Registered breaches in the recent years regarding game, fish and other natural products.

No serious breaches are registered within the 10-year period of the Management Plan operation until 2019 regarding game and fish on Rusenski Lom Nature Park territory.

1.16.7. Tourism, recreation, sport, services

1.16.7.1. Tourist infrastructure

Places for accommodation and lodging, according to the Tourism Act

There are no means of lodging and/or places for accommodation on the territory of the NP categorized according the Tourism Act. There are in the adjacent territories – see Section 1.17.3.

Catering establishments by type of site

There are no means of lodging and/or places for accommodation on the territory of the NP categorized according the Tourism Act. There are in the adjacent territories – see Section 1.17.3.

Tourist routes length

It should be taken into consideration that almost all routes are not situated only and completely on the territory of Rusenski Lom NP, but embrace also parts of the adjacent territories.

Short specialized routes:

- Route Dendropath, circular, thematic, educational: from the village of Nisovo along the Mali Lom river valley. Length 6 km, possibility to extent it to Big Nisovo monastery for 4 km more. The rout passes under the Small Nisovo monastery, by which adventure climbing route Via Ferata is built.

- Route Golata Mogila, circular, panoramic with view to the village of Nisovo and the Beli Lom river valley: to the north of the village of Nisovo, starting point at the village. Length 5 km.

- Route Bryasta /the Elm-tree/, circular, of general educational value, panoramic: from the village of Nisovo along the northern bank of Beli Lom river. The elm-tree itself that had given its name to the route, has fallen, but the route can be used. Length 6 km.

- Route Ivanovo Rock Churches: from the village of Ivanovo to the NAHR Ivanovo Rock churches. Length from 1 to 9 km depending from where particularly it is started.

- Route Cherven Fortress from the village of Cherven to NAHR Middle Ages town of Cherven. Length 2 km.

- Route Pobit Kamak, circular, panoramic with views of the Beli Lom river valley. Starting point the village of Pisanets. Length 10 km.

- Route Gramovets: from the Ivanovo Rock churches to the build shelter Gramovets under the monastery bearing the same name. Length 5,30 km. It could be diversified is from Gramovets the visitor goes to Koshov (4,80 km more).

- Route Habitats and Species from the Natura 2000 Network: from Lomovete (CSESA) conservation centre

Longer routes:

- Route Mali Lom from the village of Svalenik along the Mali Lom river valley to the Big Nisovo monastery, and from there to the end point of the Dendropath and to the village of Nisovo. Length 15 km.

- Route The Village of Nisovo – Ivanovo Rock churches, through the Smesite countryside, where Beli and Cherni Lom fuse into Rusenski Lom river. Length 15 km.

- Route Village of Nisovo – Village of Pisanets. It is not recommendable to use it at the moment as far as it crosses a hunting region and there are impassable parts, too.

- Route Ivanovo Rock Churches – Middle Ages Town of Cherven. There is an elaborated project for tourist lane. It is not recommendable to use it at the moment for the same reasons described about the above route, although hunting is illegal here. One can pass across the village of Koshov (partly on asphalt and country roads across the fields by Koshov) and then it goes down in the river valley.

Bike routes:

- The territory is partly crossed (NAHR Ivanovo Rock churches on the side of the village of Ivanovo and continues to the village of Basarbovo) by the not-yet-officially approved route bed of International bike route EuroVelo 6 Atlantic ocean – Black sea. Danube Ultra biking marathon is organized along it – covering the route with various topics – for 6 years in a row already in the beginning of September. Even if they don't enter the official corridor of EuroVelo 6, the routes in Polomieto could be shaped like the so called tourist "triggers", which include detours to nature and historical phenomena, what Rusenski Lom NP actually is without doubt.

- Existing country roads in the Lomovete valleys are used as biking trails by the tour operators offering such programmes as well as by various clubs and organizations. There is also an elaborated and updated by the NPD draft project for tourist lane that connects NAHR Ivanovo Rock churches and NAHR Middle Ages town of Cherven. It is also related to the project proposal, jointly elaborated by Association Velo-Ruse, Rusenski Lom NPD, District administration-Ruse and other partners, which includes the construction of tourist biking lane: Ruse – Basarbovo – Krasen – Bozhichen – Ivanovo – Koshov – Cherven – Tabachka – Pepelina.

- Velo-Ruse association has an elaborated proposal (conception map) of primary and secondary routes in the entire District of Ruse that include Rusenski Lom NP. The map could be reviewed at the following link: http://map.velo-ruse.eu/. Among the routes that concern the NP territory are:

(a) Route The Nature around Nisovo with starting and end point the village of Nisovo and length of 32 km, medium difficulty. It crosses the village of Svalenik, climbs to the road Katselovo-Nisovo and again returns to the village, mainly along asphalt roads, where extension is possible.

(b) Route Rusenski Lom – Canyons and Middle Ages Cultural Centres - option 1 with starting point city of Ruse and final point the railway station Ivanovo, length around 41 km, medium to intense difficulty. It goes along the Rusenski Lom river valley by the Basarbovo monastery, the village of Krasen, the village of Bozhichen, the village of Ivanovo and to the Ivanovo Rock churches. The terrain is asphalt and farm roads with several climbing ups to a maximum of 100 m.

(c) Route Rusenski Lom - Canyons and Middle Ages Cultural Centres - option 2 with starting point the city of Ruse and final point the railway station town of Dve mogili, length about 80 km (two-day), medium to intense difficulty. The rout overbuilds the previous one, including the Middle Ages town of Cherven. Terrain: on asphalt and farm roads with several climbing ups to a maximum of 100 m.

(d) Route Along Picturesque Paths Around Cherni and Beli Lom with starting and final point the city of Ruse, length around 117 km (three-day), medium difficulty. Up to the Ivanovo Rock churches it coincides with the above routes, and after that it includes Smesite countryside and the village of Nisovo, eventually with visit to the Nisovo rock monastery, to the village of Pisanets, from where it reaches the village of Vetovo and returns to Ruse. Terrain: asphalt and farm roads with several climbing ups to a maximum of 100 m.

(e) Route Orthodox Cloisters in Polomieto with starting point the city of Ruse and final point the railway station Borovo, length around 123 km (two- or three-day), medium difficulty. Terrain: mainly asphalt and dirt roads with several climbing ups to 100 m. It overbuilds the route above, continuing to the village of Katselovo, Karan Varbovka, the monastery of Saint Marina, Koprivets and the monastery of Saint Petka.

Traditional places for popular recreation, picnics, excursions, fairs, etc.

Such places are the region of the Ivanovo rock churches, where various events are organized; the Mali Lom river valley from Nisovo to both monasteries (Small and Big Nisovo monasteries); less, the region of the Middle Ages town of Cherven and the vicinities of the village of Pisanets, mainly the Pobit kamak countryside. There is a shelter built between the villages of Koshov and Cherven, where also local people go for picnic and walk.

Buildings and facilities related to sports

There are no buildings on the territory of Rusenski Lom NP related to sports. The small tourist infrastructure related to Via Ferata could be eventually accepted for facility related to sports.

Sites offering additional tourist services

The following sites are to be mentioned on the Rusenski Lom NP territory:

- NAHR Ivanovo Rock churches. Described in details in Section 1.18. Cultural-historical heritage. It offers tour guides, ensured by Ruse Historical Museum– Ruse and sale of souvenirs.

- Conservation centre of Rusenski Lom NPD by the village of Nisovo. It comprises exhibition / information part and Centre for Study, Education, Simulation and Analysis (CSESA), built with the support of Operative Programme Environment 2007 – 2014. It offers Rusenski Lom NP natural heritage interpretation, information on the possibilities for tourism, souvenirs, logistic possibilities for conducting various scientific, study and educational events.

1.16.7.2. Places for practicing of specific types of sports and tourism:

Climbing: The layouts shaped for climbing are mainly outside the territory of the Nature park and some are even outside the adjacent territories, with two small exclusions – Via Ferata and one of the Koshov routes penetration within the limits of the protected territory (see item 3.2.3. (47). There are climbing routes by the villages of Tabachka, Koshov, Basarbovo and Pepelina. 5 routes are, for example, shaped by the village of Koshov: Koshov North, Koshov North – before the bridge, Milkovata House, Koshov South and Koshov South – after the bridge. More information about them could be found at the following Internet address: https://www.climbingguidebg.com/.

Speleology: It bristles with caves of short galleries on the NP territory, but speleologists from the two speleology clubs in Ruse still consider there is great potential new caves and galleries to be found. There is no developed tourist service for non-specialized visitors at the moment.

Tourism of informative value: NAHR Ivanovo Rock churches and NAHR Middle Ages town of Cherven are the main objects of cultural-informative tourism in the Park's adjacent territories. The specialized routes described above in item 1.16.7.1 are used for nature-informative tourism.

Horse riding: There are no specially designated and provided places for practicing horse riding on the Nature park's territory.

Hang gliding: As of now, there are no specially provided / developed / designated places for practicing hang gliding on Rusenski Lom NP territory.

Cycling tourism: See item 1.16.7.1 above.

1.16.7.3. Dynamics of number of spent nights and tourists' profile:

Number of spent nights for the last 3 years. There are no means of lodging and/or places for accommodation on the territory of the NP categorized according the Tourism Act, hence there are no spent nights. There are such in the adjacent territories – see Section 1.17.3.

Number of spent nights for the last year, according to the visitors' interest. See the above item.

Defining tourists' interests. The interests of the tourists as of now, without special marketing study being made, is defined empirically according to the goal the visit Rusenski Lom NP territory with. The observations show that:

(a) The main goal is visiting NAHR Ivanovo Rock churches. Practically all tour operators' programmes offered on the market at the moment regarding Rusenski Lom NP territory, include visit to that site, no matter what else is included and no matter which market the offers are targeted at.

(b) Not organized visitors of the adjacent territories enter also the park's Conservation centre by the village of Nisovo, as far as it could be assessed, led by pure curiosity. It is also visited by organized students groups from all over the region, including from the city of Ruse.

(c) The routes in the park are used by the local people, including partly as recreational zones in the weekend; on the other hand, by representatives of scientific and non-governmental circles for explorative and conservation goals, and by organized groups aiming tracking, cycling and wild life (predominantly birds) observation.

(d) Various events in the park are organized along the lines of the three touristic organizations in the city of Ruse – Tourist association Prista, Ruse club for trips Byala zvezda and и Sport Tourist and Conservation Association Akademik, mainly for the city of Ruse residents (any age) as well as for organizations' friends and followers. The initiative of October 5th 2019 for a cross-march Ruse Polomie 2019 could be pointed as an example, where the residents of Ruse have the opportunity to participate in covering the 11-kilometer route from Koshov to the Ivanovo rock churches.

(e) Municipal administrations and the villages' chitalishta form the adjacent territories also organize events for the local residents. The Children of Polomie – Celebration under the Monastery could be pointed as an example – in the region of NAHR Ivanovo Rock churches.

Tourists' age structure and national belonging – included item Attendance below.

Price segment.

By that indicator, Bulgarian visitors could be grouped basically in two categories:

- non-organized visitors with income around and slightly above the average

- organized visitors with low income (retires people, university students)

Foreign visitors are mainly with income around the average, which is characteristic of the users of such cultural-informative or mixed programmes.

Stay duration

Taking into consideration the fact that there are no places for accommodation on the Park's territory, the tourists' stay on that territory, strictly reviewed, is one-day. However it should be mentioned that the programmes offered by the Bulgarian tour operators on the Bulgarian market are predominantly 2- and 3-day with starting from the capital city and other big cities, where in some cases the groups enter the park in more than one day. The programmes for foreigners are longer, because they include either thematic cultural-historical tours of entire Bulgaria, or are essentially cruise ones, with stop in the city of Ruse.

Expected satisfaction with the stay. The expected satisfaction with the stay could be found only within an integral market study. As for the actual satisfaction with the already completed visit, it also needs thorough study, but at the moment it could be judged after indirect data from the tour operators, who bring organized groups to the Park and from the tour guides in NAHR Ivanovo Rock churches. As a whole, visitors are much impressed by the nature and by history in the Park, there are certain reprimands regarding the lack of contemporarily presented information (or tourist interpretation). There are desirable things to be done during certain seasons regarding the maintenance and the accessibility of the routes in the park.

Attendance according the type of trip, including age and nationality, including organized and individual

As far as no purposeful monitoring of visitors flow is conducted on the Rusenski Lom NP territory, it is not possible structured information on the attendance to be provided. On the other hand, almost each visitor on the territory, organized or individual, includes in his programme the Ivanovo Rock churches, so the data on the attendance there, provided by the RHM –Ruse give quite a good orientation about visitors' level in the Park. This way only visits by local people aiming walk or short recreation in the weekends could not be reflected.

The data about the visitors in NAHR Ivanovo Rock churches for the last 5 years show a relatively stable and constant growth of the visits number – from approximately 13 400 in 2014 to 18 800 in 2018, and for the present year only to September, 21 427 visitors are already reported. Here, in contrast to NAHR Middle Ages town of Cherven (the data is provided in item 1.18), the foreign tourists predominate, and in 2014 have been a little bit over the half, and in 2015-2016 they drop to about 37%, but a continuous growth to 65% is observed after that and until present. It is interesting that organized groups predominate in the beginning but since 2016 they are almost the same number with the foreign non-organized tourists. The individual visitors predominate among the Bulgarian ones, and their percentage gradually reduces towards the total number of visitors – from more than 20% to about 16% at the moment, and in 2018 there was a sharp drop to 11,5%. Bulgarian pensioners and university students follow, comparatively the same number each, and their percentage also gradually reduces towards the total number of visitors (from about 12% to 6% currently, for each group). This reduction is due to the fact that while the total number of visitors increases, the number of Bulgarian university students and pensioners stays almost the same. Schoolchildren from secondary schools predominate among the visiting school groups, but as a whole their number and percentage gradually goes down.

At the moment, the visits to the Rusenski Lom NP Conservation Centre by the village of Nisovo are mainly on the behalf of school students, organized by the relevant schools and teachers with particular goals like attending presentations, competitions or celebrating significant dates like the Forest Week. In 2018 this way the Centre is visited by 320 individuals totally. The non-organized visitors are under 100 a year.

Goal of visits and organized activities, grouped depending by the tourists organization and the duration of the stay.

(a) Cultural-informative aims:

- two-day programmes for Bulgarian tourists: visit to NAHR Ivanovo Rock churches is combined with visit to NAHR Middle Ages town of Cherven, Basarbovo monastery, Orlova chuka cave, and more rarely to other cultural-historical sites in the Park like the Big Nisovo monastery or the Gramovets monastery; in many cases, with further situated sites like NAHR Sboryanovo, Demir baba teke and Abritus.

- a single time (for few hours) visit to NAHR Ivanovo Rock churches by foreign groups on cruises along the Danube river, organized by foreign tour operators with stay in the city of Ruse.

(b) Tracking: two-, three- and four-day programmes for Bulgarian tourists with passages in the river valleys. mainly Cherni Lom and Malki Lom.

(c) Cycling tourism: three-day programmes for Bulgarian tourists, where at least one of the days is inside the Park, most often the bed of a countryside road by the Cherni Lom river from Ivanovo to Cherven is used.

(d) Wildlife watching: two- and three-day programmes for Bulgarian tourists, where at least one day is inside the Park, mainly the Cherni Lom river valley and the region around the village of Nisovo are used. It is often combined with visit to the Srebarna reserve.

(e) Educational aims: short visits for schoolchildren groups, mainly from the region of the city of Ruse to NAHR Ivanovo Rock churches or Lomovete CC.

The programmes for Bulgarian tourists start mainly from Sofia and Varna. The accommodation is predominantly in the village of Nisovo or Ruse as well as in other close villages like Bozhichen, Tabachka, etc. The programmes for foreign tourists are cultural-informative rounds of Bulgaria or a stop during cruise along the Danube river. The visits are usually conducted during the warmer half of the year (April-October, with episodic visits in March and November), including to the Ivanovo Rock churches.

1.16.7.4. Analysis of financial revenues from tourism:

Total volume of revenues from tourism for the last 3 years

It could be spoken about financial revenues from tourism on the Nature park's territory only regarding the visits to NAHR Ivanovo Rock churches. The revenues are as follows:

2016 – 56 556 leva

2017 – 55 607 leva

2018 – 81 315 leva

The revenues in Lomovete CC from advertising materials sale are 230 leva average / a year for the last 3 years; the revenues from lectures and hall rent are respectively 0 leva for 2017, 886 leva for 2018 and 1300 leva for 2019.

Distribution of the revenues by seasons for the last 3 years

Taking into consideration the fact that the visits to the Park are conducted only during the warmer half of the year, it could be summarized that this is the period, when revenues are generated for the services suppliers.

1.16.7.5. Current trends in tourism development at local and regional level:

Regional and municipal strategies, programmes, tourism development plans
District strategy for District Ruse development 2014 – 2020:

- Only the project Improving the Care for the Game Reserves Aiming Their Increase And the Production of Quality Hunting Trophies is the only included in the measure for alternative tourism forms development.

- Separate measure: Creation of a Regional Tourist Product and Destination Marketing through partnership of small municipalities.

- Measure Organization of Events of Regional and National Scope and Impact Such As Festivals, Events in the Open, Sports Competitions, Folklore Events, Presentation of Local/Regional Traditions, Cuisine, Crafts, etc. through partnership of small municipalities.

Municipal development plan of the Municipality of Ivanovo 2014 – 2020. Planned measures:

- Tourist activity – means of living for the local population. The measure supports the monitoring and updating of the Tourism Development Strategy of the Municipality of Ivanovo. Cultural events organization in regard to local customs and traditional is encouraged. Activities for conservation, preservation and improvement the tourist resources quality are planned – repair and/or improvement of existing tourist sites, establishing zones for short recreation, improvement of transport access to the touristic sites, including disabled people.

- Making use of the possibilities of cultural heritage and natural conditions for the tourism development. Support of various forms of tourism – cultural, nature-oriented, recreational, eco, rural, etc., including through study the possibilities of including the municipality in integrated touristic routes as well as establishing local tourist product that ensures municipality distinguishability on the tourist market. Marketing and advertising activities aiming attraction of potential tourists from outside the municipality and the district.

Municipal plan for development of the Municipality of Vetovo 2014 – 2020. Planned measures (it is not précised what they include and how the budget for them is calculated):

- Elaboration of package of integrated thematic tourist services, products and attractions, including construction / rehabilitation of adjacent infrastructure and promotion

- Make and maintenance of a system of indicative and informative boards for the natural and anthropogenic sites

- Update of the list of immovable cultural sites of value on the territory of the Municipality of Vetovo

- Conduction of traditional festivals and events from the territories cultural calendar

- Building of guest houses, including catering and recreation environment on the territory of the entire municipality

A strategy bearing the same name is elaborated in 2019 under the project Joint Strategy for Development of Tourism in the region Giurgiu-Ruse, TourDev Giurgiu-Ruse, financed under the Romania-Bulgaria Cross-Border Cooperation, with Bulgarian partner – Business Centre for small and medium enterprises support. Planned measures that regard Rusenski Lom NP and its adjacent territories:

- Destination coordinated management: regular meetings and exchanges, constitution of coordination centre, current tourism studies conduction

- Destination brand creation and popularization

- Joint destination marketing that includes joint participation in tourist fairs and events, small businesses trainings in marketing, construction of a joint Internet site, marketing campaigns, advertising in social media, promoting events and campaigns organization

- Tourist infrastructure maintenance and development

Joint valorization strategy has been elaborated again by the Business Centre for small and medium enterprises support in Ruse under the project: Sustainable Rural Tourism Maintenance in the Region Giurgiu-Ruse through Its Cultural Heritage, financed by the Cross-border Cooperation Programme V-A Romania-Bulgaria. Measures that regard the territory of and around the Park are also included there:

- Development of distinguishable tourist destination for rural tourism Ruse-Giurgiu:
Elaboration and continuous application of campaigns for raising awareness; creation of a tourist brand Ruse-Giurgiu; Interaction with study centres and universities; Interactions with the tourist industry; Elaboration of specific routes that start from the rural tourism sites; Development of integrated cross-border routes; Application of the Danube Strategy tools for touristic interest attraction to the region

- Strategic goal 2 Raising the tourist products quality in the region Ruse-Giurgiu: Establishment of places for accommodation and catering in the rural communities; Development of new tourist products through preserved traditions and customs; Development of creative industries; Establishment of regional tourist cluster; Exchange of experience in the field of rural tourism; Partnerships with educational institutions; Road infrastructure improvement in the region;

Encouraging the activities of sustainable mobility in the region; Tourism information provision improvement; Danube Strategy tools application for raising the tourist products quality.

Project developments for new sites and facilities, new tourist products, etc.
Municipality of Ivanovo – preparation of project proposal under Regions in Growth Operational Programme, Priority Axis 6 Regional Tourism, procedure BG16RFOP001 -6.002 Tourist Attractions Development. The project concerns construction of a modern Visitor's centre by NAHR Ivanovo Rock churches.

NPD overall activity in the field of tourism development
Rusenski Lom NPD activity until now has been closely related with the implementation of the first Park's Management Plan and its prescriptions. The activities implemented by the NPD include development and maintenance of tourist infrastructure in the Park, including socialization of cultural-historical heritage sites and maintenance of routes; restoration of local traditions, customs, crafts, cuisine; tourism information provision; promotional and advertising measures.

1.16.7.6. General tourist supply other components:

In formation provision

Tourist information centre that covers the touristic possibilities on the municipality territory and Visitors centre with multifunctional hall that could be used for various events function in the building of the Municipality of Ivanovo in the village of Ivanovo.

Souvenirs, information and advertising materials are offered by both big sites NAHR Ivanovo Rock churches and NAHR Middle Ages town of Cherven.

Information centres presenting boards with dimensions 2/1,5 m with characteristic information about the Rusenski Lom NP region and spot for free advertising materials distribution are constructed in the villages of Svalenik. Nisovo, Koshov, Tabachka and Shtraklevo, in the buildings by the Archeological reserves Ivanovo Rock churches and Middle Ages town of Cherven, and the village of Pisanets chitalishte under Rusenski Lom NPD's project.

Information about the Park but also about the possibilities for tourism, is offered in the Rusenski Lom NP Conservation centre by the village of Nisovo.

In the city of Ruse, touristic information about the Rusenski Lom NP and its adjacent territories could be found in the Park's Directorate itself; in the hotels members of the Consultative Council on Tourism (advertising materials and short documentaries, including about the Park); in the Ruse Tourist Information Centre; there is a lecture about the biodiversity of the Nature Park and the Polomie in the Eco museum, plus small models of the Orlova chuka cave and the Ivanovo Rock churches. Information regarding tourism in and around the Park v=could be also found in the tourist organizations offices in the city of Ruse.

Marketing

(a) Printed materials

- Published by the Rusenski Lom NPD: Guide-book on the routes in Rusenski Lom NP, map of the routes in the Park, information and advertising materials on all projects the Directorate has worked on.

- Published by the Municipality of Ivanovo: advertising catalogue and brochures With Canoe to the Wild Nature, advertising brochures for winter and summer cross-border route between Ivanovo and Bucsani (Romania), advertising tourist materials with map under the project Rivers of Time, tourist guide-book for the Municipality of Ivanovo in Bulgarian and English language.

- Most materials published by Ruse Art municipal enterprise aiming popularization of the region and the tourist opportunities, include also sites outside the Municipality of Ruse, including the most popular ones in and around Rusenski Lom NP. General promotional materials about the region are also published by other local organizations and companies, for example Parnas Press.

(b) Films and video clips

Advertising video clips produced by the Municipality of Ivanovo under old project of theirs 4 years ago; advertising film about Rusenski Lom NP, produced under cross-border project on tourism between the Danube Municipalities Association and Living Nature Foundation – Romania. NPD has a film about the protected area within the project Activities on Rusenski Lom Nature Park Sustainable Management, financed by Environment Operational Programme 2007-2014. Some other video0materials have to be added to that, prepared by Ruse Art municipal enterprise, and other local organizations and companies like Arena Media, etc.

(c) Internet sites

Rusenski Lom Nature Park: www.rusenski-lom.bg; www.lomea.org

Municipality of Ivanovo: www.ivanovo.bg

Municipality of Vetovo: www.vetovo.com

Regional Historical Museum – Ruse: www.museumruse.com

(d) Social media

Facebook profiles: There are Facebook-groups for almost all villages; Shtraklevo has also its own page, as well as some of the chitalishta. All of them with limited number of followers. There is a group of Prista TA with 1200 members. Other Facebook-pages: RHM–Ruse (almost 7000 followers), Middle Ages town of Cherven (over 1000), the Rusenski Lom river (over 1000), Byala zvezda (2100), Velo-Ruse (1300), Akademik STCA (600).

(e) Tourist markets and fairs

Under various projects implemented on the territory, the possibilities for tourism have been presented at various fairs, mainly around Bulgaria and Romania. As of now, the participation is focused on the fair Weekend Tourism, held in the city of Ruse every year in May as well as on the national fair Vacation and Spa Expo in Sofia.

1.16.7.7. Analysis and assessment of tourism impact in the region upon the nature complex elements.

There is no data about special impact of tourism upon the Park's natural complex elements, as of now. It is possible that the main reason for that is the low number of visitors. If an integrated approach towards the development of tourism in the Park and the adjacent territories is developed, prognostics for eventual effect of the increased touristic flow – negative or positive, would be necessary to be made.

Map № 18 Tourist routes and sites is elaborated to the present plan

1.16.8. Industry

There are no industrial enterprises on the territory of the park. Most of the enterprises in the adjacent territories belong to the small ones in branches of the light industry. The enterprises of the food industry directed towards own needs satisfaction create sustainability.

1.16.9. Awareness of public about the Nature Park and the attitude towards it.

The following conclusions are drawn according to conducted questionnaires during the elaboration of the present plan and information from Rusenski Lom NPD regarding the local population level of awareness, with focus on the ecological threats in the region of the park:

The region is sparsely populated and there is lack of young people; Local people are insufficiently informed; Civilians of Ruse use the park for tourism, sport and health little.

People suggest more regular meetings and discussions with the local population and possibilities for including them in initiatives of the park; Organization of events in the nature; Conduction of thematic campaigns.

NPD activities regarding the relations with the public and its work with other organizations, media, local communities, target groups, partners and others, are presented in ***Annex 1.16.9.1.***

NPD activities regarding educational projects and programmes are presented in ***Annex 1.16.9.2.***

NPD activities for popularizing the territory and scientific studies in the NP are presented in ***Annex 1.16.9.3.***

1.17 CURRENT USE OF ADJACENT TERRITORIES

Part of the population in all Park's adjacent settlements is directly engaged with the tourist servicing branch as well as with using resources in and around the park.

There is no particular information about the population directly engaged with the tourist servicing branch as well as about the one connected with using resources in and around the NP, in the existing analysis related to employment and demographic trends in the communities in the Park's adjacent settlements.

1.17.1. Description of forestry activities and forests functions, agricultural and hunting functions in Park's adjacent territories.

- Agriculture

The plots in the courtyards by the rivers from the park's adjacent territories settlements' site development plans are used the same way. Mainly vegetables, potatoes, corn and lucerne are grown on them. Pesticides are used mainly in vegetables growing. Waste from stock-breeding and plant-growing is disposed in the rivers.

Agricultural lands that border the nature park are worked by cooperations, tenant farmers, associations and other production units. They are planted with traditional for the region cultures: wheat, barley, corn, sunflower, lucerne, etc. Traditional technologies for pesticides and mineral fertilizers use and intensive soil processing are applied.

Erosion is activated in times of intensive precipitation and winds, and this way soil, pesticides and nitrates are brought within the park's limits.

Some of the bigger tenant farmers already use more friendly fertilizers and new combined vegetation herbicide. Insecticides procession is avoided, more is relied on natural biological processes.

- Stock-breeding

Mainly sheep, cattle and goats are bred. Cattle-breeding is developed in Nisovo, Shtraklevo, Svalenik and Pisanets. Koshov and Cherven have less live-stock.

Calves for fattening and cows for yield of milk are bred in Svalenik and Shtraklevo, and in Pisanets - cattle, milch cows and calves for fattening, swine. Goat-breeding is developed best in Svalenik. Goats are also bred in the rest of the settlements around the park.

- Forestry activities in the forests in the park's adjacent territories.

The management and use as well as the functions of the forests in the adjacent territories are set by the TTI SHR Dunav Forestry plan.

- Adjacent territories use for hunting and fishing

The local hunting parties go hunting in the adjacent territories. Reindeer, wild boar, pheasant, wolf, jackal, fox, wild cat are objects of hinting. The shot game shows trend of increasing regarding the wild boar, the jackal and the fox. The hunting parties from the settlements and the officers of TU SHR Dunav build and maintain facilities for feeding the game. The restored fishponds by Svalenik, Pisanets and Nisovo are used for fishing. Fishing in the rivers flowing across the Nature park is allowed the way and in the periods permitted in the Republic of Bulgaria.

1.17.2. Afforestation with untypical for the region ligneous species; breeding and raising of untypical species of game and fish.

The park's adjacent territories are entirely occupied by NATURA 2000. The presence of natural habitats in the Natura 2000 protected zones excludes the possibility for afforestation with untypical for the region ligneous species in the Park's adjacent territories as well as raising and breeding of untypical species of game and fish inside them. These processes are regulated by the Biological Diversity Act and its annexes as well as by the Forestry Act and the secondary legislation (Regulations, regiments, etc.).

1.17.3. Tourist sites and resources in the NP adjacent territories:

(a) Means of lodging and places for accommodation

Table 1.17.3(1) Categorized places for accommodation in the seven settlements from the adjacent territories:

Category	Settlement	Type of site	Name	Capacity – number of beds
1	Ivanovo	Place for accommodation	Villa Diana guest house	3
1	Nisovo	Place for accommodation	Black Stork family hotel	40
2	Cherven	Place for accommodation	Intriga guest house	3
1	Ivanovo	Place for accommodation	Detelina 2 guest house	14
2	Ivanovo	Place for accommodation	Kladenetsa-C guest house	18
1	Koshov	Place for accommodation	Seven Generations guest house	6
1	Ivanovo	Place for accommodation	Happy House guest house	10

1	Pisanets	Place for accommodation	Slanchevo villa	10
1	Koshov	Place for accommodation	The Milkovata House guest house	5
1	Tabachka	Place for accommodation	Stella guest house	5

(b) Catering and entertainment establishments

There is one categorized catering establishment with the capacity of 30 seats in the village of Pisanets, municipality of Vetovo. There are two categorized catering establishments in the village of Ivanovo out of the settlements in the municipality of Ivanovo of interest (with 50 seats each), and one in Cherven (50 seats) and in Shtraklevo (30 seats), and in addition, there are categorized catering establishments to 5 of the places for accommodation, listed above.

(c) Other sites and resources

- NAHR Middle Ages town of Cherven – the most visited site in the adjacent territories. It is described in item 1.18 below.

- There are small museum collections to the chitalishta in the villages of Shtraklevo (dedicated to the Svetlostruy newspaper), Ivanovo, Tabachka and Cherven (ethnographic), in the village of Svalenik is only a small ethnographic exhibition to the library. There is a separate ethnographic museum collection in the village of Shtraklevo, placed in a building from 1914; the collection itself dates back to year 1965.

- Festival life in the settlements from the adjacent territories is of various intensity, which is bound to the size of the villages and particularly to the number of residents; as of now the events do not have touristic nature. Local chitalishta are active in the events' organization and have potential for touristic services supply but the potential has not been used until now, except certain experience of the chitalishte in the village of Koshov, which officers are invited by a local hotel several times to make folklore demonstrations for guest of the hotel. Special attention is to be paid just to the three-day event Cherven Middle Ages Camp, which is organized annually in the beginning of May by the National reserve by several associations for historical reenactments in partnership with RHM – Ruse.

- There are other possibilities for additional services at the following sites: horse base of BTB Endurance – Ruse in the village of Tabachka; bungee jumps by the village of Pisanets; climbing routes by the villages of Koshov and Tabachka.

Tourist subjects and potential NPD partners for sustainable tourism development

(a) Tourist businesses

- The owners of all companies offering basic tourist services – accommodation and catering

- The registered in the National tourist registry tour guides (61 people) and mountain guides (3 people) from Ruse
- The registered in the National tourist registry tour operators and tourist agencies from Ruse (53 companies)
- Tour operator companies that have included Rusenski Lom in their programmes as of now and actually bring tourists to the region

(b) Non-governmental organizations
- The chitalishta in all 8 villages from the adjacent territories
- Prista TA – Ruse
- Akademik STCA – Ruse
- Club for trips Byala zvezda – Ruse
- Regional chamber of craftsmanship – Ruse
- Business centre – Ruse
- Ruse Chamber of Economics
- Union of Hotels and Restaurants – Ruse
- Business centre for MSE support - Ruse
- Ruse – City of Free Spirit Association
- Danube Municipalities Association

(c) Governmental organizations
- District administration Ruse
- Municipal administrations of Ivanovo and Vetren
- Regional Historical Museum – Ruse
- Angel Ranched University of Ruse
- The schools from the district

Attendance

NAHR Middle Ages town of Cherven attracts the most visitors in the adjacent territories. The number of visitors annually is 8-9 000 average, and in 2015 and 2016 it had reached 11 400, and after that it reduces to the average level. Among them most (around 30%) are the individual Bulgarian tourists, followed, with almost the same number, by the Bulgarian university students (15% average) and Bulgarian pensioners (12-13% average). Schoolchildren from secondary predominate among the visiting Bulgarian schoolchildren. The foreign visitors are 14-15% average annually, and the organized groups predominate with them, almost in proportion 2:1 towards the individual tourists. The data is reflection of visitors monitoring from the last 5 years.

Table 1.17.3(2) the nights spent in the categorized places for accommodation in the adjacent territories during the last 5 years is as follows (the data is from the municipalities of Ivanovo and Vetovo):

	2014	2015	2016	2017	2018
Village of Nisovo	1646	1214	1965	1827	2201
Village of Koshov	1247	868	1665	1384	1541
Village of Cherven	130	0	16	136	168
Village of Ivanovo	309	1215	994	2778	1939
Village of Pisanets	0	6	348	225	70

The Bulgarian visitors predominate here, too (up to 100% in Pisanets for example), most of them not organized, in contrast to the ones spending time in the Black Stork hotel in the village of Nisovo, which is included in some tour operators' programmes. Data about the revenues is available only about the tourist tax, collected by the municipalities but the information is collected generally for the whole municipal territory, not only for the settlements of interest in the Rusenski Lom NP adjacent territory. As a whole, it could be stated that a growth in these revenues is observed during the last three years.

Additional information about the attendance in the adjacent territories could be received from the Tourist information centre of the Municipality of Ivanovo. The visitors in the TIC have increased from 120 in 2015 to 345 in 2016, 350 in 2017 and 300 in 2018. The Bulgarian visitors are about 50% and mainly non-organized; Germany, Great Britain and Romania predominate among the foreigners.

1.18 CULTURAL HERITAGE

1.18.1. Declared and announced immovable cultural sites of value in the NP and in the adjacent territories

Region of the village of Ivanovo

1. **Village of Ivanovo**. It came into being in the times of the Second Bulgarian kingdom (12-14 century), probably in relation with the existence with the rock monastery Saint Archangel Michael. It is supposed it bears the name of one of the monastery's donors – Tsar Ivan Asen the Second or tsar Ivan Alexander. It is pointed as Ivan Ciflik /Ivan's Croft/ in the early Ottoman sources. The village and its land, during the Liberating war, are fields of military operations; the church Saint Paraskeva (1860) and many houses are destroyed. In 1961 the village changed its traditional appearance and settles at its nowadays spot.

2. **Rock monastery-lavra Saint Archangel Michael.** It is situated 2 km eastwards from the village of Ivanovo, in the Pismata countryside. It came into being in the 20s of the 13th century. Later, his founder became patriarch Joakim the First (1235-1246). It develops with the donor help of the Bulgarian tsars Ivan Asen the Second, Ivan Alexander and other members of the royal court. It plays a crucial role in the Second Bulgarian kingdom spiritual and cultural life. It is then an active literary centre, attractive for clergymen and grammarians from all over the

country. It comprises number of differentiated complexes of rock premises with separate churches or chapels, some of which inhabited during the Thracian and Late antique epochs:

- Complex at the Saint Virgin Mary church (the Church) on the left river bank. It comprises a big rock church with chapel, where murals from the 15th century are preserved, and premises-cells eastwards from them. Residential premise (12,5/9,5 m), the church (6/3,6 m) and a chapel (6/2,5 m) are well preserved.

- Complex at the Zatrupanata church /the Piled over Church/ (Saint Archangel Michael). It comprises chain-arranged premises at the same level at 20 m over the river valley. This is the oldest part of the monastery.

- Complex at the so called Krashtalnya /the Baptistery/ 100 m eastwards from the Zatrupanata church. It embraces three merging into each other levels with big church (8,90/2,80 m) and residential premises, which lead to deep natural caves.

- Complex at Gospodev dol /the God's Ravine/. It comprises a chapel (5/3,5 m) with surrounding premises at two levels that continue into deep natural cave.

- Complex at the Saborenata church /the Thrown down Church/. Three-storeyed, comprises big church and well shaped premises around it, which connect to a deep narrowing cave.

- Complex of rock cells. Two premises 50 m westwards from the Saborenata church.

The Saint Archangel monastery is announced museum reserve and archeological reserve.

3. **Rock complex Stalbitsata /Rock complex The Stairs/.** It is situated on the left bank of the river valley, на 200 m behind the back of the complex at the Saint Virgin Mary church, in the same rock massif. The premises are placed at two levels; the upper one comprises one completely inaccessible shallow-hewn cell with rectangular outline. The premises at the lower level are chain-connected and compose two caves with traces of tilling in the most southern part, two connected rectangular premises with equal walls in their middle part and big, thrown down today church in the northern part. The complex is difficult to access.

4. **Stone water-mill** near the Rusenski Lom river bed since the rock complex Stalbitsata. It has been built in the beginning of the 20th century. Remains of its walls are preserved.

5. **Middle Ages and late Middle Ages settlement.** It is situated on the slant slope in the river valley's wide turn, on the right-hand bank, 1 km southwards from the complex at the Saborenata church. Ruins of dwellings vaguely outline on its terrain's surface. Limited quantity of ceramics is found.

6. **Smesite countryside** at the joining of Beli and Cherni Lom rivers. There is a very big sacredness load, formed on the grounds of classic opposition left/right or white/black. Thracian, Roman and Middle Ages cult centre. There is a Thracian sanctuary in the highest part

of the rock height between both rivers, with which several rock niches are connected. Latin dedication inscription of Diana and two cylindrical stone tanks were found at its bottom back in the 60s of the 20th century during digging activities. A not big building from Antiquity, also with cult functions, is studied 500 m southwards from the two rivers joining.

Smesite region - Cherven

1. **Gramovets rock monastery** on the Cherni Lom river left bank. Its premises form three closely situated groups 10 m above the river valley, reachable through stone stairs, destroyed in its bottom. The monastery church (10/3,5 m) is with well tilled walls. It has differentiated narthex and well outlined althar part. The monastery is object of treasure hunters' raids.

2. **Late Antiquity and Middle Ages settlement** 1 km southwards from Gramovets in the Selishteto countryside. It occupies slightly inclined to east area, surrounded by Cherni Lom river wide turn, on the left bank. Ceramic fragments from Late Antiquity (4-6th century) and from the period of the Second Bulgarian kingdom (12-14th century) have been found.

3. **Inhabited cave (Kichiyata)** with tunnel-shaped form and traces of walls tilling on the left bank. It is connected with two big premises in its northern end. Heavily worn stairs lead to it. The whole complex is much ruined.

4. **Chepliysko rock monastery.** Complex of premises on the left bank, immediately to the south of the Kichiyata cave. There are plastic fragments in the church (7,5/5 m). To the south of it, there are two groups of ruined residential premises, one of which is connected to a deep cave.

5. **Rock cells** 100 m to the south of Chepiysko, with regular square form, inaccessible today.

6. **Rock monastery** on the left bank, 1 km northwards of the village of Koshov. Much ruined; it presents today a big 45 m long and about 10 m high cave, with three openings from east and south. A stone stairs ruined at its bottom leads to the cave. There are a lot of traces of artificial tilling at many spots in it – walls and floor flattening, sockets for attaching wood bars, etc.

7. **Late Middle Ages necropolis** on the left bank, in the northern corner of the village of Koshov. Regular stone crosses have been found.

8. **The village of Koshov** came into being in the times of the Second Bulgarian kingdom. Its name is seen in early Ottoman sources from the 15th century. The church is from 1873.

9. **Thracian and Middle Ages settlement** on Cherni Lom river right-hand bank, in the Bodurtsi countryside, in the southern corner of the village of Koshov. It occupies the

territory outlined by the river wide turn. Ceramic fragments as well as stone crosses, probably from the Late Middle Ages have been found.

Region by the village of Cherven

1. **Malak Ray monastery /Small Paradise monastery/** in the rocks on the left bank of the Cherni Lom river valley, 3 km northwards from the village of Cherven. Its premises are at three levels. The monastery's church is accessible through inside pass-stairs, which is opened in the narthex's floor. The nave is attached from the north and has probably been separated from the narthex by a wood wall. The althar apse was towards the rock's face and is thrown down today. There are small fragments of wall plaster and murals. Malak Ray monastery (actually a hermitage) is one of the most impressive rock cloisters in Polomieto. It needs socialization.

2. **Koshuta monastery** is on the right-hand bank, 2 km northwards of the village of Cherven. It comprises several chain-arranged at same level shallowly hewn and rectangular shaped cells. They have probably finished at the rock's face with wood, lifting construction. Dug in the rock corridor , in which probably there had been wood stairs, led to them.

3. **Golyam Ray monastery /Big Paradise monastery/.** Big complex of arranged in chain premises in the rocks on the left bank, 1,5 km northwards from the village of Cherven. Pathway from the bottom or pass connecting it to the plateau over the valley lead to it. The pass reaches from the south the biggest monastery premise (11/5,5 m), probably a church, which althar part had been towards the rock's face and is ruined now. Several burial chambers are dug in its floor. Different in size and stage of tilling premises are situated in northern and southern direction. It needs socialization.

4. **Water mill** on the left bank, in the Chuchana countryside, 1 km northwards from the village of Cherven. It is built in the beginning of the 20th century. Solid stone building, with a separate water canal, water wheel and millpond with high water fall.

5. **Prehistoric settlement** on the right bank, in the Chuchana countryside. It is situated at the bottom of a big scree near a spring of great capacity. Ceramic fragments ar found because of which it is considered belonging to the stone-copper age.

6. **Rock monastery by Moskov dol /the Moskov Ravine/**. A complex of big rock church-niche and scattered, comparatevile at distnace from each other, premises on the left-hand bank of the Cherni Lom river, northwards opposite the town of Cherven, in the Boruna countryside. The church is a big natural cave (10/5 m), the southern part of which has been overbuilt upon a sticking out wide rock grounds. It has a well outlined narthex and an althar part with synthronon. Murals from the second half of the 14th century on the rock wall upper parts are well preserved. The church is connected with the other monastery premises by a branched system of rock paths and stairs. It has been used by the local population until the middle of the 19th century.

7. **Antique and Middle Ages road** in Moskov dol countryside. Part of the Roman road system in the Bulgarian lands. The road bed is 4,5 m wide and is covered with big stone slabs on sandy base. It reaches the Cherni Lom river valley in its southern part, where there had been a bridge. The road probably connected the antique fortress on the spot of the Middle Ages town of Cherven and the Sexaginta Prista castel by the Danube. It has been used by the local population until the middle of the 20th century. Today big parts are ruined by torrents.

8. **Rock monastery** (the so called Cherven monastery). It is situated on the left valley bank, on the top of the turn westwards from the Middle Ages town of Cherven. A complex of chain premises with rectangular outlines and flat walls. The monastery church (10,8/5,6 m) has narthex attached from the south. Its althar part has been towards the rock face and is thrown down today. A narrow path makes the connection with the closely situated rock premises from the north and the south, but it can be proposed further situated in the surrounding rocks premises also belonged to that monastery. The monastery is affected by earthquakes in 1892.

9. **Middle Ages fortified town of Cherven**, one of the biggest military-administrative, economic and cultural centres of the Second Bulgarian kingdom. It is successor of a early Byzantine fortress from the 6th century. Its significance grows after 1235, when it becomes centre of the Cherven bishopry. Its territory reaches 1 sq. km in the second half of the 14th century and is with well outlined planning structure comprising inside fortified town on a spacious rock hill into a turn of the Cherni Lom river and an outside town at the bottom of the rocks and on the surrounding hills. It is a spiritual and educational centre related to the rock monasteries in the Rusenski Lom river valley. It was seized and destroyed by the Ottoman Turks in 1388. The following is uncovered today: castle, fortress walls, two underground water-supply passes, 13 churches, public administrative buildings, dwelling places, workshops, streets. Three-storied fortress tower from the 14th century is completely preserved.

10. **Rock monastery** in the Cherven hill southern rock foot, immediately under the rock saddle between the citadel and the real town. It is a not big complex of chained premises that comprise small church and a chapel. The southern parts were in front of the rock face on a rock terrace.

11. **Thracian settlement** upon the slant earth slope in the Cherven hill southern foot, at the southern water-supply pass. Ceramics and ruins of a dug-out have been uncovered.

12. **Middle Ages necropolis** on the slant slope northwards from the hill of the Middle Ages town of Cherven. Human bones and Roman coins have been found at soil tilling.

13. **Middle Ages and Ottoman necropolis** in the most eastern end of the built-up territory of Middle Ages town of Cherven. There were Christian and Muslim gravestones on the surface until the end of the 19th century. A Middle Ages cemetery church has been uncovered on the territory.

14. **The village of Cherven**. It came into being in the 15-17th century. The residents of the declined Middle Ages town of Cherven settled there, leaving the former town's territory. The village kept its predominantly Bulgarian ethno-confessional appearance as well as significant part of the spiritual traditions established in the times of the Second Bulgarian kingdom. The first known Bulgarian teachers in Ruse originate from there, Todot Tonev (Averkiy schoolmaster) and Ivan Tonev (18th century) as well as the kin of Baba Tonka Obretenova. It progresses today as a tourist centre.

15. **Rock monastery**. It was situated on the right bank, opposite the nowadays centre of the village of Cherven. It was a three-storied complex. One of the premises at the third level was probably a church.

16. **Thracian fortress**. It is situated on the right bank, 2,5 km southwards of the village of Cherven, in the Mutyovitsa countryside. It is situated on a high rock surrounded by the river valley and a deep ravine from the southwest and northwest. It has the outlines of an irregular triangle with an area of 15 decares, which is limited by a double fortress wall from the accessible eastern part. Ceramic fragments from 5-3rd century B.C. are found on the terrain's surface.

17. **Prehistoric and Middle Ages settlement**. On the right bank, in the foot of the Thracian fortress, in the Bey chiflik countryside, 2,5 km southwards from the village of Cherven. Items from everyday life and remains of residential architecture from the eneolithic epoch and form the Second Bulgarian kingdom are found during probing ecscavations. Today significant part of the settlement is destroyed by torrent.

18. **Late Middle Ages Christian necropolis**. It is on the right bank, in the Stankova strana countryside, not far from the prehistoric and the Middle Ages settlement. Entire and ruined big stone crosses, characteristic for the period 15-17th century existed on the surface until the beginning of the 20th century. Few burials with inhumations have been found.

19. **Thracian sanctuary (?) and rock churches**. They are on the right bank, in the low part of a deep ravine, in the Thracian fortress northeast foot. Complex of several destroyed rock premises. There is a depiction of a deer or horse rider, made with white pigment, on the wall of one of them, as well as illegible graphics and crosses from the Middle Ages period.

20. **Antique settlement** in the so called Water cave 4 km southwest from the village of Cherven, in the rocks on the left bank, 50 m over the river valley. It is reachable by a pathway on a rock terrace. The cave is big, arch-shaped niche, 70 m long, with high ceiling, on which Latin and other inscriptions and marks are indented. There is a spring at the bottom with not much big capacity. The ceramic fragments found along the slope under the cave show that the sanctuary has been used during the Thracian epoch and the period of the Second Bulgarian kingdom.

<u>Smesite – Pisanets region</u>

1. **Late Antiquity fortress** on a not big hill on the right bank of the valley, 6 km away from the village of Shtraklevo, in the Chaushka countryside. It has oval form (120/60 m) and double fortress wall towards the plateau. Much destroyed by treasure hunters.

2. **Late Middle Ages settlement** on both river banks in the Obretenka countryside. There is a stone water-mill from the beginning of the 20th century on the right bank.

3. **Late Middle Ages settlement** in the Chelingir countryside, 6 km southwards from Shtraklevo, on a slant slope on the right bank. Pits from previous building up outline on the surface.

4. **Prehistoric and Thracian settlement** in a rock shelter on the Beli Lom river right bank, within the outlines of the Chilingir settlement. Fragments from early Neolithic and Thracian ceramics, residence putty, animal bones and other items are found in its embankment.

5. **Thracian, Late Antique and Middle Ages fortress** (Chelingir kale).It is situated on a high rocky cape, on the left bank, in the river turn's narrowest par, 5 km northwards from the village of Nisovo. It is surrounded by steep rocks, where the access is realized only from northwest, where fortress wall bank and ditch outline. Traces of residencies outline on the surface. On the northern slope, there is a cave with traces of wall tilling called Karaulnicata.

6. **Late Antique and Middle Ages fortress** on the rock plateau in the interspace between the rivers Beli Lom and Mali Lom, immedicately before their joining westwards from the village of Nisovo. It is accessible from southwest, where the plateau is partitioned with a massive fortress wall, outlining under a high earth bank. A pathway with steps to the foot is traceable also along the southwestern slope. Middle Ages coins have been found in its surroundings. There have been treasure hunters raids.

7. **The village of Nisovo** is probably a successor of a Middle Ages fortress in its western vicinity. It is mentioned in early Ottoman documents from the 15th century. Houses from the end of the 19th – the beginning of the 20th century are preserved.

8. **Late Middle Ages necropolis** on the slant slope on the river right bank, in the eastern vicinity of the village of Nisovo. There are big stone crosses on its surface with depictions that ground the necropolis dating 16-18th century. Today it is the only still well-preserved necropolis in Polomieto dating back to the Late Middle Age.

9. **Thracian settlement** 2 km eastwards from the village of Nisovo, into a turn on the left bank by the so called Sechena skala /the Cut Rock/. Traces of buildings outline on the slope and pre-Roman ceramics is uncovered.

10. **Late Antique fortress** 2 km eastwards from the village of Nisovo, on the left bank, in the highest part of the river valley turn by Sechena skala. It is known as Kale Adzhamka. It is a not big rectangular fortification (55/45 m) with massive walls with a tower each, contiguous to a vertical rock from the east. It is covered by dense vegetation.

11. **Late Middle Ages settlement** in the Galitsa countryside on the right bank 8 km eastwards from the village of Nisovo, along a wide river turn slope. Ceramic fragments are found.

12. **Habitation hill** on the left bank, in the Krivitsa countryside, in the northern lowest part of the Grebena elevation. It possesses the shape of a cut cone with diameter of 50 m and height of 5 m. The ceramic fragments found in the hill excavations take it to the late stone-copper age.

13. **Late Antique and Middle Ages fortress** (Krivishko kale) on the right bank in the Krivitsa countryside, on a small elevation limited by ravines from the east and the west. It's today remains are insignificant.

14. **Rock cells** on the right bank in the Indolipitsa countryside rocks. There are two, inaccessible today premises with traces of tilling: steps, niches, etc.

15. **Middle Ages iron mine** on the right bank, on the rock vertical in the Probit kamak countryside. Several cylindrical wells with diameter of 10 m are uncovered with openings of horizontal galleries in various directions in their bottoms. The surrounding terrain is covered with pieces of iron ore. The mines are part of the Middle Ages Pisanets iron ore region.

Village of Pisanets region

1. **Thracian, Middle Ages and Late Middle Ages settlement** (Vakovo, Vlakovo) 3 km westards of the village of Pisanets, on the left bank by the pump station in the slope westwards of the Varovichets ravine. Semi-dugouts, workshops for iron procession and production, tools, coins, Christian burials are found during excavations. The settlement has probably existed in relation to the development of the surrounding iron mines.

2. **Middle Ages open iron mine** on the right bank, in the slopes of the ravine to the west end of the village of Pisanets. Great number of old copper coins and pieces of iron ore are found.

3. **The village of Pisanets**. It probably came into being in the beginning of the Ottoman period and succeeded the declined town on the spot of the Bulgarian and the Turkish site of a town and the mining settlement in the Vlakovo countryside. It is mentioned in travel notes from the 18th and 19th century as a station on the road Ruse - Varna. Residential buildings from the 19th and the beginning of the 20th century are preserved in the village. The village church Sveto Vaznesenie /Holy Ascencion Church/ (1868) is destroyed during the Liberation war and is consequently restored. The separately standing stone tower-belfry is popular, with western European architectural influence.

4. **Thracian, antique, late antique and Middle Ages fortress**. It is situated 3 km eastwards from the village of Pisanets, in both Beli Lom river rock turns. It is known with the names the Bulgarian and the Turkish sites of ancient town, which are situated on two

neighboring elevations. The fortifications on them are independent during the Thracian and the Antique ages and have different chronology. They progress as one town with unknown name during the Second Bulgarian kingdom. It was one of the biggest in Polomieto and its spreading is due to iron production in the region and related to it crafts. The main planning features of fortified settlements of the period can be traced in the structure of the Bulgarian site of the ancient town. The fortified internal town with castle is in the highest part of the elevation, and vast suburbs develops on the plateau southwards (Selishte countryside). The Turkish site of the ancient town's elevation incorporation is probably a stage of the territorial spreading of the settlement's territory. Ruins of fortifications and remains of residential architecture outline in all parts of the town. Iron production workshops, ceramics, coins from various periods have been found. The town is probably destroyed during the Ottoman conquest and the residents move to the village of Pisanets, Ruse and other settlements.

5. **Rock church**. It is situated in the medium, high part of the former Bulgarian settlement. It is a small premise with rectangular apse, opened to the south and to the west. A horizontal niche is hewn on the northern wall. There are several inaccessible today premises in the rock under the church from the west.

6. **Rock monastery**. On the left bank, in the rocks southwestwards opposite the Bulgarian former town and to the west from Dolap dere. Big rectangular premise with ruined outside wall, in which thickness the althar apse was integrated one upon a time.

Village of Nisovo – village of Svalenik region

1. **Rock monastery** (Small Nisovo monastery) – complex of hardly accessible premises with tilled flat walls, on the right bank, 3 km southwards of the village of Nisovo. Steps hewn in the rock, today ruined, led to the church, which is situated in the highest part. There is a cave with hewn premises to the north of the church.

2. **Rock monastery** (Big Nisovo monastery) on the right bank, 7 km southwards of the village of Nisovo. A big complex of chained premises some 20 m over the river valley, to which a hewn in the rock stairs, today partly ruined, led. One of the biggest and most representative monasteries in Polomieto. Its premises have rectangular outlines and evenly hewn walls. They are connected by a system of interior passes in its medium part. The church, with differentiated althar space with rectangular outlines, is in the most western part. At some spots there are preserved fragments of plaster with murals on its walls.

3. **Rock complex** (hermitage) on the left bank in the rocks opposite the Big Nisovo monastery. One church and one residential premise situated in a section of heavily weathered rocks, are accessible. The church (6/2,5 m) has a longitudinal axis North-South, and the althar space is in a differentiated wide niche on the long eastern wall.

4.**Belbernitsata rock complex** (hermitage) on the left bank southwards from the above hermitage. It comprises inaccessible church and cell.

5. **Late Antiquity fortress** (Dakovo kale) 3,5 km southwards from the Big Nisovo monastery, on the right bank on a not big elevation with steep banks. It is accessible from northeast, where there are two parallel fortress walls.

6. **Rock complex** on the right bank in the Martvitsata rock, 7 km northwestwards from the village of Svalenik. A group of hardly accessible premises with traces of tilling.

7. **Late Antiquity fortress** in the Byalata stena countryside, some 6 km northwestwards from the village of Svalenik, on the river's right bank. It occupies the high northeast part of a rocky elevation with steep banks, accessible only from the northeast. It has irregular polygonal form. At single spots, the bed of the fortress wall outlines.

8. **The village of Svalenik** probably came into being during teh Ottoman rule around a local mansion. The preserved houses are from the beginning of the 20th century. There are Russian monuments from the Liberation war southwestwards from the village.

9. **Thracian, Antique and Middle Ages settlement** in the northeast vicinity of the village of Svalenik, in the Selishteto countryside on the right bank. Ceramic fragments from the time of the Second Bulgarian kingdom are found.

10. **Kuklata (Kulata) fortress** on a not big narrow elevation in the eastern corner between the Malki Lom and Tserovetska rivers valleys, southeastwards from the village of Svalenik. It is probably from the Late Antiquity of the Second Bulgarian kingdom.

11. **Rock complex** (hermitage) on the right bank in the Sopotets countryside. It comprises a rectangular church and two small cells.

Conducted studies

The studies of cultural-historical heritage in Polomieto are described in details by experts of the Regional historical museum – Ruse at the first Management Plan elaboration. In the period from the first MP elaboration until now, the following studies are additionally completed:

1. Study of the northern section of the saddle between the citadel and the real town started in 2007 on the territory of the Middle Ages town of Cherven. Craftsmen and residential buildings are studied as well as the bed of the way to the northern water-supply pass. In 2011 a small church with №15 is uncovered. It is situated in the saddle's eastern half. The church is with one nave, one apse, without narthex. A necropolis by it, formed in the end of the 12th – the beginning of the 13th century is also studied. The church is probably built as cemetry one as far as it steps on the already abandoned part of the necropolis. A trial for restoring again the church building has been made in the end of the 14th century. Three inscriptions are uncovered southwards from the entrance, one of which contains the temple's name – Holy Virgin Mary. The excavations continued in this zone until 2015 uncovering new information about the Middle Ages town's planning.

The regular excavations in 2017 include the western part of the so called actual town, situated on the rock plateau. The studie of a new church №16 started. In the following years, 2018 and 2019, a church building was uncovered, parts of its necropolis as well as sections of later building up around the studied temple. Fragments of mural paintings in the narthexm the northern and the southern narthex walls are uncovered as well as the temple's althar part. The church is dated being from the beginning of the 14th century.

The studied sections of the Middle Ages town of Cherven open the possibility for supplementing the existing information about its development in the period of the Second Bulgarian kingdom (12-14th century) and the Early Ottoman period (15-16th century).

2. In 2018, a study in the Smesite countryside by the village of Koshov is conducted, in immediate proximity to the place of Beli and Cherni Lom rivers junction. Three inscriptions of dedication to the goddess Diana Plestrensis are found in the same region in the 20th century, witnessing the existence of a big sanctuary. In 1985, in relation to the programme Ivanovo-Cherven and the plan for building a road, the ruins of massive constructing was uncovered – the ruins of two big buildings. In 2018, the study of that sector is undertaken again. The first building could be related with the epigraphic monuments that belong to Diana's sanctuary. This building could have been the main temple or part of a sanctuary complex. Its probable dating is within 1-4th century. The second building has been built earliest in the 4th century and belong to the group of representative late Roman buildings with an apse. The excavations by the village of Koshov would continue the uncovering of the supposed sanctuary buildings, which would allow the building of a route from the village of Koshov to the Smesite countryside.

3. Saving archeological studies of a late Roman and early Byzantine fortification in the Dolap boaz countryside, the land of the village of Svalenik, municipality of Ivanovo are conducted. The terrain belongs to property № 000261 after Map of Restored Property /MRP/, state forest fund in section 47, sub-sections "d", 3; 4 (Forestry Management Project /FMP/-2002) on the Rusenski Lom Nature park's territory. As result of the study, parts of the fortress wall and several big chained buildings are uncovered. Based on the uncovered archeological material, the time of fortress operating belongs to the middle of the 4th – the first quarter of the 7th century.

Assessment of the sites' significance and status

The predominating sites are archeological monuments of culture and are concentrated inside the valleys of Lomovete, where most are situated along the Cherni Lom course. The best preserved sites are of religious nature, much better preserved than the settlements, and mainly from the period of the Second Bulgarian kingdom, when the region played important role in the life and development of the state and religion. Among these, some sites are in much better condition than others, and the best preserved are situated within both National historical-archeological reserves. The rest are not taken care of and they are left under the effect of the natural processes.

The archeological excavations held in the region rank some of the monuments in Polomieto among the greatest and most important archeological sites defining the cultural appearance of the Bulgarian lands through the centuries. Among them the neolithic and chalcolithic settlement in the Bey chiflik countryside by the village of Cherven, the antique sanctuary in the Smesite countryside, the Saint Archangel Michael rock monastery by the village of Ivanovo, the Middle Ages towns of Cherven and the one by the village of Pisanets as well as number of smaller sites – roads, sacrificial altars (sharaptashi), etc. After specifying the data on the style, the local features, the authors' artistic manner and other things, the miral decoration of the temples in the Saint Archangel Michael rock monastery-lavra found its place among the finest achievements of Bulgarian and Balkan art of painting in the 13th and 14th century and is reason for the monastery to be enlisted in UNESCO world cultural heritage list. Ivanovo rock churches and Middle Ages town of Cherven have the statute of National archeological archeological-historical reserves (NAHR). From sustainable tourism development point of view, not only these two significant sites are important, but also the rest as far as they are subject of tourist interpretation and could contribute to creating modern and quality tourist product.

It should be pointed that NAHR Ivanovo rock churches and Middle Ages town of Cherven have the statute of reserves with higher level of protection than the category "nature park" and special regiments under the Cultural Heritage Act are in power for them. These regiments should be taken into consideration at the planning of any actions in regard to not only the reserves themselves but to the whole territory that could have effect on their preservation.

1.18.2. Buildings

Beside the buildings within the sites of the cultural-historical heritage pointed in item 1.18.1 above with their names and condition, here should also be mentioned ones having relation to the sites' management, namely Tourist information centre in the building of the municipality of Ivanovo and the visitor's sites at both NAHR. All sites are managed by the municipal administrations with the support of Regional historical museum – Ruse, and for both NAHR – also control by the National Institute for Immovable Cultural Heritage. Within the period of the previous MP operation, Rusenski Lom NPD have completed socialization (ensuring access) to the Gramovets monastery, the socialization of Malak Ray monastery is planned but not performed.

RHM – Ruse has buildings related to NAHR Middle Ages town of Cherven. One of them is Archeological base situated on the rock elevation on the site's territory. Its area is 50 sq. m, and the building is combined, with wooden part of shed type and masoned part. Its condition is good, it is used for the purpose it was meant, as archeological base. It is electrified and there is access to running water, which to be used by visitors and building's inhabitants. The account numbers for electricity and water are on the name of the Regional historical museum - Ruse.

The other building is situated within the limits of the archeological reserve. Its area is 45 sq. m, masoned building in not good shape. It does not have electivity or running water.

1.18.3. Intangible cultural heritage

Folklore

Folklore traditions in Polomieto are preserved by the local chitalishta (there is one in each of the eight adjacent villages) and particularly the folklore groups to them: dance, sing, for authentic folklore and reproduction of customs and rituals. Traditions have been preserved and are transmitted to the younger generations.

Crafts

According to present data, there are no preserved and active traditional crafts in the villages from the Rusenski Lom NP adjacent territories. Studies show that in the past these were:

- Woodworking - cooperage, carpentry
- Stone extraction and processing following traditional methods
- Production of everyday-life objects – basket-making, goat's hair rug making, rush mat making
- Women's household occupations – weaving, hand knitting, embroidery
- Agricultural activities – vine-growing, fruit-growing, gardening, bee-keeping and honey production

Holidays

Traditional feats:

- January 6th – Yordanovden, Saint Jordan's Day, Epiphany, throwing the cross in the river
- January 7th – Ivanovden, Saint John's Day
- January 21st – Babinden, Midwives' Day
- February, 11th – Beekeeper's Day
- February 14th – Vine-grower's Day
- March 1st – Baba Marta
- March 3rd – The Bulgarian national holiday
- March 8th – Woman's and Mother's Day
- March 22nd – First Spring Day
- Saturday before Palm Sunday – Lazarovden, Saint Lazar's Day, custom Lazaruvane
- Easter holidays
- May 1st – traditional village fair of the village of Shtraklevo and of the village of Pisanets
- May 6th – Gergyovden,, Saint George's Day
- May 24th – Slavic culture and writing Day
- June 1st – Children's Day, big feast with guest actors

- October 1st – Elderly people's Day
- First Saturday and Sunday after Dimitrovden /Saint Dimitri's Day/ (the end of October) – village of Svalenik's fair
- November 1st – Day of the enlighteners
- Second week of November – fairs of the village of Cherven and the village of Koshov
- November 21st – Christian family's; fair of the village of Nisovo
- Christmas – Christmas concerts, bazars and exhibitions, custom Koleduvane /Go carolling/

Rituals based on traditions, restored for demonstrative goals:

- „Varden kvas" /Guarded yeast/– ritual for kneading leavened bread with certain number of participants, ritual flour sifting, kneading, etc.; the kneaded yeast is guarded the whole night long and this is accompanied by people having feast. Vazrazhdane 1906 chitalishte, village of Shtraklevo.
- Otbulvane na bulkata /Taking off bride's veil/– specific wedding ritual related to taking bride's veil off. Vazrazhdane 1906 chitalishte, village of Shtraklevo.
- Kapane na tsarya /Tsar's bathing/on Ivanovden (related to the people having celebrating their name's day on that day), Svetlina 1929 chitalishte the village of Svalenik.
- Valchi praznitsi /Wolves' holidays/ – pagan ritual in the end of November – the beginning of December, 17 days after Dimitrovden. Women gather from one house to another, ritual with sitting for hemp processing, when nothing else is worked in order the wolves not to trouble the men and the cattle. Svetlina 1929 chitalishte the village of Svalenik.
- Dzhamal – ritual for expelling evil spirits, it is presented at masquerade dancing festivals. It is founded in 1875, it has been practiced around Ivanovden. A ladder wrapped up in burlaps is carried by two strong men; there are 15 men with pillows, gourds, swords around them – something ugly, in order to frighten the evil spirits. Various characters are reproduced – Ali baba, housewife, householder (family), etc. Prosveta 1928 chitalishte village of Koshov.
- Kumichene – the day after Lazarovden the girls-lazarki weave wreaths from willow branches and go to throw them in the river. The girl, whose wreath comes to the surface first, becomes Kumitsa and according to the tradition she, around Easter, meets the other lazarki in her house and they honor her with Easter bread and eggs. Prosveta 1927 chitalishte in the village of Tabachka.

Modern holidays hat are related to cultural-historical heritage indirectly:

- Middle Ages Camp Cherven, described above.

- The Children of Polomieto – Celebration under the Monastery – in the region of NAHR Ivanovo rock churches. It usually coincides with significant dates connected with the Liberation of Bulgaria. It is organized by Hristo Botev chitalishte in the village of Ivanovo. A stage in the open is made, on which local amateur artists of all ages perform; it is accompanied by a culinary exhibition for the children.
- From Polomieto to the Danube Together – holiday of the municipality of Ivanovo on August 28th – date of a traditional cross-border fair of Ivanovo and a Romanian municipality. It is organized by the municipality of Ivanovo; an exhibition of local products is made; an opened stage with local and guest-performers.
- National literature contest Svetlostruy, village of Shtraklevo

1.18.4. Active school, study circles' and chitalishta's activities

• Vazrazhdane 1906 chitalishte village of Shtraklevo: women's group for authentic folklore, youth Koledari group, youth dancing group for folklore dances Horosletsi, dance group for folklore dances 50 Plus Minus (for people around 50 or older), group for artistic recitation, Kraeznanie /Local Studies/ club, schoolchildren's group for Lazarki songs. The groups actively participate in folklore festivals around the country. It organizes National literature contest Svetlostruy (fourteen editions already) every second year; maintains the only museum collection in the country dedicated to a newspaper – the one bearing the same name, Svetlostruy. The chitalishte cultural calendar counts 74 events only for 2019, where all traditional dates and holidays are reflected, plus some specific ones, for example the Earth day and the Forest Day in April, Children's Book and Arts Week; Gergyovden on the square; June 14th – celebration with schoolchildren and Dinamika Centre for rehabilitation of disabled people; October – Creative season that includes meetings with writers, with Ruse poets, etc.; December 3rd – Disabled people's Day; All village Christmas concert with the school (100 children) and the kindergarten (50 children); participation in the Christmas concert at the ceremonial session of the town's hall in the municipality of Ivanovo.

• Svetlina 1929 chitalishte village of Svalenik: club Let's Open Grandmother's Chest, which works with schoolchildren (applied arts, folklore);women's group for authentic folklore and customs, men's group for folklore customs, group Little Lazarki. There has been a small ethnographic collection to the chitalishte, which premise cannot be used any more, that's why it is arranged in the library. Most of the traditional holidays are celebrated.

• Prosveta 1928 chitalishte village of Koshov: women's choral folklore group (and for artistic recitation), Group for authentic folklore (men's). Most of the traditional holidays are celebrated, there are also some specific ones, for example, the so called Boenets has been practiced around Christmas; Doyli around Lazarovden – Lazarski songs in two groups, one of them is starting singing, the other one is finishing the singing, and has special steps.

- Prosveta 1928 chitalishte village of Cherven: musical band of accordion, kettle-drum and gadulka /rebeck/. There is also an ethnographic exhibition to the chitalishte, which is mainly visited by people from the village now. Most of the traditional holidays are celebrated, with focus on Zarezan /Vinegrower's Day/, Lazarovden, Koleduvane, Babinden.

- Geo Milev 1915 chitalishte village of Nisovo: they have no constant groups, children and young people gather on particular holidays, for example for the custom Survakane on the Christmas Eve, Lazaruvane; they organize celebrations for Babinden, the Beekeeper's Day, Zarezan and others together with the elderly women of the village.

- Hristo Botev 1925 chitalishte the village of Ivanovo: group for authentic folklore, Ivanovo Roots Local Studies club, choral group for modern songs, Koledari group, Lazarki group. They maintain a museum collection and an Internet centre. Most of the traditional holidays are celebrated, they also make a reproduction of the Dzhamal traditional custom. A book on local cuisine is published.

- Prosveta 1901 chitalishte the village of Pisanets: Pisanets Voices choral women's group for authentic folklore. Most of the traditional holidays are celebrated.

- Prosveta 1927 chitalishte village of Tabachka: small ethnographic museum collection; the customs Lazaruvane and Kumichene are reproduced together with the children; they have also reproduced Enyovden but it is not done at the moment. There was also a women's choral group until 2017.

- Group for old popular songs to the Pensioner's club village of Shtraklevo. They have local appearances.

- Mixed amateur's schoolchildren's group for recitation and songs to Hristo Botev Primary school, village of Shtraklevo. They have local appearances.

1.19 LANDSCAPE

1.19.1. Landscape structure

According to the regional landscape division of Bulgaria, Rusenski Lom NP belongs to the following regional landscape structure:

A. Zonal landscape district of the Danube plain.

II. Northern Danube-Bulgarian landscape sub-district.

17. Ruse-Lomovski landscape region.

According to the typological landscape division of the country, Rusenski Lom NP territory belongs to the following typological landscape structure:

1. Class Plain landscapes

1.4. Type Landscapes of big karst of moderate-continental plains.

1.4.9. Sub-type Landscapes of plain bare karst in the forest-steppe zone.

1.4.9.16. Group Landscapes of the bare karst on the slopes of canyon-like valleys that cut the plains of sedimentary carbonate rocks.

Forest landscapes

On the Park's territory, the widest represented type of forest landscape is the one that contains 24 types and occupies 66.9 % of the total territory. All three sub-types are represented – forest coniferous, forest deciduous high stemmed and forest deciduous sprout.

Meadow landscapes

The type meadow landscape is represented by 2 types and is mainly placed on the rivers' terrace. It is mainly represented by the type meadow riparian rich mesomorphic valley-like - 273.4 ha.

Agrarian landscapes

The type agrarian landscape is represented by 15 types of landscapes. The sub-type agrarian pasture contains 13 types, which include meadows, barrens, barrens unuseful for forestry, meadows with shrubs, common lands and other areas occupied by grass ecosystems.

The sub-type agrarian crop rotation landscape is represented by 2 types arable agricultural areas, situated in the valley around the rivers in proximity of the settlements. The type agrarian crop rotation rich mesomorphic valley is main one with area of 77,7 ha.

Rock landscape

The type rock landscape is represented by only one type – rock sedimentary carbonate with area of 417,9 ha. It embraces the rock verticals, canyons, verticals and peaks constructed of Aptian Lower Cretaceous limestone along the Rusenski Lom river valley and its tributaries, Beli, Cherni and Malki Lom. Rock landscapes are strewn with various karst forms and various in size and configuration caves.

Aquatic landscape

The type aquatic landscape is constructed of one type aquatic riparian and includes the aquatory of all water areas of the rivers and several fish ponds. Water ecosystems condition is significantly improved.

Anthropogenic landscapes

The type anthropogenic landscape is represented by 2 types.

- anthropogenic infrastructure, which includes roads, openings, electric communications, etc.
- anthropogenic built up, which includes yards, buildings of historical or farm purpose and other built up plots.

RLNP landscape's morphologic complexity is defined by the polycyclical Sarmatian-Pontic denudation flatness, which height is gradually decreasing from the South to the North towards the Danube. That flatness should be accepted as initial surface for the development and the entire forming of nowadays landscape. At present, these are the plain parts of the relief between Lomovete valleys.

1.19.2. Aesthetic features

1.19.2.1. Places and points for watching along key touristic routes and settlements that possess potential and special aesthetic effect.

Landscapes are perceived in motion along exactly specified routes in the Park and NPD has determined and marked places for watching grounds in the past years, presented on map №18 – tourist routes and objects.

1.19.2.2. Places with special aesthetic qualities.

Rock landscapes, presented mainly by rock sedimentary carbonate landscape are of special significance for Rusenski Lom NP.

The rock landscapes along the Cherni Lom river valley to the north of the village of Cherven to the village of Koshov and the Rusenski Lom river valley from the Smesite countryside to the NAHR Ivanovo rock churches remain particularly valuable from landscape-aesthetic point of view.

Forest deciduous landscapes, the most represented in the park, are also of essential significance for the aesthetic features of landscape, and in combination with the rock and meadow landscapes represent natural background or the river aquatory. Thus various in scope panoramic views are obtained.

The aesthetic qualities of landscapes are supplemented by the historical significance of the rock monasteries.

1.19.2.3. Necessity of particular measures on landscape management, directed towards decreasing anthropogenic landscapes impact upon the visitors.

Particular measures on landscape management, directed towards decreasing anthropogenic landscapes impact upon visitors are necessary on spots along the tourist routes, where the territories between tourist trails and the river are tightly overgrown with nettle. This isolates the aqua landscapes and sharply decreases the natural complex aesthetic effect.

1.19.2.4. No cases of landscape change as result of conducted activities in the forests or building are found.

Republic of Bulgaria still hasn't developed legal, administrative, fiscal and financial order for the goals of applying the European Landscape Convention, which to be conformed with and to correspond to the country's traditions most exactly.
Programmes for landscape identification, assessment, protection, management and planning are defined in section 4.

The basic types of landscapes in the NP are presented on **Map №17 Landscapes Types**.

1.20 ENVIRONMENT COMPONENTS STATE

No damaged areas as result of erosion, farm activity, pollution are registered in the Park throughout the years, and the bordering lands after 2005, waste water and radiation.

There are no illegal dung-hills on the Rusenski Lom Nature Park's territory. The exploitation of the municipal depots situated on the territories of the municipalities of Ivanovo and Vetovo is stopped with Orders № 282/July 16th 2009 and №278/July 16th 2009 of the RIEW-Ruse's director.

Both dung-hills on the territory of the municipality of Ivanovo in the Paradzhika countryside (the Dam) and the Kalendzhi Koru countryside (Behind the Cemetery) are closed with State reception commission, assigned with Order № ДК-08-P-55/August 22nd 2019 and Order № ДК-08-P-56/August 22nd 2019.

A system for separate collection and transportation of households' waste on the territories of both municipalities is organized for treating households' waste, including from tourist sites that generate waste, and the waste is transported to Regional Depot for non-dangerous, inert and dangerous waste for the municipalities of Ruse, Vetovo, Ivanovo, Slivo pole and Tutrakan.

There are no objects with point and diffuse sources of pollution of surface and underground waters functioning on the Rusenski Lom Nature Park's territory.

As of now, no administrative measures for ascertained breach within the borders of Rusenski Lom Nature Park are imposed.

FIRST ASSESSMENT

1.21. ECOLOGICAL ASSESSMENT

This assessment specifies the significance of certain characteristics in the park. These are species or groups of species, types of natural habitats and landscapes. These characteristics' significance

is specified through assessment of their vulnerability, rarity, naturalness, typicality, size, biological diversity, stability and instability.

The choice of natural habitats and species that need conservation is based on world, European and national significance.

The tables presented in **annex 1.21.** show the regular presence of conservationally significant species and types of natural habitats on the site. They are structured by type of natural habitats that include species threatened by loss or degradation of habitat, where assessment of the conservational significance of Rusenski Lom Nature Park is given.

Assessment has been made for:

- Natural habitats in compliance with item 1.12.
- Flora, according to the characteristics reviewed in item 1.14
- Fauna in compliance with item 1.15.

1.21.1. Vulnerability

1.21.1.1. Vulnerability regarding found anthropogenic effects and activities as well as the vulnerability of natural factors.

That assessment is presented in **Annex 1.21.1.1**

1.21.1.2. Measures for removing factors of reducing their impact.

Regarding the natural habitats:

1. Fire prevention.

2. Prohibition for taking rock mass away, for ploughing up, for using chemicals in the places of grass habitats spread.

3. Limitation of invasive ligneous species resettling.

4. Prohibition for undertaking fellings in the riparian forests.

5. Increasing the area of alluvial flood forests through gradual hybrid poplars plantations transformation.

6. Encouraging pasture and mowing in the grass habitats.

Regarding vegetative species:

1. Fire prevention.

2. Conservation of habitats 6110, 6250 and 6240.

3. Prohibition for taking rock mass away, for ploughing up, for using chemicals in the places of grass habitats spread.

4. Shrub overgrowing limiting.

Regarding the fauna:

1. Maintenance of existing and establishment of new areas with opened grass coenoses in the park as well as in the adjacent territories;

2. Operative monitoring, control and information activities aiming non-admission of biocides use in the park;

3. Limiting the biocides use in the adjacent territories.

4. Support of investments in pasture stock-breeding in the adjacent territories;

5. Fish-breeding economies support for aqua-ecological practices introduction;

6. Restoration of forest age structure in the biological diversity most significant zones in the park;

7. Prohibition for single trees and groups of trees removing in agricultural lands on the border with the park;

8. Compensating mechanisms for maintenance of ecotone zones with shrubs and low trees between the forests and the agricultural lands;

9. Regulation of activities of cleaning the river beds and the riparian vegetation in regard to floods;

10. Prohibition for natural riparian vegetation change. Elaboration of long-term programme for autochthonous ligneous vegetation restoration in the park and the adjacent territories;

11. Prohibition for conducting water current correction within the park's limits;

12. Elaboration of integrated strategy for restoration of water current and the zones for natural water retention;

13. Conduction of control monitoring of the water pollution main point sources in the park and the adjacent territories;

14. Elaboration of integrated plan for buffer zones building and maintenance by rivers, gullies, ravines, roads, big agricultural massifs, etc., conformed with the relevant object specifics (bias, size, coverage, etc.) and to the type of pressure. This plan appears to be a point of intersection for addressing several different in origin problems:

- the diffuse surface water bodies load of biogenes;
- surface water erosion;

• insufficient bio-corridor connectivity between the grass and the forest habitats;

• reduction of the areas with ecotone habitats, etc.

• presence of migration barriers for the hydrobionts;

15. Providing priority conservation species operative monitoring aiming its guarding optimization;

16. Providing Egyptian vulture nests individual guarding during the generative period. That measure should be also applied for the considered extinct species (golden eagle, ruddy shelduck, Eastern imperial eagle, saker falcon, etc.) in case of finding new presence in the park's region;

17. Providing Egyptian vulture feeding up;

18. Staring a long-term programme for the Egyptian vulture local population strengthening with birds bred in artificial conditions;

19. Conduction of pre-project studies for restoring ruddy shelduck, saker falcon, lesser kestrel, griffon vulture and cinereous vulture.

20. Park's guarding strengthening with focus on disturbing and poaching prevention;

21. Prohibition for practicing rock climbing, alpinism and off-road sports on the park's territory. Introduction of regulation for the activities in the adjacent territories;

22. State administration capacity increase for law enforcement in case of law violation against nature.

23. NPD to apply actions from the National Strategy for Combat Illegal Use of Poisoned Bait within the present plan implementation

1.21.1.3. Priority natural habitats vulnerability according the BDA.

The conservation status of the types of natural habitats is presented in **Annex 1.12.4.**

3 types are in Favorable Conservation Status. 4 types are in Unfavorable Conservation Status. 10 types are in Unfavorable Bad Conservation Status.

The conservation status of the animal species (without birds) is presented in **Annex 1.12.5.**

The evaluations are correlated to the protected zone's territory under the Habitats Directive Lomovete - BG0000608 and are completed under the project Mapping and Defining the Conservation State of Natural Habitats and Species - Phase I. The following are in Favorable Status in the Zone out of 42 species included in the evaluation (without birds): 3 species of invertebrate animals; 2 species of fish; 1 species of amphibian; 1 species of large mammal and 8 species of bats. The following are in Unfavorable-Unsatisfying Status in the Zone: 7 species of

invertebrates; 5 species of fish; 6 amphibian and reptile species; 5 species of mammals (without bats) and 4 species of bats. No species are defined being in Unfavorable-Bad Status in the Zone. According to the Integrated Lomovete Protected Zones Management Plan, 11 species of birds are Species in Unfavorable Bad Status and most of them are extinct as nesting in the park birds, other 11 species are defined as Species with Stable but Low Number and 18 species are defined as Species with Stable, Possibly Increasing Number.

1.21.2. Rarity

Rarity is considered element of threat in the red lists of the International Union for Conservation of Nature (IUCN) of animals and plants threatened worldwide. This is also in power for the lists of species and types of natural habitats threatened at European and national level.

The Park has been established in 1970 with the goal to preserve the unique nature of the picturesque canyon-like valleys of Lomovete in combination with the cultural-historical complex Cherven-Ivanovo.

1.21.2.1. Depending on the specifics of abiotic and biotic elements in the Park towards the ones on national and international scale – the evaluation is presented in ***Annex 1.21.2.***

1.21.2.2. Rare, relict, endemic, diminishing and extincting habitats and species – the evaluation is presented in ***Annex 1.21.2.***

1.21.3. Naturalness

Naturalness and typicalness are assessed through assessing the species distribution and their populations significance on Rusenski Lom NP territory.

1.21.3.1. Extent of anthropogenic factors impact on natural habitats and species populations – the evaluation is presented in ***Annex 1.21.3.***

1.21.3.2. Extent of naturalness of natural habitats or habitats groups in regard to vegetation, flora and fauna - the evaluation is presented in ***Annex 1.21.3***

1.21.3.3. Landscape.

Rock landscapes naturalness, supplemented with forest and meadow landscapes in combination with the original canyon relief as well as the meadow landscapes, is preserved. The forest coniferous, the agrarian crop-rotational, the anthropogenic infrastructural and the anthropogenic built up landscapes appear being unnatural.

Specific measures on landscape management, directed towards reducing the anthropogenic landscapes impact upon the visitors are necessary at spots along tourist routes, where the

territories between the tourist trails and the river are densely overgrown with nettle. This isolates aqua landscapes and strongly reduces the natural complex aesthetic effect.

1.21.4. Typicalness

Park's significance for preserving the typical for the region habitats and species of flora and fauna is presented in ***Annex 1.21.4.***

1.21.5. Size

The Park's territory is insufficient regarding preservation of natural habitats and vegetative and animal species populations. Part of the natural habitats types of national and European significance are outside the park limits and although some of them belong to Lomovete protected zone, it is necessary for them to be added to the park's territory aiming better possibilities for preservation and management the protected territory regiment provides. Some of the best preserved, typical and of high extent of naturalness steppe grass habitats outside the Park are situated in the Cherni Lom valley in the section between the villages of Cherven and Katselovo.

It is necessary for the area has to be increased in order the park to be able to perform its conservation functions and in order to achieve the PAA managerial goals in harmony with the modern European conservation policies. Numerous studies and suggestions for RL NP borders extension are made in the recent years.

The necessity of park territory borders' change is proved and a proposal is submitted in the MOEW. ***Annex 1.21.5*** *The conclusion that Rusenski Lom Nature Park extending would enhance local administrations' potential for attracting funds for municipality's development, for their appearance improvement, for sustainable maintenance of nature and of the biological diversity is explicit.*

1.21.6. Biological diversity

1.21.6.1. Presence and number of vegetative coenoses, habitats and number of species (sub-species) for plants and animals – the assessment is presented in ***Annex 1.21.6.***

1.21.6.2. The defined biological diversity's richness, towards the one of the country – the assessment is presented in ***Annex 1.21.6.***

1.21.6.3. Priority species and habitats that need conservation.

The natural habitats enlisted in ***Annex 1.21.1.1*** are of substantial conservation significance.

The vegetative species enlisted in Annex ***Annex 1.21.1.1.*** are conservation priority.

All animal species of high and medium degree of vulnerability enlisted in ***Annex 1.21.1.1*** are conservation priority.

1.21.6.4. Significance of Rusenski Lom NP on national and international scale for biological diversity conservation – the assessment is presented in ***Annex 1.21.6***

1.21.7. Stability and instability

1.21.7.1. Summarized assessment for the trends in the conservation status of the key conservation elements in the NP – the assessment is presented in ***Annex 1.21.7.***

The conservation status of the natural habitats types is presented in ***Annex 1.12.4****.*

1.21.7.2. Ecosystems and species natural reactions in result of anthropogenic impact – the assessment is presented in ***Annex 1.21.7.***

1.21.7.3. Species and habitats sensibility towards climate changes – the assessment is presented in ***Annex 1.21.7.***

1.21.7.4. Assessment and analysis of ecological processes taking place in the park.

Various scenarios of succession processes progress could unfold depending on the approach in habitats management. The most negative one is related to grass habitats loss as consequence of shrubbing, loss of habitats attached to water objects because of drying up, aggressive invasive ligneous species penetration in the natural forest ecosystems and local ligneous species removal.

The direct habitats loss leads also to vegetative and animal species loss.

1.21.7.5. Natural habitats and populations of species for which is found they are in instable status and the reasons for that – the assessment is presented in ***Annex 1.21.7.***

1.21.7.6. Restoration of natural habitats and species.

Forest natural habitats with the participation of oaks on the places of acacia and noney locust plantations, and the riparian forests on the places of hybrid poplars plantations are difficultly restorable.

The grass coenoses of habitat 6250* Pannonic loess steppic grasslands is also difficult to be restored, particularly after ploughing up.

Calcicolous basophilic open grass coenoses and the chasmophytic vegetation are irrestorable at rock mass taking away and their inbreak.

Theoretically, all bird species that are extinct on park's territory or are with critically discorganized populations, could be object of restoration. All these species are still found in the

wild nature of the Republic of Bulgaria and/or Europe and there are no irreversibly destroyed habitats on the territory of the park. Restoration priority are the species with: preserved or restorable habitats; positive restoration experience in other parts of their areal; positive impact on the status of other conservationally significant species.

The species requiring large scale measures outside the park's limits are difficultly restorable. As of now, the extinct species of fish restoration is impeded by the worsened waters quality in the park, which is due to a significant number of point pollutants (discharges) and diffuse pollutants (mainly agricultural areas) in the entire Polomieto catchment area.

Priority for restoration animals are:

- complex of land mammals inhabiting open grass habitats – European ground squirrel, European hamster, Romanian hamster and gray dwarf hamster).

- day birds of pray – Egyptian vulture, griffon vulture, lesser kestrel, saker falkon, etc.

1.21.7.7. Necessity of measures for removing or reducing factors that lead to natural habitats or species population's instability;

Particular measures for the removal and the reduction of the impact of factors regarding natural habitats status worsening are pointed in item 1.12.4 and 1.14.2.2.

The measures for priority vegetative species conservation are pointed in item 1.14.2.1.3., and for the animal species are pointed in 1.21.1.2.

1.22. SOCIAL AND ECONOMIC ASSESSMENT

1.22.1. Urbanized environment

1.22.1.1. Functional zoning assessment.

INDICATOR	ASSESSMENT	MEASURES AND RECOMMENDATIONS for achieving the set management goals
Compatibility with the purpose and the goals	The existing zoning includes 5 zones and 7 sub-zones. There are territorial zones pre-overlapping. The functional purpose is correctly defined and inherent to the nature parks.	Removing the overlapping in-between the zones aiming easier control on one hand, and on the other, easier regiments acquiring on the behalf of the stakeholders.

Achieving the set managerial goals and the function inherent to each zone.	The goals for zones management correspond to the functions. The zones' managerial goals are achieved. The sub-zone does not have defined specific functions, norms and regiments. The park has entirely become part of Natura 2000 network of Bulgaria.	Removal of zones, for which is impossible to define specific functions, norms and regiments. Conforming the regiments in the park with the goals of Natura 2000 network protected areas.
PResults from applying the regiments, norms and recommendations of Management Plan 2005.	Conservation goals are achieved. Part of the stakeholders are not acquainted the functional zoning and the related regiments. The regiments related to Cultural Historical Heritage are changed during the period. New sites of historical heritage are found on the territory. New deposits of rare species the conservation of which enters in conflict with the socialization of some CHH sites are found.	Reduction of the number of zones and simplification of regiments aiming their easier acquiring by the stakeholders. Updating the regiments as consequence of change in the regiments of monuments of immovable cultural heritage.
Providing the zones function	The regiments, norms and recommendations application has not impeded zones functions.	Reduction of the zones number and regiments simplification aiming their easier acquiring by the stakeholders.
Territorial disposition and scope of the particular zones	Measures for achieving the set managerial goals are necessary, including elaboration of policies and additional functions for the existing zones.	Regiments update, related to the changes occurred in the socio-economic development.
Urbanized zones impact on the development of the ecosystems in the park.	The impact is within the admissible limits. Part of the traditional activities in agriculture has reduced or is highly dependable on subsidizing. The problems related to the impact of industrial agriculture from territories neighboring the park are not solved as well as problems related to management of the waste from the settlements in the park.	Regiments update in relation to the changes occurred in the socio-economic development.

Description of the zones and regiments inside them, set by Management Plan 2005 is presented in ***Annex 1.7.***

1.22.1.2. Built up territories assessment.

There are no buildings and sites on the territory of the natural park, which are in contradiction with its management goals. The existing buildings are compatible with the specific landscape.

1.22.1.3. Technical infrastructure assessment

The park is well provided with tourist infrastructure for recreation and environment friendly tourism. There is possibility for supplementing the recreation sites with architectural elements without this to disturb the natural complex conservation. Part of the constructed tourist infrastructure elements need renewal.

1.22.1.4. Cultural-historical heritage

INDICATOR	ASSESSMENT	MEASURES/ RECOMMENDATIONS
Conservation and/or offering interpretations for the visitors.	Cultural heritage sites on the territory of the park are not under direct danger and there are no urgent problems related to their conservation. Interpretation for the visitors is not offered at this stage.	(a) socialization of more cultural heritage sites aiming tourism – provision and maintenance of access, marking, ensuring information, etc. (b) offering interpretation for the visitors
Local customs and crafts preservation	Practically, it could be spoken about local customs and crafts only in the park's adjacent territories, because the settlements are located there. There are no preserved local crafts. Traditional crafts are not practiced outside the bonded with national celebrations such as Christmas, Easter, etc. Single ones are restored by the local chitalishta as folklore demonstrations – for example Dzhamal, Kapane na tsarya, etc.	(a) elaboration of more and interesting old customs in the form of demonstrations; (b) shaping these demonstrations in the form of tourist service, including training of suppliers, providing equipment, marketing
Use of the park as cultural and aesthetic environment; places of historical value	Park's territory is mainly used for cultural-informative purpose – visits to NAHR Ivanovo rock churches, plus, to an insignificant extent Big and Small Nisovo monasteries and Gramovets. To a lesser extent, the park use's purposes include environment for biking, walks, world life watching, nature-informative activities and some events.	(a) maintenance of continuous access to the sites of interest; (b) development of more events / more active cultural life in the park and the adjacent territories, particularly ones with touristic nature; (c) more active and more creative marketing of tourist services
Sites of cultural heritage in the NP's adjacent territory	The most visited site is NAHR Middle Ages town of Cherven, which is managed by RHM - Ruse. All the rest, written above, is in power here, too.	See what is written above

1.22.1.5. Sanitary-hygienic conditions assessment

As it is seen from the data provided by RIEW-Ruse and listed in item 1.20, there are no problems with the sanitary-hygienic conditions on the park's territory and no additional measures are necessary for: sewerage and waste waters purifying; waste treating as well as for sanitary-guarding zones for the sources of drinking and household needs.

No household, industrial or other pollution of soils is found compared to the described study in Management Plan 2005.

1.22.2. Socio-economic conditions

1.22.2.1. Recreational activity assessment

INDICATOR	ASSESSMENT	MEASURES AND RECOMMENDATIONS
Established conditions for recreation and nature friendly tourism	There are enough established conditions that are not fully used; main problem is the maintenance of continuous access to routes and sites in the park and the lack of modernly shaped attractive tourist service.	(a) maintenance of continuous access to the routes and the sites in the park; (b) elaboration of modern touristic service based on heritage interpretation; (c) applying creative modern marketing
Implementation of new projects for softening the conflict between the capacity possibilities and the visitors' interests	New projects aiming tourism are constantly implemented by various institutions and organizations.	(a) binding all new projects with the general strategic vision for tourism development in the destination; (b) continuous communication and cooperation among the stakeholders, with the aim to avoid vain/repeated efforts, as well as to avoid activity fading after project's finish
Projects adopted after the MP 2005-2013 adoption regarding achieving the management goals and observing the regiments in the NP	Rusenski Lom NP Directorate in partnership with other organizations and institutions has implemented numerous projects after the MP 2005-2013 adoption; greater part of the set measures and goals are fulfilled and achieved.	NPD's strive is to play central role or at least to be always involved in the partners efforts on sustainable tourism development in and around the park

Measures undertaken for providing visitors' safety and information, and the necessity of new ones	Rusenski Lom NPD, the municipality of Ivanovo and the municipality of Vetovo provide information and visitor's centres for the tourists in the Lomovete valley and the Rusenski Lom NP. The main information system is built in details by Rusenski Lom NPD.	Information system, information and visitors' centres maintenance in good condition.
NPD participation in international initiatives and agreements for tourism development.	As member of the Danube Parks Association, Rusenski Lom NPD is part of these protected territories network and realizes exchange of information and study of not only biological diversity, but also build tourist routes that embrace the Danube river valley. Komana Nature Park from Romania is also a partner from previous project, with which there are other, more direct possibilities for tourism development initiatives.	Participation in projects for tourism development with the Danube Parks Association as well as with Komana Nature Park-Romania.

1.22.2.2. Resources use activities assessment

Assessment of the extent of sustainable resources use

Resources	Impact	Assessment
Forest	Positive: There are sanitary fellings conducted against damages by biotic and abiotic factors Negative: The conducted afforestations volume is small, and the afforestation with local species is not a priority. The afforestation is mainly with agriculture significant species.	0
Agricultural	Negative: Local varieties from the main vegetative species are not tolerated. Presence of meadow and abandoned fields, overgrown with shrubs, nettle and other	-2

	ruderal species. Meadows are not mowed, which leads to floral composition worsening. Unregulated pasture has negative reflection on biodiversity and grass stand quality. Unregulated paths have led to erosion of some ways along which animals are taken. Lack of practice for separate storing, composting of organic waste for manure and processing. Bee-gardens setting are not synchronized with the existing routes and sites for recreation. The abandoned agricultural lands worsen landscape's aesthetic qualities, disturb particular park ones' functions, affect negatively biodiversity. Farmers' agro-ecological education improvement is necessary.	
Game	Positive: Hunting parties build and maintain facilities for game feeding. Hunting is expedient at the park's borders regarding protection of some species from their enemies (jackal, fox). A stable population of wolf and jackal is maintained through shooting; The reserves of red deer, roe deer and wild boar are comparatively high. Negative: Potential danger of breach through unregulated shooting of species of high conservation status. Jackal reserves are extremely high.	+2 -2
Water and fish	Positive: Possibilities for limited individual fishing in certain rivers sections on the park's territory and in the fish-ponds bordering the park • Negative Nesting birds disturbance.	+1 -1
Other natural resources	Positive: Possibilities for mowing and hay collecting, for nettle picking up for personal use; Presence of places suitable for cattle watering; Pasturing under certain regime and capacity of animals. • Negative Nails are collected aiming trade and lime branches are cut for lime blossom collection. Object of farm use – Brown garden snail (Helix lucorum) and Danube crayfish (Astacus leptodactylus) – the main nutritive base of some invertebrates and reptiles.	+1 -1

Uses from the forests during the last 10 years:

The use of wood from the forest territories is carried out on the grounds of forestry plan or programme. The reported quantities of wood do not exceed the ones set in the forestry plan and do not exceed the growth, which is precondition for sustainable use of these resources.

Northern Central State Enterprise, where Rusenski Lom NP belongs, possesses certificate for sustainable management of forests under the FSC system. Complying with the standard deriving

from this certificate guarantees forest territories sustainable management and control as well as conduction of joint activities with the local population regarding resources use.

Cultures and plantations of the species *Robinia pseudoacacia* L. – Acacia, Black locust are observed on the park's territory. Rotation processes are in an advanced stage and the plantations are with low bonity and bad structure. Fellings are conducted in correspondence with an established forestry plan and cycle of rotation.

Extent of sustainable resources use:

Contribution to the environment;

The rock landscapes supplemented by the historical and archeological monuments are particularly valuable from landscape-aesthetic point of view. A lot of monuments of culture are localized. There are two national archeological reserves. The murals of the rock churches by the village of Ivanovo are enlisted in the UNESCO World Heritage List.

The territory of the park is part of the European Habitats Conservation Network, and a significant part are included in lists of strictly protected and requiring special conservation measures under conventions of 1992, 1996 and 2000. Rare for Europe bird species are distributed all over in appropriate biotopes and are in great numbers. The park is part of Lomovete protected zone, element of the European Natura 2000 network.

Species of higher plants, macromycetes, invertebrates and mammals are protected in Red lists or with EU conventions. A specific complex of many steppic and forest-steppic invertebrates is present. Numerous vegetative species and sub-species, fish, amphibians, reptiles, birds and mammals are observed.

Socio-economic contribution;

A lot of examples of positive interrelation between protected zones/biodiversity conservation on one hand and conditions contributing to the sustainable local socio-economic development on the other hand could be seen in the park, which leads, beside all the rest, to possibilities for employment and business. This is due to the different types of services provided by the natural ecosystems – for example in tourism, the well preserved natural landscape and the clean environment appears being a key factor for choosing tourist destination. The same way, the numerous nutritive and cosmetic products have greater success in the value chain of clean and healthy environment, which is usually observed within the frame of the protected zone or in proximity of them.

Technical, economic and financial viability.

The park, with its built park infrastructure and technical facilities for recreation and tourism, contributes to the territory's economic progress. The groups benefiting from the park's territory and imparting viability to the park are managing and controlling bodies, the owners of forests and land, owners of arable land, companies in the field of tourist service, etc.

Impact upon sustainable resources use:

Positive:	Negative:	Impact:
+3	-3	Strong
+2	-2	Medium
+1	-1	Light
0	0	No impact

1.22.3. Ownership

Interest of owners and users	According to studies, owners and users would apply environment friendly practices if being compensated for the lost profit. Owners' and users' attitude towards the Management Plan elaboration is positive, because is associated with the expectations for region's long-term sustainable development.
Possibilities for preferences for attracting private owners to the Plan's goals achievement	According to *ANALYSIS of applicability of the systems for farms support within the frame of the agricultural policy and their application on the territory of Rusenski Lom Nature park and of Lomovete protected zonesBG0002025 and BG000608",* beneficiaries are frightened by the bureaucracy in projects' preparation, applying and reporting. The frequent cases of sanctioning or not paying part of the set subsidy stresses potential beneficiaries additionally and makes them refrain from consequent applying. Thus agro-ecological measures, even appropriate for the Park's territory, are practically inapplicable

1.22.4. Management

INDICATOR	1.22.4.1. Management strong and weak aspects. **ASSESSMENT**	1.22.4.2. *MEASURES/RECOMMENDATIONS*
Park administration's administrative capacity	The numerical strength of experts of the NPD set as goal by the MP is achieved. The directorate still misses potential in the field of agricultural activities. Appointing forest guard to the NPD is not achieved yet. There is no existing system for personnel growing and its qualification enhancement. NPD extent of material-technical provision is high, where needs in the field of transportation equipment are still found. The expiating management infrastructure is increased within the MP operation according to its provisions.	Precising NPD organizational structure regarding complete coverage of the park's administration functions according to the statutes. Establishing system for personnel's qualification. Minimal improvement of material-technical provision. Necessity of integrating NPD responsibilities to Kalimok Brashlyan PCS into organization's structure.
NPD relations and interaction with other bodies of executive power	The relations of the interested bodies from the central and local authorities are comparatively good.	Rusenski Lom NPD relations with District Agricultural Advisory Service /DAAS/ Ruse and Regional Agriculture Directorate /RAD/ – Ruse to be improved with the goal of raising the awareness of local farmers on the management regiments and the limitations of farm activities within Park's borders.
Relations with juridical bodies with functions on Park's management;	The existing contacts with owners of property in the NP and with resources users are insufficient.	The work with farmers and resources users, for example truffle pickers, to be improved.
1.22.4.4. Managerial measures for improving NP management effectiveness		
INDICATOR	***ASSESSMENT***	***MEASURES/RECOMMENDATIONS***
Present guarding sections effectiveness	The present guarding sections are not limited only to the territory of the park. Forest guard appointment to NPD planned in the MP has not been done.	Redesign of the guarding and control system in the MP.
Conditions for local bodies and public participation at the discussion and taking decisions related to the management and activities in the park	The public consultative council for the Park has seized to function. There is no Scientific council established. NPD has established tradition for work with volunteers and partners from non-governmental organizations.	Updating and précising the methods for work and engagement of stakeholders, including through permanent structures as consultative and scientific councils. Development of a donor strategy to the NPD. Development of strategy for enhancing the stakeholders' feeling of belonging to the Nature park.

International and national assessments and verifications, European integration and international cooperation	NPD has solid relations with similar park administrations from the Danube basin. The Park has participated in two RAPPAM assessments.	Selection of appropriate international assessments and membership in organizations, which to allow internationalization of knowledge and recognition of the nature park value.

1.22.5. Formulating the territory's main and specific problems

The assessments of the project team experts and of the stakeholders, discussed during the forums held for presenting the Plan's updating stages are used to formulate the main and specific problems on Rusenski Lom NP's territory. The protocols and results from these meetings are presented in VOLUME III– Public hearing: Protocol and Reference for the not included notes and recommendations.

MAIN PROBLEMS	SPECIFIC PROBLEMS THAT LEAD TO THE ASCERTAINED MAIN PROBLEMS ARISING
Vulnerability of species and habitats as consequence of human activity, climate changes	Grass coenoses areas reduction as consequence of shrubbing and ruderalization. The result of the outlined trend is the loss of plant species natural habitats (two of the species with only deposits in our country; Significant participation of invasive species (ligneous and herbaceous) that are direct or indirect competition of local species; The established cultures of acacia and honey locust on the park's territory also lead to occupying territories of natural forest habitats; Meadows are not mowed, which leads to floral composition worsening; There is no information for the wide public about the extreme biodiversity and the international worth of the park; Park's area is insufficient for ensuring vital populations to the target species. Park's area appears insufficient for many of the vulnerable bird and big mammals species even for individual territories for particular couples or families;
Resources use	***Water use*** The present hydro-technical facilities are migrational barriers for hydrobionts. These are water catches for fishponds, irrigation, industrial waters and old watermills. These facilities could have direct effect upon the water fauna even when they are at significant distance from the park, downwards as well as upwards the rivers stream. All barriers along the Rusenski Lom river downstream after the park are of critical significance, because the Danube river appears being main genetic bank for maintaining and repopulating the hydrobionts in Polomieto. Springs are silted up as result of the river getting out of its bed 15 years ago and as of now springs are few. River beds and riparian vegetation cleaning up in regard to the floods;

	River bed and adjacent to the park river sections corrections; Point and difuse river pollution with biogenes and biocides; Ware erosion and increased turbidity („terrigenous water pollution“); ***Forest resources managing*** Forests age structure disrupting. Low density and habitat trees uneven distribution in the park and in the neighboring territories; Single trees and tree groups removal in the farmlands bordering the park; Reduction of the ecotonic zones with shrubs and low trees between the forests and the farmlands; Substitution of natural riparian forest poplar plantations or non-forest habitats; Main vegetative species local varieties are not tolerated; Disturbance from forestry activities during the birds nesting season. Most often these are: wood material overload and transport, forest roads maintenance and construction, afforestation, etc. Presence of meadows and abandoned fields, overgrown with shrubs, nettle and other ruderal species. ***Agricultural resources use*** Chemicalization intensification in agriculture for the territories neighboring the park. The wide spread use of insecticides and rodenticides have the most direct negative impact on the park's fauna as well as the disturbance from flying agricultural aircrafts over active nests of priority bird species. Use of poisons against land predators (jackals, foxes, wolves, Mustelidae family representatives, etc.). It is most often conducted by herdsmen, live-stock /pet/ owners, etc. Damage of open herbaceous habitats that appear to be nutrition base for great number of rare and vulnerable species of all systematic groups. Main types of damage are: ploughing up; establishing permanent crops; ploughing up buffers by roads, ravines, forest territories; leaving without pasture and/or mowing; Pasture stock-breeding decline and the related unbalanced resources use – incomplete grazing up of over grazing; ***Non-wood resources use*** Purchasers are not licensed for quantity and quality at non-wood forest products collecting; Pickers are not trained for observing the requirements for medicinal plants and forest fruits picking up; Animal species disturbance caused by lime blossoms, medicinal plants, mushrooms and others pickers. Vehement spreading of truffles picking up is a specific problem the recent years, which leads to forest excavating and from there to destroying undergrowth and valuable vegetative species;

	Snails are collected for sale and lime-trees branches are cut for lime blossoms picking up. Object of agricultural use – Brown garden snail (Helix lucorum) and Danube crayfish (Astacus leptodactylus) – main nutrition base for some invertebrates and reptiles. ***Hunting and fishing*** Poaching of non-hunting species. It concerns birds above all and is related with collection making (most often taxidermy and eggs), vandalism, etc.; Poaching of hunting species; Fish-breeding ponds abandoning; Active fish-breeding ponds draining up in the periods they are not used; Chasing the birds and otter in the zones around the fish-breeding ponds in use; ***Tourism and recreation*** Disturbance that affects birds and big mammals. It expresses in human presence in key for the vulnerable species locations and year periods. Systematic short visits to a certain place or single long stay are problematic. Even a half an hour stay in inappropriate climatic conditions (quite cold or warm weather) could be critically long and to lead to nesting compromising of some of the bird species observed in the park. There are enough created circumstances, which are not used to their full value; Main problem is the maintenance of permanent access to routes and sites in the park and the lack of modernly shaped attractive tourist service. Animal species disturbance by practicing rock climbing and alpinism and by off-road tourism;
Management, guarding and use on the Nature park's territory	Low personnel number Great number of state institutions with unclear rights and obligations regarding the nature park territory's management and use. Lack of media commitment in the last 2 years even at local level. Stakeholders' insufficient activeness and initiativeness. Lack of information about business alternatives related to protected territories; Directorate's limited possibilities and rights for territory's guarding and control (they can only give signals for found breaches, while the direct guard is conducted by the hunting farm). Unclear mechanisms on how people can support Park Directorate's work. Household pollution with illegal dung-hills, where part of the waste penetrates in the rivers and forms blockings of plastic waste on inaccessible spots. NPD does not plan enough funds for infrastructure maintenance and control. Local people are not aware of the regiments.
Adjacent	The adjacent settlements are not sufficiently used as sports, recreational and touristic

settlements development	resource, as bases for environmentally friendly events and for research and development activities Farmland treating with chemicals – leads to water sources pollution. Abandoned farm lands worsen landscape's aesthetic qualities, disturb the functions of certain zones in the park, affect unfavorably biodiversity. Farmers' agro-ecological training improvement is necessary. There are not preserved local crafts. Lack of regulations and preferences for credits for small and micro-enterprises in the rural regions; Lack of funds for KHH sites' conservation and for local customs and crafts preservation.

1.23. PROTECTED TERRITORY POTENTIAL VALUE

INDICATOR ASSESSMENT	**GROUNDS, SUGGESTIONS, EXAMPLES**
Biological diversity	17 habitats types, enlisted in the Red data book of Bulgaria (including 12 threatened, 3 vulnerable, 2 potentially threatened); 17 habitats types included in BDA Annex 1 and Annex 1 of the Habitats Directive; On national and international scale, Rusenski Lom NP has great significance for habitats conservation of Subcontinental peri-Pannonic shrub communities, Pannonic loess steppic grasslands, Petrifying springs with tufa formation and Pannonic woods with *Quercus petrea* and *Carpinus betulus*; It is also of important significance for the conservation of the lime and alluvial forests habitats and of sub-Pannonic steppic grasslands; 25 plant species with conservation statute are observed on the Rusenski Lom NP territory, 7 of which are protected by the Biological Diversity Act, 7 species are enlisted in the Red data book of the Republic of Bulgaria (2 critically threatened, 4 threatened and 1 vulnerable), 6 are Balkan endemites and 2 are Bulgarian ones; Regarding the international conservation agreements, 11 species of plants are under the regulations of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and 1 is subject of the European Natural Habitats Directive; The following could be mentioned among the rare plants: Chamaecytisus kovacevii, Chetiriraba zhaltuga, Polygala sibirica L. and Himantoglossum caprinum, Verbascum dieckianum, etc. International significance regarding bats conservation. There are caves in proximity of the park (Orlova chuka, Gabarnika and Zorovitsa), classified as underground bats habitats of international significance after the criteria of EURO BATS. The Orlova chukka cave is the most significant winter shelter in Bulgaria and on the Balkan

	peninsula for two species of wild bats – Mehely's horseshoe bat and Mediterranean horseshoe bat.
Phenomena in landscape and geomorphology regard *Rock landscapes mainly presented by rock sediment carbonate landscape are of particular significance for the Rusenski Lom NP.*	The rock landscapes along the Cherni Lom river valley to the north of the village of Cherven to the village of Koshov and the Rusenski Lom river valley from the Smesite countryside to NAR Rock churches by the village of Ivanovo are of particular value from landscape-aesthetic point of view. The forest deciduous landscapes, represented widest in the park also have significant importance for the landscape's aesthetic qualities, which, in combination with the rock and the meadow landscapes form a natural background of the river aquatory. The landscapes aesthetic qualities are supplemented by rock monasteries historical significance.
Site's place in the ecological networks of Bulgaria and Europe *Rusenski Lom NP is territory for habitats and species conservation of European and world conservation significance*	17 types of natural habitats from BDA Annex 1 and Annex 1 of the Habitats Directive are found on Rusenski Lom NP's territory. 10 of them are conservation priority. Himantoglossum caprinum is found on the Rusenski Lom NP's territory out of the plant species included in the Habitats Directive annexes. Pannonic woods with *Quercus petrea* and *Carpinus betulus*, Euro-Siberian steppic woods with c *Quercus* spp., Subcontinental peri-Pannonic shrub communities are of high conservation priority II 13 mammal species, 4 reptile species, 2 amphibian species, 4 fish species and 10 invertebrates are target out of the species in the park, under the Directive 92/43/EEC for natural habitats and for the wild flora and fauna conservation (Habitats Directive). 60 bird species are target species under the Directive 2009/147/EC for wild bird's conservation (Birds Directive). 7 mammal species, 1 reptile species and 8 bird species are world threatened (IUCN red list. 39 mammals species, 165 bird species, 15 reptile species, 5 amphibian species and 10 fish species are included in the Berne Convention Annex II and III. 83 bird species are included in the Bonn Convention on the Conservation of Migratory Species of Wild Animals and 5 mammal species, 36 bird species and 2 reptile species are included in the CITES Convention on International Trade in Endangered Species of Wild Fauna and Flora.
Site for educational and research and development activities; *Throughout the past years Park's Directorate works in the direction of local people training to work together as community, which to have joint initiatives in favor of nature park's and local people's development.*	The maintenance of regular contacts with local schools gives good results for children's joining the nature. The Directorate works with local people of enterprise, includes them in its activities, organizes visits to other nature parks in the country and abroad for them; Possibilities for elaboration of joint cross-border projects; Publishing scientific and popular literature related to the NP.

Rusenski Lom NP significance for establishing lasting policy for natural resources sustainable use. *Natural environment with immovable cultural valuables and with possibilities for development of tourism, sport and recreation*	The presence of a managing body – the park's directorate, which to coordinate the MP implementation for the whole territory and the attraction of financial resources and investments from national and international sources is a precondition for lasting policy; Many of the vegetative species on the park's territory are economically worthy. Such are the ligneous and most of the herbaceous species; Wood production is one of the main uses, which is realized on the nature park's territory; The medicinal types of plants are 356 species.
Cross-border protected territory between Bulgaria and Romania *Possibilities for development of tourism; rich in cultural, historical, ethnographic and archeological monuments*	Rusenski Lom NP's territory offers conditions for sustainable tourism development, which correspond to the diverse interests of Bulgarian and foreign tourists; Possibilities for cross-border cooperation and synchronized management of the existing border protected territories in both countries – Comana Park; Possibilities for elaboration of joint cross-border projects; A project is elaborated, aiming building of a cross-border ecological corridor between the protected zones and the protected territories that partially overlap their areas. *Suggestion for Joint Management Plan for the Territories Between Protected Zones Lomovete and Comana /Romania/*, which includes analysis of the possibilities for differentiating species migration corridors, recommendations are made for habitats and landscapes conservation, which to be coordinated with the local municipalities and to underlie in their future regional economic development's planning.
Source of benefits for the local population and of financial returns for the various owners and landlords *The possibilities and advantages the Nature park offers are of great significance for generating income for the local communities, including as a cross-border protected territory between Bulgaria and Romania*	Support of local people and PT visitors in becoming acquainted to interesting habitats and species in the PT; Raising local people awareness and knowledge on PT's value as natural complex of landscapes and ecosystems; Providing tourists with information; Presenting natural and cultural heritage and the needs for its conservation; Advertising local products and services, achieving higher demand and finding new market niches; Establishing broad public support for the development of a cross-border corridor, including among politicians and the decision makers at regional and national level. Development of alternative, environment friendly businesses and establishing local brands of natural products.

1.24. ASSESSMENT OF GOALS ACHIEVEMENT AND OF REGIMENTS AND ASSIGNMENTS IMPLEMENTATION, DEVELOPED IN MANAGEMENT PLAN 2005 SECTIONS 2, 3 AND 4

The assessment that the set long-term goals are achieved thanks to park's good management in the period of Management Plan 2005 (2005-2004) operation categorically confirms after the studies and analyses made in the present Plan-2 on the update of the Rusenski Lom NP management plan of 2005!

1.24.1. Analysis of goals achieving:

(a) Through the existing zoning, regiments and regulations (see item *1.22.1.1.*)

The existing zoning and the defined regiments and regulations have contributed to achieving the following set major goals:

- Biological and landscape diversity conservation;

- Cultural-historical heritage sites preservation;

- Achieving balance between resources conservation and use;

- Generating income for the municipalities as result of Nature park's possibilities and advantages.

And the secondary goals for:

Providing possibilities for sustainable tourism and recreational use development.

(b) Through results from the projects set in Plan-1:

Programme	Projects implementation	Results assessment
Biological and landscape diversity conservation in Rusenski Lom NP includes 13 projects	7 are partially developed	Satisfactory
Cultural-historical heritage sites preservation includes 8 projects	3 are implemented, and 2 are not topical	Satisfactory
Improvement of Rusenski Lom NP management structure and coordination includes 2 projects	Partially implemented during the Plan-1 period of operation	Unsatisfactory
Natural resources sustainable use includes 4 projects	1 is partially implemented	Unsatisfactory
NPD communication policy improvement includes 7 projects	Implemented	Excellent
Enhancing growing ups ecological culture and forming nature conservation behavior among the population includes 4 projects	Implemented	Good
Providing possibilities for sustainable tourism and recreational use development has 5 projects	Implemented	Good

Environment preservation includes 2 projects	Not implemented	Unsatisfactory
Rusenski Lom NP's territory monitoring includes 5 projects	Work has been done on 3	Satisfactory

Review of the performed activities and implemented projects from the management plan is presented in ***Annex 1.24(2)***

1.24.2. Analysis of the extent of conservation and restoration of natural habitats and habitats of vegetative and animal species, subject of conservation, as consequence of zones functional purpose, regiments and regulations in power, resources use, construction and infrastructure, results of the set projects (implemented and not implemented).

The conservation status of the types of natural habitats on the Rusenski Lom NP's territory is as follows: 3 types are in Favorable Conservation Status, 4 types are in Unfavorable Unsatisfying Conservation Status and 10 are in Unfavorable Bad Conservation Status.

All forest types' natural habitats are in unfavorable bad status. They are differentiated in Subzone for Maintaining and Restoration Measures for the Forests and Resources Use in the previous management plan. Part of the regiments and regulations set there do not correspond entirely to the legislation requirements anymore. Aiming forest ecosystems status improvement and their complex management, there are already Forests in the phase of old age and representative samples from all natural forest ecosystems on the park's territory differentiated. Also, Forests of high conservation value with elaborated measures for management and monitoring for them are differentiated. In 2012-2013, 308 decares are afforested with lime, elm, cerris oak and narrow-leafed ash after complete soil preparation on the site of acacia culture, with funds under the project LIFE+08 NAT/BG/000281 *Conservation and restoration of 11 Natura 2000 riparian and wetland habitats in 10 protected zones.* This activity aims at restoring the natural riparian habitat 91E0* Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Pandion, Alnion incanae, Salicion albae*). In 2014, after completing an analysis of invasive ligneous species presence on the Nature park's territory, the acacia plantations are exchanged with local species, where 38 decares are afforested.

Two natural habitats out of the herbaceous natural habitats are in Unfavorable Bad Conservation Status - 6250* Pannonic loess steppic grasslands and 6510 Lowland hay meadows. In the previous management plan, they are included in Zone for Conservation of Riparian and Rock Biotopes with Priority Habitats and Species of High Conservation Status. Part of the planned there regiments – mainly related to pasture, haven't got positive result. Rusenski Lom NPD has bought meadows within the limits of the Nature park, where periodical cleaning and mowing is conducted, for restoration and maintenance of riparian meadows, under the project

Improvement of Grass Habitats Management in the Nature Parks as Part of Natura 2000", financed by the EECONET Action Fund.

Lomovete protected zones preserve 33 bird species included in Annex I of Directive 79/409/EEC, 18 species of regularly observed migrating birds that are not included in Annex I of Directive 79/409/EEC, 11 invertebrates species, 6 fish species, 4 amphibians and reptiles species, 20 mammals species and 2 plant species. All of them are related to their habitats status maintenance in good condition. Intensive agriculture in neighboring lands, where it is nutrition base for many birds of prey, intensive pesticides and herbicides use, treating land against vole and setting traps for predators are causes for many of the species to reduce and become extinct in the recent years. Meadows overgrowing with solid herbaceous species change the composition of inhabiting insects as well as of the other fauna representatives. Protected area zoning regulated by Plan-1 and the defined regiments and regulations have rendered very good sense for conservation of species conservation subject of Lomovete protected zones, on which territory Rusenski Lom Nature park is situated, because they have stricter than the general Protected zones regiment and appear being reserve core for them.

Regarding vegetative species of conservation significance, for some of them there is no set regiments and conservation measures in the previous management plan as well as their positioning regarding the existing zones is incorrect. Such are, for example, (*Polygala sibirica)* and Chetiriraba zhaltuga (*Genista tetragona*).

Updating the present plan, it was found that part of the natural habitats and herbaceous species habitats are not included to the existing zones and sub-zones and some of the regiments are not relevant any more or they haven't given the sought effect. That's why new zones and new regiments are suggested in the present plan, in correspondence with the present status. The relevant projects are also suggested for implementation for these habitats and species for the updated plan operation period.

1.24.3. Analysis of resources use (wood, water, medicinal plants, pastures, places for recreation, etc.) in regard to the subject and goals of Rusenski Lom NP conservation.

(a) Zones that do not fulfill the goals with their existing areas.

ZONE for forest resources and agricultural lands sustainable use;

SUB-ZONE for maintaining and restoration measures for forests, and for resources use;

SUB-ZONES for maintaining and restoration measures for farmland and resources use;

SUB-ZONE for pasture with cuts for drinking.

(b) Regiments that do not fulfill the goals.

For the forests for reconstruction – stand of trees change is not planned in connection with their original and unique nature;

No tree stand change is planned for the forests for reconstruction during the next decade;

The region for pasture's area is 473.7 ha at standard of 10 decares per cattle head and 2 decares per small livestock head. The use of pastures as pastures is not planned and the cut through paths are not marked.

The grass stand improvement in the pasture region to be completed through sowing, shrubs and stones removal.

The assessment that the set long-term goals are achieved thanks to park's good management in the period of Management Plan 2005 (2005-2004) operation categorically confirms after the studies and analyses made in the present Plan-2 on the update of the Rusenski Lom NP management plan of 2005!

Analysis of implementation and missimplementation of projects and activities set in Management Plan 2005 is presented in ***Annex 1.24(1)***

SECTION 2:
LONG-TERM GOALS AND CONSTRAINTS

2.1. LONG-TERM GOALS

Goals determination in the present update is made on the grounds of territory's potential possibilities described in item 1.23. The formulated ideal goals could be used as indicators for achieving these possibilities (Section 5). Project team experts' assessments are also taken into consideration as well as the results of the discussions with stakeholders discussed during the held meetings.

Article 29. (2) Natural parks shall be managed for the purpose of:
1. maintenance of the diversity of ecosystems and conservation of biological diversity therein;
2. provision of opportunities for pursuit of scientific research, education, and recreation;
3. sustainable use of renewable natural resources while preserving traditional forms of livelihood, and ensuring conditions for the development of tourism.

Protected Areas Act

Rusenski Lom NP corresponds to Category V according to the goals of management regarding the IUCN categorization system:

CATEGORY V – protected area of high aesthetic, ecologic and/or cultural value, and very often of great biological diversity, mainly managed with the purpose of conservation of landscape and recreation.

Management purposes

To ensure and sustain habitats condition, necessary for conservation of significant species, and/or environment physical characteristics, where specific human intervention and actions for optimal management is required;

To sustain scientific research and environment monitoring as major activities related to resources sustainable management;

To define territories for the purposes of public information and education, for evaluating the habitats significance and the managing bodies work;

To eliminate and consequently to prevent exploitation or use that do not correspond to the purposes the protected territory is announced for; and

To provide benefits for the people living in the protected territory, which correspond and are in compliance with the other management purposes.

IUCN – Management Guidelines for categories of protected territories

2.1.1. Long-term (ideal) goals definition

The main goals, managerial decisions and park's administration and other organizations' activities are directed to, related to the territory within the next 10 years (Section 4), are formulated on the grounds of all findings and assessments in Section 1.

The main goals are directly related to the Nature park's main purpose „…*to institute the vision for land use, conservation and ecologically sustainable socio-economic development, shared by the major stakeholders within the protected territory as well as within the adjacent territories* …. " (item 0.3.).

The following long-term goals are defined by the present plan for the Rusenski Lom NP's development until 2030:

2.1.1.1. Conservation and sustenance of biological and landscape diversity.

2.1.1.2. Achievement of balance between resources conservation and sustainable use.

2.1.2. Secondary goals (sub-goals) definition

Secondary goals are defined as sub-goals, i.e. such ones that are directly related to the Rusenski Lom NP specific characteristics as well as to the findings and assessments in Section 1, and which achievement leads to achieving the long-term goals defined above.

Certain activities of the administration for the next 10 years for achieving the sub-goals are also defined in *Table 2.3.,* in section 2.3 below.

2.2. CONSTRAINTS

However, the successful achievement of the goals, defined in item 2.1. is very often influenced by a number of constraints and threats of anthropogenic as well as natural essence.

The identified constraints and threats and their significance are also indicated in Table 2.3., where they are referred to the relevant goals.

SECOND ASSESSMENT

2.3. CONSTRAINTS EFFECT ON THE LONG-TERM GOALS

The extents of constraint/threat's impact upon the goals are defined by the experts, which have elaborated the Rusenski Lom NP management plan particular parts. The assessment is formed after the points system the following way:

2.3.1. Regarding constraints and threats impact upon set main goals achieving:

3 points Significant – the constraint/threat is a serious obstacle, which would probably play a throughout the whole term of Management Plan implementation

2 points Medium – the constraint/threat is important but could be decreased or controlled in the course of time

1 point Insignificant – the constraint/threat provokes concern but is already addressed through corresponding managerial measures

2.3.2. Regarding the territorial range of impact of constraints and threats in the park:

3 points All over – exercises impact on the whole park's territory

2 points Locally – exercises impact on certain part of the park

1 point Potential – it is possible to exercise impact in certain situations

2.3.3. Assessment of constraints and threats for undertaking measures within the framework of a 10-year Rusenski Lom NP Management Plan.

Constraints and threats assessment made in *Table 2.3* below takes also into consideration the Park directorate's responsibilities to engage with them. The last aspect is also classified by rank the following way:

Regarding the extent of efforts for removing the threat and to what extent it is possible and realistic for it to be removed, the assessment in *Table 2.3* below is completed after the points system, the following way:

3 points - constraints/threats removing is Park directorate's task and mandatory measures are to be undertaken for their removal.

2 points - constraints/threats removing is not only Park directorate's task but it is necessary for it to undertake initiatives for their removal.

1 point - constraints/threats removing is not Park directorate's task and it requires additional research and drawing over more instances and partners in order to undertake the necessary measures.

Constraints and threats with most points are grounds for defining the priorities that are described in item 4.1.

Table 2.3
Assessment of constraints and threats

MAIN GOAL	Definition of secondary goals/sub-goals Directions for their achievement	Constraints and threats impeding goals achievement	Impact item 2.3.1	Range item 2.3.2	NPD ability to cope with the problem	Total assessment of the priority for the NPD
I. Conservation and maintenance of biological and landscape diversity	***1. Conservation of existing natural habitats, habitats of rare and threatened flora and fauna species, including ones that are conservation object under the EU Habitats Directive and Birds Directive.*** Monitoring of the herbaceous coenoses status and changes as result of shrubbing and ruderalization through setting of permanent areas; Monitoring of invasive species distribution (ligneous and herbaceous), which present direct and indirect competition of local species; Monitoring of the habitats status, with particular focus on the priority ones. Application of system of forestry activities, directed towards increasing the alluvial flood forests area.	**Trends of anthropogenic character**				
		Afforestation with non-local species;	**2**	**3**	**3**	**8**
		Abandoning the pastures and meadows;	**3**	**2**	**2**	**7**
		Pressure for building RES in the region of the park –wind power plants, hydroelectric power stations and photovoltaic parks.	**3**	**3**	**2**	**8**
		Trends of natural character				
		Succession processes leading to change of conditions of habitats and of species composition;	**2**	**2**	**2**	**6**

	2. Conservation, maintenance or restoration of rare and threatened species populations, including the ones that are conservation object under the EU Habitats Directive and Birds Directive, as well as of species that are indicatory for the status of the park. Control of poaching and unregulated production of resources (for example, truffles); Conservation of territories and habitats significant for the indicatory species; Monitoring of the status of conservation priority species populations.	**Trends of anthropogenic character** Afforestation with non-local species; Unregulated wood resources picking up;	**2** **3**	**2** **2**	**2** **2**	**6** **7**
		Trends of natural character Succession processes leading to change of habitats conditions and of species composition;	**2**	**2**	**2**	**6**
	3. Preservation of typical landscape elements naturalness Definition of measures for restoration of meadows and abandoned fields, overgrown with shrubs, nettle and other ruderal species; Landscape identification an assessment with the aim of establishing grounds for long-term activities directed to landscape protection and improvement.	**Constraints/Trends** Insufficient financing for the annual activities on maintenance of various types of landscapes.	**3**	**3**	**2**	**8**

II. ***Achieving balance between resources conservation and sustainable use***	***1. Conservation, maintenance and/or restoration of forest-ligneous species*** Gradual change of hybrid poplars for local species; Gradual transformation of acacia cultures in plantations composed by local ligneous species; Giving priority of renewing fellings for turning the sprout oak plantations into seed ones; Settling traditional ways of land use. Defining the price of ecosystem services offered by the park.	**Trends of anthropogenic character**				
		Afforestation with non-local species;	**2**	**2**	**2**	**6**
		Trends of natural character				
		Succession processes leading to change of habitats conditions and of species composition;	**2**	**2**	**2**	**6**

	2. Creating conditions for development of sustainable tourism. Socialization of more cultural heritage sites that aim at tourism – providing and maintaining access, marking, providing information, etc. Offering interpretation for the visitors; Developing more and interesting old customs in the form of demonstrations; Maintaining permanent access to the sites of interest; Development of more events/more active cultural life in the park and the adjacent territories, particularly ones for touristic purpose.	**Constraints/Trends** More funds are necessary for new interpretations and for maintaining the existing tourist sites. NPD is not enough involved in partners efforts on sustainable tourism development in and around the park.	**2** **2**	**2** **3**	**2** **2**	**6** **7**

	3. Building capacity and improving Rusenski Lom NPD management. Building a wide public support for the NP through providing the functioning of the Consultative council for the park Systematic training of the permanently enrolled personnel of the park and of the volunteers. Educational and scientific activities planning. NPD's responsibilities integration to the PC Kalimok Brashlyan in the organization's structure; Cross-border cooperation development in the border protected territories in Bulgaria and Romania; Selection of appropriate international assessments and membership in organizations, which to allow internationalization of knowledge and recognition of the nature park's value.	**Constraints/Trends** The Directorate suffers lack of potential in the field of agricultural activities. Enrolling forest guard to the NPD is not achieved yet. There is no existing system for personnel growth and for enhancing its qualification.	**2** **2** **3**	**2** **3** **3**	**2** **2** **2**	**6** **7** **8**

2.4. RUSENSKI LOM NP POTENTIAL OPPORTUNITIES

The potential opportunities assessment is made in compliance with the set goals. It is grounds for defining programmes and projects in section 4, for balanced park's potentials realization.

2.4.1. Rusenski Lom Nature Park has potential for conservation and management of natural processes in the natural habitats and the species habitats

Rusenski Lom NP's territory offers conditions for preserving the habitats of Subcontinental peri-Pannonic scrub, Pannonian loess steppe grasslands, Petrifying springs with tufa formation and Pannonic woods with *Quercus petrea* and *Carpinus betulus*. Its significance for conservation of the habitats of the lime and the alluvial forests and of the sub-Pannonian steppe grasslands is also important.

Rusenski Lom NP's nature and landscape outward appearance offers diversity, individuality and beauty, which are significant factor for ensuring lasting impact on people while they recreate.

2.4.2. Rusenski Lom NP is a site for realizing relation with the other protected territories in the region, with the purpose of conserving the rich species and genetic diversity.

Rusenski Lom NP's locality allows connection with well preserved natural habitats and landscape structures in Romania, genetic material exchange and mammals and birds populations' preservation.

2.4.3. Rusenski Lom NP is a site for carrying out ecology-educational and interpretative programmes

Rusenski Lom NP offers abundant and interesting information on vegetative and animal world as well as on cultural-historical heritage and conditions for its interpretation. An increased interest at local, national and international level for such programmes is observed, through the formal educational system, through informal education and training or through the related health benefits.

Par's directorate may serve as a mediator between scientific circles and educational institutions, conservation organizations, tourists, business and local bodies of authority, which controls the preservation of nature.

2.4.4. Rusenski Lom NP is a site for development of sustainable tourism at local, national and international level

Rusenski Lom NP's territory offers sustainable tourism development conditions for that correspond to the diverse interests of Bulgarian and foreign tourists. The Park is an attracting centre for visitors in the adjacent settlements.

The existing visitors' interest is determined by the possibilities the protected territory offers, in combination with the adjacent territories:

- Comparatively uniformly distributed interesting routes, leading the visitors to all parts of the park;

- Specialized routes connecting spots of biological diversity, CHH sites, tourist objects, panoramic observation points, etc.;
- Places for recreation;
- Abundant information, printed materials and programmes;
- Abundant cultural-historical heritage in the adjacent territories

2.4.5. Rusenski Lom NP is model for protected territory public management

Rusenski Lom NP Directorate in partnership with the municipalities, the local non-governmental organizations and the local state structures could play a crucial role in the park's management as far as it presents a source of information and could combine the various stakeholders' requirements.

NPD's activity enjoys well enough public support and understanding in the period of Plan-1 action. That gives the opportunity for enhancing NPD's authority, for people's mentality change and for their desire to participate in nature's conservation.

2.4.6. Rusenski Lom NP is tool for adjacent territories sustainable economic growth offering opportunities for generating revenues for the local communities and being cross-border protected territory between Bulgaria and Romania

Rusenski Lom NP, as protected territory with preserved cultural-historical and natural heritage, provides actual opportunities for a higher sellability and local products and services higher price, which correspond to the market standards for authenticity and quality. That is of particular significance for forming local people's appropriate attitude towards the natural complex preservation.

SECTION 3:
REGULATIONS, REGIMENTS, CONDITIONS AND RECOMMENDATIONS FOR THE IMPLEMENTATION OF ACTIVITIES

Rusenski Lom NP's (RLNP) territory zoning is made in compliance with requirements of (i) the Protected Areas Act (PAA), (ii) the principles of the adopted categorization system of the International Union for Conservation of Nature (IUCN), (iii) the Orders for announcing the nature park and (iv) the Council of Ministers decree for announcing Lomovete Protected zone.

On the grounds of the cited documents, the following is taken into consideration at the Rusenski Lom NP zoning:

– The Nature park as protected territory and part of the national and European ecological network;

– Ecological sensibility;

– The factors inside and outside the territory that affect the management;

– Infrastructure existing management;

– Physical characteristics that are beneficial for the management;

– Opportunities for scientific and practice-applied researches and monitoring, in support of the management.

Zones' borders are defined on the grounds of the existing cadastral information – sections, sub-sections, property limits, etc. At some spots, where cadastral units do not completely coincide with the defined zones' border, the division is made along the relevant site's limits.

The suggested regiments and regulations are defined on the grounds of normatively determined requirements and of the analyzed information and assessments, presented in the present management plan's Section 1 and Section 2. Their inculcation aims overcoming or limiting the threats' effects, identified in the present management plan's Section 2, providing conditions for control and managerial decision taking.

3.1. ZONING AND ZONES FUNCTIONAL PURPOSE

3.1.1. Zones territorial location after PAA Article 19:

Zone for tourism and natural and cultural heritage conservation;
Zone of buildings and facilities.

Table 3.1.1. Zones distribution by area.

№ of the zone	Name of zone, range	According to PAA Article 19	Area ha	% of the park's area
I	Zone for tourism and natural and cultural heritage conservation	**item 2**	**3059.1**	**87.3**
II	Zone of buildings and facilities	**item 3**	**446.8**	**12.7**
totally			**3505.9**	**100**

The territorial location of the zones under item 3.1.1. and item 3.1.2. is presented on Map №19 Zoning

3.1.2. Zones main purpose.

Zone I – Zone for tourism and natural and cultural heritage conservation

Zone range:

The zone embraces the natural and semi-natural ecosystems, the forest in the stage of old age, the territories occupied by natural habitats and habitats of target species for conservation in the protected zones, places for reproduction, rest and gathering during migration of the protected animal species, the habitats of the protected plant species, NAR and the monuments of cultural heritage, existing and planned for the future routs and spots for recreation of tourist attractions.

Purpose:

- Conservation of biological diversity in the ecosystems;

- Conservation and exhibition of cultural-historical heritage;

- Nature friendly tourism development;

Goal of management:

- Maintenance of natural processes and environment qualities for long period of time;
- Conservation of threatened species of flora and fauna and their habitats;
- Conservation of landscape and of inanimate nature characteristic sites;
- Conservation of the archeological sites and their exhibiting if appropriate;
- Preservation of drinking waters qualities and quantities for the settlements needs;
- Encouragement and popularization of ecologically sustainable economic activities, compatible with the goals of management.
- Providing conditions for recreation and stay of visitors, development of specialized tourism and sports activities, while considering territory's conservation goals;
- Creation of conditions for information servicing of visitors and for interpretations;

Zone II – Zone of buildings and facilities

Zone range:

The zone embraces the existing roads, agricultural and forestry buildings, farms, stock-breeding complexes and farms, the buildings for training and nature parks' management, visitor's centres, fish ponds, water intake facilities, villas and buildings for habitation, easements and beds for electricity distribution lines and for water-mains.

Purpose:

Effective and nature friendly use of urbanized and built-up properties.

Goal of management:

- Providing possibilities for optimal management of buildings and technical infrastructure;
- Preservation of landscape at the design and settling of infrastructural sites;
- Park's management improvement;
- Establishing conditions for information servicing of visitors and for interpretations.

3.1.3. Planned relations with neighboring territories for implementing biocorridors, in regard to Habitats Directive's Article 10 are presented in ***Annex 3.1.3.***

Rusenski Lom Nature Park is situated in the interior of Lomovete Protected zone and the latter provides a biocorridor with neighboring protected zones – Ludogorie with code BG0000168

and Ludogorie with code BG0002062, and the Danube river is the natural biocorridor with protected zones Batin with code BG0000232, Ribarnitsi Mechka with code BG0002024 and Marten-Ryahovo with code BG0000529. That is why no special measures are needed for realizing additional biocorridors between the Nature park and neighboring territories.

3.2. REGIMENTS AND REGULATIONS

3.2.1. Universally valid for the park's territory, originating from the regulative documents and from general administrative acts

The entire Bulgarian legislation and numerous general administrative acts operate on the nature park's territory, regulating independently or in combination with each other, the human activities. The present item includes only the documents which application in the period of the plan operation is key and definitive for achieving the set goals.

Annex 1.3. *presents Order № 567/26.02.1970 Order № 586/08.06.1983 Order № 580/17.06.1986 Order № РД-794 of August 19th 2002, Order № 639 of December 19th 2001).*

REGIMENTS

(1). Prohibition for activities and building that are not allowed with the order for announcing the park, the park's management plan and the development and technical plans and projects. (*PAA*)

(2). Prohibition for conducting clear felling in all forest, except the poplar and the low-stemmed forests; for blending bare, unrenowned clearings on an area that is bigger than 2 hectares, in low-stemmed forests, except the acacia ones. (*FA*)

(3). Prohibition for felling around permanent water currents, except the artificially established plantations, in zones of width not less than 15 m, where, if necessary, only removal of dry and/or fallen trees is admissible. (*Regulation № 8 of August 5th 2011 for the fellings in the forests*)

(4). Prohibition for felling in the forests in immediate proximity (in radius of 20 m) to springs, wells, catchment areas, drinking pools and other water sources that are not included in the sanitary protection zones, except the conduction of sanitary fellings and forced fellings. (*Regulation № 8 of August 5th 2011 for the fellings in the forests*)

(5). Prohibition for conduction of fellings in the forests in the stage of old age, except the cases of damages of more than 50 percent. (*Regulation № 8 of August 5th 2011 for the fellings in the forests*)

(6). Prohibition for conduction of fellings in the forests within the limits of 200 m around tourist chalets and sites of religious significance as well as the ones related to preservation of cultural heritage and national traditions for the local population (countryside's related to religious belief, sanctuaries, territories traditionally related to

holding fairs, singing competitions, other events of local character), except cutting single trees presenting danger for people and facilities, or the conduction of sanitary and forced fellings. (*Regulation № 8 of August 5th 2011 for the fellings in the forests*)

(7). Prohibition for fellings in the forests of local species that lead to reduction of their areal distribution or to the change of species. (*Order N PA-562/5.9.2008 of MOEW*)

(8). Prohibition for introducing not typical for the region herbaceous and animal species (*PAA*)

(9). Prohibition for goats pasture. (*Order № PA-794/19.08.2002 of MOEW*)

(10). Prohibition for picking up fossils and minerals, rock formations damage. (*PAA*)

(11). Prohibition for collecting rare, endemic, relict and protected species, except for scientific purposes. (*PAA*)

(12). The following are prohibited for the animal species from Annex № 3 of the Biological Diversity Act:

1. all forms of intentional catching or killing of specimens with any devices, means and methods;

2. chasing and disturbing, particularly in the reproduction periods, during young representatives raising, spending the winter and migration;

3. destroying or taking eggs, including the cases, when they are abandoned; destroying, damaging or moving nests;

4. damaging or destroying places of reproduction, rest and gathering during migration;

5. taking found dead specimen; (*BDA*)

(13). The following are prohibited for herbaceous species from Annex № 3 of the Biological Diversity Act:

1. picking up, collecting, cutting, rooting or another way of destroying of specimens in their natural districts of distribution;

2. possessing, growing, carrying, transporting and offering for sale or exchange of specimens taken from nature. (*BDA*)

(14). Wild animals disturbing, collecting and destroying of birds' eggs and nests is prohibited. (*Order No.580 of June 17th 1986 of NECC*)

(15). Picking flowers, picking up medicinal herbs and forest fruits for commercial and industrial goals is prohibited.(*Order No.580 of June 17th 1986 of NECC*)

(16). Prohibition for polluting waters and terrains with household, industrial and other waste. (*PAA*)

(17). Landscape characteristics (field boundaries, single or groups of trees, protective forest belts) removal is prohibited, while using agricultural lands as such. (*Order N PA-562/5.9.2008 of MOEW*)

(18). Prohibition for afforesting meadows and pastures and their turning into arable lands and permanent plantations. (*Order N PA-562/5.9.2008 of MOEW*

(19). Prohibition for use of pesticides (including rodenticides of second generation) and fertilizers (except manure) in pastures and meadows. (*Order N РД-562/5.9.2008 of MOEW*)

(20). Prohibition for violating the natural's status of wetlands and their coasts, including wetlands draining. (*Order N РД-562/5.9.2008 of MOEW*)

(21). Prohibition for caming. (*ПАА*)

(22). Prohibition for extraction of useful fossils with an open method. (*ПАА*)

(23). Prohibition for extraction and primary procession (dressing) of metal useful fossils through applying chemical and chemico-bacterial methods and cyanides. (*ПАА*)

(24). Prohibition for opening quarries, mine-geological and other types of activities, which change the natural appearance of the countryside or its water regime. (*Order No.РД-567 of February 26th 1970 of MFFI*)

(25). Prohibition for damaging the rock churches and other historical sites. (*Order № РД-794/19.08.2002 of MOEW*)

(26). Prohibition for hunting, except of selective hunting in the period September – January in sections 36, 37, 68, 69 and 70 and hunting of predators - foxes, jackals, roaming dogs. (*Order № РД-794/19.08.2002 of MOEW*)

(27). Night pasture and pasture without herdsman in the forest territories is prohibited. (*ЗА*)

REGULATIONS

(28). Conducting fellings, standing and lying wood and dying trees, which are not less than 8% of the plantation reserve before the felling is kept, except plantations of class I of fire hazard. (*Regulation № 8 of August 5th 2011 for the fellings in the forests*)

(29). No single cutting of more than 30% of the plantation reserve is admissible during the conduction of breeding fellings, except the cases when schematic methods of the breeding felling are applied. (*Regulation № 8 of August 5th 2011 for the fellings in the forests*)

(30). The juridical bodies and the sole traders conduct their activities in a way that do not allow production of noise in the environment above the volume limits, set in Annex 2 to Article 5 of Regulation 6/2006 of MOEW and the MHC for the indicators of noise in the environment, which gives the level of discomfort in the various parts of the day and night, the values limits of the noise indicators for the environment, the methods for noise indicators values evaluation and the noise negative effects on population's health. (*Regulation 6/2006 of MOEW and MHC)*

(31). Owners of constructions should maintain them in a technical condition that corresponds to the basic requirements of Article 169, Paragraph 1 and 3 of SDA, not to conduct and to allow the conduction of carrying out changes in them, which result in or could result in worsening the project levels of correspondence to the requirements concerning the entire construction or its particular characteristics. The municipal mayor issues an order for removal of constructions, which, because of natural wearing out or of

other circumstances, have become dangerous to the health and life of civilians, unfair for use, are threatened of self-destruction, create conditions for fire ignition or are damaging in sanitary0hygienic view and cannot be repaired or strengthened. (*SDA*)

(32). Owners of existing water-power facilities, dams and shoots are obliged to construct fish passes allowing fish migration realization. (*FAA*)

(33). Owners and individuals managing water-power facilities, dams and shoots, and owners of water sites under Article 3, Paragraph 1, and item 2 of FAA are obliged to maintain optimal water level during fish spawning mating period, aiming spawn preservation, except when emergency water discharge is necessitated. (*FAA*)

CONDITIONS

(34). Providing the preservation of key biodiversity elements (trees with hollows, trees with dried up big branches and/or tops, single of group of old trees, etc.), while planning and conducting forestry actions. (*Regulation № 8 of August 5th 2011 for the fellings in the forests*)

(35). Individuals, whose business activity produces waste waters, are obliged to construct the necessary treatment facilities in compliance with the requirements for discharge in the water site, when there is sewerage system constructed on the corresponding territory. (*AW*)

(36). All water sources, for which there are no found and constructed SPZ /Sanitary Protection Zones/, are set in compliance with the regulations of Regulation № 3/2000 within a term of one year from the regulation entering into power. (*Regulation № 3 of October 16th 2000 for the conditions and order for sanitary-protection zones researching, designing, approving and introducing into operation around water sources and facilities for drinking-household water supply and around the sources of mineral waters used for medicinal, prophylactic, drinking and hygienic needs*)

(37). The constituted SPZ after the order of Regulation № 2 of 1989 for SPZ around the water sources and facilities for drinking-household water supply (SG, issue 68 of 1989) are set in compliance with the requirements of this Regulation № 3/2000 regarding the borders and the guarding regiments in belts II and III in a term of up to 10 years from its promulgation in the State Gazette. The border of the most internal belt of SPZ is not changed. (*Regulation № 3 of October 16th 2000 for the conditions and order for sanitary-protection zones researching, designing, approving and introducing into operation around water sources and facilities for drinking-household water supply and around the sources of mineral waters used for medicinal, prophylactic, drinking and hygienic needs*)

3.2.2. Regulations and regiments valid for the territory of the park, part of the Municipality of Ivanovo

These regulations and regiments originate from the Rules and Regulations for Applying the General Site Development Plan of the Municipality of Ivanovo and the Regiments for Conservation of NAR Rock Churches

by the Village of Ivanovo. The present item includes only the ones, which application in the period of the plan's action is key and definitive for the set goals achievement.

(38). For all agricultural territories of the Municipality of Ivanovo in the park, regiment of preventive protection is established under Article 10, Paragraph 3 of SDA, with which their actual use is kept, without worsening their qualities. The regiment does not concern the lands under §4 of the Transitional and Final Provisions of the Law on Ownership and Use of Agricultural Land. Change of land use of the agricultural territories is admissible as an exception, for:

1. construction of sites of transport infrastructure;

2. Construction of other technical infrastructure and such of the communal economy, including hydromelioration networks and facilities related to their operation;

3. performance of activities and building related to mobile cultural heritage objects conservation and exhibition.

(39). For all forest territories of the Municipality of Ivanovo in the park, regiment of preventive protection is established under Article 10, Paragraph 3 of SDA, with which their actual use is kept, without worsening their qualities. No building is allowed in them, except elements of technical infrastructure and hydrotechnical facilities as well as the sites under Article 153, Paragraph 1 of FA, which construction is not considered building.

(40). On the territory of NAR Rock churches by the village of Ivanovo within the limits of the park, prohibited are all constructional activities except constructing infrastructure related to exhibiting the immovable cultural archeological valuables or to providing access and service for visitors – protective coverages, shelters, stairs, panoramic grounds, passages and handrails, art and functional lighting, information provision.

(41). On the territory of NAR Rock churches by the village of Ivanovo within the limits of the park, prohibited is land tilling and all activities related to natural environment change.

(42). On the territory of NAR Rock churches by the village of Ivanovo within the limits of the park, prohibited is any anthropogenic intervention in the rock formations except for cleaning, caving, anchoring and other activities related to ensuring the rock massif stability and making the territory safe after coordination with the Ministry of Culture.

(43). On the territories of the protection zones of NAR Rock churches by the village of Ivanovo within the limits of the park, not admissible is the change of land use related to building, except construction of land and underground infrastructure.

3.2.3. Regulations, regiments, conditions and recommendations generally valid for the territory of the Park and introduced by the present management plan.

3.2.3.1 Regulations, regiments, conditions and recommendations for the activities in the forests, lands and water areas and the natural resources use, that operate on the entire territory of the nature park.

REGIMENTS:

(44). Movement of motor transport vehicles is prohibited outside the existing roads, except official cars of MoI, MOEW, MK, municipal administrations, RIEW, NCSE, NPD, for the needs of managing agricultural lands and forests by owners and users of properties in the park, fire safety service and emergent medical aid.

(45). The use of drones is prohibited, except for official purposes of Rusenski Lom NPD, RIEW Ruse and SHR Dunav Ruse.

(46). Moto-, para- and delta- aerodonetics is prohibited.

(47). Rock climbing is prohibited except properties 51768.21.55 along the built via ferata to the Small Nisovo monastery, which to be conducted with specialized climbing equipment and the equipped routes in subsection 21/5 within the limits of the Nature park, and outside it, but in immediate proximity – in subsection 35/7 and properties 39205.201.220 and 72028.92.265.

(48). It is prohibited to create new hunting paths and game fields.

(49). It is prohibited to collect, transfer and transport of truffles until the adoption of the corresponding legislation.

(50). It is prohibited to conduct any activity that causes noise over 40 decibels except regular activities related to meadows mowing, logging, afforestation and hunting as well as during rescue actions. /*This limit originates from the Regulation on the noise for tourist territories outside urban territories. The size of the noise is determined by measuring with specialized devices*/.

(51). Prohibition for night pasture and pasture without herdsman in the agricultural territories.

(52). For all agricultural territories of the Municipality of Vetovo in the park, regiment of preventive protection is established under Article 10, Paragraph 3 of SDA, with which their actual use is kept, without worsening their qualities. The regiment does not concern the lands under §4 of the Transitional and Final Provisions of the Law on Ownership and Use of Agricultural Land. Change of land use of the agricultural territories is admissible as an exception, for:

1. construction of sites of transport infrastructure;

2. Construction of other technical infrastructure and such of the communal economy, including hydromelioration networks and facilities related to their operation;

3. performance of activities and building related to mobile cultural heritage objects conservation and exhibition

(53). For all forest territories of the Municipality of Vetovo in the park, regiment of preventive protection is established under Article 10, Paragraph 3 of SDA, with which their actual use is kept, without worsening their qualities. No building is allowed in them, except elements of technical infrastructure and hydrotechnical facilities as well as the sites under Article 153, Paragraph 1 of FA, which construction is not considered building.

(54). The following is prohibited for the animal species of European turtle dove (*Streptopelia turtur*) and Western jackdaw (*Corvus monedula*):

1. all forms of intentional catching or killing of specimens with any devices, means or methods;

2. chasing and disturbing, particularly during the periods of mating, raising the young representatives, spending the winter and migration;

3. destroying or taking eggs, including the cases they are abandoned; destroying, damaging or moving of nests;

4. damaging or destroying places for mating, rest, gathering during migration;

5. taking of found dead specimens;

(55). For the vegetative species of Chetiriraba zhaltuga (*Genista tetragona*) the following is prohibited:

1. picking up, collection, cutting, rooting or another way of destroying of specimens in their natural district of distribution;

2. possessing, growing, carrying, transporting and offering for sale or exchange of taken from the nature specimens.

(56). Prohibition for storing remains of the felling (branches, lids, etc.) at a distance of less than 5 meters from water currents.

(57). Hauling of wood and transporting vehicles moving along black roads situated on first flood terrace is prohibited.

(58). Hauling of wood and transporting vehicles moving along black roads situated in proximity of river beds is prohibited.

(59). Hauling and transport of wood and farm products along the forest and farm roads is prohibited when soil is overmoisted (in result of heavy fall of rain, snow melting, etc.).

REGULATIONS:

(60). Biotopic trees with nests, hollows and/or indications they are inhabited by protected or target for conservation species, described in item 1.15, are preserved during marking and felling. At presence of nests of day birds of prey on trees, rocks or another substratum, a zone around them of minimum of 300 meters radius is left, where no forestry actions are conducted during the mating period from March 1st to August 15th.

This zone is 500 m for the nests of the Egyptian vulture, the lesser spotted eagle, booted eagle, short-toed snake eagle, golden eagle and black stork, and additionally touristic and other activities that might cause disturbance particularly during the mating the raising periods are being limited – from March 1st to August 15th.

(61). Renewing fellings of oak high-stemmed forests (except cerri-oak ones) may start after 140th year, and for cerris-oak high-stemmed forests – after the 110th year.

CONDITIONS:

(62). In the performance of the norm under item (60), in the year, prior to the use, within the framework of marking and of the present year, the Nature Park Directorate conducts verification for presence of biotopic trees with nests, hollows and/or with indications they are inhabited by protected or target for conservation species an d elaborates prescriptions for conduction of forestry activities, touristic and other activities that might cause disturbance.

(63). After ceasing the forestry and agricultural activities, rehabilitation of damaged terrains and unstabilized roads is carried out.

RECOMMENDATIONS:

(64). NPD to initiate procedures under SDA for all destroyed, unusable facilities for water use or appearing being obstacle for the water organisms migration, to be safeguarded and cleared within the framework of the plan's operation or to be equipped with fish passes.

(65). It is recommended to maintrain and present updated information on the behalf of NPD about the drinking qualities of all accessible for the visitors water sources within the limits of the ark and the adjacent territories.

3.2.3.2 Regiments and conditions for the development of infrastructure and building, in operation on the entire territory of the nature park.

REGIMENTS:

(66). Destruction, damage, moving of objects and facilities of the administrative, touristic and information infrastructure is prohibited.

CONDITIONS:

(67). All architectural elements and facilities of the touristic infrastructure are designed and constructed of natural materials – stone and timber.

(68). Putting any kind of signs and symbols related to touristic and information infrastructure outside the planned ones in the legislation in power, is completed by NPD or after coordination with NPD.

(69). The construction of new linear objects of the electricity grid system, if technically possible, to be done after underground method aiming reducing paths' width, biological diversity and landscape conservation.

3.2.4 Specific regulations, regiments, conditions and recommendations for the particular zones

For the Zone for natural and cultural heritage conservation

REGIMENTS

(70). Domestic animals pasture is allowed in the regulated pastures and in the following forest territories:

Ivanovo land: 20/а,б,в,г,д,е,ж,з,и,к,л,м,н,о,п,р,с,т,ф,1,2,3,4,5,6,7,8,11;

Nisovo land: 39/д; 40/а,б,в,г,д,и,3,4; 41/а,ж,з,и,н,н,п,т,у,ф,х,1,2,4,5,6,7,8,9,10; 42/е,и,о,х,ю,я,а1,б1,в1,з1,1,5; 67/а,б,в,г,д,е,ж,з,и,1,2,3,4,5,6,7,8; 68/а,б,в,г,д,е,ж,з,о,п,р,с,т,у,ф,х,ц,ч,ш,1,3; 69/а,б,в,г,д,е,ж,з,и,к,1,2,3; 70/а,б,в,г,д,е,ж,з,и,к,л,м,н,о,п,р,1,2,3,4,5; 71/д,м,3; 88/а,б,в,г,н,ф,х,щ; 89/а,б,в,г,д,1,2,3; 90/а,б,в,г,д,е,ж,з,и,к,л,м,н,о,п,р,с,т,1,2,3,4,5; 91/а,б,в,г,д,е,1,2; 92/а,б,в,г,д,е,ж,1,2,3,4;

Svalenik land: 46/а,б,в,г,д,е,з,и,к,л,о,ф,ц,1,3,4,9; 47/а,б,в,г,д,1,2,3,4,5,6; 60/а,б,в,г,д,е,ж,з,и,п,р; 61/а,б,в,г,д,е,з,м,о,1,3,4; 62/а,б,в,д,з,1,2,3,4,5,6; 63/а,б,в,г,д,е,ж,1,2,3; 64/а,б,в,д,з,3,4; 65/а,б,в,г,д,е,3; 66/а,д,е,2,4; 247/а,ж,5,;

Tabachka land: 21//б, у,ф,5,6

Cherven land: 28/к,р,щ; 33/а,б,в,г,д,е,ж,з,к,л,м,н,о,п,р,с,т,1,2,3; 34/н,7; 41/ц; 42/г1,д1,е1,ж1; 43/б,в,г,д,м,п,р,с,т,у,ф,ш,щ,ю,1,2; 44/б,г,д,л,н,о,п,с,т,1;

Shtraklevo land: 71/а,б,в,г,з,и,л,1; 72/а,б,в,г,д,е,ж,1,2,4; 73/а,г,ж,3,4; 76/б,в,г,д,е,ж,1; 93/а,ж,в,г,д,е,ж,з,1,2,3,4,5,6;.

(71). Lighting fire and constructing facilities of tourists servicing (tables, benches, fireplaces, shelters) is allowed on the grounds of adopted detailed site development plans without change of use on the following properties: 56441.0.334, 56441.0.630, 56441.0.631, 56441.0.669, 56441.0.670, 56441.0.671, 56441.0.672, 56441.82.114, 56441.82.115, 56441.82.131, 80443.0.160, 80443.0.161, 80443.0.162, 80443.68.1, 80443.68.2, 80443.68.3, 80443.68.4, 80443.68.5, 80443.68.6, 80443.68.7, 80443.68.8, 80443.68.9, 80443.68.10, 80443.68.11, 80443.68.12, 80443.68.13, 80443.68.14, 80443.68.15, 80443.68.16, 80443.68.17, 80443.68.18.

(72). Construction of feeding grounds and volaries for adaptation before releasing day birds of prey in nature is allowed.

(73). For the archeological sites registered in Archeological Map of the Republic of Bulgaria, any activities that damage the integrity of the Earth layer are prohibited, except the allowed archeological researches after the lawful order.

REGULATIONS

(74). Differentiating bee gardens at a distance of more than 20 meters from the tourist routes is allowed.

(75). Meadows mowing to be conducted after June 15th;

RECOMMENDATIONS

(76). It is recommended that the hay-making is conducted from the middle to the end of the meadow, aiming ornithofauna conservation.

For the Zone for buildings and facilities:

REGIMENTS:

(77). It is allowed to light a fire.

(78). It is allowed to transform and reconstruct existing buildings and facilities.

(79). It is forbidden to undertake production activities giving off waste waters, without constructing local treatment plants

RECOMMENDATIONS:

(80). Fish ponds maintenance is recommendable

3.2.5. Recommendations for the management organization for achieving Rusenski Lom NP management plan goals

(81). It is recommended, on the grounds of Article 17, Paragraph 1 of the Cultural Heritage Act (CHA) for the mayors of municipalities to initiate, before the competent bodies, and to render cooperation for completion of procedures under CHA for updating the lists and the final classification and categorization of immovable cultural valuables in the municipality and for defining certain regiments for their conservation, including defining statute of historical zone for part of the Rusenski Lom NP territory with concentration of immovable cultural valuables, according to Ivanovo Cherven Territorial Programme.

(82). Establishment of Consultative council to Rusenski Lom NPD is recommended.

(83). RL NPD to undertake responsibility on the management of PZ Lomovete BG0000608, PZ Lomovete BG0002025, PZ Kalimok-Brashlyan BG0000377 and complex Kalimok BG0002030

(84). In case Rusenski Lom NP is nominated for UNESCO Geopark, NPD to take the functions of geopark's managing body.

(85). RL NPD's personnel number to be increased by 2 full-time positions for forest inspectors.

SUMMARIZED TABLE after item 3.2.1

Prohibitions, regulations and recommendations on resources use, universally valid for the territory of the entire park, originating from the regulative documents and general administrative acts (pointed in item 3.2.1. and ANNEX 1.3.)

CATEGORY	PROHIBITIONS – *the names of the administrative documents are*	REGULATIONS	CONDITIONS
BUILDING	Prohibition for activities and building that are not allowed with the order for announcing the park, the park's management plan and the development and technical plans and projects. Owners of constructions should maintain them in a technical condition that corresponds to the basic requirements of Article 169, Paragraph 1 and 3 of SDA, to not conduct and to allow the conduction of carrying out changes in them, which result in or could result in worsening the project levels of correspondence to the requirements concerning the entire construction or its particular characteristics.		The municipal mayor issues an order for removal of constructions, which, because of natural wearing out or of other circumstances, have become dangerous to the health and life of civilians, unfit for use, are threatened of self-destruction, create conditions for fire ignition or are damaging in sanitary-hygienic view and cannot be repaired or strengthened.
MAINTAINING AND RESTORATIVE ACTIVITIES IN THE FORESTS	Prohibition for conducting clear felling in all forest, except the poplar and the low-stemmed forests; for blending bare, unrenewed clearings on an area that is bigger than 2 hectares, in low-stemmed forests, except the acacia ones.	Conducting fellings, standing and lying wood and dying trees, which are not less than 8% of the plantation reserve before the felling is kept, except plantations of class I of fire hazard.	Providing the preservation of key biodiversity elements (trees with hollows, trees with dried up big branches and/or tops, single of group of old trees, etc.), while planning and conducting forestry actions.
USE OF NON-WOOD PRODUCTS	Prohibition for introducing not typical for the region herbaceous and animal species. Prohibition for goats pasture. Prohibition for picking up fossils and minerals, rock		

	formations damage; Prohibition for collecting rare, endemic, relict and protected species, except for scientific purposes. The following are prohibited for the animal species from Annex № 3 of the Biological Diversity Act: *1. all forms of intentional catching or killing of specimens with any devices, means and methods;* *2. chasing and disturbing, particularly in the reproduction periods, during young representatives raising, spending the winter and migration;* *3. destroying or taking eggs, including the cases, when they are abandoned; destroying, damaging or moving nests;* *4. damaging or destroying places of reproduction, rest and gathering during migration;* *5. taking found dead specimens;* The following are prohibited for herbaceous species from Annex № 3 of the Biological Diversity Act: *1. picking up, collecting, cutting, rooting or another way of destroying of specimens in their natural districts of distribution;* *2. possessing, growing, carrying, transporting and offering for sale or exchange of specimens taken from nature.* Wild animals disturbing, collecting and destroying of birds' eggs and nests is prohibited . Picking flowers, picking up medicinal herbs and forest fruits for commercial and industrial goals is prohibited.		

WATERS	Prohibition for polluting waters and terrains with household, industrial and other waste. Owners and individuals managing water-power facilities, dams and shoots, and owners of water sites under Article 3, Paragraph 1, and item 2 of FAA are obliged to maintain optimal water level during fish spawning period, aiming spawn preservation, except when emergency water discharge is necessitated. Owners of existing water-power facilities, dams and shoots are obliged to construct fish passes allowing fish migration realization.		Individuals, whose business activity produces waste waters, are obliged to construct the necessary treatment facilities in compliance with the requirements for discharge in the water site, when there is sewerage system constructed on the corresponding territory. All water sources, for which there are no found and constructed SPZ /Sanitary Protection Zones/, are set in compliance with the regulations of this Regulation within a term of one year from the regulation entering into power. The constituted SPZ after the order of Regulation № 2 of 1989 for SPZ around the water sources and facilities for drinking-household water supply (SG, issue 68 of 1989) are set in compliance with the requirements of this Regulation № 3/2000 regarding the borders and the guarding regiments in belts II and III in a term of up to 10 years from its promulgation in the State Gazette. The border of the most internal belt of SPZ is not changed.
FARMLAND	Landscape characteristics (field boundaries, single or groups of trees, protective forest belts) removal is prohibited, while using agricultural lands as such; Prohibition for afforesting meadows and pastures and their turning into arable lands and permanent plantations; Prohibition for use of pesticides (including rodenticides of second generation) and fertilizers (except manure) in pastures and meadows; Prohibition for violating the natural status of wetlands and		

	their coasts, including wetlands draining;		
OTHERS	Prohibition for camping. Prohibition for extraction of useful fossils with an open method. Prohibition for extraction and primary procession (dressing) of metal useful fossils through applying chemical and chemical-bacterial methods and cyanides. Prohibition for opening quarries, mine-geological and other types of activities, which change the natural appearance of the countryside or its water regime. Prohibition for damaging the rock churches and other historical sites. Prohibition for hunting, except of selective hunting in the period September – January in sections 36, 37, 68, 69 and 70 and hunting of predators - foxes, jackals, roaming dogs. Night pasture and pasture without herdsman in the forest territories is prohibited.	The juridical bodies and the sole traders conduct their activities in a way that do not allow production of noise in the environment above the volume limits, set in Annex 2 to Article 5 of Regulation 6/2006 of MOEW and и MHC for the indicators of noise in the environment, which gives the level of discomfort in the various parts of the day and night, the values limits of the noise indicators for the environment, the methods for noise indicators values evaluation and the noise negative effects on population's health.	

SUMMARIZED TABLE after item 3.2.3

Regulations, regiments, conditions and recommendations universally valid for the Park's territory and introduced with the present management plan (item 3.2.3).

3.2.3.1 Regulation, regiments, conditions and recommendations for the activities in the forests, lands and water areas and the natural resources use that operate on the entire nature park's territory.

REGIMENTS	REGULATIONS	CONDITIONS	RECOMMENDATIONS
Movement of motor transport vehicles is prohibited outside the existing roads, except official cars of MoI, MOEW, MK, municipal administrations, RIEW, NCSE, NPD, for the needs of managing agricultural lands and forests by owners and users of properties in the park, fire safety service and emergent medical aid. The use of drones is prohibited, except for official purposes of Rusenski Lom NPD, RIEW Ruse and SHR Dunav Ruse. Moto-, para- and delta- aerodonetics is prohibited because of the territory's significance for the birds of prey. Rock climbing is prohibited except properties 51768.21.55 along the built via ferrata to the Small Nisovo monastery, which to be conducted with specialized climbing equipment and the equipped routes in subsection 21/5 within the limits of the Nature park, and outside it, but in immediate proximity – in subsection 35/7 and properties 39205.201.220 and 72028.92.265. It is prohibited to create new hunting paths and game fields. It is prohibited to collect, transfer and transport of truffles until the adoption of the corresponding legislation. It is prohibited to conduct any activity that causes noise over 40 decibels except regular activities related to meadows mowing, logging, afforestation and hunting as well as during rescue actions. /*This limit originates from the Regulation on the noise*	Biotopic trees with nests, hollows and/or indications they are inhabited by protected or target for conservation species, described in item 1.15, are preserved during marking and felling. At presence of nests of day birds of prey on trees, rocks or another substratum, a zone around them of minimum of 250 meters radius is left, where no forestry actions are conducted during the mating period from March 1st to August 15th. This zone is 500 m for the nests of the Egyptian vulture, the lesser spotted	After ceasing the forestry and agricultural activities, rehabilitation of damaged terrains and unstabilized roads is carried out. In the performance of the norm under item (60), in the year, prior to the use, within the framework of marking and of the present year, the Nature Park Directorate conducts verification for	NPD to initiate procedures under SDA for all destroyed, unusable facilities for water use or appearing being obstacle for the water organisms migration, to be safeguarded and cleared within the framework of the plan's operation or to be equipped with fish passes. It is recommended to maintain and present updated information on the behalf of NPD about the drinking qualities of all accessible for the visitor's water

for tourist territories outside urban territories. The size of the noise is determined by measuring with specialized devices/. Prohibition for night pasture and pasture without herdsman in the agricultural territories. For all agricultural territories of the Municipality of Vetovo in the park, regiment of preventive protection is established under Article 10, Paragraph 3 of SDA, with which their actual use is kept, without worsening their qualities. The regiment does not concern the lands under §4 of the Transitional and Final Provisions of the Law on Ownership and Use of Agricultural Land. Change of land use of the agricultural territories is admissible as an exception, for: 1. construction of sites of transport infrastructure; 2. Construction of other technical infrastructure and such of the communal economy, including hydromelioration networks and facilities related to their operation; 3. performance of activities and building related to mobile cultural heritage objects conservation and exhibition. For all forest territories of the Municipality of Vetovo in the park, regiment of preventive protection is established under Article 10, Paragraph 3 of SDA, with which their actual use is kept, without worsening their qualities. No building is allowed in them, except elements of technical infrastructure and hydrotechnical facilities as well as the sites under Article 153, Paragraph 1 of FA, which construction is not considered building. The following is prohibited for the animal species of European turtle dove (*Streptopelia turtur*) and Western jackdaw (*Corvus monedula*): all forms of intentional catching or killing of specimens with any devices, means or methods; chasing and disturbing, particularly during the periods of mating, raising the young representatives, spending the winter and migration; destroying or taking eggs, including the cases they are abandoned; destroying, damaging or moving of nests; damaging or destroying places for mating, rest, gathering during migration; taking of found dead specimens;	eagle, booted eagle, short-toed snake eagle, golden eagle and black stork, and additionally touristic and other activities that might cause disturbance particularly during the mating the raising periods are being limited – from March 1st to August 15th Renewing fellings of oak high-stemmed forests (except cerri-oak ones) may start after 140th year, and for cerris-oak high-stemmed forests – after the 110th year.	presence of biotopic trees with nests, hollows and/or with indications they are inhabited by protected or target for conservation species an d elaborates prescriptions for conduction of forestry activities, touristic and other activities that might cause disturbance.	sources within the limits of the park and the adjacent territories.

REGIMENTS	CONDITIONS
For the vegetative species of Chetiriraba zhaltuga (*Genista tetragona*) the following is prohibited: picking up, collection, cutting, rooting or another way of destroying of specimens in their natural district of distribution; possessing, growing, carrying, transporting and offering for sale or exchange of taken from the nature specimens. Prohibition for storing remains of the felling (branches, lids, etc.) at a distance of less than 5 meters from water currents. Hauling of wood and transporting vehicles moving along black roads situated in proximity of river beds is prohibited. It is forbidden, at hauling and transport of wood and vehicles crossing of permanent water currents or water sites with running water, without construction of relevant facilities (bridges, tubes, etc.), providing water current protection. Hauling and transport of wood and farm products along the forest and farm roads is prohibited when soil is overmoisted (in result of heavy fall of rain, snow melting, etc.).	

3.2.3.2 Regiments and conditions for the development of infrastructure and building, in operation on the entire territory of the nature park.

Destruction, damage, moving of objects and facilities of the administrative, touristic and information infrastructure is prohibited.	All architectural elements and facilities of the touristic infrastructure are designed and constructed of natural materials – stone and timber. Putting any kind of signs and symbols related to touristic and information infrastructure outside the planned ones in the legislation in power, is completed by NPD or after coordination with NPD. The construction of new linear objects of the electricity grid system, if technically possible, to be done after underground method aiming reducing paths' width, biological diversity and landscape conservation.

SUMMARIZED TABLE after item 3.2.4 **Specific regulations, regiments, conditions and recommendations for the particular zones**

ZONE	REGIMENTS	REGULATIONS	RECOMMENDATIONS
Zone for tourism and cultural and natural heritage conservation	The territory where pasture is allowed includes the pastures from the agricultural territories and the forest territories, except: Ivanovo land: 20/а,б,в,г,д,е,ж,з,и,к,л,м,н,о,п,р,с,т,ф,1,2,3,4,5,6,7,8,11; Nisovo land: 39/д; 40/а,б,в,г,д,и,3,4; 41/а,ж,з,и,н,н,п,т,у,ф,х,1,2,4,5,6,7,8,9,10; 42/е,и,о,х,ю,я,а1,б1,в1,з1,1,5; 67/а,б,в,г,д,е,ж,з,и,1,2,3,4,5,6,7,8; 68/а,б,в,г,д,е,ж,з,о,п,р,с,т,у,ф,х,ц,ч,ш,1,3; 69/а,б,в,г,д,е,ж,з,и,к,1,2,3; 70/а,б,в,г,д,е,ж,з,и,к,л,м,н,о,п,р,1,2,3,4,5; 71/д,м,3; 88/а,б,в,г,н,ф,х,щ; 89/а,б,в,г,д,1,2,3; 90/а,б,в,г,д,е,ж,з,и,к,л,м,н,о,п,р,с,т,1,2,3,4,5; 91/а,б,в,г,д,е,1,2; 92/а,б,в,г,д,е,ж,1,2,3,4; Svalenik land: 46/а,б,в,г,д,е,з,и,к,л,о,ф,ц,1,3,4,9; 47/а,б,в,г,д,1,2,3,4,5,6; 60/а,б,в,г,д,е,ж,з,и,п,р; 61/а,б,в,г,д,е,з,м,о,1,3,4; 62/а,б,в,д,з,1,2,3,4,5,6;	Meadows mowing to be conducted after June 15th;	The hay-making is to be conducted from the middle to the end of the meadow, aiming ornithofauna conservation

	63/а,б,в,г,д,е,ж,1,2,3; 64/а,б,в,д,з,3,4; 65/а,б,в,г,д,е,3; 66/а,д,е,2,4; 247/а,ж,5,; Tabachka land: 21//б, у,ф,5,6 Cherven land: 28/к,р,щ; 33/а,б,в,г,д,е,ж,з,к,л,м,н,о,п,р,с,т,1,2,3; 34/н,7; 41/ц; 42/г1,д1,е1,ж1; 43/б,в,г,д,м,п,р,с,т,у,ф,ш,щ,ю,1,2; 44/б,г,д,л,н,о,п,с,т,1; Shtraklevo land:71/а,б,в,г,з,и,л,1; 72/а,б,в,г,д,е,ж,1,2,4; 73/а,г,ж,3,4; 76/б,в,г,д,е,ж,1; 93/а,ж,в,г,д,е,ж,з,1,2,3,4,5,6;. Differentiating bee gardens at a distance of more than 20 meters from the tourist routes is allowed. Lighting fire and constructing facilities of tourists servicing (tables, benches, fireplaces, shelters) is allowed on the grounds of adopted detailed site development plans without change of use on the following properties: 56441.0.334, 56441.0.630, 56441.0.631, 56441.0.669, 56441.0.670, 56441.0.671, 56441.0.672, 56441.82.114, 56441.82.115, 56441.82.131, 80443.0.160, 80443.0.161, 80443.0.162, 80443.68.1, 80443.68.2, 80443.68.3, 80443.68.4, 80443.68.5, 80443.68.6, 80443.68.7, 80443.68.8, 80443.68.9, 80443.68.10, 80443.68.11, 80443.68.12, 80443.68.13, 80443.68.14, 80443.68.15, 80443.68.16, 80443.68.17, 80443.68.18.		
Zone for buildings and facilities	It is recommended that the hay-making is conducted from the middle to the end of the meadow, aiming ornithofauna conservation		The hay-making is to be conducted from the middle to the end of the meadow, aiming ornithofauna conservation

Inventories of cadastral numbers of PI /ПИ/ and of the relevant sections and subsections for the forest territories for SHR Dunav that belong to the zone are presented in Annexes 3.2.4(1) and 3.2.4.(2) respectively

SECTION 4:
OPERATIVE TASKS AND PRESCRIPTIONS FOR CONSERVATION AND USE

4.1. SPECIFYING THE PRIORITIES

The priority directions for the 10-year period of Plan's action are determined on the grounds of the made characteristics and assessments, the defined potential values and possibilities for achieving the set goals that correspond to national and international documents as well as to the approved by the Consultative council vision. (*The present plan provides again for establishing Consultative council*)

The arrangement of the described directions of park management by priority is made according to the assessment, respectively the number of points, defined for the constraints/threats in Section 2: *Table 2.3.* Assessment of constraints and threats.

Conservation and maintenance of biological and landscape diversity

Preservation of existing natural habitats and coenoses and especially the ones included in the EU Habitats Directive, through:

Monitoring of herbaceous coenoses status and changes as result of shrubbing and ruderalization through selection of permanent areas;
Maintenance of existing and creating new herbaceous coenoses;
Monitoring of invasive species distribution (ligneous and herbaceous) that present direct and indirect competition of local species;
Monitoring of habitats status with special focus on the priority ones;
Application of system of forestry activities directed towards increasing the alluvial flood forests area and improving the age structure in all forest habitats

Conservation, maintenance and restoration of species populations

Restoration of Egyptian vulture population;
Cease the reduction and restoration of the populations of priority species of mammals, birds, reptiles, amphibians, fish and invertebrate animals (see item 1.21.6.3.);
Providing biocorridors for the water organisms through migration barriers removal;
Maintenance of fishponds and other wet zones;
Limiting the action of key limiting factors for the fauna – use of poisons, pesticides, distribution lines, etc.;
Control of poaching and illegal resource yield (i.e. truffles);
Conservation of territories and habitats that is significant for the indicative species;
Monitoring of populations status of conservation priority species.

Preservation of landscape typical elements naturalness

Determining measures for restoring meadows and abandoned fields overgrown with shrubs, nettle and other ruderal species;
Landscape identification and assessment aiming putting base for long-term actions directed to landscape protection and improvement.

II. Achieving balance between resources conservation and sustainable use

Conservation, maintenance and/or restoration of forest-ligneous resources

Gradual exchange of hybrid poplars with local species;
Gradual transformation of acacia cultures into plantations composed by local ligneous species;
Giving priority to renewing fellings for turning the sprout oak plantations into seed ones;
Conservation of biotopic trees in the park;
Elaboration of integrated plan for maintenance of riparian forest vegetation in relation to flood risk management;
Settling traditional ways of land use.
Determining the value of ecosystem services offered by the park.

Creating conditions for development of sustainable tourism.

Socialization of more cultural heritage sites aimed at tourism – provision and maintenance of access, marking, information providing, etc.
Offering interpretation for the visitors;
Development of more and interesting old customs in the form of demonstrations;
Maintaining of permanent access to the sites of interest;
Development of more event/more active cultural life in the park and the adjacent territories, particularly ones that are tourist directed.

Building capacity and improvement of Rusenski Lom NPD management.

Building wide public support for NP through providing the Consultative Council for the Park functioning
Systematic training of park's enrolled personnel and the volunteers:
Integrating NPD'd responsibilities to PC Kalimok Brashlyan in the park administration's structure;
Cross-border cooperation development in the border protected territories in Bulgaria and Romania;
Selection of appropriate international assessments and membership in organizations, which to allow internationalization of knowledge and recognition of the nature park's value.

4.2. PROGRAMMES

Programmes are bound to the determined main and secondary goals. They give directions for projects and activities that:

Are selected on the grounds of criteria for priority, defined in item 4.1;
Lead to overcoming threats and constraints for achieving managerial goals, defined in *Table 2.3*;
Ensure park's progress in compliance with its purpose, as a whole and of its particular zones.

There is an action plan suggested to each programme, which specifies the projects and activities necessary for the Programme's implementation regarding their goal/expected result, subject of applying and method.

The priority projects from each programme are included in the work plan item 4.3.
All projects should be enlisted in the park's GIS system and to be timely updated.
It is recommendable that the duration for the planned programmes implementation is not more than 5 years. For these connected to monitoring activities performance, it is recommendable they to be completed periodically – annually or in two year period.

Activities that are to be performed directly by Directorate's officers within the frame of their office tasks are included in Operative Tasks, item 4.4.

The following programmes are defined for implementation for the Plan's period of operation:

I. Programme**:**	Long-term monitoring of biological and landscape diversity in Rusenski Lom NP.
II. Programme **:**	Forests and farmlands management directed towards conservation of the biodiversity in Rusenski Lom NP
III. Programme**:**	Increasing economic benefits for local population through balanced use of resources in Rusenski Lom NP.
IV. Програма**:**	Creating conditions for development of sustainable tourism in Rusenski Lom NP and the adjacent territories.
V. Programme**:**	Management policy improvement and specialized guarding of the park.

4.3. PROJECTS

I PROGRAMME:

LONG-TERM MONITORING OF BIOLOGICAL AND LANDSCAPE DIVERSITY IN RUSENSKI LOM NP

Context:
Monitoring aim is to identify, if possible traced, negative influences affecting key species, coenoses, habitats, ecosystems and landscapes. All received results should be periodically entered in the park's data base.
The received results could be used as comparative value for evaluating the naturalness of the other landscapes and ecosystems in the park, including outside its borders.

Object of observation and documenting are:
The processes of natural development of ecosystems, habitats and species;
The restoration processes of previously damaged ecosystems;
Socio-economic processes in the region – business activity, tourism, settlements development.

The programme is related to the following goals:
Preservation of existing natural habitats and coenoses and especially the ones included in the EU Habitats Directive
Conservation, maintenance or restoration of populations of indicatory or of conservation value species.
Preservation of landscape typical elements' naturalness and damaged territories restoration

Directions and requirements for performing monitoring:
Long-term monitoring for biological diversity conservation is performed at three interrelated levels.

I. Basic monitoring of key indicators for biodiversity

That includes assessment of the status of important natural habitats and species, while taking into consideration the national requirements regarding biodiversity monitoring and the management goals. Monitoring could be conducted by the NPD personnel or by external experts when necessary. Monitoring results would be used for determining to what extent the existing managerial activities should change (and if yes – in what direction), as part of the periodical process of Management plan's review (the so called adaptive management).

II. Monitoring of managerial interventions' impact

That includes assessment of specific managerial activities' actual results, towards the planned ones. The activities might be the set ones in the present Management plan (e.g. Application of forestry activities system, directed to ceasing succession processes related to invasive species distribution or to originate from the basic monitoring results, described above (e.g. trans-location of certain species or certain threat removal) or a particular phenomenon (see below). Monitoring could be performed by NPD officers of by external experts when necessary.

III. "Routine" monitoring and phenomena monitoring

That includes systematic reporting of accidental observations conducted by the NP personnel, the park's guards or other individuals, for example the appearance of rare migrating bird, not typical behavior of certain animal or the early flowering of a certain plant.

The other aspect of that monitoring level is reporting incidents that might render influence on management, e.g. floods, fires, depositing waste or diseases distribution.

The monitoring programme's financing would be provided from various sources, according to each particular aspect: the national government, the local authorities, universities and institutes, NGO or external resources. Still, all monitoring activities in the nature park should be coordinated and supported by the NP administration, and all results to be reported before it.

The indicated below projects are grouped by:
A. SPECIES AND HABITATS
B. ABIOTIC FACTORS
C. SOCIO-ECONOMIC PROCESSES

Projects under programme I:
Long-term monitoring of biological and landscape diversity in Rusenski Lom NP

A. SPECIES AND HABITATS

№	Project/Activity	Goal and expected results	Method
1	Monitoring of herbaceous coenoses status and changes in result of shrubbing andruderalization, through setting permanent monitoring sites	Information on the status and trends. Possibilities for natural habitats restoration. Information about fluctuation and succession processes.	Determined territories verifications, update and data analysis. Entering the data in a shape appropriate for NP management and the guarding, using GIS. Researches on the grounds of photo pictures and satellite pictures, probes from permanent transect permanent observation points. *Note: Suggestions for monitoring sites are pointed in Annex № 1.12.1(2) list Natural Habitats for Monitoring With the Relevant Monitoring Sites Coordinates*
2.	Monitoring of forest coenoses status and changes in result of change in the composition and status, through setting permanent monitoring sites	Information on the status and trends. Possibilities for natural habitats restoration. Information about fluctuation and succession processes.	Determined territories verifications, update and data analysis. Entering the data in a shape appropriate for NP management and guarding, using GIS. Researches on the grounds of photo pictures and satellite pictures, probes from permanent transect permanent observation points. *Note: Suggestions for monitoring sites are pointed in Annex № 1.12.1(2) list Natural Habitats for Monitoring With the Relevant Monitoring Sites Coordinates*

3	Monitoring and control of invasive species distribution (ligneous and herbaceous), which present direct and indirect competition for the local species;	Information on the status and trends. Prevention and limiting of non-local invasive species distribution on new territories through application of system of measures that also includes non-admission of new for the territory non-local invasive species penetration	Periodic observations in neighboring habitats for finding and control of invasive species distribution. Elaboration of an action plan if finding extending of invasive species distribution.
4	Monitoring of herbaceous species status, with particular focus on the conservation priority ones.	Detailed information about the status, density and age structure of the cenopopulations of conservation priority species, as base for their conservation and management.	Personnel and Guard training in distinguishing conservation significant species on site. Reporting changes in the species populations (density and abundance, age structure). Entering the data in a shape appropriate for NP management and the guarding, using GIS. *Note: Suggestions for monitoring sites are pointed in Annex № 1.14.2.(2) List of Herbaceous Species for Monitoring with the Relevant Monitoring Sites Coordinates*
5	Monitoring of the status of day birds of prey and the black stork in the park and in Lomovete protected zone (BG0002025)	Providing information about the activities on day birds of prey and black stork conservation. Application of the regulations for preventing disturbance and other negatively acting factors.	Conduction of target periodic researches for the territory of the entire park and of protected zone Lomovete (BG0002025), annual, twice during the mating season through combination of point and transect observations and once during the autumn-winter season for finding new nests through transect observations. Methods for monitoring of species of nesting birds to the National system for biological diversity monitoring are applied.
6	Monitoring of the status of indicative forest bird species with priority being the woodpeckers in the park.	Providing the missing at present information about species composition, numbers and density of indicative forest bird species. Mapping the forest territories significant for the birds and outlining measures for their management.	It is applied twice in two consecutive years, within totally four years. It is recommended this monitoring to be conducted in the second and third year of the time period the present plan is in action as well as during the seventh and eighth year. Methods for monitoring of the nesting bird species (woodpeckers) and Methods for monitoring of regular bird species to the National system for biological diversity monitoring is applied
7	Monitoring of nesting birds and the conservation priority birds that are not included in the previous projects.	Clarifying the trends in the numbers and identifying the limiting for the target groups factors.	It is recommended to be held twice during the fourth and the ninth year of the period the present plan is in action. Methods for monitoring of the nesting bird species and Methods for monitoring of regular bird species to the National system for biological diversity monitoring is used. Mapping of Eurasian eagle-owl's nesting deposits.
8	Monitoring of the status of vulnerable mammal species on open herbaceous	Providing information about potential threats regarding conservation of vulnerable mammal species on open herbaceous habitats in the park	Inventory is made every two years, twice during the season, of all known colonies of the European ground squirrel in the park and the adjacent territories. There relevant methods are applied according to the National system for biological

	habitats in the park and the adjacent territories	and the adjacent territories	diversity monitoring.
9	Of the bats in the park and the adjacent territories	Providing information about potential threats regarding conservation of the bats in the park and the adjacent territories	Annual summer and winter inventory of cave bats colonies. Annual identification of trees with hollows and other significant habitats for bats outside the caves. Methods for monitoring and assessment of cave-loving species of bats status according the National system for biological diversity monitoring are applied.
10	Monitoring of vulnerable amphibians and reptiles and of the potentially invasive species Red-eared slider	Providing information about potential threats regarding conservation of amphibians and reptiles in the park. Purposeful search for the species sheltopusik, blotched snake and red-eared slider is included	Methods for monitoring of amphibians and reptiles according to the National system for biological diversity monitoring is applied. Double application during the fifth and the tenth year in the period of the present plan's action is recommended.
11	Monitoring of the thick shelled river mussel and the Amur bitterling	Providing information about the status of the type and quality of water	Transect samplings in all river sections on the territory of protected zone Lomovete (BG0000608) according to the National system for biological diversity monitoring. Double conduction of monitoring during the first and the fifth year of the period of present plan's action is recommended.

B. ABIOTIC FACTORS – RECOMMENDABLE PROJECTS, FOR WHICH RUSENSKI LOM NP ADMINISTRATION COULD RENDER SUPPORT

№	Project/Activity	Goal and expected results	Method
1	Preparation of Rusenski Lom NP application for Geopark of UNESCO.	In the recommendations of the European Council for the geological heritage conservation Rec(2004)3, it is said that the European geopark should include *sufficient area for a real territorial-economic development, mainly through geotourism.* Each area's extension would lead to inclusion of new valuable objects of geological, archeological, ecological, cultural and spiritual interest. (*For example, area's extension would make so that Orlova chuka cave would become part of the area.)*	The procedure that continues for at least 1 year, requires well determined territory with strictly defined borders, clear concept and plan for development as well as managing body of the geopark. Geologic characteristics satisfy the requirements for UNESCO Geopark. With the experience and capacity of our geoconservation community experience, which is part of the European association for the conservation of the geological heritage, Rusenski Lom NP could acquire the UNESCO logo yet in the next two-three years. For that, it is necessary to mobilize national resource in the field of geoconservation and to draw the attention of state and local institutions that take the decisions.

C. SOCIO-ECONOMIC PROCESSES

№	Project/Activity	Goal and expected results	Method
1	Monitoring of the processes in territories after damages of natural and anthropogenic character	Determining effective restorational measures for damaged terrains by anthropogenic loading and facilities building or after natural disasters	Organizing monitoring stations or permanent sample areas for observation of processes in the main types of habitats Reporting the results after recultivation works Regular update of the data in GIS
2	Periodic monitoring of visitors flow	Reporting the number of visitors in the region and their impact upon the natural complex	Registration and assessment of attendance, report of the number, the type of recreation, age structure, visitors' interests and the way of use of park's various zones, data base update.
3	Monitoring of the breaches and conflicts in using the park	Finding the type of breaches and the trends in their number; Reduction of the number of breaches; Softening of the main conflicts. Finding opposing interests regarding the future use of Rusenski Lom NP on the grounds of the long-term vision for the park.	Elaboration of public registry, where registered breaches to be listed. Discussing arisen or expected conflicts with the stakeholders.

II PROGRAMME

MANAGEMENT OF FORESTS AND FARMLAND, WITH FOCUS ON BIOLOGICAL DIVERSITY CONSERVATION IN RUSENSKI LOM NP

Context:

Rusenski Lom NP's territory is not compact and this is serious precondition for influence of neighboring territories use upon the ecosystems in the park. The negative economic trends have negative effect on the forest ecosystems because of intensification of chemicalization in agriculture for the territories neighboring the park. The wide use of insecticides and rodenticides and the use of poisons against land predators are the most direct negative impacts upon park's fauna.

Incorrect collection of lime blossom, medicinal herbs, mushrooms and others is observed in the recent years. A specific problem is the vehement spreading of truffles collection. This imposes the necessity to exercise control regarding use in order not to disturb the sustainability of species deposits that are subject of use.

The programme is related to the following goals:

Conservation, maintenance or restoration of indicative species populations.

Preservation the naturalness of landscape's typical elements.

Conservation, maintenance and/or restoration of ligneous and non-ligneous resources.

Projects under programme II:
Management of forests and farmland with focus on biological diversity conservation in RUSENSKI LOM NP

№	Project/Activity	Goal and expected results	Method
1	Mapping of habitat 7220* Petrifying springs with tufa formation on Rusenski Lom NP territory.	Exact defining of habitat's locations and its entering in the park's geographic information system. Conservation of priority habitat and maintenance of favorable conservation status.	Defined territories check-ups data update and analysis. Entering the data in a shape appropriate for PP's management and guarding, using GIS.
2	Restoration of habitat 91E0* Alluvial forests of *Alnus glutinosa* and *Fraxinus excelsior (Alno-Pandion, Alnion incanae, Salicion albae)* on the spots along the river terraces, occupied by hybrid poplars.	Gradual change of the territories occupied by hybrid poplars along the river terraces with local species. Achievement of favorable conservation status of the forest natural habitats regarding the areas, plantations' structure, dead wood quantity and the forest at the stage of old age.	Conduction of appropriate forestry measures for gradual substitution of hybrid poplars, including afforestation with local species and toleration of their natural renewal.
3	Gradual transformation of foreign species cultures into plantations composed of local ligneous species.	Gradual substitution of acacia and honely locust cultures with plantations composed of local species. Limiting acacia distribution in neighboring territories and habitats.	Conduction of appropriate forestry measures for gradual substitution of acacia and honey locust cultures, including afforestation with local species and toleration of their natural renewal.
4	Shrubs cleaning in selected polygons of habitat 6250* Pannonic loess steppic grasslands in the Cherni Lom river valley in the section between the village of Cherven and Smesite countryside.	Priority habitat restoration and maintenance. Achievement of favorable conservation status of herbaceous natural habitat regarding the areas, the structure and the species composition.	Conduction of adequate technical measures for restoration of habitat's natural character (including shrubs cleaning).
5	Shrubs cleaning and mowing in the polygons of habitat 6510 Lowland hay meadows in the Mali Lom river valley between the villages Nisovo and Svalenik.	Priority habitat restoration and maintenance. Achievement of favorable conservation status of herbaceous natural habitat regarding the areas, the structure and the species composition.	Conduction of adequate technical measures for restoration of habitat's natural character (including shrubs cleaning and mowing).

6	Restoration of the protected species *Polygala sibirica* and strengthening species population in Rusenski Lom NP.	Maintenance and strengthening species population and deposits strengthening. Species conservation and extending its distribution on the park's territory.	Researches for seed renewal and laboratory experiments for getting new herbaceous specimens of the species. Resettlement in existing deposits and support for its distribution extension.
7	Restoration of Egyptian vulture's population in Rusenski Lom NP	Restoration of one of the most significant species on national and regional scale. This activity would support the overall day birds of prey conservation in the park.	Elaboration of plan for species restoration, which includes: Artificial feeding; Fight against poisons and other pesticides use; Population strengthening through release of birds raised in artificial conditions – providing additional little ones in wild birds nests, releasing zero year old birds from hack, postponed release of one-year old and two-year old birds, etc. Making distribution lines safe-proof, etc. Encouraging extensive pasture stock-breeding.
8	Limiting poisons and other pesticides use in the park and the adjacent territories	Ceasing biological diversity loss caused by poisons use	Elaboration of local poisons combat plan. Establishing a work group and conduction of trainings. Tracing poisons in the nature. Conduction of preventive communication activities.
9	Removal of migration barriers in the rivers	Ensuring fish and the other water organisms migration in Polomieto	Initiation of procedures under SDA for all destroyed, unusable water use facilities or ones that appear being obstacle for the water organisms migration to be made safe-proof or to be cleared out or to be equipped with fish passes
10	Conservation of the European ground squirrel colonies in the park and the adjacent territories	Identification of the European ground squirrel colonies. All colonies with potential significance are included as nesting base of the Rusenski Lom NP birds.	Identification of the European ground squirrel colonies with potential significance as nesting base of the Rusenski Lom NP birds. Conduction of information activities related to maintenance of the European ground squirrel's habitats and prevention of habitats loss.
11	Biocorridors and buffer zones	Reduction of natural habitats fragmentation. Softening the effect of the water and wind erosion, biogenic and terrigenous river pollution, etc.	Elaboration of integrated project for building buffer zones and biocorridors within Rusenski Lom NP and Lomovete (BG0000608) protected zone limits

III PROGRAMME

INCREASING ECONOMIC BENEFITS FOR THE LOCAL POPULATION THROUGH BALANCED USE OF RESOURCES IN RUSENSKI LOM NP

Context:
Many of the present (and future) activities would be performed by individuals, cooperations and companies. One of the management plan's goals is to stimulate private owners and users of natural resources to orient towards more sustainable and nature friendly activities conformable to the land use, suggested for the relevant zones according to the management plan.
The transition to the future nature park's sustainable use is based on the concept that managerial goals could be (partially) achieved through rational resources use in a way which to be favorable for the users (individuals, companies or communities) as well as for the biodiversity. That mechanism relies on the inclusion of **ecological sustainable enterprises /ESE/** and **Public-private partnerships (PPP)** in the activities, which bring benefit for the people as well as for the nature, and which are, at the same time, economically, financially and technically effective.

Object of observation and documenting are:
1. The small and medium enterprises (SME) and local financial institutions for creating suitable financial opportunities for the companies, which to get direct financial benefits from the circumstance they work for the biodiversity conservation and for the natural resources sustainable use.
2. Annual assessment of resources (medicinal herbs, fungi, timber), object of business use and use for personal needs.

The programme is related to the following goals:
Sustainable management and use of natural resources that advantages at the same time biodiversity, the local communities and economy in medium and long term;
Engaging owners and users in the resources assessment, the decision taking about the way, places and quantities of use as well as in activities on their conservation.
Provision of appropriate financing in order to be created trade and financial opportunities for small and medium investors, who predominate in rural regions, so that they to be directly benefitted by the fact they work for the biodiversity conservation.

The implementation of projects related to resources sustainable use and management in compliance with the management plan, would be supported and coordinated by the NPD personnel in partnership with municipalities, NGO, the business, stakeholders associations and individuals from the region.

Projects under programme III:
Increasing economic benefits for the local population through balanced use of resources in Rusenski Lom NP

№	Project/Activity	Goal and expected results	Methods
1	Defining the price of ecosystemmatic services the park offers	The main goal is, within the nature park, to define and give value to the ecosystemmatic services actually offered on the park's territory in	To define and give value to the four major types of ecosystemmatic services: Material services – Products obtained from the ecosystems

		compliance with the best international practices as well as on the grounds of the long-term vision for Rusenski Lom NP on land use, conservation and ecological sustainable socio-economic development, shared by the main stakeholders.	1. Providing non-wood forest products from the forests in Rusenski Lom Nature park 2. Providing timber 3. Access to genetic resources 4. Providing water **Regulating services – Benefits from the processes in the ecosystems** 5. Softening and regulating the climate changes impacts 6. Water regulating and water protecting service 7. Soil erosion prevention **Cultural and social services** – Non-material benefits from the ecosystems 8. Educational value. 9. Providing conditions for recreation and tourism. 10. Landscape's aesthetic value. **Maintaining services** – Ecosystemmatic functions necessary for all the rest services realization 12. Soil formation 13. Primary production 14. Photosynthesis 15. Nutritient substance cycle 16. Water cycle
2	Partnerships in favor of nature and people	To raise the awareness about the existing opportunities and the various forms for partnerships on the nature park's territory and successful practices from the EU member states from similar implemented practices to be presented.	The methods and opportunities for financing are related to the programmes for green business connected with precise agriculture and earth resources sustainable use, financed by the EU.
3	Ecological enterprises for natural resources sustainable use	To encourage the provision of appropriate financing in order to create trade financial opportunities for the small and medium investors, which predominate in the rural regions, so that they have direct benefits from the circumstance they work for the biodiversity conservation.	The methods and possibilities for financing are outlined in **Guidelines for ecologic-sustainable enterprises support** – elaborated and presented as separate part to the management plan (***Annex 4.3.(1).***). They include: identification of suitable activities and potential sources of financing; application of selected activities for sustainable development; Ecological enterprises support.
4	Assessment of the possibilities for development of bio- agriculture and stock-breeding in the region.	Integrating biological diversity conservation into the agricultural territories. Herbaceous habitats conservation.	Determining territories and conditions for pasture of domestic animals. Limiting invasive species and nettle distribution.
5	Elaboration of integrated plan for	Flood risk management and reduction of damages caused by the	Elaboration of projects for the riparian forest vegetation management, which to combine the

	riparian vegetation management in regard to flood risk management	riparian vegetation	needs for hydrotechnical facilities maintenance and the goals of the park

IV PROGRAMME

CREATING CONDITIONS FOR DEVELOPMENT OF SUSTAINABLE TOURISM IN RUSENSKI LOM NP AND THE ADJACENT TERRITORIES

Context:

Nature Park's Directorate in partnership with the municipalities, the local non-governmental organizations and the local state structures could develop sustainable tourism. This way local population should actively participate in the development of tourism instead of accepting these activities as an external pressure.

Park's administration should support the development of activities and services in the zone around the park, with the aim most of the tourists to concentrate there, while offering them interesting and intelligible information about the park and the numerous opportunities for spending their leisure time inside and around the park.

What should be taken into consideration is the general strategy for popularizing tourism in the park, which, at regional level, should determine the following:

- which tourist possibilities of the region to be popularized;
- what is the potential for sustainable tourism development in the region;
- how and to whom the region to be popularized.

This way local people could actually have influence on the tourism development, and not just conform to what they are imposed.

Object of observation and documenting are:

Tourists, users of sites on the territory of the park, hotel-keepers, owners of restaurants and guesthouses, the residents occupied in tourist activities;

Municipal and administrative departments of neighboring settlement, representatives of other institutions and non-governmental organization with competences in the park.

The tourist infrastructure – status, necessity of additional elements, etc.

The programme is related to the following goals:

Socialization of more cultural heritage sites with the aim of tourism – provision and maintenance of access, marking, providing information, etc.

Offering interpretation for the tourists;

Development of more and interesting old customs in the form of demonstrations;

Maintenance of permanent access to the sites of interest;
Development of more events/more active cultural life in the p ark and the adjacent territories, particularly ones directed to tourists.
The implementation of projects related to sustainable tourism development are coordinated and controlled by NPD (within personnel's official obligations) in partnership with the settlements and the NGO from or with competences in the region.
Financing is to be looked for from international programmes, municipalities, Bulgarian funds, local entrepreneurs.

Projects under programme IV:
Creating conditions for development of sustainable tourism inside and around RUSENSKI LOM NP

№	Project/Activity	Goal and expected results	Methods
1	Elaboration of SDDP	The entire territorial organization and relation between the separate buildings and facilities. Effective measures for achieving ecologically friendly recreational use of certain territories.	The project territory boundary is determined on the grounds of the elaborated digital model in the MP. Elaboration of Assignment for SDDP design in compliance with the operating regulations to SDA, FA, BDA, MPA regarding methods of research, analyses and assessments, indicators for planning in the systematized zones, volume and contents of the Preliminary and the Final project.
2	Building and infrastructural provision of interpretative route for disabled people	Creating possibility for access to the natural sites in the park for disabled people Raising public awareness about the NP and the region	Existing dirt roads could be used. Construction of deck for observation with optic devices, marking, signboards, security measures.
3	Maintaining the accessibility of existing routes that cross through the NP	Guaranteeing permanent and safe access for the visitors along all existing and eventually developed in the future routes: hiking, biking, climbing, etc. Maintenance of good and professional relationship with tour operators that offer the NP	Permanent monitoring of the status of routes beds, continuous cleaning and maintenance. Elaboration of general schedule for cleanings and maintenance among all stakeholders (NPD, tourist associations, sports clubs, civilians, etc) and distribution of roles and responsibilities. If necessary, schedule, roles and responsibilities formalization through signing joint agreement, memorandum, annual programmes or other document.

4	Elaboration and implementation of NP's entire programme for tourist interpretation	Providing high quality, modern and attractive additional tourist services for the visitors. Visitors' realizing the NP value and creation of pro-active attitude towards its conservation.	Engaging experts from various fields: tourism, education, natural heritage, cultural heritage. Coordination with the local stakeholders and introducing interpretation as a base principle at elaborating any additional tourist services. Cultural heritage inclusion together with the natural one for touristic interpretation.
5	Elaboration of calendar of tourist cultural events	Diversifying regions' tourist supply; attracting more visitors; providing additional marketing advantages	Turning selected events of local/regional significance that have certain potential, into touristic events. Elaboration of new, special touristic events together with other local stakeholders. For example: Polomieto Days or Family Day in the Open (in the Park). Cultural calendar promotion.
6	Human resources development for sustainable tourism	Providing high quality and diversification of the offered tourist services. Achieving visitors' satisfaction. Maintenance of working network among all stakeholders for sustainable tourism development.	Maintaining high level of awareness of all stakeholders, possible through maintenance of joint group for communication on Internet, forums, discussion meetings; periodic purposeful trainings for selected groups of stakeholders on suitable topics, including tourist interpretation; organization of educational trips for experience exchange with other similar regions at least around Bulgaria, possibly in foreign countries; popularization of good practices from other places with similar resources and conditions.
7	Elaboration and implementation of Conception for information system on the territory of the park	Providing safe and suitable access to the territory for all. Raising public awareness on the NP value as well as the conditions for tourism.	Creation and maintenance of specific for the NP style in building and marking visitors' infrastructure. Providing all necessary signs, marking, signboards and boards. Maintenance of info-centres and points. Maintenance of updated data base with touristic information – jointly with other stakeholders from the region. Publishing printed and online information.
8	Elaboration and implementation of Marketing tourist strategy for the NP region		Creation of a special brand of the NP region; work with Bulgarian and foreign tour operators, tourist NGOs and networks and TIC; using all the possibilities of the e-marketing parallel with the traditional forms like printed materials, souvenirs, participation in tourist fairs, etc.

V PROGRAMME

IMPROVING RUSENSKI LOM NP MANAGEMENT POLICY AND SPECIALIZED GUARDING

Context:

Park directorate's activity is the basic guarantee for management plan's application. Its personnel's skills and qualification are of crucial significance for achieving the managerial goals.

Regarding biodiversity conservation and preservation, there is always risk of anthropogenic disasters, for example fires, point pollution in the park and its adjacent territories. Even on a smaller scale, there is risk of natural disasters, too, such as catastrophic hurricanes, pests and diseases, floods, often as result of climate changes.

Element of risk always exist, caused by the recreation activity, which is the main type of tourist activity in the park.

The programme is related to the following goals:

Building wide public support for NP, through providing the functioning of the Consultative council for the park

Systematic training of the park's permanently enrolled personnel and of the volunteers;

Integrating NPD responsibilities to Kalimok Brashlyan PC in the organization's structure;

Development of cross-border cooperation in the border protected territories in Bulgaria and Romania;

Selection of suitable international assessments and memberships in organizations, which to allow internationalization of knowledge and recognition of Nature Park's value.

This programme is directly related to creating conditions for more quality execution of personnel's operative tasks – item 4.4.

Financing is from the park's budget.

№	Project/Activity	Expected results	Methods
NPD's INSTITUTIONAL DEVELOPMENT AND TRAINING			

1	Strategy for human resources development	Recruiting additional personnel for NPD and occupying all positions. Elaboration of plan for training and professional development aiming (a) improving the abilities for contributing to the full achievement of the MP goals; (b) better personnel's work as a team; (c) achieving flexibility and adaptability to the changing situations and circumstances; and (d) better skills for working with other organizations.	Assessment of the NPD personnels' and the main stakeholders' existing capacity to perform activities on ecological sustainable management; Strengthening the institutional capacity of park's administration and other important local individuals', through activities for professional training; and Elaboration of long-term training programme for strengthening local institutional capacity, for the entire management plan's period of operation.
2	Maintenance of the Geographic Information System introduced under the present project	Park's GIS maintenance and update, raising personnel's qualification; Data base update, providing data for comparison and analysis at long-term monitoring projects and scientific researches, providing necessary map materials to officers at their particular assignments execution on site	Park guard's and administration's training
3	Improvement the activity on conservation and guarding the forests and game in the park	Preparation of the personnel of NPD, SHR, meeting complex requirements for activities and knowledge about the Park's biological diversity, maintaining and restoring activities in the forests.	Training and material-technical provision of the officers engaged with guarding and protected area conservation.
4	Waste management	Introduction of certain responsibilities for the individuals occupied with the management and servicing on territories and sites in the park; Creating possibilities for applying sanctions to the polluters of the NP – physical and legal bodies, according to the legislation in power. Prevention and limiting pollution with household waste at tourist sites – routes and paths, places for recreation and other sites for servicing visitors. Cleaning the bed of Rusenski Lom river and the main tributaries from plastic and other waste.	Elaborating questionnaire with the aim researching the forming and the management of waste in the regions of the tourist sites – it is filled in by the individuals managing the sites: - certain suggestions for coping with the problems on waste management could be asked in the questionnaires; - the ones filling in the questionnaires could suggest plan-account for the necessary expenses related to their particular suggestions. Study on the morphological composition and quantity of generated waste for a one-year period in the regions of the tourist sites (possible through the questionnaire) Concluding contracts for transport of the formed waste (where possible – presence of operators on collecting and transporting waste in the settlements, accessibility of sites, etc.), a possible approach is hiring temporary staff or joint activities with volunteers.

5	Coordination of scientific researches and publications	Development of projects on the grounds of the characteristics and assessments in management plan's section 1. They can be developed at ensured financing through the entire period of Plan's action. Depending on the granted funds, they could be implemented by stages for different parts of the park's territory.	They could be supported by NPD through guiding, transport, office, etc., if financing is provided outside the park's budget. NPD ministers the inclusion of all data collected by the Park, in the national data base and ensures free access to them for everybody who is interested.
6	Achieving compactness and coherence on Rusenski Lom NP territory, through extending park's limits	Conservation and restoration of the river ecosystem of the Danube, Rusenski Lom, Cherni Lom, Beli Lom, Mali Lom rivers and their tributaries; Conservation and socialization of historical sites; Preservation and encouraging the development of traditional agricultural and forestry practices, sparing and supporting biological diversity; Sustainable tourism development, etc.;	The nest way for extending the area of Rusenski Lom NP is it to cover river valley natural boundaries including all most significant cultural-historical, landscape and nature-valuable territories, where a key element is development of compensatory mechanisms for the owners of properties that appear to be within the suggestion.
PUBLIC RELATIONS AND ENVIRONMENTAL EDUCATION			
7	Information points	Strengthening the contacts with the local population through building and equipping information points in specially adapted buildings/premises/places at the main entering points to the park. They should be well marked and to offer information for the entire park's territory.	Choosing suitable for that aim premises (stores, chitalishte, city-hall and others (in the villages), stands/shelters or kiosks outside the settlements could be used. The main equipment includes information boards, maps and full set of park's printed materials. *It is desirable information points to be organized at all sites for tourists in the region!*
8	Training of target groups with focus on natural and cultural heritage conservation and preservation	Distribution of information materials about NP conservation significance on European and world scale and for the Management plan's goals, among schools, business associations, civil organizations, governmental structures.	Training by age groups, training of guides, who to support visitors at getting acquainted with the interesting habitats and species in the park.
9	Strategy and plan for work with volunteers	Elaboration of Manual, containing rules for work with volunteers from various groups and the ways for voluntary actions organization	Planning voluntary actions in Rusenski Lom NP – interviews with officers and selection of places – on what principle it is done towards the season and the needs of voluntary labour; Selection and invitation to the people for performing certain work – selection of the target groups of volunteers – type and number, according to specific of the work in the open; Training and instructions of volunteers by the Rusenski Lom NPD officers for the work

			that is expected they to perform on each of the specific type of voluntary actions – how it is made, when; Action organization – selection of a suitable day, elaboration of plan for the day, selection of necessary materials.
10	Organizing workshop on natural conservation to Rusenski Lom NPD	Raising the knowledge of wide circle of people on park's biological diversity and nature conservation problems	Organization the conduction of a training course with practice on site, adapted for wide circle of nature-lovers. The activity requires establishment of long-term partnerships with higher educational institutions, scientific institutions, non-governmental organizations, etc.
ACTION PLAN FORUNFORSEEN SITUATIONS, INCLUDING MEASURES FOR OVERCOMING CLIMATE CHANGE CONSEQUENCES			
11	Defining the risks	Identification and assessment of all potential risks (natural and anthropogenic)	Standard approach application for risks identification and assessment, defining of each existing and potential danger and the possible risk for it to happen. Prioritizing the main risks for which action plans are necessary.
12	Elaboration of plans for unexpected cases	Plan for each of the identified main risks, including minimum action plans at (a) pollution, (b) big flood, (c) fire and (d) visitors safety. Supplying the necessary installations and equipment for the implementation of the Action plan for emergent and unforeseen situations. Provision of necessary training.	Study the planning of unforeseen circumstances in other nature parks. Elaboration of format for such plans and short instructions for their preparation. Establishment of specialized work groups with the participation with the relevant stakeholders. Each work group would be responsible for the elaboration of an action plan, for example in case of pollution, etc. Grouping of the plans with the aim achieving joint approach and distribution of responsibilities. Engaging the relevant stakeholders to get acquainted o the action plans for unforeseen circumstances and their roles / responsibilities.
13	Monitoring and update of the plans for unforeseen cases	Revision of all actual plans for unforeseen cases that contain the necessary information every two years.	Undertaking detailed review in order to find if (a) the risk still exists, (b) the main information is at hand, (c) the data about connection with the personnel is true and (d) the roles and responsibilities are clear for everybody.
14	Monitoring of climate changes	Measures for climate change consequences overcoming.	Researches on the grounds of georeferred color photo images and satellite pictures, samples from permanent sampling areas and transects, permanent points for observation, through which to track the occurred changes in the ecosystems and species populations

4.4. OPERATIVE TASKS

The enlisted operative tasks refer to Rusenski Lom NPD responsibilities on the implementation of the programmes and projects set in the Management Plan – item 4.3. They are annually implemented within the framework of NPD officers' official obligations, in compliance with their job descriptions, described in item 1.5.2. "Personnel – functions".

Provision of the Consultative council /CC/ functioning

CC technical and organizational provision is made by NP Directorate. CC gathers at least twice a year, and the fates and place of meetings are determined after the order of the Rules for its activity. In case of extraordinary situations, CC is summoned by the Director of the park.

Periodic sites' checkups and monitoring

Monitoring programmes application is conducted by all officers, depending on their competences, after preliminary drawn schedules, in compliance with the Programme for Monitoring of Biological and Landscape Diversity in Rusenski Lom NP – item 4.3.

Annual counting is conducted for creating more objective notion about the rare and threatened animal populations, object of poach hunting. Mammals and birds behavior is traced all year through and eventually the beginning of epizooties.

For projects, financed by external donors and sponsors, an expert from NPD is determined, after coordination after the due order, who observes their implementation and effectiveness. After each project's finish of a phase of it, he updates the data in GIS, too. The establishment and maintenance of such data bases could be used by the users as well as by the experts, engaged with the information system extension.

Management structure improvement

4.4.3.1. Geographical information system maintenance

Data base update, provision of data for comparison in long-term monitoring projects and scientific researches, provision of necessary map materials to the officers at the performance of their certain obligations on site.

4.4.3.2. Establishing specialized park guard.

The aim is improvement the guarding of the site and reduction of the breaches within the limits of the park through:

Park's guard training in distinguishing conservation significant species of flora and fauna;

Acquaintance to the regulatory base in power in the field of nature conservation legislation and its enforcing.

Park guard's activities should include the following:

Information for visitors, rendering knowledge on the fauna, flora, nature park's goals and development and CHH sites in the adjacent territories /e.g. through guiding of small visitors groups/;

Control and observing the requirements for behavior in the park, fines for breaching the order;

Control and observation of the activities performed in the park;

Maintenance of information system;

Support in activities related to conservation of habitats and species, processing grounds for scientific observations and monitoring.

4.4.3.3. Legislation and operating regulatory base enforcement

The goal is to conduct regular trainings and periodic reviews, related to observing national legislation as well as the engagements undertaken by Bulgaria regarding international agreements.

It is necessary to maintain contacts with international organizations related to nature protection for participation in conferences and training seminars/work meetings, etc.

4.4.3.4. Fire safety

Operative activities are related to performing the Activity: *Elaboration of Plans for Unforeseen Cases*, item 4.3., V Programme: *Improving the Policy of Management and Specialized Guard of Rusenski Lom NP, Action Plan for Unforeseen Situations, Including Measures for Climate Change Consequences Overcoming.*

Elaborating annual fire safety plans, preliminary information from the officers responsible for the park's guarding is collected. It includes highly inflammable places, state of the existing ones and necessity of equipping new depots, etc.

Volunteers as well as park's users are also engaged for the necessary fire safety activities.

4.4.4. Elaboration of schedules and budget for organizing the assignment of the activities on the work plan.

The schedules for the activities financed by EFA are elaborated according to the Organization rules of Rusenski Lom Nature Park Directorate. In case of provided opportunity for financing from external source for projects corresponding to the regiments, regulations and recommendations determined in Section 3, the schedule is updated and expert from NPD is specified to be responsible for the relevant project.

Periodic checkups under projects from the Work plan are conducted by the NPD experts in compliance with the format described in Section 5.

The schedules include activities related to conduction of competitions, existing tourist infrastructure maintenance, and work with volunteers, waste transport, sites check up, etc.

Planning and reporting the activities at the various levels in the Directorate

They are completed according to *time schedules* and the described in item 1.5.2. Functions as well as to *Report Format,* presented in Section 5. For that goal, each expert makes suggestions according to his competences and responsibilities. The planning for the next year is made to the end of the current year. The report for the previous year is prepared and presented to the end of January the current year.

Information policy and engaging of public

Schedule for the concrete tasks and activities, for which partners and funds for implementation are provided and which correspond to the regiments, regulations and recommendations determined in Section 3 is annually elaborated.

The activity on informing the public is an assignment of the NPD expert, who is responsible for the public relations and is performed mainly on the grounds of:

Ascertaining journalists, who cover the news related to the park in the relevant local and national media;

Giving information to the media, maintenance and regular update of the information on the information boards;

Information materials publishing;

Dissemination of current and well interpreted information about the plan and programmes, which the park administration implements, about the problems in the park management and the ways for their solving;

Maintenance of the park's Internet site for informing the interested parties about the natural wealth of the park, the park administration activity /annual reports and plans including financial ones as well as the documents of big volume – management plan, reports from scientific researches, etc./

Providing the functioning of information and visitors centres

Determining and equipping information points is an important element of NPD's entire activity, which would play bigger and bigger role at defining the strategies for developing tourism in the region of the park. It is coordinated and controlled by a specially appointed for the purpose expert of the park's administration. It is desirable to work in partnership with the municipalities, local NGOs, etc.

Special interest should be paid for getting in line with local, national and international bodies on nature, cultural and historical heritage conservation on the territory of the park.

NPD educational policy

NPD renders information and is necessary controls the educational programmes implementation.

Educational activity is conducted in cooperation with schools, chitalsihta, other parks Directorates, the nature conservation ecological NGOs, BAS /Bulgarian Academy of Science/ institutes.

An important element in NPD educational policy is activities related to major stakeholders, owners and users.

The type of activities and programmes is determined according the Programmes and Projects described in item 4.3.

Search of additional sources of financing

Detailed assignment is elaborated on the grounds of potential sources of financing pointed in the relevant programmes and depending on the priority of a certain project, containing the following:
Description (what, how and where);
Justification of the necessity of its implementation, respectively description of threats (section 2) that impose the project's implementation;
Expected results;
Preliminary expenses calculation.

Maintenance of regular relations with local bodies and organizations

Work in partnership with local governmental and non-governmental organizations offers more experience, knowledge and ideas and is grounds for effective Consultative council functioning as well as of other initiative groups (e.g. Friends of Rusenski Lom People's Park Club, Velo-Ruse, etc.). The goal is adoption of joint action plans and experience exchange, dissemination of periodic printed and/or digital bulletin, etc. It is coordinated by the park's administration.

Main partners are the municipal administrations, nature conservation ecological NGOs, forestry enterprises, representatives of trade oriented and social tourism, the regional bodies of Regional Department for Fire Safety and Population protection, District Directorate of the Ministry of Interior, etc.

4.5. WORK PLAN

Medium-term work plan /for 3 years/

The medium-term work plan /for 3 years/ includes priority projects from item 4.3, which are to be implemented yet from the very beginning of Management Plan's operation. It also includes priority projects, for which NPD should search financing.

PROGRAMME I **LONG-TERM MONITORING OF BIOLOGICAL AND LANDSCAPE DIVERSITY IN RUSENSKI LOM NP**			
Projects/Activities	**Term for implementation**		
A. Species and habitats	**1 year**	**2 years**	**3 years**
Monitoring of herbaceous coenoses status and changes as consequence of shrubbing and ruderalization, through setting permanent monitoring objects	X	X	X
Monitoring of forest coensoses status and changes as consequence of composition and status change, through permanent monitoring objects	X	X	X

Monitoring and control of the distribution of invasive species (ligneous and herbaceous) that present direct and indirect competition of local species;	X	X	X
Monitoring of herbaceous species status, with particular focus on the conservation priority ones.	X	X	X
Monitoring of the day birds of prey and black stork status in the park and the Lomovete (BG0002025) protected zone	X	X	X
Monitoring of indicative forest bird species status with priority the woodpecker birds in the park.	X	X	X
Monitoring of nesting birds and the conservation priority birds that are not included in the previous projects.	X	X	X
Monitoring of vulnerable mammal species status on open herbaceous habitats in the park and the adjacent territories	X	X	X
Monitoring of bats in the park and the adjacent territories	X		X
Monitoring of vulnerable amphibians and reptiles and the potentially invasive species red-eared slider	X		X
Monitoring of the thick shelled river mussel and the Amur bitterling	X		X
B. Abiotic factors – *recommendable projects, for which Rusenski Lom NP administration could cooperate*			
Preparation of Rusenski Lom NP application for UNESCO Geopark.	X		
C. *Socio-economic processes*			
Monitoring of the processes in territories after breaches of natural and anthropogenic character	X	X	X
Periodic monitoring of visitors flow	X	X	X
Monitoring of breaches and conflicts in park's use	X	X	X

PROGRAMME II **FORESTS AND FARMLAND MANAGEMENT WITH FOCUS ON BIOLOGICAL DIVERSITY CONSERVATION IN RUSENSKI LOM NP**			
Projects/Activities	**Term for implementation**		
	1 y	**2 y**	**3 y**
Mapping of habitat 7220* Petrifying springs with tufa formation on Rusenski Lom NP territory.		X	X
Restoration of habitat 91E0* Alluvial forests of *Alnus glutinosa* and *Fraxinus excelsior (Alno-Pandion, Alnion incanae, Salicion albae)* on the spots along the river terraces, occupied by hybrid poplars.			X
Shrubs cleaning in selected polygons of habitat 6250* Pannonic loess steppic	X	X	X

grasslands in the Cherni Lom river valley in the section between the village of Cherven and Smesite countryside.			
Shrubs cleaning and mowing in the polygons of habitat 6510 Lowland hay meadows in the Mali Lom river valley between the villages Nisovo and Svalenik.	X	X	X
Restoration of the protected species *Polygala sibirica* and strengthening species population in Rusenski Lom NP.			X
Restoration of the Egyptian vulture population in Rusenski Lom NP		X	X
Limiting the use of poisons and other pesticides in the park and the adjacent territories	X	X	X
Removal of migration barriers in the rivers	X		
Conservation of European ground squirrel's colonies in the park and the adjacent territories	X	X	X
Biocorridors and buffer zones	X	X	

PROGRAMME III **INCREASING ECONOMIC BENEFITS FOR LOCAL POPULATION THROUGH BALANCED USE OF RESOURCES IN RUSENSKI LOM NP**			
Projects/ Activities	**Term for implementation**		
	1 y	**2 y**	**3 y**
Defining the price of ecosystematic services the park offers	X		
Partnerships in favor of nature and people	X		
Ecological enterprises for natural resources sustainable use		X	
Assessment of the opportunities for development of bio- agriculture and stock-breeding in the region.	X		
Elaboration of integrated plan for riparian vegetation management in regard to flood risk management	X		

PROGRAMME IV **CREATING CONDITIONS FOR DEVELOPMENT OF SUSTAINABLE TOURISM IN RUSENSKI LOM NP AND THE ADJACENT TERRITORIES**			
Projects/ Activities	**Term for implementation**		
	1 y	**2 y**	**3 y**

Elaboration of SDDP	X		
Building and infrastructural provision of interpretative route for disabled people	X		
Maintaining the accessibility of existing routes that cross through the NP	X	X	X
Elaboration and implementation of NP's entire programme for tourist interpretation	X		
Elaboration of calendar of tourist cultural events	X		
Human resources development for sustainable tourism	X	X	X
Elaboration and implementation of Conception for information system on the territory of the park	X	X	X
Elaboration and implementation of Marketing tourist strategy for the NP region	X		

PROGRAMME V **MANAGEMENT POLICY AND GUARDING OF THE RUSENSKI LOM NP IMPROVEMENT**			
Projects/ Activities	**Term for implementation**		
	1 y	**2 y**	**3 y**
NPD's institutional development and training			
Strategy for human resources development	X		
Maintenance of the Geographic Information System introduced under the present project	X	X	X
Improvement the activity on conservation and guarding the forests and game in the park	X		
Waste management	X		
Coordination of scientific researches and publications	X	X	X
Achieving compactness and coherence on Rusenski Lom NP territory, through extending park's limits	X		
Public relations and environmental education			
Information points	X	X	X
Training of target groups with focus on natural and cultural heritage conservation and preservation	X	X	X
Strategy and plan for work with volunteers	X		
Organizing workshop on natural conservation to Rusenski Lom NPD	X		

Action plan for unforeseen situations, including measures for climate change consequences overcoming			
Defining the risks	X		
Elaboration of plans for unexpected cases	X		
Monitoring and update of the plans for unforeseen cases	X	X	X
Monitoring of climate changes	X	X	X

As of the time of the present Plan's elaboration, no large-scale constructions and completion of installations and equipping buildings and Directorate's personnel is planned.

SECTION 5:
GOALS AND TASKS IMPLEMENTATION REVIEW

5.1. GOALS RECONSIDERATION

Institution responsible for the implementation review

According to Article 60 of PAA, public hearing of the Rusenski Lom NP management plan's implementation is organized every four years by the Ministry of environment and water, where representatives of the interested state bodies, district governor's municipality's scientific and non-governmental organizations are invited.

On the grounds of annual reviews, NPD elaborates and presents overall review of Plan's implementation and results of managerial practice for the reported period for public hearing.

Participants in the review

Ruse district administration, the municipalities, mayors of settlements in which land park's territory belongs, RIEW-Ruse, SHR Dunav, educational institutions, representatives of business /tourism, hunting, others related to park's use/, NGOs, experts and consultants from the team elaborated the present MP, NPD partners, consultative council members, owners, users.

Way of public participation in the process of review

According to the legislation in power, plan's implementation public hearing announcement is made in advance, not less than 20 days before the date of the session. The announcement for it are put or sent to all participants described in item 5.1.2.

The general statements, recommendations and notes from the plan's implementation public hearing are shaped in protocol and are reviewed by the consultative council. The approved,

expedient new ideas as well as the revised goals are enclosed to the management plan and are presented for coordination in MOEW.

5.1.4. List of indicators for projects and activities from MP, which should obligatory be subject of assessment of the set goals achievement:

№	Indicators	Indicators for effectiveness
Related to achieving main goal I: ***Biological and landscape diversity conservation and maintenance***		
	Preservation of existing natural habitats and coenoses and especially the ones included in the EU Habitats Directive	Ceased shrubbing and ruderalization of herbaceous coenoses; Limited distribution of invasive species (ligneous and herbaceous) that present direct and indirect competition for the local species; Alluvial flood forests increased area.
	Conservation, maintenance or restoration of indicative species populations	Conduction of periodic monitoring of populations status with the aim to prevent poaching and unregulated resources yield (including hunting), as well as effective control on truffles and protected plant species collection.
	Preservation of landscape typical elements naturalness	Restored meadows and abandoned fields that at the moment of present plan's elaboration are overgrown with shrubs, nettle and other ruderal species; Determined long-term actions directed towards landscape protection and improvement.
Related to achieving main goal II: ***Achieving balance between resources conservation and sustainable use***		
	Conservation, maintenance and/or restoration of forest-ligneous resources	NPD officers' number and expertise are enough for effective management of park resources use.
	Creating conditions for sustainable tourism development	Marked tourist routes and related to marking from the settlements in the adjacent territories. Regulated and safe-proof places for tourism and various types of sports. Shaped entrances to the park determined and equipped places for recreation, observation decks, etc. Ensured parking lots at main Park's entrances. Rusenski Lom NP inclusion in tourist packages, together with the cultural tourism sites in the region. Collected data about the number of visitors, their interests, age structure and impact on the nature in the park.

	Building capacity and improving Rusenski Lom NPD management.	Completed Public-private partnerships; Implemented projects on cross-border cooperation; Attracted number of volunteers; Consultative council's regular conduction of meetings (minimum twice a year), Conducted joint activities with other park administrations. Ensured additional financing for priority projects from the programmes. Annual conduction of training foe performing basic managerial tasks, including nature conservation training, ecological monitoring, work with communities, lands management, habitats restoration and legislation enforcement; Built and maintained network for volunteer's participation from the local population, for rendering assistance in park's management.

5.1.6. Criteria for goals and projects assessment

The indicators pointed in item 5.1.4. are object of permanent reporting and their achievement is object of annual reports on the behalf of park's officers. This way, the assessment of the goals' achievement could be made in the next 5 years.

MP revision could be also assigned by international bodies. It is obligatory conducted in compliance with the described in item 1.3.3. requirements of European directives and international conventions, under which Bulgaria is party.

The following are obligatory analyzed and assessed upon reviewing the achieving of goals and projects:
To what extent the goals and expected results are achieved
Which constraints, basic and specific problems and threats are removed or their effect on goals achieving is reduced
Are the applied methods good for projects and tasks implementation
Is inclusion of new projects and tasks necessary

5.2. TASKS RECONSIDERATION

The regular annual reviews are conducted to the end of the first quarter of each year, for the previous year. The report is prepared by the park's Directorate and includes the responsibilities of individuals from the various levels in the Directorate
The check up and the assessment are made by EFA.
The protocol of the check up is approved by the EFA Director.

Directions for filling in the report form:

Code – corresponds to the number of the project/activity from the work plan in item 4.4. When breaking the activities into smaller ones is necessary, a new index is added upon NPD consideration.
Project/Operative activity Name of the certain task
Participants in the task – the executors and partners are listed
Term – the one determined with the work plan or the updated one, in case missed term is showed in previous report and extension is recommended in column № 9
Implementation assessment – The state of the project at the last presented report is pointed
Implementation assessment – The state of the project at the moment of reporting is pointed

In case the project is not completed, it is proceeded towards filling in the rest of the columns:

% of task implementation – reported by expert on the grounds of volume, time and funds
Problems – arisen problems hindering the task being completed in time and with the due quality are described
Actions for solving the problem – Depending on the problems' nature, consultations with experts, consultative or scientific council and others are held and entered in record. Activities approval is made by the Director.
10. What/whom it depends on – Dependences at various levels aiming problem solving are determined.

Action scheme for following period under review is determined after filling in columns from 7 to 10.

Diagram for current accountability and control of the implementation of the projects, activities and tasks, included in the management plan

The suggested diagram could be used at various levels in the Directorate and for annual MP implementation review by EFA/MOEW.

Report for the period of .....

Person in charge:.....

Code	Project/Operative activity	Participants in the task	Term	State of implementation		% of task implement ation	Problems	Actions for problem solving	What/whom it depends on
				Previous report	At the moment				
1	2	3	4	5	6	7	8	9	10

Criteria for implementation assessment:

	The task is in process and would be finished in time
	The task is completed
	There is danger the task wouldn't be completed in time
	The term is missed

The activities and tasks for the next period are determined on the grounds of the pointed criteria.
The suggested diagram is suitable for reports in digital form and there is no need of using other forms of control.

ABBREVIATIONS USED IN THE TEXT

BAS	Bulgarian Academy of Science
BD	Basin Directorate
BSPB	Bulgarian Society for the Protection of Birds
BHFU	Bulgarian Hunting and Fishing Union
BTU	Bulgarian Tourist Union
BFSp	Bulgarian Federation of Speleology
BRC	Bulgarian Red Cross
CDFSCP	Chief Directorate Fire Safety and Civil Protection
GIS	Geographic Information Systems
FP	Forestry Plan
SHR	State Hunting Reserve
NPD	Nature Park Directorate
EU	European Union
ESE	Ecologically Sustainable Enterprises
AW	Act on Waters
PZ	Protected Zone
BDA	Biological Diversity Act
PAA	Protected Areas Act
HGCA	Hunting and Game Conservation Act
PC	Protected Countryside
FAA	Fisheries and Aquaculture Act
PT	Protected Territory
SDA	Spatial Development Act
EFA	Executive Forestry Agency
EEA	Executive Environment Agency
EAFA	Executive Agency of Fisheries and Aquaculture
CHH	Cultural and Historical Heritage
NECC	Natural Environment Conservation Committee
EC	Efficiency Coefficient
CC	Consultative Council
HFP	Hunting and Fishing Party
FMP	Forest Management Project
MoI	Ministry of Interior
MFFI	Ministry of Forests and Forest Industry
MFEC	Ministry of Forests and Environment Conservation
MH	

MHC	Ministry of Healthcare
MAF	Ministry of Agriculture and Food
ME	Ministry of Economy
MD	Ministry of Defense
MOEW	Ministry of Environment and Water
MV	Motor Vehicle
MRDPW	Ministry of Regional Development and Public Works
NGO	Non-Governmental Organization
NBDMS	National Biodiversity Monitoring System
EFA	Executive Forestry Agency
OPE	Operational Programme Environment
MAC	Maximum Allowable Concentration
NL	Natural Landmark
GD	Government Decree
NP	Nature Park
PPP	Public Private Partnership
MP	Management Plan
EMEPA	Enterprise for Management of Environmental Protection Activities
RLMP	Rusenski Lom Management Plan
RDoI	Regional Directorate of Interior
RIEW	Regional Inspectorate of Environment and Water
RPD	Regional Police Department
RDFSCP	Regional Department for Fire Safety and Civil Protection
RDF	Regional Directorate of Forestry
NPA	Non-Profit Association
SDDP	Specialized Detailed Development Plan
AF	Agricultural Fund
TU	Territorial Unit
DSDP	Detailed Site Development Plan
EUNIS	European Nature Information System
IUCN	International Union for Conservation of Nature
WWF	Worldwide Wildlife Fund

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GLOSSARY OF THE USED TERMS AND CONCEPTS FOR THE NEEDS OF THE PRESENT PLAN

ABIOTIC	That regards inanimate nature
ABIOTIC FACTORS	Inanimate nature conditions that act complex on organisms and have direct significance for their life
AUTOCHTHONOUS	Local
ANTHROPOGENIC	Caused by the human
ANTHROPOGENIC FACTORS	Combination of various human activities that affect wildlife and inanimate nature
AREAL	Region of geographical distribution of live organisms (species, genus, family, etc.) or certain type of biotic coenoses
ASSOCIATION	Combination of heterogeneous populations with name of one or more dominating species, main classification unit of vegetative cover
DISTURBANCE	The result of various human activity upon wild animals, revealing in frightened, agitated or annoyed state and inability to carry out their inherent behavioral actions in the zone occupied by them. It leads to negative for the animal result – from changes in behavior to leaving its natural region of habitation
BIOLOGICAL DIVERSITY	The diversity of wildlife from all sources, including terrestrial, sea and other water ecosystems and ecologic complexes, to which they belong; this includes variety within particular species, among species and ecosystems
BIOME	Region or group of regions (natural – climatic zone) that have characteristic climatic or other physical conditions, necessary for the development of the plants and animals adapted to them and the complexes of these; important system-geographical subdivision within the limits of a certain geographical zone
BIOSPHERE	The combination of all live organisms on Earth that interact with environment continuously and change it through their activity
BIOTIC	That concerns live organisms and wildlife
BIOTIC FACTORS	The interrelations between the organisms of one or different species in their common life
BIOTOPE	See species habitat/territory with similar climatic and soil conditions, settled by certain complex of live organisms – biocenosis
BIOCOENOSES (COMMUNITY)	Biological system of various species populations, which are interrelated and inhabit certain territory with homogenous conditions (biotope)

FAVORABLE STATUS	The favorable status of natural habitats and species: 1. Favorable Species Status is, when: a) the data about species populations dynamics shows that this species is and will continue being viable natural habitat's element; b) the natural region of that species distribution does not decrease and there is in trend for decreasing; c) there is big enough habitat, which ensures this species populations subsisting. 2. Natural Habitat Favorable Status is, when: a) the area of its natural distribution is constant or extends; b) its structure and specific functions ensure its long-term existence; c) the status of its characteristic species is favorable.

SPECIES	Group of populations, where the specimens inside it exchange genetic material freely among them but not with specimens from other species populations
WETLANDS	All territories after the Ramsar Convention
WATER AREAS	Territories from the forest fund, the land fund and the continental shelf overflown with water
WATER BODY	Independent and significant part of the superficial or underground waters
RESTORATION POSSIBILITY	Effort (in the form of time and resources) for species or habitat (eurosite) restoration in a protected zone; through this criterion element's value is defined: the harder the restoration is, the more important relevant element's conservation is
RESTORATION	Re-creation of whole coenoses of organisms after the model of the naturally originating ones
GENETIC RESOURCES	Materials of vegetative, animal of microorganismic origin, containing functional units of heredity and having actual or potential value
FORESTS	1. lands occupied by forest-ligneous vegetation with an area not smaller than one decare, height of trees stand in mature age not less than 5 m, width of plantation, measured between the stems of the end trees not less than 10 m, and heads projection not smaller than 10 per cent of the plantation area; 2. areas that are in process of renewal and haven't yet reached but is expected to reach minimal heads projection 10 per cent and trees height 5 m; 3. areas that in result of anthropogenic activity or of natural causes are temporarily denuded but are subject to renewal; 4. protective forest belts as well as strips of trees with an area bigger than one decare and width over 10 m; 5. plantations in systems and facilities for protection from the harmful waters impact; 6. dwarf pine formations; (according to the Forest Act, Article 2, Paragraph 1.)
FOREST TERRITORIES	1. the forests under Paragraph 1 (see above definition for forests); 2. barrens, non-producing wood land and other territories intended for forestry activity; 3. karst formations situated in the lands under item 1 and 2; 4. protective forest belts with dimensions, not smaller than the determined in Paragraph 1, item 4. (Article 2,(2) of the Forest Act).

WILD NATURE	Section of nature, which is not damaged by human activity, natural landscape with characteristic wild plants and animals and coenoses of them
DOMINANT SPECIES	Species, which predominates in number, exercises significant influence upon environment and energy exchange in the biocenosis

SPECIMEN	Each animal or plant of the species in annexes 3 and 4 of BDA, alive or dead; each easily distinguishable part of the body or each product obtained from the animal or the plant as well as any other item, which, on the grounds of accompanying document, packing, symbol, label or another circumstance, could be identified as part or derivative of animals or plants of the mentioned species
ECOLOGICAL CORRIDOR	Territory that provides the relation of populations, coenoses, ecosystems of habitats and ensures unhindered migration of specimens and genetic material
ECOLOGICAL NICHE	The combination of all environment factors that form the conditions necessary for the existence of a certain species in the biocoenosis.
ECOLOGICAL EQUILIBRIUM	Stat of balance in the ecosystem between the biocoenoses and the biotope at all superorganismic levels
ECOLOGICAL SUCCESSION	Consequent natural change of one ecosystem with another under the influence of factors, which significantly change or destroy the initial one and create conditions for the development of another ecosystem, more adapted to the new conditions
ECOSYSTEM	Dynamic complex of vegetative, animal and microorganismic coenoses and their inanimate environment, which interact as a functional unit
ENDEMITE	Species, which is observed only in a certain geographical region
NATURALNESS	State of unaffected by human activity; lack of culturing or taming (eurosite)
THREATENED SPECIES	Species, which is threatened by extinction in its entire areal or in a great part of it
THREATENED TAXON	Taxon, which number of populations and area of distribution decrease in a way that in certain a foreseeable period it might cease being observed in the particular area (locally threatened), in the country (nationally threatened) or on Earth (globally, world threatened); there are detailed internationally distinguished classifications of the extents of threat and criteria of their determining
PROTECTED TAXON	Taxon put under regime of protection by a law or another regulative document, for which all actions that might exercise damage to specimens, nests or lairs, the places they inhabit is forbidden, including disturbance, taking found dead specimens, transportation, etc.
ZONING	Dividing the protected territory into parts, called zones, which are used for the management purposes, usually temporarily (their existence duration could be shorter than the period of the plan's operation). The prescriptions for management in each zone are approximately the same and differ by type and intensity from the ones in the other zones of the plan. They might be related to legally or politically determined territories inside the PT (eurosite)
COMPETITION	Interrelation between the populations, arising when they use the same nutrient resource

CONSERVATION SIGNIFICANT	Species or other taxon, coenoses, ecosystem, natural habitat, recognized in scientific publication about threatened to a certain extent of possessing significant ecologic role (e.g. included in national or international red data books or lists, in annexes to conventions or directives and other documents of that type)
LANDSCAPE	Differentiated territory the occurrence of some of whose elements has originated as result of actions and interactions between natural and/or human factors
LOCAL SPECIES	Species, which are naturally distributed in the region of the park, of European origin

SPECIES HABITAT	The region defined by the specific abiotic and biotic factors, in which this species is in some of the stages of its life cycle
MONITORING	Continuous in the course of time, tracing of the same type, of the status of a certain indicator, factor, structure, etc. aiming assessment, prognostics, control and influence for their optimization; observation system/ systematic collection of data or information in the course of time, while using the same methodology aiming maintenance of the extent of correspondence to certain standard or major line, predetermined by the review.
FLOOD	Temporary covering with water of a land section, which is not usually covered with water, including by rivers, mountain brooks
PLANTATION	Forest of forest section, occupied (covered) by forest-ligneous species or shrubs.
INSTABILITY	Extent of changeability of PT and the separate elements (EUROSITE)
LIMITER (LIMITING FACTOR)	Activity, factor or act, which could hamper the managing organization to achieve its goals (EUROSITE)
WATER RESOURCES CONSERVATION	A system of legal, organizational, economic, technical and meliorative measures, directed to prevention and removal of consequence of pollution and water exhaustion.
OPE	Operational Programme Environment
ORGANISM	Each living body, which is composed by acting in coordination organs and which exists independently. Organism is a specimen in a population of a certain species
ASSESSMENT	Evaluation of the obtained information leading to defining the significance of the particular abiotic, biotic and socio-economic factors
SUB-SPECIES	Subdivision of species, which consists of a group of populations that, in the process of the evolution, have acquired steady features and peculiarities, isolating barriers of space or time type and other features by which they differ insignificantly from the other groups of the same species, but with which they can produce fertile offspring in the nature
POPULATION	Group of specimens from a certain species, which inhabit particular space, which interbreed, have common morphological, physiological and behavioral characteristics and are related functionally with each other/ group of specimens with common origin, which exchange genetic material in between them much more than with specimens from another similar group
TERRITORY'S POTENTIAL	The possibilities of territory in ecological, social, cultural or economic aspect (EUROSITE)

POTENTIALLY THREATENED SPECIES	Species, for which its coming entering the category of threatened species is probable, if the factors that caused the threat continue existing
REVIEW	Activity through which series of quantity observations are made such as distribution, quality, thickness and frequency of natural characteristics, in order to assess the PT (EUROSITE)
PRIORITY SPECIES	Species, which need special conservation measures , because of their natural significance, or are determined being so by virtue of international agreements
NATURAL HABITAT	Natural or close to natural terrestrial of equatorial areas, characterized by specific geographical, abiotic and biotic characteristics; the types of ecosystems distinguished with certain homogeneity, characteristic appearance and relatively uniform conditions
PROGRAMME	Group of projects, by which certain operative goal/ goals is performed within certain period of time
PROJECT	Separate activity, fixed in time, defined by type and value, sometimes it called assignment (EUROSITE)
WORK PLAN	Action plan for specific period of time (usually one year and not more than five)
DIVERSITY	Extent of diversity of habitats and habitat structures, biological groups and species on regional and national scale (EUROSITE)
ANIMAL SPECIES NUMBER REGULATION	Purposeful change in the number of their specimens (increasing or decreasing)
RARE SPECIES	Whose populations are little and if not directly, then indirectly or potentially, they are threatened.
CONSERVATION REGIMENTS	The combination of allowed and forbidden activities for certain territory, provided by the legislation, and the goals, functions and purpose of the territory in question
RELICT	Taxon, which has survived until today, from previous geological epochs
RELICT SPECIES	Species that was widely distributed in past geological epochs, and today it occupies not big territories
FLOOD RISK	The combination of flood probability and the probable unfavorable consequences for human health, environment, cultural heritage, technical infrastructure and economic activity, related to floods
RARITY	Small number of population and species limited territorial distribution
RARE TAXON	Taxon, which population number is taken to minimum or has highly scattered distribution; one of the categories of threatened taxons, recently avoided because of difficulties in its ultimate determining and of overlapping with the others
STABILITY	Extent of steadiness of PT and of its separate elements towards natural processes and human intervention (EUROSITE)
STENOECIC ORGANISM	Which lives at constant, unchanging values of environment factors

SUBDOMINANT	Vegetative species, which takes major part in the composition and building of a certain layer of a particular phytocoenoses, but is of smaller abundance than the dominating species in the phytocenosis
COENOSIS (BIOCENOSIS)	System of living together, within the limits of a certain space, organisms, represented by their specimens and populations; it could be observed as composed by vegetative (phytocenosis) and animal (zoocenosis) coenoses
TAXON	Name of the classification units, resembling certain organism place in the system (main taxons - form/variety, subspecies, species, genus, family, order, class, type, kingdom)
TROPHIC BASE	Nutrition base
SUSTAINABLE MANAGEMENT	Management of the use, development and conservation of natural resources in ways and to an extent that give opportunity to present generations and communities to ensure social, economic and cultural benefits without: a) reducing the possibility of future generations and communities to satisfy social, economic and cultural needs; b) damaging the ecosystems ability to exercise their soil-protective and climate-regulating functions; c) significantly reducing biological diversity.
VULNERABILITY	Extent of PT and its elements sensibility towards certain processes and phenomena (EUROSITE)

PHYTOCENOSIS	(vegetative coenosis) each concrete vegetative grouping, on a certain space, homogenous in composition, structure and interactions among the composing plants and between them and the environment. Phytocenosis is composing part of biocenosis and ecosystem
FAUNA	All animals on a certain area
FLORA	All plants on a certain area
HABITAT	See Natural habitat
HABITUS	Outer appearance, combination of signs characterizing the type of structure or build of a single specimen
PREDATORY	Interaction among populations, where one species lives at the expense of another one
FOOD CHAIN	Series of species of organisms, in which each organism is food for the next one in the chain
POPULATION NUMBER	The number of specimens in the population on a certain territory or in a certain volume

This is a true and accurate translation of the original document. Date: 06 January 2021
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