The Minister
of the Environment and Waters

D. Arsenova

Rila Monastery Nature Park Management Plan 2004-2013

DRAFT

Adopted by Decision # xxx of the Council of Ministers dated xx.xx, 2004

Presented by ARD/BCEGP in fulfillment of Terms of Reference commissioned by the Ministry of the Environment and Waters, # xx-xx-xxxx, March 2001

The drafting and publication of this Management Plan was made possible through the generous support of the Environment, Energy and Social Transition Department of the Europe and Eurasia Desk of the United States Agency for International Development, pursuant to Contract # LAG-I-00-99-00013-00. All opinions expressed herein are solely at the authors' discretion and do not necessarily reflect the position of the United States Agency for International Development.

February, 2004

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The Management Plan is based on studies and reports of **experts** in various fields; special acknowledgment is due to the following contributors: Dr. Dimitar Peev, D.Sc.; Eng. Ventsislav Velichkov; Mr. Zheko Spiridonov; Dr, Hristo Delchev; Prof. Dr. Boyan Rosnev, Ph.D.; Dr. Petya Radovanova; Dr. Maria Samardjieva; Maurice Waterhouse, Mrs. Snezhana Kostadinova; Dr. Petar Yankov D.Sc., Dr. Veska Russakova D.Sc., Dr. Melania Gyosheva D.Sc.; Dr. Lyuba Evstatieva; Dr. Anna Ganeva; Ms. Natalia Valyovska, pharmacist; Ms. Sonya Tzoneva, biology specialist; Mr. Krassimor Bozhkov; Mr. Angel Lukanov, senior research associate; Svetoslav Petrosenko; Dr. Ventsisvlav Delov; Mr. Nikolai Simov, research assistant; Mr. Pavel Stoev, research assistant; Mr. Tihomir Stefanov, biology expert; Ms. Vera Antonova, biology specialist; Ms. Antoaneta Georgieva; Dr. Theodora Ivanova; Ms. Gergana Miladinova; Mr. Dimitar Sichanov.

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List of Abbreviations and Acronyms

ARD, Inc.	Associates in Rural Development, Inc.
BAS	Bulgarian Academy of Sciences
BCEGP	Biodiversity Conservation and Economic Growth Project
BirdLife International	An international environmental organization, a federation of national environmental organizations from over 100 countries around the world, united by common approaches, environmental protection programs, and mutual, including financial, assistance. Established in 1927, BirdLife has some 2 million members worldwide; the Bulgarian Society for the Protection of Birds is the Bulgarian representative. Its principal goal is the protection of nature through conservation of rare species, sites of natural value (land and aquatic) and habitats, the sustainable development of natural resources, environmental training and education
BOC	Bulgarian Orthodox Church
BRC	Bulgarian Red Cross
BSPB	Bulgarian Society for the Protection of Birds
BSS	Bulgarian State Standard
BTC	Bulgarian Telecommunications Corporation
BTU	Bulgarian Tourist Union
CCE	Child-care establishment
CHH	Cultural and Historical Heritage
CITES	Convention on International Trade in Endangered Species
CLGE	Central Laboratory of General Ecology
CM	Council of Ministers
"CORINE biotopes"	An all-European program for the gathering, coordination and provision of continuous information on the state and condition of the environment and natural resources in Europe; active in Bulgaria since 1994; places of conservation significance have been identified at 141 sites
CP	Checkpoints
CPE	Committee for the Protection of the Environment under the Council of Ministers (the predecessor of the Ministry of the Environment and Waters)
CS	Comprehensive school
EAFAC	Executive Agency for Fisheries and Aquatic Cultures
ECCF	European Committee for the Conservation of Fungi
EU	European Union

EUROSITE	Association of organizations engaged in the husbanding and management of the European natural heritage in 10 European nations
FA	Forestry Act
FACA	Fisheries and Aquatic Cultures Act
FB	Faculty of Biology (of the St. Clement Ohridsky University of Sofia)
FI	Forest Inventory
FPCS	Foundation for the Promotion of the Civil Society
FU	Forestry University
GEF	Global Environment Facility; please note that the acronym GEF is also used in Bulgaria to denote the GEF/USAID Project for Biodiversity Conservation.
GIS	Geographic Information Systems
GPS	Global Positioning System
HPS	Hydropower Station
HW	Household waters
IHL	Institute of Higher Learning
IUCN	International Union for Conservation of Nature – World Conservation Union, an international environmental organization comprising state and public (non-governmental) organizations as well as international organizations. Established in 1948, with members from more than 100 nations; Bulgaria is represented to IUCN by the Ministry of the Environment and Waters and the Nature Fund. The main goal of IUCN is to organize the conservation of nature (rare species, protected areas) and the sustainable use of forest resources; IUCN is the organization that has developed the internationally recognized categories of protected areas applied throughout the world.
MAF	Ministry of Agriculture and Forests
MAFS	Municipal Agriculture and Forestry Service
MCD	Ministerial Council Decree
MCMA	Monuments of Culture and Museums Act
MD	Ministry of Defense
MI	Ministry of the Interior
MOE	Ministry of the Environment (in the recent past)
MOEW	Ministry of the Environment and Waters
MP	Management Plan
MRDPW	Ministry of Regional Development and Public Works
MRS	Mountain Rescue Service
MS	Middle school

MV	Motor Vehicles
NATURA 2000	European ecological network (covering EU nations as well as countries in Central and Eastern Europe in a process of accession) comprised of territories under protection according to the provisions of the Directive on Birds and the Directive on Habitats. In Bulgaria such territories under protection are known as 'protected areas' pursuant to the Biodiversity Act, and are expected to be designated in their entirety by 2006 as part of the National Ecological Network.
NEC	National Electricity Corporation
NFB	National Forestry Board (under MAF)
NFCES	National Fire Control and Emergency Service
NGO	Non-Governmental Organization
NIMC	National Institute for Monuments of Culture
NPED	National Plan for Economic Development
OUALA	Ownership and Use of Agricultural Lands Act
PAA	Protected Areas Act (1998, promulgated in SG # 133/11.11.1998; amended SG # 98/12.11.1999; amended and supplemented SG # 28/04.04.2000; amended SG # 48/13.06.2000
PSI	Public Sanitation Inspectorate
RB	Red Book
REA	Rapid Ecological Assessment
RFB	Regional Forestry Board
RIOEW	Regional Inspectorate for the Environment and Waters (under MOEW)
RLA	Rapid landscape assessment
RMNP	Rila Monastery Nature Park
RNA	Regular National Assembly
RR	Railroad
RRA	Regional Road Administration
SF	State Forest Enterprise (in the past)
SFE	State Forest Enterprise
SG	State Gazette
SHW	Solid Household Waste
SPEC	Species of European Conservation Concern, the internationally recognized categorization system of BirdLife International of the degree of endangerment of bird species on a European scale
SPEC1	A species of bird endangered on a world scale, i.e. a species threatened with global extinction.

SPEC2	Species whose worldwide population is concentrated in Europe and has an unfavorable conservation status.
SPEC3	Species whose worldwide population is not concentrated in Europe but whose conservation status in Europe is unfavorable.
SPEC4	Species whose worldwide population is concentrated in Europe and has a favorable conservation status.
UCATTU	Unified Classification of Administrative-territorial and Territorial Units
UNESCO	United Nations Educational, Scientific and Cultural Organization, a structure of the United nations encouraging assistance among nations in the respective fields.
UPDLAB	Union of Park Designers and Landscape Architects in Bulgaria
US	University of Sofia
USAID	United States Agency for International Development

Glossary of professional terms and explanations

Abiotic	referring to non-living natural objects (whether factors: temperature, light, humidity, or components: water, air, rocks, etc.)
acidophilic	species or community encountered solely or predominantly in acid waters or soils
acidophilic mushroom	mushroom dependent on acid soils
anthropogenic pressure	negative changes in the environment caused by human impact
anthropophytes	plants whose spread is related to human activity, i.e. their continuous presence in the vegetation cover is due to intentional or unintentional human impact. Those include weeds, ruderal and cultivated plants
association	agglomeration of populations of different geni bearing the name of one or several dominant species; the basic classification unit of the vegetation cover
autochtonous	indigenous, local in origin
beta-mesosaprobic conditions	incompletely mineralized organic substances formed as a result of the biological self-purification of waters; i.e. waters with a low level of organic pollution
biological exchange zone	territory providing possibilities for genetic communication between both plant and animal populations and communities
biological monitoring	monitoring of the reaction of selected organisms (plants and animals – i.e. biomonitors)
biological reserves	the total biomass of all specimens of a given plant species in all areas of habitation, whether suitable or unsuitable for harvesting for reasons of inaccessibility or low yield
biological stocks	the total amount of raw phyto-mass made up of all, whether usable or unusable, specimens of any given plant species on all locations, whether suitable or unsuitable for harvesting, of low yield, limited access or insignificant surface area
biome	area or group of areas (natural/climatic zone) sharing characteristic climatic or other physical conditions necessary for the development of plants and animals adapted to them or complexes thereof; a major systemic or geographic unit within a given geographic zone
biotic	referring to living organisms and wildlife
bryophytes	generic name for all species of the order *Bryophyta*,

	including sporangial mosses, liverworts, leaf, and sphagnous mosses
buffer zone	a territory having a restricted use regime located around some protected areas (reserves, maintained reserves, wetlands) designated for the purpose of mitigating the negative impacts on the latter; the regime of management and protection is less strict that that of the protected area around which the buffer zone is located
buffer zone	territory designated around a protected area for the purpose of mitigating negative impacts upon the latter; defined pursuant to the applicable legislation and legally defined procedure and governed by a special conservation and management regime, less strict than that of the protected area around which it is situated
calamity	large-scale invasion of pests as related to ensuing significant damages on forests or crops
carbotroph	fungus growing on dead embers in abandoned fireplaces
clear cutting	cutting down of all timber vegetation within an area of .1 hectare, or the merging together of plots where such cutting is done whose total area exceeds .1 hectare
climax	the last, relatively stable stage in the natural development of a plant community and the ecosystem as a whole, which most fully corresponds to the ecological conditions in a given locality for the respective period; stable state of the vegetation following a succession
clone-population	population of a species performing vegetative reproduction
community	group of interrelated organisms (represented by specimens or populations) in co-habitation within a given space; when composed of plants, this is called a phytocenosis; when of animals, zoocenosis
community	group of organisms that are mutually interrelated and in co-habitation within a given space (represented by their specimens or populations); may be regarded as composed of plants (a phytocenosis) or animals (zoocenosis)
comprehensive ecological monitoring	monitoring of the state of non-living (abiotic) factors and components of the environment (e.g. for advanced accumulation of heavy metals) alongside biological monitoring (of the state and condition of factors and elements of wildlife)
conservation regime	the combination of allowed and prohibited activities for a given area as defined by law and the goals and objectives, the functions and purpose of that area
conservation significance, of	species or taxon, community, ecosystem, or natural habitat recognized in a scientific source as endangered to a certain

	extent or playing a substantial ecological function (e.g. included in national or international Red Books or lists, in appendices to Conventions, Directives or other such instruments)
corpotroph	fungus feeding on peat substrate
culture (forest)	forest or section thereof created artificially, by afforestation
detailed zone management plan	an official State document which determines the specific purpose and the method of management of landed property. The scope, content, procedure of development and approval of the plan are determined pursuant to the Territorial Planning and Management Act
disturbance	the impact of different human activities on wild animals amounting to a state of agitation, fear, or irritation and the resultant inability to perform natural behavioral activities in their zone of habitation, and leading to negative results for the animal: from behavioral changes to quitting its natural range
dominant species	species represented by the largest number of specimens, having the largest total biomass within a community which bears its name
ecological corridor	territory providing a natural link between populations, communities, ecosystems and habitats with specific biotic and/or abiotic attributes, and ensuring the natural migration of specimens, species, the free flow and exchange of genes
ecological niche	part of a habitat characterized by a specific micro-combination of ecological factors; the location of a given species within the trophic chain
ecological-trophic group of fungi	grouping of fungi by their way of feeding and the food substrate (host)
ecosystem	unit of nature constituting a unified natural complex and organic combination of abiotic environment (the bedrock, water and air) with the living organisms inhabiting it; an open system, relatively stable in time and space, functioning as an integral organism and affecting the natural cycle of substance and energy within the area it occupies
edifier species	species determining the living conditions within a community
endangered taxon	taxon whose population size and areas of habitation diminish in a way whereby over a certain period in the foreseeable future it may become extinct within a given area (locally endangered), country (nationally endangered), or worldwide (globally endangered); there exist detailed, internationally recognized classifications of the degrees of

	endangerment and the criteria to identify these
endemic	species, subspecies or other taxon of microorganism, fungus, plant or animal that can only be encountered within a given territory (e.g. Europe, the Balkans, Bulgaria, or smaller area or locality)
epizooty	mass spread of an infectious disease among animals
eutrophic	(of water basin) rich in nutrients (nitrates, phosphates, etc.) for photoautotrophy
fallout, annual	dead vegetation parts accumulating on the ground on an annual basis
foliaceous mosses	mosses of class *Bryopsida*
forest floor cover	compacted layer of dead vegetation parts (leaves, fruits, blossoms, bark, trigs etc.) accumulated over many years on the forest floor
general zone management plan	an official State document which determines the dominant purpose and methods of management of the separate structural parts of the territories. The scope, content, procedure of development and approval of the plan are determined pursuant to the Territorial Planning and Management Act
guide	person specially trained and authorized by the Nature Park Directorate to accompany, direct and guide visitors in the Park territory
habitat	Natural habitats - means terrestrial or aquatic areas distinguished by geographic, abiotic and biotic features, whether entirely natural or semi-natural (According Habitat Directive 92/43/EEC Article 1 (b)). Types of ecosystems possessing homogeneity, characteristic overlook and more or less equal ecological conditions.
heliophilic/heliophile	light-loving
hydrophilic/hydrophile	water-loving
hygrophilic/hygrophile	moisture-loving
important bird site	site, whether land or aquatic, of conservation significance, defined using internationally recognized numerical criteria of BirdLife International, and included in the world network of such sites; these sites are recognized as elements of the European Ecological Network pursuant to the Directive on Birds and the Directive on Habitats; there are 50 IBSs in Bulgaria, which are subject to monitoring by the Bulgarian Society for the Protection of Birds
important bird site	site, whether land or aquatic, defined using internationally recognized quantitative criteria of BirdLife International,

	and included in the world network of such sites; these sites are recognized as elements of the European Ecological Network pursuant to the Directive on Birds and the Directive on Habitats; there are some 50 IBSs in Bulgaria, identified and monitored by the Bulgarian Society for the Protection of Birds
industrial activities	drainage and reclamation of wetlands; mining; exploration and mining of oil, natural gas or peat; mining of ores, incl. uranium; mining of non-metallic mineral deposits; mining and processing of raw materials for the construction industry, incl. gravel; mining of energy resources; power generation, transfer and supply; transfer and supply of gases, liquids etc. using pipelines; metallurgy; manufacturing of bricks, tiles and other items from baked clay; production of quicklime and gypsum; above-ground storage of oil, petroleum products and chemicals; radio and TV broadcasts; ski-runs, lifts, drag-lifts and facilities
integrity	territorial and functional wholeness of (a) given territory(ies)
interpretation	introduction into, providing factual information on, emphasizing characteristic features of, any site or object within the Park territory
interpretative activities	activities aimed at presenting the values of the Park, the issues and problems facing its management, and its importance to the individual. These include a combination of messages communicated through lectures, printed, visual and other materials, personal examples and human interaction illustrating the Park significance. The messages are delivered mostly within the protected area and, in rarer cases, outside of it. The term applies most often to activities related to visitor service
landscape	visually perceived by man area or zone, the appearance and character of which are interaction of natural and cultural (anthropogenic) factors
landscape conservation	activities for conservation and maintenance of the characteristic features and specifics of concrete landscape, which value is assessed in terms of its natural and cultural significance, depending on the natural configuration and /or human impact

landscape management	activities for maintaining the landscape, directed to sustainable development, aiming to manage and harmonize the changes, provoked by socio-economic and natural processes
landscape politics	formulated by competent public authorities general principles, strategies and trends, allowing specific measures to be taken for landscape protection, management and planning.
landscape planning	activities envisaged for a long period, which are approved by the competent authorities and directed to assessment, restoration and creation of landscapes
littoral	zone in lakes (seas) near the shore where algae and other plants grow
liver mosses	mosses of class *Marchantiopsida*
local gatherers (of medicinal plants, wild-growing fruits and mushrooms)	physical persons permanently residing in communities surrounding the Park
management of protected areas	unified, scientifically determined complex of measures aimed at attaining the law-defined goals, functions and objectives of a protected territory (incl. security, control, direct conservation activities in the field, regulated uses, environmental education, public awareness, etc.). This is done in full respect for the legal rights and responsibilities of the owners of the territory and the respective stakeholder institutions.
mesophile	organism preferring conditions of medium (moderate) soil moisture and air humidity
mesoxerophyte	species inhabiting semi-arid areas
monitoring	continuous (over time) uniform observation of the state and condition of a component, indicator, factor, structure etc., for the purposes of assessment, prognostication, control and action towards their improvement; a monitoring system
multi-functional zone	the territory outside the Tourism, Infrastructural and Reserves Zones, used for interpretation, education, specialized sports, etc.
poaching	violation of the applicable legislative provisions regarding the conservation and use of natural resources: forests, wild animals, fish, medicinal plants, etc. Poaching constitutes a criminal offense under the Criminal Procedure Code except in insignificant cases, which are considered misdemeanors and are subject to administrative penalty.
sigmatic school, a.k.a. the	phyto-cenological school founded in the 1920s, applying

Brown-Blanque School	the floristic method of vegetation classification which takes into account the entire floristic composition of plant communities
succession	Natural process of change of the structure and content of the communities due to changes of the ecological conditions. The factors` changes lead to the development of new communities better adapted to the new environment.
syntaxon	classification unit in phytocenology (the science dealing with plant communities, or phytocenoses)
taxon	the common name or categories reflecting the name of any given organism within a classification system (ranking, in ascending order, as variety, subspecies, species, genus, family, order, class, type, kingdom)
technical infrastructure	system of buildings, facilities and linear engineering networks of transportation, water supply and sewage systems, power and gas supply, telecommunications, irrigation, waste treatment and earthworks
territorial development schemes	official State documents issued to provide for the development of territories in such a way as to correspond to the socioeconomic development while guaranteeing the protection of the environment. The scope, content, procedure of development and approval of these plans are determined pursuant to the Territorial Planning and Management Act
transect	route oriented according to natural formations or ecological zones in such a way as to cover the zones representative of biological diversity
usable stocks	The amount of raw phyto-mass made up of all usable specimens of any given plant species in all locations suitable for harvesting. Occasionally this term is solely used to denote the phyto-mass made up of specimens of commercial value within a location suitable for harvesting.
vulnerable taxon	category of endangered taxon referring to taxa whose ecological and biological peculiarities cause a sharp deterioration of the state and condition of populations even as a result of one-time or insignificant changes in the environment or of human impacts
xerophilic, xerophyte	dry-loving; adapted to arid soil conditions and low air humidity

Preamble

The Rila Monastery Nature Park Management Plan regulates and guides the type, location, timeframe, implementation method, and sequence of activities, which should and can be performed within the entire Park territory over a ten-year period. Developed according to the requirements of the Protected Areas Act, it addresses each of the content areas prescribed by a regulation under the Act. The Plan complies with the Bulgarian legislation, and the international standards and requirements for biological diversity conservation and protected area management. An extraordinary amount of information on nature and on the area's cultural and historic heritage was gathered and used in its preparation. Never before has such extensive amount of data about this area been collected and analyzed in such a complex and comprehensive manner.

The Protected Areas Act defines the management goals for Bulgaria's nature parks, which are embedded in their respective management plans. These goals include maintaining the diversity of ecosystems, and preserving their biological diversity; providing opportunities for development of scientific, educational, and recreation activities; and assuring the sustainable use of renewable natural resources while preserving the traditional sources of livelihood and enhancing conditions for tourism development.

Rila Monastery Nature Park is characterized by specific features that distinguish it from all other protected areas in the country. This uniqueness impacts on the Park's management goals, the philosophy and principles of the Management Plan, and also influences the methods and organization of its implementation. Noteworthy among these attributes is the fact that the Park's boundaries encompass some of the most valuable natural assets in the country, many of which are also significant for the continent and for the world. The Rila National Park surrounds it from the north, east, and south, and together with the National Park, it forms the only natural complex of two large protected areas combined into an integral entity in Bulgaria. According to the Protected Areas Act, the National Park regimes shall be applied to the Rila Monastery Nature Park.

The Park is the second most visited protected area in the country with more than half a million visitors annually. To the people of Bulgaria, Rila Monastery is a cherished site for prayer and worship. It is also a site on the UNESCO World Cultural and Natural Heritage Convention list. Few realize, however, that seventy-seven percent of the park territory is owned by a single private owner – the Bulgarian Orthodox Church, the country's largest religious institution.

The Rila Monastery Nature Park Management Plan is a modern and innovative contribution to the conservation and management of protected areas in Bulgaria and in Europe. The exceptional significance of the preserved natural and spiritual assets attracted attention and support by the US Government. Through the United States Agency for International Development, it rendered financial and technical assistance for the development of The Rila Monastery Nature Park Management Plan. Thus the Park is among the first nature parks in the country to obtain its plan. Owing to this

assistance the latest concepts were integrated into the plan, using the best Bulgarian experts, and representatives from all institutions and organizations with mandates and responsibilities within the area were involved in its development. The Rila Monastery Nature Park Management Plan marks an important achievement for Bulgarian nature protection, and it is a valuable investment in the development of the region and the country.

Its adoption is not the only prerequisite needed for its successful implementation. The Government of Bulgaria will need to fund activities such as guarding the Park, promoting biological diversity conservation, ensuring visitor safety, and raising public awareness. The State will have to continue to carry out its functions and to monitor law enforcement. The programs and projects for research and monitoring, for developing the Park as an educational center, for promoting tourism development and other undertakings that could enhance the role and prominence of the Park are at risk of remaining solely on the paper pages of this management plan. Only if consensus is reached and only if an appropriate and agreed upon format for cooperation among all parties concerned about the future of the Park is found will the implementation of this Management Plan be successful. It will also be important to recognize which Management Plan recommendations are compulsory, as per the law, and to differentiate them from the recommendations that depend significantly upon the will of the landowners and on the good cooperation between them and the state institutions mandated to operate with the Park boundaries.

The Nature Park is managed in accordance with the regimes and norms, described in the Zoning Section of the Management Plan. These are compulsory and are defined based upon the requirements of the current legislation. These set limits and restrictions, for example, on the size and type of construction, the quantities, type, and location of natural resources allowed for collection, the type of tourism services, the capacity of accommodation facilities, parking lots, etc. The Management Plan sets out only the admissible parameters according to the park goals and regimes with a view of ensuring the best future for the area. The maximum admissible norms have been determined, but there are no requirements set out for minimum norms. For example, a visitor center, information kiosk, and two bivouacs can be built within the Park boundary, and their locations have also been identified. This does not mean that their construction is compulsory, or that Park landowners or any state institution is obliged to fund their establishment. The plans can only be realized if conditions are appropriate, there is mutual understanding and cooperation among affected parties, and if the funds are actually secured for their construction.

Cooperation and collaboration are the real catalysts for achieving the objectives stated in this Management Plan. The concrete programs and projects defined and described in this Plan are not compulsory, although their implementation is important for the achievement of certain goals. The projects developed in this document are based on the researched needs, threats, and priorities for the Park area over the next ten years. Their implementation depends upon the cooperation between the Rila Monastery Nature Park Directorate, the state and local authorities, the landowners, and collaboration with scientific, educational, and public institutions.

The Management Plan describes tourism as the most significant potential source of income and economic growth opportunities in the region. Successful and sustainable tourism development can only be done in a manner consistent with the conservation of the Park's biological diversity. The Management Plan focuses simultaneously upon the spiritual role of the Monastery, reviving its role as a cultural and educational center, and on the development of ecotourism, respecting the natural environment and acting responsible for its preservation. In the Plan, this is achieved through the designation of two zones – the Holy Sites and Cultural Heritage Zone, and the Tourism Zone, each with specific compulsory regimes and norms. The Holy Sites Zone aims to limit and remove the activities that do not comply with the Orthodox canons and traditions of the holy places. These activities are transferred to the receiving section of the Park, or the Tourism Zone. For example, most of the tourism services such as information, accommodation, catering, parking, and souvenir shops are developed in areas away from the Monastery; they can be organized in compliance with the described regimes and norms. It is also envisaged that tourist behavior rules will be introduced. The access system for travel to the separate parts of the Park, and the transportation and parking rules outlined in the Management Plan also contribute to the restoration of the sacred atmosphere around the Monastery, to other religious sites, and to the conservation of biological diversity.

Funding for the implementation of the programs and projects described in the Management Plan can be secured from various sources. The presence of the Management Plan is often a precondition for attracting investments and it can be used as a tool for raising funds locally and internationally. Some of the activities will be funded directly by the state budget. Other projects and programs could benefit from applications for conservation funds from Bulgarian and international organizations such as the National Trust EcoFund, funds from the European Union, UNESCO, IUCN, etc. Still other projects could be funded by Park landowners or by investors acting on their behalf and in their interest. Activities related to biological diversity conservation, Park management and control could also be funded through donations. Finally, the implementation of activities within the Park will also rely upon the support of the local people.

Changes to the zones, regimes, and norms prescribed by the protected area management plans can be done according to the regulations of the Protected Areas Act. Every four years from the date the Management Plan was adopted, the Ministry of Environment and Water organizes a public hearing to review its implementation with the general public. The Management Plan's implementation is also monitored and controlled through the annual reports prepared by the Park Directorate.

The presence of the Nature Park and the Management Plan reinforces the exceptional spiritual role of the Rila Monastery. Through them, preservation of the harmony between the Monastery and nature can be guaranteed in the manner that has been maintained for centuries. The Plan assumes that all religious activities will continue to be performed as per their current practice while securing the conservation of the natural environment of the Rila holy cloister. These activities are the exclusive responsibility and right of the Holy Synod of the Bulgarian Orthodox Church and the Rila Monastery. The activities related to the preservation and maintenance of the Rila Monastery will continue as the responsibility of both the Bulgarian Orthodox Church

and the state institutions, namely the Ministry of Culture and the National Institute of Monuments of Culture.

The overall implementation of the Management Plan will require the collaborative and coordinated effort of the interested parties – the Bulgarian Orthodox Church as the largest landowner in the Park, and the state institutions responsible for the conservation and management of the protected areas and the national cultural and historic assets. The goal is to ensure harmony between the public and private interests, and to ensure the optimum correlation between the conservation of the Park's natural and cultural assets, the use of its resources, and capitalizing on the opportunities that the Park provides. Only consensus among all interested parties can lead to the successful implementation of this Management Plan.

Summary

The Management Plan for Rila Monastery Nature Park consists of two main sections:
1. Description;
2. Prescription.

Section 1: Description

The information in Section 1: Description is organized in five chapters, which describe and present in textual form, in tables, diagrams and maps the general features of the Park territory, its climate, geology, hydrology; its biotic characteristics at the species, cenose and ecosystem levels. Special attention has been given to analyses of the existing uses both within the Park territory and in its immediate vicinity; the nature of the tourist flow; the demographic trends in communities located in areas surrounding the Park; public attitudes towards the Park; as well as the existing conditions for inclusion of the Park in regional planning. The Description section ends with the first evaluation: assessment of the significance of the protected area.

Protection and conservation of the natural, religious and cultural-historical heritage in RMNP

The protection of forests around Rila Monastery started back in 1966, when the then state-owned forest surrounding the Monastery was designated a protected locality (Order # 407/9.02.1966 of the Committee for the Protection of the Environment (CPE) under the Council of Ministers, promulgated in *State Gazette* # 3, 1966). Later on, by force of CPE Order # 307/10.04.1986 (*State Gazette* # 34/29.04.1986), the Rila Monastery Forest Reserve was designated.

The present territory of Rila Monastery Nature Park was once part of the erstwhile Rila People's Park, designated by Order # 114/24.02.1992 of the then Ministry of the Environment. Following the entry into force of the Protected Areas Act, Rila People's Park was re-named Rila National Park. By Order # RD-310/26.06.2000 of the Ministry of the Environment and Waters, the part of Rila National Park falling within the territory of Rila Municipality was re-categorized into Rila Monastery Nature Park.

In 1976, by force of Ministerial Council Decree # 33 (*State Gazette* # 45/04.06.1976), the then Rila Monastery National Museum was declared a national historical and architectural reserve by the same name. The present status of Rila Monastery is that of *a monument of culture of national significance*, designated as such by the Ministry of Culture. In 1983, Rila Monastery was placed on the list of the UNESCO Convention on the World Cultural and Natural Heritage Sites.

Conservation significance

Rila Monastery Nature Park is a protected area having one of the highest degrees of naturalness, stability, typicality and representative value of ecosystems in Bulgaria. The Park is among the five most significant active centers of species formation for plants and invertebrates in the country, numbering six local, 27 Bulgarian and 90 Balkan-endemic species and subspecies of higher plants, as well as two local, 41 Bulgarian and 52 Balkan-endemic species and subspecies of invertebrate organisms.

RMNP is a protected area featuring an exceptionally high concentration of habitats, communities and species of conservation significance. It is among the territories with the highest diversity of habitats in Europe: 85 different types of habitats located within an area of only 0.25% of the territory of Bulgaria; of those, 22 types of habitats are endangered on a European scale, therefore requiring special protection measures. The Park is also one of five protected areas in Bulgaria providing the most significant natural sanctuary to wildlife species that are both rare and sensitive to human presence, such as bear, Balkan chamois, capercaillie, etc.

Rila Monastery NP constitutes a unique, harmonious unity between the deepest, most articulated system of mountain valleys in the country, centuries-old forests, impressive rock massifs, a large number of mountain lakes, plus an extremely variegated skyline, all that combined into some of the most dramatic, emotionally charged landscapes in Bulgaria. The territory of the Park is one of the three most significant mountainous areas in Bulgaria, a natural source and repository of drinking water, constituting the most significant fresh water source for Southwestern Bulgaria and parts of the Thracian Plain.

Religious, cultural and historical significance

The Description section also contains descriptions and assessment of the historical and cultural significance of Rila Monastery situated in Rila Monastery settlement as well as the Holy Sites in the Nature park around it. The Park is the only place in Bulgaria, and one among but a few places worldwide, with such an exceptional harmony of remarkable spiritual and natural values. Rila Monastery is the second most important Eastern Orthodox religious complex in the Balkans, next to the monastery cluster on Mount Athos.

In the Park territory and in the approximate vicinity are four other architectural, artistic and historical monuments of culture of national significance, as well as parts of the Pilgrims' Road, which is likewise declared a historical site of national significance.

Local, regional and national significance in a socioeconomic context

Rila Monastery is the most frequently visited cultural and religious destination in Bulgaria. At the same time, the Nature Park is the second most widely visited protected area in the country, welcoming about half a million tourists annually. In the present Management Plan, tourism is perceived as the largest potential source of income to the owner of this territory, the local communities and to the Nature Park as a whole.

There is a clear predominance of one-day visitors to Rila Monastery and the Nature Park. On the whole, the most frequently cited motive for a journey to the Park can be generalized as the combination of a pilgrimage to a monastery and a number of other holy sites, and an outing in the bosom of nature – a combination which inspires in the visitor a feeling of worship and a clear perception of the overall significance of the place.

At present, however, tourism is not managed in the most effective way possible and fails to realize its full potential as a generator of income. The hospitality and tourism infrastructure in the gateway zone is still not developed, which bodes ill for the income opportunities of the local population. The local communities use the Park territory mostly for rest and recreation; when asked about the future, local residents tend to give preference to, and to link its prospective future development with these same activities: tourism, rest and recreation.

Section 2: Prescription

This section was developed on the basis of an analysis of the findings of the scientific research, sociological surveys, and the data available at the Park Office, relations with other bodies of local and regional government and with non-governmental organizations. The information is presented in four parts, with a total of 11 chapters.

Management goals and objectives

A total of 19 long-term goals have been formulated, which are grouped in seven main themes: conservation of the religious and cultural-historical heritage; conservation of natural components; management of natural resources; management of tourism; interpretation and education; relations with local communities; and park management.

The conservation and management of natural components pursue the following goals: the further development and maintenance of the harmony between natural and religious, historical and cultural components within the Park; the conservation in their natural state of different types of ecosystems and habitats; the conservation in their natural state of populations of wildlife species of conservation significance; the maintenance of an optimum level of information availability and a system for long-term biological monitoring; the conservation of the natural state of typical as well as unique landscape elements; mitigation of the impact of the operation of the hydroelectric facilities and network and the use of water resources; restriction of the development of infrastructure in the Park to the essential needs of its management; implementation of sustainable forms of use of timber and non-timber natural resources. A substantial portion of the Management Plan refers to tourism management, with the long-term goal of developing such forms of tourism as would not compromise the preservation of the spiritual significance of Rila Monastery and the other Holy Sites, of the Park's cultural and historical heritage and its natural assets, while at the same time enabling the generation of income for the owner and the local communities.

The Management Plan also envisions providing optimum opportunities for ecological and environmental education, for scientific research, for interpretation, as well as for specialized, culture- and history-related tourism. Measures are envisioned to create a system of regular coordination of activities within local and regional government bodies, as well as public awareness programs regarding the significance and development opportunities available through the Park.

A special chapter has been dedicated to activities pertinent to the administrative management of the Park, where the need has been identified to implement a management model for RMNP that would reflect, in combination, the interests of the Holy Synod of the Bulgarian Orthodox Church and of Rila Monastery, of the State and local communities, while providing coordination between all interested parties in pursuit of the goals and objectives of the Park's management.

Assessment of threats and limitations

This part of the Prescription section deals with analyses of the threats and limitations arising from natural or anthropogenic causes, as well as some that are encoded in the legislation. The impact of threats and limitations on the implementation of the ideal goals of the Management Plan is complex and manifold.

This chapter describes the threats that have an impact on the conservation of the natural and cultural assets of RMNP; it also provides an assessment of the extent of their manifestation and impact. Threats include poaching, pollution, unregulated construction; excessive crowding of visitors and motor vehicles at certain places within the Park; performance of activities incompatible with the spiritual significance of the Monastery and the Holy Sites in their immediate vicinity; insufficient information about and awareness of the Park; intensive logging and overuse of timber without regard to the purposes of biodiversity conservation; forest fires, etc. – part of which are real threats manifested in actuality, while others are potential.

Of paramount importance for the successful implementation of the Management Plan is the need for coordination, information sharing as well as collaboration between the Bulgarian Orthodox Church and the government institutions responsible for the Bulgarian natural and cultural heritage conservation.

The successful implementation of the Management Plan requires adequate staffing, and providing the requisite material and financial resources for carrying out the activities prescribed within.

Zoning

In assessing the impact of threats and limitations on the long-term goals and potential of the protected area, the Management Plan defines a number of zones and prescribes regimes and norms for them, aimed at mitigating or eliminating the impact of the existing threats, while assisting and directing the development of the protected area and the implementation of activities in such a way as to enable the generation of income for the benefit of the landowner with full respect for the conservation of the natural and spiritual heritage.

The Plan defines seven functional zones: the Reserves Zone (3,678.8 ha); the High Conservation Significance Zone (13,350.0 ha); the Holy Sites and Cultural and Historical Heritage Zone (27.2 ha); the Environmentally Sound Use Zone (5,677.9 ha); the Tourism Zone (724.5 ha); the Infrastructure Zone (117.9 ha); and the Sustainable Forestry Zone (1,676.7 ha). Three of these zones are mandatory pursuant to the Protected Areas Act, whereas the remaining four zones are defined in regard to the specific conditions in RMNP and the concrete needs and requirements pertinent to the protection and management of this territory.

The Management Plan was developed to give equal attention to all seven of the above-described zones, in consensus between the parties represented to the in-depth discussions and with the active input of the members of the Core and Extended Planning Teams and the Coordination Team of the BCEG Project.

Programs and projects

A number of programs and projects are identified and described in the Prescriptions section, aimed to implement the long-term goals laid down in the Management Plan while overcoming, mitigating and/or eliminating the existing threats and limitations. The Plan envisions a total of 30 programs and 81 projects, the long-term realization of which would enable the implementation of the operational objectives over the planned period. The programs and projects are grouped in the above-cited seven topics and correspond to the Ideal Goals of the Management Plan.

The said programs and projects take into account the different levels of management: from a single population or an individual tourist or participant in the interpretation programs, to the management of groups of ecosystems, relations with the local communities and the provision of scientific support to the Park activities, and the development of educational and tourism-related activities.

The management of the Park's territory is carried out with a view to preserving the conditions for maintenance of the existing migration routes and other common ecological elements with Rila National Park, improving the ecological links between the Rila Monastery Forest Reserve and the Nature Reserves of Parangalitza and Central Rila located within the territory of the National Park, as well as with a view to ensuring proper interaction between the two park administrations in managing and providing for visitor safety, fire control and other areas.

The last chapter of the Prescription section contains a three-year Action Plan, which prioritizes the programs and projects that would ensure the effective protection and conservation of all components of the Park from the earliest stage of implementation of the Management Plan.

Necessity and prerequisites for the protection of the Nature Park and development of the Management Plan

Rila Monastery Nature Park is one of the largest nature parks in Bulgaria, covering a total area of 25,253.2 ha. It is located in the Rila-Rhodope mountain massif, some 100 km south of Sofia. Its present territory was declared a protected area within the boundaries of Rila People's Park in 1992, and designated as a separate protected area

(Nature Park) in the year 2000. Pursuant to the Territorial Development Act, the entire territory of RMNP falls within the Protected Areas Fund. The forests within the Park perimeter occupy a total area of 16,370 ha; another 8,883.2 ha are high-mountain pastures and meadows. Also located within the Park is one nature reserve: the Rila Monastery Forest Reserve, which itself covers 14.5% of the Park's territory. In terms of the country's administrative-territorial division, RMNP falls within the territory of one district – the district of Kyustendil, and a single municipality, the municipality of Rila township.

Rila Monastery Nature Park is defined as part of Site F00002400 RILA under the EC-sponsored CORINE Biotopes program; concurrently, the Rila Monastery Forest Reserve is defined as another site under the same program, Site 00002403 RILA MONASTERY FOREST RESERVE. Both sites are subject to inclusion into the National Ecological Network as per the Biodiversity Act (2002), whereby they would also become part of the NATURA 2000 European ecological network.

The protection of Rila Monastery Nature Park is carried out in pursuance of a number of Bulgarian as well as international legislative instruments. It takes place in strict compliance, before and above all, with the Constitution of the Republic of Bulgaria (1991), and constitutes realization of the National Biodiversity Conservation Strategy (1994) and the All-European Strategy for Conservation of Biological and Landscape Diversity (1995). Since the Park is a significant element of the national system of protected areas, its protection represents a major step towards building the national and the European ecological networks, as envisioned in the National Action Plan for Biodiversity Conservation (1999) and the Biodiversity Act (2002). The management of the Nature Park is carried out in direct implementation of PAA, the Bern Convention (ratified by Bulgaria in 1991), as well as of Art. 8 of the Biological Diversity Convention (ratified by Bulgaria in 1996).

The Park's special status is determined by the Protected Areas Act (Nature Park as per the provisions of Art. 21); its protection is largely based, in practical terms, on the regimes applicable to a National Park. It is especially important to note that the protection of Rila Monastery Nature Park, in fact as a Category II Protected Area under the IUCN classification scale, conforms to the spirit and goals of these national and international legislative instruments, essential to environmental protection.

The designation and management of the Park also constitutes implementation of the EC Directive on the Protection of Wild Birds (79/409/EEC) and of the Directive on the Conservation of Natural Habitats and of Wild Flora and Fauna (92/43/EEC). Thus Bulgaria fulfills its commitments as part of the process of its accession to the European Union.

Legislative basis for the development of the Management Plan

In compliance with the Protected Areas Act, the Ministry of the Environment and Waters commissions the drafting of management plans for protected areas by approving sets of Terms of Reference for their development. The management Plan for Rila Monastery Nature Park was developed pursuant to Terms of Reference approved by MOEW in March 2001.

The Management Plan for Rila Monastery Nature Park was developed on the basis of an agreement between the Governments of the Republic of Bulgaria and the USA and is the product of cooperation between the Ministry of the Environment and Waters (MOEW) and the United States Agency for International Development (USAID). Its drafting took place through the Biodiversity Conservation and Economic Growth Project (BCEGP), which in turn was implemented and managed by the US company Associates in Rural Development, Inc. (ARD-Bulgaria).

The process of information gathering for developing the Management Plan, and the Participants

The Management Plan for Rila Monastery Nature Park is based on the entire amount of available information and on solid scientific data regarding the biological diversity, and the religious and cultural-historical assets within the Park territory. The area comprised in RMNP has been the subject of in-depth scientific research both before, and since its designation as a protected area, performed by experts from the Bulgarian Academy of Sciences, the University of Sofia and other schools of higher education, the National Water Board, the Bulgarian Society for the Protection of Birds, the Wilderness Fund Society and other organizations. During the period 1996-1999, the GEF Biodiversity Conservation Project carried out a broad-spectrum investigation of some areas within the Park (mostly along the valley of the river Manastirska and in the area of Kalin Dam) within the framework of development of the Management Plan for Rila National Park. In the course of these studies, separate teams of botanists (experts in flowering plants, cenoses, fungi, medicinal plants, freshwater algae, etc.) and zoologists (experts in different groups of invertebrates, amphibians, reptiles, birds and mammals) investigated different parts of the Park, the findings of their work having since been published in specialized papers compiled in the collection Biological Diversity of Rila National Park (1999). Between June and September of 2001, the Biodiversity Conservation and Economic Growth Project organized a more in-depth, comprehensive study of the biological diversity, threats, medicinal plants resources, infrastructure, and the social and economic aspects in the territory of Rila Monastery Nature Park. The biological diversity was studied using the method of Rapid Ecological Assessment, applied for the first time in Bulgaria. An inter-disciplinary team comprising 23 specialists representing 17 scientific disciplines put in a total of 1,006 man-days gathering data from 50 basic sampling stations. These stations, which are representative of the Park, were distributed throughout its territory, located both in different parts of the Park and at different altitudes, covering the entire range of types of natural habitats. Part of these studies included assessments of the uses of natural resources, visitor pressure (incl. motor vehicle traffic, concentrations of visitors by time and place, etc.), as well as the socioeconomic characteristics of the local communities. Similarly, in 2002, a study was carried out of landscapes within the Park, while at the same time a comprehensive expert assessment was made of the territory proposed for inclusion into the Park, located between the point of confluence of the Rilska and Iliyna Rivers and Kalin River.

The Management Plan for Rila Monastery Nature Park was developed on the basis of information gathered by a team of experts from the Bulgarian Academy of Sciences, the University of Sofia, the Bulgarian Society for the Protection of Birds, Analytical

Creative Group, the Union of Park and Landscape Architects in Bulgaria, the Wilderness Fund Society, and the Coordination Team of the BCEG Project.

The maps appended to the Management Plan were prepared by GEOHIDE Ltd., based upon digital models from Agrolesproject PLC (regarding the territory of the forest estate), at scales of 1:25,000 and 1:10,000, as well as digital models for the treeless zone at a scale of 1:25,000, the result of studies under the OM2 Project and cadastral maps from the Land Registry in the town of Rila. These digital models were also used as the basis for developing the Geographic Information System for the Park.

The structure of the Management Plan

Generally, the Management Plan comprises the following sections:

- Section 1: Description: describing the abiotic and biotic features of the entire protected area, as well as its socioeconomic characteristics, history and culture;

- First and second evaluation: the first evaluation presents the Park's significance in a national, regional, European and global context while providing the basis for selecting the long-term goals for RMNP. The second assessment presents the entire range of threats and limitations with an impact on the state and development of the Park. Based upon the second evaluation, an informed choice is made of concrete, time-referenced operational objectives;

- Section 2: Prescription: presenting the spectrum of long-term goals and management objectives. The bulk of those relate to the zoning of the Park territory, and to defining environmentally sound regimes and norms for the separate zones. The section also presents programs and projects designed to ensure the implementation of environmental legislation and the stable development of the Park, while identifying the relevant human, financial and material resources;

- Integral parts of the Management Plan are the illustrated maps and area plans designed using the Geographic Information System for the Nature Park. There are a total of 13 such maps, all in A3 format, including: a base map; map of main localities and sites; geology; relief; hydrographic characteristics and hydrotechnical infrastructure; forest vegetation and treeless zone; maps of flora and fauna of conservation significance; non-timber natural resources; holy sites, historical and cultural monuments; distribution of the territory according to the quality of landscapes; and zoning;

- The factual data of the studies performed by different expert groups are presented in text form, in tables and graphs, all included in the Appendices. These likewise form an integral part of the Management Plan, providing data and justification for the solutions included in the prescriptive section.

Stakeholders (interested parties) participating in the planning process

Rila Monastery Nature Park is the only protected area in Bulgaria where such a large proportion of the territory (77%) is the exclusive possession of a single private

landowner. By virtue of this fact, Rila Monastery as an institution becomes the principal stakeholder in the process of development of the Management Plan. The territory's status of a protected area, in turn, engenders a number of responsibilities and assigns functions to certain government institutions pertinent to the conservation of the natural, cultural and historical heritage in the Park.

Involving, from the outset, representatives of all stakeholders, carried out the planning process. These made up the **Extended Planning Team**, which comprised representatives of 12 different institutions: the Holy Synod of the Bulgarian Orthodox Church, Rila Monastery, the Directorate of RMNP, the Kyustendil-based Regional Forestry Board, the National Institute for Monuments of Culture, etc. The members of the Extended Planning Team have participated in four three-day workshops relevant to implementing the consecutive stages of planning the management of the Park territory, as well as in reviewing, in draft form, the final version of the proposed Management Plan. The gathering and analysis of the information, the organizing of discussions and workshops, as well as the all-round facilitation of their work, were all the responsibility of the **Core Planning Team**. The summarizing of the information, the writing up and styling of the document was done by the principal author, in conjunction with the remaining members of the Core Planning Team. The general work pertinent to the development of the Management Plan was carried out with the direct and full participation of the members of the **Coordination Team of the BCEG Project**.

Connection between the Management Plans for RMNP and RNP – two protected areas constituting an inseparable natural complex

Conceptually, the connection between the present Management Plan and that for Rila National Park was ensured through the participation in the Core Planning Team of the principal author of the RNP Management Plan, Dr. Dimitar Peev, and of Dr. Peter Hetz, who likewise was directly involved in the development of the latter plan. The close link between the two Management Plans was also guaranteed by the direct participation in the Extended Planning Team of Eng. Vassil Petrov, the acting Director of Rila National Park, whose contribution lies in a much more thorough analysis of the stated problems of the two protected areas, their zoning, activities and all other elements that determine the coordinated management of the ecologically integral complex of Rila National Park and Rila Monastery Nature Park. Functionally, applying the same approach and logical framework provides the connection between both Management Plans: purpose-oriented planning.

On the other hand, the distinguishing features of RMNP are reflected in the new zoning scheme applied, as well as in defining the programs and projects. Considerable innovation in the planning process, made possible by the experience accumulated with drafting the management Plan for RNP, was due to the much stronger involvement of a wide circle of representatives of all stakeholders from the very beginning of the planning process. Their active input into the planning process has made it possible to take into account a whole range of social and economic aspects and interests. This constitutes a major advantage in planning and an assurance of the attainability and applicability of the Management Plan.

Subcontractors to the planning process and their roles

The following entities took part in the development of the Management Plan for Rila Monastery Nature Park as corporate subcontractors:

- GEOHIDE Ltd. – development of the digital model of RMNP and the maps appended to the Management Plan;
- Analytical Creative Group Ltd. – sociological studies;
- Institute of Botany of the Bulgarian Academy of Sciences – the botanical studies;
- Institute of Zoology of the Bulgarian Academy of Sciences – part of the zoological studies;
- National Museum of Natural History of the Bulgarian Academy of Sciences – part of the zoological studies;
- The Union of Park and Landscape Architects in Bulgaria – the landscape assessment.

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The Management Plan for Rila Monastery Nature Park is largely based on the EUROSITE format, which has become the standard tool for the development of management plans for protected areas in Europe. It provides the required flexibility in decision making in the planning process, while allowing adaptation to the specific conditions in Rila Monastery Nature Park.

PART I:

DESCRIPTION AND EVALUATION

1.0 General information regarding Rila Monastery Nature Park

1.1 Location, boundaries and territory of the Park and other categories of protected areas included within

Rila Monastery Nature Park is located in Rila Mountain, in the southwestern region of Bulgaria (Fig. 1), between 42°03' and 42°11' northern latitude and 23°12' and 23°32' eastern longitude. Administratively, the entire Park falls within the territory of the Rila Municipality within the watersheds of the Rilska and Iliyna Rivers. The lowest parts of Rila Monastery NP are situated at altitudes about 750m above sea level (asl), while the highest point in its territory is Rilets Peak (2, 713m asl).

Fig. 1. Geographic location of Rila Monastery Nature Park

Boundaries

The boundaries of Rila Monastery Nature Park were determined by Order # RD-310/26.06.2000 (promulgated in State Gazette, # 56/11.06.2000) of the Minister of the Environment and Waters. Within these boundaries, as defined pursuant to the said Order, the Park's total area amounts to 27,370.7 ha. Calculations based upon the Park's digital model, developed on the basis of digital models for the RMNP Forest Inventory 2000, put its total area at 25,253.2 ha. The location and boundaries of the Park are as shown on Fig. 1 and the Base Map of the Nature Park.

To the north, east and south Rila Monastery Nature Park borders on Rila National Park. From the point of confluence of the Manastirska and Iliyna Rivers on the west along the asphalt road to the Pchelino Nunnery the borderline follows to the north up to Ksilifontova meadow; continues to the west above Krusha locality to the ridge connecting the Ravna locality and Eleshnitsa complex; to the southwest along the ridge to the bridge of the Eleshtnitsa River on the road to the Rila monastery. The border follows Eleshtnitsa River to the north up to the end of Zone A of the watercatchment of the town of Rila, continues to the northwest to Zheleznik Peak 1734 m (Demirkapia)[1], to the west through the forest fund (as stated in the declaration Order) up until Deburshtitsa River. From there to the north along the ridge through Karaul Peak (1981m) to Maluk Polich Peak (2342m). Follows to the east along the watershed of Dupnishka Bistritsa and Rilska Rivers through Kalinini peaks, Mokrishki ridge to Vazov Peak (Damga). To the south and southwest it goes along the watershed to Dodov Peak, follows to the east along the ridge on the border of Rilska River watercatchment passing the following peaks: Malak Mramorets, Goliam Mramorets, Maliovitsa, Elenin vrah, Zlia zab, Lovnitsa, Goliam Kupen (2731m), Goliama Popova kapa, Popovokapski preval, and Lopushki vruh; then follows the watershed to the south through Kobilino branishte to Vodni vrah (2683m), to the east through Marinkovitsa Peak to Vazela Peak, on the southeast to Shishkovitsa (2669m). It continues to the south to Venetsa Peak, to the southwest through Kanarski preslap to Kanarata Peak, goes along the watershed between the Rilska and Mesta Rivers through the peaks of Pavlev vrah, Cherna poliana, Pastri slap, Sedloto locality (12 Post), Goliama Pastritsa Peak (2606 m), Angelov vrah, and Goliam Mechi vrah (2617m). It then goes to the west through Markov kamak along the watershed of Lijna River and Blagoevgradska Bistritsa River, through Arizmanitsa Peak (2272m), Dobro pole locality, Tsarev vrah (2375m), Rizvanitsa Peak, Beltchevitsa Peak to Derizmiitsa Peak (1876m). To the north it follows along the ridge to Pobit kamak locality, goes to the Diavolski Vodi River and along the river up to its confluence with the Rilska River follows parallel to the Rilska River up until its confluence with the Ilijna River.

In May 2002 an official proposal was made for changes in the borders and the area of Rila Monastery Nature Park. Changes in the protected areas are made persuant to Art. 41 and 42 of the Protected Areas Act.

The Rila Monastery Forest Reserve

Located within the territory of Rila Monastery Nature Park is the Rila Monastery Forest Reserve, situated on the north and south slopes of the Rilska River

[1] The old names of the parks' geographical objects are shown in brackets (Appendix №2)

(Manastirska). The Reserve was designated by Order # 307/10.04.1986 of the then Committee for the Protection of the Environment under the Council of Ministers (Appendix 1).
Pursuant to Order # 307/10.04.1986, the Reserve has the following boundaries: "Starting from the northwest, from the Manastirska River, along the ridge serving as the western boundary of forest unit 17 (in describing the boundaries of the Reserve, the forest units numbers hereon conform with the 1978 Forest Inventory of Rila Monastery Forest Estate) to the upper timberline and then along it to the side ridge outlining the western border of the rocky massif in forest unit 1 and then along it to the main ridge; from the north, along the main ridge via Malyovitsa Peak and Orlovets Peak, to the eastern end of the rocky massif in forest unit 1; from the northeast, along the edge of the rocky massif to the ravine crossing the said massif and the forest in subsection 25-б and along that ravine to the point where its joins the outflow ravine of Lake Suhoto, following the latter until its intersection with the tourist trail and below it to the meadow above Suhiya Dol gorge (subsection 25-4), and along the boundary between subunits 25-з and 25-г to Suhiya Dol gorge. Then it follows Suhiya Dol gorge to Lake Suhoto, the upper timberline and the edge of the dwarf pine zone to the side ridge, descending from Vodniya Chal Peak to Suhiya Dol gorge and along the upper boundary of forest units 26 and 27 reaches the ravine that serves as boundary between forest units 27 and 28. From the east, it follows the ravine to the Manastirska River and then along the Djendema gorge reaches the upper dwarf-pine line. From the south it follows the upper dwarf-pine line to Brichebor Peak and from there along the side ridge to the Rilska River. The above-described boundaries do not include the Rilomanastirska River Valley, which is between 0.3 and 2.0 km wide, and which comprises the buildings and sites of the Rila Monastery architectural and historical reserve..." The valley of the Rilomanastirska River is included in the buffer zone of the Rila Monastery Forest Reserve by force of the same Order # 307/10.04.1986. The buffer zone comprises parts of the forest estate with a total area of 1,199.6 ha, and a total of 1,202 ha of farmland. The location of Rila Monastery Forest Reserve is shown in the Base Map of RMNP.

The total area of the Reserve according to the Order # 307 is 3,445.5 ha. Order # 114/24.02.1992 (SG No 20/10.03.1992; Appendix 1) enlarges the reserve territory to 3676.5 ha including additional 230.9 ha along the Ilyina River Valley. According to the digital model of the Park, the reserve area amounts to 3,678.8 ha, i.e. 14% of the park's total territory (Fig. 2).

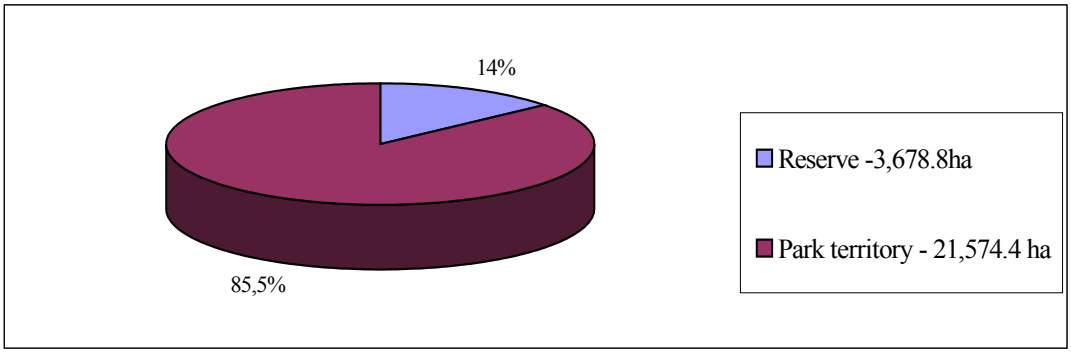

Fig. 2. The area of Rila Monastery Forest Reserve in relation to the combined territory of Rila Monastery Nature Park

1.2 Zone and administrative affiliation

Pursuant to Art. 7 of the Territorial Development Act (SG, # 1/02.01.2001) in terms of the purpose and function of its territory, the Rila Monastery Nature Park falls entirely within the category of Protected Area. As per Order # RD-310/26.06.2000, within its territory, forests occupy a total area of 14,370.7 ha, the remaining 13,000 ha being high-mountain meadows and pastures.

The area comprised within RMNP was re-calculated and updated in drawing up the Forest Inventory 2000 for Rila Monastery State Forest Enterprise. The proportional distribution of wooded areas vs. meadows and pastures in each village`s land, according to that Forest Inventory is shown in Table 1.

Thus calculated, the total area of RMNP differs considerably from that stated in its declaration Order: 27,370.7 ha. This is due, as explained in Forest Inventory 2000, to a miscalculation of the area of high-mountain meadows and pastures, estimated upon designation of the Park at 13,000 ha, whereas in fact, it is considerably less. The forest estate in RMNP, including the Rila Monastery Forest Reserve, totals 16,370 ha, while meadows and pastures cover an area of 8,883.2 ha. The proportional distribution of forests vs. meadows and pastures in RMNP is shown in Fig. 3.

Table 1: Distribution of the areas covered by forests vs. meadows and pastures in RMNP, incl. the Rila Monastery Forest Reserve, by their territorial inclusion in the estates of surrounding communities.
Source: Forest Inventory 2000 of Rila Monastery State Forest Enterprise.

Community estate	Forests (ha)	Reserve (ha)	Meadows and pastures (ha)	Total (ha)
1. Rila Monastery	11,475.6	3,665.7	7,335.7	22,477.0
2. Pastra village	1,029.1	-	950.9	1,980.0
3. Padala village	199.6	-	596.6	796.2
Total:	**12,704.3**	**3,665.7**	**8,883.2**	**25,253.2**

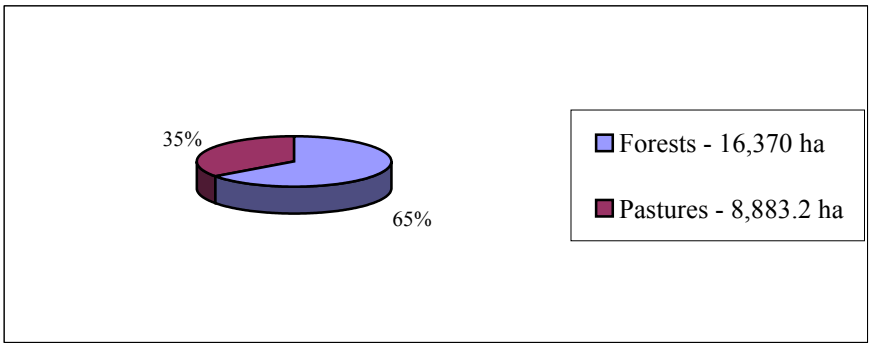

Fig. 3. Relative share of wooded areas and high-mountain meadows and pastures in the Nature Park

Administratively, Rila Monastery Nature Park is located within the Kyustendil Region and falls entirely within the boundaries of Rila Municipality and, in parts, within the lands of three populated areas: the villages of Rila Monastery, Pastra and Padala.

Status of the Rila Monastery settlement unit

Pursuant to Art. 6 (2) of the Protected Areas Act, populated places and settlement units within the boundaries of protected areas, defined as per zoning or development plans or settlement unit polygons, do not constitute parts of the respective protected area.

The Rila Monastery settlement is situated in the Nature park boundaries. In 1923, King Boris signed into law an act of the 19th Regular National Assembly (promulgated in State Gazette, # 237/23.01.1923) whereby Rila Monastery and four other monasteries, along with their property and possessions, were recognized as separate, independent municipalities. Under that act, a settlement unit formed around a monastery was given the status of a 'monastery-settlement'. By amendments to the 1995 Administrative-Territorial Division Act (State Gazette, # 63/1995), all settlement units of the types of monastery-settlements, separate neighborhoods or hamlets were given the status of villages. Thus, as of 1995, the settlement unit of Rila Monastery became Rila Monastery settlement, bearing a Unified Territorial Registry # 62685. Administratively, Rila Monastery is part of Rila Municipality, Kyustendil Region, which appoints a mayoral deputy as head of the settlement.

According to the Rila monastery settlement`s land digital model, received by Agriculture and forest municipality service the settlement area is 32.6 ha. Filed at the Technical Service of Rila Municipality is a zoning and development plan for Rila Monastery settlement unit, approved by Order # 4253/04.08.1976 by the then first deputy-Minister of Construction and Architecture. The plan delineates only subdivisions, not individual lots. No lot registry exists as such. The settlement unit polygon comprises Rila Monastery, Tzarev Vrah Hotel, Bor camping site, Bachkova Cheshma Restaurant, the recreational facility of the Kyustendil-based National Center for Student Recreation and Tourism, the recreational facility of the Kocherinovo Comprehensive School, the recreational facility of the Dupnitza Road Administration, the summer camp of Sl. Vanev Comprehensive School of Kocherinovo town, as well as the building of the old railroad station (Appendix 3).

At several places, the settlement limits are vague (the polygon is open). Part of the sites and facilities where the settlement system polygon is not closed have not been excluded from the forest estate. Their users have not initiated an administrative procedure for changing their purpose and function, in order for these to be transferred under the populated area fund. Currently ongoing is a clarification procedure for the boundaries of the settlement lands.

1.3 Legal status of the protected area and the cultural and historical sites within, under applicable legislation

The present territory of Rila Monastery Nature Park was once part of Rila People's Park, as designated by Order # 114/24.02.1992 of the Ministry of the Environment. Following the entry into force of the Protected Areas Act (PAA), Rila People's Park was re-named Rila National Park. Then, by Order # RD-310/26.06.2000 of the Ministry of the Environment and Waters, that portion of Rila National Park which falls within the territory of Rila Municipality was re-categorized as Rila Monastery Nature Park (Appendix 5).

Pursuant to the Protected Areas Act (§ 2 subpara 1) the territory around Rila Monastery is designated a Nature Park. By force of subpara 2 of the same paragraph (2), "in the Management Plan for Rila Monastery Nature Park, the provisions of Art. 21 shall apply". Essentially, the cited paragraph of PAA postulates that Rila Monastery Nature Park be managed in the same way as a National Park.

Rila Monastery Forest Reserve was designated by Order # 307/10.04.1986 (SG, #34/29.04.1986) of the Committee for the Protection of the Environment under the Council of Ministers. By virtue of the said order, the then state-owned forest around Rila Monastery, which had been declared a protected area back in 1966 (Order # 407/9.02.1966, promulgated in State Gazette # 3/1966) was transformed into a forest reserve with a total area of 2,586.7 ha.

In 1992, the status of this territory as was re-confirmed a forest reserve within the then Rila People's Park (Order # 114/24.02.1992, promulgated in *State Gazette* # 20/10.03.1992). By force of Order # RD-310/26.06.2000 the regime of a Forest Reserve was retained, corresponsing to a category I protected area under the IUCN classification scale. A historical review of the protected area status of Rila Monastery Forest Reserve is presented in Table 2.

Table 2. Historical review of the protected area status of Rila Monastery Forest Reserve

Year/State Gazette issue	Order #	Status	Area (ha)
1966/SG # 3	407/9.02.1966	Protected area	2,586.7
1986/SG # 34	307/10.04.1986	Reserve	3,445.6
1992/SG # 20	114/24.02.1992	Reserve	3,676.5
2000/SG # 56	RD-310/26.06.2000	Reserve	3,676.5

Located in the nature park boundaries are buildings declared by the Ministry of Culture as monuments of culture pursuant to the List of Declared Monuments of Culture in the territory of the Holy Monastery of Rila – SG, # 73/08.09.1992. These are:

The Complex of the St. John of Rila Tomb declared a complex architectural, artistic and historical monument of culture, also an asset of national significance. It has the following boundaries: western, northwestern and northeastern, along the respective outer contours of the rock face; southeastern, along the boundary of the plot connecting the north-easternmost and the south-westernmost points of the concave rock face);

The St. Luke Hermitage declared an architectural, artistic and historical monument of culture, also an asset of national significance, with borders as per the repective property plot;

The Pilgrims' Road, having the status of a historic site of national significance. Its section from the Tomb of St. John to Brichebor locality falls within the present-day boudaries of RMNP;

A main part of this cultural historical complex is the Rila monastery, which is an architectural, artistic and historical monument declared a monument of national significance. The monastery is situated in the territory of the Rila monastery settlement.

The Rila monastery cultural monument actual boundaries include (SG, # 73/08.09.1992 – see Appendix 4): **I. The Rila Monastery compound** (having the following boundaries: southwestern, from point # 1, defined as the intersection of the line perpendicular to the center of the west wing with the bank of the Rilska River, to point # 2, located 100 m from the center of the west wing and 120 m from point # 1; northwestern, running parallel to the north wing at a distance of 40 m, from point # 2 to point # 3, the distance between which is 280 m; northern, running parallel to the bend of the north wing and 90 m from it, from point # 3 to point # 4, the distance between which is 90 m, then along the forest line, to point # 5, located 180 m from the north corner of the east wing, and from point # 5 to point # 6, the distance between which is 90 m; southeastern, along the near bank of the Manastirska River, from point # 6 to point # 1)

In 1976, by force of Ministerial Council Decree (SG, # 45/04.06.1976), what was then the Rila Monastery National Museum was declared a National Historical and Architectural Reserve of the same name. In 1983 Rila Monastery was added to the UNESCO List of the World Natural and Cultural Heritage Sites.

1.4 Ownership

The territory of what is today Rila Monastery Nature Park has been closely linked with Rila Monastery ever since its establishment. Between the 10th and the 14th c. a succession of Bulgarian kings, notably Ivan Assen (1218-1241) and Kaliman (1241-1246) had conferred lands, forests and pastures upon the Monastery, both along the valley of the Rilska River and in today's Kyustendil and Blagoevgrad region, in the present-day municipalities of Razlog, Melnik, etc. In 1378, King Ivan Shishman (1371-1393) reconfirmed the special privileged status of the Monastery and expanded its holdings by issuing a Royal Decree describing in detail the boundaries of the Monastery estate. The present Nature Park fits exactly into the said boundaries. During the Ottoman domination of the Bulgarian lands, the lands and property of Rila Monastery changed hands more than once. For a list of documents where the Monastery status, ownership rights and title of its estate were restituted in full see Appendix 6.

Following the liberation from Ottoman domination (1878), Rila Monastery became the undisputed owner and caretaker of the territory falling within the perimeter of the present-day RMNP. This is evidenced, among other things, by the 1937 Definitive Economic Management Plan of the Rila Monastery Forests and High-Mountain Pastures.

With the entry into force of the Constitution of the People's Republic of Bulgaria on December 6th, 1947, ownership title over lands and forests included within the Forest Estate were wholly transferred to the State. Thus all lands and forests belonging to Rila Monastery were in effect nationalized and transferred under the management of the State.

In 1992, a protected area was designated by the name of Rila People's Park, subsuming within itself the present-day territory of Rila Monastery Nature Park. Under Art. 18 (1) of the Constitution of the Republic of Bulgaria, Natural Parks and nature reserves designated by law are the exclusive property of the State. Thus, as Rila People's Park was re-categorized into a National Park and fell under the jurisdiction of the Protected Areas Act, all lands and forests within it became the exclusive property of the State.

In 1997, a Restitution of Forests and Lands in the Forests Act was adopted (promulgated in State Gazette, # 110/25.11.1997). The Act provides the legal basis for reinstating forest ownership rights to the Holy Rila Monastery, as well as to any physical persons or legal entities in the Republic of Bulgaria who had owned forests in the past. In connection with the above changes the Monastery requested on 07.09.1998 at the Rila Town Land Commition to legally restore the forest and land ownership from the forest and land fund. The Monastery also filed a claim for the restitution of its title over the area falling within the boundaries if the Rila Monastery settlement unit.

In the year 2000, by virtue of the amendments made to the Protected Areas Act (SG, # 28/2000), the communal lands of the Municipalty of Rila town comprised within the territory of Rila National Park was re-categorized from *National Park* into *Nature Park*, a category of protected area that allows different kinds of land ownership in its territory. This made possible the restitution to Rila Monastery of all lands and forests previously in its possession, with the exception of those within the Rila Monastery Forest Reserve.

The latest, most up-to-date information of the Municipal Agriculture and Forestry Service, Rila town, regarding the structure of land ownership within the perimeter of Rila Monastery settlement unit, is dated January 2003. No detailed balance sheet regarding the ownership structure of the communal lands of the villages of Padala and Pastra falling within the territrory of RMNP can be made available by the Municipal Agriculture and Forestry Service (or, respectively, the Ministry of Agriculture and Forests), since MAFS does not have the exact boundaries of the Park as they intersect with the lands of these two communities.

According to Letter # 21/29.01.2003 by MAFS at Rila town, the distribution of the territory by type of ownership for the lands of Rila Monastery settlement, with a total area of 23,247.4 ha, up until January 29, 2003, is shown in Table 4.

Table 4: Distribution of the territories within the land property of Rila Monastery settlement by types of ownership

Lands/sites	Area (ha)	Ownership
1. Agricultural estate	8,305.4	Holy Monastery of Rila
2. Forest estate, incl.	11,090.1	
2.1 Treeless areas	1,305.1	Holy Monastery of Rila
2.2 Forests	9,701.2	Holy Monastery of Rila
2.3 Water catchment zone A	16.3	State public property
2.4 Service zones of hydrotechnical facilities	25.4	State public property
2.5 Built-up areas	42.1	State private property
3. Nature reserve	3,673.0	Exclusive state property
4. Populated areas	32.6	
5. Surface water basins and streams	125.1	
6. Transport facilities (RR, state road grid)	20.8	

By Decision # R-1 from 27.06.2002 of the Land Committee at Rila town, title over 9,701.2 ha of forest and 9,610.5 ha of pastures and meadows within the boundaries of the Rila Monastery lands was reinstated to the Holy Monastery of Rila. The total area of all territories restituted to Rila Monastery within the boundaries of its ancestral lands amounts to 19,311.7 ha, which is not final. At present there is a process of clarifying and sorting out the anpunt of lands and forests belonging to Rila Monastery within the perimeter of RMNP; still pending is reinstatement of Rila Monastery's title over lands of category 2.5 *Built-up areas* as per the above table. The Management plan does not aim and cannot resolve problems concerning ownership of any private owner on the parks territory. The Management plan also does not not lead to the establishment or legalization of ownership over lands and facilities in the park.

1.5 Managerial structure

1.5.1. Organizational structure, staff and functions

A significant part of the territory of Rila Monastery NP is property of Rila Monastery. Pursuant to the Protected Areas Act, Rila Monastery Nature Park is to be managed by a specially created Directorate, a regional body of the National Forestry Board under the Ministry of Agriculture and Forests, which is to supervise the implementation of the Management Plan for RMNP. Thus, intertwined, whether directly or indirectly, in the territory of Rila Monastery Nature Park are the interests of numerous organizations and institutions, or stakeholders, represented either directly or through affiliated businesses or authorized agents. A number of NGOs, landowners and users also have a stake in that territory. Listed below are some such stakeholders:

Legal entities with direct managerial functions and roles in RMNP

These are institutions, organizations or other legal entities mandated by law with duties and responsibilities pertinent to the direct management and conservation of the territory of Rila Monastery Nature Park or components thereof, as well as having property rights and commitments to that territory:

1. **Rila Monastery**. An autonomous monastery of the Bulgarian Orthodox Church (BOC), directly subordinated to the Church's Holy Synod, Rila Monastery is run in both its spiritual and administrative affairs by an Abbot. Five monks permanently serving at the Monastery perform religious services and all rites and rituals. There is an administrative and support staff of 25. In addition to its spiritual role and functions, the Monastery exercises legal rights over its territory within the Nature Park and is fully entitled to engage in economic activities on its lands. Also included in the Monastery compound is the Rila Monastery Museum, with a staff of 3, offering guided tours and educational services to visitors.

   The mailing addresses and telephones numbers for contact with the listed institutions and organizations are presented in Appendix 7.

2. **The Ministry of Agriculture and Forests (MAF),** respectively the National Forestry Board (NFB) (as well as physical persons and legal entities in the municipalities in possession of lands, forests and water basins) are the agents responsible for caretaking and protecting the Nature Parks (including RMNP) on a national level. Regional structures of MAF are the Regional Forestry Board in Kyustendil, the Rila Monastery State Forest Enterprise, and the Directorate of Rila Monastery Nature Park.

   Directorate of RMNP. It comprises a staff of five: Director, park zone development expert, biodiversity expert, public relations expert and accountant. Its role and functions are to coordinate activities pertinent to the implementation of the Management Plan in the territory of RMNP, in compliance with the provisions of PAA, FA, the Rules and Regulations on the Implementation of the Forestry Act and the Rules and Regulations on the Structure, Functions and Activities of the Nature Park Directorate. The Directorate has its offices in the town of Rila, Kyustendil region.

   The Rila Monastery State Forest Enterprise with a staff of 35. The main functions of SFE are management of the state forests as well as the implementation of the Forestry management plan on the territory of the enterprise. They are also responsible for the security protection of all forests, regardless of their form of ownership. By law, the obligations of SFE to RMNP amount to solely guarding the park territory outside the area occupied by Rila Monastery Forest Reserve. Security is provided by 2 forest guards without motor vehicles, each responsible respectively for one of the two naturally defined park sections: along the Rilska and Iliyna Rivers.

   The Executive Fisheries and Aquatic Cultures Agency (EFACA) under MAF. EFACA controls the implementation and execution of the Fisheries and Aquatic

Cultures Act. EFACA coordinates the seasonal and restrictions regimes for amateur fishing. The headquarters is in Sofia and has a department responsible for the region in Kustendil. EFACA has no representatives in the Park's territory.

3. **Ministry of Environment and Waters (MOEW)** implements government policy regarding control and conservation of the biodiversity, protected areas, geological and water resources and the environment as a whole.

   The Regional Inspectorate of the Environment and Waters - Sofia, a regional body of MOEW, supervises the implementation of the law with regard to protected areas within Kyustendil Region, notably in the territory of Rila Monastery Nature Park.

   The Water Basins Directorate, Blagoevgrad, a regional structure of MOEW, is the body responsible for managing, on behalf of the State, the management of waters in the Strouma River Watershed, which falls within the river network of RMNP. The Water Basins Directorate is currently undergoing a process of restructuring overhaul.

   The Directorate of Rila National Park is likewise a regional body directly subordinated to MOEW. Within the territory of RMNP, it is responsible for the management, control and protection of the Rila Monastery Forest Reserve. For the latter purpose, security protection of the Reserve territory, it employs two park rangers. The central office of the RNP Directorate is based in Blagoevgrad.

4. **The Ministry of Culture**, through **the National Institute for Monuments of Culture (NIMC)** implements the state policy on protection of the cultural-historical assets through registering the monuments, issuing of permits as well as implementing control functions in the territory of the monuments of culture and their protective zones. It employs no staff on the grounds of Rila Monastery.

5. **The Kyustendil Regional Administration** is the government authority representing the power of the State in the territory of the region. On behalf of the State, is supervises the enforcement and implementation of the law, organizes the territorial and zone planning and public administration.

6. **The Municipality of Rila Town**, Kyustendil Region, is a local self-government agency. The bodies of local self-government, namely the Municipal Council as the elected representative body, and the Mayor's Office as the local executive, regulate, direct and sanction all activities within the territory of the Municipality, and maintain public order and security. The Municipal Mayor helps the protection of the cultural and natural assets in the municipality; develops a program and creates a Consultative Council on the issues concerning tourism, supports the state authorities in the implementation of the state policy in the tourism sector and controls the quality of tourist products. The Municipal Council appoints a mayoral deputy for the Rila Monastery settlement, which falls within the territory of the Nature Park. In addition to the Mayoral Deputy, the Mayor's Office of Rila Monastery settlement also employs a senior expert for administrative services.

7. **The National Energy Complex Dams and Cascades PLC, Blagoevgrad Branch**, uses, monitors and supervises the water catchment facilities at Elevation 2000, and the Kalin and Malak Kalin dams. These facilities effect the deviation of river water into Belmeken-Sestrimo water cascade facility, as well as into the Rila group of hydroelectric plants. The monitoring stations have between themselves a staff of 12.

8. **The Regional Road Administration, Dupnitsa**, is obligated by law to maintain in good operational order, to clear and clean the road connecting Rila Monastery to the national road grid. The length of this road within the Park territory is 17 km, starting at Brichebor locality and ending at Kirilova Polyana. One worker of the regional road administration is responsible for maintaining that stretch of road.

Other stakeholders

1. The Dupnitsa-based **Rilski Ezera Tourism Society** is responsible for maintaining the permanent winter and summer marking and signposting of the tourist routes accessing the Park from the direction of the Ivan Vazov and Sedemte Ezera Chalets. The Society employs no permanent staff within the Park territory.

2. **Rilales PLC, Dupnitza**, a joint public-cum-private company, fully licensed for logging, afforestation and other forestry activities, also engaged in fish-farming and other activities.

3. **The Recreational Facilities Enterprise in the town of Sapareva Banya** manages the Ribni Ezera chalet, together with the adjoining buildings and bungalows, a small ski-lift, Yavora tourist lodge, offering food and accommodation to tourists. The facilities are opened from April to the beginning of October. The Enterprise employs five workers within the Park territory: three at Ribni Ezera Chalet and two at Yavora tourist lodge.

4. **The Mountain Rescue Service, Blagoevgrad**, is assigned to carry out, wherever necessary, rescue operations in the entire territory of Rila Mountain. It employs no permanent representative within the territory of RMNP.

5. **The Hunting and Fishing Association, Dupnitsa**, is engaged in fish farming on the Rilska River; the fish farm is located in Brichebor locality, at the point of confluence of the Rilska and Iliyna Rivers. One person manages the fish farm on concession; however, the Hunting and Fishing Association employs no permanent representative in the territory of RMNP.

6. **Granitoid Ltd.**, a Sofia-based private company engaged in husbanding and operation of water catchment facilities, and in electricity generation. The company has an office in Rila town, which supervises its activities in the valley of the Rilska River.

7. **Owners and users of buildings and facilities** in the territory of RMNP, as well as in the territory along Rilska River in the vicinity of the park. These are physical persons and legal entities, owners and users (concessionnaires) of recreational

facilities, restaurants, camping sites and/or hotels located in the territory of the Park. Such are Mactours Co., the Pastries and Bakeries and Hearing-Impaired Manufacturing Cooperative, both Dupnitza-based; the Paper Mills of the village of Barakovo, and others (see Appendix 3).

8. **Users of timber and of non-timber natural resources**. These are legal entities and physical persons conforming to the provisions of the applicable legislation regulating the use of timber from forests, as well as of of non-timber natural resources (medicinal plants, mushrooms, forest fruits), both by the local population for personal needs without the right of sale, and for commercial purposes.

1.5.2. Fixed Assets and Technical Equipment

The Holy Monastery of Rila owns the Monastery building and a multitude of other buildings located around it (Appendix 3). It also owns two motor vehicles, which serve mostly ceremonial functions. The Monastery communicates with the outside world via three fixed telephone lines. Under the Bulgarian State Budget Act, the Monastery receives an annual budgetary subsidy from the quota for non-profit legal entities.

The Directorate of Rila Monastery Nature Park operates on an annual budget for its Park management activities provided by the Ministry of Agriculture and Forests, under which operates the National Forestry Board. The Park Directorate is currently renting part of a municipal-property building in the town of Rila. The staff have an all-terrain Lada Niva four-wheel-drive and a fixed-line telephone at their office.

The Rila Monastery State Forest Enterprise is headquartered in its own building in the territory along the Rilska River neighboring Rila Monastery Nature Park. It has a fleet of three all-terrain vehicles (1 Lada-Niva and 2 UAZ). Communications are via a fixed telephone line. The State Forestry Enterprise manage and maintain four forests roads with a total length of 20 km, as well as eight bridges along the roads.

Dams and Cascades PLC, Blagoevgrad Branch, owns and operates, on behalf of the State, all facilities and installations for the catchment, collection, storage and delivery of water. For performing its functions, the enterprise has five lodges serving as living quarters at four water-monitoring stations within the Park territory. One of the stations is in the Iliyna River Valley (at Elevation 2000); the second, at Tiha Rila locality in the Rilska River Valley; the third, in Chala locality near Kalin Dam; and the fourth, in Turskoto parche (see Site plan Hydrographic Characteristics and Hydrotechnical Infrastructure). Communication is by means of a designated-frequency two-way radio. The company has no automobile fleet based within RMNP, but vehicles operated by Dams and Cascades (Lada-Niva, UAZ, a Chavdar minibus) may occasionally cross the Park territory in fulfillment of their duties. The National Energy Complex – Dams and Cascades PLC manage and maintain two gravel roads with a total length of 20 km, and six bridges.

The Regional Road Grid Administration, Dupnitsa has a roadside lodge in Bachkova Cheshma locality, which provides shelter to road maintenance crews in winter, while in summer serves as a recreation facility for Administration employees and their families. As part of the national road grid, the blacktop road connecting the village of Pastra with Kirilova Polyana, is owned and operated by the State. There is one bridge along it, with the Dupnitza-based regional Road Administration being responsible for its maintenance.

The Dupnitsa Fishing and Hunting Association operates a fish farm consisting of one building and 11 operational hatching pools at Brichebor locality, which is operated by concessionaires chosen by open tender for fixed periods of time.

The Sofia-based Granitoid Co. owns and operates in the territory of RMNP one hydro-electric power station, Kalin (4 MW) and the Ribni Ezera mini-power station (50 kW). Also owned and maintained by Granitoid is the concrete-surface road from Pastra village to Kalin Dam.

Rilales PLC, Blagoevgrad, owns one operational fish-farm, consisting of seven pools, one building and 0.8 ha of grounds. The company also owns a restaurant, a recreational home, and a multitude of other facilities both in the present Park territory and in the territory in the vicinity of the park along Rilska River Valley (Appendix 3).

The Regional Inspectorate of the Environment and Waters - Sofia; the Water Basins Directorate, Blagoevgrad; the RNP Directorate; the Kyustendil Regional Administration and the Rila Munisipality own no buildings, facilities or transport vehicles in the territory of Rila Monastery Nature Park.

1.6 and 1.7 Current development plans, zoning and regimes

The territory of Rila Monastery Nature Park is subject to local, regional and national planning and project developments. Parts of these prescribe functional and territorial zoning and regimes in the Park's territory.

1. Forest Inventory 2000 by the Rila Monastery State Forest Enterprise. The traditional territorial units – sections and subsections of the forest estate – are subject to inventory and stock taking and planning of forestry activities once every 10 years. The most recent forest inventory for the Rila Monastery State Forest Enterprise was taken in the year 2000; part of that is the forest inventory for Rila Monastery Nature Park. This inventory reflects a transition from intensive commercial use, where the norms and regimes of timber extraction have often been in excess of the average annual growth, to a selective caretaking of forest resources with a view to attaining a more diverse age structure of the forests.
   While according to the 1990 forest inventory of the Rila Monastery State Forest Enterprise logging intensity has been 20, 25, 30 or, sometimes, over 30% of the total timber stock of the respective forest, under the new 2000 forest inventory the prescribed logging intensity is between 10 and 15%.

According to FI 2000, the entire timber producing area within RMNP amounts to 9,840 ha. On 3,511.5 ha of that, FI 2000 envisions different types of logging. The total timber stock, not including branches, is estimated at 1,965,140 m³, of which 195,195 m³ (again not including branches) are slated for cutting over the next ten-year period. The average annual growth rate is estimated at 21,354 m³, which is more than the 19,519 cu.m annually planned for logging.

Forest Inventory 2000 for Rila Monastery Nature Park envisions that afforestation is to be carried out on an area of 316.6 ha. Of that area, on 107 ha only assisted natural afforestation is to be carried out, while the remaining 209.6 ha will be subject to topsoil regeneration and subsequent afforestation.

Also according to FI 2000, the following quotas for secondary use of forest resources are to be allowed:

- Medicial plant extraction: up to 5 metric tons per annum;
- Mushroom extraction: up to 2 metric tons p.a.;
- Christmas tree harvesting: up to 1,500 pcs p.a.;
- Grazing of domestic animals (excluding goats) on an area of 1,480.0 ha. The numbers of livestock alowed into the grazing area are: 1,233 heads of cattle or 5,920 heads of sheep, or combinations of these.

FI 2000 for the Rila Monastery State Forest enterprise was approved and adopted by the National Forestry Board in 2001, and was partially implemented in late 2002, in the absence of a management Plan for RMNP. On request by the landowner, the Abbot of Rila Monastery, timber has been extracted within the limits set as per FI 2000, for the needs of the Monastery.

2. Under the Forestry Act and the Rules and Regulations on Its Implementation, strips of forest between 100 and 200 m in width along the upper timberline; up to 100 m in width along river banks and up to 200 m in width around lake and reservoir shores, have erosion control and embankment functions. Therefore, they fall within the category of protective, recreational forests. Logging in such forests is done in compliance with the 1997 Logging Regulations for Bulgarian Forests. As a rule, logging intensity in them should not exceed 15%; at places, logging can be banned altogether depending on particular local regulations.

3. In 1983, the National Institute for Monuments of Culture developed a conceptual plan and a set of directives entitled 'The Rila Monastery Zone', comprising the valley of the Rilska River from Rila town to Kirilova Poltyana locality. According to the concept, the territory was to be divided into three zones: gateway zone, active zone (encompassing the Rila Monastery National Museum) and exploration-cum-recreation zone. Neither this Plan, nor the regimes and norms prescribed in it have ever been applied in practice.

4. Applicable at present are zones, regimes and norms as determined by the Ministry of Culture by the act of designating monuments of culture in the territory of the Holy Monastery of Rila. In fulfillment of Order # RD-19-132/24.03.1992 of the Ministry of Culture, regarding the monuments of culture in the territory of the Holy Monastery of Rila, security perimeters around them, together with the

respective regimes and norms for their use and protection, have been determined. The security perimeter for the declared complex (group) and single monuments of culture in the territory of Rila Monastery encompasses a strip along both banks of the Rilska River, including the Pilgrims' Road from Rila town to Sospa Dere ravine, with a total area of 1,117.2 ha, of which 1,092.8 ha are forest estate, and 24.4 ha, agricultural lands. The size and boundaries of the security perimeter were promulgated in State Gazette, # 73/08.09.1992. The eastern portion of the said security perimeter falls entirely within the buffer zone of the Rila Monastery Forest Reserve.

The security perimeter for monuments of culture is divided into two zones, Zone A and Zone B, each with its specific regime. As a whole, the regimes of the two zones coincide with the regimes of the buffer zone for the nature reseve, but are supplemented with provisions regarding the drafting of territorial development plans, restrictions on construction, as well as requirements about the carrying out of archaeological excavations. The main purpose of the regimes of the security perimeter around monuments of culture is to guide and direct activities pertinent to the development and building up of the area of holy and cultural sites between Rila town and Kirilova Polyana locality. The regimes imposed on the security perimeter around monuments of culture do not conflict with the goals of the present Management Plan.

5. In 1986, the then Higher Institute of Architecture and Civil Engineering in Sofia developed a project entitled 'Territorial and Landscape Plan of Rila Mountain'. In 1991, a new edition of this project was published after a major overhaul. As part of Rila Mountain, RMNP falls entirely within the area covered by that project. None of the zones or regimes provided under this Project have been adopted in or applied in practice in this territory.

6. Zoning and development plan for Rila Monastery settlement unit, approved by Decree # 4253/04.08.1976 of the then first deputy Minister of Construction and Architecture. The Plan outlines only subdivisions, not individual plots. There has been no follow-up or subsequent revision of the Plan by the competent authorities, which largely explains the present somewhat random, chaotic organization and operation of the auxiliary areas around the Monastery: parking lots, restaurants, restrooms, gift shops, etc., which do not appear to follow any particular patter or concept.

7. Regimes and norms regulating the security protection of sites and facilities, the provision of water and electricity supply. Built within Rila Monastery Nature Park are important infrastructural sites and facilities relevant to meeting the nation's needs for water distrubution and electricity generation. The use, protection, conservation and management of waters and water supply installations in RMNP are carried out subject to the Waters Act.

   Parts of the water catchment, collection, deviation and delivery infrastructure built for the Belmeken-Sestrimo water supply system also lie within the Park perimeter. The two deviation and catchment zones operational at present bear the names of rivers on which they are built: Manastirska and Iliyna deviations, which

affect the water outlow regimes, respectively, of the valleys of the Manastirska and Iliyna Rivers. The service areas of the hydrotechnical facilities within the lands of Rila Monastery settlement unit in the territory of RMNP, cover a total of 25.4 ha.
The Kalin and Malak Kalin Dams and the Kalin Hydroelectrical power station have been built and are operated in the Park for purposes of water storage and power generation.

- Sanitary protection zones around water catchment facilities, pursuant to Ordinance # 3/16.10.2000 are regulated on the conditions and procedure of exploration, design, commissioning, confirmation and operation of drinking and household supply water sources, and around sources of mineral waters used for therapeutic, prevention, drinking and bathing needs (SG # 88/27.10.2000).
- Within the lands of Rila Monastery settlement unit, subzone A of the water catchment zones covers a total area of 16.320 ha.

8. Prior to the entry into force of the present Management Plan (Art. 12 (2) of the Fisheries and Aquatic Cultures Act, SG # 41/24.04.2001), the by-laws of the previous Fisheries Act shall apply, whereby a fish farming zone has been determined as follows: the Iliyna River from its sources to the point of confluence with the Rilska River (15 km); the Rilska River from Kirilova Polyana to the Iliyna River (8 km); and the Eleshnitsa River, from its sources to the point of confluence with the Rilska River (7 km), pursuant to Ordinance # 49 of the then Committee for Forests (SG # 29/1992). Places for amateur fishing, as well as the norms and regimes governing this activity in the territory of RMNP, are determined later in the present Management Plan.

9. In the early 1960s, the asphalt road (category 3 road # 107) was built that connects the Rila Monastery compound and the surrounding area with the national road grid (the E79 international highway). It was built on the existing bed of the old narrow-gauge railroad, which provided regular transport services to the Monastery between 1921 and 1961. The road is operated subject to the regime for category 3 roads of the national road grid and its maintenance is the responsibility of the Dupnitza-based Regional Road Administration. The road constitutes the main entryway into the Park accessible by motor vehicle, and provides right of access into it (Art. 14 para 1 of PAA). There are no proposals for the construction of new roads within the Park perimeter under any regional development plans.

10. *National development plans*. There are two such plans: the National Economic Development Plan for the period 2000-2006 and the National Regional Development Plan for the period 2000-2006. The latter comprises elements of the existing regional development plans. Territorially, RMNP falls within the Southwestern Planning Region.

11. Regional development plans. There are two plans for regional development: (1) Economic Plan for the Development of the Southwestern Planning Region as part of the National Economic Development Plan for the period 2000-2006, and (2) Regional Development Strategy for Kyustendil Region for the period 2000-2006.

The Regional Development Strategy singles out tourism as the main engine for regional development and economic prosperity.

None of the national or regional development plans contain any concrete projects, regimes or norms that directly affect the teritory if Rila Monastery Nature Park.

12. *Strategic Development Plan* for Rila Municipality 2000-2006. This Plan contains no concrete proposals for zones or regimes as may affect directly the zoning of Rila Monastery Nature Park. Still, there are two specific proposals in it which pertain to Park territory: (1) Project for rehabilitation of the road section from the town of Kocherinovo, via Rila town, to Rila Monastery, completed in 2002; and (2) Upgrading of the facilities (ski lift) and extension of the existing ski run at Rila Monastery, which never reached completion.

13. *Restoration of the Rila Railroad Project*. The year 2001 saw some preliminary action being taken towards restoring the old narrow-gauge line once connecting the town of Kocherinovo with Rila Monastery. A Rila Railroad Society was established and registered pursuant to the Non-Profit Legal Entities Act for the sole purpose of rebuilding the railroad; the Society has since taken some action drumming up public support for possible future practical steps in that direction. Rila Monastery does not take part in the Society, nor has appointed a representative on its behalf. By the end of May 2003, the Planning Team commissioned to develop the Management Plan for RMNP had not received a copy of any official proposal for the restoration of the railroad that may be taken into account in the planning effort. Despite the fact that some public discussion was held in March 2003 regarding the proposal, no attempt has been made to involve the institutions responsible for the protection and management of the Nature Park.

    The existing main access road into the Nature Park via Rila Monastery uses in some of its sections parts of the old roadbed of the narrow-gauge railroad line. If the proposal to rebuild the railroad is ever materialized, it is hard to know how that could affect the asphalt road; anyway, no official project to that effect has been approved or otherwise officially sanctioned. No zones or regimes ensuing from the rebuilding of the railroad have been identified that may have an impact on the Nature Park and should therefore be assessed. The Management Plan for Rila Monastery Nature Park does not provide for rebuilding of the railroad between Kocherinovo and Rila Monastery. The Management plan includes a Project for investigation and evaluation of the possibilities for ensuring alternative transport in the park. (See Part IV; Section 2 “Programs and projects”, 2.7.4)

14. In the westernmost part of the Iliyna River Valley, just east of its point of confluence with the Rilska River, there were plans in the 1970 to build a dam, which were never materialized.

2.0 Description of abiotic factors

2.1 Climate

2.1.1 General description

Three out of the four sections of Rila Mountain's physical geographic division are represented in Rila Monastery Nature Park, as follows: the Central, Northwestern and Southwestern sections. About 10 percent of the Park's territory falls in the foothill climatic zone (altitudes of 800-1,000m asl), and 90 percent, in the mountain proper (1,000 m and over) climatic zone. Geographically, the park lies on the borderline between the moderate-continental and the transitional-Mediterranean climate.

The territory of RMNP is characterized by a considerable altitudinal gradient (from 800 to 2,700m asl). The valley of the Rilska River is oriented in a northeast-southwest direction and opens westwards towards the Strouma River Valley. The slopes of the mountain massifs forming the Rilska River (Tiha Rila) and Iliyna River basins have an average incline of 30^0, but in many places (at Vodniya Rid, the upper course of the Radovichka River, etc.) the incline may reach $80\text{-}90^0$; the river gorges are 300-400 m wide with an average height of the slopes 100-150 m above the river bed.

The variegated terrain and the orientation of river valleys, the altitudinal temperature differential of 0.7°C per 100 m determine the considerable differences in the climate between the lower portions of the Park and those located at higher altitudes.

2.1.2 Temperatures

Average annual temperatures

Some basic data about the temperatures in different parts of RMNP are presented in Table 5 below:

Table 5. Basic temperature facts at two weather stations in in RMNP

Station	Average temperature in January	Average temperature in July	Annual temperature differential	Average annual temperature
Rila Monastery (1,175m asl)	-2.8°C	16.0°C	18.8°C	7.0°C
Ribni Ezera Chalet (2,225m asl)	-5.2°C	12.0°C	17.4°C	2.6°C

The all-time lows recorded in the area around the Monastery are -25^0C (end of January), while the all-time highs do not exceed 36^0C (July). The average annual temperatures for the 2,000-2,500 meter asl zone oscillate between 0^0 to $+5^0$ C, while at places over 2,500 m (very few areas in the park) they are under 0^0.

Temperature inversions and isotherms

Some clearly defined temperature inversions are manifest in the territory of RMNP, having the following characteristics:

- The number of days with temperature inversions, whereby temperatures at higher altitudes are higher or equal to those at lower altitudes, is 200-220 annually.
- Inversions are more common during the colder season and in the cooler hours of the day, when an average of 8% of all days are temperature-inverted.
- The highest inverse temperature differences are observed about 7 in the morning. Isothermy (temperatures remaining identical with changes of altitude) are also a kind of inversion.

Such a high incidence of temperature inversions and isothermy in the territory of RMNP is due to the penetration of relatively warm, oftentimes more humid masses of air of Mediterranean origin from the southwest.

2.1.3 Precipitation and humidity

Precipitation

The average amount of precipitation in the foothill zone is 700-800 mm annually. In the 1,000 to 2,200 m zone, the annual precipitation is between 1,050 and 1,200 mm, and in the highest altitudes precipitation drops again, and is mostly of snow (between November and May). February is the driest month year-round, while the maximum amounts of precipitation have been recorded in May-June, with daily values ranging between 40-50 mm. In the past decade, there has been a steady tendency towards decrease in precipitation, by 3-4% annually.

Evaporation

In the lower parts (800-1,000m asl) evaporation ranges between 450-500 mm annually, and in the higher portions of the mountain (1,000-2,200m asl), it is between 350-400 mm. As can be seen, annual rainfall still exceeds potential evaporation rates, which determines the positive annual water balance.

Air humidity

In the higher portions of RMNP air humidity is 80-85%, but can drop to 30% on a cold winter day. Air humidity changes with air temperature, the average annual value being by 4-4.2 Hpa (steam pressure). The humidity deficit on north-facing slopes (36-38 Hpa) is less than on south-facing ones (46-50 Hpa).

The increased air humidity at higher altitudes in the summer months is due to ascending conventional air currents, which bring moisture from a long distance.

2.1.4 Solar radiation

At lower altitudes (1,000 m and below) there is an average of 2,200 hours of sunshine per annum. At higher altitudes, due to a more substantial cloud cover, the average annual duration of sunshine is 1,800-1,900 hours.

Winter solar radiation

As altitudes increase, the winter cloud cover becomes scarcer. During the winter months (November through April), the average duration of sunshine at altitudes above 1,900 m is between 1,000-1,100 hours on average. At lower altitudes the average duration of sunshine for the same period is 800 hours.

Summer solar radiation

With the increase in altitude, the summer cloud cover becomes more abundant. For that reason, during the summer months (May through October), the average duration of sunshine at altitudes over 1,900m asl is ca. 1,000 hours.

The annual fluctuations of sunshine are typical of the mountain climate and the geographic location of RMNP.

2.1.5 Snow cover

Physical description

The orientation of mountain sections and the exposure of slopes and the altitude are such that a permanent snow cover can only form in mid-December at the earliest. The duration for which the snow holds at altitudes up to 1,200 m is between 160-180 days (the snow cover remains stable for 70-80 days), and in the higher sections, between 190 and 200 days. In the lower zone, the thickness of the snow cover is 60-70 cm (March), while at higher altitudes (e.g. at Ribni Ezera Chalet) it can exceed 2 m.

In the higher reaches of the Park, spring thaw begins in the first third of April. No estimation has been made of the snow stocks in the territory of RMNP.

Long-lasting snow spots and snow-drifts

The long-lasting presence of a thick layer of snow is a characteristic feature of the deep bottoms of cirque hollows. The drifted and compacted snow holds until the middle of June; once it melts, the snow-spot that remains in its place constitutes a specific natural habitat with a characteristic population of the so-called chionobiones.

2.1.6 The wind factor

The wind direction and force are largely dependent on the lay of the land.

Wind direction and humidity transfer

It is an established fact that the prevailing wind direction in the territory of RMNP is from the south-southwest to the northeast. Air currents are largely formed under a Mediterranean and, in part, Atlantic influence. The average wind speed at 2,000m asl is 8-10 m/sec., reaching 16 m/sec. (ca. 60 km/h.) about 30% of the time. In the lower altitudes wind speed never exceeds 4-9 m/sec. The night-time wind circulation is within the 1-2 m/sec. limit. Owing to the fact that the lower Park zone is drier, there is no vertical humidity transfer in the direction of the higher altitudes.

Windfalls

As was noted earlier, the area of RMNP is characterized by temperature inversions which generate descending wind currents sliding down slopes at relatively high speed (20-30 m/sec.), but within a limited range. No specific pattern has been found in the dynamics of stormy winds of the kind that causes windfalls.

2.2 Geology and geomorphology

2.2.1 Geological and tectonic make-up

The territory of Rila Monastery Nature Park is made up mostly of metamorphic complexes: gneisses, biotite-gneisses, amphibole-schists, amphibolites, mica schists, and marbles, bordering to the north and south on large-grained granites, gneiss-granites, or are interspersed with fine-grained granites and pegmatite veins. The entire bedrock is highly dislocated; therefore exogenetic processes have shaped up a rich variety of forms. The metamorphic mantle of the Rila pluton follows a general incline of 35 to 60^0 to the southwest. Transverse warping and faulting in a north-south and east-west direction have caused the sinking of the tectonic layers towards the Rilska River Valley, as evidenced particularly by the movement of the powerful large-grained marble layer which, starting from the ridge of Yossifovitsa Peak (2,697 m) and from Mermera Ridge (2,602 m) descends steadily to the west and crops out in the Rilska River Valley at Otchov Dol (1,600m asl). As a reflection of the block-and-fault structure of the Rila massif and under the influence of neotectonic movements, there are several powerful ridges and imposing monoclinal crests. The most important processes in the geological development of Rila Mountain by ages and periods are presented in Appendix 8.

The rocks of the so-called gneiss-biotite and amphibolite suite are distinguished as a strip of varying width stretching from Sapareva Banya to the River Bistritsa-Golyam Mechi Peak, part of which falls within the park perimeter. The rocks are highly fragmented, bent into isoclinal folds, assimilated, and in their southern end, reoriented at the their point of contact with the granitoids of the batholite and the Kalin pluton.

There is a clearly defined lithological boundary, with imposed concordance in the gneiss-migmatic complex, but in most cases the contacts are tectonic. This suite is made up of diverse gneisses, gneiss-schists and schists, amphibolites, marbles, metamorphogenic skarns and calciphires. The principal lithological variety are the fine-grained biotitic gneisses, at places containing garnet and graphite. They make up some 70% of the composition of the suite and are dark-gray or gray with a parallel, foliate or pinstriped texture. They consist of plagioclase, quartz, and red to reddish-brown biotite, granite epidote and rutile. In the proximity of granite intrusions these take on a striped or fine-grained texture. The remaining rock types appear as layers of different orientation and thickness amid the fine-grained biotite gneisses.

The muscovites and bi-mica gneisses and gneisso-schists are unevenly distributed across the suite, but on the whole dominate its upper levels. Marbles are relatively well represented in the lower levels of the suite, but can also be seen in the middle levels. They form a number of distinct layers, in associations with amphibolites, leptinites, calciphires and fine-grained biotite gneisses. In the area around Rila Monastery and Lake Skakavitza, they associate with kyanite, amphibolites and amphibole-biotite gneisses. The marbles are unevenly dolomitized and skarnized.

Aplitoid-pegmatoid granites form an irregular body with a complex configuration between Kirilova Polyana and the Skakavitza River. At the point of contact there can be found granitoids, as small, structureless bodies, or close to it, metamorphites, embedded in the metamorphic framework. Their contacts are clearly defined, intrusive, with numerous layered veins or apophyses. The larger bodies comprise xenoliths of varying sizes, usually oriented in the direction of the extension. The granites usually have an unevenly grained or striped texture, with a hypodiamorphogranular structure, gradually transforming into pegmatite, aplitiod, and in some cases, metasomatic. They are made up of plagioclase-potassium feldspar, biotite, muscovite, garner and ortite. From a petrochemical point of view, the granites are relatively homogeneous.

Tectonically, this part of Rila has a rather complex structure, the result of a polycyclic and polyphase tectonic evolution. The block is made up of the rocks of the gneiss-migmatic complex, among which granitoids are intruded. The planar structures have a northwest southeast strike and dip at 30^0-70^0, mainly to the southwest, following the outlines of the Rila batholite. Around the Kalin pluton, a re-orientation of the strike in a north-by-northeast direction is observed. The principal macrostructure in this part of Rila is the Malyovitza antiform. A number of sub-parallel forms are established between the town of Sapareva Banya and Golyam Mechi Peak. The first of these, a well-defined anticline, with its fold axis oriented in a north-by-northwest direction. This fold can be traced south of Sapareva Banya, along the upper course of the River Otovitsa, the Eleshnitsa River, Pchelino locality, up to a point northeast of Tsarev Peak. The core of the anticline is made up of amphibolites. Sub-parallel of it, a little off to the east, lays a syncline. To the west of these two folds, between the sources of the River Eleshnitsa, along the right-hand slope of its valley, up to its point of confluence with the Rilska River, lie two isoclinal folds with their axes oriented in an almost perfect north-south direction. The cores of these two are made up fine-grained biotite granites, and their limbs, of amphibolites. Between Rila Monastery, the Iliyna River, and southwest of the Radovichka River, another synclinal structure can also be traced, with its axis parallel to the above described. Near its point of contact with the

Mechi Peak magmatic body, the orientation of its axis changes to east-by-southeast, passing south of Golyam Mechi Peak. To the east of the described structures, the rocks are curled into tight isoclinal folds, which are not easy to trace due to poor exposure and surface resolution.

Between the described structures there appear kilometer and decimeter wing-shapes folds, their axes oriented at 310-350^0 and inclined at 5-10^0 to 30^0, or with sub-equatorial pivots inclined at 20-30^0 (south of the Iliyna River).

As a result of the intrusion of south Bulgarian granitoids, there appear deformations superimposed on already folded and block-fragmented foundation bedrock. Attributed to the Caledono-Herzine tectonic-magmatic cycle is the intrusion of the Mussala-Mechi Vruch body from the Rila-Western Rhodope batholite, the Kalin pluton, the Badinski body and the Strouma dioritic formation. As a whole, the former two bodies are shaped as conforming, discordant domes, intruded into unstable gaps between the granodiorites and mutually linked in depth. In the process of their extrusion, the granites disrupt, reorient or assimilate the metamorphic and synmetamorphic structures. Such deformations are clearly defined along the northern line of contact of the Mechi Vruch body, where the rocks are either cut across or reoriented and sink in a periclinal pattern around the main body. South of the Rilska River, among the rocks of the Bogutevska suite, one can distinguish an antiform structure, slung in a west-by-northwest direction, sub-parallel to the Rila batholite.

The contemporary block structure is the result of Late Paleogene as well as of neotectonic movements. Instances of normal faulting have occurred mostly along the Strouma and western Rila fault zones.

During the neotectonic stage, as a result of normal faulting along the above mentioned and other fault zones, especially active in the late Neogene and the early Quaternary, the Rila dome-block structure was formed. Simultaneously, its block fragmentation took place along fault lines of northeast, west and northwest strike. Within the western Rila Block, the Kapatnishki and Vlahinski blocks broke off along faults of northwest strike and complex morphology. To the northeast the Kapatnishki bloc abuts the Rila Fault and its extension along the Iliyna and Radovichka Rivers and Dinkov Dol (Gorge). To the north, between the Rila Fault and several sub-parallel faults of northeast strike, there falls part of the Mussala block. To the northwest the Rila Fault and the fault lines along the River Rilka-Levi Iskar define it by the main fault zones, and to the east.

2.2.2 Mineral deposits

A wide variety of mineral deposits have been identified in the territory of Rila Monastery Nature Park; however, none of these are of any commercial significance.

Related to the rocks of the above-described suites are small deposits of kyanite and graphite, mostly of interest to collectors and mineralogists. Poor veins of magnetite and ferro-ferrichromespinelides and tremolite-asbestos have been located in the ultrabasite outcroppings in the area next to the Seven Lakes.

In the granites of the Badinski body there have been established high-temperature pirite-molybdenum ore with superimposed medium-temperature hydrothermal activity in the final magmatic stage.

Paragenetically with the Late Cretaceous magmatic activity there have appeared a range of contact-metasomatic ore deposits. In some of them (e.g. the area adjoining Malyovitsa) the ore formation is specularite-magnetite with a superimposed hydrothermal mineralization. Along the valley of the Drushlyavitsa River, there have been identified garner-hedenbergite skarns with ferrite mineralization (magnetite), pyrotite, halcopyrite, malachite and azurite.

Hydrothermal activity with relatively poor polymetallic mineralization has been observed at several sub-parallel zones southwest of Golyam Mechi Peak. To zones of the same orientation has been attributed the copper mineralization identified at Rila Monastery, Brichebor locality, and Radovichka River.

Of the non-metallic mineral deposits, of scientific interests are pegmatite veins and bodies, genetically related to granitoids (at Ribni Lakes, Pastra); however, these are of no commercial interest to the ceramic industry. The minerals and their varieties found in Rila Monastery Nature Park are listed in Appendix 9.

2.2.3 Geomorphological description and morphometric parameters

The territory of Rila Monastery Nature Park comprises portions of Northwestern, Southwestern and Central Rila. The valley of the River Rila, from Kirilova Polyana to Ribni Lakes, divides the area into two main orographic ridges: the Skakavitza Ridge and the Rilets Ridge, linked together at the principal orographic junction, Kanarata Peak (2,691m asl) (A three-dimensional model of RMNP is shown in Fig. 4.). The Skakavitsa Ridge branches into four limbs, or spurs: northern (outside the Park perimeter); northwestern, with highest peak Pogledets (2,691m asl); western, with Vodniya Chal (2,683 m); and southern, comprising three peaks: Shishkovitsa (2,669 m), Venetsa (2,600 m) and Yossifitsa (2,696 m). All four spurs are connected to the main orographic junction of the Skakavitsa Ridge, Vazela Peak (2,581 m), while its southern spur provides, next to Yossifitsa Peak, the main orographic link with Kanarata Peak. The Rilets Ridge extends between the valleys of the Rilska and Iliyna Rivers. A massive ridge with short transverse ridges, it starts from Rila Monastery and the nearby Brichebor locality. From west to east, it is dotted by the following peaks: Brichebor (2,104 m), Padarska Chuka (2,574 m), Baba (2,609 m), Theodossievi Karauli (2,671 m), Rilets (2,713 m), Mermera (2,602 m), and Pavlev Vruch (2,667 m). To the south of Kanarata Peak are the following peaks: Cherna Polyana (2,716 m), Aladja Slap (2,683 m), Angelov Peak (2,643 m), Golyam Mechi Peak (2,617 m), Markov Kamak (2,342 m), etc.

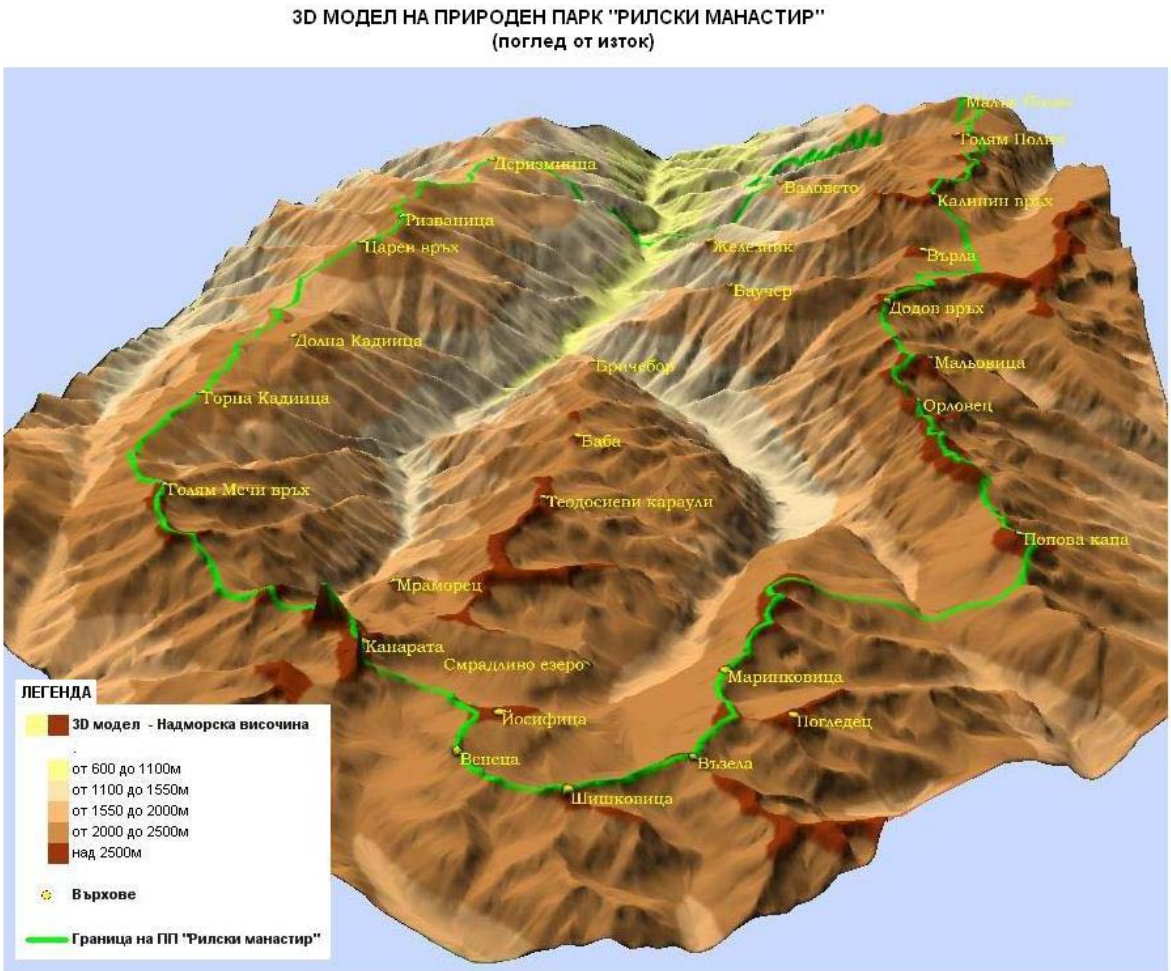

Fig. 4: 3D model of Rila Monastery NP – view from the east towards the Rilska River Valley. Legend - altitude in meters above sea level; green line – park boundary.

The highest point in Rila Monastery NP is Riletz Peak (2,713 m). Malyovitsa Peak (2,729 m) is higher, but it is located on the boundary with Rila National Park. The average altitude of terrains within RMNP is 1,750m asl

In this section of Rila Mountain is the principal orographic and hydrographic junction of the entire massif: Kanarata Peak (2,691 m), defining both the Main Balkan Watershed (between the Aegean and the Black Sea basins), and the watershed between the two principal drainage areas of the Aegean Basin, those of Belishka and Rilska Rivers.

Residual relief

The shaping of Rila as a solid, high mountain started as early as the Paleozoic, when the metamorphic rocks were intruded by granites and the formation of the batolite body as a dome-anticline took place. The latter represents a dome-like morphostructure shaped by deep peripheral faults, clearly visible in the present-day relief. The large dome-shaped body has been subjected over time to constant, spatially differentiated, mostly positive tectonic movements, whereby it has grown in

height, reaching towards the end of the Early Tertiary a significant altitude which defines it as a high-mountain plutonic morphostructure.

The shaping up of the present-day relief started in the Neogene. During that period, as well as, subsequently, during the Pliocene and later on, differentiated tectonic movements (stages of arch-like rising alternating with stages of repose) triggered the occurrence of denudation and planation processes of different intensity. This combination of endogenetic and exogenetic earth forces acting as relief-forming factors has produced the present-day traces of the oldest landscape forms in the area of the Nature Park, observed as level surfaces of denudation. So far, the presence of four clearly defined levels of denudation has been established, the oldest and the highest of which is the one dating from the Old Miocene, formed along the ridges of the 2,200-2,450 meter altitude zone, and subsequently reactivated and transformed by Pleistocene glaciation. Some cirques and cirque lakes remain preserved in its surface. The mountain peaks rising above it are mostly jagged, representing erosional remnants on the Lower Miocene peneplain, re-shaped later on by glacial activity.

The best-preserved denudation surface is that of the Early Miocene. It extends over most of the rolling ridges and rounded peaks in the 1,700 to 1,900 m altitude zone. It has an even more pronounced denudation peneplain appearance, since large remains of it are preserved today, despite the bedrock petrographic differences. Within the park territory, this denudation surface is largely displaced as a result of crisscrossing concentric and radial faults, rising therefore, at places to altitudes of 2,000 m.

Owing to its rhythmic repetitiveness, Tectonic activity during the Pliocene has formed two denudation surfaces. Against a backdrop of the all-round arch-like rise of Rila Mountain, two stages of tectonic repose are identified, contributing to a marked peneplanation activity. As base-level for these processes served the existing Pliocene (Pontian and Levantine) lakes in the neighboring territories, negative vis-à-vis Rila Mountain. The remains of the older, and higher, Pliocene (early Pliocene) surface are found at different levels within the 1,100 to 1,300 m altitude zone, where they extend over the flat ridges or occur as slope steps.

The Early Miocene denudation surface is observed in the lower parts of slopes in the area, occurring in the form of small slope terraces, usually situated at altitudes between 750 and 850 m. In these, cases of fault-induced vertical drop are also observed. This denudation surface is poorly preserved due to fragmentation by the river network going downstream to the neighboring piedmonts. Such fragmentation increases the aggregate area of eroded slopes at the expense of the Early Miocene denudation surface. These processes are most clearly expressed where the surface consists of weaker Paleogene sediments.

Especially characteristic of all denudation surfaces in the area is their relatively large altitudinal gradient. It is due to the concentric/step-like and radial faulting, closely related to the permanent dome-like rise of the mountain bulk.

Most of the present-day river valleys in Rila run parallel to the direction of radial faulting. Their geomorphologic appearance, however, with the exception of the lowest portions, is mostly influenced by the erosional and accretionary activity of the descending glaciers during the Quaternary. A typical example is the valley of the Rilska River and its tributaries.

Glacial relief

Characteristic of the high-mountain zone and dates from the Pleistocene. During that period, the snow line was at 2,300m asl, gradually rising to 2,300 m in an eastward direction. Glaciers were of an alpine type, with a pronounced névé field above the snow line and a glacial tongue below it. The glacial tongues descended into the river valley to altitudes of 1,200-1,300 m. Some frontal moraines are formed along the ice line, best preserved along the Rilska River (at 1,250m asl).

Glacial-erosional forms

These are the most expressive land shapes, having arisen from the interaction of glacial-nival processes with the paleo-relief and the bedrock sub-stratum. Typical in this respect are the cirque hollows – large, deeply indented, largely hanging. They can be observed in the high lateral slopes of the big glacial U-shaped valleys of the Rilska River and its tributaries. Examples are the cirques of the Lake Smradlivo (2,294 m) and Cherniya Gyol (2,462m asl). A multitude of cirque lakes in the area occupy the deep concave bottoms of the cirque beds or cirque terraces. Among them is the largest cirque lake in the Balkan Peninsula: Lake Smradlivoto (21.2 ha surface area and 24.0 m deep). Next in size is Lake Gornoto (Upper) Ribno at 2,227m asl (17.6 ha, 8.9 m deep). Through a cirque threshold the outflow of Lake Gornoto Ribno connects with Lake Dolnoto (Lower) Ribno, situated at 2,200m asl. Next to the eastern shore of Lake Gornoto Ribno, there are several sandbars formed as a result of snow avalanches. The lowest-altitude single cirque lake with a northern exposure is Lake Yozola (2,134m asl), which falls outside the Park perimeter. Its location is evidence of the average altitude of the Neopleistocene snow line. The highest cirque lake, Malkoto, is located at 2,496 m, just below the Vodni Chal Peak. Its origin is attributed to the final stage in the retreat of glaciers from Rila Mountain, at the transition from the Neopleistocene and the Holocene.

In addition to the cirques and cirque lakes, another characteristic feature for the area of RMNP is U-shaped, or trough river valleys (canyons). The trough valley of the Rilska River is the deepest and most peculiarly shaped in all of Rila massive and has its characteristic shape down to St. Luke Hermitage.

Other specific land shapes in these valleys are the glacial thresholds, sheep-backs, jagged glacial pinnacles and peaks.

Glacial-accretionary forms

Also typical of the RMNP areas are the glacial-accretionary forms known as moraines. They are located in the perimeter of the cirque outlets and point in the direction of the fossil glacial valleys. Moraine swells of more considerable size can be found mostly in the valley of the Rilska River. Remains of some stadial moraines can be seen at altitudes of 1,860 and 2,000 m; those at Kirilova Polyana are arranged in four gigantic rows. The most important product of the accretionary activity of the Rilska River Valley glacier was the deposition of the frontal moraine, located at 1,210-1,230m asl, not far from the present Rila Monastery.

Periglacial relief

It extends mostly over the high alpine and sub-alpine zone of RMNP, and is characterized by cryoclastic forms: summit and valley-side torses, cambered edges, boulder seas; cryonival stationary forms: cryonival cirques, niches, and coves; cryoturbational forms: stone wreaths, 'pavements' and grass hummocks; cryosolifluctional forms: stone tongues, stripes, grass terraces, creeping blocks; cryonival gravitational forms: horseshoes and screes; cryonival-corrasional forms: avalanche gullies, tracks etc.

The glacial relief of Rila Mountain, including the perimeter of RMNP, was formed during the Würm; the last remaining glaciers retreated from the area some 10-12 thousand years ago.

2.2.4 Opportunities for demonstration and interpretation of geological processes and geomorphologic shapes

The geotectonic and geomorphological peculiarities of the territory of RMNP and the diversity of forms and landscape formations provide ample opportunities for demonstration and interpretation of individual geological and geomorphological elements and the very stages of the mountain's geological and geomorphological evolution. This can be carried out by means of different information and interpretation materials (pamphlets, information boards, etc.), as well as through the direct, immediate demonstration of the peculiarities of the terrain by specially trained mountain guides. The main processes in the geological evolution of Rila Mountain (including the territory of the Nature Park) by eras and periods are presented in Appendix 8.

2.2.5 Avalanche hazards

At many places throughout the Park, the specific terrain and climatic conditions enable the occurrence of avalanches. The steep slopes with a 1,400-1,500 m gradient on both sides of the Iliyna and Marinkovitsa River Valleys (especially along their upper courses), and the steep incline of the southern slope along the main ridge (at places in excess of 35^0), combine to form local avalanche gullies. The same applies to the central northern sections of the Park, especially along the steep valleys of Ochov Dol and the narrow gorges lying to the east of it (Beliyat Uley, Siniyat Uley, etc.), as well as to some areas in the eastern and southeastern Park section (the southern slopes of Vodniya Rid and Mramorets). The highest avalanche hazard has been registered along the entire stretch of road between Kirilova Polyana and Hydroto locality (at Tiha Rila), from Kirilova Polyana to Lake Suhoto and by the tourist trails around Ribni Ezera Chalet.

2.3 Hydrobiology

2.3.1 Background notes

Rila Monastery Nature Park comprises the middle and high portions of Western Rila Mountain, at altitudes of 800m asl and over. They are characterized by a well defined alpine relief, with 28 cirque lakes formed at higher altitudes, 2,200-2,500m asl, dating back as far as the period of evolution of the Earth crust. It is from these lakes that many rivulets and brooks take their sources, forming the drainage area of the principal water stream in the Park, the Rilska River. The territory of Rila Monastery NP is among the riches in water resources in all of Bulgaria. The total drainage area of the Rilska is some 390 sq.km, and its estimated annual outflow, 241.9 million m.^{3} By comparison, this amount of water accounts for 11.4% of the total outflow of the Strouma River, and 1.24% of the continuous average annual outflow of Bulgaria. (Table 6).

Table 6. Annual natural outflow of the Rilska and Strouma Rivers

#	River	Watershed area (km^2)	Annual outflow module (m^3/sec.km^2)	Outflow volume (m^3x10^6)
1.	Rilska	390	0.02	241.9
2.	Strouma	10,797	0.008	2,765

Measurements taken at the hydrometric station by the village of Pastra confirm what has been observed about the mountain as a whole, namely that 82% of the natural outflow is generated in the high and middle mountain zones (Table 7):

Table 7. Distribution of the water outflow by altitudinal zones in Rila Mountain

#	Altitudinal zone (in meters asl)	Watershed area (km^2)	Q (m^3/sec.)	Water outflow (m^3 x 10^6)	% of outflow
1.	over 1,600 m	1,097.92	32.43	1,022.80	
2	600-1,600 m	1,774.24	16.60	523.52	
3.	300-600 m	300.32	1.06	33.41	
4.	Total for Rila over 300 m	3,172.48	50.09	1,579.73	82
5.	Water gauge at Pastra village, RMNP	222.00	6.27	197.00	82

From a hydrological point of view, the territory of RMNP is understudied. There is only one operational station belonging to the National Hydrological Network, and the available data are very scant.

2.3.2 Hydrography

The only large river in the entire territory of RMNP is **the Rilska River**, which has it sources from Ribni Lakes at elevation 2,691. In its course, it collects the outflow of Iliyna River, and a multitude of other streams and rivulets; and exits the Park territory

in a westward direction and flows into the Strouma by the village of Sharkov Chiflik, Kyustendil Region.

The drainage area of the Rilska River, which flows in a westward direction, stretches between the ridges of the Dodov Vruch, Orlovetz, Golyan Kupen and Popova Kapa, and Voden peaks to the north; Vazela, Shishkovitsa, Venetsa and Kanarata peaks to the East; and Ostrets, Rilets, Theodossievi Karauli, Baba and Brichebor peaks to the south. Among its more important tributaries are: from the south, Smradliv Dol, Cherniya Potok, Dyavolska (Djendemska) Reka; and from the north, Marinkovitsa, Kriva Reka, Suhia Dol and Drushlyovitsa. The left-hand tributaries account for most of the outflow, since they are situated on slopes with northern exposure, where the snow cover holds over a longer period (from November up until the end of June) and thaw takes longer, feeding and moisturizing the soil. The main water source is the thick snow cover, the humid climate and the many lakes situated at altitudes between 2,300 and 2,500 m. Some of the latter, e.g. Ribni Lakes, Lake Smradlivoto and others, with their constant, steady outflow, are crucial in feeding the rivers during the dry season, thus ensuring the water quantities necessary for maintaining the proper functioning of the ecosystems in the area. There are 28 permanent lakes in the Parks territory, 26 of them are glacial. The exeptions are Lake Suhoto and Lake Vira, which are permanent, but not of glacial origin.

The following lakes are located within the Rilska River drainage area:

Smradlivite (Stinky) Lakes, a group of three lakes located in the central section of the Rila Mountain between Ostretsridge to the east and Rilets to the southwest, in a lateral circus flowing out in a northward direction, towards the river valley. The central of the three, Lake Smradlivoto, is the largest Bulgarian high-mountain lake both in terms of surface area and in total volume. It is located at an altitude of 1,350m, just below Rilets Peak (2,294 m). Its surface area is 21.2 ha, its total volume, 1.72 million m³. The lake has a maximum depth of 24 m and a drainage area of 2.73 km². Its water is generally soft, with high oxygen content and low oxidizability. The lake is the source of the Smradliva River, a left-hand tributary to the Rilska.

Lake Chernoto (Sherniyat Gyol), located to the northwest of Lake Smradlivoto, is set in a little cirque open to the north, at elevation 2,362 m, some 1,200 m north of Rilets Peak. The lake has a surface area of 2.24 ha, water volume of 0.15m m³, maximum depth of 15.5 m and a drainage area of 0.47 km².

The Dyavolski (Djendemski) Ezera Lake Cluster consists of seven lakes, located in the middle section of the Rila Mountain, to the northwest of Rilets Peak. The largest lake in this cluster lies to the west-northwest of Rilets Peak, at 2,402m asl Its surface area is 1.56 ha; its drainage area, 0.32 km². The Dyavolska River has its sources from this cluster.

Manastirski Lake Cluster– consists of three lakes located west of the Dyavolski Lakes, in the western portion of a cirque surrounded from the south by Baba and Dabrava peaks and from the north and west by lateral ridges. The cirque flows out to the north, towards the Vodnitza (Gyolska) River Valley. The largest lake in this cluster is Golyamo Manastirsko, located 675 m to the north-northeast of Baba Peak,

at an altitude of 2,392m asl. Its surface area is 2.45 ha; its total volume may reach 17,500 m³; its maximum depth is 4 m; the size of its drainage area, 0.48 km².

The northern portion of the Rilska River drainage area lies on rocky slopes of southern exposure where the snow cover lasts less (December to May), which explains the smaller number of lakes and rivulets in the area. The following lakes can be listed here:

Lake Marinkovsko, a cirque lake in Central Rila, is set in the glacial valley of the Marinkovitsa River. The lake is located 1,100 m northeast of Yossifitsa Peak. It has a surface area of 0.65 ha, and a drainage area of 0.21 km². Flowing out to the east, it gives the Marinkovitsa River its source.

Lake Suhoto (Dry) is located in Northwestern Rila, some 400 m southwest of Malka Popova Kapa Peak, at 1,892m asl. It is oblong in shape, with 1.95 ha surface area and a drainage area of 10.1 km². In the summer months, its water level drops sharply; at times the lake dries up completely, hence its name. It flows out to the south, forming the Suhia Dol, a right-hand tributary to the Rilska.

The largest and most significant lake cluster within RMNP is **Ribni Lakes**. It is located in a large cirque, surrounded by Yossifitsa Peak from the east and Kanarata Peak from the south and Ostrets Peak from the west. The cluster consists of two large and two small, shallow lakes.

Lake Gorno (Upper) Ribno is set at the very bottom of the cirque, 1,470 m north of Kanarata Peak, at 2,227m asl. It is oblong in shape, with a narrower, shallower southern portion and a larger, deeper northern one. It gets its waters from some 30 small tributaries, spread radially on all sides. Its natural surface area is 14.99 ha; the volume of water in it, 412,000 m³; its maximum depth, 8.9 m. In 1956, a concrete wall was built around it, raising its water level by some 2 m and thence increasing its surface area to 17.6 ha, and its volume to 771,000 m³. The wall was intended to increase the water quantities collected in it during spring thaw and thus to compensate for dry season water shortages for the Pastra and Rila hydropower stations on the Rilska River. Following construction of the Manastirska deviation collector to the Belmeken-Sestrimo hydropower complex, these facilities lost their relevance and were abandoned. The lake flows out to the north, towards Lake Dolno Ribno.

Lake Dolno (Lower) Ribno is located some 400 m north of the Gorno, at 2,200 m altitude. It has a rounded shape, with 4.69 ha surface area and a volume of 131,500 m³; its maximum depth is 8.9 m, exactly the same as of Lake Gorno Ribno; its drainage area – 3.7 km², is considerable larger than that of the other lakes'. The lake flows out westwards, providing the source of the Rilska River. The chemical composition of all lakes is similar, showing a low general mineralization, 58.8 mg/l, and a hydrocarbonate ion content of ca. 30 mg/l. The lake water is very soft with high oxygen saturation, ca. 10 mg/l.

The chemical composition of the water in these lakes, combined with their location and steady water resource, is critical for biodiversity along the Rilska River. The water quality is especially favorable for the Balkan trout population.

Ribni Lakes and the tributary to the River Marinkovitsa form a steady and substantial combined water outflow of some 14.5 million m³ annually, which is about 6% of the total river outflow.

The other important river in RMNP is the **Iliyna**. It is a left-hand tributary of the Rilska River, discharging at Brichebor locality. The Iliyna River drainage area stretches between Brichebor, Baba and Theodossievi Karauli peaks to the north, Kanarata and Pastri Slab peaks to the east, and Angelov Vruch, Golyam Mechi Vruch, Arizmanitsa, Tsarev Vrah and Rizvanitsa peaks to the south. The Iliyna, just as the Rilska, gets most of its waters from the northern-exposure slopes along its southern bank, from where come its main tributaries: the Radovichka, Kamenitsa (Kodjakariytsa), Dimchov Dol, Gramadlivitsa, and Kravarski Dol Rivers. The right-hand tributaries of the Iliyna are the Mramorska (Mermerska) Chernatishka (Karaomerishka), Dyado Ilyov Dol and Beloborski Dol Rivers. Most of these have their sources from the high-mountain lakes dotting the area.

Chernatishki (Kraomerski) Lakes – a cluster of 4 cirque lakes, situated in the Kanarski section of Central Rila, to the northwest of Kanarata and to the east of Mramorets Peak. From these lakes takes its source the Chernatishka (Karaomerishka) River, a right-hand tributary of the Iliyna. The largest lake in this cluster is the Lake Sinyoto (Blue), located north-northeast of Mramorets Peak, at 2,412m asl Irregular in shape, it has a surface area of 3.72 ha and a drainage area of 0.43 km². The other three lakes are considerably smaller, having between themselves a surface area of 0.7 ha and a combined drainage area of 1.12 km².

Lake Mramoretsko (Mermersko) is set at the bottom of a small valley in Central Rila, on the northwestern slope of Kyoravitsa Peak, 2,422m asl The lake is kidney-shaped, with a surface area of 0.76 ha and a drainage area of 0.17 km². It is the source of the Mramoretska River, a right-hand tributary of the Iliyna.

Lake Kamenitsa (Kodjakariytsa) is a cirque lake located some 800 m to the west of Angelov Vrah Peak, at an altitude of 2,410 m in the southwestern section of Rila Mountain. With an almost perfect wound shape, the lake has a surface area of 0.56 ha and a drainage area of 0.13 km². It flows out to the north and is the source of the Kamenitsa River, a left-hand tributary of the Iliyna.

2.3.3 Water reservoirs

To better utilize the water resources of Rila Mountain, there are two water reservoirs in the territory of RMNP: the Kalin and Malak (Minor) Kalin Dams, built at Elevation 2000 in order to catch and store the waters of the spring thaw for the generation of electricity. Their combined submerged volume is 1.04 million m³ (Table 8):

Table 8. Basic data about the water reservoirs in Rila Monastery Nature Park

#	Reservoir	Total volume (m^3x10^6)	Usable volume (m^3x10^6)	Watershed	Purpose
1.	Kalin Dam	1.02	0.92	Strouma	Irrigation, power generation
2.	Malak Kalin Dam	0.025	0.02	Strouma	Irrigation, power generation

2.3.4 Anthropogenic pressure on the formation of river outflow

Before 1935, when systematic monitoring of the water outflow in the area of the present day Nature Park began, such outflow was presumed to be natural. Subsequently, in a period of intensive economic activity, there were some forms of anthropogenic impact causing disruptions of its regime. Such impacts can be divided into two categories:

- Impacts on the drainage area;
- Direct impacts on the river network.

The former category, of impacts on the drainage area, comprises farming and forestry activities, irrigation, construction of buildings and facilities, mining of sand, gravel and building stone, etc. The impact of such factors occurs slowly and gradually; it is difficult to notice and very hard to assess, but is negative all the same.
The latter category, that of direct interference with the revert system, comprises hydrotechnical construction for purposes of irrigation, power generation, water supply, etc. The impact of such interference is plainly visible and of considerable significance, depending on the actual purpose and function of the facilities built. According to their purpose, such facilities are divided as follows:

- Facilities built to regulate and store the water outflow: dams (Kalin and Malak Kalin);
- Water catchments and collectors for hydropower stations and water deviation;
- Water transfer and distribution facilities: Manastirska and Iliyna collector deviations.

The largest impact on the Rila water resources can be attributed to the Beli Iskar and Belmeken dams, even though both are outside the perimeter of the Nature Park, because they are fed by water deviations built within the Park territory: Manastirska and Iliyna. These have a palpable impact on the natural river outflow. Indeed, their purpose is to redistribute the natural river outflow in time and space. These facilities are parts of complex waterworks, the water resources of which are utilized in a complex way.

2.3.5 River water quality

Surveys of the water quality along the valley of the Rilska River are limited in both number and scope. Mountain waters, in general, have a low mineral content; they are very soft and rich in oxygen. On the basis of a comparative analysis of samples taken separately from the Iliyna and Rilska Rivers, at different altitudes above and below their point of confluence, the following conclusions can be made:

- In its upper course, the Iliyna River shows lower oxidizability and higher nitrogen content in the form of nitrates, making it possible to consider the river water unpolluted with biological substances (Fig.5). A sample taken at Brichebor shows a slight increase in oxidizability and decrease in nitrogen content, evidence of a certain level of organic pollution – possibly from stockbreeding farms along the river valley. Still, water pollution is relatively low, as can be seen from a comparison with the admissible pollution norms. Pursuant to Ordinance # 7/08.08.1986 of the Committee for the Protection of the Environment, regarding the quality of surface waters (SG, # 96/1986), the admissible pollution norms for Category 1 surface waters (as in RMNP) are as follows: permanganate oxidizability: 10 mg/dm³; total hardness: 7 mg eq./dm³; NO_3: 5 mg/dm³; PO_4: 0.2 mg/dm³.

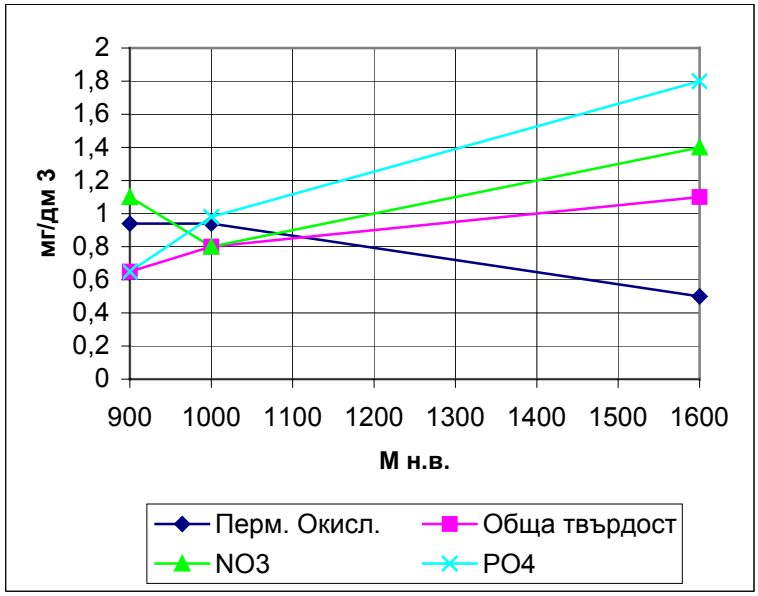

Fig. 5: Values of some basic indicators of the quality of waters of the Iliyna River by altitude zones

- Samples taken from the Iliyna River at places of different altitude along its course show more or less the same results as with the Rilska (Fig.6). There is a certain increase of the nitrogen content downstream of Rila Monastery;

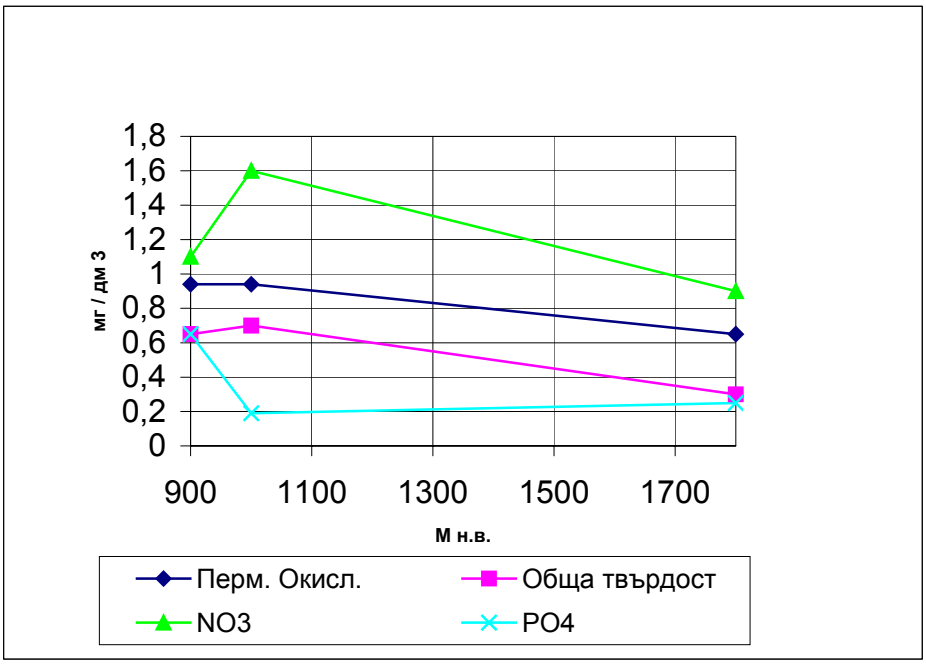

Fig. 6: Values of some basic indicators of the quality of waters of the Rilska River by altitude zones

- After the confluence of the two rivers the results are not essentially different from the upper parts (Table 9).[2]

Table 9. Values of the more characteristic indicators of the quality of river waters at the monitoring stations

#	Station	Permang. oxydation	General hardness	NO3	PO4	Debris (hard particles)
1.	Iliyna River at confluence into River Radoivichka (1600m asl)	0.5	1.1	1.4	1.8	10
2.	Iliyna River at Brichebor (1,000m asl)	0.94	0.8	0.8	0.98	10
3.	Rilska River at Tiha Rila (1,800m asl)	0.65	0.3	0.9	0.25	10
4.	Rilska River downstream of Rila Monastery (1,000m asl)	0.94	0.7	1.6	0.19	10
5.	Rilska River downstream of Brichebor (900m asl)	0.94	0.65	1.1	0.65	20

[2] All samples were taken on October 22nd, 2001, during the low-water season, which affects the results and tends to show higher values of organic pollution.

The above-cited findings show that, as a whole, the waters within the territory of Rila Monastery Nature Park are clean. There are no major sources of pollution with biological or chemical waste in the two major rivers' combined drainage area. Biological pollution from the sewage collectors of populated places is insignificant owing to the very small amount of sewage waters discharged.

2.3.6 Hydrobiology

There are, thus far, no comprehensive studies that establish the current all-round hydrological status of the territory of Rila Monastery Nature Park. The data presented below were collected prior to 1997 and apply mostly to some groups of invertebrates encountered in Ribni, Smradlivoto and Suhoto Lakes. The following data exist regarding the groups of invertebrates and their spread in the lakes of the area:

- The *testaceous amoebas* group, represented in RMNP by 35 to 40 separate species, or 70% of all species encountered in the lakes of Rila Mountain;
- The *plankton rotatoria and crustaceans* group – 15 to 20 species, 15-16% of all encountered in the lakes of Rila Mountain;
- The *ephemeroptera and plecoptera* group – 14 species, 58% of all encountered in the lakes of Rila Mountain;
- The *leeches* group – 2 out of 3 groups encountered in Rila Mountain.

Of the invertebrate fauna inhabiting the rivers and brooks there are scientific data solely about the simulidae group, represented in the Rilska River by 28 species, 71% of all species of that family encountered in the lakes and rivers of Rila Mountain.

2.4 Soils and soil formation processes

2.4.1 Soils

Pursuant to the Comprehensive Soil, Climate and Vegetation Zoning Plan of the Republic of Bulgaria, RMNP falls in the medium and high-altitude zone of Rila sub-region of the Thracian forest vegetation region.

There are some complex soil formation processes taking place in the territory of the Park, determined by the complex impact of a variety of abiotic and biotic factors, subordinated to an altitudinal (vertical) zoning pattern. All types of soils encountered in the Park are of the metamorphous class of Cambisols. Depending on the altitude, all three types of that soil class are represented in RMNP: brown forest soils, mountain-forest dark soils and mountain-grassland soils. The medium forest vegetation zone comprises the lowest reaches of the Park (ca 800m asl) and extends upwards to some 2,000 m. The dominant soils in that zone are brown forest soils and mountain-forest dark soils, with the latter spreading still higher, towards the dwarf-pine sub-zone and the sub-alpine pastures. The high-mountain forest-vegetation zone comprises the highest parts of the mountain, at altitudes over 2,000m asl, and is dominated by mountain-grassland soils, which cover the alpine pasture zone.

Brown forest soils (Cambisols)

These are situated in the 800 to 1,600-1,800-meter altitudes and are one of the most common types of soil. Their profile includes all genetic horizons: A, B and C. The thickness of the dead vegetation cover on the forest floor varies from 3 to 10 cm; the humus accumulation horizon is poor – 5 to 25 cm; the illuvial horizon is between 80-100 cm and is not of sufficient density. Horizon C consists of rock fragments mixed with other, finer weathering products. Soils of this type are light to medium-weight, highly porous in texture and water-permeable. They are divided in two sub-types: light and dark.

The light-brown forest soils are characteristic of lower altitudes, where they cover drier and more exposed slopes. At higher altitudes, towards the upper limit of the forest-soil area, wooded, shaded and more humid mountain slopes are dominated by the dark-brown forest soils, which determine the higher timber productivity of forests growing on them.

Mountain-forest dark soils (Umbric Cambisols)

These are located at altitudes between 1,600 and 2,000-2,200m asl. With them, too, the soil profile comprises all three horizons: A, B and C. The dead-vegetation forest floor cover is ca. 10+ cm; the A-horizon is over 30 cm; the B-horizon, between 0.5 and 1 m in thickness. These soils have a larger humus content (7-10%), which gives them their dark-brown color, and a pH reaction of 4.0-5.0.

Mountain-grassland soils (Molic Cambisols)

This type of soil is common at altitudes of 2,000-2,200 to 2,500 m and is formed at very harsh climatic conditions. They have a tendency of forming a peat layer. The grassy vegetation supplies large quantities of organic matter, which, at high humidity and low temperatures, decomposes and mineralizes very slowly. Depending on the terrain and the moisture content, these soils become waterlogged or, alternatively, trigger processes similar to the chernozem soil development process. The soil profile is incomplete, with the A-horizon being of great depth and density, while the B-horizon is about 10 cm or less. The mountain-grassland soils have a great fertility potential, yet the abundance of nutrients are, most often, in a form difficult for plants to absorb. The soil moisture is sufficient, but the soil aeration is inhibited. For this reason, these soils support mostly grassy and shrubby communities. They have an acid reaction, pH = ca. 4.5.

At 2,500m asl there dominate mountain-grassland soils in combinations with various primitive soils, bare rocks and screes.

2.4.2 Soil erosion

In the territory of RMNP, erosion processes are observed mostly at higher altitudes; above 1,800-2,000 m. Surface (topsoil) erosion processes are most visible in the areas of hydrotechnical facilities (Tiha Rila, Elevation 2000 along the Iliyna River, along some stretches of the road to Kalin Dam, etc.). In forested areas, there is mostly plane erosion in coniferous forests and the partly represented forests of the reconstruction class: winter oak, beech, hornbeam, birch, alder, aspen and others, of fifth bonity and density up to 0.5.

Terrains affected by erosion occupy an insignificant proportion, only about 1.3% of the total area of RMNP. Forest erosion is largely under control.

Challenges as a result of human pressure appear at places of larger concentrations of the visitor flow: along trails, around buildings and facilities (tourist-induced erosion); as a result of economic activities: overgrazing of livestock, badly maintained forest roads, clear cutting of forests followed by prolonged periods of regeneration; building of hydrotechnical facilities and power lines, etc. Such processes with a considerable degree of intensity are observed largely between the point of confluence of the Iliyna and Rilska Rivers and the western Park boundary (the Kalin River Valley).

3.0 Biological attributes

The biological characterization of the territory of RMNP provides information about the biological diversity preserved within it: habitats, communities, as well as wildlife species (plants, animals and macrofungi). The conservation status of species and habitats has been assessed on the basis of both nationally and internationally recognized criteria; it has been determined on the basis of whether these are found to be rare, endemic, relict, protected under national legislation, included in Red Lists or otherwise listed for protection as endangered on a European scale (on the lists of CORINE, BirdLife International, the annexes to the Bern and Bonn Conventions, the EC Directive on Birds or Directive of Habitats), or on the IUCN List of Globally Endangered Animals, Plants and Mushrooms.

3.1 Ecosystems, habitats and communities

3.1.1 Ecosystems

Forest-type ecosystems or parts thereof are situated at altitudes between 800 and 2,200 m in the Park's territory and occupy about 70% of its total area. Located in the lowest altitudes are a beech forest ecosystem, dominated by beech (*Fagus sylvatica*); riverine ecosystems of deciduous forests with an annual leaf cycle; ecosystems based on gray alder (*Alnus incana*), as well as mixed forest ecosystems made up of beech, common hornbeam (*Carpinus betulus*) and water hornbeam (*Ostrya carpinifolia*). Parts of ecosystems of xerothermic oak forests are situated at altitudes higher than the beech (altitudinal inversion), the Rila oak being the dominant species there. Such altitudinal inversions in both types of ecosystem can be explained by the presence of a practically stable atmospheric inversion observed throughout the territory. At the top tier of this group of forest ecosystems is a system made up of beech and common fir (*Abies alba* subsp. *alba*) and of King Boris's fir (*Abies borisii regis*). The ecosystem group of coniferous forests (whether homogeneous or mixed) occupies the 1,300 to 2,200 meter altitude zone. It is made up of spruce (*Picea abies*), Macedonian pine (*Pinus peuce*), common fir (*Abies alba* subsp. *alba*), Scots pine (*Pinus sylvestris*). Small tracts of forest have been found made up exclusively either of spruce, or of Macedonian pine, or of Scots pine. Depending on altitude, transitional types of ecosystems may be formed with different combinations of dominant species: mixed spruce and common fir; mixed Scots pine and Macedonian pine; mixed spruce and Macedonian pine, as well as mixed spruce and beech forests. The entire group of ecosystems belongs to the natural vegetation.

Secondary (derivative) ecosystems and fragments thereof replace natural forests destroyed by natural or man-made causes: tracts vacated by spruce or Scots pine are taken over by ecosystems dominated by aspen (*Populus tremula*); by birch (*Betula pendula*) or hazelbush (*Corylus avellana*); while destroyed spruce forests along the riverside terraces give way to ecosystems dominated by gray alder (*Alnus incana*).

Ecosystems of the treeless alpine zone are situated at altitudes of 2,200-2,500m asl and occupy about 20% of the Park's territory. The structure-determinant species in those ecosystems is the dwarf pine (*Pinus mugo*). Depending on the terrain, exposure, and water availability, this ecosystem may also include species like green alder (*Alnus viridis)* and Waldstein's willow (*Salix waldsteiniana)*. This ecosystem is entirely made up of rooted vegetation. The secondary (derivative) ecosystem related to it is made up of Siberian juniper (*Juniperus sibirica*) and, now more often than not, *Chamaecytisus absinthioides*, which has typically replaced communities of *Festuca valida*.

The ecosystem of grassy communities is mostly based on perennial cereal grasses: *Sesleria comosa*, *Festuca riloensis*, *Agrostis rupestris*, and others. A specific element of that ecosystem is the zone of calciphilic vegetation, represented by species like *Elyna bellardii*, *Carex kitaibeliana*, various species of dwarf willow (*Salix retusa*, *Salix reticulata*, *Dryas octopetala*, a.o.). Another specific element of this ecosystem is the zone of peat-bogs, all at different stages of their development, dominated by sour sedges (*Carex* sp.), sphagnum mosses (*Sphagnum* sp.), as well as cowslips (*Primula deorum* and *Primula farinosa*). In terms of plant evolution, it is not impossible that this type of ecosystem component has evolved in place of eutrophied high-mountain lakes.

The pond and lakeside type of ecosystem is represented by 26 mountain lakes, all of glacial origin and with similar characteristics of the surrounding phytocenoses: from acidophilic grasses and small shrubs (*Vaccinium* sp., *Eriophorum* sp., *Juncus* sp., *Salix* sp., etc.).

A feature of the treeless alpine zone is the rock-massif ecosystem. Vegetation in vertical rock faces and outcroppings is made up of different species of saxifrage (*Saxifraga* sp.), *Selene* sp., different kinds of gentian (*Gentiana* sp.); representatives of the geni *Sedum* and *Sempervivum*. A particularly interesting component of that ecosystem is the rock massif made up of two crests along the Riletz ridge: one by the Rubni Lakes cirque and another at Beliya Uley, where the limestone base provides a favorable breeding ground for typical high-mountain calciphilic vegetation.

3.1.2 Habitats

A total of 85 types of habitats have been identified in the territory of RMNP, using the Palearctic Habitats Classification System (Fig. 7). This equals 21% of all habitats identified for Bulgaria through the implementation of the CORINE Program. Compared with the Rila and Central Balkan National Parks, RMNP comprises a larger number of habitats within a smaller area. A list of habitats in the territory of Rila Monastery Nature Park is presented in Appendix 10, stating their conservation significance and status. The distribution of the main types of habitats throughout the territory of RMNP is shown in the Vegetation and Basic Habitats Map.

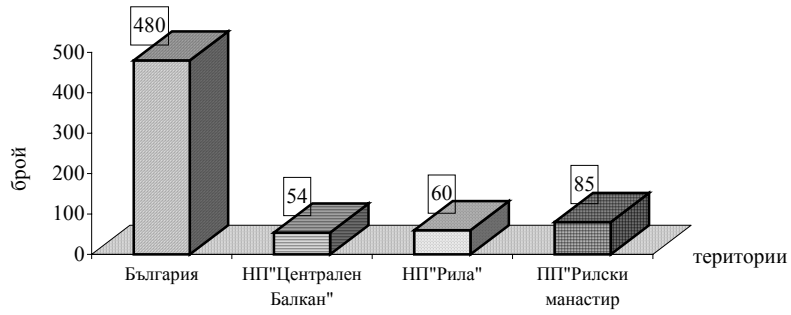

Fig. 7: Proportional distribution of the number of habitats for Bulgaria, Central Balkan and Rila National Parks, and Rila Monastery Nature Park

Depending on the type of vegetation and altitudinal zone, habitats in RMNP are distributed as follows (Fig. 8):

* Forest zone only	37
* Alpine unwooded zone only	34
* Existing in both zones	14
* Total	85

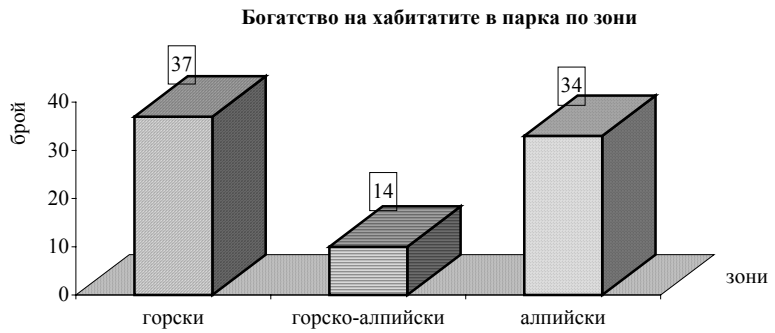

Fig. 8. Wealth of habitats by zones of RMNP – forest habitats, forest-alpine and alpine habitats

The middle and higher altitudes of the forest zone are dominated by the following types of habitats: 42.2413 Moesian-Macedonian spruce (*Picea abies)* forests; 42.723 Rila-Pirin and Macedonian Macedonian pine (*Pinus peuce*) forests; 42.5C2 Rhodope Scots pine (*Pinus sylvestris*) forests; 42.171 Forests of King Boris's fir (*Abies borisii-regis*). At lower altitudes, the following types of habitats are encountered: 41.1911 Southwestern-Moesian beech (*Fagus sylvatica)* forests mixed with (*Luzula sp.)*; 41.1912 Southwestern-Moesian neutrophilic beech (*Fagus sylvatica)* forests; 41.19122 Southwestern-Moesian mixed beech-and-fir (*Fagus sylvatica, Abies alba)* forests. Located above the beech forests is the habitat of Rila oak (*Quercus protoroburoides*). Fragments of the following habitats are represented in the lowest reaches of the territory: 41.763 Heleno-Moesian durmast (*Quercus dalechampii)* forests; 41.7372 Moesian forests of hairy oak (*Quercus pubescens)*, and 41.762 Heleno-Moesian forests of durmast (*Quercus dalechampii)*. The bulk of habitats of species of the genus *Quercus* lie outside the territory of RMNP.

The alpine treeless zone is dominated by the following dwarf-pine habitats: 31.58 Balkan-Rila-Rhodope communities of dwarf-pine (*Pinus mugo)*; 36.318 Oro-Moesian turf meadows based on acidophilic soils (*Nardus stricta*), as well as cereal (*Poaceae*) grasses; 36.391 Oro-Moesian communities of *Festuca paniculata*; 36.3921 Oro-Moesian communities of *Festuca valida* and acidophilic (*Cyperaceae*) grasses; 36.3941 Oro-Moesian communities of *Carex curvula*. Of shrub-like species, the following habitats are also encountered: 31.431 Mountain shrub communities of Siberian juniper (*Juniperus sibirica)*; 31.44 Alpine small-shrub communities of *Empetrum nigrum* and *Vaccinium uliginosum*; 31.4A2 Balkan-Helenic communities of bilberry and blackberry (*Vaccinium myrtillus, V. vitis-idaea)*; 31.4915 Carpatho-Balkan *Dryas octopetala* communities, as well as dwarf-willow (*Salix)* habitats; 36.12211 Alpine snow-drift communities of willow (*Salix retusa-reticulata)* on a limestone bedrock; 36.1112 Alpine snow-drift communities of herbaceous willow (*Salix herbacea)* on acid soil, and others.

Note. In the List of Habitats (Appendix 10) there is mention of four habitats without a code number under the Palearctic classification system. These are marked with "n" and a proposed name and number to denote them according to their place under the Palearctic habitat classification system. These habitats were all identified during field studies carried out in the Park in 2001; the necessary steps should be made to assess and propose them for inclusion in the European List of Habitats. These are the following:

1. Habitat of Amethyst Fescue (*Festuca amethystina L. ssp. kummeri* (G. Beck.) Markgr.-Dannb.) - characterized by a dominance of the Amethyst Fescue. Identified in the area west of Golyam Mechi Peak;.
2. Habitat of *Ranunculus crenatus* W. et K., identified in the area of Ribni Lakes and Mramorets.
3. Habitat of *Alopecurus riloensis* (Hack.) Pawl. Identified in the area of Ribni Lakes and Tiha Rila.
4. Habitat of permanently moisturized rock faces: characterized by the presence of massive exposed silicate bedrock, a step-like structure and very steep (up to 900) incline; by a permanent moisturizing factor (water seeping down the slope) and the development of petrophytic and chasmophytic vegetation. Established in the area of Vodniya Vrah.

3.1.3 Conservation significance and protection status of habitats

Of the 85 identified habitats:

- 28 are listed in Annex I to Directive 92/43 (1992) of the Council of Europe on the Conservation of Natural Habitats. Annex I of the said Directive lists natural habitats of considerable public interest, the conservation of which requires the designation of special protected areas;
- 22 are listed under Resolution # 4 (1996 on endangered natural habitats requiring urgent conservation measures);
- 4 appear on both lists.

It follows, therefore, that 46 (54 percent) of all habitats in the territory of Rila Monastery NP are of conservation significance conforming to EU norms.

At the same time, 30 habitats in RMNP (35% of all habitats within the Park) are listed in Appendix # 1 to Art. 6 (1) 1 of the Biological Diversity Act (2002) and are protected under Bulgarian legislation. Appendix # 1 to BDA lists types of natural habitats for the conservation of which protected zones are designated, while at the same time prioritizing those of them that require urgent protection. Two of the habitats listed in Appendix # 1 do not appear on any European lists, but are protected in Bulgaria due to their specific conditions and national conservation status.

3.2 Vegetation

3.2.1 Cenotic diversity

An assessment of the cenotic diversity in the territory of RMNP was conducted in conformity with the methodology prescribed by the sigmatic school of Brown-Blanqué. The diversity of plant communities is synthesized in 60 associations: European, Balkan, local and Bulgarian endemics; in 25 alliances: European, Balkan, Carpatho-Balkan endemics; and in 17 orders, one of which is a Balkan endemic: *Seslerietalia comosae* Simon 1958, and includes the majority of grassy communities in the high-mountain zone. A total of 16 orders have been identified, of which two represent aquatic vegetation; all of them can be found throughout Europe.

The large altitudinal gradient of the Park's terrain transforms the local climate, enabling the coexistence of four distinct vegetation zones: fir/beech, coniferous forest, sub-alpine dominated by phytocenoses of dwarf pine (*Pinus mugo*), and alpine unwooded, dominated by grassy communities of *Sesleria comosa*, *Festuca riloensis*, *Festuca airoides*, and *Carex curvula*. The lowest altitudes of the Park also contain small tracts of the oak zone. Bits of oak groves (*Quercus protoroburoides*) can also be found above the fir/beech zone. The existing vegetation ranges in diversity from steppe grasses (*Poa bulbosa* and *Festuca valesiaca*) to phytocenoses dominated by boreal species, e.g. blueberries (*Vaccinium uliginosum*) a.o.; from primary, fully preserved phytocenoses and even glacial relics (*Elyna bellardii*, *Carex rupestris* etc.), to severely disrupted, almost entirely secondary phytocenoses of *Rumex alpinus* and the like.

The vegetation diversity in the Park is remarkable also in terms of the connections between phytocenoses and different ecological factors: from hygrophiles to xerothermics, and from chasmophytes to widely spread, common plants.

Among the most common associations in the high-mountain zone are *Agrostio-Seslerietum comosae*, *Lerchenfeldio-Pinetum mugo*, *Diantho-Nardetum strictae*. So far, a detailed syntaxonomic description is yet to be undertaken for the forest zone, but a cursory survey is likely to identify three associations of Macedonian pine (*Pinus peuce*), two of spruce (*Picea excelsa*), two of common fir (*Abies alba, Abies Borisii regis*), two of beech (*Fagus sylvatica*), as well as several oak associations (*Quercus* sp.).

The following territories have been identified as having the highest concentrations of flora and vegetation elements of high conservation significance:

- The Mramorets Ridge and Mramoretski (Mermerski) Lakes;
- The Radovichka River;
- The central and northernmost (highest) portion of the zone around Kalin Dam;
- The Tiha Rila and Ribni Lakes.

Located within the above listed territories are the populations of some 50% of all flora and vegetation elements of conservation significance in RMNP.

3.2.2 Conservation Significance of Plant Communities

An association both endemic and relic is that of *Poonemoralis-Quercetum protoroburoidi*, represented by three unique phytocenoses concentrated almost entirely within the spruce zone. The Rila oak (*Quercus protoroburoides*), which is the principal cenosis-forming agent, is a locally endemic species. Other communities of rare species are those of Macedonian pine (*Pinus peuce*) and Scots pine (*Pinus sylvestris*), in combination with the endemic sub-species of King Boris's fir (*Abies Borisii-regis)*.

Another unique association represented by a single phytocenosis is that of *Angelico pancici-Rheumetum rhapontici*. It includes the Rila violet (*Viola orbelica)*, a species endemic for Bulgaria; *Angelica pancicii*, which is endemic for the Balkan Peninsula; and the extremely rare Rila rhubarb (*Rheum rhaponticum*), a world-endemic species of unique conservation significance. Very rare relic associations in the high-mountain zone are *Salix reticulata- Salix retusa*, identified only in two locations. Those two locations are also home to a host of other very rare and valuable species of high conservation significance for Bulgarian and European flora. Among these is the newly discovered association of *Trollius europaeus* with *Potentilla montenegrina*.

A large proportion of the phytocenoses identified in the Park's territory contain in themselves rare or endangered species that are locally endemic or endemic to the Balkans, along with single specimens or very small populations of *Lilium jankae*, *Anthemis sancti-johannis*, and *Rheum rhaponticum*. These latter species can be encountered most often in phytocenoses of different associations, which requires that efforts for their conservation be spread over a considerable territory. In other cases, the species in question may be dominant for the respective phytocenosis, as is the case with the Rila oak (*Quercus protoroburoides*), located in three separate phytocenoses, each very limited in area.

Two park sections, the Rilets ridge and the Mramoretski cirque, feature extremely well preserved phytocenoses of glacial relics based on limestone rock, best represented in all of Rila within the territory of RMNP. In a broader picture, these relic species can be said to be endemic to Bulgaria, if we discount their token presence in Pirin Mountain. These are communities of *Elyna bellardii*, *Carex rupestris*, as well as phytocenoses including other alpine or boreal species very rare to the Bulgarian flora, such as *Arenaria ciliata*, *Saxifraga androsacea* a.o. In fact, Rila Monastery NP is the southern frontier of the natural distribution of these species and phytocenoses.

Of extreme importance for the quality of vegetation in RMNP is the fact that most cenoses have preserved their structure and composition in a state close to rooted phytocenoses.

Due to the absence of comprehensive and exhaustive research on the subject, the phytocenotic characteristics of the Park's vegetation presented above by no means reflect the full cenotic diversity in the Park's territory; yet, hopefully, it gives an idea of its richness and specifics.

3.2.3 Forest Attributes

General Characteristics

According to the most recent Forest Inventory 2000, the forests and wooded areas in RMNP, not counting those within the Rila Monastery Forest Reserve, amount to 12,704.3 ha. This includes 9,840 ha of forest massifs and 2,864.3 ha of treeless areas. Of the forest massifs, 1,736.1 ha are occupied by dwarf-pine formations.

The most recent forest inventory for Rila Monastery Forest Reserve dates from 1990. According to the 1990 FI, its territory comprises 2,325 ha of forest massifs, 334.8 ha of treeless areas and 1,016.7 ha of dwarf-pine forests. The cited FI contains no data about some parameters like exposure, incline, or altitude for the forest sections or the subsections covered in dwarf-pine. Regarding the territory of the Nature Reserve, the FI provides only a most general description of these parameters, and only in regard to the forest massifs, excluding dwarf-pine formations.

Distribution of forests according to exposure

The exposure determines the dominance and overall distribution of one tree species, community or habitat or another. About 59% of all forests have predominantly northern or largely shady exposure: slopes having a northern or eastern component, 41% occupy sunny exposures: southern or western slopes. (Table 10). For the reserve alone, 50.4 % of all forests have predominantly northern or largely shady exposure, and the remaining 49.4 percent have predominantly southern or sunny exposure.

Table 10: Distribution of timber producing areas in RMNP by exposure

Exposure	N	NE	NW	E	SE	SW	W	S	Total
Hectares	2,674.5	1,393.5	1,093.1	639.5	642.8	682.7	1,491.4	1,222.5	9,840.0
%	27.2	14.2	11.1	6.5	6.5	6.9	15.2	12.4	100

Table 11: Distribution of timber producing areas in Rila Monastery Forest Reserve by exposure

Exposure	N	NE	NW	E	SE	SW	W	S	Total
Hectares	433.7	261.6	375.4	106.5	196.8	295.9	242.4	412.7	2,325.0
%	18.7	11.2	16.1	4.6	8.5	12.7	10.4	17.8	100.0

Distribution of the forest estate by altitude

Almost 56% of the forest massifs in RMNP occupy areas with altitudes between 1,400 and 2,000m asl. This altitudinal zone provides optimum conditions for the development of beech, fir, spruce and Macedonian pine forests, both homogeneous and mixed. About 22% of the Park's forests are located in the lower-altitude zone, up to 1,400m asl, common in which are mostly broad-leaf tree species. The remaining 22%, located at higher altitudes of over 2,000m asl, are mostly coniferous (Table 12). The distribution of forests by altitude in the Rila Monastery Forest Reserve is largely identical to that of forests in the rest of the Nature Park. About 70.6% are located in the 1,400 to 1,900 m altitude zone, i.e. thrive in the best growth conditions (Table 13).

Table 12: Distribution of timber producing areas by altitude in RMNP

Altitude (m)	**Area** (ha)	%	**Altitude** (m)	**Area** (ha)	%
800 - 900	1.1	-	1,701 - 1,800	969.8	9.8
901 - 1,000	18.5	0.2	1,801 - 1,900	876.4	8.9
1,001 - 1,100	210.2	2.1	1,901 - 2,000	736.1	7.5
1,101 - 1,200	472.5	4.8	2,001 - 2,100	566.8	5.8
1,201 - 1,300	597.0	6.1	2,101 - 2,200	466.9	4.7
1,301 - 1,400	826.3	8.4	2,201 - 2,300	868.5	8.8
1,401 - 1,500	1,049.1	10.7	2,301 - 2,400	230.1	2.3
1,501 - 1,600	1,029.7	10.5	2,401 - 2,500	23.1	0.3
1,601 - 1,700	896.3	9.1	2,501 - 2,600	1.6	-
			Total :	9,840.0	100.0

Table 13. Distribution of timber producing areas by altitude in Rila Monastery Forest Reserve

Altitude (m)	**Area** (ha)	%	**Altitude** (m)	**Area** (ha)	%
до 1200	65.6	2.8	1,701 – 1,800	303.3	13.0
1,201 – 1,300	122.4	5.3	1,801 – 1,900	370.1	15.9
1,301 – 1,400	308.6	13.3	1,901 – 2,000	83.9	3.6
1,401 – 1,500	426.8	18.4	2,001 – 2,100	99.3	4.3
1,501 – 1,600	359.6	15.5	2,101 – 2,200	3.3	0.1
1,601 – 1,700	182.1	7.8			
			Total :	2,325.0	100.0

Distribution of the forest estate by incline

The forest massifs in RMNP are typically situated on steep or very steep terrain; about 95 percent of the wooded areas are inclined at 20º or over (Table 14). The existence of centuries-old forest on such slopes is vital as they prevent topsoil erosion and slow down surface water outflow, which in turn prevents torrents and flooding. Indeed, no floods have been recorded in past decades along the Rilska River Valley.

The predominant portion of the Forest Reserve is likewise situated on very steep terrains. Almost 93.4% of all wooded areas within it are inclined at 30º or over, and are therefore largely inaccessible (Table 15).

Table 14: Distribution of timber producing areas by incline in RMNP

	Even ground	Slanting ground	Sloping ground	Steep slopes	Very steep slopes	Total
Incline (º)	0-4	5-10	11-20	21-30	Over 30	
Area (ha)	4.7	43.2	483.4	2,470.1	6,838.6	9,840.0
%	-	0.4	4.9	25.1	69.6	100.0

Table 15: Distribution of timber producing areas by incline in Rila Monastery Forest Reserve

	Even ground	Slanting ground	Sloping ground	Steep slopes	*Very steep slopes*			Total
Incline (º)	0-4	5-10	11-20	21-30	31-40	41-50	50 +	
Area (ha)	-	-	27.3	126.6	868.6	1,139.6	162.9	2,325.0
%	-	-	1.2	5.4	37.4	49.0	7.0	100.0

Types of forest habitats

According to the forest habitat classification system adopted in Bulgaria, geographically RMNP lies within the Thracian forest-vegetation zone, sub-zone Rila. Altitudinally, it is situated in the medium and high-mountain forest vegetation zone.

In terms of the richness or paucity of soils, there are very poor, poor, medium rich and very rich soils in a ratio of 0.5 : 29.3 : 64.6 : 5.6%.

In terms of moisture content, the most common soils are dry, fresh and moist; their percentage in the Park's territory being, respectively, 5%, 89% and 6%. There is an intermediary sub-category under fresh soils: fresh to moist.

Consequently, a predominant proportion of all habitats in RMNP are, most generally, defined as fresh to humid and medium-rich to rich. In such growth conditions, forests are very productive, resistant to diseases and pests and capable of renewing themselves in a natural way.

Distribution of forests by tree species and bonities

The spread and relative distribution of tree species within the territory of RMNP is determined both by vertical (altitudinal) changes in climatic and soil conditions and by factors such as exposure, incline, terrain and the ecological peculiarities and requirements of individual species. Of potential commercial interest are 24 tree species growing in the Park, of which 9 coniferous and 15 deciduous.

However, to complete the picture of arboreal diversity in RMNP, one must also include 11 species represented in small clusters or single specimens throughout the Rila Monastery forests. These are: *Ostrya carpinifolia*, *Acer monspeculanum*, *Sorbus torminalis*, *Sorbus aria*, *Sorbus aucuparia*, wild cherry, *Prunus avium*, *Salix sp*, Rila oak (*Quercus protoroburoides*), wild pear (*Pyrus sylvestris*), yew (*Taxus bacata*), and King Boris's fir (*Abies borissi-regis*). The total number of tree species encountered within the Park, therefore, is 35.

Bearing in mind that there are 109 tree species recorded in all of Bulgaria, this means that 32% of the country's arboreal diversity is represented in Rila Monastery Nature Park.

With some approximation, the percentages of individual species represented in RMNP are as follows: 21.6% beech, 16.7% spruce, 14.6% Scots pine, 12.7% common fir, 6.9% Macedonian pine, 17.4% dwarf pine, 4.6% winter oak, 1.5% birch, 1.3% aspen, 1.1% alder, and 1.6% for all the rest. There is a clear predominance of coniferous tree species, with 68.3 percent over 31.7 percent for the broad-leafs.

The estimated percentage of tree species within the Forest Reserve is as follows: 20.59% beech; 20.33% Macedonian pine; 17.04% common fir; 12.77% winter oak (including locations of Rila oak); 7.64% Scots pine; 2.95% aspen; 1.91% birch; and 1.92% other deciduous trees (hornbeam, alder, elm, sycamore, ash, and willow). Again, coniferous trees have a clear predominance with 60.36% of all three stocks.

Several types of foreign coniferous trees have been introduced into the Park as cultivated forest: Douglas fir, sequoia, larch, Weymouth pine. Together, these account for less than 1% of all forests in the Park.

Typically, tree species in Rila Monastery Nature Park cohabitate in mixed forests, which bears evidence of their naturalness. Thus, of all forests in the Park's territory, 5,730.2 ha are mixed, and 2,107.5 ha are homogeneous, of which 887.5 are pure Macedonian pine forests. It must be noted that the above proportional analysis excludes 1,736.1 ha of dwarf-pine communities because of their specific nature.

The productivity of individual tree species is in direct correlation of the place of habitation. Average bonities are estimated as follows: for beech, 3.0; spruce, 3.2; common fir, 3.0; Scots pine, 3.7; Macedonian pine, 3.5. The average bonity for the forest as a whole is estimated at 3.4, which is a clear indication of favorable growth conditions.

Distribution of the forest estate by age groups

The age of the forest in Rila Monastery Nature Park is directly dependent on the biological peculiarities of the constituent tree species; on the ecological and environmental conditions of vegetation growth; and on the human impact. The longevity of the main arboreal species in RMNP: beech, spruce, common fir, Macedonian pine, oak, Scots pine as well as the favorable conditions for their growth, have enabled the existence of centuries-old forests in the Park's territory. At present, 53.7% of all trees in the Park are aged 100 years or over (FI 2000). However, forest use in the Park's territory over the last century has had its negative impact on its age structure. The commercial over-logging of mature tree specimens in the recent past has inhibited the natural increase in the average age of the forest. While a century ago the aggregate age of forests in what is today RMNP was 103 years, since then it has decreased to 99 years. The distribution of forests and tree specimens per age brackets is shown in Table 16. Approximately ¾ of the forests of the reserve are aged 120 years or over. Here the average age is considerably higher than in the rest of RMNP (Table 17).

Table 16: Distribution of the wooded areas by age categories in RMNP

Age (yrs)	1-20	21-40	41-60	61-80	81-100	101-120	121-140	141-160	Total
Area (ha)	209.2	793.8	423.5	780.4	1,426.6	1,462.8	1,507.2	1,247.0	7,850.5
%	2.7	10.1	5.4	9.9	18.2	18.6	19.2	15.9	100.0

Table 17: Distribution of the wooded areas by age categories in Rila Monastery Forest Reserve

Age (yrs)	21-40	41-60	61-80	81-100	101-120	121-140	141-160	161-180	181-200	201 +	Total
Area (ha)	34.9	167.4	144.2	48.8	153.4	434.8	369.7	458.0	372.0	141.8	2,325.0
%	1.5	7.2	6.2	2.1	6.6	18.7	15.9	19.7	16.0	6.1	100.0

Distribution of the forest estate by age groups

Timber resources are the products of a favorable combination of factors, most of which were described above: age, habitat, bonity, altitude, exposure, and terrain. The forests of Rila Monastery Nature Park hold at present an estimated 2,267,195 m³ timber biomass. Of that amount, 62.5% is in forests aged 100 or over, while 37.4% is in forests up to 100 years-old. Table 18 shows the distribution of timber resources by age category.

Table 18: Distribution of timber resources by age category

Age (yrs)	1-20	21-40	41-60	61-80	81-100	101-120	121-140	141-160	Total
Resource (m³)	4,220	122,115	80,970	226,165	414,545	499,175	503,685	416,320	2,267,195
%	0.2	5.4	3.6	10.0	18.3	22.0	22.2	18.3	100.0

The average timber resource for the entire Park territory is thus 250 m³/ha, and the average annual growth, 2.72 m³/ha.

Table 19: Distribution of forests by age and timber resource in Rila Monastery Forest Reserve

Age (yrs)	21-40	41-60	61-80	81-100	101-120	121-140	141-160	161-180	181-200	201-220	Total
Resource (m^3)	1,750	16,680	28,920	14,710	32,720	98,820	96,600	77,340	43,990	2,300	432,830
%	0.4	3.8	6.7	3.4	7.6	22.8	22.3	17.9	10.2	4.9	100.0

On the whole, forests reach their peak in growth between 121 and 140 years of age; this fact is determined by some physiological peculiarities of tree species growing in this area. The average timber resource within the Forest Reserve is 186 m^3/ha.

Sanitary condition of forests and description of more common types of forest by tree species

The peculiarities of climatic conditions, the natural structure of forest ecosystems and the relatively limited human impact in the course of many centuries, have enabled the formation, in the territory of what is today RMNP, of high-quality, high-yield forests of exceptional ecological significance, not least for water conservation, erosion control and human recreation. The use of forests in the Park has had its impact on the state and condition of individual ecosystems, causing changes in their age structure, and to a certain extent, in their sanitary condition. An evaluation of their sanitary condition was made using the ICP "Forests" during the Rapid Ecological Assessment conducted in summer 2001. The forests in RMNP have been deliberately set on fire for purposes of clearing grazing grounds. Traces of old forest fires can be found all over the territory.

1. Alder forests

These forests form large strips along the valley of the Iliyna River, between elevations 1,015 and 1,500m asl. Two forest habitats have been identified within these limits:

a) 44.217 Rila-Rhodope gallery forests of white alder (*Al. Incana)*;
b) 31.6115 Rila-Rhodope sub-alpine communities of green alder (*Al. viridis*).

The communities investigated are unique for the area and are of considerable embankment and erosion-control significance.

The health condition of *Al. Incana* is good overall, characterized by a very high growth rate, reaching an average 11.5 to 18.5 cm in diameter and an average height of 16-17 m. Between 55 and 90% of all tree specimens are free of damage, whether biotic or abiotic. Only about 2.5 to 7.7% of all trees are either drying or dry (Appendix 11). The main causes of degradation are: mechanical damage to the tree trunks, illegal cutting down (poaching) of individual tree specimens, or necroses, drying up of the tree top as a result of fungal infection or destruction of the leaves by insects.

In habitat 31.6115 (Rilo-Rhodope communities of *Al. Viridis*), the health condition of both the alder and the willows is unsatisfactory. Between 20 and 28% of all trees are either drying or dry, largely due to mechanical damage and, to a lesser extent, to necroses and tumors of pathological or entomological origin.

2. Beech forests

Beech forests occupy the lower portions of the park territory, at altitudes between 850 and 1,500m asl. They are most commonly mixed with aspen, hornbeam, sycamore and birch, but the share of secondary tree species never exceeds 10%. The forests are of both seed and sapling origin, and are aged 30-40 to 150-200 years. The four forest massifs investigated are largely characteristic of the health condition of the beech forests in the territory of RMNP (Appendix 11). The health condition of beech forests, therefore, can be assessed as satisfactory to good. The trees show a very good growth rate, yet instances of mechanical damage, defoliation or rotting are not uncommon. Between 2.5 and 9.6% of all trees in the sampling sites are dry or drying, or broken as a result of heavy snow. The most common damages are thus mechanical caused either by the heavy, wet snow typical of these parts, or by the extraction of timber logged in the respective park section in the past. There are significant traces of defoliation, perforation and/or browning of the leaves, caused by the pest *Rhynchaenus fagi* L., of which there was a calamitous invasion in 2001, causing large-scale necroses and early falling of the tree leaves. If the scourge persists over a number of years, the wholesale drying of trees cannot be ruled out. Beech forests occupy a large portion of the territory of the forest estate in RMNP and play an important role in reinforcing slopes, riverbanks, in erosion control and all-around protection.

3. Oak forests

Oak forests are limited in range in the territory of Rila Monastery Nature Park. Characteristically they are formed at relatively high altitude, along the boundary between beech and coniferous forests, which is due to the existing temperature inversion and the Mediterranean influence. Tracts of oak forest were surveyed in the representative of habitat 41.7642 Forests of Rila Oak (*Q. protoroboroides*). The health condition of tree specimens and habitats is satisfactory to good (Appendix 11). Between 10 and 17.5% of all trees suffer from drying of the treetops, or are drying or dry. At places, two very distinct generations of trees co-existing in the same are: some aged 200 years or over, with a density of 3-4 specimens per hectare, still viable and with trunk diameters ranging between 50-120 cm; and others, aged 70-100 years, with trunk diameters between 30-35 cm, of mixed seed or sapling origin, more viable than the former and with less sustained visible damage. In dry or drying trees, damage by the fungi and leaf-cutting insects are defined. The oak forests are unique for those specific conditions, and are viable enough for their age but during the field studies almost no regeneration processes were established.

4. Scots pine forests

Scots pine forests occupy mostly southern, southwestern or southeastern slopes at altitudes between 1,500 and 2,024m asl. The reasons for that are the highly

photophilic character of this species and the existence of a temperature inversion. The plots investigated belong to the habitat 42.5C2 Rhodope forests of Scots pine (*Pinus sylvestris* L.), they occupying relatively small areas due to the highly articulated terrain, causing a rapid alternation of exposures. The health condition of the studied plots was found to be very good to good. The Scots pine shows great vitality, a very good growth rate and insignificant damages, mostly mechanical. Only about 2.5 to 7.6% of all trees were found to be drying or dry, and mostly as a result of heavy snow in Radovichka locality. Pathological deformities or diseases are extremely rare and insignificant. The construction of the elevation 2000 canal has so far caused no significant impact on the Scots pine forests around it. However, the tendency towards draught, manifested in recent years, may increase that negative impact in the future.

5. Mixed coniferous (spruce-and-fir) forests

Spruce and fir constitute the most common forest vegetation in the area surveyed. They occupy the altitudinal zone between 1,450 and 1,800m asl. Up to an altitude of 1,600 m these forests are mostly mixed, with predominance of the common fir (*Abies alba*), and at higher altitudes, with a predominance of the spruce (*Picea abies*). These can be referred to habitats 42.1613 Western Rhodope fir forests; 41.19122 Southwestern-Moesian beech-and-fir forests, and 42.2413 Moesian-Macedonian spruce forests (Appendix 11). The spruce and fir forests are quite stable, adapted to widely different soil conditions (mostly brown forest soils, rich and fresh to moist).

The habitats of common fir were found to be in satisfactory to good health (Appendix 11). One reason for the frequent and substantial damages found in these forests is the high sensitivity of the common fir to severe draughts (quite common since 1982), which caused the wholesale withering of the species in almost its entire natural range. In the surveyed plots the spread of woodworms are relatively limited. Damages by *Pucciniastrum cariophillacerum* (D.C.) Schr. are quite common. In these forests, serious attention should be paid to the threat of snow drifts and damages as a result of heavy snow, which may cause the breaking of trunks and limbs, the knocking down of individual trees or even the clearing of spots amid the forest. In such forest clearings, regeneration is difficult and slow, and mostly involves aspen, willow and, only in part, spruce and fir.

The spruce (*Picea abies*) is in much better health condition both in mixed forests up to 1,600m asl, and also in homogeneous spruce forests. The spruce trees show a very good natural growth rate, high resilience and vitality. Drying and dry specimens are rare and far apart, and range between 0 and 11.3% of all trees. Dead trees are mostly knocked down by windfalls, or snow drifts, partly assisted by rotting of the roots. As a whole, spruce forests were found to be in excellent health, regardless of altitude.

6. Macedonian pine forests

These forests trace the upper tree line within the Park, at altitudes between 1,800 and 2,100m asl. In such harsh climatic conditions, the Macedonian pine has managed to form healthy, fast-growing forests, as clearly evidenced at the six sites surveyed (Appendix 11). The Macedonian pine grows in homogeneous or mixed communities

with *Picea abies* or *Pinus sylvestris.* The health condition of tree specimens in these communities is good to very good. Damages by pathogens are insignificant. Damage by snowdrifts and avalanches have also been noted. The fallen trees are then attacked by bugs, which, however, do not constitute a significant threat to healthy Macedonian pine specimens. As the species defining the upper tree line, the Macedonian pine has an exceptional ecological, anti-erosion and snow-holding effect.

7. Dwarf pine communities

Dwarf-pine communities form communities of exceptional ecological significance. The communities surveyed in Mramorets (Mermera) locality evidence the very good health, steady growth and sustainable development of these communities.

Territories affected by forest fires

In the year 2000, part of the territory of RMNP was affected by forest fires, notably in the watershed of the Eleshnitsa and Djambevska Rivers, and in part along the upper current of the Kalin River. Some 9,000 ha of forests and high-mountain pastures were affected in all. The affected forests occupy area with altitude between 1000-1100 and 2000m asl. The forests that were partly damaged or completely destroyed as a result of the forest fire were coniferous forests of Scots pine at lower altitudes, and mixed forests of Scots pine, spruce and common fir at higher altitudes, in areas of southern exposure, and those dry, rocky and inaccessible (Appendix 12).

3.3 Flora

3.3.1 Higher plants

The range and diversity of higher plant taxa

The total number of higher plant taxa established so far within RMNP is 1400, which constitutes 38.88 percent of the higher flora in all of Bulgaria. For example, the Park is home to 2 species of *Lycopodiophyta*, 5 species of *Equisetophyta*, 34 species of *Polypodiophyta*, 10 of *Pinophyta*, and as many as 1,349 species of *Magnoliophyta*, of which 250 of monocotyledonous and 1,099 species of dicotyledonous plants. Of the separate plant families, best represented in the Park are the families *Asteraceae* (152 species); *Poaceae* (104 species); *Rosaceae* (103 species); *Caryophyllaceae* (94 species); *Fabaceae* (80 species), a.o. On the other hand, best studied are the *Pinophyta* and *Polypodiophyta.* Also well studied are are the *Pinophyta* (including all conifers) and the *Polypodiophyta*, as well as species of the families *Liliaceae*, *Primulacae*, *Saxifragaceae*, and a few others. On the other hand, the families *Poaceae* and, to a lesser extent, *Asteraceae* are as yet insufficiently studied in terms of the full range of species represented in RMNP. The numbers of species of higher plants in Rila and Central Balkan National parks and in Rila Monastery Nature Park are shown in Fig. 9 below:

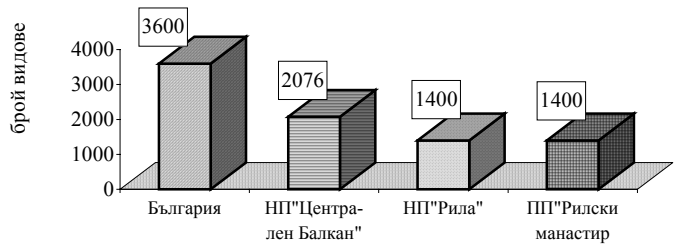

Fig. 9 The proportional ratio between numbers of higher plant species in Bulgaria, Central Balkan and Rila National Parks and Rila Monastery NP

The richest diversity of plant species can be found in the coniferous and sub-alpine zones: 1,000 to 1,200 identified species. The greatest wealth of plant species has been established in the higher reaches of Rila Monastery Forest Reserve, the Iliyna, Radovichka and Tiha Rila River Valleys, and at the piedmont to Kalinin Peak, just above the village of Pastra. Conversely, poorest in plant diversity is the alpine treeless zone, which is home to some 250-300 identified species.

From a phytogeographic perspective, the flora in Rila Monastery NP is made up of some 50 types of components:

1. **Eurasian component:** ca. 158 species. Examples include *Stipa balcanica*, *Artemisia eriantha*), etc.;
2. **Circumboreal component:** 135 species. This is the group of glacial relics. Typical examples: the presence of several species of the genus *Saxifraga*; several species of willow (*Salix herbacea*, *Salix reticulata* and *Salix retusa*), and of *Dryas octopetala*;
3. **The Central-European component:** 125 species. Typical examples are the species of the genus *Luzula*; and also the spread of *Hypericum richerii* and *Veronica bellidioides*, in the alpine unwooded zone;);
4. **Mediterranean component:** - 307 species. The most common species in the territory of RMNP is the Balkan (*Chamaecytisus absinthioides*);
5. **Endemic component: local, Bulgarian and Balkan endemics.**

The great diversity of florogeographic elements provides evidence of the connections between the Park flora and more or less geographically remote territories, as well as of the Park's significance as an ecological corridor for maintaining genetic exchange between plant populations.

Conservation significance and status of higher plants

The total number of endemic taxa is 123 (6 locally endemic, 27 endemic to Bulgaria and 90 to the Balkans). The widest-spread locally endemic taxon in the territory of RMNP is that of the Rila cowslip (*Primula deorum*). Of the species endemic to Bulgaria most common in the Park are *Jasione bulgarica*, *Alopecurus riloensis*, *Silene roemeri*, and *Viola orbelica*. And lastly, the best-represented Balkan endemics are *Geum bulgaricum*, *Aquilegia aurea*, *Armeria rumelica*, *Crocus veluchensis*, *Dianthus microlepis* and some others.

Appendix 13 contains a list of the higher plant species of conservation significance in Rila Monastery Nature Park.

Relic species in the Park'e territory number 110 in all (77 glacial and 33 Tertiary). This means that no less than 7.86 percent of all plant species represented in the Park are relics. Glacial relics constitute 5.51 percent of the Park's higher flora. Representative species are *Soldanella pusilla*, *Primula minima*, the dwarf pine (*Pinus mugo*) a.o. Tertiary relics make up 2.35 percent of the higher flora. Particularly widespread are the common juniper (*Juniperus communis L.*), spruce (*Picea abies*), Macedonian pine (*Pinus peuce*), King Boris's fir (*Abies Borisii-regis*) and the locally endemic Rila oak (*Quercus protoroburoides*).

Of the species of higher plants identified in the territory of RMNP, 57 are protected under the Biological Diversity Act. Eleven of these are listed in Appendix # 2 regarding plant and animal species, the conservation of which requires designated protected areas. Fifty-seven species are included in Appendix # 3, regarding protected wildlife species throughout the entire country. Listed in the Red Book of Bulgaria are 96 species encountered in RMNP: 9 endangered and 87 rare, together making up 12.84% of all wildlife species listed in that book.

European List (E/ECE/1249), 6 species; the Bern Convention, 6 species, and the CITES List, 24 species. (Fig. 10).

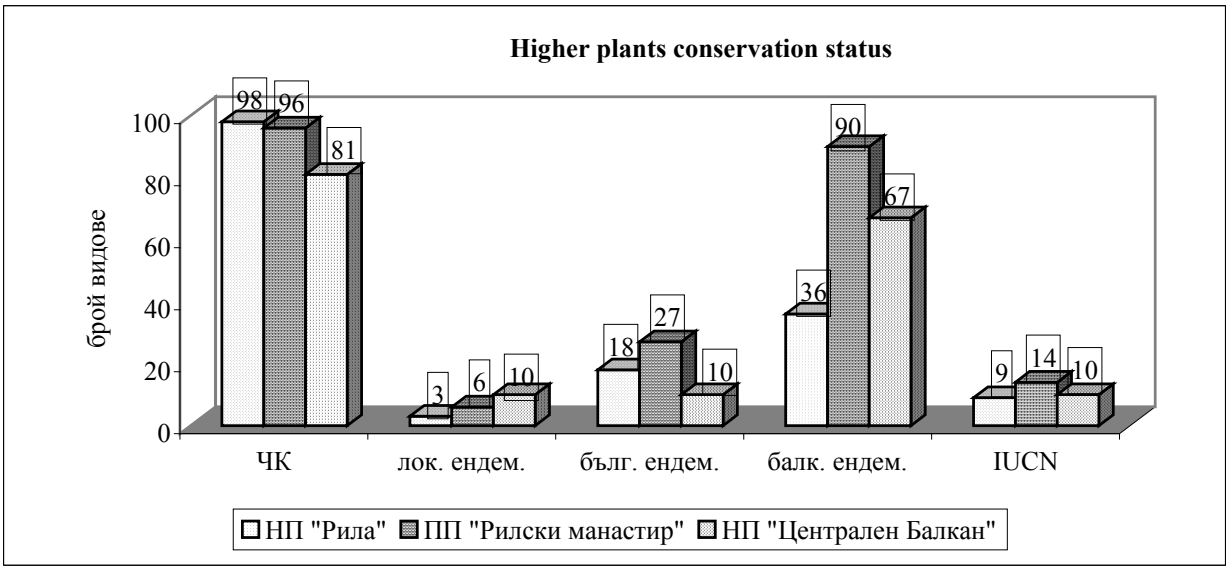

Fig. 10: Comparative distribution of higher plant species of conservation significance in Rila National Park, Rila Monastery Nature Park and Central Balkan National Park. Categories: Red book, Local endemics, BG endemics, Balkan endemics, IUCN List

Significant concentrations of rare, endangered and other species have been identified in the riverside communities of gray alder (*Alnus incana*), along the Rilets ridge and in the Mramorets cirque amid communities of dwarf pine (*Pinus mugo*) and in limestone terrains, as well as in the territory of Rila Monastery Forest Reserve. The latter location is home to the largest known community of King Boris's fir (*Abies alba* subsp. *borisii-regis*), and also to the main community of Rila oak (*Quercus*

protoroburoides). The locations of three rare species, *Verbascum jankeanum*, *Cicerbita plumeri* and *Ligularia glauca*, have not been confirmed.

3.3.2 Mosses

The range and diversity of moss taxa

A total of 164 species of moss have been identified in Rila Monastery NP, which account for 58 percent of all moss species known so far in Rila Mountain. In terms of taxonomic classification, 78 (37%) of all geni and 39 (49%) of all families of the bryoflora in Bulgaria are represented in the territory of the Park. Thus, there are 24 species of class *Marchantiopsida*, and 125 species of class *Bryopsida*. Of the moss geni, the most numerous are genus *Sphagnum* (peat mosses), represented by 13 species; genus *Bryum*, 9 species; *Grimmia*, 7, and *Brachythecium*, 5 species. The numbers of moss species in Rila and Central Balkan National Parks and in Rila Monastery Nature Park are shown in Fig. 11.

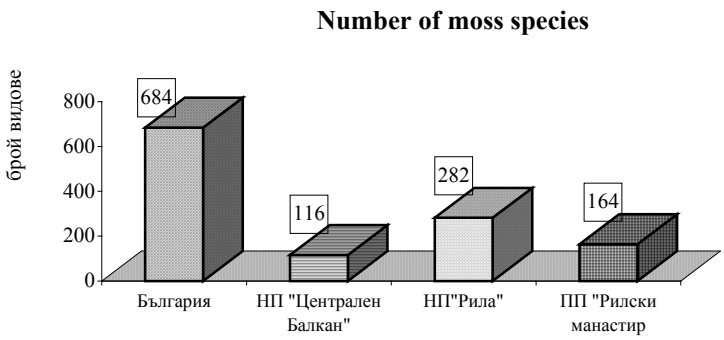

Fig. 11: Comparative distribution of moss species of conservation significance in Bulgaria, Central Balkan and Rila National Parks and Rila Monastery Nature Park

The diversity of moss species encountered in Rila Monastery Nature Park and their conservation significance are shown in Appendix 14.

The species *Grimmia unicolor*, rare to Bulgaria, was first identified in Rila Mountain.

Soil mosses of the geni *Polytrichum*, *Barbilophozia*, *Tortula*, *Tortella* and the widespread *Ceratodon purpureus* grow in terrains damaged by erosion or in small spots between clumps of cereal grasses. Rock-growing mosses are represented by the xerophyte species of the geni *Grimmia* and *Racomitrium*. In old, humid coniferous forests, rotting timber provides breeding ground for species of the geni *Dicranum, Lophozia, Lophocolea, Jungermannia*, as well as the individual species *Herzogiella seligeri, Blepharostoma trichophyllum, Hypnum cupressiforme, Brachythecium velutinum*. Epiphytic mosses are represented mainly by the genus *Leucodon sciuroides* and some species of the geni *Orthotrichum* and *Porella*. A frequently encountered epiphyte growing on beech trunks is *Frullania dilatata*.

The largest quantities of mosses have been discovered along and inside the beds of the Rilska and Iliyna Rivers and their numerous tributaries, which at places flood the adjoining areas, feeding moisture into marshes and peat bogs. These are appropriate habitats for hygro- and hydrophilic mosses; representative geni are *Drepanocladus, Calliergon, Calliergonella, Philonotis, Hygrohypnum, Rhynchostegium*, and *Scapania*. Species of genus *Sphagnum* usually dominate the forest floor, covering some 70 to 100 percent of the ground.

Conservation significance of moss species

Four species of moss of high conservation significance have been identified in the territory of Rila Monastery Nature Park:

1. *Lophozia ascendens* (class *Marchantiopsida*). A species quite rare for Bulgaria, listed in the Red Book of European Mosses and the ECCB '95 List of rare Species;
2. *Schistidium agassizii* (class *Bryopsida*). A rare species for Bulgaria.
3. *Grimmia unicolor* (class *Bryopsida*). A rare species for Bulgaria.
4. *Anthelia juratzkana* (class *Marchantiopsida*). A rare species whose range throughout Bulgaria is insufficiently studied.

Literary sources identify around Rila Monastery the locations of two more rare, endangered and insufficiently studies mosses in Bulgaria: *Porella baueri* and *Taxiphyllum wissgrillii.* Their exact range is hard to confirm, for lack of accurate and exhaustive records of the locations where they have been thus far found.

3.3.3 Medicinal plants (medicinal herbs)

The range and diversity of medicinal plant taxa

A total of 203 species of medicinal plants, whether of commercial significance or for personal use (Fig. 12), have been identified in the territory of Rila Monastery NP. Their number accounts for 28 percent of all medicinal plant species known in Bulgaria and used in both official and traditional (homeopathic) medicine. Of these, one species is lichen, and the remaining 202 species are higher plants. Best represented in the Park's territory are the families *Asteraceae* (by 16 species), *Rosaceae* (15 species), *Lamiaceae* (11 species) and *Scrophulariaceae* (6 species).

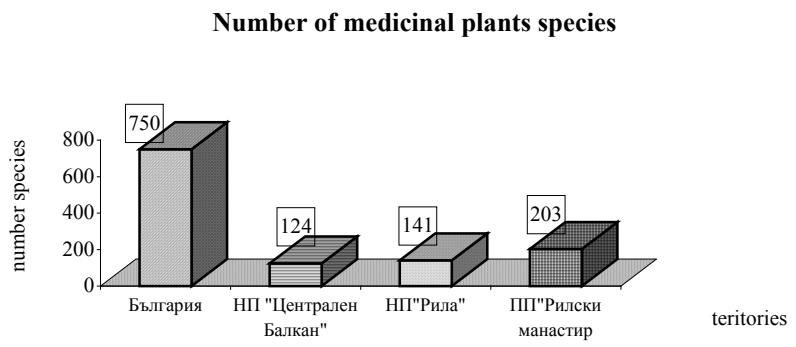

Fig. 12: Proportional distribution of medicinal plant species in Bulgaria, Central Balkan and Rila National Parks, and in Rila Monastery Nature Park

The diversity of medicinal plant species encountered in Rila Monastery Nature Park during the Rapid Ecological Assessment made in 2001, and their conservation significance are shown in Appendix 15.

The greatest diversity of medicinal plants (up to 100 different species) has been recorded in the Iliyna River Valley, in communities of Gray Ader (*Alnus incana)*; in the Kalinin Peak area above the village of Pastra, which includes both coniferous and broad-leaf forests; along the banks of the stream of Beliya Uley (Gorge) in the high-mountain zone; and in Otchova River locality in the Rila Monastery Forest Reserve. Fewer medicinal plant species (between 20 and 40) have been identified in the coniferous and beech forests around Tiha Rila and Radovichka Rivers, and around Mramorets (Mermera) and Lake Suhoto. The alpine and sub-alpine zone, notably the area around Ribni Lakes, around Lake Suhoto, below Kalinin Peak and the locality of Dobro Pole have the scarcest recorded concentrations of medicinal plants and herbs.

Conservation significance and status of medicinal plant species

Of the diversity of medicinal plant species identified during the Rapid Ecological Assessment in the territory of Rila Monastery Nature Park, 21 species are of high conservation significance. One of these is included in the IUCN list; 8 are listed in the red Book of Bulgaria; one in Appendix 2; and three, in Appendix 4. Under special use and protection regime as per Art. 10 of the Medicinal Plants Act are 14 species of medicinal plants (see Appendix 15).

The largest diversity of species of conservation significance (4-5 species each) are represented in the coniferous forest zone along the Radovichka, Tiha Rila, and Kalin Rivers, as well as in the sub-alpine zone, in stream-side habitats at Beliya Uley, Mermera, at Ribni Lakes and along the Otchova River. Species of conservation significance are relatively scarcer (represented by 2-3 species in each case) in the habitats of gray alder (*Alnus incana*) along the Iliyna River Valley, in the mixed forests along Radovichka River, at Bukovo Berdo and along Tiha Rila River. In the latter locality, in the spruce/Macedonian pine community along Tiha Rila, there is an established population of yellow butterwort (*Gentiana lutea)*, of excellent density, covering a 10-ha area. In the area of Kirilova Polyana, 15 specimens of yew (*Taxus baccata*) have been located, most of which are juvenile.

The populations of *Rheum rhaponticum*, *Pulsatilla vernalis* and *Rhodiola rosea*, as well as some other species of high conservation significance, are located in the sub-alpine zone, at altitudes above 1,500 m.

<u>*Medicinal plant resources*</u>

Based on an estimation of their available resources, medicinal plants in RMNP can be divided into four groups:

Group I

This group comprises medicinal plant species of high conservation significance:

Subgroup A. Medicinal plant species protected under the Nature Protection Act: Six species belonging to this group are listed in Annex # 3 of the Medicinal Plants Act: *Gentiana lutea*, *Gentiana punctata*, *Taxus baccata*, *Pulsatilla vernalis*, *Rheum rhaponticum*, and *Rhodiol*a *rosea*. The first two species are well represented and cover large areas throughout the park. The rest are limited due to scarcity of populations.

Subgroup B. Medicinal plant species placed under special conservation and utilization regime – 14 such species in all: *Alchemilla vulgaris* complex, *Angelica pancicii*, *Asplenium trichomanes*, *Atropa belladonna*, *Carlina acanthypholia*, *Cetraria islandica*, *Galium odoratum*, *Primula veris*, *Sedum acre*, *Valeriana officinalis*, *Betonica officinalis*, *Arctostaphyllos uva ursi*, *Huperzia selago*, and *Lycopodium clavatum*. Of these, *Angelica pancicii* and *Atropa belladona* are listed in the Red Book of Bulgaria, while the medicinal cowslip (*Primula veris L.*) is also included in Annex # 4 of the Biodiversity Act regarding wildlife species subject to protection and regulated use.

Of the species listed above, *Alchemilla vulgaris* complex and *Angelica pancicii* are widespread throughout the park and form considerable resources, while the rest are more sparse and are not significant resources.

Group II

This group comprises 16 species of medicinal plants, all covering wide ranges and forming very good resources (Appendix 16). The group includes various forest fruits, like blueberries (*Vaccinium* sp.), raspberries (*Rubus idaeus*), hips (*Rosa canina*) a.o., as well as ruderal plants such as *Rumex alpinus*, *Tanacetum vulgare*, *Urtica dioica*, *Veratrum lobelianum*, a.o.

Group III

This group comprises 18 species of medicinal plants, each represented by several populations covering larger areas. However, the estimated total resources of these are relatively small, therefore they are of low resource significance.

Group IV

The fourth group of medicinal plants comprises 77 species, all found in very small quantities and at isolated places around the Park, sometimes represented by separate clumps or even single specimens of no resource significance. If these are commercially harvested for drug extraction that would quickly and irreparably upset their existing populations.

Medicinal plants of commercially significant resource potential

The following medicinal plants and forest fruits in RMNP are of significant resource potential:

1. Bilberry (*Vaccinium myrtillus*), spread at altitudes between 1,000 and 2,200-2,300m asl;
2. Alpine dock (*Rumex alpinus*) spread at altitudes of 1,400 to 2,200-2,300 m;
3. Common nettle (*Urtica dioica*), ubiquitous throughout the Park;
4. Several species of thyme (*Thymus* sp.), ubiquitous throughout the Park.

The available data regarding the intensity of use of non-timber resources do not point to overuse or to any high-risk impact on their populations. A comparative analysis of the findings of the sociological survey and the estimated resources of each of the medicinal plants available shows that only the intensity of raspberry and hip extraction may pose a threat to the respective resources.

3.3.4 Macrofungi

The macrofungi (mushrooms) are a specific, intermediate biotic group providing a natural link between the plant and animal kingdoms.

The range and diversity of mushroom taxa

The total number of mushroom species represented in the territory of RMNP is 306; of these, 43 are cited in literary sources, while for another ten there are no written records, yet specimens of them are preserved in the mycological collection of the Institute of Botany under the Bulgarian Academy of Sciences. (Fig. 13).

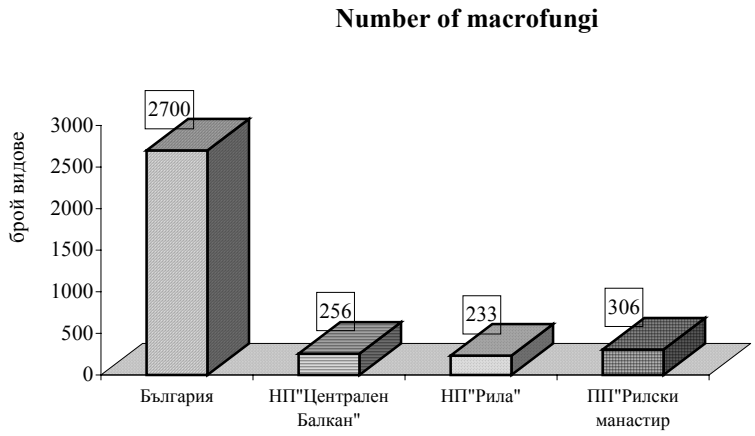

Fig. 13: Proportional distribution of species of macrofungi in Bulgaria, Central Balkan and Rila National Parks, and in Rila Monastery Nature Park

The species of macrofungi encountered in RMNP belong to three distinct classes (*Myxomycota*, *Ascomycota* and *Basidiomycota*), 26 orders, 54 families and 140 geni. The most numerous order is *Agaricales*, with 109 identified species; of the families, best represented are *Tricholomataceae* (62 species), *Russulaceae* (40 species), *Cortinariaceae* (31 species), *Coriolaceae* (19 species) and *Boletaceae* (15 species). The most numerous geni are *Russula* (29 species), *Mycena* (13 species), *Lactarius* (11 species), *Cortinarius* (10 species), and *Amanita, Boletus* and *Inocybe* (with 7 species each).

The largest numbers of species of macrofungi have been identified in the forest ecosystems of beech (69 species); Grey Alder (47 species), spruce and common fir (80 species), and Macedonian pine (36 species).

Mushroom taxa of conservation significance

A total of 16 taxa of macrofungi of conservation significance have been identified in the territory of RMNP, as follows (Fig. 14):

1) IUCN	11 rare species
	5 endangered species
2) The Rila Mountain Red List	2 species
3) The Bulgarian Red List	3 species
4) The European Red List	9 species
5) The Bern Convention Annex	1 species

***N.B.**: The total number of species listed under the different categories above adds up to more than 16, as individual species are listed in more than one category.*

The list of mushroom species of conservation significance in RMNP is presented in Appendix 16. A comparison between the numbers of mushroom species in Rila and Central Balkan National Parks and in Rila Monastery Nature Park can be made in Fig. 14.

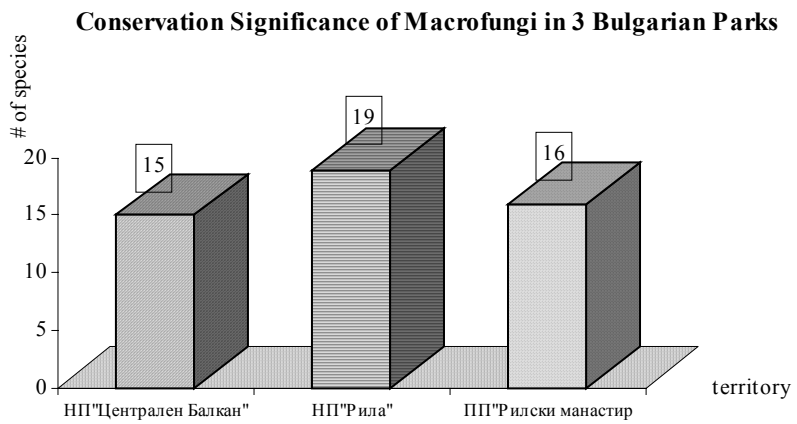

Fig. 14: Proportional distribution of numbers of mushroom species of conservation significance in Central Balkan and Rila National Parks and in Rila Monastery Nature Park

Of the highest conservation significance among all mushrooms in the Park is, undoubtedly, *Suillus sibiricus* (appearing on the Red List of Bulgaria, the European Red List and the Annex to the Bern Convention). This species has so far been located solely in habitats of *Pinus peuce* in both Bulgaria and Macedonia, as well as in habitats of *Pinus cembra* in the Alps. Of high conservation significance are another eight species of mushrooms, appearing both on the European Red List (Table 4) whose status is identical to that of the IUCN List.

The largest numbers of mushroom species of high conservation significance have been identified in habitats of Macedonian pine, spruce, common fir, beech, and in peat bogs, and also, to a lesser extent, in habitats of Rila oak, alder and in alpine grassy communities.

The largest number of mushroom species of conservation significance in a single location has so far been identified in the Rila Monastery Forest Reserve (6) and in the area of Rizvanitsa (5).

<u>*Edible mushroom species*</u>

The summarized list of edible mushrooms in Rila Monastery NP comprises 38 species, as follows Appendix 17:

- 7 species known from literary sources: *Agaricus augustus*, *Calvatia utriformis*, *Lactarius piperatus*, *Lactarius volemus*, *Russula cyanoxantha*, *Russula grisea*, and *Russula olivacea*;
- 27 species with confirmed areas of habitation in the territory;
- 7 previously unpublished species identified in earlier surveys: *Albatrellus confluens*, *Clitocybe odora*, *Craterellus cornucopioides*, *Langermannia gigantea*, *Leccinum aurantiacum*, *Macrolepiota procera* and *Sarcodon imbricatus*.

Three species of edible mushrooms are also of high commercial value and significance: *Boletus aestivalis, Boletus edulis* and *Cantharellus tubaeformis.* However, no commercial harvesting of edible mushrooms has been observed in the vicinity of the Park, and no buying stations exist in the area.

3.4 Fauna

3.4.1 Invertebrates

The biodiversity of invertebrate organisms in Rila Monastery Nature Park is assessed on the basis of several model groups: *Protozoa*, *Rotatoria*, *Mollusca, Tardigrada*, *Crustacea*, *Arachnida*, *Myriapoda*, and *Insecta.*

<u>*Taxonomic diversity*</u>

The total number of invertebrate taxa identified in RMNP belonging to the model groups listed above, adds up to 2,475 species and sub-species: 315 taxa of *Protozoa*, 53 of *Rotatoria*, 56 of *Molluska,* 10 of *Tardigrada*, 53 of *Crustacea*, 232 of *Arachnida*, 53 of *Myriapoda*, and 1,703 of *Insecta*. In addition to that, another 362

taxa of invertebrate organisms not belonging to any of the above model groups have also been identified within the Park. The number of invertebrate species identified and recorded thus far constitutes about 37 percent of the 6,500 to 7,000 species potentially existing in this geographic area.

The Rapid Ecological Assessment performed in 2001 notwithstanding, the diversity of invertebrate fauna in the Nature Park is, on the whole, insufficiently studied. Research efforts have been so directed as to cover more or less evenly the Park's territory. The areas identified as richest in biodiversity are the Rila Monastery Forest Reserve, the easternmost sections at Ribni Lakes, the area around Kalin Dam, the systems of rivers and streams throughout the Park and the areas of Radovichka River and Bukovo Berdo. The spread of invertebrate fauna across vegetation zones is likewise uneven, the largest numbers of species having been recorded in the alpine and sub-alpine zone, as well as in beech forests.

Conservation significance and status of species of invertebrate organisms of conservation significance.

Of all invertebrate taxa identified in the Park, 332 are of high conservation significance, among them 96 rare (stenotopic) taxa, 85 endemics, 146 relics, 116 on world and European endangered species lists (IUCN: 7; European Red List: 19; CORINE: 72; Bern Convention: 17 and Directive on Habitats: 1). Five species are protected in Bulgaria under the Biological Diversity Act; four are listed in Appendices # 2 & 3 of that Act, and one in Appendix # 4.

Rare (stenotopic) taxa. A total of 95 species and subspecies of invertebrate organisms in RMNP are considered rare or stenotopic taxa (Appendix 19). They belong to the following groups (Fig. 15 below):

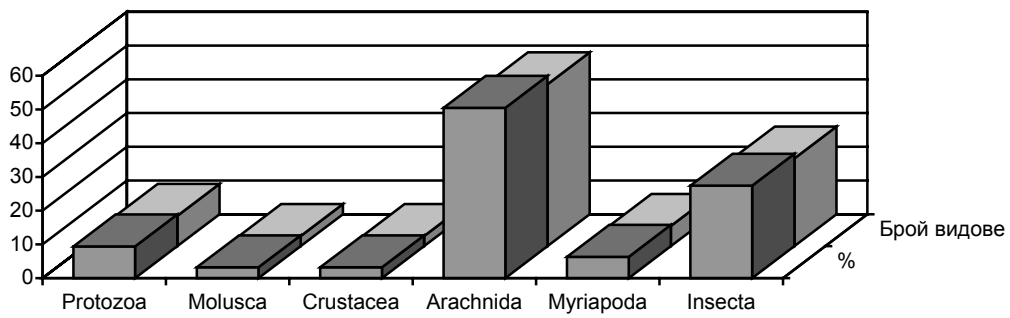

Fig. 15. Group distribution of rare invertebrates in Rila Monastery Nature Park

Rare (stenotopic) taxa have been identified amid all groups of invertebrates inhabiting RMNP. Their relative proportion is highest among arachnids (50.5%) and insects (27.4%). Representatives of this category have been identified in all areas of the Nature Park, but most of all, in forests (broad-leaf as well as coniferous), along the riverbanks and the shores of other water basins, and in habitats of the alpine and sub-

alpine zone. The largest numbers of rare taxa of arachnids have been established in the areas of the Radovichka River (11), the Iliyna River (9), at the Tiha Rila and Ribni Lakes (5 each); the most numerous rare taxa of *Coleoptera* insects have been found along the Rivers Iliyna (6) and Tiha Rila (4) and at Kalin Dam (3).

In none of the other groups does the proportion of rare (stenotopic) taxa exceed 10%; yet in every group there are characteristic species that are bound to specific habitats in the mountain.

Endemics - A total of 85 endemic species have been identified in the Park. They are very different in origin and constitute a heterogeneous group. The majority of those (42) are endemic to the Balkans, followed by Bulgarian (2) endemics;. The largest numbers of endemic species per location have been established in the Iliyna River Valley (25), followed by the Kalin area (13) and the Rila Monastery Forest Reserve and Tiha Rila (10 each). The distribution of endemics by groups is shown in Fig. 16 below.

The largest number of endemic species have been identified amid insects: 64 (75.3% of all endemic species). Of these, 33 are Bulgarian, and 31, Balkan endemics. For some of the smaller groups the percentage of endemic species is rather high (for *Myriapoda*, 16.2%; *Arachnida,* 14.3%); while in *Mollusca* it is 8.6%. Out of 17 endemic species of *Myriapoda*, 11 are Balkan endemics, while out of 15 endemic arachnids five are Bulgarian, five Balkan, two endemic to the Balkan-Asia Minor area and one is Carpatho-Balkan.

The largest number of endemic invertebrates has been found in Rila Monastery Forest Reserve (31), along the valley of the Iliyna River (29), in the Kalin area (20) and along the River Radovichka (16). The mixed-forest, sub-alpine and alpine zones are the richest in endemic taxa.

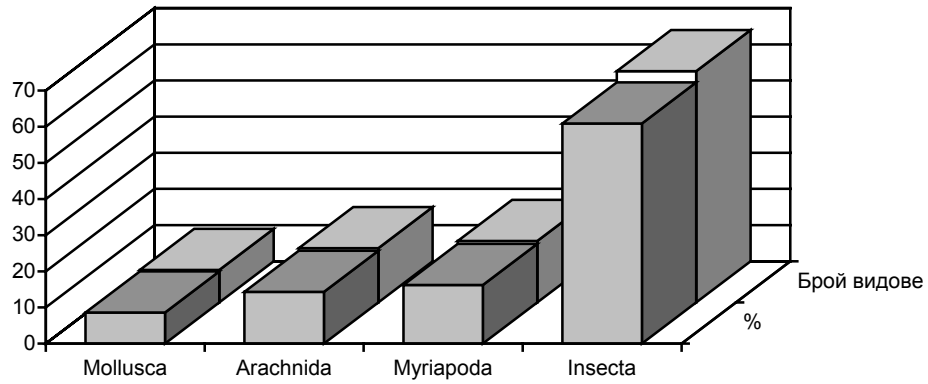

Fig. 16. Endemic invertebrates in Rila Monastery Nature Park (bars in front show percentage of all species in the respective class represented in the Park)

The percentage of endemic invertebrate taxa is significant (4.2%), making the territory of Rila Monastery Nature Park a major species-generating source.

The large number of endemic taxa and especially the presence of such taxa inherent to other zoogeographic regions, is positive evidence that the territory of Rila Monastery Nature Park (as part of Rila Mountain and the Rila-Rhodope massif as a whole) is an integral element of an ecological corridor and a zone of zoogeographic exchange between the regions of Asia Minor and the Carpathian Mountains.

Relic species - A total of 146 relic species (glacial and Tertiary relics) have been identified in the territory of RMNP. Their distribution by classes is shown in Fig. 17 below:

The largest number of relic species has been identified in the group of insects: 99 (68.8% of all relics). There is a high percentage of relic species among moths and butterflies (*Lepidoptera*) – 15.3%.
Territorially, the largest numbers of invertebrate relics have been established in Rila Monastery Forest Reserve, in the Kalin area and along the River Valleys of the Iliyna and Tiha Rila.

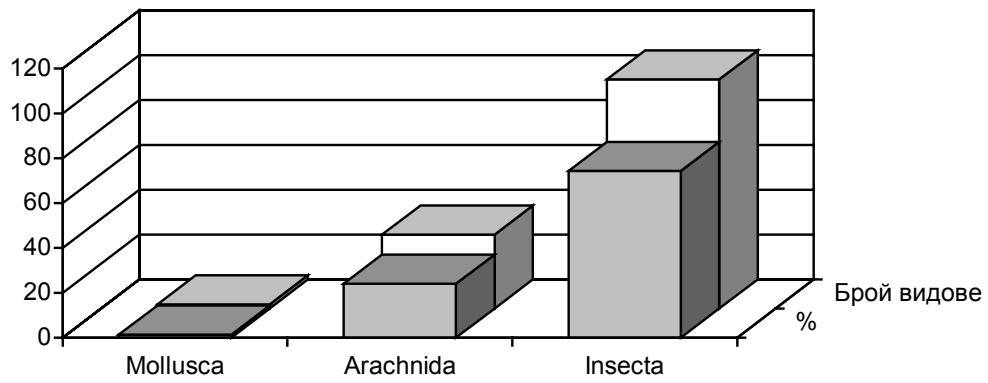

Fig. 17: Relic invertebrate species in Rila Monastery Nature Park (bars in front show percentage of all species in the respective class represented in the Park)

Endangered species. A significant number of species endangered on a national, European and world level have been identified in RMNP. Endangered species in the Park fall in the following groups:

<u>A. Species listed in world and European Red Books and endangered species' lists:</u>

Coleoptera: *Calosoma sycophanta*, known from the area of Ribni Lakes (IUCN, CORINE, Bern Convention); *Carabus intricatus,* from Rila Monastery Forest Reserve and the valley of the Rilska River (IUCN, CORINE, Bern Convention); *Procerus gigas,* from Rila Monastery Forest Reserve (European endangered, CORINE, Bern Convention), *Morimus funereus,* from Rila Monastery Forest Reserve and the valley of the Iliyna River (European endangered, CORINE, the Bern Convention).

Neuroptera: *Libelloides macaronius*, identified in the Kalin section of RMNP (CORINE). This is one of three attractive species representing the order in Bulgaria, encountered in the mountains. Its biotope is also considered endangered.

Hymenoptera: *Formica lugubris*, known from the area of Rila Monastery Forest Reserve (IUCN, CORINE, Bern Convention); *Formica pratensis* – inhabits the areas of Kalin, Radovichka and Tiha Rila River Valleys, Bukovo Berdo, Rizvanitsa (CORINE, Bern Convention); *Formica rufa*, found in the area of Rila Monastery Forest Reserve, the Iliyna River Valley and Kalin area (IUCN, CORINE, Bern Convention).

Lepidoptera: *Parnassius apollo bosniensis*, found in the area of Rila Monastery Forest Reserve and around Ribni Lakes (IUCN, CORINE, Bern Convention); *Parnassius mnemosyne caucasica,* found in Rila Monastery Forest Reserve and around Ribni Lakes (IUCN, CORINE, Bern Convention); *Euphydryas aurinia bulgarica*, from Rila Monastery Forest Reserve (CORINE, Bern Convention); Polyommatus *eroides*, known from Rila Monastery Forest Reserve (CORINE, Bern Convention; *Apatura iris iris,* found in Rila Monastery Forest Reserve and around Ribni Lakes (IUCN, CORINE, Bern Convention); *Carterocephalus palaemon palaemon,* known from Rila Monastery Forest Reserve (European endangered, CORINE); *Colias caucasica balcanica*, from Rila Monastery Forest Reserve and the Kalin area (CORINE, Bern Convention); *Erebia rhodopensis*, from Rila Monastery Forest Reserve and the Kalin area (CORINE, Bern Convention); *Gnophos obscuratus*, from Rila Monastery Forest Reserve (European endangered, CORINE, Bern Convention); *Limenitis populi populi*, from Rila Monastery Forest Reserve and the valleys of the Iliyna and the Eleshnitsa (European endangered, CORINE, Bern Convention); *Melitaea trivia trivia*, from Rila Monastery Forest Reserve (European endangered, CORINE, Bern Convention); *Zerynthia polyxena gracilis*, from Rila Monastery Forest Reserve (European endangered, CORINE, Bern Convention).

Mollusca: *Helix pomatia,* inhabits Rila Monastery Forest Reserve (CORINE).

B. Protected species

The species of invertebrate organisms protected under Bulgarian law and their places of habitation are listed in the following groups below:

Hymenoptera: *Formica rufa*, found in the areas of Rila Monastery Forest Reserve, the Iliyna River Valley and the Kalin area. This species is listed under Annexes 2 & 3 of the Biological Diversity Act.

Lepidoptera: *Parnassius apollo bosniensis* found in the Rila Monastery Forest Reserve and the Ribni Lakes area; *Colias caucasica balcanica*, from Rila Monastery Forest Reserve and the Kalin area; *Erebia rhodopensis*, from Rila Monastery Forest Reserve and the Kalin area. All three species are listed in Annexes 2 & 3 of the Act.

3.4.2 Vertebrates

Over the past 30 years, a total of 202 species of vertebrate animals have been identified in the territory of RMNP: 5 species of fish, 11 amphibians, 12 reptilians, 122 species of birds, and 52 of mammals (Appendix 20).

Taxonomic diversity

Fish. Five species of fish have been identified in the territory of Rila Monastery Nature Park: Minnow (*Phoxinus phoxinus*), Thracian barbel (*Barbus cyclolepis*), Balkan trout (*Salmo trutta*), Rainbow trout (*Oncorhynchus mykiss*) и Brook char (*Salvelinus fontinallis*), which together account for 4.6% of Bulgaria's freshwater ichthyofauna.

The predominant types of water bodies in the Park are creeks, upper river courses and high-mountain lakes, which, as a rule, are poor in ichthyofauna. An exception is the section of Rilska River flowing along the Park's boundary, which is relatively richer in ichthyological biodiversity. Balkan trout is common for Rilska River and its tributaries, for the Upper and Lower Ribni Lakes, the lakes Smradlivoto and Djendema, Kalin Dam and Kamenitsa River. *Salvelinus fontinallis* has been artificially introduced in the Upper and Lower Ribni and Smradlivoto lakes, as well as in the Kalin Dam and Kamenitsa River. *Phoxinus phoxinus* has so far been discovered only in Rilska River including its eastern part, around the Tiha Rila locality; however, its natural range within the Park may be broader. *Barbus cyclolepis* has been spotted in Rilska River, in the Eleshnitsa locality.

Amphibians. Rila Monastery NP is home to 11 species of amphibians (Appendix 20).

In batrachological terms, the richest in biodiversity are the humid deciduous forests, as well as high-mountain lakes and brooks, especially those located within the forest zone. The most significant area in terms of amphibian diversity is the Rila Monastery Forest Reserve. At the same time the most numerous species of high conservation significance inhabit the Rila Monastery Forest Reserve and the area of Theodossievi Karauli Peak; in the latter location are the two known sites of alpine newt. Other areas of higher conservation significance from a batrachological perspective are the Radovichka and Iliyna Rivers.

Reptails. Twelve species of reptile, mostly snakes and lizards, are known to inhabit the territory of Rila Monastery NP (Appendix 20). A species of spike-thighed tortoise (*Testudo graeca*) has been sighted around the perimeter, especially in open terrain between Pastra village and the Park's boundary; it is very likely that the tortoise will eventually be located within the Park as well.

From a herpetological point of view, the richest diversity of species can be found in the lower Park sections and along its boundaries. Especially rich in reptilian species is the area between Pastra village, Kalin Dam and the grounds around Eleshnitsa Chalet, an area which straddles the Park's boundary. This is also the place where the largest number (10) of species of conservation significance can be found. Also rich in reptilian species is the area around Kirilova Polyana and Rila Monastery, including the Rila Monastery Forest Reserve, where five species of conservation significance. Other areas of conservation significance for the reptilian class are the Radovichka River Valley (three species confirmed, three potential) and Mermera Peak (three confirmed so far; if the viper is also confirmed there, this will only further increase the area's conservation significance).

Birds. The territory of RMNP is home to 122 bird species, which is 30.1 percent of the Bulgarian ornithofauna (Appendix 20). However, the total number of bird species

that can be encountered in the Park in different seasons is in excess of 180; of these, no fewer than 97 are nesting (nesting-migratory or permanently residing) birds. At least 58 species of birds stop at RMNP during annual migration or cross its territory in their periodic roamings. The Park provides much-needed sanctuary to a small number (five) of species of very high conservation significance, which enter its airspace and seek food in its territory, including during the nesting season. These include *Gyps fulvus*, *Aegypius monachus*, *Aquila heliaca* and, possibly, the small *Hieraaetus pennatus*. Only two of the species known as having inhabiting the Park's territory have not been sighted there in the past 5 years - Bearded vulture *Gypaetus barbatus* and Greater spotted eagle *Aquila clanga*.

Twenty-seven species are represented in RMNP by 1-5% of their nation-wide populations; at least five species, by 6-10% of their nation-wide populations, and at least six species, by 10-15% of their nation-wide populations. Two species are either endemic to the Park or have in it one of maximum two nesting sites known in Bulgaria. These are Lanner (*Falco biarmicus*) and Scarlet Rosefinch (*Carpodacus erythrynus*).

Rila Monastery Nature Park is of particular significance for the conservation of a number of bird species, notably Hazel Grouse, the mountain partridge, the capercaillie, the pygmy and Tengmalm's owl, the black and white-backed woodpecker, Red-breasted Flycatcher, as well as the bird species making up the alpine biome (the wall creeper, Alpine Accentor and Alpine Chough). In most cases these species are represented to the Park territory by over 5% of their nation-wide populations.

For more details about the groups of birds inhabiting RMNP and the proportions of their nation-wide populations represented in it, see Appendix 21.

The territories within the Park that are richest in bird species include the Rila Monastery Forest Reserve, the Radovichka River area, the areas around Ribni Lakes, Kalin Dam, the Iliyna River Valley, and Bukovo Berdo.

Mammals. A total of 52 mammal species are represented in RMNP; they are divided into three main groups: bats, small mammals and large mammals (Appendix 20).

Bats (Chiroptera). So far, 15 species of bat have been identified in the territory of RMNP, which is 50 percent of the total number of bat species known in Bulgaria, and

shown that a considerable proportion of the nation-wide population of this rare animal inhabits Rila Monastery Nature Park. Conversely, the small molerat (*Nannospalax leucodon*) is encountered relatively rarely in the park territory (just two sightings during the REA), whereas it is relatively common in the rest of the mountain. On the other hand, studies conducted as part of student practicums over the past ten years testify to the resilience and stability of the, albeit small, molerat population, which in itself is an indicator of the sustainability of animal communities in RMNP.

Large mammals. A total of 17 large mammal species (*Macromammalia*) have been identified in Rila Monastery Nature Park, of which 13 are predators and four, ungulate herbivores (Appendix 19). For almost all of these there is much older evidence that they have inhabited the present day's Park's territory for many years, as confirmed by data from much older studies confirmed by observations in the period 1996-2001. About six large animal species can be regarded as common to the Park in view of their wide range there, regardless of the relatively low density of the populations of some of these. Eleven species are scarce, although specimens of some of these can be encountered in different parts of the Park (Table 20).

About the size of large mammal populations and their distribution throughout the Park, see Appendix 22.

Table 20. Range and size of the populations of predatory mammals (*Carnivora*) and ungulate herbivores *(Artiodactyla)* in Rila Monastery Nature Park

Species	**Latin name**	*Altitude* (m asl)	**Population size** (# of specimens)	**Range** (ha per specimen)
Wolf	*Canis lupus*	850-2200	4-10	**2200-2600**
Jackal	*Canis aureus*	800-2000	2-5	1000-1500
Fox	*Vulpes vulpes*	800-2000	30-60	300-500
Bear	*Ursus arctos*	850-2000	9-16	800-900
Badger	*Meles meles*	800-1650	40-50	200-300
Black polecat	*Mustela putorius*	800-1450	25-30	?
Otter	*Lutra lutra*	800-1250	4-5	6-km river section
Marten	*Martes martes*	800-1950	30	450-600
Beech marten	*Martes foina*	800-2100	?	?
Wild cat	*Felis silvestris*	800-1600	10-15	500
Wild boar	*Sus scrofa*	850-2000	70	150-170
Red deer	*Cervus elaphus*	850-2000	5-10	150
Roe	*Capreolus capreolus*	800-2000	60	40-50
Balkan chamois	*Rupicapra rupicapra*	1700-2250	<20	60-75

Conservation significance and status of vertebrate species

Of high conservation significance are 188 vertebrate animal species, or 93.1% of all identified in the Park's territory, which fall in the following groups: two species of fish; all 11 amphibian and all 12 reptile species; 121 species of birds and 42 of mammals. A total of 24 animal species are endangered on a world scale; 171 are of

European, and 151 of national conservation significance. About 53 species inhabiting Rila Monastery Nature Park form in it populations of conservation significance.

In Bulgaria, a total of 164 animal species are protected under the Biological Diversity Act. Of those, 58 are listed in Annex # 2 to the Act; 123, in Appendix # 3, and 16, in Appendix # 4 to the Act. For more details on the conservation significance and status of vertebrate animals, see Appendix 20 to the Management Plan.

Endemic species. There are 5 endemic vertebrate taxa in all in RMNP.

Fishes. Of all fish species in the Park's territory, only the Maritza barbel (*Barbus cyclolepis*) is a Balkan endemic.

Birds. There are two sub-species of birds identified as common only for the Balkan Peninsula. These are *Eremophila alpestris balcanica* and (*Prunella collaris subalpina*).

Mammals. Two sub-species of mammals can be regarded as endemic to the Balkans: the weasel (*Mustela nivalis galinthias*) and the Balkan chamois (*Rupicapra rupicapra balcanica*).

Relic species. A total of 12 relic species have been identified in Rila Monastery Nature Park, as follows:

Fish. Of all fish species in the Park's territory, only the Balkan trout (*Salmo trutta*) is a glacial relic.

Amphibians. Of the reptilian species found in the Park, two are glacial relics: the alpine newt (*Triturus alpestris*) and the mountain frog (*Rana temporaria*).

Reptilians. Two species of reptiles living in RMNP are glacial relics: the viviparous lizard (*Lacerta vivipara*) and the viper (*Vipera berus*). Both are relatively widespread throughout the Park. The viviparous lizard can be seen at favorable areas of habitation between 1,400 and 2,700 m above sea level, while the viper prefers the higher altitudes of the sub-alpine and alpine zones, rarely descending below 1,400-1,500m asl.

Birds. There are five recorded relic species of bird in RMNP: the capercaillie (*Tetrao urogallus*), two owls (*Glaucidium passerinum* and *Aegolius funereus*), and two species of woodpecker (*Dendrocopos leucotos lilfordii*, and *Picoides trydactilus*).

Mammals. Two of the species of mammals that are found in the Nature Park are glacial relics: *Chionomys nivalis* and *Rupicapra rupicapra balcanica*.

Endangered species. A total of 173 vertebrate species inhabiting Rila Monastery NP are considered endangered on a national, European or world scale. They belong to the following groups:

A. Species endangered on a world scale and other species having world conservation significance

Some 24 species of vertebrates inhabiting Rila Monastery Nature Park are included in the lists of animals endangered on a world scale (Appendix 20).

Fish. Of the ichthyofauna represented in RMNP, one species, Thracian barbel *Barbus cyclolepis*, is endangered on a world scale.

Amphibians. Two species of amphibians inhabiting RMNP are endangered on a world scale: the large crested newt (*Triturus cristatus*) and the tree-frog (*Hyla arborea*).

Reptilians. One species of tortoise, *Testudo hermanni*, has been identified as endangered on a world scale. The species inhabits the lowest Park zone, especially exposed spots with abundant sunshine.

Birds. Ten species of birds in RMNP are of world conservation status. Three of these appear on the IUCN World List of Endangered Species. These are: *Aegypius monachus* Black Vulture, Imperial Eagle and Spotted Eagle. No sightings of the latter species have been recorded during the REA in 2001; still, in view of the stability of habitats within the Park, conditions for its habitation there remain favorable. Black Vulture *Aegypius monachus* and Imperial Eagle *Aquila heliaca* use the Park's territory as a source of food, especially in recent years.

Also breeding in Rila Monastery Nature Park are representatives of another category of wildlife of world conservation status: biome-restricted species. RMNP is inhabited by viable populations of all three species of the alpine biome identified in Bulgaria: Alpine Accentor (*Prunella colaris*), Alpine Chough (*Pyrrhocorax graculus*) and Wallcreeper *(Tichodroma muraria*).

Four bird species inhabiting the Park's territory can be identified as being of world conservation significance: Redwing *(Turdus torquatus)*, Alpine Accentor (*Prunella collaris)*, Horned Lark *(Eremophilla alpestris balcanica)* and White-backed Woodpecker (*Dendrocopos leucotos lilfordi)*.

Mammals. The Nature Park is home to 17 species of mammals endangered on a world scale. Among them are seven species of bat endangered on a world scale: *Rhinolophus ferrumequinum, Rhinolophus hipposideros*, *Rhinolophus euryale*, *Myotis myotis*, *Myotis nattereri*, *Nyctalus lasiopterus* and *Barbastella barbastellus*. Another two species of mammal are listed in the "Vulnerable" category on the World Red List: the molerat (*Nannospalax leucodon*) and the otter (*Lutra lutra*), while five species belong to the "Partly-vulnerable" category: the squirrel (*Sciurus vulgaris*), three species of dormouse (*Dryomys nitedula*, *Glis glis* and *Muscardinus avellanarius*), and *Chionomys nivalis*. In terms of conservation significance four mammal species and sub-species inhabiting the Park's territory are identified as being of world conservation significance: *Chionomys nivalis*, the brown bear (*Ursus arctos*) the marten (*Martes martes*) and the Balkan chamois (*Rupicapra rupicapra balcanica*).

B. Species endangered on a European scale or having European conservation significance

A total of 186 vertebrate species inhabiting Rila Monastery Nature Park are identified as being of European conservation significance (Appendix 20).

Amphibians. All 11 species of amphibians represented in the Park are listed under Annexes II and III of the Bern Convention; five of these are also on the CORINE List. Two of these five are also listed under Annex II of the EU Directive on Habitats.

Reptilians. All 12 species of reptilians represented in the Park are listed under Annexes II and III of the Bern Convention; of these, eight are included in Annex II (strictly protected species). The exact same eight species appear in the same order also on the CORINE Lists of species of European conservation significance. One species is on the list of Annex II to the EU Habitats Directive, which in principle lists animal species of significance for the community, the preservation of which requires designation of specially protected areas. One reptile species, the grass-snake (*Elaphe longissima*) sustains in the Park a population of European conservation significance.

Birds. A total of 121 bird species inhabiting Rila Monastery Nature Park are of European conservation significance; 61 of those appear on the list of BirdLife International as species of special European interest (Appendix 20). Five of the species having their worldwide populations concentrated in Europe are of unfavorable conservation status. Of particular interest for conservationists is the rock partridge (Alectoris graeca), as between 1-5% of its Bulgarian population inhabits the Park's territory; due to the vulnerability of its habitat, as well as the fact that the species is insufficiently protected. To the group of species whose worldwide population is not concentrated in Europe, but whose conservation status in Europe is unfavorable, belong 24 species of the ornithofauna of RMNP. Of special interest for reasons similar to those cited above are some birds of prey, owls, woodpeckers, as well as rock thrush and rock bunting. Although in recent decades there have been no incontrovertible data of the existence of the Bearded Vulture within the Park's territory, the prospects of its possible return to the area are good. We owe this to the proximity of RMNP to the last known nesting grounds of the species in the Balkans, those in Macedonia, to the high degree of stability of its previous habitat, located in the area around Popova Kapa Peak, as well as to the more frequent recent sightings of that vulture in the area of the Eastern Rhodopes. Of the species whose world populations are concentrated in Europe and have a positive conservation status, 32 species are encountered in RMNP; while of those on the Corine List, 27 species can be seen there. Some 95 bird species (78.5% of the Park's entire ornithofauna) are listed in Annex II of the Bern Convention (strictly protected species for which the State is obligated to provide special protection). This fact not only illustrates the instrumental role of RMNP in the implementation of the Bern Convention; it confirms the correctness of government policy in assigning to the Park a predominantly conservation role (pursuant to the Protected Territories Act and the Amendments and Supplements Act). Another 19 species are protected by special use regimes (species listed under Annex III of the Convention).The territory of Rila Monastery Nature Park is home to 43 species of birds (35.2% of its ornithofauna) listed under Annex II to the Bonn Convention.

Also, in the Park's territory there have been identified 28 bird species (21.8% of the total number) of those listed in the Annexes to the EU Directive on Birds belong, for which the signatory States are obligated to institute special protection measures in regard to their habitats (species listed under Annex I of the Directive). Another 14 species encountered in the Park (11.7% of all) are listed under Annexes II/1 and II/2 of the Directive.

Mammals. A total of 42 mammal species inhabiting the territory of RMNP are of European conservation status. All 15 species of bat identified in the Park appear on the CORINE List, on the lists of the Bern and Bonn Conventions and the EU Directive on Habitats. Another 27 species of mammal are of European conservation significance. The great majority of the latter (25 species) are listed under Annex II and Annex III of the Bern Convention. In addition, five species of mammal inhabiting the Park's territory are on the Red List of Europe. A total of 17 mammal species in the Nature Park appear on the CORINE List. Six mammal species (two bats, three large and one small mammal) have in RMNP populations of European conservation significance.

C. Species endangered on a national scale or of national conservation significance

Amphibians. Of the amphibian species identified so far within PMNP perimeter, six are protected under the Biodiversity Act. Seven of these species are listed in Appendix # 3, six in Appedix # 2, and two species, in Appendix # 4 of the Biological Diversity Act. The alpine newt is listed in the Red Book of Bulgaria as 'rare'. This species has been identified in the areas around Lake Suhoto (Dry) and Theodossievi Karaouli Peak, but it seems that the periodic drying of the lake have caused its extinction at the former location. It is not impossible that the alpine newt could be encountered in other lakes in RMNP. Two species of frog (*Bombina variegata* and *Rana temporaria*) have populations of national conservation significance in the Park. (Appendix 20).

Reptilians. Six species of reptiles in RMNP are protected under the Biodiversity Act. All six are listed in Appendix # 3, and two of them, in Appendix # 2. One – Aesculapian snake (*Elaphe longissima*) is listed as 'endangered' in the Bulgarian Red Book. Of national conservation significance are five species of reptile: Slow (*Angius fragilis)*, Adder (*Vipera berus)*, Smooth snake (*Coronella austriaca)*, Aesculapian snake *Elaphe longissima* and Vivipaurous lizard (*Lacerta vivipara)*.

Birds. 24 bird species inhabiting RMNP are listed in the Red Book of Bulgaria (24.0% of all birds nation-wide appearing on that list). A total of 110 wildlife species inhabiting the Park are protected under the Biological Diversity Act: 28 are listed in Appendix # 2, 109 in Appendix # 3, and 7 species, in Appendix # 4 to the Act. The populations of 42 species are of national conservation significance.

Mammals. Nine species of mammals inhabiting the Park are listed in the Bulgarian Red Book. Of national conservation significance are five mammal species. A total of 29 mammal species are protected under the Biological Diversity Act and are listed in

its annexes. Of these, 23 are included in Appendix # 3, 22 in Appendix # 2, and five species are listed in Appendix # 4.

Habitats of conservation significance for vertebrate animal species

Old beech, beech/oak and oak forests. (habitats 41.1912 southwestern-Moesian neutrophilic beech forests - *Fagus sylvatica*; 41.763 Heleno-Moesian durmast forests - *Quercus dalechampii*; 41.7372 Moesian forests of hairy oak - *Quercus pubescens*; 41.762 Helen-Moesian forests of blagun - *Quercus frainetto).* All of the above mentioned habitats are listed in Appendix # 1 to the Biological Diversity Act and in the List of Resolution # 4 of the Bern Convention. Within the Park's perimeter, such forests can mostly be found in the Rila Monastery Forest Reserve, and are of European conservation significance as habitats of vertebrate fauna. Beech-dominated forest massifs provide breeding grounds and a food base for the woodpecker *Dendrocopos leucotos lilfordii*, for most species of owl and for several large predatory birds, as well as for other vertebrates (the salamander *Salamandra salamandra*, the grass-snake *Elaphe longissima*, all three species of dormouse, the marten a.o.), listed in Appendices # 2 & 3 of the Biological Diversity Act (Appendix 20).

Mixed deciduous forests. (*habitats 41.19123 southwestern-Moesian hornbeam and beech forests - Carpinus betulus, Fagus sylvatica),* listed in Appendix #1 to the Biological Diversity Act, in the List of Resolution # 4 of the Bern Convention, etc. The mixed broad-leaf forests are characterized by a diversity of species that is above the average for Park forests in general. Of the mammalian class, typical inhabitants of this type of forest are the various dormice, some other small rodents, and the black polecat, and in areas rich in rivers and streams, otters, river rats, water shrew and Mediterranean water shrew, etc. This type of forest provided the principal habitat for *Bonasa bonasia*, *Angius fragilis*, *Rana dalmatina* and some other species, some of which are protected under BDA and listed in Annexes 2 & 3 thereof.

Mixed deciduous/coniferous forests. *(habitats 41.19122 southwestern-Moesian beech and common fir forests* (*Fagus sylvatica, Abies alba*), listed in Appendix # 1 to the Biological Diversity Act, in the List of Resolution # 4 of the Bern Convention, etc. These are generally richer in species than the mixed deciduous-only forests. Of the mammalian world, 26 species are encountered here, among which the badger, the wild cat, three species of dormice and the common forest mouse. The black polecat can occasionally be spotted as well. Many species of birds are represented there, including the green and gray woodpeckers, several owls, etc. A large portion of the species listed here are included in Annexes 2 & 3 of BDA. The largest number (10) of mammal species of high conservation significance inhabits the zoocenoses of broad-leaf and mixed broad-leaf and coniferous forests: five species of world significance, four of European and one of national conservation significance.

Coniferous forests. (habitats 42.1613 Western Rhodope forests of common fir - *Abies alba*; 42.2413 Moesian-Macedonian spruce forests - *Picea abies*; 42.5C2 Rhodope forests of Scots pine - *Pinus sylvestris*; 42.171 Forests of King Boris's fir - *Abies borisii regis*; 42.723 Rila-Pirin and Macedonian forests of Macedonian pine - *Pinus peuce*, etc.).*;* 42.6618 Rhodope forests of black pine (*Pinus nigra* subsp.

pallasiana), etc. All types of habitats mentioned here are listed in Appendix # 1 to the Biological Diversity Act and included in the List of Resolution # 4 of the Bern Convention, while black pine habitats are also listed in Annex I to the Directive on Habitats. Generally, since these are of a boreal-alpine type, they are relatively poor in animal communities. The vertebrate phylum numbers 63 species there, of which 3 amphibians, two reptilians, some 38 bird species and 20 species of mammals. Many of those are represented by insignificant numbers of specimens. Within the coniferous forest zoocenosis, three mammalian species are of world conservation significance, three of European and one, of national. These forests provide the principal area of habitation for some rare and endemic taxa, such as the southern sub-species of woodpecker *Dendrocopos leucotos lilfordi*, as well as of the three-toed woodpecker *Picoides tridactylus*; these forests remain an important integral part of the entire forest massif. In addition to the 10 species characteristic of dwarf-pine and scrub forests, coniferous forests provide a permanent home to the brown bear, wolf, fox, marten, lynx, mole, squirrel, the three species of ungulate herbivores and, albeit less frequently, an occasional badger or wild cat. From the point of view of the more mobile larger mammals and birds, the coniferous forests are inseparable from the mixed coniferous-broad leaf forest habitat. A large part of the species listed here are included in Annexes 2 & 3 of BDA.

Dwarf-pine forests. Habitat 31.58: Balkan-Rila-Rhodope communities of dwarf-pine (*Pinus mugo*), listed in Annex I to the Directive on Habitats, as well as in Appendix # 1 to BDA. A cenosis is formed within the dwarf-pine forests providing home to both species of *Microtinae* of the alpine cenosis, as well as to red voles, yellow necked field mouse, Pygmy shrew, the hare, chamois, marten and weasel, while carnivores and ungulates using alpine habitats as their food base find themselves here, as well, in specific food-chain relationships with the species and habitats of the dwarf-pine cenosis. These communities are used in different seasons and periods of the annual cycle by a number of bird species: capercaillie, dunnock, grey and willow warbler, crossbill, etc., listed in Appendices # 2 & 3 of BDA.

Alpine and sub-alpine meadows. Habitats 31.631: Sub-alpine tall grass mixed with shrubs of *Sorbus*; 31.633: Sub-alpine tall grass mixed with shrubs of *Rubus* sp.; 35.122: Boreal sub-alpine communities of *Agrostis-Festuca*; 36.39 Oro-Moesian alpine herbaceous communities, etc.
The high-mountain zone within RMNP is of world conservation significance owing to the fact that it is inhabited by five vertebrate species endangered on a world scale, as well as by three species species of birds representative of the alpine biome. The alpine-type habitat is related to many vertebrate species of European and Balkan conservation significance, among which the Balkan chamois, the mountain partridge, the golden eagle, the Dalmatian and peregrine falcons, the eagles *Circaetus gallicus* and *Hieraaetus pennatus*, the Balkan lark, and some others. Most of these are protected under BDA and are listed in its Appendices # 2 & 3. Certain species use, more or less frequently, the treeless zone as their food base: hare, brown bear, wolf, fox, lynx and the three species of ungulate herbivores.

Rock massifs and outcroppings. Habitats 61.115: Carpatho-Balkan screes with *Saxifraga, Veronica, Senecio*; 62.1A122: Vertical limestone rock faces in Rila; 62.252: Carpatho-Balkan-Rhodope vertical rock faces with *Silene*, listed in Annex I

to the Directive on Habitats, as well as in Appendix # 1 to BDA. To the same group of habitats also belong 62.41: Vertical limestone rock faces without vegetation; 62.42 Vertical silicate rock faces, listed in Annex I to the Directive on Habitats, etc.
Special mention is due of vertebrate communities inhabiting rock massifs and outcroppings in different parts of the Park, notably a habitat of a specific complex of petrophilic vertebrates, of which a special place is occupied by the larger predatory birds, bats and some other mammals, many of which are listed in Appendices # 2 & 3 of BDA. Most of the birds listed above under sub-alpine and alpine meadows also use rocky habitats for nesting: the golden eagle, the dalmatian falcon, alpine chough, wallcreeper, a.o. Cliffs and rock outcroppings in Rila Monastery NP are inhabited by six world-endangered species of bat.

Aquatic habitats. (22.1 permanent (non-drying) lakes and dams, 22.2 temporary freshwater basins, 24.1 rivers and streams, 24.17 waterfalls) (Listed in Appendix # 1 to BDA). The Parks has in its territory a dense system of rivers, creeks and high-mountain lakes rich in vertebrate species. In addition to the five species of fish, aquatic habitats are related to almost all amphibians, a third of all reptilians, as well as numerous birds and mammals. Characteristic among the higher animals are the black stork, wagtail, starling, otter, and other species. A large portion of the above-mentioned species are listed in Appendices 2 & 3 to BDA.

Areas in RMNP of special conservation significance for vertebrates

The Rila Monastery Forest Reserve. All four zoocenoses existing in the Park are represented in the Reserve. There are five main types of habitat of a high degree of naturalness. This territory is home to species of birds endangered on a world scale, a multitude of amphibians, reptiles and birds of European conservation significance, to significant bird populations of the alpine biome, and to 14 species of large and 14 species of small mammals (80 percent of all species in all five orders within that class). Of these, 11 are species of high conservation significance (85% of all such species within the Park, the otter and molerat being the only exceptions).

Vodniya Rid-Ribni Lakes-Radovichka River-Bukovo Berdo. Six main types of habitat are represented, among which the only habitat in Europe consisting of a rock face constantly washed by flowing water (Vodniya Rid). The area is home to birds endangered on a world scale, species of the alpine biome, as well as birds to which this is the only nesting ground in all of Bulgaria. There are a large number of vertebrates of European conservation significance. Nine species of large and 12 species of small mammal have been identified (60% of all species in the Park). Of these six (46%) are species of conservation significance: Snow vole, Balkan chamois, bear, marten, squirrel and wolf.

Kalin-Eleshnitsa. Four principal types of habitat (excluding dwarf-pine and scrub forests), with old broad-leaf and coniferous forests occupying a relatively limited area. Forests dominated by Rila oak are of world conservation significance. Three out of the four zoocenoses are represented in that area, the sub-alpine being the only exception. The vertebrate fauna is represented by a significant number of species endangered on a world, European or national scale. Three bird species of the alpine biome are represented by stable populations. The area is home to 13 species of large

and 14 species of small mammals (almost 80% of all species). Of these, ten are of high conservation significance (77%), excepting the otter, lynx and forest dormouse

Kalin Peak-Verla-Boucher. Four main types of habitats are identified in this area. The vertebrate fauna is represented by over 40 species endangered on a world, European and national scale. The area is inhabited by stable populations of bird species of the alpine biome. To some large mammals (e.g. chamois), the territory is of critical importance for their genetic exchange with the populations of Rila National park.

Iliyna River Valley. Four main types of habitat, with old mixed broad-leaf forests occupying a relatively limited area. Three zoocenoses have been identified (alpine communities are not represented). The diversity of vertebrate species is high, with river- and lakeside species being represented by stable populations. A total of 45 species of vertebrates endangered on a world and European scale have been identified in the Iliyna Valley; 13 species of small and 14 of large mammals (almost 80% of all species) have been sighted there. There are also nine species of high conservation significance (70% of all significant species) excluding the otter, lynx, molerat and *Chionomys nivalis*.

4.0 Cultural and Socioeconomic Characteristics

4.1 Socioeconomic activities and existing trends regarding uses of the Park

4.1.1 Settlements and population

The only populated place within the boundaries of Rila Monastery Nature Park is the Rila monastery settlement. It started taking shape with the establishment of the Holy Monastery of Rila, and is primarily populated by hired employees of the Monastery and their families. In the past, this was common practice with other Bulgarian monasteries; in the early 1920s, King Boris III issued a Royal Decree whereby several such communities, Rila Monastery being one of them, were declared settlement units: monastery-settlements. The development of commercial logging provided a powerful boost to the population growth of the Rila Monastery community as people settled to live in the vicinity of the newly built additional infrastructure (railroad with the respective stations, a cable line for dragging logs down the slope, etc.). Also included in the Rila Monastery settlement unit were: the Eleshnitza Forest Estate; Radovishte and Balabanovo railway stations; the Orlitza nunnery; Pchelino farmhouse; Kulata, Rila Monastery, the St. John of Rila and St. Luke Hermitages.

Being part of the network of populated areas in Bulgaria, the Rila Monastery settlement unit has invariably been included in periodic population censuses, data stored at the National Statistical Institute. Table 21 below presents data of the number of inhabitants by year.

Table 21: Population dynamics of Rila Monastery settlement unit over the years.

Census year	**1926**	**1934**	**1946**	**1956**	**1965**	**1970**	**1985**	**1992**	**2001**
Population	361	264	677	1054	570	306	105	57	31

4.2.1 Infrastructure

A multitude of buildings are located in the Rila monastery settlement territory as well as at various places within the territory of Rila Monastery Nature Park: the monastery compound, hotels, restaurants, recreational facilities, tenement and industrial buildings, etc.; there are also roads, electrical power lines and hydrotechnical facilities of different kinds: water catchment and supply mains, hydropower stations, irrigation facilities. For a full list of the Park infrastructure see Appendix 3.

Religious, cultural and historical sites

The principal site of cultural, spiritual and historical significance is the Rila Monastery compound within the Rila monastery settlement. It comprises the following main building:

The Rila Monastery compound

This includes:

1. *The Monastery nucleus*, a complex of solid-structure stone buildings, with timber upper storeys and a wood-beam roof, built in the shape of an irregular quadrangle around an open courtyard of 3,220 sq.m;
2. *Free-standing Monastery buildings.* These are located within the Monastery complex itself and include the following facilities:
   - *The Nativity of the Virgin Monastery Church,* a solid-structure, architecturally complex stone building located in the very center of the interior courtyard;
   - *The Hrelyo Tower with the Chapel of the Transfiguration of Christ* is a solid-structure, tall, all-stone building of rectangular shape, standing by the northeastern corner of the Monastery church;

- *Auxiliary building located outside the main Monastery compound*: laundry room; servants' quarters and school; bakery; firewood shed; abbot's quarters; coal shed; gunpowder depot.

3. *The Monastery cemetery* is located due south of the Monastery compound. At its eastern edge, immediately by the right bank of the Rilska River, is the Presentation of the Virgin Church, a solid-structure, low building.
4. *The Boucher Grave* is located to the southwest of the Monastery nucleus.

In the territory of the Nature park itself are situated the following objects of the infrastructure:

The Tomb of St. John Complex

This holy place is located some three km northeast of Rila Monastery and comprises a complex of natural cliffs with a natural niche, or crevasse, in the rock face; the all-stone structure of the Dormition of St. John Church; a natural spring and a terraced stone walkway, reinforced at places with supporting walls. The entire complex is the property of the Holy Monastery of Rila.

The St. Luke Hermitage Complex

Located some two km northeast of the Monastery nucleus, the complex stands on a steep, terraced slope and consists of a stone enclosure with the Church of St. Luke the Evangelist set in its southern half. An annex to the church once held a small monastery school. In the northern half of the complex there is another shrine, the Church of the Shroud of Mary. The entire complex is the property of the Holy Monastery of Rila.

The residence of Archimandrite Theodossius

Located in Bachkova Cheshma locality, the residential complex consists of three stone buildings. Property of the Holy Monastery of Rila

Hydropower and water supply facilities

Within the territory of Rila Monastery Nature Park there are two whole separate systems of facilities and installations for the catchment, storage and supply of mountain water. One system, located in the Kalin section of the Park, consists of two reservoirs and a network of surface canals for catching water during spring thaw, which is then fed by gravity pipeline into Kalin Hydropower Station. The used water is discharged from the powerhouse into a cooling pool, into which thaw waters are fed via two additional pipes. From there, water is fed again by gravity to the next powerhouse within the system, Kamenitza Hydropower Station, in the near vicinity of the Park, by the Pastra-to-Kalin road.

The other hydrotechnical system constitutes part of the Balmakan-Sestrimo cascade of power stations, which covers the entire Rila Mountain. Two of its branches cut across the Nature Park, in the upper reaches of the Rilska and Iliyna River watersheds. These are catchment facilities and canals for collecting thaw waters and underground tunnels for feeding them into the Beli Iskar Dam.

Water reservoirs

The construction of Kalin Dam was begun in 1939; it was followed shortly thereafter by a smaller facility, Malak (Lesser) Kalin; both dams were put on stream in 1948. Both are small, with a combined capacity of 1.04 million m³, and serve to capture the thaw waters in the watershed of the Kamenitza and Kalin Rivers (see Table 8 in Chapter 2.3.3).

Deviations, collectors and canals

In 1965, the blueprints for the Belmeken-Sestrimo cascade of power stations were approved; by 1969, a project was developed to collect additional waters for the cascade. This project envisioned the building of several additional collectors: Manastirska-Beli Iskar, Iliyna-Left, Iliyna-Right and Blagoevgradska Bistritza, designed to deviate an additional 71.61m cu.m of water from the watersheds of the Stourma and Iskar Rivers into the Belmeken-Sestrimo catchment area. These additional quantities of water were expected to help generate an extra 2,470m kW/hours of electricity. The Manastirska, Iliyna-Left and Iliyna-Right collectors are built within the perimeter of RMNP at elevations slightly over 2,000m asl, the combined watershed of these covering an area of 53.7 km².

The Manastirska collector covers the territory from the Cherney Ridge and ends at Lake Smradlivo. It catches the waters of the Rilska River, which has its source at Ribni Lakes at elevation 2,220 m, and its left-hand tributaries by means of the Gyolski tunnel, and the Smradliva, Dyavolska and Vodnitza Rivers and their right-hand tributaries by means of a pipe canal. The combined water catchment area for

the collector is 29.35 sq.km, with an average annual flow of 31.21 million m³. There are nine water catchment facilities built along the course of the Rilska River, and 4,315 meters of tunnels with a combined flow of 10.4 m³/sec.

The Iliyna-Left collector starts from the Brichebor ravine and ends just below 12th Post locality. The Iliyna-Right collector starts from Sospa Dere locality and likewise ends below 12th Post. Both collectors serve to catch the left-hand and right-hand tributaries, respectively, of the Iliyna River, which has it source from Lake Karaomersko at elevation 2,412m asl. The actual collection takes place at elevation 2,056 m and covers a catchment area of 24.37 sq.km with an annual flow of 18.5 million m³. A total of 19,000 m of roofed canals, 6,200 m of water tunnels and 34 water catchment facilities have been built along the course of the Iliyna River, with a combined flow of 3.14 m³/sec.

The cascade is constructed in such a way as to be able, when necessary, to deviate waters either towards Beli Iskar Dam, for the water supply system of Sofia and the surrounding communities, or towards Belmeken Dam, for power generation and irrigation purposes. The average annual volume of waters diverted from the territory of RMNP towards Iskar Dam, measured over a period of many years, equals 50 x 106 m³, which amounts to about 30% of the annual outflow of the Rilska River, or 2% of that of the Strouma.

All systems and facilities are operated by National Energy Complex, Sofia – Dams and Cascades, Blagoevgrad Branch, National Hydropower Complex pursuant to a development plan and water resource distribution scheme, subject to approval by the Ministry of the Environment and Waters.

HPS and mini-HPS

Kalin Hydropower Station (HPS), with a capacity of 4 MW, is located along the road to Kalin Dam. In the territory of RMNP there is another mini-HPS, the Ribni Lakes mini-Hydropower Station, located between the Upper and Lower Ribni Lakes, with a capacity of 50 kW.

Other water supply and power generation buildings and facilities

There are five buildings at four maintenance stations operated by the Dams and Cascades National Hydropower Complex, Blagoevgrad regional branch. The maintenance stations are solid-structure two-story buildings used as shelter by local maintenance crews assigned to the respective hydrotechnical facilities.

In addition to these buildings, there is a chlorinating station on the water pipeline supplying the Riletz Hotel, which is the property of a Blagoevgrad-based company by the name of Mactours.

Infrastructure related to farming and forestry

Fish farms

A fish farm in Brichebor locality, which is owned and operated by the Fishing and Hunting Association of the city of Dupnitza, comprises one solid-structure building and 11 concrete pools for fish breeding.

Road network

Roads belonging to the national Road Grid

There is a blacktop road within the Park itself, which starts from Brichebor locality and ends at Kirilova Polyana, with a total length in the park of 17 km. This road provides the only connection between Rila Monastery and the National Road Grid.

Other roads

From Kirilova Polyana to Tiha Rila leads a nine-kilometer gravel road; it extends from there onwards as a dirt road following the right bank of the Rilska River, and ending at the unfinished tunnel at elevation 1,500 m. The latter road is 2 km in length.

A gravel road, 16 km in length, runs along the Ilijna River Valley. It starts at Brichebor, ending at 12th Post locality below the crew lodge of Dams and Cascades, Blagoevgrad Branch.

About one kilometer from Vladichina Livada locality, a seven km-long forest dirt road turns off the main road towards Bukovo Berdo.

Another forest dirt road, totaling four km in length, also turns south off the main road at the point of confluence of the Kamenitza and Iliyna Rivers. This road leads along the upper section of the River Radovichka. After it runs its four km length, it turns into a tourist trail leading towards Makedonia Chalet; during the summer season, this trail can be used by all-terrain vehicles to get to the very chalet.

A concrete-surface road starts from the village of Pastra and leads towards Kalin Dam across the territory of RMNP. The road is 13 km in length in the park; a gate restricts vehicle access past Kalin Hydropower Station. Access is regulated with a barrier.

Motor vehicle access into the park is free using the above-mentioned roads; since 2002, a special access permit is only required for the road to Kalin Dam.

The narrow-gauge railroad

From the old narrow-gauge railroad connecting in the past Kocherinovo town with Rila Monastery, there survive only bare remains (the concrete foundations, or 'feet') of two bridges, one at Veli Lag and one at Pchelino locality.

Main entry and exit points

There are two principal entry/exit points by road into the Park: one is situated in the Rilska River Valley east of Pastra village (the road to Rila Monastery); the other is north of Pastra (the road to Kalin Dam). Ordinary vehicles can access and exit RMNP only at these two points. Four wheel drive and off-road vehicles could also use the dirt road across the ridge north of Makedonia Chalet.

Telephone and power lines

There is only one telephone line in the territory of Rila Monastery Nature Park, connecting the Rila Monastery settlement unit with the national telephone system of Bulgaria. The line is aboveground, suspended on wooden and concrete telegraph poles, and connects the Monastery with the town of Rila.

Electric power lines run along the two main river valleys in the Park territory. They are all aboveground, suspended on concrete, wooden or metal poles. The power line running along the Rilska River Valley starts from Brichebor, goes via Rila Monastery and Kirilova Polyana and ends at Tiha Rila. From Brichebor to Kirilova Polyana the line is operational; from there onwards there are sections where the electric cable is missing.

The power line running along the Iliyna River Valley connects Brichebor with the 12th Post. The line is operational up to Vladichina Livada locality. All electrical power lines in RMNP operate at 20 kV.

Chalets, hotels, lodges, shelters, restaurants, recreational facilities, etc.

In the territory of Rila Monastery Nature Park there is one chalet, Ribni Ezera, and one tourist lodge, Kobilino Branishte. In the Rila monastery settlement territory and in the RMNP territory, there are numerous recreational facilities, restaurants, cabins, etc. There are also a large number of disused and abandoned buildings, some of which are in disrepair and falling apart. Generalized information regarding the types of infrastructural sites and facilities in the Park territory is presented in Table 22. For more details refer to Appendix 3.

Table 22: General information regarding the types of infrastructural facilities in RMNP and Rila Monastery settlement unit

Type of building(s)/facility(ies)	RMNP	Rila Monastery settlement unit	Total
Chalets	1	-	1
Hotels	1	1	2
Lodges	1	-	1
Camping sites	1	1	2
Restaurants	2	1	3
Rest homes	9	4	13
Single cabins	4	-	4
Concrete tower	1	-	1
Mini-powerhouses (HPS)	1	-	1
Hydropower station (HPS)	1	-	1
Workmen's lodges of NEC Dams and Cascades	4	-	4
Disused buildings	6	1	7
Religious compounds	2	1	3
Fish farms	1	-	1
Trailers	2	1	3
Chlorinating station	1	-	1
Others	5	-	5
		Total:	53

4.1.3 Agriculture, industry, mining and management of mineral resources

Agriculture

In the past, the main farming activities in what is today the RMNP territory used to be stock-breeding and, to a certain extent, agriculture (mostly of vegetable- and fruit-growing). Today, farming, to the extent that it exists, is practiced mostly on a sustenance level, for the needs of the Monastery, and in part as livelihood of the surrounding communities

Rila Monastery Nature Park comprises some 8,883.2 hectares of high-mountain pastures and meadows. In the early 20th centuries, these were used on a year-round basis. According to a 1939 report by the Forestry, Hunting and Fishing Department of the Ministry of Agriculture and State Lands, towards that year "the Holy Monastery of Rila owns 75 heads of cattle, 60 horses, 400 goats, 4,000 sheep, 50 pigs"; in addition to five dairy farms set amid the Monastery pastures.

At present, the territory of RMNP is used mostly for grazing the herds of domestic animals of cows, horses, sheep and goats, haymaking and, on an insignificant scale, crops (small plots, planted with potatoes).

At present, the territory is mostly used by residents of the nearby communities of Rila and Kocherinovo for grazing livestock. Private owners residing within the territory of the Park itself also raise a herd of some 10-20 heads of cattle (at Vladichina Livada locality). The herds graze mostly in the southern portion of the Park, along the valley of the Iliyna River, and to the northwest of its point of confluence with the Rilska River. Also grazing in the Park territory is a flock of sheep belonging to the Monastery, between 20-30 heads, together with 5-10 cows and the same number of goats.

There is a large herd of horses, about 200 heads in all, that come every year to graze in the area near Kalin Dam, between Vintcheto locality and Malak Kalin. A herd of cows, between 50 and 70 heads, grazes every year at Ravna Polyana locality. A large herd of cattle numbering between 150 and 200 heads, belonging to residents of the villages of Govedartsi and Mala Tsarkva, Samokov Municipality, graze in the area of Kobilino Branishte. Another heard, of between 70 and 100 heads of cattle, is brought to pasture every year in the valley of the Marinkovitza River. Yet another, smaller heard of 30-40 heads of cattle, also belonging to Rila town residents grazes at the foot of Golyam Mechi Peak.

According to Forest Inventory 2000, the grazing of livestock (not including goats) is allowed on an area of 1,480 ha within the entire territory of RMNP. The maximum allowed size of the combined grazing herd is 1,233 heads of cattle or 5,920 heads of sheep, or a combination of these.

At present, haymaking is also practiced in the RMNP territory, mostly by people residing inside the Park or in the surrounding communities. This is done mostly in the southwestern sections of the Park, and to a lesser extent, along the Iliyna River Valley. The annual quantities are estimated at some 20-30 tons. Although small lawn-mowers are often used, in most cases the mowing is done by hand, with scythes.

Crops (potatoes) are raised within the Park territory in small fields of a few decares, mostly along the lower reaches of the Rilska and Iliyna Rivers, and almost exclusively for the needs of the Monastery or a few local residents.

Industry

On the whole the area of what is today Rila Monastery Nature Park has never been the scene of any intensive industrial activity. Rather, small-scale manufacturing businesses have operated here at different times, drawing on local natural resources. Of these, the most stable and longest lasting in time have been logging and timber processing. Until early 20th century, limited quantities of timber were logged, and processed at several small, water-powered sawmills belonging to Rila Monastery. The first large-scale logging operation in the area was the so-called Balabanov Concession, launched in 1903. Later, following the change of regime in 1944, intensive logging was carried out in the territory of the entire Nature Park; the commercial extraction of timber continued until the year 2000.

Dairy farming was another industrial activity practiced within the present-day boundaries of RMNP until the 1970s; it was then that the last dairy farm remained in operation at Brichebor locality, before being closed down for good.

Mining and management of mineral resources

It is known, that during the 50s and 60s of the 20th century, studies for uranium recovery at the foot of Vodnia Rid are conducted. Tunnels drilled for the purposes of uranium prospecting survive to the present day alongside the road connecting Kirilova Polyana with Tiha Rila.

In the past, the local population used to quarry local stone for facings and roofing slabs. Stone slabs were mined on the southern slopes around Mramoretz Peak and in the direction of the 12th Post locality.

4.1.4 Forestry

The first forest inventory for the lands belonging to the Monastery was commissioned in 1890 by Yordan Mitrev, the then forestry inspector for Kyustendil. Until then, the Monastery had been surrounded by all-natural, centuries-old forests, with timber extraction being insignificant in volume. There were only two small, water-powered sawmills, one on the Dyavolski Vodi River, and the other, on the Lomnitza.

Towards the end of the 20th century, the land holdings of Rila Monastery amounted to 21,935.6 hectares, of which 7,456 ha were forests. Of those, 4,530 ha, or 61 percent, were coniferous, and the remaining 2,926 ha, or 39 percent, were deciduous forests. The average age of trees in those days was estimated at 103 years (as compared with 99 years at present); 74 percent of all forests were aged 80 years or over (as compared with 72 percent today). The average forest density was then 0.7, and is now 0.65. Timber resources then were estimated at 397 m^3 per hectare on average, and for coniferous forests alone, at 492 m^3 per hectare. No such figures have been registered for a single piece of land within the entire Bulgarian territory at present. The average annual growth in those days (1890) was an estimated 3.65 m^3 per hectare.

In the beginning of 1892, a powerful snowstorm knocked down thousands of coniferous trees throughout the forest, especially in its western and southwestern portion of the Park. To extract and utilize the fallen timber, 17 new water-powered sawmills were built around the Monastery in 1894-95 alone; this marked the beginning of a period of particularly intensive over-use of the Rila Monastery forests that was to continue up until the very end of the 10th century. Between 1902 and 1933, the notorious Balabanov concession had fully established itself within the territory. All coniferous trees over 30 cm in diameter in nearly all parts of the forest were put to the ax and saw. There was even a plan to make the Rilska River navigable by a system of weirs and locks in order to facilitate the extraction of so much timber to the large new sawmill built at the village of Barakovo. Timber was moved from the logging grounds to the rivers by rolling the logs down the slopes or using runners to slide them down dry or water-filled runways in the natural folds of the mountain. A narrow-gauge railroad was completed and put on stream in 1921 for the main purpose of timber extraction; thus rail superseded the extremely dangerous and labor-intensive

practice of sending log rafts down the Rilska River. The known data about quantities of timber extracted from the territory are presented chronologically in Table 23 below:

Table 23. Quantities of timber extracted from the territory of the present-day Rila Monastery Nature Park during the period 1894-1999.

Period (years)	Quantity (m³)
1894 – 1902	150,000
1902 – 1915	381,000
1924 – 1930	630,000
1930 – 1933	300,000
1944 – 1947	106,000
1948 – 1957	378,000
1958 – 1967	678,000
1968 – 1977	438,000
1978 – 1988	238,000
1989 – 1999	200,000
Total:	**3,499,000**

Since 1937, forestry activities in what is today the territory of Rila Monastery NP have been performed pursuant to 10-year forest inventories, which between 1948 and 2000 were revised and updated once in 10 years. The main kinds of cutting practices during that period were short-term/gradual, gradual, hollow-shaped/gradual and hollow/shaped. Their planned intensity was often exceeded.

The logging and timber extraction methods and techniques used in early 20th century were primitive and inefficient. Trees were cut down with hand-held lumberman's saws; logs were dragged from the logging grounds to the upper stations of the sliding-runways by horses or oxen.

New logging techniques only began to be introduced in the 1960s. Lumberman's saws gave way to chain saws. Cableways superseded donkeys and human power in removing the logs from the logging grounds; and trucks beat rail transport as more efficient, flexible and able to reach every point of the logging grounds. During the 80s the tractors beat cableways for removing the extracted timber.

The first afforestation measures in the territory of present-day RMNP date from 80-90 years ago. The tree species used were mostly Scots pine and larch. In the 1950s, afforestation increased considerably in intensity and scope. The used species during this period are Scots pine, spruce, common fir, giant sequoia, larch, Douglas fir, sycamore, birch, ash, chestnut, etc. The territories where afforestation was practiced were concentrated between the village of Pastra and Brichebor, on both banks of the Rilska River, and to a lesser extent, on the southern and northern slopes along the Iliyna River.

Traditional forestry practices of the local population are the gathering of firewood, the cutting of young saplings for poles, beams and girders; and the extraction of tree

leaves for fodder. These activities, while more pronounced in the surrounding territories, were practiced on an insignificant scale within the park proper.

4.1.5 Hunting and fishing

The territory of Rila monastery Nature Park, prior to its designation as a protected area within the boundaries of the erstwhile Rila People's Park belongs to large-game areas. Pursuant to the then applicable Hunting and Game Act, the State Forest Enterprises were responsible for managing such areas, including all activities pertinent to setting up feeders, supplementary feeding of wild game with hay and fodder during the winter season, selective culling to regulate the size of game populations, and enforcing the hunting season, as well as performing annual taxonomic surveys of the available game stocks. The data of such surveys performed in 1986, 87 and 88 for Rila Monastery Forest Enterprise are presented in Table 24 below:

Table 24. Taxonomic surveys of large game for Rila Monastery Forest Enterprise during 1986 – 1988

Year	Total area of RMFE (ha)	Roe	Doe	Wild boar	Chamois	Caper caillie	Bear (m)	Bear (f)
1986	28700	28	33	73	32	8	2	3
1987	28700	20	25	60	30	6	2	3
1988	28700	22	28	70	30	10	2	3

The hunting grounds for different kinds of game in the territory of the present day RMNP were designated as follows: for red deer, in the localities Tiha Rila, Dyado Ilyovo Dere, along the Rivers Kamentiza (Kodjakariytza) and Radovichka, etc.; for wild boar and roe, in the localities Ravna, Pavlov Dol, Bukovo Bardo, Beloborsko Dere, Sospa Dere, etc.; for chamois: at the saddle above Lake Mramorno, around Lake Sinyoto and Ribni Lakes, in the Marinkovitza River Valley, along Vodniya Ridge, etc.; for capercaillie, on the slopes below Cherney Ridge, on the rocky slopes above Kirilova Polyana and in the Macedonian pine forest below Terziite locality. According to official records for the three-year period cited above, the following quantities of game have been killed: 12 roes, 6 wolves, 165 foxes, 32 martens, 6 wild boar, 7 badgers and 14 wildcats.

Between 1978 and 1988, the following game support facilities were created: 40 feeders, 35 salt-boxes, and two hectares of game-feeding fields; during the same period, the following quantities of food were provided for supplementary feeding of wild game: four tons of hay, 90 tons of dry-leaf fodder, two tons of fresh fodder, and three tons of animal feed concentrate. Again during the same period, a total of 109 violations of the Hunting and Game Act have been recorded.

A hunting program for the period 1989-1999 was developed for the territory of today's Rila Monastery Nature Park, constituting an integral part of the RM State

Forest Enterprise inventory. However, the measures and activities envisioned in this program were not implemented during the said period.

According to the national fishing and fisheries zoning scheme, the present-day RMNP fell entirely within the trout-fishing zone. Within that zone, at altitudes of 800 m and over, the period where amateur fishing is banned differs from the respective period for the lower, warm-water zone. For the over-800-meter zone, which is almost entirely dominated by trout, the ban was in force from October 1st through January 31st. For all other species of fish, amateur fishing was banned between the first Monday of May and the third Friday of June. By force of Order # 49/1992 of the then Committee for Forestry, fishing was banned altogether on the Iliyna River, on the Rilska River from Brichebor to Kirilova Polyana, and on the Eleshnitza River; by virtue of the same Order, the Park Director was authorized to impose further bans or restrictions on all other rivers and water basin throughout the Park.

The territory of RMNP offers favorable conditions for fish farming. There is an operational fish farm at Brichebor locality for breeding rainbow trout and Brook trout; two other fish farms operate on the Rilska River between its point of confluence with the Iliyna River and the point of coinfluence with the Kalin River. In the past, Rila Monastery itself operated a farm for breeding local Balkan trout, the remains of which can be seen to the present day in the Bivolarnika locality.

The findings of a poll taken among the population of the surrounding communities show that two to three percent of that population (i.e. between 120 and 180 people in all) have been actively involved in hunting and amateur fishing for a long time, 20 to 25 years. Hunting is practiced mostly in territrories just outside the Park perimeter, while amateur fishing is done mostly within the Park territory. Both hunting and amateur fishing are seen as pastimes, done for pleasure, most often in combination with other leisure activities. Data from the same poll show that the total amount of game extracted from the park in all of 2001 stands at 168 kilograms, while that of fish, at ca. 1.2 tons. The numbers of hunters and anglers in the territory of RMNP and the surrounding areas, however, is larger, since visitors from more remote areas engage in similar activities, or come here especially for that purpose. Poaching seems to have become a permanent activity in the Park territory.

4.1.6 Harvesting of natural resources

To the population of the gateway communities of Rila Monastery Nature Park, the gathering and extraction of non-timber natural resources seems to be a relative novelty (practiced since some 10 years ago). Supposedly, the consumption of wild-growing fruit prior to the democratic changes (1989) was much less practiced, due to the wide availability of cultivated and manufactured products (fruit, mushrooms, even pharmaceuticals) and, especially, the great abundance of cultivated raspberries in the area of Rila town and the surrounding villages, outside the present Park perimeter. The subsequent destruction of raspberry crops, the rampant unemployment and the all-round impoverishment of the local population has necessitated an increased interest in, and consumption of wild-growing products.

According to data from a survey of the local population, one-third (1,800 to 2,000 people) from the population of the communities around RMNP (the villages of Pastra, Stob and Padala) collect in the territory of RMNP at least one, often more of these natural products: wild-growing fruits, herbs and medicinal plants, or mushrooms, most often for personal use (insignificant quantities of mushrooms and snails are also collected for sale). In none of the communities surveyed is there an operational buying station for natural products; this to a large extent determines the fact that such resources are extracted predominantly for personal and household needs. As of now, the closest buying station for wild-grown natural resources is in Blagoevgrad. In actuality, current extraction practices affect a territory that is in the immediate vicinity, yet outside the Park perimeter (gathering is done mostly on foot, covering average distances of 15 km). Between 1/3 and 2/3 of all gatherers enter the Park when collecting natural resources.

The widest spread practices are the collecting of wild-growing fruits and medicinal plants (herbs); average quantities vary from about 1 kilogram of herbs to ca. 10 kg. of fruit per person per outing. During the entire year 2001, the following quantities were extracted from the Park territory: 3,624 kg. of raspberry, 1,497 kg. of rose hip, 1,152 kg. of bilberry, ca. 480 kg. of medicinal plants, ca. 600 kg. of mushrooms. Most medicinal plant collectors extract different kinds of plants in small quantities, of under 1 kg. each per annum. Substantially greater quantities of fruit are extracted, however, most of all raspberries, bilberries, elder, etc. Between ¼ and 1/3 of all tourists in the territory of RMNP gather natural products, likewise for personal use; there are no reliable data that would allow an estimate of the quantities extracted.

4.1.7 Tourism

Tourism is the most significant activity in the park`s territory as well as the biggest potential source of sustainable income for the private owners of lands and facilities. Rila Monastery Nature Park is the most visited protected area in the soutwest part of the country and ranks second in number of visitors in Bulgaria after Vitosha Nature Park.

Visitor profile

The number of visitors to Rila Monastery Nature Park during 2001 ranges somewhere between 495,000 and 570,000; about one-third of these, i.e. between 163,350 and 190,000 persons, were foreign nationals. The rest were Bulgarians, as follows: 12% (i.e. between 59,400 and 68,400) were children on school trips; almost 6% (29,700-34,200) were residents of nearby communities; while 49% (242,550-279,300) were Bulgarian citizens from other parts of the country.

So far, no sufficiently reliable system has been introduced to keep track of the number of visitors to RMNP; neither have any known purposeful attempts been made in the past to monitor in any consistent way the tourist flow. The estimates cited in the management plan have been made using the method of the repersentative statistical sampling, made on the basis of one season of fieldwork and a subsequent statistical extrapolation of findings.

Visitors on single-day trips make up the largest distinct group of tourists arriving at Rila monastery and the Nature Park. At least two-thirds of all visitors to RMNP spend less than one day in its territory, without overnighting. Typically they visit, at most, two or three separate sites within the Park perimeter, one of which, for 90% of all visitors, is Rila Monastery itself.

Bulgarian tourist profile

Compared with the rest of the Bulgarian population, visitors to Rila Monastery and the eponymous Nature Park are, on the whole, younger, better educated, and more active economically. Over two-thirds of them are employed in the private sector and earn higher income than the national average. The majority of these people come from Sofia or other major cities, mostly Blagoevgrad, Dupnitza or Kyustendil.

Foreign tourist profile

Over 80% of all foreign tourists visiting the territory of Rila Monastery Nature Park do so in groups, on organized package tours. The rest are usually accompanied by a Bulgarian who is either their host or a hired guide. Studies of the nationality structure of the foreign tourist flow have established a considerable presence of German, Japanese, British, Spanish, French, Australian, Polish, Russian, Greek, American, Czech, Austrian and Belgian nationals; their distribution by country of origin is rather haphazard, preventing any statistically significant patterns from being identified. Still, the most common tongue among this diverse multitude of foreigners is English.

Visitor motives

The large majority (ca. 2/3) of all Bulgarian tourists visiting RMNP cite as their prime motive for the trip the need for 'clean air and natural scenery, joy with the contact with nature', and 'rest and recreation'. The Holy Sites located within the territory of the Nature Park come third on the list of significant reasons motivating a visit to the place. On the whole, the most common motive for a trip to RMNP can be generalized as the combination of a visit to a monastery and a set of holy sites, and an outing in the bosom of nature – a combination that inspires awe in visitors and gives them a feeling of the significance of the destination.

A typical single-day trip to the territory includes a brief visit to the Monastery, combined with short hikes, picnics and time for rest. This tendency is evidenced by the items, which single-day visitors usually carry in their luggage: camera, food, eating utensils, soft drinks. About 1/3 of visitors to the Park also bring alcoholic beverages for consumption during their stay.

To most foreign visitors, the most important motive for taking the trip is the historical and cultural fame of Rila Monastery. The overwhelming majority of them have no idea whatsoever of the other opportunities provided by the surrounding territory; very few are even aware of the existence of a Nature Park around the Monastery. On their departure from the Monastery, most foreigners take with them a similar feeling of

awe and fascination with the place as a whole, rather than impressions from particular elements of the visit.

Trends and seasonal dynamics of the tourist flow

Since 1990, the number of visitors to the present-day territory of the Nature Park has decreased almost by half. (A study of the literature on Rila Monastery shows that in 1986, the Monastery received the Golden Apple Award as a tourist destination visited by over a million people during the current year.) There is no single explanation of this decline in the tourist flow; according to most visitors polled, as well as according to the local authorities and travel agencies, it is due to the worsening socioeconomic situation in the country during the period 1990-1997. Between 1995 and 1997 the figures leveled off, and the picture has remained largely unchanged up until 2001.

About 50% of all visits to the Monastery take place in the summer season, in July and August. During these months, the average number of visitors varies between 5,000-7,000 people daily. About one-fifth of them opt for a longer stay and take advantage of the accommodation opportunities provided by tourists chalets and lodges.

Expenses per person per visit

The average amount spent by one person during a single visit to Rila Monastery Nature Park is 30 BGN (44 BGN for foreigners). To almost 50% of all visitors, the actual expenses made during a single visit amount to just under 30 BGN per person. The sum is slightly higher for those who overnight in the Park territory. Most of the expenses are made to cover the cost of food and transportation.

Structure of expenses

An all-round assessment of the structure of expenses made in the course of visits to RMNP shows that between 50 and 60% of the planned amount is actually spent in the territory of RMNP (up to 70% for persons overnighting here). Over half of all visitors use the restaurants/food kiosks and/or grocery stores in the territory. About one-third of all visitors buy gifts and souvenirs, typically reproduction icons, postcards, crosses, small carved-wood items, decorations. According to most interviewed visitors, the gifts and souvenirs on offer are inappropriate for the place and/or too expensive. To almost everyone the purchase of church candles and/or holy water is part of the ritual of the visit. No more than 1/5 are prepared to pay an admission fee to see the museum exhibits, or to buy promotional materials, books or maps.

About 2/3 of all visitors say they would support the introduction of a licensing system for tourism services, which they see as a quality assurance tool.

Visitor access and distribution of the tourist flow in the territory of RMNP

At least two-thirds of all visitors access the Park territory by motor vehicle, using the main entryway into Rila Monastery Nature Park, the blacktop road leading to the Monastery. The existence of only one single access road means that to reach points of the interior beyond Rila Monastery, the entire traffic must pass by the Monastery gates. The rest of the visitors to RMNP access the Park territory on foot, whether individually or in groups.

There also exist a number of minor points of entry into RMNP, on the tourist trails crossing its boundary with Rila National Park. These entry points are located on traditional routes and are only accessible on foot. They serve approaches to the Park along the following trails: from Ivan Vazov Chalet to Kalin Dam; from the Seven Lakes to Rila Monastery; from Kobilino Branishte to Kirilova Polyana; from Malyovitza Chalet to Rila Monastery; from Granchar Chalet to Ribni Ezera Chalet; from Dobro Pole locality to Brichebor; and from Macedonia Chalet to Brichebor.

The most popular tourist destinations within RMNP are grouped together in six clusters according to location: Rila Monastery, the Tomb of St. John of Rila, Kirilova Polyana, Ribni Lakes, the St. Luke Hermitage, and the valley of the Iliyna River. Studies show that the further inside the park, and away from the Monastery, a site is located, the more time visitors are inclined to spend at it.

The grouping of the tourist objects (destinations) according to its level of visitation and the distribution of visitors among them are shown in Fig. 18:

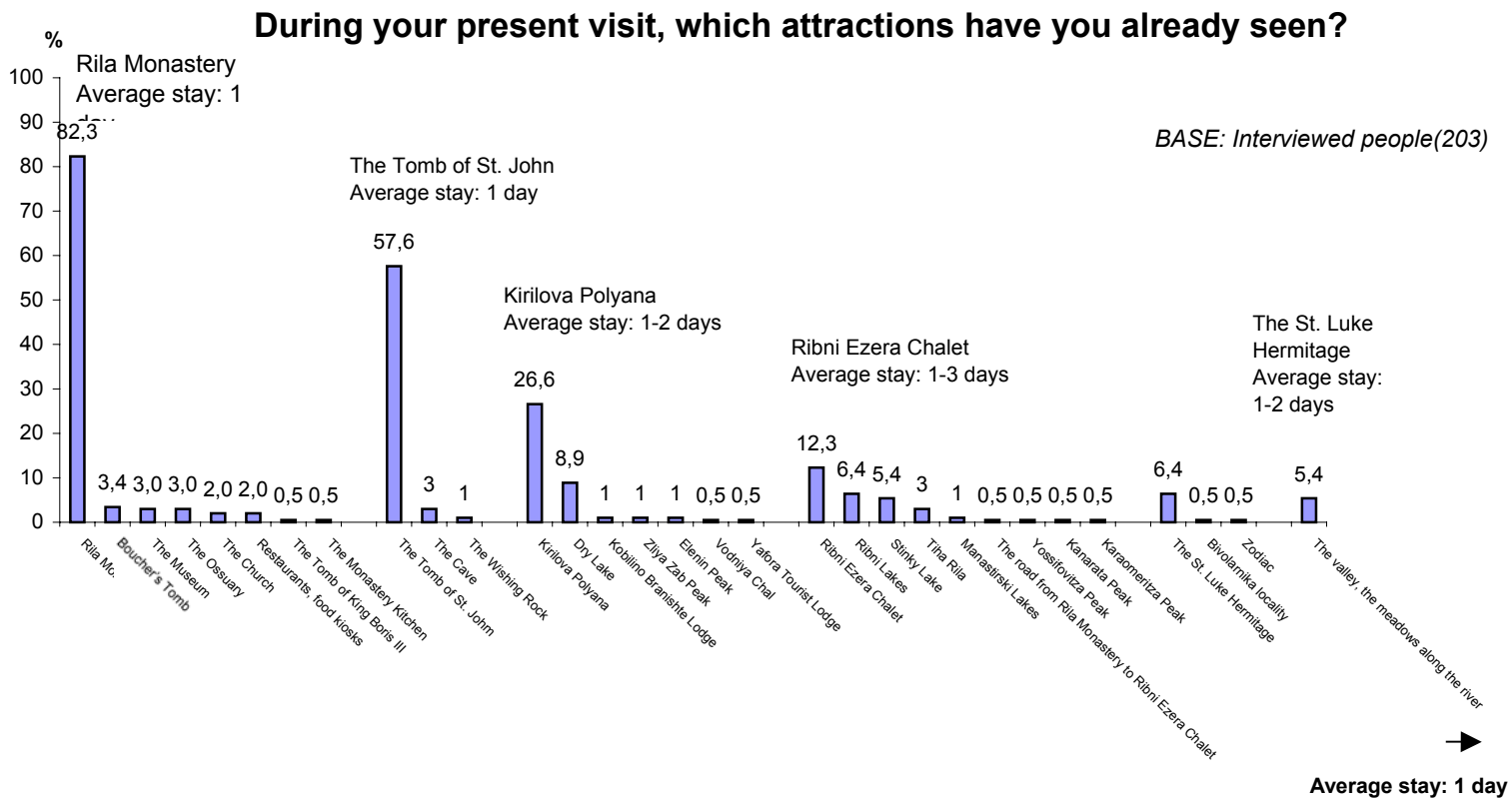

Fig. 18: Grouping of the tourist objects (destinations) according to its level of visitation

Tourist awareness and basic needs

On the whole, tourists are poorly informed about Rila Monastery Nature Park; only about a fifth of all visitors to its territory have been vaguely aware of its existence prior to their arrival. Two-thirds say they had spotted signs and information boards announcing its existence immediately before entering its territory.

As a result of the visitor survey, the following basic needs for information and tourist services have been identified: signs and information boards, as well as more museums, restaurants and shops.

As a whole, visitors to RMNP do not attach any particular significance to activities like the gathering of herbs or mushrooms, hunting and amateur fishing, etc. So long as they exist at all, such activities are practiced exclusively for pleasure or personal consumption.

Willingness to pay fees

The interviewees are split right down the middle regarding the idea of introducing an entry fee for admission into the park territory, half being in favor and the other half against. The prevailing argument against is that, given the present level of tourist information and services offered in it, such a fee would not be justified. If, however, a fee is nevertheless to be introduced, according to Bulgarian respondents the optimum amount should be 1 BGN for Bulgarians and 5 BGN for foreign visitors. On the other hand, if a standard fee is to be introduced for both Bulgarian and foreign nationals, the recommended amount should be 2 BGN.

Foreign visitors are generally more inclined to pay an entry fee, with 70% of interviewees speaking in support of introducing one; foreigners also believe 10 BGN per person to be a very reasonable amount.

Specialized tourism: special events and organized trips

Cultural tourism, religious festivals and celebrations

Rila monastery is an object of special importance for the European cultural tourism. It is part of the European network of cultural tourist roads "European roads of the Orthodox Monahism."

Rila Monastery is a much-preferred venue for celebrating religious holidays on the Christian calendar. The largest numbers of visitors gather here on occasions that have become traditional for the Monastery: the Dormition of St. Mary (August 15th), the Dormition of St. John of Rila (August 17th), Fathers' Day (October 19th). Large crowds, including visitors from neighboring countries, are drawn to the Monastery on Christian holidays of general appeal, like Christmas, Easter, Epiphany, Holy Spirit (on the 50th day after Easter), etc.

Hiking and mountain climbing

Hiking is the most common form of high-mountain tourism in Rila Monastery Nature Park. The Monastery itself is a preferred starting point or final destination for individual and group outings as well as longer (several days-long) treks across Rila Mountain. Organized high-mountain treks across the Park territory are offered by Bulgarian tour operators as part of the standard tourist packages. Typically, groups number 12 to 20 members; the preferred season is May through July. The number of such groups has declined since the Kosovo crisis, rarely exceeding five annually.

Since 1990, the territory of today's Nature Park has been used as a destination by various organized groups, mostly foreigners, of practitioners of different forms of alternative or specialized tourism: bird and butterfly watchers, botanical routes, etc. Such groups are usually made up of 12-14 members each, and their total number rarely exceeds 10 per year. The trips are organized by private tour operators, both Bulgarian and foreign (Odyssey Inn, Explorer 2000, Neophron PLC, and others). Such trips, which are usually highly specialized, are led by highly trained, multilingual tour guides with in-depth knowledge of the subject-matter of the trip. Specialized tourist groups use preferably the valley of the Rilska River, mostly the section between Rila Monastery and Tiha Rila. (Possible specialized tourism routes are described in Appendix 30.)

The territory of RMNP has traditionally been used for sports events and mountain-climbing practices. Before 2001, individual climbers used the vertical rock face and cliffs northwest of Kirilova Poluyana (Zliya Zab); in recent years, this practice has stopped.

Special events

Once a year, in the simmer, the territory of RMNP becomes the venue for a vintage-car race involving between 15 and 20 automobiles. Participants arrive with their cars from Sofia, spend the night at Kirilova Polyana and return to Sofia on the next day following the same route.

There is an initiative for carrying out an annual summer bikers' festival in the Gorchim locality, which has taken place two years in a row.

Tourism services

Tourist trails/routes

Listed below are the main tourist routes established in the territory of Rila Monastery Nature Park:

1. Rila Monastery-via Kalugerski Dol-Boucher-Ivan Vazov Chalet;
2. Rila Monastery-Kirilova Polyana- Dry Lake - Kobilino Branishte;
3. Kirilova Polyana-Tiha Rila-Ribni Ezera Chalet;
4. Ribni Ezera Chalet-Granchar Chalet;
5. Ribni Ezera Chalet- Macedonia Chalet (E-4);
6. Ribni Ezera Chalet-Marinkovitza-Kobilino Branishte-Malyovitza Chalet;
7. Brichebor-via Radovichka River-Macedonia Chalet;
8. Pastra village-Kalin Dam;
9. Tiha Rila-Stinky Lake-Ribni Ezera Chalet.

Tourist infrastructure

Chalets and lodges

Ribni Ezera Chalet. The only operational chalet in the territory of Rila Monastery Nature Park consists of two solid-structure buildings and four cabins, at present operated on concession. All buildings of the complex are supplied with electricity from a mini-powerhouse (hydroelectric plant). The management has no two-way radio or any other means of communication. Although Ribni Ezera is one of the most popular tourist attractions in Rila Mountain, it is practically closed during the winter season.

The main approach to the chalet is by a marked trail from Tiha Rila locality. Ribni Ezera Chalet is a crossing point of numerous tourist routes, including the Trans-European Route from the Pyrenees in Spain to Mount Olympus in Greece.

Kobilino Branishte tourist shelter. Set amid the eponymous location, the shelter is a simple wooden structure without plumbing, built to provide shelter to tourists in bad weather, and very basic accommodation during longer hikes. Situated by the ancient Roman road crossing the territory of RMNP between Rila town and Samokov.

Hotels

There is one operational hotel within the park perimeter: the Riletz hotel and restaurant complex in Bivolarnika locality, open all year-round.

Camping sites

There are two privately owned camping sites in the territory of RMNP. One is part of the Zodiac restaurant and camping site complex, located by the side of the road from Rila Monastery to Kirilova Polyana, comprising 18 separate buildings and facilities. The other is the Bor camping site, in Bivolarnika locality, consisting of 23 separate buildings with different functions. .

In addition, there are 10 recreational facilities (campsites, rest homes, etc.) located throughout the Park territory. All of these facilities are operational during the summer season only.

Trailers and other temporary facilities

Scattered at different points within the Park are four wooden cabins and three trailers, all of them privately owned, which are used for rest and recreation.

Independent restaurants and food kiosks

There are three such facilities in the Park territory, the biggest of which is Bachkova Cheshma restaurant, consisting of a light sheet-metal structure with a barbecue grill. Another restaurant, Pri Chicho Kiro (At Uncle Kiro's) is a semi-solid structure in Kirilova Polyana locality. In addition to that, again at Kirilova Polyana, there is a small food canteen. For a detailed list of the tourist infrastructure in the RMNP and the Rila monastery settlement see Table 25.

Table 25: List of the tourist infrastructure in Rila Monastery Nature Park and the Rila monastery settlement

Type/name of the facility	Locality/section/ subsection	Description of the facility (operational condition)	Owner	Number of beds/seating capacity	Amenities
1. Bor camping site	Bivolarnika/Rila Monastery settlement unit	Wood cabins and restaurant with open-air barbecue grill - inadequate	MacTours, Blagoevgrad	20 beds 20 seats for diners	- electricity - running water - septic tank - dumpster - dirt road
2. Recreational facility	Bivolarnika/Rila Monastery settlement unit	Wood cabins with lean-to toilets, bathroom and toilet, and a dining hall - inadequate	National Center for School Recreation and Tourism, Kyustendil	80 beds 80 seats in cafeteria	- electricity - running water - septic tank - dumpster - dirt road
3. Recreational facility	Bivolarnika 4, subsection 1	Wood cabins with lean-to toilets, bathroom and toilet, and a dining hall - inadequate	The Bread and Pastries Factory, Dupnitza	80 beds 40 seats in cafeteria	- electricity - running water - septic tank - dumpster - dirt road
4. Recreational facility	Bivolarnika 39, subsection 1	Wood cabins with lean-to toilets, bathroom and toilet, and a dining hall - inadequate	The Hearing-impaired Manufacturing Cooperative, Dupnitza	20 beds 20 seats for diners	- electricity - running water - septic tank - dumpster - dirt road
5. Recreational facility	Bivolarnika 39, subsection 1	Wood cabins	The Movie Distributors' Guild, Dupnitza	16 beds	- electricity - running water - septic tank - dumpster - dirt road
6. Recreational facility	Kirilova Polyana 24. subsection 2	Wood cabins - inadequate	IPF Sofia	52 beds	- electricity - running water - septic tank - dumpster - asphalt road
7. Recreational facility	Kravarski Dol 75, subsection 8	Wood cabins, dining hall - inadequate	Paper Mills, Barakovo village	36 beds 20 seats for diners	- electricity - running water - septic tank - dumpster - dirt road

Type/name of the facility	Locality/section/ subsection	Description of the facility (operational condition)	Owner	Number of beds/seating capacity	Amenities
8. Recreational facility	Bivolarnika/Rila Monastery settlement unit	Wood cabins - inadequate	Comprehensive school, Kocherinovo town	36 beds	- electricity - running water - septic tank - dumpster - asphalt road
9. Recreational facility	Yavora locality 26, subsection 1	Solid structure buildings, dining hall - average	Rest and Recreation Facilities Enterprise, Sapareva Banya	160 beds 60 seats for diners	- electricity - running water - septic tank - dumpster - dirt road
10. Corporate recreational facility	Bachkova Cheshma locality	Solid structure building - average	Regional Road Administration, Dupnitza	15 beds	- electricity - running water - septic tank - dumpster - asphalt road - telephone
11. Corporate recreational facility	Kirilova Polyana	Solid structure building - average	Rilales PLC, Dupnitza	8 beds	- electricity - running water - dumpster - asphalt road
12. Corporate recreational facility	Kalin Hydropower Station	Solid structure building - inadequate	Granitoid Ltd., Sofia	40 beds	- electricity - running water - septic tank - dumpster - concrete road
13. Corporate recreational facility	Turskoto Parche locality	Unfinished solid-structure building - inadequate	Tobacco Industry, Dupnitza		- running water - dirt road
14. Restaurant/ food kiosk	Kirilova Polyana 24, subsection 4	Sheet-metal structure - inadequate	Orbita Complex, Rila town	20 seats for diners	- electricity - running water - septic tank - dumpster - asphalt road
15. Zodiac Camping site & Restaurant	Bivolarnika 21, subsection 5	Semi-solid structure building and wood cabins - good	Private property	20 beds 200 seats for diners	- electricity - running water - septic tank - dumpster - asphalt road

Type/name of the facility	Locality/section/ subsection	Description of the facility (operational condition)	Owner	Number of beds/seating capacity	Amenities
16. Bai Kiro Restaurant	Kirilova Polyana 24, subsection 2	Semi-solid structure building - average	Private property	100 seats for diners	- electricity - running water - septic tank - dumpster - asphalt road
17. Bachkova Cheshma Restaurant	Bachkova Cheshma, Rila Monastery settlement unit	Semi-solid structure building - inadequate	Mactours, Blagoevgrad	60 seats for diners	- electricity - running water - septic tank - dumpster - asphalt road
18. Ribni Ezera Restaurant	Ribni Lakes 1000, subsection 7	Solid-structure building - inadequate	Rest and Recreation Facilities Enterprise, Sapareva Banya	120 beds 40 seats for diners	- electricity - running water - septic tank
19. Tourist lodge	Kobilino Branishte	Wooden building - inadequate	Bulgarian Tourist Union	20 bunks	-
20. Riletz Hotel	Bivolarnika 43, subsection 1	Solid-structure building - average	Mactours, Blagoevgrad	180 beds 220 seats for diners	- electricity - running water - septic tank - dumpster - asphalt road - telephone
21. Tzarev Vrah Hotel	Rila Monastery settlement unit	Solid-structure building - good	Rila Monastery	180 beds 200 seats for diners	- electricity - running water - septic tank - dumpster - asphalt road - telephone

Occupancy of the tourism infrastructure and seasonal variations therein

During the period of development of the present Management Plan, the entire tourism infrastructure in the territory of RMNP has been operating below capacity, despite a considerable tourist flow. The actual occupancy rate is the product of the complex interaction of several main reasons:

- Decrease in the tourist flow: since 1990, the number of visitors to the Park territory has dropped to a little more than half the previous levels. This, in turn, has shrunk occupancy rates to 50% of capacity;
- Limited choice of accommodation: Ribni Ezera Chalet is used up to capacity despite inadequate amenities, due to lack of alternative facilities in the higher portions of the Park;
- The value (amenities, sanitation, entertainment) for money factor: a tendency to make do with less at a better price that drives people to seek accommodation at recreation homes rather than, for example, proper hotels.

At the same time, studies show that there is a social bracket of visitors of higher educational and socioeconomic status who are more particular in their requirements of both the amenities and entertainment opportunities. In actuality, these people, at least so far, have nowhere to stay in the territory of RMNP. Table 26 below presents the basic facts about the capacity, occupancy rate and seasonal occupancy fluctuations of the hospitality infrastructure within the Park and the territory in its direct vicinity:

Table 26: Capacity and seasonal dynamics of the occupancy rate of the tourist infrastructure

Facility	Number of beds/ Restaurant seating capacity	SEASON	Seasonal occupancy fluctuations	Weighted average occupancy rate
Ribni Ezera Chalet	120/40	May-September	July, August 90%; May, June, September 60%	75%
Zodiac Camping Site	20/200	Year-round	Year-round	60%
Bulgarian Postal Services Recreation Home	90/30	Year-round		60%
Kremikovtzi Camp	29	May-September	May-September	50%
Kravarski Dol Camp	36	May-September	May-September	45%
Kirilova Polyana cabins	80/35	May-September	July, August 60%; May, June, September 30%	45%
Yavora Camp	160/60	May-September	July, August 60%; May, June, September 30%	45%
Bor Camp	20/30	May-September	July, August 60%; May, June, September 20%	40%
Tzarev Vrah Hotel	180/200	Year-round	Year-round	40%
Pchelino Hotel	15/30	Year-round	Year-round	40%
Eleshnitza Tourist Lodge	60	Year-round	Year-round	30%
Eleshnitza Chalet	70	Year-round		25%
Riletz Hotel	180/220	Year-round	Year-round	15%

4.1.8 Public awareness about the Park and education

General awareness of the territory

Although its status as a protected area is a little known fact, the territory of RMNP is widely popular among the public, locally and on a national scale. Such popularity is due to two basic factors:

1. Rila Monastery is a famous site, known to practically every Bulgarian. While most respondents find it impossible to tell when they first came to know about it, it is likely that this happened in pre-school or early school age;
2. The territory of RMNP is regarded as an inseparable part of Rila Mountain, and is referred to by visitors as "the heart of Rila".

- 60% of (adult) Bulgarians have visited Rila Monastery more than once or twice in their lifetime, as opposed to a mere four percent who have never visited it;
- About four to five percent of (adult) Bulgarians (240-250 thousand individuals) have visited Rila Monastery during 2001;
- The territory of RMNP is the most popular tourist destination in all of Rila Mountain, with 2/3 of visitors to Rila National Park also spending some time in Rila Monastery NP;
- Rila Monastery NP is the most attractive protected area in southwestern Bulgaria and, next to Vitosha Nature park, the second most popular tourist destination in all of Bulgaria;
- RMNP is a most preferred destination for school trips, with about five percent of middle and high school students in all of Bulgaria visiting the area of Rila Monastery every year; this accounts for ten percent of the entire visitor flow into the area.

Access to information

Following the designation of RMNP, the access of the public at large to more concrete and detailed information regarding the Park is ensured along several main channels:

- Activities and events organized and held by the Park Directorate: exhibitions, issue of promotional materials, sessions with high-school students, etc.;
- Information targeted at visitors to RMNP: information boards, exhibitions about the Nature Park in the lobby of the Tzarev Vrah hotel, issue of posters, brochures and maps for sale at commercial outlets around the Monastery and at other locations;
- Regular press conferences of the Planning Team responsible for drafting the Management Plan for the territory, targeted at a national as well as the local audience; these aim to cover the process, stages and products of the Team's work;
- Meetings, workshops, field studies carried out in conjunction with representative of the local community;

Despite the extreme popularity of Rila Monastery as a tourist attraction and with all efforts made in that respect, access to public information about the Park is relatively limited. There are simply not enough sources of such information. At the same time, a poll among a small sample of tourists shows that the information signs and billboards draw the attention of 60% of them. It should be borne in mind that an increased public

awareness of RMNP among different groups of the population would be conducive to the attainment of the goals and objectives defined by the Management Plan.
The level of awareness of the general public across the country about the designation and existence of the Park varies very broadly. While some 76 percent of the population of the surrounding communities knows about the act of its designation as a protected area and its proper name, only about one-fifth of visitors to the territory share that knowledge. An insignificant minority of people, even local residents, are familiar to any substantial extent with any details regarding the Park (boundaries, ownership, stakeholder institutions, etc.). The prevailing opinion among all groups of respondents, however, is that the efforts and responsibilities for the protection and development of RMNP should be shared in a coordinated manner between the Monastery, Rila Municipality and all relevant government institutions.

At present, none of the groups of respondents surveyed have any clear idea about the existing restrictions on some activities: building camp fires, camping out, harvesting of natural resources, fishing and hunting; the widely shared belief is that these are all unconditionally allowed in the Park's territory.

Expectations towards and interest in RMNP

The main expectations in relation to the designation of Rila Monastery Nature Park among the different groups of society relate to:

- environmental conservation (of plants, animals, forests, soil, air);
- preservation of Rila Monastery;
- as a whole, proper management and husbandry.

In this context, the population of the surrounding communities differs from the remaining groups surveyed (visitors and the public at large) in that it relies to a greater extent on the presence of the Nature Park for the future prosperity of the region, mostly through the development of tourism. To some 40 percent of the local people, the designation of the area as a Nature Park opens up new possibilities for livelihood and prosperity in their respective communities. On a personal level, however, individuals so far show little willingness to make plans or take advantage of the opportunities presented.

The interest shown by respondents in obtaining more information about the Park relates to four main themes:

- general information about RMNP and the main landmarks in it;
- biodiversity;
- history;
- services and hospitality infrastructure.

There is a tendency among all groups of respondents to declare a high degree of commitment to RMNP. In the event of a critical situation or emergency within the Park territory, their reaction would most probably amount to alerting the relevant institutions, the media and, less likely, in volunteering to help rectify the situation. Residents of Sofia and the cities of Blagoevgrad, Kyustendil and Pernik are more likely than the Bulgarian public in general to commit themselves in a critical situation

or emergency, since the territory of RMNP is a favorite tourist destination and place for rest and recreation for them.

The attitudes towards environmental protection registered on a basic level among the respondents confirm the Bulgarian people's traditionally positive rapport with nature.

4.1.9 Education

Educational activities organized by the Rila Monastery NP Directorate

There are some specially established centers for environmental education within the park's territory. The Directorate of RMNP has undertaken a number of steps in this direction. Here are some of the more important initiatives:

Exhibitions

The Directorate of RMNP has set up a permanent exhibition in the lobby of Tzarev Vrah Hotel, which comprises a collection of minerals, a display of plant seeds and photos of scenic landscapes, plant and animal species characteristic of the area. Photo exhibitions are organized in several settlements around the park: Rila, Kocherinovo, Boboshevo, Dupnitza, Blagoevgrad. Some of the exhibitions are related to particular nature conservation events.

Working with the media

The Park Directorate is working with several regional and national media: the cabel TV "Armtex"- from Kustendil and "Rila TV" – from Dupnitza; the newspapers – "Vjara", "Dupnitza", "Struma", the journals "Gora" and "Touristicheski pazar". Appearances in the media are usually initated by the Parks Directorate, focusing on significant nature conservation dates or when presenting park editions.

Rila Monastery Nature Park Directorate editions

In order to increase public awareness of the Park and to publicize its natural and cultural heritage, the Park has issued a range of promotional and publicity materials, e.g. a **video** of the Park (filmed in July 2002 by Emanoil Vassilev Ltd. of the town of Rila). A total of five copies of the video were produced. The Park Directorate has commissioned and produced a range of **thematic brochures**. Part of these is general information materials about the Park, the dendrological trails, protected plants, lakes, flora and fauna in general. Others are more of a tourism promotional nature and present some of the available tourist routes within the Park. In circulation is a **Tourist Map of the Park**, issued in 2002. Among the most informative thematic publications is the full-color **Album of the Lakes in RMNP**, which contains detailed data about every single lake in the park territory; an English-language edition is forthcoming. Among the promotional and information materials, also notable are the various **postcards** and **calendars** (the latter issued every year). Information about the Park can also be found in a more general book, **Bulgaria's Parks**, published in 2002, ed. (Civil Society Development Foundation).

Work with school classes

At present, the Park Directorate supports two programs with high-school classes from Dupnitza and Blagoevgrad. Under the Children Without Drugs Programs, jointly initiated with the Regional Sanitation Inspectorate, Blagoevgrad, school pupils and park personnel are carrying out a joint afforestation campaign. Under the other program, dubbed Socrates, RMNP staff organizes a five-day eco-school in the Park territory for children of Hristo Botev High of the city of Dupnitza. Park clean-up campaigns have been organized with students from the Clothing and Footwear Technical College, the Food and Beverage College and Evlogi Georgiev High, all based in Dupnitza. The Directorate also supports programs for pre-school and grade school children, e.g. of the Dr. Theodora Miladinova Day Care Center and Averkii Popstoyanov Comprehensive School of the town of Rila. It has initiated an ecology circle at the school in Rila town, which not only provides children with the basics of ecology as a science but also with concrete, real-life examples of environmental protection measures in the territory.

Field educational activities

There are several specially designed dendrology trails in the territory of RMNP, with signs and information boards placed at popular spots along their length to provide basic information about the tree species encountered throughout the park.

Other information boards have been placed at different sites around the Park presenting the basic facts about the territory, as well as the ground rules of public behavior within it. The rivers and creeks are properly signposted with their names; so are some distinct localities and sites within the Park.

Educational activities for academic institutions

Kirilova Polyana locality, Eleshnitza and some other spots in the territory of RMNP and the neighbouring territory, including Rila Monastery Forest Reserve are used for the annual student practices of different schools of higher learning. Among these are the following institutions:

University of Sofia, Department of Biology

Since 1990 the Faculty of Biology (FB) of Sofia University has been holding on a regular basis its annual practices in the territory of what is today RMNP. The point of these practices is for students to recognize at a glance plants and animals, and to learn about the main peculiarities of some species and ecosystems. Most of the expenses (travel, accommodation, food) are covered by FB. The number of participants is about 125 every year, spending 10 days in the field. The nearby Hotel Eleshnitza is used for accommodation. Zoology students have their practices along the valley of the River Eleshnitza to the north, as well as in parts of the Park territory south of the hotel; while botanists use Kirilova Polyana locality and different parts of the Rila

Monastery Forest Reserve. Classes take place according to a curriculum drawn up by the faculty. Since these practices are not aimed at systematic scientific information gathering, the field data are not collected for any special analysis.

The University of Forestry Engineering

The annual student practicums of the Forestry Engineering and Environmental Conservation departments of that University were held in the Park territory between 1982 and 1995. The students came on one-day field trips to Rila Monastery Forest Reserve. The format of the educational activity is similar to that of FB of the University of Sofia.

The Southwestern University, Blagoevgrad

Since 1990, students majoring in ecology, geography and pre-school pedagogy in the Blagoevgrad University have held their one-day practices in Rila Monastery Forest Reserve and at an elevation of 1,500m from the water catchment area down to Kirilova Polyana. The format of the educational activity is similar to that of the FB of the University of Sofia and the Forest University.

Other educational activities

The fact that Rila Monastery, Bulgaria's foremost religious, spiritual and cultural center, is set within the territory of RMNP, makes this area a favorite destination with middle- and high-school students across the country. About five percent of all school-aged children in Bulgaria visit the Monastery and the Park every year.

4.1.10 Scientific research

Ever since the 19th century, the area around Rila Monastery has been the venue for many scientific projects and conventions, combined with visits to the Monastery itself. In some specific cases, the territory has been used for focused studies on some groups of invertebrates. The data thus gathered have been published in different scientific journals in Bulgaria and overseas, while the material collected is stored in the vaults of the Bulgarian Academy of Sciences and of some Bulgarian institutions of higher learning. In recent years, data about specific groups of animals are collected sporadically and ad hoc by various NGOs (the Bulgarian Society for the Protection of Birds, the Nature Find, etc.). The wealth of available information has never been collected in its entirety, catalogued or filed in a systematic way, by any Bulgarian institution.

Since 1993, the annual summer practicums of Sofia University's Department of Biology held around Kirilova Polyana and Eleshnitza have yielded abundant data about wildlife in these and other areas around the Park.The information thus collected, however, is only stored in the personal collections of students and faculty, or in individual cases has been included in scientific publications. Both the published and the unpublished data have been carefully sought out and used in the drafting of this Management Plan.

Between 1996 and 1998, USAID sponsored the so-called GEF Biodiversity Project, initiating a series of intensive field studies, backed up by literary data research, of the territory of Rila National Park, which then included the present Rila Monastery NP. The project made use of the existing literary data, including all relevant publications since 1890. Involved in the effort was mostly research staff from the Bulgaria Academy of Sciences.

During the summer of 2001, a team of scientists formed under the BCEG Project with the concrete objective of performing a rapid ecological assessment (REA) in the territory of RMNP. This method, used in conservation biology, was applied for the first time in Bulgaria. A team of 18 scientists from BAS, BSPB, assisted by experts from the Park Directorate, undertook three expeditions with a total duration of 35 days, in order to perform a comprehensive study of the biota in all altitudinal zones and in all sections of the Park.

The findings and data gathered as a result of both projects, together with the information purchased form Agrolesproject Ltd., form the core of the Nature Park's Geographic Information System (GIS) and the electronic database on biodiversity within it.

In recent years, different components of biodiversity have been studied in the territory of RMNP outside the context of the present Management Plan. Scientists from the BAS Institute of Botany, the Institute of Zoology, the Central Laboratory of General Ecology, the Forestry Institute, the University of Sofia, the University of Forestry Engineering and other institutions undertook most of these research projects.

The French OM2 expedition (1994) made partial surveys of the territory of what is today Rila Monastery Nature Park, as part of Rila Mountain.

The Institute of Forestry of the Bulgarian Academy of Sciences has been active since 1986 on a program for Assessment and Monitoring of Air Pollution in Forest Ecosystems. The program was initiated by the Economic Commission of the European Union and is funded by the Ministry of the Environment and Waters and the National Forestry Board under the Ministry of Agriculture and Forests. A total of four sampling grounds have been defined within the Park territory. In his 1989 dissertation project on "Form Diversity of the Macedonian pine", Rumen Dobrev considers the state and condition of that species in the Park territory.

The Central Laboratory of General Ecology (also under BAS) has conducted a study on the soil- and moss-based nematodic fauna in pine and beech forests around Rila Monastery. Soil samples were taken from Rila Monastery Forest Reserve (for pine forests), and from oak forests located in the immediate vicinity of Rila Monastery (3-4 km southwest of the Monastery compound). The study was launched in 1997, under a joint project sponsored by CLGE and the Scottish Institute of Cultures. The aim of this study is to conduct a comparative analysis of the nematodic fauna in both countries.

The BAS Institute of Zoology is working on a project within the 5th Framework Program of the European Union for scientific research, technological development and demonstrations 2000-2003, entitled "High-Mountain Ecosystems: Diagnosis, Assessment, Classification."

Since 1980, the Dams and Cascades Enterprise PLC has carried out systematic and periodic monitoring along the lengths of the Rilska and Iliyna Rivers. The measuring stations are housed in the personnel lodges of Dams and Cascades. Studies include:

- density and thickness of the snow cover;
- water flow through the hydrotechnical facilities;
- ambient air temperature;
- precipitation.

4.2 The Nature Park in a regional context and the current use of the adjoining territories

The very location of Rila Monastery Nature Park predetermines its biological, territorial-administrative and cultural links of the territory with Rila National Park, with neighboring municipalities and the southwestern Planning Region as a whole. The present section of the Management Plan focuses on the possibilities, arising from these connections, for building sustainable relationships with the local communities and the region as a whole, and on the need to preserve the present integrity of ecosystems and biological complexes shared between Rila National park and Rila Monastery Nature Park.

4.2.1 Population of the adjoining territories

Administrative context

Rila Monastery Nature Park is situated entirely within the administrative boundaries of the Municipality of Rila Township, an administrative unit comprising five communities with a combined population of 4,203. In turn, the Municipality of Rila Township belongs administratively to Kyustendil Region, with the city of Kyustendil, located some 60 km northwest of the nature park, as its regional center.

Due to the above-described direct physical boundary between Rila National Park and populated areas, settlement units (gateway communities) can only be found around the western edge of Rila Monastery Nature Park. With the exception of the village of Padala, all other settlement units: the villages of Pastra and Stob and the townships of Rila and Kocherinovo, are located either on, or by the side of, the only vehicle access road leading into the Nature Park, the one connecting Rila Monastery with the Sofia-to-Kulata highway.

Demographic trends

The town of Rila, the villages of Padala and Pastra and Rila Monastery all belong to Rila Municipality, constituting 89.7 percent of its population. The town of Kocherinovo and the village of Stob belong to Kocherinovo Municipality, and account for 55.6 percent of that municipality's combined population. The combined population of all six

communities numbers 7,518 inhabitants, or 4.4 percent of the total population of Kyustendil Region (170,559). The large majority of the population of the six communities listed above, 78.3 percent, are residents of the two townships. The relative share of the urban population for Kyustendil Region is 64.5 percent, compared with a national average of 68.1 percent.

The natural growth of the population of these towns and villages is negative: -14.6%, and its rate of decline is three times the national average of – 4.8%, or nearly twice as high as that for Kyustendil Region as a whole, 8.7%. The higher population decline index is the result of a relatively high mortality rate in the communities of this area, which stands at 20.6% (as compared with 13.6% national average and 15.8% for Kyustendil Region alone), and the low birth rate of 6.1% (as compared with 7.6% national average and 15.8 for Kyustendil Region).

On the other hand, population growth as a result of migration is positive for most communities, i.e. more people are moving in than out; yet the aggregate population growth (the sum total of natural growth and migration) remains negative: -9.5%, which means that the combined population of these communities has decreased in 1999 by 9.5 persons for every thousand living in the area, as a result of the higher mortality rate.

The age distribution of the population of the communities located around the Park in terms of economic productivity (i.e. below, at or above economically productive age) roughly follows the nation-wide pattern, with the share of the above-active-age population being higher than the national average: 31.8 percent (as against 24.7 percent for the national average), at the expense of a relatively lower share each of population segments at or below economically productive age: 13.8 and 54.4 percent respectively (as compared with 17.2 and 58.0 percent nation-wide).

Employment trends

Three economic sectors dominate the employment patterns of the population of the municipalities to which the communities under review belong: processing industry (23.1%); education (20.5%), and health care (11.5%). Almost twice as many people (65.4%) are employed in the public sector as in the private, with the dominant sphere being education (31.3%), followed by health care (17.4%) and public management (12.6%). The main employment groups in the private sector are those engaged in the processing industry (57.7%), and retail trade and repairs (24.9%).

A total of 571 persons are registered as unemployed[3] with the employment offices in Kocherinovo and Rila Municipalities; of those, close to one quarter (23.6%) are young people aged 29 or less, while one in five (21.7%) seeking employment have been unemployed for over a year. The unemployment level in these two municipalities is lower than the national average: 13.5 percent for Kocherinovo Municipality and 10.1 percent for Rila Municipality (as compared with a 1999 national average of 16.0% and 13.8% for Kyustendil Region).

[3] Unemployment data refer to persons officially registered with employment offices and is reported at the municipal level. Everywhere in the text employment data refer to persons employed on a contractual basis and are collected at the municipal level. The economic activity and employment coefficients cannot be calculated, as no exact data are available regarding the number of actually employed.

The average annual wage[4] for Kocherinovo and Rila Municipalities in 1999 was considerably lower than both the national average and the average figure for Kyustendil Region. Thus, the average wage in the area under review was by ¼ lower than the national average of 2,412 BGN (2,332 BGN for Kyustendil Region); in Kocherinovo Municipality alone it was by almost 1,000 BGN (or 35%) lower than the national average. This applies to employees in both the public sector (where the average annual salary for Rila Municipality is 2,224 BGN, and for Kocherinovo Municipality, a paltry 1,722 BGN, as compared with a national average of 2,751 BGN), and in the private sector (1,263 BGN for Rila and 1,372 BGN for Kocherinovo municipalities, as against a 1999 national average of 2,010 BGN). The only sub-sector where the annual wage is higher that the national average is retail trade and repairs in the public sector: 4,200 BGN for Kocherinovo Municipality and 3,711 BGN for Rila Municipality, as compared with 3,432 BGN as the national average in that sub-sector; however, very few people are employed in it. In all other sectors the average annual wage for these municipalities is lower than both the national and the regional average. Even in the processing industry sub-sector of the private sector, which employs the bulk of the private sector workforce, the average annual wage is between 30% (for Kocherinovo Municipality) and 60% (for Rila Municipality) lower than the national average.

Concrete data about the current demographic and employment trends are shown in Appendix 24.

Economic activities and livelihood of the population in the adjoining territories

The data regarding the role of RMNP in people's lives, the direct uses and indirect benefits, including the collection of non-timber natural products, are mostly derived from a statistically significant survey of the adult population of the communities cited (ca. 6,000 people). The statistical sample surveyed comprised some 600 individuals, interviewed in their homes.

On the whole, the population of Rila Monastery NP makes little use, whether direct or indirect, of the available natural resources. Paradoxically, some communities located at the base of a mountain territory that is the richest in water resources in all of Bulgaria suffer from chronic water shortages. About three percent of the territory's population are in gainful employment pertinent to Rila Monastery itself, while six percent are employed in logging and forestry.

Agriculture

The number of livestock and other domestic animals raised in the territory of Rila Municipality in 1999, 2000 and 2001 (up until July), according to municipal records, are presented in Table 27 below**:**

[4] Here, as well as with employment data, figures refer to persons employed on a contractual basis only. The average annual wage for the area comprising the communities under review is impossible to calculate, as is the combined average annual wage for the two municipalities together; this is due to the unavailability of data about individual communities or by months of the year.

Table 27. Numbers of domestic animals raised in the territory of Rila Municipality during the period 1999-2001

Animals	1999	2000	2001
Cattle	199	217	292
Pigs	901	915	950
Sheep	3,170	3,065	1,616
Ewes	317	372	259
Goats	1,471	1,538	1,032
Fowl	4,679	4,713	3,668
Beehives	146	156	130
Rabbits	215	217	250
Horses	220	202	218
Donkeys	50	42	38
Mules	12	14	16

The most common agricultural crops grown in the areas around the Park boundary are vegetables, potatoes, or tobacco (Table 28). The farming intensity at present is in harmony with the requirements and prospects for the development of the Park. The decline in production, due to problems with the cash flow, stimulates the introduction of organic farming for the simple reason that less and less money is spent on plant protection agents and mineral fertilizer.

Table 28. Statistical data about some basic crops in Rila Municipality during 2000 up until July 1, 2001

Crop	2000 (ha)	2001 (ha)
Wheat	77.0	105.0
Potatoes	52.0	25.0
Tobacco	20.0	22.8
Natural meadows	565.0	570.0

Tourism

The local population uses the territory of Rila Monastery Nature Park mostly for rest and recreation; moreover, in its expectations of the future it links the territory's prospective development with recreational and tourism-related activities. Tourism and related services are regarded as very promising for the future, but at present are not seen as particularly feasible; less than five percent of all households are engaged in hospitality services.

In the territory of Rila Municipality out of the RMNP and the Rila Monastery settlement few tourist facilities exist for tourist accomodation. These are the hotel in Rila town and several smaller places, which offer food and accomodation for the tourists along the Rilska River Valley. The tourist facilities in the neighboring park territory are listed in Table 29.

A natural phenomenon of interest to visitors in the immediate vicinity of the Park are the sandstone pyramids at the village of Stob, as well as pairs of storks that permanently nest in Kocherinovo.

Table 29: List of the tourist infrastructure in the territory along Rilska River at the Rila Monastery Nature Park vicinity

Type/name of the facility	Locality/section/ subsection	Description of the facility (operational condition)	Owner	Number of beds/seating capacity	Amenities
1. Recreational facility	Eleshnitza locality 7, subsection 8	Wood cabins, restaurant and boiler room - good	Bulgarian Postal Services Recreation Home Sofia	80 beds 30 seats in cafeteria	- electricity - running water - septic tank - dumpster - asphalt road - telephone - asphalt road - telephone
2. Restaurant	Veli Lag locality 6, subsection 9	Solid-structure building with barbecue grill - average	Private property	60 seats for diners	- electricity - running water - septic tank - dumpster - asphalt road
3. Rilski Rai Restaurant	Gorchim locality 1, subsection 4	Solid structure building - inadequate	Private property	20 seats for diners	- electricity - running water - septic tank - dumpster - asphalt road
4. Ribarnika Tavern	Eleshnitza 13, subsection 5	Solid structure building - inadequate	Private property	40 seats	- electricity - running water - septic tank - dumpster - asphalt road
5. Pchelino Restaurant	Pchelino 16, subsection 12	Solid structure building - average	Private property	30 seats for diners	- electricity - running water - septic tank - dumpster - asphalt road
6. Gorski Kat Restaurant	Yagniloto locality 14, subsection 7	Semi-solid structure building - inadequate	Rilales PLC, Dupnitza	60 seats for diners	- electricity - running water - septic tank - dumpster - asphalt road

Type/name of the facility	Locality/section/ subsection	Description of the facility (operational condition)	Owner	Number of beds/seating capacity	Amenities
7. Fantasia Restaurant	Eleshnitza locality 7, subsection 9	Semi-solid structure building - inadequate	Private property	30 seats for diners	- electricity - running water - septic tank - dumpster - asphalt road
8. Eleshnitza Chalet	Eleshnitza locality 7, subsection 9	Solid-structure building - inadequate	Rest and Recreation Facilities Enterprise, Sapareva Banya	70 beds	- electricity - running water - septic tank - dumpster - asphalt road

Dependence of the population on the use of non-timber natural resources

Studies among the local community have so far identified no social groups that are economically dependent on the gathering of non-timber natural products. Over 2/3 of all respondents say that if these practices are banned or restricted, that would have next to no effect on their households. Not a single respondent identify the collection of natural products as their primary, or even secondary, source of income In 2001 the population of the gateway communities has used up a 20,000 BGN total worth of natural products, including game and fish.

Health care and social services

The tendency towards graying (increase of the average age) of the population makes it necessary to allocate more efforts and funds towards social care and services. To Rila Municipality in particular, this is a major outstanding problem in need of an urgent solution. To date, there are three basic types of health care institutions operating concurrently within Rila Town: the Municipal Hospital, the Medical Diagnostic Center and the Center for Emergency Medical Assistance. To get to either of these, local people have to rely on private transport. Social care and services are provided by the General Social Assistance Service and by the Institution for Male Mental Patients, located by the road from Pastra Village to Kalin Dam. As a result of the reform in national public health, all health care institutions are independent legal entities enjoying greater freedom of operation, while social care institutions remain, at least for now, more closely regulated, supervised and funded by the State. Due to their continuing dependence and the chronic shortage of budgetary funds, social care institutions become increasingly uncertain as to their continued ability to provide adequate relief to needy households or to improve the living conditions and care for the inmates at the Institution for Male Mental Patients

The significance of waters for the population

The water resources in the territory of RMNP have always had, and continue to have, particular importance for the population outside the park territory. In the past, such importance was mostly biological. Since ancient times, water has been used by people as a natural given, something that gives the soil its moisture, enables the growing of big and numerous trees and lush meadows and usable for drinking. There was an abundance of fish in the rivers. The waters of Rila Mountain also played, albeit indirectly, an economic function, in that the local population was mostly engaged in animal husbandry, logging, and fishing. It was at a later stage that water-driven grain and fulling mills began to be built in the area

With the advance of industry, waters began to play a bigger economic role. A paper mill was built at the village of Barakovo in the early 20th century. Since its operation necessitated the cutting down of the forests in the Rilska River Valley, the river waters were also used for transport purposes, for bringing down the logs to be processed into pulp in the factory.

In the early 1920s Granitoid, the Bulgarian-German joint venture developed the blueprints for building a series of hydropower stations along the Rilska River. The first of those, Pastra Hydropower Station, was built in 1925; followed in 1929 by Rila Hydropower station. Having completed those two, the company began developing another set of blueprints, for building the so-called Rila Hydropower Group. The year 1939 saw the groundbreaking for Kamenitsa and Kalin hydropower stations, and of Kalin Dam, which were completed and put on stream in 1948. The electrical power generated by these stations was fed to the cement plant at the village of Batanovtsi, Pernik District, to the Pirin mining complex operated by the same company, and the Barakovo paper mill; the population of the Rilska River basin used the remaining part for household purposes. The completion of this cascade of hydropower stations changed the life of the local community by creating a host of new jobs during its construction and subsequent operation, as well as by improving their living conditions. The electricity generated has provided a powerful push for the industrial development and economic output of southwestern Bulgaria.

At a later stage, a proposal was developed to utilize the discharged water of the "Kamenitsa" hydropower stations for the supply of Rila town and the communities of the Rila River basin with drinking water to the tune of 60 liters/sec. Another source of drinking water for these communities is the Eleshnitsa River, via the Rila-Kocherinovo pipeline (100 liters/sec.). At present, shortages of drinking water have come to affect the population of Rila Municipality, since most of the local water is piped into Sofia and other major cities in the region.

It is not only the population of the surrounding territories that benefits from waters collected from the territory of the Nature Park; in fact, local drinking water is distributed throughout the entire southwestern region of Bulgaria. Two arms of the Belmeken-Sestrimo cascade of water catchment facilities are situated within the Park territory. The cascade is built in such a way as to allow water to be diverted to either Beli Iskar Dam, which supplies drinking water to the capital, or to Belmeken Dam, where it is used for irrigation and power generation.

Several pumping stations operate along the Rilska River, which feed water for the irrigation of farmlands along the lower stream of the river.

4.2.2 The Nature Park in the context of the South-western Planning Region

Planning mechanisms

The Regional Development Act (promulgated in State Gazette, # 26/23.03. 1999) provides the legal basis as well as the tools pertinent to the investment policy in both a regional and nation-wide context:

1. The National Plan for Economic Development during the Period 2000-2006. (NDEP) [5] The Plan was developed in conformity with the National Strategy for accession of Bulgaria to the European Union, last updated in the year 2001. Under it, Rila Monastery Nature Park falls within the Southwestern Planning Region, which

[5] Amendments to the Territorial Development Act that were submitted for parliamentary approval towards April 2003, may lead to changes in the planning process.

includes the following administrative units: Sofia City, Sofia, Blagoevgrad, Kyustendil and Pernik regions, and is centered on Sofia. NPED defines the general strategy for the country's development and its national priorities using a 'from-the-top-down' planning.

2. The National Plan for Regional Development 2000-2006[5]. This is the other basic instrument for the development of a comprehensive, long-term mechanism of regional development, which is expected to strike the right balance between national, regional and local interests.

NPED comprises national programs for realization, which emphasize, focus upon and use as their basic planning unit the areas of targeted impact: growth areas, development areas, areas of trans-boundary cooperation and development, areas of industrial decline and underdeveloped rural areas, the territorial scope of all of which is determined by ordinance adopted by Decree # 105 of the Council of Ministers of June 2, 1999 (SG # 53/11.06.1999). There are two types of areas that can be distinguished within the Southwestern Planning Region, namely areas of trans-boundary cooperation and areas of industrial decline.

3. Plan for strategic development of Rila Municipality for the Period 2000-2006. The conservation of nature and the environment and the development of tourism are among the states priorities of this Plan. The planned activities, as well as other local initiatives, are largely related to the idea of tourism development.

Essentially, the underlying philosophy and the approaches used in planning make it a process of constant updating and improvement, of setting new goals and, respectively, priorities to keep abreast of the ever-changing domestic and international environment. This places the present Management Plan in a favorable position because:

1) No national or regional projects in an advanced stage of realization (financing, construction) have been identified that bear upon the territory of RMNP and could lead to conflicts or contradiction in the planning process;
2) The Management Plan for Rila Monastery Nature Park is the most concrete document to be applied on a priority basis toward the development of this territory, in relation to other, more general pieces of legislation. Through the public hearings, combined with timely and persuasive presentations during which the Plan is well presented to competent institutions, it would become possible to stimulate the updating of regional plans along with the goals of the Management Plans;
3) The activities undertaken in the planing process have yielded greater knowledge, awareness and a vision of the development of this territory in conformity with its basic purposes and the provisions of both the Territorial Development Act and the Protected Areas Act, as well as in the context of biodiversity and environmental conservation while providing opportunities for the environmentally sound development of the local economy.

Roads and vehicle traffic in the area round RMNP

The territory of RMNP is accessible by third-class road # 107, which connects Kirilova Polyana locality with the E79 international highway, a few kilometers west of Kocherinovo. Though traffic decreases somewhat as it nears the interior of the Park, it remains significant, estimated at 159,870 motor vehicles for the year 2000 according to data collected by the highest axle-counting station, the one located within the Park territory, between the State Forest Enterprise and Rila Monastery.

Annual traffic on E79 international highway totals 2,156,420 motor vehicles, of which 60% (1,311,445) are cars. The tendency over the next 10 years can only be towards further increase in vehicular traffic, for the following reasons: The upcoming accession of Bulgaria to EU; the fact that international transport routes E4 and E8 cross this territory; and the planned setting up of new border crossing points with neighboring countries (Nevestino Municipality – Vetren village; Treklyano Municipality – Slavcheto locality; Simitli – Pehchevo; Stroumyani – Belovo; Drama – Ilinden – Gotse Delchev).

Recent studies carried out in 2001 show that a large proportion of visitors to RMNP are people who have spontaneously taken the turn-off to Rila Monastery while motoring down the E79 highway. Some basic facts about vehicular traffic in the area around RMNP are shown in Table 30 below:

Table 30. Vehicular traffic around RMNP in 2000 (Source: The Executive Road Grid Agency)

Road	Counting station	Total motor vehicles	Cars only
E79 Highway	Main automated 203 (b/n Dupnitza and Kocherinovo, north of the turn-off to Slatino village)	5,908/ 2,156,420	1,311,445
Third-class road # 107 (III 107)	1774 (between the State Forestry and Rila Monastery)	438/ 159,870	134,320

Impact and opportunities of the proximity of Rila National Park

Rila Monastery Nature Park benefits considerably from its exceptional proximity to Rila National Park. The two Parks not only have a common boundary; in fact, RMNP is practically surrounded by RNP on all sides except to the west, where it shares a 20-km boundary with other, non-RNP territories. Since by year 2000 the present-day territory of the Nature Park was part of the National Park.

Biologically, the two Parks remain connected by two important corridors of genetic exchange between wildlife populations inhabiting them: the links between RMNP, on the one hand, and Central Rila and Parangalitza nature reserves in RNP, on the other.

Such proximity enables a set of mutual influences, including the exchange of genetic material, especially between populations of large vertebrates.

The fact that Rila NP surrounds RMNP almost completely reduces anthropogenic pressure on the Nature Park, as the National Park functions as something of a buffer zone that literally protects the territory of RMNP from pressure by a whole series of potentially harmful factors, thus increasing its value as the core of the entire set of natural complexes constituting the whole of Rila Mountain. To date, there is only partial coordination between the administrations of the two protected areas, on important matters related to law enforcement, tourism management, protection of rare and endangered species, management of habitats and fire prevention.

Tourism and recreation opportunities

Concentrated in the Southwestern Planning District are some of the largest mountain ranges in Bulgaria: Vitosha, Rila, and Pirin, as well as some minor ones in the border regions with Greece and Macedonia: Belassitsa, Ograzhden, Slavyanka, Osogovska and Maleshevska mountains. Large parts of these mountains are protected areas. In addition to RMNP, two out of the three National Parks in Bulgaria are also located here: Rila and Pirin National Parks, as well as Vitosha Nature Park. Rila National Park already has an approved Management Plan, while the management plans for Pirin National and Vitosha Nature Parks are in the process of being developed.

Along the border with Greece there are also two nature reserves, both having the potential of becoming regional nature parks; in addition, in the Rupite locality there is a protected area and a mineral spring.

Winter skiing tourism is traditional to the mountains Vitosha, Pirin and Rila, while for most of the regional centers, especially of Blagoevgrad and Kyustendil regions, tourism is declared a priority economic sector.

The natural heritage, protected natural areas, the well-preserved local traditions and cultural values, the existing and planned transport connections, both domestic and international, combine to create real possibilities for development of specialized tourism, diversifying the currently available tourism products and extending the tourist season.

Rila Monastery Nature Park is the most popular tourist destination and a priority in the development of tourism in the entire Southwestern Planning Region. The Park is a key element of the network of tourist landmarks within the region, located within an hour's drive from the following major places:

- Sofia, with the entire range of administrative, cultural, historical and other institutions, as befit the capital of Bulgaria;
- Kyustendil, a regional center and a spa resort;
- Blagoevgrad, a regional and academic center, the seat of a university;
- Sapareva Banya - mineral springs, visitors' center and a gateway to the Park;

- Semkovo and Treshtenik - hotels and chalets along the boundary of Rila National Park;
- Bansko – Dobrinishte, a famous winter resort and skiing center;
- Leshten, Ognyanovo and Kovachevitsa – villages of highly original period architecture, yet offering modern conveniences and amenities for rest and recreation in the vicinity of Gotse Delchev, incl. mineral spas;
- Zemen Monastery;
- Rozhen Monastery, Melnik – a historic place declared a museum town, famous far beyond the borders of Bulgaria for its quality wine;
- Sandanski – an international spa resort;
- Petrich – the southernmost Bulgarian town along the Strouma River Valley, one of the sunniest places in Bulgaria. In its vicinity is the historic fortress and castle of King Samuil.

4.3 Religious, cultural and historical sites in RMNP, Rila monastery settlement and in the territory neighboring the park

By far the most significant monument is the Rila Monastery architectural and historical reserve, declared a complex of national significance, and since 1983 listed under the Convention of the World Cultural and Natural Heritage.

The Rila Monastery compound

Rila Monastery was founded in the 10th century by followers of the earliest Bulgarian hermit, St. John of Rila; the construction of the different phases of the Monastery complex continued over many centuries until it took its present shape in mid-19th century. The compound consists of:

1. *The Monastery nucleus*, comprised of several interlocked wings, making up an irregular rectangle enclosing an open space (courtyard) of 3,320 sq.m and uniting in an integral whole the individual buildings and facilities of the compound.

The north, the east and the west wings were built by Master-Builder Alexy Rilets in 1833-4, after the great fire of 1833. The south wing was added in 1847 by Master-Builder Milenko of Radomir. The wings have a total built-up area of ca. 4,500 sq.m The common layout for all four wings is with the rooms facing outwards, away from the courtyard, and with long galleries running the length of every floor on the inside. The structure employs a mixed building technique. The outer walls are built of local stone, and are about two meters thick. The inside walls are made of stone or brick masonry or wood panels, depending on their function. The galleries of the north, east and west wings are shaped as long arcades on the first three floors, built of stone masonry on the ground floor, brick on the two storeys above, and light-weight wooden colonnades on the top floor. The south wing is made up entirely of solid stone arcades. The floors themselves are built of massive timber joists with solid-wood floorboards; the roof is of wooden girders and crossbeams. The wings perform a multitude of different functions, distinctly grouped as follows: the monks' cells

(living quarters) are grouped in the east, south and west wing; in the north wing are some of the common premises: library, dining hall, the Abbot's offices and the infirmary; the east and west wings also house two chapels and a gate each; in addition, on the ground floor in the north wing are some storage and auxiliary rooms and the monastery kitchen, and on the floors above, spare rooms for visitors and pilgrims. The overall appearance and the architectural value of the main wings of the compound rank Rila Monastery among the most sublime accomplishments of Bulgarian Revival architecture.

2. *Parts of the Monastery having their own architectural and artistic value.* These are located within the Monastery compound or even within individual wings of the main building and include the following elements:

- *The Chapel of St. John the Theologian*, located above the Samokov Gate on the first floor of the solid east-wing structure. The Chapel is preserved intact in its original shape dating from 1816; the gilded carved-wood iconostasis is a unique work of art.
- *The Sts. Sava and Simeon Chapel*, built in 1834, located on the third floor just above St. John the Theologian;
- *The Chapel of St. John the Precursor*, located above the Dupnitsa Gate in the west wing, between the first and second floor. Painted in 1844 with 145 frescoes of Biblical scenes, figures of saints and medallions;
- *The Sts. Michael and Gabriel Chapel*, built on the third, top floor in the west wing above St. John the Precursor;
- *The Dupnitsa Gate*, in the northern section of the west wing, shaped like a deep portico with two massive pillars set a little forward from the façade and connected by a curved double arch in high relief. The whole structure of the portico is topped by a tiled gable roof. The tunnel below the building is arched, with a small-suspended cupola in its middle section. The structural elements are highlighted with elaborate frescoes;
- *The Samokov Gate,* in the northern section of the east wing, was built in 1958 in place of an old portico, in its original shape and size, emulating that of the Dupnitsa Gate;
- *The guest quarters*, on some of the floors in the north and east wing, are richly decorated with woodcarvings and frescoes, and bear the names of towns that have donated the funds for their interior decoration. The spatial layout of the rooms and the decorative patterns used are typical of Bulgarian Revival aesthetics;
- *The Church of the Nativity of the Holy Virgin*, begun in 1837 and completed in 1860, stands in the exact spot of the old Hrelyo's Church. The elaborate spatial composition of the church building is impressive and imposing; the interior is exquisitely proportioned and elaborately decorated in a variety of media and techniques: carved stone, gilded wood and wrought metal; marble mosaics; architectural shapes and elements highlighted with painted patterns; rich frescoes. Perhaps the most striking work of art inside the nave is the iconostasis, carved from wood under the direction of Atanas Geladour, and the frescoes by a number of eminent Revival painters, including Zakhari Zograph;
- *Hrelyo's Tower with the Transfiguration of Christ Chapel*. Built in 1335 to defend what was then a medieval monastery, the tower has since been

remodeled as spare living quarters. With a floor plan is almost a perfect square (7.25 by 8.25 m), the tower is 23 m in height. The outer walls are 1.8 m thick, built of cut and river stone masonry with plaster. The interior space is divided into five storeys, with a chapel, the Transfiguration of Christ, topping the enlarged fifth storey. Inside the chapel one can see surviving fragments of the original 14th century frescoes of enormous artistic and historical value. A belfry was added to the tower's western facade in 1843-44, its ground floor occupied by the Monastery store.

3. Auxiliary building located outside the main Monastery compound:
These are a number of separate, independent buildings comprising the Monastery household, whose historical value is mostly determined by their age. Among those are the monastery laundry room, the servants' quarters and the monastery school, the firewood and coal storage rooms, the Abbot's quarters, the powder house, the wine cellar, etc. All of these buildings date from the early 19th century and some retain their original function to the present, while others have been converted to other purposes. Their physical structure and appearance are more or less unchanged; at the same time, there are records of other contemporary buildings and facilities that have either been destroyed or changed beyond recognition.

4. The Monastery cemetery is located due south of the Monastery compound. At its eastern edge, immediately by the right bank of the Rilska River, is the Presentation of the Virgin Church, built and decorated in the 1790s.

5. The Boucher Grave is located to the southwest of the Monastery compound. It is the final resting place of a British journalist, James Boucher (1850-1920), actively involved with the Bulgarian national liberation cause, who himself willed to be buried at this spot;

The Tomb of St. John of Rila Complex

The place where, as legend has it, the remains of the hermit St. John of Rila are entombed, is located about 3 kilometres northeast of the Monastery, in a small niche in the Rupite rock face. The nearby 15th-century ***Dormition of St. John Church***, renovated in 1746 and with an extension by Master-Builder Alexy Rilets dating from 1820, is painted inside with frescoes depicting traditional gospel scenes and episodes from the life of the saint. In the immediate vicinity of the church, partly hidden in a rock crevasse a little ways to the southwest is a hermit's den. The terrace in front of it fits into the concave rock face and is only open towards the southeast, supported underneath by stone masonry and a terraced slope.

St. John's Tomb is a 20 minutes' walk along the marked trail from Kirilova Polyana locality. It is accessible direct from the Monastery via another marked trail; the distance is ca. 1:30 hrs. The tomb site is property of the Holy Monastery of Rila.

The St. Luke Hermitage Complex

The St. Luke Hermitage Complex consists of a structure of solid stone reinforcements from the south and supporting walls of stone masonry from the west, north and south. Standing in the southern single-nave, singe-apse **church** by the name of ***St. Luke the Evangelist***, built in 1799 in memory of a man by the same name, Luka, allegedly nephew of St. John of Rila, who died on this spot from a snakebite, having voluntarily joined his uncle in his hermitage. In the 19th c., a small monastery school of five cells was added to the church.
Perched atop the northern end of the compound is the single-nave ***Church of the Shroud of Mary***, erected in 1805. Both buildings are certified historical monuments, both are the property of Rila Monastery.

The Pilgrim's Road

Most of the length of the Pilgrim's Road falls within the Park perimeter; this road, which connects Rila Monastery with the nearby township of Rila, marks the last stage of the historic procession, which transferred the remains of St. John from the ancient capital of Tarnovo to Rila Monastery in 1469. The procession, described by Vladislav the Grammarian in his *Book of the Progress of the Remains of St. John from Tarnovo to Rila Monastery*, became a major event of national symbolic significance for the then enslaved Bulgarians. The re-internment of the saint's remains placed Rila Monastery in the centre of national attention, triggering mass pilgrimage from all corners of the land and contributing to the rapid prosperity of the Monastery. In keeping with the ancient tradition of building houses of prayer along pilgrims' routes, a **chapel bearing the name of the Holy Trinity** stands by the side of the Pilgrims' Road, south of Rila town.

The Pilgrim's Road follows the natural terrain of the mountain pass entering the Park from the direction of Pastra village; it plays an important role not merely as a religious site, but as an organic link between the religious, spiritual, cultural and historical site situated along its length.

Religious, cultural and historical monuments around Rila Monastery

In the immediate vicinity of the Rila Monastery Nature Park are a number of monuments of the religious and historical heritage of national significance.

Pchelino Nunnery

This monastery croft built in the late XIX and early XX century is located four km to the west of the Monastery complex, in immediate proximity to the Pilgrim`s road. It represents a solid-built two-storey structure surrounded by a stone fence.

The Dormition of St. Mary (The Holy Virgin) Church

Built in late 18th century, the church lays a little ways north of Pchelino Farmhouse. The frescoes, completed in 1834, are of high artistic value.

Orlitza Nunnery

Situated to the west of Rila township, some 20 km from Rila Monastery, by the northern side of the access road to the Monastery and the actual Pilgrim's Road, nunnery is declared a complex architectural, historical and cultural monument of national significance.

The ancient stone walls of the nunnery have survived from the time of Voivod Hrelyo; the earliest written records about it date from 1378. The nunnery was the last stop of the procession carrying, in 1469, the remains of St. John of Rila from Tarnovo to Rila Monastery, before it reached the Monastery itself.

The courtyard is terraced and fenced up with a stone wall; set within it are the **Church of Sts. Peter and Paul**, the kitchen house (a two-story building with the original stone-and-brick-cell masonry and wooden frame of pre-18th c. Bulgarian architecture), a cluster of 19th c. living quarters and auxiliary buildings; a stone drinking fountain with an inscription "1809", built into the northern section of the fence wall. The Church of Sts. Peter and Paul was built in 1491, and last renovated in 1863. Parts of the original painting are preserved intact above the main door and in the altar apse.

4.4 Structure and aesthetic merit of the landscape

The evaluation and classification of landscapes in Rila Monastery Nature Park was made on the basis of a Rapid Landscape Assessment (RLA) carried out in 2002, where the landscapes were reviewed and assessed, both in the field and from photographs, by a team of forest engineers and landscape architects.

4.4.1 Peculiarities of the landscapes within the Park

Typological classification of landscapes

The typology of landscapes is determined pursuant to the elements and characteristics of lay of the land and the vegetation cover (Bulgarian State Standard – BSS, 17.8.01-88), the list of most common landscapes in Rila National Park, the presence of water basins and streams, the presence of cultural elements, as well as the extent of damage inflicted on the landscape. The main types of landscapes identified during the field assessment are listed in Appendix 25.

Topography and incline

Rila Monastery Nature Park is defined by a long and narrow river valley (that of the Rilska River) with its characteristically steep slopes, that cuts across it, starting from the western outskirts of Rila town. The main entryway into the territory of RMNP is located in that same valley, a little ways to the east of Pastra village; from that point the valley extends some six km inward into the Park, before branching into two long valleys, those of the Rilska and its main tributary, the Iliyna River, reaching into the very heart of the Rila mountain massif (see Fig. 4).

On the whole, both valleys are oriented in an east-west direction. The two rivers, which run steady and full all year round, have their point of confluence at Brichebor locality. Their valleys are separated by a steep and tall mountain ridge, which falls entirely within the Park perimeter. The ridge is characterized by the steep incline of both its northern and southern slopes, its high-mountain meadows and pastures in its upper reaches, and the several high, pointed peaks (Ostratz, Theodossievi Karaouli, Baba and Prichebor) that crown it. From the east, the ridge is accessible to the area of Ribni Lakes (a cluster of glacial high-mountain lakes) and the Hydroto locality.

All river valleys in the park are characterized by slopes that are steep or very steep in incline. Table 31 shows the distribution of terrains in the Park territory according to incline.

Table 31: Distribution of terrains within the territory of RMNP according to incline

Incline %	% of RMNP area
0-10	2.5
11-20	5.3
21-30	9.7
31-40	1.0
Over 40	70.5

Aesthetic quality of the landscapes

As a result of the field assessment of landscapes carried out in 2001, the landscapes in RMNP were rated for quality according to a number of criteria (aesthetic and others), the decisive criterion being the all-round appearance of the landscape (Appendix 26). In the lab assessment, in 43% of all cases considered, of decisive importance for the final score was the sum of all aesthetic criteria plus the general character grade. Therefore, the landscape of Rila Monastery Nature Park is perceived and assessed in an aesthetically complex manner, as an integral unity of components and qualities. Of the landscapes subject to the field assessment, about 85% were rated as highly picturesque and vividly evocative, and only 15% as being of medium aesthetic appeal. The final scores are closely related to the great relative significance of the criterion of naturalness (preservedness), stability, uniqueness (rarity, exotic flavor): over 90% of the landscapes assessed scored high for stability; 84%, for naturalness, and ca. 82% scored high for uniqueness.

The landscapes in RMNP as a natural resource

The ranking of components which determine the character and aesthetic merit of a landscape in the lab assessment shows that the presence of forest has the highest relative importance (28%), followed by rocks and rock formations (17%), lay of the land (12%), aquatic components (11%), etc. There is a correlation between the presence of a given component within a given landscape and the significance of that component for the landscape's character and outlook. In this line of thought, it is worth noting that the relatively low recorded significance of flowers (4%) does not mean that they have been played down in the assessment; it simply means that flowers appear in a negligible number of landscapes that have been subject to lab

assessment in the first place (for example, 81.2 percent of the landscapes included in the field assessment comprised rare and/or beautiful plant species).

Assessment of the Park landscape as a cultural resource

Such an assessment is based on the presence of infrastructure sites and facilities (roads, trails, buildings, engineering facilities, tourist marking and signage, etc.) and of cultural landmarks (Rila Monastery, the Guardhouse, etc.), i.e. of components thatare illustrative of the material and spiritual culture of the age when they were created.Many of the landscapes in Rila Monastery Nature Park feature man-made elements: out of all landscapes assessed in the field, 84.4% were found to contain infrastructural sites and facilities, while 9.3% are graced by cultural landmarks. The lab assessment (performed from photographs in laboratory conditions) found these percentages to be 57 and 10.7 respectively.

Of all landscapes containing man-made components subject to lab assessment, the extent of anthropogenic impact was rated high only in 18%, medium in 27%, and weak in 55%. Characteristic of the group of landscapes marked by strong anthropogenic impact (18%) is that no concrete measures (land reclamation, afforestation) have been instituted to restore their harmony with the surrounding environment.

Psychological assessments of the landscape

A large proportion (81%) of the landscapes subject to field assessment evoke a feeling of joy; more than half, or 62%, of serenity and calm; again more than half, or 59%, of rapture and exultation; 40%, of spiritual uplifting. Only 6.2% of all landscapes, namely those with visible anthropogenic impact, evoke negative feelings (confusion). About one-third (32%) of the landscapes subject to lab assessment are seen as evoking a feeling of serenity and calm. Those are predominantly landscapes featuring wooded mountain slopes, with man-made components that are either hard to spot or beautifully harmonizing with the scenery, as well as landscapes with level water surfaces of natural lakes. The landscapes, which usually evoke a feeling of joy, contain water streams gushing among large boulders (e.g. under the forest canopy); flowers, or animals (horses). Landscapes featuring vertical rock faces or lofty cliffs like Zliya Zab are assessed as magnificent (regardless of the distance from the observer); so are river valleys with multiple grounds of perspective (the river in the foreground, then wooded slopes, then rocky cliffs, etc.) were assessed as majestic.

Dynamic landscapes (9.1%) provide a counterpoint to those evoking a feeling of calm and serenity. A dynamic landscape usually comprises a number of vertical elements (cliffs, solitary trees of forest massifs with dead, old trees or trees with twisted trunks or funny branches highlighted against a more uniform background), as well as landscapes of the upper timberline featuring solitary trees.

4.4.2 All-round assessment of the landscape and territorial distribution

Based upon the results of the assessments of landscapes, the territorial distribution of landscapes within the perimeter of RMNP was established in the context of their all-

round qualities, functional suitability and recommended manner of use (Appendices 26 & 27). The all-round qualitative assessment of the landscape is presented in graphic form on the map titled "Distribution of the Territory by Quality of Landscape." The following areas have been identified in terms of landscape quality:

Area A: Very high quality landscapes. These are areas containing landscapes that have received very high or high comprehensive quality grades: places of extreme natural beauty, of impressive or easy-to-remember lay of the land, unique rock formations; varied, multiple-ground perspectives; a variety of vegetation cover, a rich variety of colours and sustainable use at the time of the assessment. Portions of Area A comprise the highest territories of the Park, the mountain peaks along the central Rilets ridge and the Mramorets cirque, featuring glacial and relic phytocenoses on limestone bedrock; the peaks along the peripheral, southern or northern, mountain ridges, and the landscapes by the road to Kalin Dam. Another portion of Area A comprises the territory around Ribni Ezera Chalet within the cirque valley between Yossifovitsa, Kanarata and Kyoravitsa peaks. A third portion of Area A includes the localities Kirilova Polyana and Radovitsa, with the all-natural forest of spruce and other species of high conservation significance. The area also includes the sub-alpine and alpine landscapes of Vodniya Chal, which offer a multitude and variety of viewing points. The great majority of these landscapes contain no visible traces of anthropogenic impact or tourist infrastructure facilities to upset the harmony of the environment, the only exceptions being the area around the Kalin Dam barrier and the immediate vicinity of Ribni Ezera Chalet.

Area B: High quality landscapes. This includes landscapes which received medium quality grades in the comprehensive assessment – attractive yet less evocative, with some anthropogenic damage. Such are: the landscapes around Kalugerski Dol, the cultural landscape of Rila Monastery, the riverine, high-mountain and sub-alpine landscapes along the Iliyna River Valley, the landscapes observed from the trail between Ribni Ezera Chalet and Hydroto, the landscapes on both sides of the tourist trail from Hydroto to Lake Smradlivoto and Brichebor locality. Area B also includes the Tiha Rila locality, chiefly because of the electric power lines disrupting the natural beauty of the scenery. Gentler slopes, more accessible forests, easier-to-climb inclines and the presence of open spaces characterize landscapes in this category: sub-alpine meadows, moraines, and river valleys. Their value consists mostly of the possibility to observe directly the changes in the vegetation with the increase of altitude.

Area C: medium quality landscapes. This category comprises landscapes that have received low or very low comprehensive grades: less attractive natural landscapes with different degrees of visible anthropogenic impact, subject to insufficiently sustainable use. Area C includes the area of water catchments facilities in Hydroto locality, some landscapes around Kalin Dam, Turskoto Parche locality by the Iliyna River, portions of Bukovo Berdo and part of the landscapes at Elevation 2000 above the Iliyna River.

Classification of landscapes according to functionality

This classification, which was based upon the results of the Rapid Landscape Assessment and the classification of landscapes according to quality, comprises the following three groups

Functional group 1: This group includes almost all Area A landscapes with the following recommended uses: 1) viewing of beautiful vistas (the locations of viewing points are marked on the map); 2) specialized viewing of valuable plant and animal species, valuable habitats, cirque lakes, rare land formations, etc.; 3) interpretation, education and ecological, cultural and religious tourism and pilgrimage.
Functional group 2: Contains a large part of the Area B landscapes, suitable mostly for: 1) cultural and religious tourism, mostly around Rila Monastery and the other holy sites; 2) picnicking, camping and amateur fishing; 3) traditional recreation (rest) of different duration.

Functional group 3: Comprises almost all landscapes of Area C characterized by relatively high anthropogenic impact. These are divided in two categories depending on their possible use: 1) landscapes capable of absorbing a possible enlargement of the technical infrastructure (roads, parking lots, tourism hospitality facilities, a visitor information centre, etc.); 2) landscapes where the current forms of use are to be preserved without increasing their capacity or the intensity of uses (Hydroto locality and Kalin Dam), and without allowing any further damage to the ecosystems or the appearance of the landscape.

5.0 First assessment: Assessment of the significance of Rila Monastery Nature Park

The present section of the Management Plan for Rila Monastery Nature Park constitutes a summary of the results of the analysis of the entire body of information, data, maps, studies, surveys and expert opinions presented by different experts in the course of the planning effort. This part of the Management Plan, therefore, presents the most significant components and aspects of the Park, i.e. those determining its role for biodiversity and the system of protected areas in Bulgaria, in Europe and the world at large. An evaluation of the Park's significance should, by necessity, include an assessment of the religious, spiritual and cultural value of this territory and its socioeconomic significance.

5.1 Spiritual, religious and cultural-historical evaluation

- The only place in Bulgaria, and one among few in the world at large, featuring such a harmonious blend of exceptional natural and spiritual values;
- One of the most important holy places in Bulgaria, a cultural mainstay for the Bulgarian people for many centuries, a place for spiritual inspiration and religious worship;
- A final resting place for the mortal remains of the most highly revered patron-saint of Bulgaria, St. John of Rila;
- The most popular and frequently visited cultural and religious destination in Bulgaria;
- One of the most characteristic traditional Eastern Orthodox monasteries in the world, a monument of culture without rival in Bulgaria, a recognized element of the world cultural and natural heritage;
- The second most significant Christian Orthodox complex in the Balkans next to the Mount Athos cluster of monasteries.

5.2 Ecological evaluation

5.2.1 Significance of biological diversity

Rila Monastery Nature Park is a protected area of exceptional biological diversity on a national as well as world scale, characterized by a particularly high degree of rarity, naturalness, representative value and vulnerability.

- One of the territories with the highest diversity of natural habitats in Bulgaria and Europe:

- 85 different types of habitats representing 21% of all habitats in Bulgaria identified under the CORINE Program, including four habitats without a match in the Palearctic system of habitat classification;

- 22 habitats endangered on a European scale, requiring special conservation measures pursuant to Resolution # 4 (06.12.1996) and 28 habitats listed in Annex # 1 to the EU Directive on Habitats;
- the only location of Rila oak worldwide;
- the only habitat in Europe based on permanently moistened slopes of bedrock (Vorniya Rid);
- one of ten most significant locations in Bulgaria where peat-based communities are preserved;

• The territory in Bulgaria with the highest degree of naturalness, stability, typicality and representative value of the ecosystems:

- typical altitudinal zoning of the vegetation, comprised of six characteristic zones: homogeneous deciduous, mixed deciduous, mixed deciduous-and-coniferous, coniferous, sub-alpine and alpine vegetation;
- one of four protected areas in Bulgaria with the highest degree of naturalness, over 70% of its territory being occupied by all-natural ecosystems;
- the presence of some of the most pristine forest ecosystems in Europe, almost unaffected by human impact: about 94.8% of all forests all-natural in origin;
- the most representative spruce and common fir ecosystems in the world, in combination with the endemic Macedonian pine;
- the most representative populations in Europe of King Boris's fir, a Balkan endemic, having the highest percentage of specimens of that species within its forest ecosystems;
- some of the most representative dwarf-pine ecosystems in Europe (11% of the Park's territory);
- a representative sample of the "mixed mountain systems of complex zoning" biome in Europe;

• One of the three most significant territories in Bulgaria in terms of the conservation of alpine birds, a key element of the international network of Important Bird Areas of world significance for birds of the alpine biome (this also holds true of the entire group of alpine fauna);

• One of five most important natural centers of new species formation in Bulgaria for both plants and invertebrate organisms:

- one of the places in Bulgaria with the highest concentrations of relic species;
- one of the most important centers of endemicity: of the species and subspecies of endemic higher plants found here, six local, 27 Bulgarian and 90 Balkan endemics and invertebrates species – two local, 41 Bulgarian and 52 Balkan endemics;

• A protected area featuring an exceptionally high concentration of habitats, communities and species of conservation significance:

- breeding ground for 35 species of vertebrate animals listed in the Red Book of Bulgaria, and of 54 vertebrate species having populations of national conservation significance within the Park;
- a high degree of representation of European significance of the Macedonian pine (a Balkan endemic), making up to 11.6% of the composition of forest ecosystems;
- one of the locations in Bulgaria with the highest concentrations of vertebrate species of European conservation significance: 186 (90% of all vertebrate species within the Park territory);
- breeding ground for populations of European significance of 32 vertebrate species (one species of reptile, 25 birds, and six mammals);

- breeding ground of 45 wildlife species endangered on a world scale: 14 plants, seven invertebrate organisms and 24 vertebrate animals;
- a territory ensuring the survival and reproduction of viable populations of world conservation significance of 13 species and subspecies of vertebrates;

- One of five protected areas in Bulgaria providing most significant natural sanctuaries to wildlife species that are both rare and sensitive to human presence:

- one of the places in Bulgaria comprising considerable tracts of land that are least affected by human impact, providing conditions for undisturbed habitation to particularly sensitive animals like bear, Balkan chamois, or capercaillie;
- one of the most significant locations worldwide of the local endemics Rila cowslip and St. Johns Chamomile (*Anthemis sancti-johannis*);
- one of the largest viable populations of the southern white-backed woodpecker, Bechstein's bat and the alpine molerat in the world;
- one of the most important breeding grounds in Bulgaria for the Dalmatian falcon (one of two locations), the pygmy owl (one of three locations), the marten (one of five areas with a viable sub-population) and the alpine newt.

5.2.2 Significance of the landscape, rock formations and natural phenomena

- Some of the most dramatic, emotionally charged landscapes in Bulgaria, a unique, harmonious unity of the deepest, most articulated system of mountain river valleys in Bulgaria, centuries-old forests and imposing rock massifs, a large number of high-mountain lakes and the most variegated skyline;
- Some of the most pristine landscapes in Bulgaria and Europe, virtually unaffected by manmade elements;
- Territory with unique combination of different types of natural and cultural landscapes with exceptional emotional influence;
- Combination of various cultural landscapes – anthropogenic-functional, with natural origin, suggestive.

5.3 Social and economic evaluation

5.3.1 Significance for tourism

- The second most visited protected area in Bulgaria;
- One of the most attractive tourist destinations in the country, a place charged with a strong emotional content.

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5.3.2 Significance for the community and for society as a whole

- The most significant freshwater source for Southwestern Bulgaria and parts of the Thracian Plain; one of the three most significant mountainous areas in Bulgaria, constituting a natural freshwater repository;
- One of the most visited destinations in Bulgaria for socially disadvantaged citizens, providing an opportunity for a considerable number of people to feel on a level with the rest of the population;
- The most important religious center in Bulgaria, a prime asset of Christian orthodox faith and culture.

5.4 Potential value of the protected territory

5.4.1 Evaluation of the potential for sustainable management of resources

This subchapter is based on an estimate of the financial value of timber and non-timber natural resources (medicinal plants and wild-growing fruits) and tourism. The actual value is calculated on the basis of typical or predominant production costs and/or market prices of the product. Estimations in the tourism sphere are based on data of current financial values related to that sector, gathered during the socioeconomic survey carried out in 2001, as part of the development of the Management Plan.

Forestry and timber resources

The financial value (revenue and expenditure) of the use of forests in Rila Monastery Nature Park has been estimated on the basis of the use of timber as prescribed under Forest Inventory (FI) 2000, for the period 2000-2009. The ten-year forest inventory is in force to guide and direct all forestry activities and any other actions undertaken in forests within the Park territory until the Management Plan is adopted and comes into force. It does not, however, take into account the added value of the territory, comprising the combined values of biodiversity, tourism, educational programs and interpretation, opportunities for scientific research and the value of non-timber natural products.

The value of timber resources has been estimated without taking into account the additional value of all resources within the Park. If the only use of a natural resource practiced within RMNP were timber extraction pursuant to the provisions of FI 2000, the estimated value of that over a 10-year period would be 9.75 million BGN. It should be noted, however, that most of the timber slated for extraction is either inaccessible, or too costly to log, or both. Expenses for logging the above mentioned 9.75 million BGN's worth of timber are estimated at almost 6.37 million BGN. [6].

In view of the other natural resources available within RMNP, the potential revenue from timber use has been calculated by factoring in an experimental model of sustainable forestry. Calculations of the financial value of timber use by applying that model are likewise based on data from FI 2000, yet they are extrapolated from a restricted area of where the impact and sustainability of the model are to be tested in regard to the significance of other natural resources and the possibilities of the Park. If the proposed experimental model of sustainable forestry proves effective and successful, its implementation for timber extraction from other locations within the Park may be considered in subsequent ten-year management plans.

[6] In estimating the approximate cost pertinent to the extraction of one cu.m of timber, the following basic costs have been factored in: (1) Logging: fuel (gasoline) and oil for the chainsaws; equipment depreciation; transportation of crews to the logging grounds; labor remuneration; (2) Extraction (by tractor or draft animals) diesel fuel and oil for the tractor; depreciation; labor remuneration for the driver and his assistant; transportation of crews to the logging grounds; (3) Transportation costs to the nearest railroad station (70 km); diesel fuel and oil for the tractor; labor, loading of the logs by crane; (4) Management costs.

The proposed sustainable forestry model is to be tested in an area identified as offering the best opportunities for introducing sustainable forestry practices. The model should provide evidence of the possibilities of generating income for the largest landowner, ensuring sustainable or increasing biodiversity in the selected area, while at the same time having no negative impact on any other values within the Park territory or the development of tourism.

The necessary investments, as well as the estimated revenues from the use of timber in the selected area where the proposed experimental model of sustainable forestry is to be tested, are shown in Table 32:

Table 32: Estimated value of the investments and revenue pertinent to the use of timber resources in the territory of the proposed Sustainable Forestry Zone over a ten-year period (2000-2009)

#	Timber by type	Timber qty (m³)	Approximate cost (BGN/m³)	Total cost (BGN)	Appr. market value (BGN/m³)	Expected revenue (BGN)
1.	***Coniferous***	***32 570***		***1 180 700***		***1 752 850***
	Large	12 000	50	600 000	85	1 020 000
	Medium	6 430	45	289 350	65	417 950
	Small	2 140	30	64 200	35	74 900
	Firewood	10 715	20	214 300	20	214 300
	Brushwood	1 285	10	12 850	20	25 700
2.	***Deciduous***	***13 540***		***566 550***		***741 225***
	Large	4 990	50	249 500	75	374 250
	Medium	2 675	40	107 000	55	147 125
	Small	890	30	26 700	35	31 150
	Firewood	4 450	40	178 000	40	178 000
	Brushwood	535	10	5 350	20	10 700
3.	**Total**	**46 110**		**1 747 250**		**2 494 075**

Total revenue for one year: 249,408 BGN
Investment for one year: 174,725 BGN
Expected profit: 74,683 BGN

Non-timber natural resources: medicinal plants and wild fruits

A survey and assessment of the available resources of some basic types of medicinal plants and forest fruits in the territory of Rila Monastery Nature Park was conducted in 2001 for the needs of the development of a Management Plan for the territory. The potential value of these resources over a one-year period was then estimated on the basis of the maximum allowable extraction quantities and the market prices of such resources for 2001 (Table 33).

The findings of the socioeconomic survey carried out in 2001 of the available quantities and approximate value of natural resources extracted from RMNP by the local population show that the residents of the nearby communities use an annual total of 20,000 BGN's worth of non-timber natural resources harvested from the Park territory.

During the preparation and development of the Management Plan, it proved impossible to make even an approximate estimation of the financial value of the available resources of mushrooms and fish in the territory of RMNP, since there are no estimates of the actual quantities of their stocks. While fishing is envisioned as an allowed practice in the future pursuant to the Management Plan, at present the fish stocks in RMNP are subjected to overuse, poaching, as well as to pressure from populations of non-local (introduced) fish species such as, for instance, the rainbow trout. The Management Plan envisions measures to find solutions to these problems which, if implemented, my help rake in considerable revenue for the Park from amateur fishing, especially of trout.

Table 33: Resources and financial value of stocks of medicinal plants and wild fruits in the territory of Rila Monastery Nature Park

Species		Yield (kg/ha fresh weight)	Area (ha)	Annual output (kg)	Maximum allowed quantity (kg)	Approximate market value (BGN/kg)	Annual value (BGN)
FRUIT OF MEDICINAL PLANTS HAVING THE LARGEST RESOURCES IN RMNP							
Bilberry	*Vaccinium spp*	340	40	13 600	10 000	2	20 000
Hazel	*Corylus avellana*	2300	1	2 300	2 000	1	2 000
Raspberry	*Rubus idaeus*	1500	0.6	900	800	2	1 600
Hip	*Rosa spp.*	1600	0.5	800	700	0.40	240
Hawthorn	*Crataegus spp.*	4000	0.5	2 000	1 500	0.2	300
Blackberry	*Rubus caesius*	3000	0.1	300	200	2	400
Group total					**15 200**		**24 540**
FRUIT AND FLOWERS OF OTHER MEDICINAL PLANTS							
Danewort	*Sambucus ebulus*	5 000	0.5	2 500	2 000	0.80	1 600
Elder	*Sambucus nigra*	1 200	1	1 200	800	0.40	320
Juniper	*Juniperus communis*	450	1	450	400	0.80	320
Group total					**3 200**		**2 240**
PERENNIAL HERBACEOUS MEDICINAL PLANTS (dry weight kg/ha)							
25 species total for the group			**50**	**104 244**	**65 000**	**1,20**	**78 000**
Total for all species of commercial significance			**95.2**	**128 294**	**83 400**		**104 780**[7]

[7] Almost 2/3 of the Park's territory with locations of medicinal plants and wild-growing fruits was surveyed in 2001. The total value of the resources in the area subject to the survey was estimated at 104,780 BGN. Assuming that the value of natural resources within the remaining, unsurveyed, third of the territory stands at 35,000 BGN, the total annual value of medicinal plants and wild fruits in the entire Nature Park can be estimated at 139,780 BGN.

Tourism

Tourism is one of the basic economic branches for development of the Parks territory. At present, however, tourism in the park has developed without planning and is not properly managed and far from realizing its full potential for income generation. Under the present Management Plan, tourism is regarded as the largest potential sources of income for the territory, the landowner and the local communities.

An estimation of the financial value of some basic services and activities in RMNP related to tourism is presented below in four tables. The conducted calculations are based on information received from the tourist facilities managers, as well as information from visitors for the expences structure and size of the particular visit. The extrapolation of the turnover is conducted for a tourist flow of 400,000 persons, which is a rather conservative assessment. In the assessment include facilities of the Park territory, Rila monastery settlement and the territory along the Rilska River in the vicinity of the park.

Table 34: Total annual turnover of major tourism services

Table 35: Evaluation of employment payments

Table 36: Transportation expenses to and from Rila Monastery, as reported by visitors

Table 37: Visitor perceptions of the potential cost of a visit to RMNP, based upon responses to the question: "If an entry fee were to be imposed for Rila Monastery Nature Park, what in your view would be a reasonable amount and would you agree to pay it?"

Table 34: Total annual turnover from some basic tourism-related activities and services

Revenue	Total annual turnover (BGN)	Estimation criteria
Sale of religious items	150,000	400,000 visitors annually, of whom 60,000 (15%) buy religious items @ 2.50 BGN a piece
Parking fees	108,000	100 paid parking spaces x 90 days average occupancy in the summer season @ 6 BGN per day = 54,000 BGN + another 54,000 BGN for the rest of the year
Revenue from restaurants	764,000	The total turnover* of top 10 establishments
Revenue from hotels	139,000	The total turnover* of top 10 hotels/ accommodation facilities
Camping fees	Incl. under "Hotels"	
Accommodation and food at chalets	20,000	Declared turnover
Museum fees	30,000	20,000 visitors (5% of all coming to RMNP) report visiting at least one museum @ 1 BGN = 20,000 BGN + 50,000 students @ 0.20 BGN = 10,000 BGN
Concession fees	200,000	As per the official bids for the top 15 establishments
Sale of gifts and souvenirs	200,000	80,000 visitors (20% of all coming to RMNP) report buying souvenirs @ 2.50 BGN a piece
Revenue from student practicums and educational activities	67,800	7,200 man/days (80 beds x 90 days occupancy in the summer season), of which 2,400 man/days generated by students on practicums at Eleshnitza Chalet @ 6.25 BGN per night = 15,000 BGN, + 4,800 man/days (students at others) @ 11 BGN per night = 52,800 BGN
TOTAL	1,678,800	Total annual turnover from tourism-related services and activities

* Declared turnover

Table 35: Evaluation of employment payments

	Total annual turnover (BGN)	Estimation criteria
Employment in the tourism services sector	284,400	Restaurants: up to 120 places @ 160 BGN average salary = 19,200 BGN @ 12 = 230,400 Hotels: to 30 @ 150 BGN @ 12= to 54 000 BGN
Monastery staff and maintenance personnel	60,000	25 @ 200 BGN average salary @ 12 = 60,000

Table 36: Transportation expenses to and from Rila Monastery

	Total annual turnover (BGN)	Estimation criteria
Transportation expenses of the visitors to Rila Monastery	2,400,000	400,000 visitors @ 6 BGN on average*

* Since data reported by tour operators put the average transportation cost of a single-day trip to Rila Monastery at anywhere between 15 BGN and US$ 65 per person, the above estimate is rather conservative.

Surveys of people's willingness to pay for a given product or service in Bulgaria have focused in the past on determining the perceived value of administrative services on a municipal or central government level from the point of view of service recipients. The same technique was used in developing the Management Plan in order to determine the amount that visitors to RMNP were willing to pay, if an admission fee were to be introduced. Here the estimate is also conservative since it discounts the number of students visiting the Monastery every year (Table 37).

It should be noted that while according to foreign respondents a reasonable admission fee to RMNP would be five BGN per person, Bulgarians are inclined to pay an average one BGN per person. If a uniform fee were to be introduced for Bulgarian and foreign nationals, the reasonable amount is seen by both groups as two BGN per person.

Table 37: Willingness to pay an admission fee

Findings of the survey	Total annual turnover (BGN)	Estimation criteria
Reported willingness to pay an admission fee	720,000 to 840,000	Fees seen as reasonable Foreign nationals: 120,000 @ 5 BGN = 600,000 BGN Bulgarian nationals: 240,000 @ 1 BGN = 240,000 BGN, or: 360,000 @ 2 BGN = 720,000 BGN if a uniform fee were to be introduced for both categories

PART II

IDEAL GOALS AND LIMITATIONS

1.0 Ideal (long-term) Goals

A set of ideal (long-term) goals is defined for Rila Monastery Nature Park. They are consistent with the management objectives required for this category protected area pursuant to the Protected Areas Act (PAA). These Ideal Goals prescribe the desired future and conditions that are to be attained by means of planned activities on the Park's territory. They are intended to be a comprehensive framework in which all efforts are made to preserve the significance of the territory. The ideal goals do not change over time; there is no time limit for their implementation.

The Ideal (long-term) Goals set for Rila Monastery Nature Park are set and prioritized by topics as follows:

1.1 Conservation of religious and cultural heritage

Long-term goal 1.1.1 To conserve and develop the unique Orthodox religious and cultural-historical complex Rila Monastery and the Holy Sites around it as a center of spiritual culture and education.

This Ideal Goal is aimed at the conservation and planned development of Rila Monastery and the adjacent Holy Sites (the Tomb of St. John of Rila, the St. Luke Hermitage, the Church of the Holy Virgin, the Pilgrims' Road, and others) as centers of the spirit and cultural heritage sites, which form one united and harmonious complex. All efforts are made to return and maintain these sites to their original purpose - as examples of holy, spiritual assets of the Bulgarian Orthodox Church, as national treasures, and as sites of importance for Christianity and world heritage.

Long-term goal 1.1.2 To conserve the archaeological, architectural and other cultural and historical components located within Rila Monastery Nature Park as an integral part of the Bulgarian national heritage.

This Ideal Goal relates to the archaeological and historical sites that are not directly linked with the present-day spiritual and cultural role of Rila Monastery (remains of the earliest Monastery buildings, remnants of Roman roads, etc.), as well as to other sites of cultural and historical significance.

1.2 Conservation of natural components

Long-term goal 1.2.1 To preserve the harmony between natural, cultural-historical and religious heritage in the territory of RMNP.

One of the unique and most significant values of Rila Monastery Nature Park is the exceptional harmony between the sites of cultural and spiritual significance and pristine nature. The exceptional qualities of the natural environment around Rila Monastery includes a high degree of vitality and naturalness, the existence of

effective, natural corridors and links with the rest of Rila Mountain. The landscape also demonstrates a low degree of anthropogenic degradation. Of particular importance is the presence of the Rila Monastery Forest Reserve, with its centuries-old forests and ecosystems of high conservation significance. These surround the Monastery and give its special ambience and exceptional experience. Activities that negatively impact these special features and intangible values should be avoided at all costs.

Long-term goal 1.2.2 To conserve the natural state of forest habitats; especially the unique communities of Rila oak and King Boris's fir and their biological potential.

A considerable proportion of the forests within RMNP are of natural origin, composition and structure. In many parts of the Park there are preserved sections of climax forests, the likes of which can be seen nowhere else in Bulgaria outside of the few mountainous protected areas. This Ideal Goal has as a first priority the preservation of forest ecosystems and communities that are of exceptional conservation value in a national, regional, and international context. This includes the preservation of forest composition, structure and phases of ecological development. In this context, special attention is paid to communities and habitats of endemic Rila oak and King Boris's fir within the Park.

Long-term goal 1.2.3 To conserve the natural state and biological potential of sub-alpine and alpine communities and rocky habitats.

High-mountain, treeless portions of the Park contain some of the rarest and most endangered types of habitats of high biodiversity value. These high mountain natural areas are centers of species formation, shelter of high number of endemic species and are very fragile. As such examples are disappearing from the world at an alarming rate, these areas take on more and more significance. This Goal aims to ensure that the most critical aspects of these areas are not lost through ignorance, mismanagement or visitor impact.

Long-term goal 1.2.4 To conserve the natural state, biological potential and diversity of lake, lake and riverside habitats and other wetlands within the Park.

Water is synonymous with the Rila Mountains and is critical to Park ecosystems as well as human settlements that depend on this water source. Water sources and water bodies remain a critical feature of this mountain Park and can ill afford pollution or negative interference. The diversity of these aquatic sites and their adjacent areas are vital components to the integrity of the Park. This Goal aims to ensure this integrity and to minimize negative impacts.

Long-term goal 1.2.5 To conserve the natural state and biological potential of populations of species of conservation significance.

The aim is conservation of species that warrant special attention: rare, endangered, endemic, as well as species of changing conservation status. The Goal refers to cases where conditions require direct conservation measures, aimed at conserving species populations within the Park. Such measures may include replenishing depleted

populations (reintroduction), removal of invasive species; specialized protection including enclosure/separation, improving the nutritional base and conditions within habitats, etc. Examples of these measures could be taken in light of depleted populations of large mammal, fish, birds, as well as special habitats of other animal and plant species.

1.3 Management of natural resources

The long-term goals listed below lay down the philosophy and principles of sustainable management of natural resources. At the core of these goals is the belief that sustainable harvests of natural resources can be achieved without the loss of biodiversity. But there is still a need to demonstrate the practices and success of resource harvesting without damaging the environment, without jeopardizing the other values of the Park and Monastery, and within limits that provide for natural resource self-renewal and continued preservation.

Long-term goal 1.3.1 To preserve the water resources within RMNP and to allow their use solely in quantities and by means that would not constitute a threat to ecosystems within its territory.

The impacts of human manipulation of watersheds and the redirection of water from the Nature Park have unspecified and unknown consequences, but the impacts cannot be beneficial or natural. This Goal aims to prevent further disruption of water resources and patterns in the Park, and to determine the minimal requirements of a system that is clearly water dependent. The interventions and/or mistakes of our predecessors do not need to be blindly repeated in the event that its negative impacts outweigh its advantages. For water resources this is particularly difficult given the dependence of a growing human population. However, international sustainable development and conservation measures worldwide are demonstrating the foolishness of blindly pursuing water use at the expense of larger issues of environmental quality.

Long-term goal 1.3.2 To operate a model of sustainable caretaking and use in suitable sections of the RMNP forests while conserving biodiversity and without compromising other values and significance of the Park.

This Goal is aimed at developing a model of contemporary forest management that will provide timber and income to the owner, and not compromise tourism or the value of the biodiversity in the Park. This Goal is premised on the need to modify the existing Forest Inventory 2000 and to use that plan more judiciously within an experimental area of the Park until appropriate, sustainable forest management techniques and practices have been demonstrated successfully. Such practices may include changes to the regimes of timber harvesting, timber extraction, road construction, storage, transportation, and processing. While intentions in Bulgaria have been focused on developing models of sustainable forestry management that incorporates biodiversity conservation, there has been little practical experience to date with their effective application. There is equally important pressure on the Bulgarian Orthodox Church to demonstrate a model of forest management that adds to the reputation and image of the Rila Monastery, and does not jeopardize any of the

values of the territory recently restituted to it. Many Bulgarians view the Nature Park as land held in trust by the Monastery for the benefit of the nation, and for all Bulgarians. The sustainable forestry management model should become a model for restituted forest management, biodiversity conservation and public-private land management cooperation.

Long-term goal 1.3.3 To conserve the natural state and biological potential of fish stocks, populations of medicinal plants, forest fruits and mushrooms, pastures and meadows within RMNP.

The present Goal focuses on attaining the right balance between the lawful use of fish stocks, of medicinal plants, forest fruits and mushrooms, and the conservation of the said resources and their potential for self-renewal in perpetuity. There is value in developing a model of sustainable harvesting of non-timber renewable natural resources. The Rila Monastery has the potential to benefit from income associated with this collection, and to demonstrate leadership in this area as a private landowner. There is also the possibility of demonstrating the values of this enlightened approach as part of the visitor experience to the Park.

1.4 Management of tourism

Long-term goal 1.4.1 To ensure the implementation of forms of tourism that would not compromise the conservation of the spiritual significance of Rila Monastery and the other Holy Sites, the cultural and historical heritage of the Park, nor its natural assets and landscape.

Tourism is viewed as a legitimate and desirable form of land use in the Park. This Goal is aimed at the consolidation and development of general tourist management, tourism organization, and tourist information that is in keeping with the special qualities of the Park. Visitors and services will be better managed so as to reduce their negative impacts on the environment, and to restore the sanctity and special qualities of holy and natural sites.

Long-term goal 1.4.2 To encourage new forms of tourism that are not in conflict with the preceding goal and that provide opportunities for income generation and profits.

This Goal aims to develop forms of tourism that improve and diversify visitor experience, reduce negative effects on the environment, and provide income generation and economic growth opportunities for the owner and the Park. Tourism is viewed as a primary source of income for the landowner of the biggest part of the land. While tourists will continue to be allowed free access to the Rila Monastery and Nature Park, tourism management activities, facilities and services will be operated on an income-generating principle. Tourism will become the number one revenue generator for the territory.

1.5 Interpretation and education

Long-term goal 1.5.1 To present the natural, religious and cultural heritage of RMNP in ways and by means that would contribute most fully to people's personal enrichment and their involvement in the preservation of orthodox values as well as the conservation of nature.

This Goal seeks to ensure the active and balanced interpretation of the exceptional values of Rila Monastery and the Nature Park for both visitors to the area and the public at large. Interpretation and education programs and projects are expected to start before the arrival of the tourist, augment the visitor experience while visiting the Park, and be supported through popular information and education efforts in the formal and non-formal education and public information systems in the country. These programs will aim at illustrating the Rila Monastery Nature Park as a model of public-private cooperation and outstanding conservation management. Information development and delivery must be improved for the Monastery and the Park. A combination of subsidized and commercial information, interpretation, and educational opportunities would be important for the future of this Goal in the Park.

Long-term goal 1.5.2 To provide optimum opportunities to make the Nature Park a scientific and educational center for matters of the natural sciences.

The Goal aims to add a special dimension to the Nature Park and to generate additional income for the Park. The goal aims to make scientific research and field studies an important offering on the territory. Existing facilities could be made-over to accommodate full time study centers for both spiritual and natural sciences. This Goal also aims to develop these facilities on an income-generating basis as appropriate. Links with similar centers and or universities suggest that these facilities could be operated on a concessional basis, with minimal subsidies, if any. This would help establish the Park as a center for spiritual development, and for continuing education, research, and applied research. All these activities are aimed at capitalizing on the unique combination of values embraced within the Park.

1.6 Partnerships and local communities

Long-term goal 1.6.1 To ensure that the use of resources and the utilization of the Park's potential take place with full respect for the interests, rights and responsibilities of the landowner, and other stakeholders.

This Goal aims to create a unity of intent and actions on matters of mutual concern between the state Park administration, the landowner, local communities and visitors. This Goal intends to develop a commitment and realization of opportunities for the Park and local communities to engage in activities of mutual concern. These may include education and outreach programs into schools. It may include special events organized for special groups by the Nature Park administration. It may include fuel wood assistance programs, special provisions for grazing and non-timber natural resources collection. It may include preferential employment programs for local people in future activities of the Park. It may include the volunteer engagement of

local communities in emergency response programs for fire fighting, avalanches, mountain rescue, etc. The end result of this Goal should realize respect and commitment of both parties to the conservation and management activities of the Park and these ideal goals.

1.7 Management of the Park

Long-term goal 1.7.1 To implement a management model for Rila Monastery Nature Park that combines the interests and responsibilities of the Holy Synod of the Bulgarian Orthodox Church and Rila Monastery, the State and the local communities, while ensuring proper coordination among all stakeholders for attaining the management objectives of the Park.

This Goal aims to ensure interaction and collaboration between persons and institutions, which have legal rights and responsibilities on the territory of the Nature Park. This can be done on voluntary bases through establishment of consultative councils; bilateral and multilateral agreements at different levels etc.

Long-term goal 1.7.2 To ensure that the requirements for the conservation and development of RMNP are reflected in the regional planning scheme of the Southwestern Planning Region.

This Goal aims to ensure the future integration of the Rila Monastery Nature Park in all regional and local development plans. The Monastery and Nature Park are sources of welfare and importance for the Rila Municipality as well as the Western and Southwestern administrative regions of Bulgaria. In addition, decisions taken in these regions can affect the Monastery, particularly visitor flow, access, and communications. The same is true for the Monastery, as its plans are expected to impact its surroundings. Previous planning attempts in the region have failed to address these reciprocal responsibilities and impacts sufficiently. This Goal aims to correct this by addressing Nature Park planning and management in a regional context, seeking active engagement in future regional planning and its implementation. These must be addressed in all future Southwestern Region planning efforts.

Long-term goal 1.7.3 To maintain and optimize the Park infrastructure in compliance with the special laws and in compliance with the environmental protection purposes of RMNP.

Much of the infrastructure in the Nature Park is a random and ill-planned collection of functional and dysfunctional structures. Other infrastructure in the Park still needs to be rationalized. This will require the renovation of some building, service lines, roads, etc, and the complete removal of others. This Goal aims to ensure that infrastructure is operated and maintained with maximum regard for the holy and natural values of the Park. All infrastructure development, maintenance, removal and operations should only be done with regard to the strictest adherence to environmental impact criteria, and the other goals and objectives of park management. This Ideal Goal refers both to activities such as the maintenance of

roads, hydro technical facilities and any other technical infrastructure, and to the management of components of the social infrastructure, abandoned buildings, chalets, waste disposal, new infrastructure development, etc.

Long-term goal 1.7.4 To maintain close coordination in the management of the territories of Rila Monastery Nature Park and of Rila National Park, as an inseparable nature complex.

This Goal aims to ensure that activities carried out in Rila Monastery Nature Park are coordinated with the Rila National Park (and vice-versa) to ensure maximum benefit to both areas. This includes the close coordination of activities relates to fire management and control, the maintenance of ecological corridors for the passage and movement of large mammals in particular, visitor management and safety, and law enforcement, among others.

2.0 Threats and limitations

The threats listed below have been identified and confirmed through observations by the teams who performed the rapid ecological and the rapid landscape assessments as well as the sociological survey in summer 2001; they were determined on the basis of recorded activities and practices, and findings regarding impacts. The present subsection deals with the existing territory of Rila Monastery Nature Park, as well as with some potential territory. Their significance is also determined, on the basis of expert assessments, in terms of intensity: critical, high, medium, or low; and in some cases qualified as: potential, local, affecting certain species, or insufficiently studied. Also stated in the assessments is the estimated significance of each threat for the Park at present, based on their actual occurrences during the period under review, as well as their potential impact.

Part of the described threats affects to a greater extent the facilities and territories in Rila Monastery settlement and the territory neighboring the park on the west. These threats are described here, because of their direct or indirect influence on the Park's territory and goals.

2.1 Natural threats

Climate changes

The decline in precipitation and the tendency toward drought observed over the past decade has also affected the Park territory, notably the hygrophilic plant habitats and aquatic or moisture-loving animals, as well as, on the whole, habitats situated along river banks, lake shores, peat bogs, marshes and other types of wetlands. As a result of a series of severe droughts during the period following 1982, there have been negative consequences for the mixed spruce-cum-fir forests, during which there was a tendency of the common fir and Scots pine to wither and die. Most visible are the changes occurring in the composition of the vegetation cover with a tendency towards an increase in areas occupied by plants adapted to dry conditions. Any further drying of the climate would have an extremely negative impact on the biodiversity of species and habitats within the Nature Park.

Significance: potentially high

The Chamaecytisus absinthiodes invasion

The tendency, observed at many locations in the Park, for herbaceous cenoses to become overgrown with *Chamaecytisus absinthiodes* constitutes a threat to a number of elements of the Park's biological diversity and conservation significance. The extent of this invading plant's spread throughout the territory is shown by the fact that it has been identified in 50% of all surveyed areas, replacing a number of local species and altering the cenotic make-up of the local vegetation. Shrub communities of *Chamaecytisus absinthiodes* cause the disappearance of natural herbaceous cenoses and communities of *Festuca valida* and *Calamagrostis arundinacea*

(a similar process has been observed along the Radovichka River). The tendency is especially found in the upper reaches of the coniferous zone, where forest phytocenoses were cleared away in the past. Chances for the forest vegetation to naturally regenerate itself in such sections of the forest are slim. In recent years, the *Chamaecytisus absinthiodes* has been observed to rapidly expand its range in the sub-alpine zone as well. This leads to deterioration of the breeding conditions for some birds linked to grassy terrains, including bird species of high conservation significance, like those of the alpine biome (e.g. Alpine Accentor (*Prunella collaris*).

Significance: high

Natural fires

Natural fires do constitute a threat to the Park; historically, there have been such incidents in its territory. However, their concrete impact on the biological diversity within the territory of RMNP is unknown.

Significance: insufficiently studied

Windfalls and snowslides

These phenomena are known to have affected separate sections of the Park territory, to the tune of several hundred hectares. More substantial damage as a result of windfalls has been recorded in the area along the upper timberline in Otchova Reka locality, with damages to the beech forest; and in the higher portions of Bukovo Bardo locality, where the damages affect the spruce forest. Mechanical damage as a result of snowslides can be observed in the beech forests, in Scots pine forests (e.g. in Radovichka Reka locality), and at places, in the spruce-cum-fir forests.

Significance: medium

Avalanches

The rapid downhill drift of substantial masses of snow destroys the vegetation both on the path of the snowdrift and at the final place of accumulation of the snow mass. Mechanical damage as a result of avalanches can be observed in beech forests throughout the Park; also affected are some plots of Macedonian pine. In the Suhoto Lake area, avalanches have destroyed a phytocenosis of young birch, formed in the wake of previous avalanches that cleared the same area of the old vegetation. In some cases avalanches and/or torrents may damage species of conservation significance. For example, in 1998, avalanches destroyed the Rila rhubarb phytocenosis in Beliya Uley locality. Avalanches have a negative impact on the habitats of some groups of animals (e.g. beetles and other insects, which are closely attached to certain microhabitats). They also necessitate special attention to visitor safety, especially in the areas of Beluya Uley, Siniya Uley, at some locations in the eastern portion of the Park: the southern slopes of Vodniya Rid and Mramorets, especially along the entire section of road from Kirilova Polyana to Hidroto locality at Tiha Rila, and along the tourist trails around Ribni Ezera Chalet.

Significance: medium to high (for visitors), local

Low reproduction potential, narrow specialization of species and small population size

Some wildlife species have low reproduction potential and have therefore naturally formed small populations, which makes them highly vulnerable to human impact. Characterized by their low reproductive potential are St. Johns Chamomile (Anthemis sancti-johannis), Lathyrus grandiflorus, Potentilla montenegrina, Minuartia saxifraga, Rila rhubarb, Rila oak, certain invertebrates (Eresus sp.), some larger predatory birds (golden eagle, short-toed eagle, lanner falcon, etc.), some larger hens (capercaillie, mountain partridge), most bats, and the brown bear. Of the species adapted to highly specific habitats, there is also the Balkan chamois, Aesculapian snake (Elaphe longissima), as well as to most endemic and relict species like, such as the entire peat-based flora, which is dependent on the high acidity of its environment.

A number of species that normally could have maintained decent-sized populations in the Park have been reduced by human impact to population sizes that are near, or even below critical. One example is the Balkan chamois, brought to near extinction (still encountered only because of migration of individual specimens from the neighboring Rila National Park). Also severely reduced are the local populations of red deer, lynx (of which very few remain) and otter.

Significance: high to critical for some species

Natural pests and pathogens

Some insects, fungi and other pathogens cause necroses and the drying off of the stem tips in alder forests (mostly attacked by *Agelastica alni*); beech forests (chiefly affected by the calamitous pest insect *Rhynchaenus fagi L.*, and to a lesser extent, by certain fungi); oak forests (predominantly under pressure from the fungi *Armillaria mellea* Vahl., *Hypholoma fasciculare* Humm., *Stereum hirsutum* (Willd. ex Fr.) Gray, and *Ophyostoma* sp., as well as by leaf-cutting insects: Geometridae, Tortricidae and Ipidae (Hylesinini); mixed spruce & fir forests (mostly by *Pucciniastrum cariophillacerum*).

Significance: low

Borderline location within the natural range (peripheral populations)

Certain wildlife species and subspecies encountered within the Park territory (mostly higher plants and invertebrate organisms – see Appendices 13 & 19) have survived in the mountain from past geological ages and are forced to exist away from their principal range, or, in other cases, have their entire world range, or at least a large part thereof, concentrated within the Park territory. This category also includes some large vertebrates, especially species for which Bulgaria as a whole lies at the end of their natural worldwide range, or otherwise their natural range is disjunctive and scattered throughout the country (capercaillie, hazel hen etc.). Such organisms are extremely vulnerable because of the impossibility for genetic exchange with other populations of their own species.

Significance: high

2.2 Anthropogenic threats

Logging

In the early 20th century, significant portions of the forests in what is today Rila Monastery Nature Park were subjected to intensive commercial logging. This has resulted in lowering the average age of forest specimens and reducing in size the areas within the present-day Park once covered with centuries-old beech and ancient coniferous forests (especially around Kirilova Polyana, the slopes north of the Iliyna River, the eastern portions of the Kalin section, a.o.). Moreover, mechanical damage to nearby trees as a result of commercial logging in the past, or of timber poaching at present, has affected areas of alder, and to a certain extent, beech and Scots pine forests, causing at places disruptions of the natural state of ecosystems and general deterioration of the forest health.

Unregulated logging causes fragmentation and deterioration of the health and quality of individual habitats and microhabitats within the Park, changes in the hydrological dynamics of rivers and natural illumination patterns of whole areas; disruption of the topsoil and dead-leaf cover of the forest floor, thus triggering accelerated erosion. The inevitable side effects of logging also affect nearby territories through noise, the movement of motor vehicles and heavy equipment, human presence and other forms of disturbance to wildlife. The wholesale felling of old forests, the cutting down of ancient rotting or hollow trees, and the removal of fallen tree trunks deprives of natural habitation almost all groups of animals, especially bats, woodpeckers, weasels, salamanders, wild cats and the three species of dormice. Unsuitable forestry practices and/or overlogging reduce biodiversity as a whole, degrading the aesthetic value of the landscape by eliminating or reducing its key advantages: naturalness, typicality, representational value and ecosystem stability.

It should be noted that during the second half of the 20th century the intensity of logging decreased considerably as a result of applying the principles of sustainable forestry and the inclusion of the territory of today's RMNP into a protected area. The actual damage and the overall negative impact of the so-called Balabanov Concession in the past may never be known in full; there is no doubt, however, that the present state of the Park's forests (albeit considerably healthier than in other parts of the country) is but a shadow of the one-time rich and complex forest ecosystems that had remained intact until the beginning of the 20th century, and is now long lost, possibly forever. Therefore, any future timber use should only be done following extensive considerations of whether or not it would destroy the last remaining tracts of all-natural forests in the region.

Significance: high

Illegal hunting

Illegal hunting, or game poaching, has been practiced in the territory of RMNP for many decades, but has intensified since 1990. The placement of this territory under protected area status has done little to change the actual state of affairs. Subject to

poaching are mostly large mammals, particularly chamois, red deer, roe, wild boar, as well as large birds (there is evidence that even eagles have been shot in the Park). Poaching affects the entire Park territory, but more markedly so the more remote areas and higher altitudes, even though shots from a hunting weapon were recorded in June 2002 in as central a locality as Kirilova Polyana (a specimen of Balkan chamois shot in the latter location was brought to Kirilova Polyana in plain sight of students from the Biology Department who were having their summer practicum there in June 2002). The numerous incidents of shooting (single reports as well as bursts of automatic fire from assault rifles) detected in the Kalin Dam area, at Mramoretz (Mermera) Peak, Smradlivoto Lake, Theodossievi Karauli and elsewhere, as well as cartridge shells found on the ground and the numerous bullet marks visible on standing objects, buildings and facilities throughout the Park, as reported during the Rapid Ecological Assessment, are all evidence of the gravity of the problem. In August 2002, a young bear was killed in the Suhoto Lake area, within the Rila Monastery Forest Reserve no less.

Another kind of poaching is the collection of protected plants, rare invertebrate organisms, reptiles, some birds, bats and other animals. Due to the fact that, as a rule, all these activities are carried out by professionals, without making too much noise or otherwise drawing attention to themselves, much too often they are difficult to notice or identify, yet remain extremely dangerous as they amount to depriving the Park of some biodiversity components of the highest rarity and conservation significance.

Significance: very high, to some species critical

Illegal fishing

This amounts to catching fish during periods when fishing is banned, or by means that are prohibited by law (incl. chemical agents or electrical shocks), or in quantities and or species that are not allowed. It is among the most serious threats to the ichthyofauna, and above all, to the Balkan trout population. In summer 2001, some 50 empty bottles of bleach were discovered along the higher section of the Iliyna River; bleach is an agent used in illegal fishing. In addition to the direct damage to fish populations within the Park, chemical poisoning and electrocution have a devastating effect on the entire riverine ecosystem along a considerable stretch of the river. The depletion of fish stocks directly affects other animals preying on them, like the river otter.

Significance: high

Killing of non-game animals and picking of flowers

Individual incidents of killing of non-game animals by visitors to the Park have also been reported. Most often, the victims are amphibians and reptiles of almost any kind, especially snakes (killings of grass snakes, a species endangered on a European scale, have been reported in Eleshnitsa and Pchelino localities; also in Eleshnitsa there has been a similar killing of a viper; dormice have also been reported killed, etc.). More often than not, such acts are due to ignorance on the part of visitors as to the actual significance of these animals, to superstition or plain fear.

Similar in its destructive effect, though diametrically opposite in terms of motive, is the picking of flowers, which poses a threat to a whole series of flowering plants of conservation significance. The picking of flowers for bouquets is a favorite activity with many visitors. On their way back from outings they carry away many attractive species of higher plants: Globe flower (a rare species), *Lilium jankae* (a rare species), *Aquilegia aurea* (a rare species and Balkan endemic), Martagon lily etc.

Significance: medium, high for some species

Arson and man-made fires

Instances of man-made fires have been recorded both prior to (on the slopes north of Kravarski Dol ravine), and since the designation of the territory as a Nature Park. The great fire of 2000 in the region of Kalin ridge is a reminder that the threat of man-made fires is all too real and significant. Fires are the most drastic form of human interference with natural habitats, the one that causes the largest and most significant changes in them. They affect virtually all groups of organisms, causing changes in habitats that accelerate erosion processes while destroying smaller and slower-moving organisms, incl. beetles, amphibians, reptiles and small mammals, together with their habitats. Observations made in 2001 in areas destroyed by fire show that the devastation has certainly affected important and vulnerable habitats of significance for the biota, incl. for bird species of the alpine biome.

Significance: medium, potentially very high

Use of chemical or biological agents

Chemical agents, including fertilizers, detergents and other, are used, albeit on a small scale, throughout the Park territory, mostly around sites and facilities of the social infrastructure. Chemical agents are also used in fish breeding, in fish farms around the Park (see also *Illegal fishing* above). This particular threat causes changes in aquatic ecosystems, the topsoil and some microhabitats.

Significance: low

Large-scale interference with the natural water outflow

In the territory of RMNP, there operate a variety of systems and facilities used to collect, store and divert waters (see part *4.1.2 Infrastructure: Hydropower and water supply facilities)*. These facilities hold back a considerable portion of the natural water outflow, diverting parts of it to water reservoirs outside the Park territory. The existing high-mountain diversions and canals disrupt the natural conditions of forming the river outflow downstream of their locations, causing changes in the cross-feeding of the surface and subterranean water streams. Particularly affected are the areas of Ribni Lakes, Smradlivoto Lake, Tiha Rila River, Kalin Dam, and a number of sections of both major river valleys at Elevation 2000. The overall hydrological and ecological impact of the above mentioned instances of human interference are practically unknown. The visible effect amounts to violations of the requirement to ensure the discharge of an ecologically sound minimum of waters downstream of each hydrotechnical facility thereby cause a drastic drop in the water

level of rivers or even the complete drying up of entire sections of them. This has a negative impact on habitats of hydrophilic plants, of the invertebrate organisms dependent on them, on amphibians, some kinds of reptiles, birds and mammals.

A report by the International Program for Climate Control (IPCC, 1990) outlines a long-term climatic forecast of extremely high accuracy and veracity. In this context, the following trends should be noted: a global tendency towards drier climate, amounting to a 3-5% annual drop in air humidity (5-8% in real terms), due to an average annual rise in temperatures by 0.5ºC.

During the period 2000-2030, the aggregate warming up of the European continent will reach somewhere between 2 and 3ºC, causing a 15 to 25% drop in topsoil moisture in the summer season. It is not impossible that the cumulative effect of local and global drought could cause a 30% decrease in summer soil moisture content in the Park territory. Such a drastic, long-term drought will go way beyond the compensation potential of the complex of mountainous ecosystems in Rila Mountain and the Nature Park.

Significance: insufficiently studied, potentially high

Changes in the number of grazing livestock

Grazing and the herding of horses, cows or sheep, as well as the lighting of fires and haymaking related to animal husbandry, have a many-sided impact on the Park's territory. Overgrazing, as observed in the areas of Kalin, Dobro Pole, Rizvanitsa, Bukovo Bardo, and Tiha Rila, causes compacting of the topsoil, changes in the rooted vegetation, as well as in the composition of fungous communities. There is an abandoned sheep-pen in the vicinity of Kalin, where the community of *Alopecurus riloensis* is highly ruderalized. In the area of Kobilino Branishte considerable plots of land are invaded by Monk's Rhubarb *(Rumex alpinus)*. The process of regeneration of the original structure and composition of the higher flora is difficult and protracted. Due to the fact that herds are concentrated in specific places, instances of topsoil erosion have been recorded in the area around Kalin Dam; in principle, the threat is more pronounced for the more sensitive and vulnerable sub-alpine and alpine portions of the Park.

On the whole, there is a considerable decrease in the herds of sheep, cattle and horses grazing throughout the Park, compared with the early decades of the 20th century, which is paralleled by a decline in the numbers of wild grazing animals. The resultant undergrazing, in turn, has its own negative impact on some succession processes and may be one of the reasons for the *Chamaecytisus absinthiodes* invasion. Insufficient grazing also affects the populations of some insects and amphibians. This factor may also be seen as one of the reasons for the decline or disappearance of some of the species of vultures in the Park (bearded vulture, black vulture, gryphon vulture).

Significance: medium, high for some areas

Increased tourist pressure and uneven distribution of the visitor flow

The territory of RMNP, especially the area immediately surrounding Rila Monastery, is among the natural sites in Bulgaria with the highest intensity of human presence. The largest crowds concentrate around the Monastery itself, as well as at Kirilova Polyana, Bachkova Cheshma, along the banks of the Rilska River between the Monastery and the Tomb of St. John, and along the Iliyna River in Brichebor locality. Events, festivities and sports games organized in these localities involve the use of public address systems, playing loud music over loudspeakers and other sources of noise. Relatively fewer tourists proceed along the two river valleys as far as the Tiha Rila or the point of confluence of the Radovichka into the Iliyna River. Those who do typically spend their time picnicking, sunbathing or picking forest fruits. Least popular with visitors to the Park are the areas around Ribni Lakes, at Kobilino Branishte, Smradlivoto Lake and, to a certain extent, around Kalin Dam. Most of these territories are home to large numbers of wildlife species of high conservation significance, for which human crowds may represent a positive threat. One particularly significant form of negative human impact is the disturbance of wild animals through noise, lighting fires, etc. In some cases the gathering of large crowds at certain locations, especially when indulging in activities and overall conduct inappropriate to the sanctity of the place, completely upsets the tranquillity and religious contemplation that characterizes the all-round atmosphere of the Monastery and the Holy Sites around it.

In the absence of a comprehensive strategy for organizing the tourist flow in such a way as to meet visitors' expectations at minimum cost to the cultural and historical assets and natural scenery, crowds scatter throughout the Park perimeter without any restriction, guidance, safety precautions or control over their conduct or the impact of their stay on the territory. There is still a shortage of reliable information regarding the man-made threats and disruptions in the respective Park section, as may have a negative impact on the natural values of RMNP.

Significance: high, local

Unregulated or extreme sports

Rock climbing was practiced in RMNP until 2001; moreover, this was done in one of the areas of highest significance for biodiversity: the rock faces northwest of Kirilova Polyana. These rocks are one of the main, if not the sole, nesting habitat of species such as the golden eagle, the peregrine falcon, alpine chaugh and others, which are averse to human presence of any kind. The area is also highly promising in terms of the possible re-introduction of the bearded vulture, another species that is extremely sensitive to human presence. In the past decade, the use of the rock faces for climbing has been practically stopped; in consequence, the above-mentioned ecosystems have largely regained their characteristic ornithofauna.

Significance: low

Planned construction of a dam on the Iliyna River

The construction of a dam near the point of confluence of the Iliyna River into the Rilska, which started back in the 1980s, has so far caused relatively limited damage, mostly amounting to changes in the natural riverside vegetation, pollution with construction debris and general deterioration of the landscape.

If built, the planned dam is likely to cause a whole range of negative impacts on the natural and cultural-historical values of the Park. Above all, this would change the natural state of the area including significant portions of the valley of the Iliyna River. Submerged under water would be habitats and microhabitats of very high conservation significance. Such an artificial body of water would certainly change the parameters of microclimate in the area; it is to be expected that permanently increased air humidity in the vicinity of the Monastery would have a damaging effect on frescoes and other cultural artifacts. It is also possible that the inevitable changes in subterranean water currents may accelerate the process of lateral sliding of the Monastery compound.

Significance: very low, but potentially high

Unregulated access of motor vehicles

At present, motor vehicle access to the entire territory of RMNP is free, with the exception of the area around Kalin Dam, where vehicles are allowed with special permission only. As a result, vehicular traffic in the area is extremely intensive; the largest concentrations of motor vehicles being recorded around the Monastery itself, at Kirilova Polyana and Bachkova Cheshma localities and at the Tomb of St. John. Vehicles proceed unchecked into the interior of the Park, notably along the road along the Rilska River going southeast from Kirilova Polyana to Tiha Rila locality; on the road along the Iliyna River to Mramorets (Mermera) locality and the by-roads branching south from it towards Bukovo Bardo, the Radovichka River (and all the way up to the ridge to Makedonia Chalet), up on the ridges along the southern Park boundary (Dobro Pole, Tsarev Vrah, Rizvanitsa, etc.), as well as on the dirt roads in the western portions of the Park territory. People enter by car, jeep and SUV, by motorcycle, etc. Unregulated access of motor vehicles is, above all, a major nuisance to the more sensitive animal species. This is a particularly serious threat to species like bear, wolf and other predators, as well as to the large ungulates, predatory birds and the hazelgrouse. Indirectly, unregulated vehicle access into the territory encourages poaching.
The movement of motor vehicles, especially into herbaceous communities of the alpine and sub-alpine zone, entails or accelerates erosion processes. The actual layout of the roadway from Rila Monastery to Tiha Rila and the vehicle-access territory along the banks of the Rilska River bisect the Rila Monastery Forest Reserve is in such a way as to form an ‘anthropogenic corridor’ of high negative impact.

Significance: high

Pollution with solid household waste

At a number of places in the Park, chiefly around major clusters of buildings, by roadsides and at places of higher visitor concentrations, considerable solid waste pollution has been recorded. This is especially true of the area around Rila Monastery, Bachkova Cheshma locality, Kirilova Polyana, around the Eleshnitsa complex, along the banks of the Rilska River between the Monastery and Kirilova Polyana, at Brichebor locality, along the Iliyna River Valley around its point of confluence with the Rilska and eastward to Kravarski Dol, as well as at places where camping with tents and trailers is freely allowed in both major river valleys, in some sections of Bukovo Bardo, etc. Less affected by pollution are the areas around Ribni Ezera Chalet and the Kobilino Branishte tourist lodge, as well as along the tourist trails. The accumulation of solid waste has a degrading effect on the aesthetic merit and recreational value of the landscape. Its negative impacts on biodiversity amount to changes in the diversity and species composition of macrofungi, whereby an increase in ruderal and coprotrophic species is observed. To a certain extent, solid waste pollution is the result of a lack of proper tourist amenities: insufficiency of waste receptacles, benches, fireplaces, etc.

Significance: high, mostly local

Pollution and eutrophication of water basins

While the waters of rivers, brooks, lakes and other bodies of water within the territory of Rila Monastery Nature Park are, as a whole, within the prescribed norms in terms of pollution levels, in some river sections (downstream of Rila Monastery and at some other tourist sites) there is a certain degree of pollution with waste waters, detergents, disinfectants, petroleum products and the like. At 80% of all tourist facilities (hotels and restaurants) there are no septic tanks; to the extent that these exist, they are not built with impermeable walls, thus allowing the dissolved organic matter to seep into the water streams. Water pollution is a threat to aquatic ecosystems, and to all groups of invertebrates and higher organisms ecologically dependent on them. It is especially detrimental to fish populations, hygrophilic mollusks, as well as to some typical high-mountain aquatic taxa, such as the class *Pisidium* of freshwater shellfish, and all species of amphibians.

Significance: low, locally medium

Construction

Although at present there is no construction activity of any significance within the Park territory, the consequences of past construction are still very much in evidence. This factor applies mostly to the areas around Rila Monastery, Kirilova Polyana, Ribni Lakes, Kalin Dam, some sections of the Iliyna River Valley (Kravarski Dol, Turskoto Parche, Vladichina Livada, Hydroto, etc.), as well as to Brichebor locality and the valley of the Kalin River. At places where construction work has been performed in the past, there is evidence of serious damage to the landscape, the aesthetic and recreational qualities of the territory. Construction has caused fragmentation of habitats, an increase of anthropogenic pressure, processes of soil

erosion and degradation of natural communities. Most modern structures built in the territory do not blend well with the environment, nor conform to any coherent vision of the general appearance of the area; some of them are disused and abandoned to the elements, which causes further degradation of the aesthetic qualities of the landscape. A sharp increase in the spread of ruderal species and an invasion of alien (non-local) ones (e.g. *Borago officinalis*) has been established around abandoned buildings of rest homes and other facilities. These appear to be in excellent condition, with superb reproduction capacity and, consequently, reduce the naturalness of the higher flora. The highest concentration of ruderal species has been observed along the Iliyna River and in the Kalin Dam area.

Hydrotechnical facilities, such as water canals, weirs etc., built in river valleys without any regard to ecological requirements, cannot be navigated by fish and therefore cut off their natural migratory routes. This threat applies mostly to the Balkan trout. The building of dikes around some mountain lakes has caused changes in their water outflow, eutrophication, drying up of one-time wetlands around them, all of which is a very grave threat to the populations of mountain frog and alpine newt. While there are no concrete observations of the impact of construction work itself on the Park's biota, it can be said that in principle, construction work, incl. the building of mountain roads, directly affects a whole series of extremely valuable phytocenoses, habitats of high conservation significance and the wildlife species in them, and also has an indirect impact on populations of wild animals by disturbing them.

Special attention is necessary in dealing with the disused, half-destroyed buildings, tunnels, galleries and other facilities remaining around the Park. Many of these serve as lairs to bat colonies that will be threatened with extinction.

Construction is a specific threat for the monuments of culture in the Park. Unregulated building and infrastructure interference is observed over the monuments of culture and in the security belt boundaries.

Significance: high, local

Overuse of non-timber natural resources

According to a sociological survey, no overuse of the natural resources in RMNP has been recorded, with the exception of raspberry and rose hip; however, these findings only apply to the inhabitants of surrounding communities. On the other hand, visiting users have been found, at places or over certain years, to practice overuse of some natural resources. A case in point is the wholesale harvesting of St. John's wort in the year 2000. Similar situations occur in certain years in relation to mushrooms: the uncontrolled, haphazard collecting of mushrooms is a major threat to the current year's resource and to macrofungous biodiversity in general. Despite a strict ban on the extraction of medicinal plants of conservation significance (protected pursuant to the Biodiversity Act) – e.g. *Gentiana lutea, Gentiana punctata, Taxus baccata, Pulsatilla vernalis, Rheum rhaponticum, Rodiol*a *rosea*, the survey has found an expressed interest in the collection of these species throughout the Park territory. The

overuse of non-timber natural resources causes, albeit indirectly, an increased risk of forest fires, the disturbance of wild animals, and pollution.

Significance: medium, high to some areas and species

Quarrying of sand, gravel and building stone

Cutting flagstones for construction of roof structures and, to a lesser extent, quarrying other building materials (river stones that go into the foundations and walls of buildings) has been practiced in the past in the Park territory. This was a serious threat to rock outcroppings and their characteristic flora and fauna of high conservation significance, as well as to the river beds that are home to some micro-habitats of immense value (especially in the Iliyna River Valley between its point of confluence with the Rilska River and Kravarski Dol locality). Potentially, such quarrying activities may have a negative impact on a number of species of conservation significance: plants, invertebrates, reptiles, and bats.

Significance: low

Plowing of natural herbaceous phytocenoses

This is mostly done to clear space for potato fields. Even though this threat factor applies to a relatively small extent in the territory of RMNP (e.g. the Kravarski Dol, Turskoto Parche localities, etc.), its impact can be considerable. It affects the populations and stocks of medicinal plants, and – to an extremely grave extent – arachnids and some other invertebrate species.

Significance: locally medium

Disturbance

A number of the threats described above (logging, poaching, overcrowding, vehicular traffic, building of forest roads, etc.) also entail, as a side effect, a considerable degree of disturbance to wildlife. This is one of the most significant threatening factors since its occurrences have been detected throughout the entire Park territory, and since they affect animal species of high conservation significance.
As a result, animals are driven away from their suitable natural habitats, while the so-called ‘quiet zones’ shrink. The disturbance factor is of critical significance for the survival within the Park territory of the bear, chamois, otter, wolf, red deer, golden eagle, some falcons and other predatory birds, of capercaillie, mountain partridge, bats in their lairs, and to a lesser extent, of the roe, wild cat and hare.

Significance: very high, critical to the species listed

Genetic erosion, introduction of alien species, creation of cultivated forests

Several alien tree species have been introduced as forest cultures, as single specimens or in groups, into the Park territory (planted mostly around the tree nursery south of Eleshnitsa): larch, Douglas fir, sequoia, Weymouth pine, etc. Although this account for less than 1% of all forests within the Park, there is still a danger of genetic pollution of local species with alien ones (e.g. of silver spruce with common spruce).

From among the animal wildlife, hybridization is a threat mostly to the wild cat and the wolf. Hybrids between wild and domestic cat have been sighted around 1988 in the territory of the Forest Enterprise. The presence of stray dogs (in the area around the point of confluence of the Rilska and Iliyna Rivers, and also along the valley of the Iliyna itself) poses a threat of hybridization between dog and wolf. The introduction of species of fish like the rainbow trout and, to a certain extent, Brook trout *(Salvelinus fontinalis)*, which are alien to the Bulgarian ichthyofauna, constitutes a threat to local fish species, since the invaders compete with, and eventually displace, the local Balkan trout *(Salmo trutta fario).*

At certain places throughout the Nature Park, and especially in the area between the point of confluence of the Rilska and Iliyna Rivers and of the Kalin River Valley, natural broad-leaf forest ecosystems have been replaced by cultivated forests, mostly of Scots pine and other species alien to the habitats in question. Such instances of drastic interference with, and changes in, the local vegetation cause degradation of the landscape and are detrimental to the natural appearance of the Park, while also creating possibilities for genetic erosion of wildlife. Afforestation with unsuitable tree species may trigger changes in the composition of wildlife communities and the microclimate, thereby causing the extinction of certain, usually stenotopic wildlife taxa of high conservation significance. Among these are most species of snail (of those identified within the Park territory only one, *Arion subfuscus*, can survive in fir forests), all amphibians, the common grass snake (which breeds only on old broad-leaf forests); also destroyed are the breeding and hunting grounds of bats, etc.

Significance: medium, to some species high

Activities incompatible with the atmosphere and significance of Rila Monastery and the Holy Sites as a center of the spirit

A threat which compromises the perceived exceptional spiritual significance of Rila Monastery and the other holy sites around it, is the presence and operation of commercial entertainment establishments, open-air bazaars, shops etc., with the inevitable country-fair atmosphere surrounding them; the presence of individuals in improper attire, of motor vehicles, the noise, pollution and other degrading factors in the immediate vicinity of the religious sites. All these factors degrade the outlook of spirituality, propriety, and humility of the holy places.

Significance: very high, local

The sliding of the Rila Monastery compound

Built on an alluvial terrace, in recent decades the Monastery compound has been involved in a process of a gradual downhill slide of some of its structures and.or parts thereof, as evidenced by the appearance of cracks and other visual signs. The latter have been marked accordingly and are subject to constant monitoring. These destructive processes are probably amplified by vibrations caused by heavy motor vehicles passing on the stretch of road immediately by the northeastern wing of the Monastery.

Significance: very high

2.3 Limitations

The lack of precedent and prior experience in collaborative management of a Nature Park in Bulgaria

About 77% of the territory of Rila Monastery Nature Park has been restituted to its owner, the Bulgarian Orthodox Church. So far, there is no known precedent or prior experience of an operational model of collaborative management of nature parks in Bulgaria, especially in a situation where such a considerable portion of the protected area is held by a single private landowner. The biggest challenge to the Park remains finding a way to balance the rights, role and responsibilities of the State and the Bulgarian Orthodox Church in implementing the first Management Plan for the territory. The Nature Park should be managed in compliance with the provisions of the government act by which it was designated, namely Decree # RD-310/26.06.2000 (State Gazette, # 56/11.06.2000), by applying the regimes prescribe as per Art. 21 of the Protected Areas Act, whereby RMNP is to be treated as a National Park.

Significance: critical

Insufficient staffing and provision of material and financial resources and equipment to the institutions relevant to the Park management

The role and responsibilities of the State and the Church in financing the activities pertinent to managing the Nature Park are as yet insufficiently clear. In the absence of clarity, a large proportion of the provisions of the Management Plan and the long-term (ideal) goals laid down in it are in danger of remaining unfulfilled. The present level of financing the activities carried out in RMNP through the Park Directorate is insufficient to endure the implementation of the Management Plan. It is critically important to clarify the issue of the future financing of Park-related activities.

On the other hand, the fact that the Park Directorate is understaffed and/or poorly organized in terms of assignment of functions and responsibilities, as well as short on office space, equipment and supplies, further diminishes the State's chances of carrying out its duties in ensuring the effective implementation of the Management Plan. Although this does not apply solely or specifically to Rila Monastery Nature Park, the implementation of the Plan will be seriously compromised if the necessary resources for protection, control and management of the tourist flow in RMNP are not provided.

The Bulgarian Orthodox Church, notably Rila Monastery, are likewise lacking in specialized and properly trained staff for managing its property within RMNP, for maintaining liaison with the institutions and protection of the territory as a Nature Park.

Significance: very high

Insufficient information from and about the Park

The fact of this territory's designation as a Nature Park on account of its conservation significance is, more often than not, unknown to visitors, whether Bulgarian or foreign. Although Rila Monastery is among the most popular tourist destinations with Bulgarian as well as international tourists, little information is available about its history, its connection with the surrounding natural scenery, or the importance of this territory from the perspective of the international environmentalist community. While Rila Monastery itself, being a World Heritage site, is a known symbol of Bulgaria's national pride and a major destination for foreign visitors, little is known of the Park's significance as one of the most valuable protected natural areas in the country.
The insufficient quantity of relevant information diminishes people's understanding, sensitivity and appreciation of the Park's value, whether natural or spiritual. This fact also reduces the Park's potential to contribute towards making Bulgaria a leader in harmonious collaborative management of sites of exceptional cultural, religious and conservation significance located within the same territory.

In addition, there is limited support on behalf of the public sector for the progress and accomplishments made in the sphere of nature protection within the Park territory. The Directorate of RMNP operates in the absence of a coherent, coordinated strategy of communication with the landowners. Whatever information is available from the Directorate is limited to highlighting the natural values of the Park without any relation to the cultural and spiritual treasures in its territory. There is practically no support on behalf of the private sector in this respect. There is very little preliminary information, whether in the form of educational materials or advertising, outside the Park territory; while the information available within it is still insufficient. The unavailability of advance information as to what visitors can and cannot do within the Park territory makes management of the tourist flow extremely difficult, while lowering the quality of tourist services and visitor experience during the actual visit.

Significance: high

Inefficient mechanisms of interaction, conflict resolution and harnessing support by local communities and institutions

The new management models developed for protected areas require that their management plans, as well as any activities envisioned in them, be attuned to the livelihood and the general economic situation of the local communities. The Park administration, in addition to being faced with the challenge of collaborating with a major landowner, the only private holder of lands within the Park, should also interact and cooperate with the local authorities and communities in the adjoining territories.

Mechanisms and public relations programs should therefore be identified to allow that the needs and responsibilities of the local population become intertwined with the needs and responsibilities pertinent to the management of the Park. In more specific terms, it is necessary to seek methods and tools to deal with issues like gathering of firewood, access to non-timber natural products, communication and water supply systems, waste management, etc. All these activities should be organized in such a way as to fully take into consideration the interests, role and responsibilities of the Bulgarian Orthodox Church, since most of them are to be performed on its property.

Significance: high

The presence of a settlement unit in RMNP

Rila Monastery itself has the status of a populated place, or settlement (see Section 1, Chapter 1.2). Pursuant to the provisions of the Protected Areas Act, the Management Plan cannot lay down conditions, requirements, regimes or norms valid for populated areas within the territory of the respective Nature Park. However, despite its settlement status, no zoning or urban development plan is being implemented for Rila Monastery, therefore activities carried out in its immediate vicinity (retail trade, catering, parking lots etc.) considerably affect and diminish the proper perception and appreciation of its exceptional spiritual and religious value.

The lack of clear-cut boundaries of the Rila Monastery settlement unit and the obvious absence of an operational zoning and urban development plan for its territory threaten to compromise the sacred religious core of Rila Monastery Nature Park while jeopardizing the effective integration of this populated area with the ideal goals set for the Park by virtue of its first Management Plan.

Significance: high

3.0 The effect of threats and limitations on the long-term goals and potential of the protected area

The preceding chapter (***2.0. Threats and limitations)*** contain a detailed account of the basic impacts of most of the threats and limitations affecting the long-term goals and potential of the protected area. Still, with a little effort to digest and summarize the above information, it is possible to identify the following general impacts, which stand in the way of attaining the long-term (ideal) goals of Rila Monastery Nature Park.

The lack of interaction among the stakeholders (interested parties), as well as understaffing and the shortage of material and financial resources will make very difficult or even call into question the attainment of each of the ideal goals, and thence, the proper protection and conservation of the religious, natural and cultural-historical treasures in the Park and its development as a protected area.

The following threats directly bear upon the conservation of the religious and cultural heritage in the Park's territory (Ideal Goals 1.1.1 and 1.1.2): increased tourist pressure and uneven distribution of the visitor flow; unregulated access of motor vehicles; the insufficient awareness of tourists as to the rules of behavior and conservation of the religious and cultural monuments at the Monastery and in the area of the Holy Sites. Another serious problem is the state of the existing infrastructure in the Park and the construction work that needs to be carried out in compliance with the applicable legislation and Detailed Zone Development Plans.

Another set of threats and limitations, both natural and man-made, have an impact on the conservation of nature components. Poaching, intensive logging and the overuse of timber; forest fires and pollution of the forests, land and waters within the Park; the low reproduction rate of certain species and their borderline position within their respective natural ranges; the overuse of non-timber natural resources; disturbance of wild animals and other threats compromise the attainment of Ideal Goals 1.2.2; 1.2.3; 1.2.4; 1.3.2; 1.3.3, etc.

The development of sustainable, environmentally sound forms of tourism is seen as the principal potential source of income for the landowner, and also as the engine for the economic development of the area as a whole. Obvious threats and limitations like pollution; unregulated construction; overcrowding with people and motor vehicles; activities at odds with the religious and spiritual significance of the Monastery; and insufficient information from and about the Park all inhibit the development of RMNP and the Monastery itself as an attractive tourist destination. The above listed threats directly compromise the attainment of Ideal Goals 1.2.1, 1.4.1 and 1.4.2, while indirectly threatening a number of other ideal goals and the purpose of the Park as a whole, pursuant to PAA. As more and more people attach importance to the quality of service, the degree of conservation of nature and the requirements of environmental protection and the preservation of cultural and, even more so, religious monuments, the lack of progress and improvement of the hospitality conditions and opportunities in the Park in this respect is sure to cause a decline in the numbers of visitors and the potential income they generate.

The impact of threats and limitations on the attainment of the Ideals Goals set as per the Management Plan is complex and many-sided. A certain threat may bear directly upon the attainment of a given ideal goal while influencing indirectly other goals or amplifying the effect of other threats. The attainment of the Ideal Goals themselves is also a complex and multi-dimensional process, as the attainment of each one of them contributes more or less towards the realization of the others. It is in appreciation of the effect of threats and limitations on the long-term goals and the potential of the protected area that the Plan determines a range of operational objectives, programs and projects, geared to help overcome, mitigate and/or eliminate the existing threats and limitations. The regimes and norms set for the Park territory are also designed in such a way as to restrict or eliminate the impact of these threats and limitations.

4.0 Management (Operational) Objectives

The so-called management (operational) objectives are formulated on the basis of the ideal goals and are designed to elaborate upon and further specify them. They are realistic, adaptable and updateable, and are defined for the 10-year period of validity of the Management Plan.

Below are the management (operational) objectives for Rila Monastery Nature Park, as related to the respective ideal (long-term) goals:

4.1 Conservation of religious and cultural heritage

Long-term goal 4.1.1 To conserve and develop the unique Orthodox religious and historical complex Rila Monastery and the Holy Sites around it as a center of spiritual culture and education.

Operational objectives:

- To provide conditions around the Holy Sites for preserving an atmosphere which does not conflict with the traditions of the Eastern Orthodox faith and is conducive to worship, spiritual uplifting and purification of the soul:
- To bring the existing infrastructure (coffee shops, restaurants, shops etc.) around the religious sites into harmony, in both purpose and appearance, with the religious significance of the place;
- To introduce and impose rules regarding the variety and means of commercial supply of goods (incl. food and beverages) in the area around the Holy Sites;
- To develop and fit out a network of trails linking the Holy Sites and providing travelers with an opportunity to seek privacy and seclusion:

Long-term goal 4.1.2 To conserve the archaeological, architectural and other cultural and historical components located within Rila Monastery Nature Park as an integral part of the Bulgarian national heritage.

- To continue work on the protection, conservation and rehabilitation of historical and cultural values of the Holy Sites within the Park;
- To undertake steps towards the study, conservation and restoration of archaeological and historical sites outside of the Holy Sites (remnants of the early Monastery buildings, of ancient Roman roads, etc.);
- To mark and interpret the cultural and historical sites in such a way as to provide for their conservation while ensuring proper tourist behavior;
- To identify, examine and map the different cultural landscapes and to determine measures for their conservation.

4.2 Conservation of nature components

Long-term goal 4.2.1. To preserve the harmony between natural, cultural-historical and religious heritage in the territory of RMNP.

Operational objectives:

- To avoid interventions that may upset the natural state and condition of the extant nature complexes determining the general appearance of the territory;
- To apply specific requirements for landscape planning and specific rules and norms regarding the architectural appearance of the sites and facilities in conformity with the natural, religious, and cultural-historical values; to ensure that the infrastructure be limited to the most essential elements, allowing the preservation of the natural state of the territory and mitigation of the anthropogenic impact;
- To commence a gradual phasing out and eventual restoration to their original appearance of plots of cultivated forest, which do not conform to the all-round appearance of the Park;
- To remove the remains of anthropogenic activities in the past (unused buildings, concrete platforms, hydro technical equipment, electricity poles and other) so to provide an aesthetically pleasing landscape.

Long-term goal 4.2.2 To conserve the natural state of forest habitats; especially the unique communities of Rila oak and King Boris's fir and their biological potential.

Operational objectives:

- To develop and implement a fire control plan (in conformity with the conservation goals of the Park);
- To implement a program for conserving the natural state of forests within the Park:
  - To draw up a map of forests aged 100 years or over by age categories, succession phases, degree of naturalness of the forest structure, etc.;
  - To leave tracts of old forest without human intervention in order to facilitate the occurrence of natural processes within them;
  - To implement measures for preserving the natural succession in tracts of forest aged under 100 years;
- To set up and maintain a database and a monitoring system regarding the state and condition of forest ecosystems;
- To implement a program for the protection and conservation of communities of Rila oak and King Boris's fir:
  - To map and mark locations of both species and their communities;
  - To carry out annual monitoring of the state and condition of communities of both species;
  - To carry out a taxonomic study of Rila oak and King Boris's fir;
  - To gather seed material of both species for setting up a gene bank, for exhibits, etc.;

Long-term goal 4.2.3 To conserve the natural state and biological potential of sub-alpine and alpine communities and rocky habitats.

Operational objectives:

- To map, and to undertake concrete measures for preserving the natural state of rock faces, complexes and outcroppings:
- To describe locations of rare, endangered, biome-restricted, endemic, relict, sensitive or vulnerable species bound to rock formations;
- To discontinue activities that may lead to degradation of, or damage to, rock faces, complexes and/or communities of plant and animal species;
- To carry out monitoring of their state and to record the effect of measures undertaken to improve it.
- To maintain the herbaceous vegetation in sub-alpine and alpine grassy communities (by introducing suitable regimes of grazing and hay-making) in such a way as to preserve the entire herbaceous biodiversity, while simultaneously monitoring the impact of maintenance measures;
- To apply a monitoring and control program regarding the zanovets (*Chamaecytisus absinthioides* (Janka) Kuzm.);
- To implement a program for rehabilitation and reclamation of terrains damaged or degraded as a result of hydro technical construction or other anthropogenic interventions in the sub-alpine and alpine Park zone.

Long-term goal 4.2.4 To conserve the natural state, biological potential and diversity of lake, lake- and riverside habitats and other wetlands within the Park.

Operational objectives:

- To improve the technical condition of hydro technical facilities within the Park and bring it up to the requirements of the applicable environmental legislation (incl. by ensuring the discharge of an ecologically sound water outflow);
- To implement measures for the conservation of locations along the river network and in other wetland areas where habitats and species of conservation significance are preserved:
- To map and mark locations of conservation significance around water basins;
- To plan and undertake concrete measures for protecting the most endangered wetland components in the Park;
- To implement a program for hydrometric and hydro chemical monitoring of waters in the Park;
- To assess the impact of human interference with rivers, lakes, and other aquatic sites within the Park and to institute measures for improving the state and condition of wetlands and related ecosystems:
- To study and assess the impact of water extraction and diversion on ecosystems and river sections downstream of the catchments facility;
- To study the processes of lake eutrophication and sedimentation;

Long-term goal 4.2.5 To conserve the natural state and biological potential of populations of species of conservation significance.

Operational objectives:

- To describe the distribution of the principal species of conservation significance throughout the Park; to assess the state and condition of their populations and to perform monitoring thereof;
- To implement programs for the conservation of significant species habitats:
- To institute measures for the conservation of the most vulnerable species of higher plants in the Park;
- To institute measures for restoring the Balkan trout and chamois populations in the Nature Park to their natural condition;
- To study the state and condition of, and to institute measures for protecting the Dalmatian falcon, the capercaillie and other wildlife species of conservation significance;
- To undertake action to restore to previous levels the populations of vultures and other rare species;

4.3 Management of natural resources

Long-term goal 4.3.1 To preserve the water resources within RMNP and to allow their use solely in quantities and in ways that would not constitute a threat to the ecosystems within its territory.

Operational objectives:

- To assess the nature, amount and condition of water stocks in RMNP and to perform monitoring thereon;
- To implement a program for water consumption monitoring in RMNP.

Long-term goal 4.3.2 To operate a model of sustainable caretaking and use in suitable sections of the RMNP forests while conserving biodiversity, without compromising the other values and significance of the Park.

Operational objectives:

- To operate a model of sustainable caretaking and use of forests in the area of Lomnitzite and Mravulyako (Mravunyaka) while conserving biological diversity;
- To utilize the experience and expertise accumulated in implementing sustainable forestry practices in RMNP for professional training and demonstration purposes.

Long-term goal 4.3.3 To conserve the natural state and biological potential of fish stocks, populations of medicinal plants, forest fruits and mushrooms within RMNP.

Operational objectives:

- To implement a system of measures to restore and maintain fish stocks within RMNP;
- To make periodic assessments of medicinal plant and forest fruit stocks and to plan annual quotas of maximum allowed use;
- To develop guidelines and prescribe methods of harvesting of specific species and to implement an enforcement system in the use of resources;
- To implement a special regime for the use of mushroom resources by imposing stricter requirements regarding their use.

4.4 Management of tourism

Long-term goal 4.4.1 To ensure the implementation of such forms of tourism not compromising the conservation of the spiritual significance of Rila Monastery and the other Holy Sites, the cultural and historical heritage of the Park, its natural assets and landscapes.

Operational objectives:

- To develop and implement a comprehensive strategy and program for the development of tourism in the territory of RMNP (types, forms, proportional distribution, etc.);
- To ensure coordination and interaction with the municipal Tourism Consultative Council for the inclusion of the program in the Municipal Tourism Development Program;
- To develop, in conjunction with the Mountain Rescue Service, the National Fire Service, The Bulgarian Tourism Union, the Bulgarian Army, the National Police Service, and others, an improved system of visitor safety and emergency action;
- To reorganize and refurbish the existing tourist and recreational facilities (buildings) and to regulate levels and forms of tourist pressure in such a way as to not endanger the natural state of nature complexes, the religious and cultural value of Rila Monastery and the harmony between these;
- To establish a system for monitoring and management of vehicle access and distribution in the territory of RMNP;
- To improve existing and to create new elements of tourist infrastructure (camping sites, rest areas, scenic outlooks, marking, provisions for visitor awareness and safety, etc.). Tourist marking is to be considered with the national and European requirements and standards;
- To impose ground rules of visitors behaviour and a system of publicizing and enforcement thereof;
- To develop and implement a system of management of household waste and sewage;

- To implement a program for publicizing tourism opportunities in RMNP (incl. by putting up information boards at the main entry points, in gateway communities and by providing appropriate promotional materials at visitor information centers).

Long-term goal 4.4.2 To encourage new forms of tourism that are not in conflict with the preceding goal and that provide opportunities for income generation and profits.

Operational objectives:

- To build an ethnographic theme park showcasing traditional arts and crafts and to ensure the natural separation of visitors seeking rest and recreation from those preferring privacy and contact with nature;
- To build, at a suitable location and in compliance with the internationally established norms, an eco-lodge as a specific form of tourist facility and a source of significant income;
- To diversify the range of tourism services by themes and subjects of human interest (nature, history, recreation, horseback riding, etc.), and to set up special interest routes, etc.
- To establish and develop a system of environmentally sound transportation in the park using suitable vehicles (road trains, horse-carts, internal vehicle transport, etc.);
- To set up, at suitable places and in compliance with environmental protection requirements, special shelters for observing animals in the wild.

4.5 Interpretation and education

Long-term goal 4.5.1 To present the natural, cultural and religious heritage of RMNP in ways and by means that would contribute most fully to people's personal enrichment and their involvement in the preservation of orthodox values and the conservation of nature.

Operational objectives:

- To develop and implement a comprehensive plan for interpretative activities within RMNP, that would reflect the unity and harmony between religious, natural and cultural values in the Park:
- To identify the basic facts regarding the natural, religious and cultural heritage of the Nature Park as the basis for producing comprehensive information materials (printed, audio-visual, CD-ROM, etc.);
- To apply both traditional (visitor information centers, printed materials, information boards etc.) as well as innovative (Internet, audio-visual and multimedia products) forms of interpretation;
- To implement a program for using interpretation tools and approaches to increase public awareness of the need to conserve the spiritual and cultural values in RMNP:

- To utilize the potential of Rila Monastery and the Holy Sites in RMNP as a source of national pride and self-awareness and for instilling a sense of duty and a desire to work for their conservation;
- To identify plant and animal species emblematic to the Park and to use them in a suitable way to instill among the public a desire to join in the interpretation program;
- To propose to the competent authorities that RMNP be included in the UNESCO List of the World Natural and Cultural Heritage Sites.

Long-term goal 4.5.2 To provide optimum opportunities to make the Nature Park a scientific and educational center on matters of the natural sciences.

Operational objectives:

- To develop a comprehensive strategy for development of the park as a scientific and educational center in the realm of the natural sciences:
- To utilize the Park's natural values for education and scientific research in ways and by means that do not conflict with its goals;
- To organize specialized courses in the use of natural resources, tourist and environmental activities, protected areas management, etc.;
- To organize forms of ecological and cultural education.

4.6 Partnerships and local communities

Long-term goal 4.6.1 To ensure that the use of resources and the utilization of the Park's potential take place with full respect for the interests, rights and responsibilities of the landowner of the biggest part of the territory, and other stakeholders.

Operational objectives:

- To implement mechanisms for sustainable, environmentally sound use of resources in the Park as a tool towards attaining its conservation goals:
- To organize special courses with interested parties on the proper use of non timber natural resources, the marketing of tourist activities, a.o.;
- To propose alternative methods of use of natural resources by their cultivated growing in the area around the Park, more on-site processing, certification of organic products, etc.;
- To implement a program for development and utilization of the possibilities provided by RMNP to satisfy the economic needs of the landowner in concurrence with local communities:
- To provide conditions and technical assistance to the landowner and local communities (consultations, projects proposals development, business plans, etc.) for performing economic activities in compliance with the management objectives of the Nature Park and the active legislation;
- To develop mechanisms and approaches that would enable the local population to fill Park-based jobs in tourist services etc.;
- To propose a program for use and promotion of the natural and cultural heritage in education and the cultural life of local communities:

- To develop and implement ways and means of pursuing joint educational activities with schools and other educational and cultural institutions in the region, in both the domain of the cultural and historical heritage and in the sphere of ecological education.

4.7 Management of the Park

Long-term goal 4.7.1 To implement a management model for Rila Monastery Nature Park that combines the interests and responsibilities of the Holy Synod of the Bulgarian Orthodox Church and Rila Monastery, the State and the local communities, while ensuring proper coordination among all stakeholders for attaining the management objectives of the Park.

Operational objectives:

- To introduce a system of ongoing exchange of information and coordination of activities between all stakeholders with an interest in the territory of RMNP;
- To ensure the implementation of joint activities between partners on the basis of clearly defined rights and responsibilities of all parties involved;
- To implement a plan for the institutional streamlining, strengthening and capacity building of the Nature Park administration, including the establishment of mobile patrols for RMNP, defining park sections with offices and appointing heads of sections responsible for the respective territory:
- To develop and maintain the Park infrastructure for the effective attainment of park goals and objectives;
- To develop mechanisms for income generation for the Park administration in order to support its continued operation;
- To supply RMNP with an effective communication system for coordinating activities between different services in the event of natural calamities, forest fires and other emergencies;
- To introduce a unified strategy of the Park administration for public relations; to support a public awareness program regarding the values, opportunities and specific resources of the Park, as well as a system for regular information access and for providing information to the public:
- To implement a program for involving NGOs, scientific research institutions, artistic guilds, the media, the civil service, the private sector and others and to solicit their cooperation for protecting and publicizing RMNP and its religious, cultural and natural values;
- To develop and register a system of identifying symbols, signs and emblems;
- To extend existing partnerships with suitable organizations on a national and international scale.

Long-term goal 4.7.2 To ensure that the requirements for the conservation and development of RMNP are reflected in the regional planning scheme of the Southwestern Planning Region.

Operational objectives:

- To implement mechanisms for information exchange between RMNP and the municipal and regional planning bodies:

- To appoint a permanent representative for RMNP to participate in the work of the District Regional Planning Council, Kyustendil, and in the District Expert Council for Territorial Development;
- To ensure that the said RMNP representative assist in coordinating activities as envisioned for the Southwestern Planning Region, so as to not endanger or conflict with the protection of the religious, cultural and natural values in the Park;
- To develop a General Zone Development Plan for the Park as well as Detailed Zone Development Plans of separate areas within the Park (Tourist Zone) based upon the updated cadastre and in pursuance of the Territorial Development Act.

Long-term goal 4.7.3 To maintain and optimize the Park infrastructure in compliance with the special laws and in compliance with the environmental protection purposes of RMNP.

Operational objectives:

- To assess the state and designated function of Park infrastructure and to make steps towards harmonizing it with the environment and the management objectives (rebuilding, removal of disused facilities and land reclamation, building of underground communications, etc.);
- To ensure the performance of routine activities pertinent to maintenance of roads, hydrotechnical, and electrical facilities in the territory of RMNP, as well as of sites of the social infrastructure, by making them more environment friendly.

Long-term goal 4.7.4 To maintain close coordination in the management of the territories of Rila Monastery Nature Park and of Rila National Park, as an inseparable nature complex.

Operational objectives:

- To engage in regular exchanges of information and joint activities in both protected areas on matters of fire control, provision and maintenance of ecological corridors, visitor management and safety, law enforcement, etc.;
- To ensure that RMNP refer complex issues as well as ones of significance to both Parks to the Scientific Consultative Council of Rila National Park for resolution.

1.0 General Regimes and Norms

Pursuant to the Protected Areas Act (PAA), in the Management Plan for Rila Monastery Nature Park, the provisions of Art. 21 of the said Act shall apply. Pursuant to Art. 21 of PAA, the following activities shall be prohibited in Rila Monastery Nature Park:

1. Construction, except of tourist shelters and chalets; water catchments and water purification facilities for drinking water supply purposes; buildings and facilities necessary for the management of the Park and for visitor service; underground communications; repairs and renovation works on existing buildings and roads; sports and other facilities;
2. Manufacturing and production work, except for maintenance and reconstruction purposes, in the forests, non-wooded lands and water basins;
3. Clear cutting of forests;
4. Use of artificial fertilizers and other chemical agents;
5. Introduction of plant and animal species alien to the area;
6. Grazing of goats, as well as of any animals in forests outside the designated meadows and pastures;
7. Extraction of herbs, wild-growing fruits and other plants and animal species from certain restricted areas;
8. Gathering of fossils and minerals, damage of rock formations;
9. Upsetting of the natural state of water basins, water currents, their banks and shores and adjoining areas;
10. Game breeding and hunting, except for culling purposes;
11. Angling* and fish-breeding in certain restricted areas;
12. Pollution of waters and soils with household, industrial or other waste;
13. Camping and lighting fires outside specially designated sites;
14. Any interference with existing biological diversity;
15. Any collection of rare, endemic, relic or protected species;
16. Any other activities as identified by virtue of the decree designating the territory as protected area and of the management plan thereof.

* Following the adoption of the Fisheries and Aquatic Cultures Act (promulgated in State Gazette, # 41, 2001), the term “angling” is replaced in the Management Plan by the term “amateur fishing”.

1.1 Regimes

In the management and use of the natural resources and the protection of the culture-historical heritage in RMNP territory, the regimes and restrictions of the following laws are implemented: Protected Areas Act, Medicinal Plants Act, Forest Act, Water Act, Biodiversity Act, Fishing and Aquaculture Act, Monuments of Culture and Museums Act, Tourism Act and other special and general acts.

1.1.1 The following activities are allowed in the territory of Rila Monastery Nature Park:

1. Guarding;
2. Fighting of forest fires and fire prevention activities pursuant to an approved fire control plan;
3. Rescue and police operations;
4. Marking, signposting and upkeep of the boundaries of the Park marking, the Reserve and the Pilgrim's road, as well as the tourist trails;
5. Maintenance and safety measures along the tourist routes;
6. Hiking along the tourist routes, incl. for educational and pilgrimage purposes;
7. The gathering of seeds, wild plants and animals for purposes of scientific research or of their re-introduction in other locations;
8. Sanitary activities in the forests;
9. The maintenance and restoration activities in the forests plantations to gradually transform them into natural ones pursuant to Forest Inventory 2000 with the exception of the plantations in the Buffer zone of the Reserve and the High Conservation Significance Zone;
10. Scientific research and educational activities, interpretation and ecological monitoring;
11. Elimination of non-local (alien) plant and animal species;
12. Passage of domestic animals along designated trails (Appendix 29);
13. Protection and guarding of the biodiversity, water streams and basins, river banks and riverine vegetation and also all other natural complexes;
14. Reclamation of damaged terrains and the dismantling and removal of disused sites and facilities of the technical and social infrastructure disfiguring the landscape; (Appendix 3);
15. Passage of service motor vehicles on duty along existing roads (as service motor vehicles the Rila Monastery's vehicles are accepted as well);
16. The movement and parking of personal motor vehicles in accordance with the established system of vehicle access and traffic management in the Park;
17. Re-integration of the cultural landscape pursuant to the Convention on the Protection of the Natural and Cultural Heritage and subject to special projects for conservation and site development plans;
18. The archeological excavations subject to the order of Monuments of Culture and Monuments Act and pursuant to the requirements of the Protocol appendix from 07.05.1992 appointed with Order # RD-19-132 / 24.03.1992 of the Ministry of Culture (Appendix 4).

1.1.2. Pursuant to PAA Art. 21, item 16, and by virtue of the present Management Plan, the following additional activities are prohibited for the territory of Rila Monastery Nature Park:

1. The cutting down of a tree or group of trees in radius of 50m around fountains, chapels and other holy sites except if they threaten the object;
2. The transportation of non-timber products extracted from the territory of Rila Monastery NP (wild-growing fruits, medicinal plants or mushrooms) without permission, with the exception of quantities gathered for personal needs;
3. The gathering, removal or transportation of any other products of organic or inorganic origin, except in the course of maintenance or restoration activities as provided for in the Management Plan, zone and site development plans and technical plans and projects;
4. The movement and parking of road motor vehicles outside the designated and specially marked places roads and parking facilities;
5. Any disturbance (including aerially), killing, catching, chasing or hurting of wild animals;
6. Any gathering, removal, moving, transportation of animals, whether live, found wounded, or killed, or of recognizable parts thereof, or of eggs or other life forms;
7. The destruction or moving of lairs and anthills, except for purposes of maintenance or restoration of populations of animal species;
8. The regulation of animal populations number except in cases where:

   8.1 they threaten the health and vitality of their own population;

   8.2 in the assisted restoration of the populations of Balkan chamois, red deer, roe, grouse, mountain quail, Balkan trout and other species, as deemed necessary;

   8.3 in cases of epizooty;

   8.4 in cases where damages are inflicted to domestic animals or threats posed to visitors;

   8.5. in the elimination of stray dogs or cats, or cross-breeds between wild and domestic animals;
9. The entry, access and movement of persons carrying whole or disassembled rifles, shot-guns or other long-barreled firearms, bows or cross-bows in the territory of Rila Monastery NP, as well as transportation of the kinds of weapons listed above, except park guards, the Ministry of the Interior or the Ministry of Defense in the discharge of their duties;
10. The use of boats or any other sailing vessels in the lakes, except for purposes of scientific research, monitoring or in maintenance and restoration activities;
11. Practicing of winter sports, which require building up ski tracks;
12. Any surface damages to the terrain, except in performing maintenance or reconstruction activities or in fulfillment of plans and schemes approved well in advance as part of, or prescribed by, the Management Plan;
13. The carrying and/or use in the Park of:

    13.1 explosives, except for purposes as prescribed by Management Plan or in fulfillment of plans and schemes approved pursuant to it;

    13. 2 metal detectors;
14. Grazing of animals outside designated locations, or in violation of the locations, types and number of branded domestic animals stated in an issued permit (Appendix 29);
15. Night-time grazing or grazing of herds without a herdsman;

16. The placement of signs and markings of any kind without prior agreement with the territory's or object's owner regarding the location, type and means of placement thereof;
17. Increase of the capacity of the tourist chalets, shelters and lodges, recreation facilities or the roadman's lodges or any increase in the built-up area or total floor area therein;
18. Gathering of non-timber products for commercial purposes (wild-growing fruits, medicinal plants or mushrooms) outside of the localities as per issued permit;
19. Destruction, damage or removal of facilities or installations of the administrative, tourist, educational or information infrastructure.

1.2 Norms:

1. Maximum number of overnights in tourist shelters: 1, except in cases of prolonged deterioration of atmospheric conditions;
2. Extraction of non-timber products (wild-growing fruits, herbs and mushrooms):

2.1. Wild-growing fruits, except those of medicinal plants:
- For personal needs, fresh, per person per day- up to 5 kg.;
- For commercial purposes: locations and quantities to be determined annually;

2.2. Herbs:
- For personal needs, fresh, per person per day – up to 5 kg.;
- For commercial purposes: locations and quantities to be determined annually;

2.3. Mushrooms:
- For personal needs, fresh, per person per day- up to 3 kg.;
- For commercial purposes: locations and quantities to be determined annually;

3. Amateur fishing:

3.1 Amateur fishing seasons:
- For fish of the trout family: May 1 through September 30;
- For all other species of fish: July 1 through October 31;

3.2 Days of the week when amateur fishing is allowed: Saturday, Sunday and all bank holidays;

4. Livestock herds shall be accompanied by at least three dogs; the dogs shall be equipped with mandatory fetters;

1.3 Conditions

The following **conditions** are instituted for the entire territory of the Nature Park:

1. Construction to be not less then 50m from the river banks;
2. The information signs and labels produced by the park directorate to be designed according to a unified project and their content to be in Bulgarian and at least one international language;
3. Locations used for commercial herb gathering shall be rotated. Extraction is subject to an annual resource assessment and shall be done by trained personnel;
4. In gathering herbs, all young, non-blossoming specimens and no less that 30% of the mature specimens shall be left intact for population renewal;

2.0 Zones, Regimes and Norms

Seven Zones are defined, mapped, and described for the territory of Rila Monastery Nature Park. Three of the Zones are required pursuant to the Protected Areas Act; the remaining four are designed according to the specific Nature Park conditions.

The following Zones are defined: the Reserves Zone; the High Conservation Significance Zone; the Holy Places and Cultural-Historical Heritage Zone; the Tourism Zone (comprised of three sub-zones); the Environmentally Sound Use Zone; the Sustainable Forestry Zone; and the Technical Infrastructure Zone.

2.1 The Reserves Zone

Background and rationale

The Nature Reserves Zone comprises the only nature reserve of paramount conservation significance within the Park, designated and declared as such by force of a number of legislative acts issued between 1986 and 2000 and is one of the zones required by PAA. Pursuant to Art. 16 of the Protected Areas Act, eligible for designation as nature reserves are samples of natural ecosystems comprising characteristic and/or remarkable wild animal and plant species and their habitats. The reserve regime allows the highest degree of protection of plant and animal communities. This zone contributes for fulfilling RMNP Ideal goals for nature components conservation in the park (Ideal goals 1.2.1; 1.2.2; 1.2.3; 1.2.4; 1.2.5).

Purpose of the Reserves Zone

This zone is designated for the maintenance of the regime of strictest protection of the habitats with significance for many animal and plant species and communities threatened in a national, European and world context. The aim of the zone is also to conserve the natural Rila monastery environment, preserving the harmony between spiritual and nature values.

Description, physical and geographic characteristics

The Reserve Zone encompasses the section of Rila Monastery Forest Enterprise pursuant to a 1978 forest inventory and by force of Order # 307/10.04.1986, and the extension of the Reserve by force of Order # 114/24.02.1992 (Appendix 1). The Rila Monastery Forest Reserve covers an area of 3,678.8 hectares along the Rilska River Valley in the northern part of Rila Monastery Nature Park. About 1,700 hectares lie northwest of the river, and the remaining 1,975 hectares are to the southeast of it. The reserve covers in part the alpine zone and forest formations on both sides of the Rilska River: between Malyovitsa Peak, Orlovets Peak, Lake Suhoto (Dry), the Dyavolska River and Brichebor Peak. The northern border runs past the Golyam Kupen, Lovnitsa, Elenin Vruch, and in part, Malyovitsa peaks, all of which rise to over 2,500 meters above sea level. The terrain is characterized by steep (up to 70°) mountain inclines, brisk streams forming part of the Rilska River watershed, riverside meanders and the exposed silicate-based rock faces; the ridges are rounded and almost level; there is only one lake –Lake Dry, which often dries up.

Regimes for the Reserves Zone

Any human acts and activities are strictly forbidden except items # 1, 2, 3, 4, 5, 6, 7, 8 and 10 of Paragraph 1.1.1 above, and the following ones:

Transit hiking according p.3, parag.1 of article 17 of PAA is along strictly designated routes, as follows:

- Kirilova Polyana – Lake Dry– Kobilino Branishte;
- Rila Monastery – Ravna Locality – the Seven Lakes;
- The Holy Virgin Church – Rila Monastery
- Bachkova Cheshma fountain – the St. John Tomb
- Rila Monastery – Brichebor Peak - Brichebor
- Along Chernei Gorge to Manastirski Lakes

Norms

1. During visits to the Reserve:
   - for scientific research purposes, groups shall not exceed 5 persons;
   - for purposes of marking or maintaining the boundaries of the Reserve, groups shall not exceed 5 persons;
   - for all other purposes, groups shall be as following:
     - Kirilova Polyana – Lake Dry– Kobilino Branishte – 15 persons;
     - Rila Monastery – Ravna Locality – the Seven Lakes – 20 persons;
     - The Holy Virgin Church – Rila Monastery – no restrictions;
     - Bachkova Cheshma fountain – the St. John Tomb – no restrictions;
     - Rila Monastery – Brichebor Peak – Brichebor – 15 persons;
     - Along Chernei Gorge to Manastirski Lakes – 15 persons.
2. The cutting down and extraction of timber in the course of sanitary measures are to be done with animal traction only and no construction of new roads.

Recommendations

1. Signs shall be placed at the Buffer zone of Rila Monastery Forest Reserve, in the area between the two parts of the reserve – a stripe running parallel to the road Brichebor – Diyavolska River between 0.3 and 2.0 kilometers in width, instructing visitors as to the proximity of the reserve and the rules of behavior in its territory;
2. All red markings shall be removed from Lake Dry (Kobilino Branishte) to Beliya Uley trail and a sign shall be placed to indicate the direction of traffic;
3. The marking and signposting along the Pilgrims' Road in the territory of the Reserve shall conform to the norms and regimes of the Reserve.

<u>The Buffer Zone of Rila Monastery Forest Reserve</u>

Background and rationale

The Buffer Zone of Rila Monastery Forest Reserve was designated by Order # 307/10.04.1986 of the Committee of Nature Protection to the Council of Ministers.

Purpose of the Buffer Zone

The territory of the Buffer Zone is designated around the Nature Reserve for the purpose of providing better protection while mitigating human impact. The Buffer Zone is intended as a means of reducing the physical impact on ecosystems and pollution in the areas surrounding the Reserve; to that end, certain activities are banned in this zone. The zone provides conditions for short-term rest and relaxation, extraction of timber through special woodcutting practices and construction, according to site development plans connected with the Rila Monastery, and the functioning and development of tourism.

Description, physical and geographic characteristics

The boundaries of the Buffer Zone are defined by Order # 307/10.04.1986. It is a belt surrounding the outer perimeter of the Forest Reserve; inside the Reserve, it is a double strip running parallel to the road bed between 0.3 and 2.0 kilometers in width, bisecting the reserve into two sections: North and South, defined by the valley of the Rilska River. According to the Order the Buffer Zone covers a total of 2,401.6 ha, of which 1,199.6 ha are of forest estate and 1,202 ha of farmlands.

In the peripheral areas, along the boundaries of the Reserve, the territory of the Buffer Zone is no different physico-geographically from that of the Reserve. Along the dividing line between the North and South sections, where the northern slopes of the Kriva and Rilska river valleys meet the southern slopes, one can find ecological pockets of a riverside type. There is a black-top road running in this part of the zone (from the point of confluence of the Rilska and Iliyna Rivers up to Kirilova Polyana) as well as two gravel roads running respectively from Kirilova Polyana to Yavora tourist compound and to Ribni Lakes and on to the boundary of the reserve. The lower parts of the Buffer Zone feature segments of beech forests, while all spruce or mixed common fir-and-spruce or alder-and-spruce forests are characteristic of its upper parts. There are no large rock outcroppings. The tributaries to the Rilska River further bisect the zone.

N.B.: *Part of the Holy Sites Zone facilities is located in the Reserve's Buffer Zone. The different types of activities carried out in the territory of the Buffer Zone include tourism, religious activities related to the Holy Places Zone, etc. All these functions shall be carried out within the same territory. The prescribed regimes and norms for the Buffer Zone pursuant to Order # 307/10.04.1986 have been taken into consideration in planning the regimes and norms for the Tourism Zone (Sub-zone with moderate visitor use), the High Conservation Significance Zone, and the Holy Places Zone; no activities which contravene those are allowed, and there are also requirements, restrictions and allowed activities pursuant to the monuments of culture conservation regimes (Appendix to Protocol from 07.05.1992 of the commission appointed with Order # RD-19-132/24.03.1992 of Ministry of Culture) (Appendix 4).*

Regimes for the Buffer Zone of Rila Monastery Forest Reserve

The regimes and norms prescribed for the High Conservation Significance Zone shall apply in full for Rila Monastery Forest Reserve Buffer Zone for the strip running parallel to the road along the Rilska River.

The regimes and norms prescribed for the High Conservation Significance Zone, the Holy Places and Cultural-Historical Heritage Zone; the Moderate Visitor Use Tourism Sub-Zone shall apply in full for the Buffer Zone strip running parallel to the road along Rilska River.

2.2 The High Conservation Significance Zone

Background and rationale

An analysis of the information available in literary sources, the findings of the Rapid Ecological Assessment and other field studies, as well as data provided by the Nature Park Directorate, together show the following:

- The Rila Monastery Forest Reserve is not the only area featuring a biotic complex of high conservation significance;
- Three other areas comprising biotic complex of high conservation significance can be identified within the territory of Rila Monastery Nature Park.

The presence of such areas necessitate finding the most appropriate ways of managing them. The High Conservation Significance Zone is defined to fulfill the Nature Park Ideal Goals: 1.2.2; 1.2.3; 1.2.4; 1.2.5; 1.3.1, etc.

Purpose of the High Conservation Significance Zone

The purpose of the zone is to preserve the larger territories (beyond the perimeter of nature reserves) in a natural or close to natural state, and to maintain the biological integrity therein; to effectively protect species, populations, communities and ecosystems of conservation significance, as well as the ongoing ecological processes characteristic of these zones. Owing to their similarity to nature reserves (in terms of biodiversity), these territories are highly suitable for scientific research, for educational and interpretative activities. This zone is designed to mitigate the physical impact on ecosystems within the reserves through restricting certain activities in their immediate vicinity. These areas also serve as ecological corridors linking the Reserve Zone with Rila National Park (towards the Central Rila and Parangalitsa reserves) while ensuring sustainable populations of species of conservation significance. There is alos the potential to create specialized tourism in this zone, as the security measures are more restricted then in the Tourist zone.

In this zone, the land owner has the possibility to use the nature resources – pastures, medicinal plants, fish in defined territories and with fixed regimes and norms consistent main goal of the zone – biodiversity conservation.

Description, physical and geographic characteristics

The High Conservation Significance Zone comprises three sections of different size located in the northwestern and southeastern portions of the Park with 13,350 ha of total area. All three are characterized by their rugged terrain and varying climatic conditions. Their boundaries are as follows:

- **Kalin section:** to the west, north and south borders on the Park boundary. The east boundary from south to north follows the ridge from Voloveto Peak and reaches 2500m were it turns to the east and follows this elevation as it connects with the Varla section. On the south under 2500m, this part of the Zone borders with the Environmentally Sound Use Zone;
- **Varla section:** to the west of the northern part of the Eleshnitsa River and the Rila Monastery-Baucher-Ivan Vasov Chalet path to the south, the Park boundary to the north, to the east and south to the reserve boundary and the Environmentally Sound Use Zone;
- **The Marinkovsko-Radovichko-Mramoretski section:** to the west it borders the Rila Monastery Forest Reserve and includes the buffer zone located along Rilska River valley to Brichebor. Below the Brichebor ridge to the south, the boundary goes along the channel at an elevation of 2000m. On the northern slopes of the Iliyna River Valley, covers the Kamenitsa and Radovichka Rivers streams and the upper streams of Dimchov Dol, Sospa Dol, Gramadlivitsa, Tamniya Dol and Kravarski Dol Rivers to the west. On the southeast, the zone boundary overlaps with the Park boundary, and continues to the west of the Radovichka River Valley and the southern boundary of the zone goes along the upper timberline.

The Kalin and Verla sections both lie on silicate bedrock. In them, one can trace the transition corresponding to altitudinal forest zoning, from broad-leafs to the high-mountain treeless zone. The terrain is highly varied, with a very great altitude differential: from 1,100 to 2,669m asl (Vazov Peak). Characteristic of this zone are very steep inclines, (more than 70^0), silicate outcroppings, rounded ridges, pointed peaks and deep valleys and gorges.

In the eastern part of the Marinkovsko-Mramoretski-Radovichko section is a transition between silicate and limestone bedrock. The terrain is rugged, dominated by valleys oriented to the north, moderately inclined slopes, passing gradually into rounded ridges. The Mramoretski sub-section lies in the high mountain zone and is in itself a mountain ridge oriented to the north and south, abundant in limestone outcroppings, niches and caves in the rock face, and terraced slopes, among others.

Regimes for the High Conservation Significance Zone

Any human acts and activities are strictly forbidden except those as per Paragraph 1.1.1 above, and the following:

1. Re-introduction of the chamois, the Balkan trout and other species;
2. Providing assistance to populations of endangered plant and animal species;
3. Amateur fishing at Lake Smradlivo and Ribni Lakes only;
4. Erosion control activities and reclamation of damaged or degraded terrains in keeping with the stated need for re-integration of the cultural landscape;
5. Grazing in designated areas (Appendix 29);
6. Regulating the size of animal populations;
7. Hay-making, by personal means in designated areas (Appendix 29);
8. Berries (*Vaccinium sp.*) collection for commercial use in the Tiha Rila locality, along the Rilska River stream from Dyavolska River on the east to the point of confluence of the Marinkovitza and Rilska Rivers;
9. Wild fruits, mushrooms and medicinal plant collection for personal needs in the entire zone territory from defined and marked places.

Norms

1. Grazing: The number of heads of livestock allowed to graze in the territory is determined in the following regulations:
    - For lands in the timber less zone:
        - for cattle: 15 decares per head minimum;
        - for sheep: 6 decares per head minimum.
2. Regulated motor vehicle access to Kalin Dam10:
        - Up to 3 private (non-service) motor vehicles at any one time past the gate on the road between Kalin Water Power Station and Kalin Dam;
3. Logging and timber transport when sanitary activities are implemented to be conducted with animal power only, without building of new roads.

Recommendations

1. During visits to the Zone:
   - for scientific research purposes, organized groups shall not exceed 7 people;
   - for education purposes, organized groups shall not exceed 20 people;
   - for marking, enclosing and maintaining of the sanitarian-protection zones belts, shall not exceed 7 people.
2. It is recommended the grazing herds not to be in the vicinity of tourist trails.

2.3 The Environmentally Sound Use Zone

Background and rationale

A significant proportion of the natural resources in Rila Monastery Nature Park are renewable: the climate as a whole, mountain air and waters. Other renewable resources in the Park are medicinal plants, forest fruits and mushrooms that, if properly used, will enable the Park management to attain some of its main goals – 1.3.1, 1.3.3, 1.6.1 and etc.

[10] Applied according to: Order № 7 / 08.06.1998 of MRDPW for material protection of the buildings;

Purpose of the Environmentally Sound Use Zone

This zone is thus established to ensure the proper, sustainable use of biotic and abiotic resources. Human interference within the zone includes the regulated, ecologically sound extraction and use of natural resources, as well as specialized tourism. The regimes within this zone allow human interference for the purpose of environmental protection: maintenance, regeneration and regulation of activities and measures in forest and other ecosystems, populations, species biodiversity, etc. In this zone, the restrictions to the human contact with nature are kept down to a minimum. Visitors seeking seclusion away from the beaten trails can experience a direct contact with nature and wildlife, without, however, being able to rely on information, interpretation or other tourism services, or any established infrastructure. In this zone, tourist safety is relatively lower than in the Tourism Zone, which provides all security precautions and tourism services. The zone provides the opportunity for scientific research, ecological monitoring, training and education, and interpretation.

Description, physical and geographic characteristics

Total area: 5,677.9 ha, distributed as follows:

- **North-western section**: the area between the Kalin and Varla sections of the High Conservation Significance Zone – between the Rila Monastery-Baucher-Ivan Vasov Chalet path in the east and the ridge from Voloveto Peak (the southern Park boundary) to Malak Kalin Dam to the west, from the south-west and the south to the Park boundary and from the north to the boundary of the High Conservation Significant Zone at an elevationof 2,250-2,500m.
- **Central section**: the area between the two parts of Radovichko-Mramoretski section of the High Conservation Significance Zone, partly bordering the Rila Monastery Forest Reserve and the Intensive Use Tourist Sub-Zone to the north and along the north borders with the Sustainable Forestry Zone (the boundary runs along Krivo Bardo);
- **Southern section**: the forestless area between the southern boundary of the Park, the Sustainable Forestry Zone and the Radovichko-Mramoretski section of the High Conservation Significance Zone.

In its physical-geographic attributes, this zone does not differ from the rest in a significant way: a varied terrain with altitude differentials, a variety of combinations of ecological conditions, different types of forest, etc. The zone features locations related to high-mountain summer grazing, herbs and medicinal plants extraction, etc. Territorially, just like the High Conservation Significance Zone, this zone is neither compact nor integral; rather, as can be seen on the map, it is divided into three Park sections.

Regimes for the Environmentally Sound Use Zone

Any human acts and activities are strictly forbidden except those as per Paragraph 1.1.1 above, and the following:

1. Maintenance and restoration of plant and animal species and their habitats;
2. Regulating the size of animal populations;
3. Regulating the spread of plant species in cases of invasive growth of their population size, permeation in the natural ecosystems and resultant changes in composition thereof;
4. Erosion control activities and reclamation of damaged or degraded terrains in keeping with the stated need for re-integration of the cultural landscape;
5. Construction of drinking water catchment facilities, water purification plants, underground communications, buildings and facilities needed for the Park's management, in keeping with the stated need for re-integration of the cultural landscape;
6. Grazing in designated areas (Appendix 29);
7. Grazing of animals controlled by an electric fence;
8. Building and maintenance of temporary shelters for stock-breeding at designated places;
9. Hay-making, by personal means at designated places (Appendix 29);
10. Amateur fishing;
11. Extraction of forest fruits, mushrooms and herbs for personal use throughout the entire zone, except at designated places and marked accordingly;
12. Extraction of forest fruits, mushrooms and herbs for commercial use;
13. Renewal and maintenance of the all-round protective and recreational functions of forests affected by natural disasters, calamities and diseases. (Appendix 12).

Norms

1. Amateur fishing on the Iliyna River from Brichebor to the point of confluence of the Kamenitsa River (Kodjakariytsa);
2. Grazing: The number of heads of livestock allowed to graze in the territory is determined with the following regulations:
   - In the meadows and pastures in the forests
     - for cattle: 10 decares per head minimum;
     - for sheep: 2 decares per head minimum.
   - For pastures in the treeless zone:
     - for cattle: 12 decares per head minimum;
     - for sheep: 4 decares per head minimum.
3. Temporary shelters for stockbreeding: without foundations, built of all-natural materials, provided that they blend well with the environment;
4. Timber use:
   In forests plantations according to an approved forest inventory (FI 2000);
   Gathering of dry or fallen timber.
5. The attendant timber extraction when actions for restoration and maintaining of the complex protective and recreational forest functions are conducted, according to Item 13 of the Zone Regimes cannot exceed 15% of the stock;
6. When using timber-according to Item 13 of the Zone Regimes, at least 5% from the affected timber must stay at the logging site.

2.4 The Technical Infrastructure Zone

Background and rationale

The existence of technical facilities for generation and transfer of electrical power, for deviation, storage and redistribution of waters; the road network; buildings and facilities, etc. The zone is formed according to the requirements of PAA and for achieving the Ideal Goals of the Park 1.3.1 and 1.7.3.

Purpose of the Technical Infrastructure Zone

To ensure the normal functioning of facilities and installations by providing for proper maintenance and security.

Description, physical and geographic characteristics

The sites and facilities included in this zone are scattered throughout the entire territory of RMNP. The Zone has point and lineal character. The total are of the zone is 117.9 ha, and is formed by the area of the facilities themselves and the territory around it serving as security areas. The boundaries thereof are determined in compliance with the applicable technical regulations, instructions and ordinances. The following sites and facilities make up the Technical Infrastructure Zone (surface area given in brackets):

1. Kalin Dam (35 ha);
2. Malak (Lesser) Kalin Dam (1.1 ha);
3. Kalin Hydro-Power Station (3 ha); Ribni Lakes Mini Hydro-Power Station
4. Manastirska Water Catchment Area (18.7 ha):
- Left-hand collector – a water tunnel with 5 catchment points (0.5 ha);
- Right-hand collector – a water canal with 3 catchment points and 1,690m total length (17.2 ha);
- Connecting canal between both collectors, 233m in length (1.0 ha);
5. Iliyna Water Catchment Area (26.5 ha):
- Left-hand collector – a water canal with 15 catchment points and 9,506m total length (11.0 ha);
- Right-hand collector – a water canal with 19 catchment points and 12,664m total length (14.5 ha);
- Connecting canal between both collectors, 124m in length (1.0 ha);
6. Polich Channel –2,425m length with one catchment area;
7. Auxiliary buildings owned by NEC Ltd “Dams and Cascades”in Kalin Dam, Tiha Rila, Elevation 2000 and Turskoto Parche localities (0.4 ha);
8. Security zones around drinking water catchment areas;
9. Electrical power grid:
- The Pastra-Kirilova Polyana power line (20 kV);
- The Brichebor-Kravarski Dol power line (20 kV);
- The Kirilova Polyana-Tiha Rila power line (20 kV);
- The Kravarski Dol-Iliyna Tunnel intake power line (20 kV);
- The Kalin HPS-Pastra power line (20 kV).
10. Road network:

- The Pastra-Kirilova Polyana black-top road (17 km);
- The Pastra-Kalin Dam concrete-top road (17 km);
- The Kirilova Polyana-Tiha Rila gravel road (9 km);
- Gravel road at Elevation 2000 (16 km);
- The Kamenitsa River-Radovishka River dirt road (4 km);
- The Vladichina Livada-Bukovo Berdo dirt road (7 km);

11. Water dams at Lake Gorno Ribno, Lake Dolno Ribno and Lake Smradlivo (0.3 ha total);
12. Flow-measuring weir by the Rilska River bridge at Brichebor locality (0.1 ha) – Veli Lag water gauge section;

Regimes for the Technical Infrastructure Zone

Any human acts and activities are strictly forbidden except those as per Paragraph 1.1.1 above, and the following:

1. Functional improvements of the above listed facilities and installations according to their intended purpose;
2. Routine maintenance of the infrastructure;
3. Building of fish ducts;
4. Building of water purification facilities for existing buildings or newly-constructed buildings and facilities, and/or, where necessary, of septic tanks with water-proofed walls;
5. Building of specially designed discharge facilities allowing the discharge of ecologically optimal amounts of water into the downstream river current;
6. Installation of safety measures in existing facilities (closing of disused tunnels with grating, removal of disused buildings and facilities, etc.);
7. Setting up of a system of hydrometric and meteorological stations;
8. Setting up of a solid waste collection system and providing the means for removal thereof;
9. Building of a lodge for the maintenance crews of Dams and Cascades National Hydropower Complex, Blagoevgrad regional branch at Kalin water catchment area.
10. Building of 2 Micro HPS for local electric supply of the NEC building located by Kalin's Dam wall and the residential Beloborski Dol.

Norms

1. The present nominal operational capacities of all facilities shall be retained according to their design specifications;
2. Only officers of Dams and Cascades National Hydropower Complex executing their obligations may stay in the auxiliary buildings. When other people visit the buildings for more then one day the NPD should be informed for their number and stay period.
3. The Micro HPS for local electricity supply will not exceed 6 KV;

Recommendations

1. Routine repairs and maintenance activities shall be done, where possible, in such a way as not to interfere with the breeding season of animals.

2.5 The Sustainable Forestry Zone

Background and rationale

This zone is established to experiment with a contemporary forest management model that ensures income generation and benefits to the owner without threatening the tourism industry or the significant biological diversity of the Park. This goal comes from the necessity to modify the existing Forest Inventory Project 2000, for its implementation in an experimental area in the Park until the sustainable forest management methods and practices for multi-functional forest management are successfully proved in the practice.

In the forest plots designated for partial use, there are no significant concentrations of species of high conservation significance. Should any concentrations of such species be encountered, methods of forest use would then be applied to mitigate the possible impact on them. The zone aims for the application of contemporary approaches in forest use as well as for possibilities for forest certification in the zone and area of the park as a whole. An additional opportunity is to achieve the requirements for including the park as a representative facility in the "*Forest restoration and sustainable management" project* of MoAF and The World Bank and the GEF-financed part of the *project "Conservation of the biodiversity application in the forest management."*

Purpose of the Sustainable Forestry Zone

The purpose of the zone is to allow for the development and implementation of sustainable forest use. Although efforts in this direction have been put in place in Bulgaria, there has been no practical experience to date for their efficient implementation. The zone is designed to preserve and increase the protective and other beneficial functions of the forest. The long-term plan of the zone is to develop as a tourist attraction and an object of study for demonstrating leading sustainable and nature-friendly forest management techniques, which would generate additional income for the owner. When the model is implemented and Park goals are successfully achieved, the forest management and use experience could also be applied to other parts of the park.

Description, physical and geographic characteristics

The zone covers the southwest part of the park with elevation between 800m – 2200m. The total area of the zone is 1,676.7 ha and according to SF "Rilski Manastir" Forest Inventory 2000 it includes wholly or in part the following sections: # 77 (part), 78 (part), 79 (part), 80, 81, 82, 83 (part), 84 (part), 85 (part), 96 (part), 87 (part), 88 (part), 89, 90 & 91.

The zone includes steep to very steep slopes with north exposure covered with mixed broad-leaf forest in the lower belt near Rilska River. From 1600-1700m up are located mixed coniferous and pure coniferous spruce, fir, Scots pine and Macedonian pine forests. The middle age of the forests in this zone is 99 years, as it is for the forests in the entire park. The boundaries are as follows:

- To the west, the zone boundary coincides with the Park boundary;
- To the north in separate sections it borders with the Park boundaries, in the remaining sections it borders with the High Visitor Use Tourist Sub-zone, i.e. its northern boundary runs parallel to the Rilska River, some 500 meters from its southern bank;
- To the east, the zone boundary starts from just above the point of confluence of the Iliyna and Rilska Rivers, following the ridge (Krivo Bardo) across Cheresha locality to the upper timberline;
- To the south, the zone boundary runs along the upper timberline, parallel to the ridge defining the Rilska River Watershed, and ends at the Dyavolska River.

Regimes for the Sustainable Forestry Zone

Any human acts and activities are strictly forbidden except those as per Paragraph 1.1.1 above, and the following:

1. The forestry activities envisaged in Forest Inventory 2000 for Rila Monastery Nature Park are applied in the zone, as well as the additional requirements of this Plan;
2. Restoration of the existing road network for timber extraction and transportation;
3. Building of new forest roads for timber transportation;
4. Storage and transportation of timber in a way that does not interfere with the Park's tourist and spiritual value;
5. Timber transportation by truck, with the exit point via Eleshnitza locality or along the southern border of the Park in the direction of the Dyavolska River;
6. Afforestation in forest sections of inhibited natural renewal.

Norms

1. Use shall not exceed the total envisaged amount for the territory for the period 2000-2010 according to the Forest Inventory 2000.
   The total volume of logging envisioned amounts to 63,260m³.The annual timber extraction, according to FI 2000 data, amounts to 6,326m³, or 1/10 of the quantity of timber subject to logging;
2. All logging operations shall be scheduled during the period between September 1st of the current and May 31st of the following year;
3. The period for regenerative activities shall be extended to 50 years;
4. The intensity of timber use shall not exceed 15%;
5. The existing road network may be increased by no more than 2 km of road by the year 2010;
6. Up to 10% of all rotting trees shall be spared during timber use;
7. The transport on the Parks territory to be with 10m³ trucks;
8. Only animal traction shall be used to extract the timber from the logging site;
9. Reloading stations and temporary storages are to be built only in the Sustainable Forestry Zone area.

Conditions

1. The Sustainable Forestry Zone experimental model is to be applied with permanent monitoring of the number and composition of the species and habitats. If there is a reduction of the number of local species and/or a worsening of the habitats status is encountered in a five-year testing period of applying the forestry activities, they must be stopped and the Zone to be transformed to Environmentally Sound Use Zone;
2. Macedonian pine and common fir forest units shall be preserved;
3. All hollow tree specimens, as well as specimens having peculiar branches or stem shapes, shall be spared;
4. The renewal forest activities shall be done in such a way as to ensure the diversified age structure of the forest;
5. In carrying out all allowed forestry activities, every effort shall be made to conserve to the fullest extent possible the natural landscape.

Recommendations

1. To train experts in using sustainable forestry practices and selective forest management;
2. In the long-term plan, the zone to develop as an object of study for implementing and interpreting contemporary and sustainable forestry practices, with the possibility of serving as tourist attraction, which could extend the tourist season;
3. The zone to be included as a pilot territory in the *"Forest restoration and sustainable management" project* of MoAF and The World Bank and the GEF-financed part of the project "*The Application of Biodiversity Conservation in Forest Management."*

2.6 The Holy Places and Cultural-Historical Heritage Zone

Background and rationale

In the Rila Monastery Nature Park territory, cultural and religious monuments exist in connection with the Rila monastery complex. Some of them are declared by the Ministry of Culture as Cultural and Historical Monument of National Significance. The presence of such monuments and the preserved spiritual pilgrim traditions create preconditions for the identification and description of a unique zone for the Park– The Holy Places and Cultural Heritage zone. It is defined to fulfill the Nature Park Ideal goals – 1.1.1; 1.1.2 and 1.2.1.

On the territory of the Rila Monastery settlement is situated the unique Orthodox Christian complex of Rila monastery. The monastery is a cultural and historical monument of national significance, featured on the UNESCO List of the World Cultural Heritage Sites. The settlements according to the PAA (Art. 6, paragraph 2) are not part of the protected areas. The Management Plan introduces regimes and norms for the Holy Places Zone only for the facilities situated in the Park's territory.

Purpose of the Holy Places and Cultural-Historical Heritage Zone

The main purpose of the Holy Places and Cultural-Historical Heritage Zone is to preserve the cultural-historical heritage of objects in the Park's territory. The Holy Places and Cultural-Historical Heritage Zone aims to restrict and/or separate activities that do not correspond to the canon of the Eastern Orthodox faith and tradition from the Holy Places and relocate them in other areas of the Nature Park (restaurants, intensive traffic, trade on unsuitable places, etc.). This zone provides opportunities for secluded meditation, spiritual purification and undisturbed contemplation within the natural scenery.

Additionally, the zone's formation will protect and further establish the unique Orthodox and historical complex of Rila Monastery as a center of cultural and spiritual enlightenment, symbolizing the inseparable link between nature and spirit.

Description, physical and geographic characteristics

The Holy Places and Cultural-Historical Heritage Zone is an agglomeration of three separate, independent areas, or plots, having the purpose and function of security belts, with clearly defined boundaries around the following religious sites:

- Rila Monastery - 300-m wide belt around the Monastery walls, including the area outside of the Rila monastery settlement only;
- The Tomb of St. John of Rila – belt area is a circular plot with a 100-m radius from the site;
- The St. Luke Complex –the belt area is a circular plot with a 100-m radius from the site;

The total area of the zone is 27.2 ha. Also belonging to the Holy Places and Cultural-Historical Heritage Zone are all the pathways linking the three above listed sites.

Regimes for the Holy Places and Cultural-Historical Heritage Zone

The Management Plan respects the right of the BOC to manage and conduct religious activity, ceremonies and rituals. According to the purpose of the Zone, regimes and norms, wholly subordinated to the canon of the Orthodox Christian faith and tradition, should be conducted within.

Any human acts and activities are strictly forbidden except those as per Paragraph 1.1.1 above, and the following:

1. Activities relevant to the restoration and conservation of religious sites and the surrounding plots (belts);
2. Observance of a system of behavioral norms corresponding to the canon of the Bulgarian Orthodox Church and the declared purpose of the zone;
3. Sale of religious items that are the exclusive monopoly of the Church;
4. Specialized educational programs of a religious nature;
5. Setting up a footpath from the Holy Virgin Church to Rila Monastery.

Norms

1. The footpath from the Holy Virgin Church to Rila Monastery is to be set up in a way as not to pass through Rila Monastery Forest Reserve.

2.7 The Tourism Zone

Background and rationale

Rila Monastery NP is among those protected areas in Bulgaria that are most popular as tourist destinations. It draws about half a million visitors a year, who seek opportunities for recreation, wildlife encounters, or a visit to Rila Monastery. The formation of such zone corresponds to the requirements of PAA (Art.19) and the Ideal objects of the park – 1.4.1; 1.4.2; 1.5.2, etc. The formation of the zone aims to enrich and diversify the tourist experience, to ensure tourist security, to provide accomodation and food services, parking, information, atractions, and facilities for sport and relaxation. All tourist activities can be open for contract assignment, for generating income for the owner and the park development. The implementation of such contracts while also including local authorities will provide the local population more employment opportunities and will ensure their support in protection the spiritual and nature values of the park.

Description, physical and geographic characteristics

The area immediately surrounding Rila Monastery is a starting point for several major tourist routes across Rila Mountain. The Tourism Zone is characterized by its varied terrain and substantial altitude differential, providing an opportunity for tourists to cross very different terrains within a short hiking distance: deep river valleys and gorges, centennial forests, mountain ridges, rocky peaks (most of them towering over 2,500m above sea level), and glacial lakes. The Tourism Zone covers a total area of 724.5 ha; it comprises a variety of infrastructure components such as: entry and exit points; tourist routes; observation points; chalets and lodges; single-day recreation facilities; marking and signage; and boards and signs (cautionary, instructional, informational). In combination with the prescribed regime and regulations applying to that zone, the above listed elements are designed to ensure an optimum re-distribution of the tourist flow while conserving existing practices and meeting tourist expectations.

Depending on the extent of tourism use, the Tourism Zone is divided into three sub-zones:

1. High visitor use sub-zone;
2. Moderate visitor use sub-zone;
3. Low visitor use sub-zone.

Four general regimes apply to the entire territory of the Tourism zone, while site-specific regimes have been identified for the sub-zones.

General regimes applying to the Tourism Zone

All human activities and acts are strictly forbidden, with the exception of those as per Paragraph 1.1.1 and the following:

1. Provision of accommodation and food services, and other normal tourist services (including trade of charcoal and wood for fire places for tourists to prevent logging and pruning of trees in the Park);
2. Reconstruction, renovation and maintenance of existing, and construction of new buildings for the needs of tourism and park management;
3. Building camp fires, sunbathing, sports games – at designated rest areas only;
4. Development of specialized tourism routes (for plant, butterfly and bird watchers, sustainable forestry practices, geologists, mountain bikers and other special interests);
5. Collection of wild fruits, mushrooms and medicinal plants for personal needs at designated and marked places.

2.7.1 The High Visitor Use Sub-zone

Background and rationale

The sub-zone includes the region of the existing main entry point to the RMNP. Most of the transportation into the entire Park territory are served through this area. This necessitates the provision of professional services for the flow of tourists: reception, direction, and distribution of information, depending on visitor preferences and interests.

Purpose

To diversify the tourist experience, to provide visitors with adequate security and safety, food services, accommodation, parking facilities, information, attractions, sports and recreation facilities, whereby easing tourist pressure on all other Park zones. To provide a possibility for deflecting and re-directing traditional secular activities and amusements outside and away from sites of religious significance.

Description, physical and geographic characteristics

The sub-zone comprises the riverside terraces along Rilska River and the lower portions of the slopes of the river valley: Eleshnitza, Pchelino and Brichebor localities. Part of the zone comprises the territory north and south of the Iliyna River, about 500m along the river in east direction. The total area of the sub-zone is 209.3 ha.

Regimes of the High Visitor Use Sub-zone

All human activities and acts are strictly forbidden, with the exception of those as per Paragraph 1.1.1, the general regimes applied to the Tourist zone, and the following:

1. Construction of an ethnographic theme park showcasing traditional local arts and crafts;
2. Construction of a visitors' center;
3. Setting up a parking lot in Brichebor locality, a public hiking and a wagon/sled trail;
4. Development of sites for one-day tourism (picnic);
5. Development of a specialized horse back riding trail subject to the provision that horses will be allowed on the designated trail only;
6. Development of a specialized mountain bike trail subject to the provision that bikes will be allowed on the designated trail only;
7. Building of waste water purification facilities for existing or newly-constructed buildings;
8. Sanitary measures in the forests, gathering of dry or fallen timber, forestation using locally distributed species;
9. Hay-making, by personal means on designated places (Appendix 29);
10. Pasture on designated places (Appendix 29);
11. Amateur fishing.

Appendix 23 describes the purpose and activities for the more important objects in the Tourist Zone.

Norms

1. Parking facilities in Brichebor locality has the capacity of 100 vehicles;
2. The hiking and wagon/sled trail is to be set up along the roadbed of the former narrow-gauge rail line. Maximum number of wagons/sleds allowed along the route at any one time: 4 (with up to 2 animals each);
3. Development of site for one-day visit in Brichebor area with 3 tables and 2 fire places;
4. The specialized horse back ride route to be developed in Brichebor locality by the Rilska River Valley, in the direction of Eleshnitsa locality;
5. Number of horses to be allowed at any one time on the horse back ride trail: 7, plus guide;
6. Development of mountain bike routes is allowed only in the east part of the sub-zone from Brichebor along the Iliyna River.

Recommendations

1. The sub-zone development to be done according to a specialized detailed development plan (part of the general zone development plan of the territory) for arranging the separated elements, after assessment of technical possibilities and terrain specificity, with particular emphasis on environment harmony:
2. The Ethnographical complex to be created on the south riverside of Rilska River at its confluence with the Iliyna River;
3. The visitor's center to be developed near the bridge of the Iliyna and Rilska River confluence point;
4. To specially create or adapt part of the routes to be accessible to the disabled;

2.7.2 The Moderate Visitor Use Sub-zone

Background and rationale

This sub-zone is designed to provide a wider range of visitors with a more intimate experience with nature, using the tourist infrastructure and services already made available by the Park. The necessity of efficient visitor flow management in the Buffer zone of Rila Monastery Forest reserve and Holy sites proximity in the park is an important reason for this particular sub-zone.

Purpose of the ModerateVisitor Use Sub-zone

The purpose of the Moderate-Visitor Use Sub-zone is to serve the tourist flow in such a way as to ensure the conservation of biodiversity, and of the religious and cultural heritage. The sub-zone shall be designed to provide information and interpretation services to tourists.

Description

The sub-zone covers the territory along the southern sides of the Rilska River and Rila Monastery Reserve. To the east it starts after the confluence of the Iliyna and Rilska Rivers, on the west continues to and includes Kirilova Polyana. The sub-zone includes the territory along the Iliyna River from approximately 500m to the east from the confluence of the Iliyna and Rilska Rivers to the Kravarski dol – Cheresha locality trail. The total zone area is 419.4 ha.

The sub-zone comprises the following components, described in terms of their basic functions:

1. Long-term rest and recreation facilities
   - Hotels
     - Hotel Rilets (180 beds);
   - Camping sites
     - At present, the number of camping sites and corporate recreational facilities belonging to the zone are located in Bivolarnika, Kirilova Polyana and Yavora areas, and Kravarski dol (Appendices 3 and 23)
   - Tent camp sites
     - At Bivolarnika locality;
     - At Tiha Rila, along the path from the river terrace.
2. Same-day recreation/picnic sites
   - At Obedishte locality;
   - At Bivolarnika locality, on the south Rilska river bank;
   - At Studenata Cheshma locality;
   - At Kirilova Polyana.

Regimes of the ModerateVisitor Use Sub-zone

All human activities and acts are strictly forbidden, with the exception of those as per Paragraph 1.1.1, the general regimes applied to the Tourist zone and the following:

1. Building and differentiating of parking places in the localities of Bachkova Cheshma, Kravarski dol, Kirilova poliana, Obedishte and the area of the former railway station;
2. Maintaining camp sites;
3. Bivouacking;
4. Installation of facilities (toilets, garbage cans, fireplaces, benches, tables, gazebos);
5. Constructing specialized mountain biking routes and passing with only mountain bikes on the routes;
6. Building a small visitor information center;
7. Ensuring of food services, accommodation and other typical tourist services in over night sites, aside from camps and picnic places;
8. Amateur fishing;
9. Hay-making, by personal means (Appendix 29),

Norms

1. In Kravarski Dol locality the parking place is built only for the camping needs with capacity of 15 vehicles;
2. The Karavarski Dol camping keeps its capacity of 13 bungalows and one semi-massive building;
3. A main parking place above the Rila monastery complex with a solid road surface to be built in Bachkova Cheshma locality with capacity of 50 vehicles. The parking places in Kirilova Polyana, Obedishte locality and the region of the former railway station to be without solid pavement;
4. The overnights at tent campsites: up to 5, depending on capacity: 10 tents for Tiha Rila and 15 tents for Bivolarnika;
5. The visitors' center shall be built at Kirilova Polyana;
6. Same-day recreation sites shall be developed in advance in accordance with project plans;
7. Amateur fishing shall be allowed on the Rilska River from Brichebor to Kirilova Polyana;
8. Mountain biking routes are developed only in the eastern part of the sub-zone along the Iliyna River.

Recommendations

1. To specially build or adapt part of the routes to be accessible for disabled people;
2. Camping overnight does not exceed 7 nights;
3. To renovate the camping on Kravarski Dol locality;
4. The following capacity of same-day recreation sites and parking is recommended:
   - At Obedishte locality: not more than 10 tables, 5 fireplaces, 30 parking spaces;
   - At Bivolarnika locality: not more than 4 tables, 3 fireplaces;
   - At Studenata Cheshma locality: not more than 20 tables, 10 fireplaces;
   - At Kirilova Polyana locality: not more than 10 tables, 10 fireplaces, 20 parking spaces;
   - At the former railway station place parking: up to 20 cars.

2.7.3 The Low Visitor Use Sub-zone

Background and rationale

In the high parts of the Park traditional hiking trails and routes are developed. They connect chalets and other facilities in the park and Rila Mountain as a whole. These routes pass through pristine nature and are used as transit trails.

Purpose of the Low Visitor Use Sub-zone

This is part of the Tourism Zone, designed to provide visitors opportunities for direct contact with nature and wildlife, safe passage and stay, as well as possibilities for privacy and quiet. The activities in this sub-zone enrich and diversify the tourist activities in the park as a whole. The sub-zone offers accommodation of tourists in Kobilino Branishte shelter and Ribni Lakes Chalet, and in the unique eco-lodge of the Bukova Burdo locality, where visitors can enjoy privacy in the heart of nature. The Eco-lodge provides possibilities for generating income for the landowner, as well as using it for base for the park rangers.

Description

This sub-zone has a linear character and its total area is 95.6 ha. The sub-zone comprises the following components, described in terms of location and function:

1. Entry/exit points:
- Zidani Bachii locality in the direction of Kalin Dam;
- Vintcheto locality, north of Kalin Dam;
- Razdelna locality, along the trail from the Seven Lakes;
- Kobilino Branishte, from the direction of Lake Strashno (Malyovitsa section) towards Beli Iskar Dam;
- South of Yossifovitsa Peak, from the direction of Granchar Chalet;
- South from Kanarata Peak;
- Along Radovichka (Radovitsa) River, from the direction of Parangalitsa;
- Derizmeetsa, west from Dobro Pole locality.

2. Hiking trails:
- From Rila Monastery - via Kalugerski Dol – Baucher - Ivan Vazov Chalet;
- From Rila Monastery - Kirilova Polyana – Lake Suhoto (Dry) - Kobilino Branishte;
- From Rila Monastery – Brichebor Peak – the channel – Elevation 2000;
- From Kirilova Polyana – Tiha Rila – Ribni Lakes Chalet;
- From Ribni Ezera Chalet - Granchar Chalet;
- Ribni Ezera Chalet – Makedonia Chalet (E-4);
- Ribni Ezera Chalet – Marinkovitsa – Kobilino Branishte shelter – Malyovitsa Chalet;
- Brichebor – via Radovichka River – Makedonia Chalet;
- Pastra village – Kalin Dam;
- From the eco-lodge at Bukovo Berdo locality – Dobro Pole;

- Tiha Rila – Lake Smradlivoto– Ribni Lakes Chalet;
- Ribni Lakes Chalet – Lake Sinyoto– Elevation 2000;
- Ribni Lakes Chalet – Lake Mramoretsko - Elevation 2000;
- Ribni Lakes Chalet – Rilets Peak – Teodosievi karauli – Baba Peak – Brichebor Peak – Brichebor;
- Ribni Lakes Chalet – Rilets Peak – Teodosievi karauli – Monastery Lakes – Chernei – Bivolarnika;
- Brichebor – Vladichina meadow – Kozi kamak - the channel – Elevation 2000;
- Vladichina meadow – Zli dol – 1-st shatra;
- Kravarski dol – Cheresha – Eleshnitsa;
- Brichebor – Lomnitsa – Eleshnitsa;
- Saint Virgin church – Rila Monastery (part of the Holy Places Zone).

3. Observation points
- Bukovo Berdo;
- Brichebor (point of confluence of Rilska and Iliyna Rivers);
- The cliff 1 km west of Kalugerski Dol along the trail to Ravna locality;
- Tzarev Peak;
- Ribni Lakes;
- Kalin Dam;
- Lake Smradlivoto;
- Elevation 2000 on Iliyna River;
- Vodnia Reed;
- Lavinata (The Avalanche);
- Kirilova Polyana;
- Lake Suhoto;
- Dyavolski lakes;
- Solunski preslap;
- Zidani Bachii;
- Belchevitsa;
- The Tunnel;
- Lopena.

4. Accommodation
- Kobilino Branishte Shelter;
- Ribni Ezera Chalet;
- Bukovo Berdo Eco-Lodge (future)

Regimes of the Low Visitor use Sub-zone

All human activities and acts are strictly forbidden, with the exception of those as per Paragraph 1.1.1, the general regimes applied to the Tourist Zone and the following:

1. Construction of an eco-lodge at Bukovo Berdo locality;
2. Development of a specialized horse back riding route subject to the provision that horses will be allowed on the designated trail only;

3. Development of a specialized mountain bike route subject to the provision that mountain bikes will be allowed on the designated trail only;
4. Building of public toilets, a water catchment facility and a small hydroelectric power station for the eco-lodge and Ribni Lakes Chalet;
5. Horse grazing (the horses for horse back riding);
6. Hay-making, by personal means (Appendix 29).

Norms

1. The number of beds for guests at the eco-lodge shall not exceed 30;
2. The specialized horse back riding route runs only on the roads and trails along the Iliyna River Valley;
3. The specialized mountain bike route run only on the roads and trails along the Iliyna River Valley.

PART IV

OPERATIONAL/WORK PLAN

1.0 Priorities of the Management Plan

1.1 Rila Monastery Nature Park Directorate structure development and improvement

An analysis of the actual needs for manpower for attaining the goals and objectives formulated as per the present Management Plan shows that the Park Directorate needs to employ the following professionals:

- Director;
- Flora expert;
- Fauna expert;
- Forest expert – forester;
- PR expert;
- Tourism expert;
- GIS and IT expert;
- Accountant;
- Driver;
- Minimum nine persons park rangers.

In addition, it would be feasible for the park to be divided into three Park sections, each with a section head and two rangers (nine persons in all).

Scope of work should be prepared for each staff position in the Park Directorate and guidelines for the administrative procedures in the Directorate.

1.2 Consultative Council within Rila Monastery Nature Park Directorate

After the approval of Rila Monastery Nature Park Management Plan, the Directorate has to initiate and prioritize the creation of a Consultative Council (CC) – a consultative body, which supports and facilitates the Directorate work. Similar councils are created according to Art. 7 of the Regulation for Structure, Functions and Activities of the Nature Park Directorates within the National Forestry Board in order to insure the interaction between institutions and individuals with authority and responsibility in park territory. The Consultative Councils ensure transparency in the work of the Directorates and Institutions conducting activities in parks territory as well as promote better public awareness. These councils are cooperative consultative bodies, which include a chairman, deputy chairman, secretary and members.

The chairman of the Consultative Council of Rila Monastery Nature Park will be the Park Director himself. At its first meeting the CC will review and accept guidelines for its activity. Representatives of the State and local authorities, owners of land and

facilities in the park territory, scientific organizations, business organizations, and NGO's will be invited to participate.

The Consultative Council coordinates the activities of institutions and individuals with authority and responsibility in park territory connected with:

1. Conservation of biodiversity and cultural-historical heritage;
2. Resource efficient conservation and sustainable use, according to owner rights, active legislation and the Management Plan;
3. Accomplishing the activities for tourism and recreation in correspondence with active legislation and the Management plan;
4. Development, maintenance and improvement of the Park information system;
5. Cooperation of the Park Directorate for better financial, material and technical equipment and staff insurance;
6. Education, information and gaining public support;
7. Making connections with similar councils for protected areas in Bulgaria and abroad.

The Consultative Council is not directly involved in park resource management nor the incomes so acquired. This is the legal right of the land and facilities owners. The CC only assists and supports the Park Directorate in law enforcement and Management Plan implementation.

After every meeting of the RMNP CC, the Chairman will inform in written form to the respective institutions and owners, and especially the Rila Monastery abbot and the Holy Synod of the Bulgarian Orthodox church, for a review of the council issues, in cases when their representatives did not attend the meeting.

2.0 Programs and Projects

Modern methods for ranking the Ideal and Operational Goals and the most prioritized programs and projects are applied in the planning process. These programs and projects are reflected in the three-year work plan.

The programs and projects included in the Plan are based on the assessment of the available information for threats and concrete needs and are consistent with Park objectives. The described projects guide the activities in the park to ensure the best interaction and harmony between them. These programs and projects could be initiated in advance by the interested parties possibly without interaction with the Nature Park Directorate. The Rila Monastery Nature Park Directorate could initiate the implementation of part of the projects on its own.

2.1 Conservation of the religious and cultural-historical heritage

2.1.1 Program for the conservation, protection, restoration and re-integration of monuments of culture and their environment in the territory of the Rila Monastery Nature Park

- Project: Monitoring of facilities within the Holy Sites and Cultural and Historical Heritage Zone

The Project envisions the development and implementation of a system for continuous monitoring of the overall state of, and changes in, the sites and facilities comprised within the Holy Sites and Cultural and Historical Heritage Zone, and the setting up and maintenance of a database to store that information. The proposed monitoring will also register the impact of the tourist flow on the state of religious and cultural monuments.

- Project: Setting up a trail between the Church of the Holy Virgin and Rila Monastery

The Church of the Holy Virgin is isolated from, and has no territorial link with Rila Monastery and the remaining sites within that zone. The project therefore envisions the restoration of an existing trail (or, if necessary, the building of sections of a new one) along the boundary of the Rila Monastery Forest Reserve. The trail is to provide the necessary link between the two sites, to be developed properly and installed with basic amenities (safety precautions, setting up of benches along it, etc.).

- Project: Plan for the conservation of cultural-historical values and cultural landscape in the park

The Project envisions the drawing up of a comprehensive plan for the conservation of the cultural and historical monuments in the park in harmony with the surrounding

natural environment. The plan should include an assessment of the existing threats and measures to mitigate the adverse impact of atmospheric conditions, biological factors, seismic phenomena, human encroachments, etc. Adequate measures should be planned for preserving the integrity of religious and cultural monuments with the surrounding natural scenery, as well as regimes and a concept for the integrated conservation of the cultural and historical heritage.

*2.1.2 **Program for interpretation of the cultural-historical heritage** (as part of the overall Concept for Interpretation in the Park – see 2.5: Interpretation and Education)*

- Project: Marking and signposting of objects of cultural-historical heritage

This Project, which is an integral part of the general Program for Interpretation within the Park, envisions the placement of information billboards with the names, purpose, background, significance, etc., of the sites and facilities constituting the cultural and historical heritage within RMNP; outlining their boundaries, as well as other marking and signposting depending on the nature of each specific site.

- Project: Marking and signposting of the Pilgrim's Road

The Project envisions the marking of the historical road bed in an appropriate manner; putting up signs and information billboards in conformity with the general Program for Interpretation within the Park, the norms and requirements of the Eastern Orthodox faith, and in compliance with the regimes and norms set for the Rila Monastery Forest Reserve where sections of the Pilgrims' Road pass near or through it.

*2.1.3 **Program for archaeological research of religious and cultural-historical sites***

- Project: Archaeological research of the cultural-historical sites within Rila Monastery Nature Park

The Project envisions research of the material remains demonstrating the historical evolution of today's Rila Monastery complex dating from the period prior to its construction of its present form and location, as well as of other sites and facilities. The research work is to be concentrated in the localities of the Cherney ravine, Tsarev Vrah, Sedloto: the tomb, the ossuary, etc.

2.2 Conservation of nature components

2.2.1 Program for marking and signposting of the Rila Monastery Forest Reserve

- Project: Marking and signposting of Rila Monastery Forest Reserve

The Project includes the signposting of the boundaries of the Reserve and the putting up of information signs and billboards in the buffer zone of the Reserve (especially in its section along the Rilska River), as well as of warning signs stating the ground rules of behavior within the Reserve territory. The project implementation is the responsibility of Rila National Park Directorate as the competent authority for the guarding and management of the Reserve. The project implementation must be coordinated with the Nature Park Directorate.

2.2.2 Program for the conservation of forests in their natural state

- Project: Environmental protection measures for sections of forest of conservation significance and for the protection of forest species of high conservation significance

The Project envisions the implementation, on a priority basis, of environmental protection measures in sections of forest deemed as having high conservation significance in terms of communities (the Macedonian pine forests), in terms of succession phase (climactic sections), in terms of degree of naturalness, or ones containing wildlife species of high conservation significance. The Project envisions the mapping of locations of forest plants of high conservation significance: King Boris's fir, Rila oak, yew, hornbeam, Macedonian pine; of rare species of invertebrates, daytime predatory birds, owls, woodpeckers, of the common grass snake, capercaillie, hazelhen, etc. An assessment is to be made of their state and condition, specific threats, and the outlook for a sustainable development of critical populations.

- Project: Development of a fire protection plan

The Project envisions the development of a fire protection plan for the prevention of forest fires and for coordinated fire control and emergency action. It comprises:

a) development of a fire protection scheme for the forests of RMNP;
b) training of employees and volunteers;
c) setting up of a system of continuous communication, coordination and interaction with the respective partnership institutions, such as the Ministry of the Interior, the National Fire and Emergency Service, the Ministry of Defense, the Civil Defense Organization, the National Forestry Board, municipal administrations, etc.

- Project: Post-fire rehabilitation of forests

This envisions the mapping of areas affected by previous forest fires, assessment of their state and condition following the fire and instituting measures to facilitate the

natural re-growth of the vegetation (the areas of Kalin, Eleshnitza, along the Iliyna River, etc.), whenever and wherever necessary.

- Project: Phasing out of cultivated forests and exotic (alien) tree species

The Project envisions selective cutting down of trees in cultivated forests while providing conditions for the gradual restoration of natural forest ecosystems and the landscape. At the early phase of the Project, an assessment is to be made of the distribution and condition of exotic (alien) tree species within the Park while measures are instituted for phasing them out and replacing them with local ones.

- Project: Setting up of a seed bank for the restoration of forests

The Project envisions the gathering of seeds from populations of local tree species, and the growth of seedlings for forestation to meet the needs of the Park.

2.2.3 Program for the conservation of the high-mountain treeless zone

- Project: Assessment, mapping and instituting measures for the conservation of high-mountain grassy, rocky and dwarf-pine communities

The project envisions a comprehensive territorial survey and mapping of the high-mountain treeless zone and the dwarf-pine zone with a view to identifying sections therein of the highest conservation significance. The main criterion in designating such sections will be the information gathered in the course of fieldwork during the planning process. For each of these sections, specific threats are to be identified and the necessary conservation measures devised to counter them: protection from human presence of the nesting grounds of vulnerable rock-dwelling birds (golden eagle, peregrine falcon etc.); regulation of grazing or imposing a complete ban at places of higher concentration of endemic or relict species and invertebrates, etc.

- Project: Measures to curb the zanovetz invasion and possibilities for reducing its population

The Project envisions measures to find out about the territorial distribution, trends and the degree of threat posed by this invading species on local flora and fauna, and to devise measures to curb its invasion. Different measures to curb the *Chamaecytisus absinthioides* invasion are to be field-tested for efficiency, and the most promising applied in the worst affected areas (along the boundary of the Rila Monastery Forest Reserve, by the Radovichka River, etc.).

2.2.4 Program for the protection of water resources and wetlands in RMNP

- Project: Measures to ensure an ecologically sound and optimal outflow downstream of extant hydrotechnical facilities

The currently operational hydro technical facilities in the territory of RMNP, whether by design or due to flaws in their maintenance and operation, fail to provide the ecologically sound minimum of outflow into the water streams flowing at lower

altitudes. The Project therefore envisions measures (whether technological, related to use regimes, or others) to ensure the discharge of an ecologically sound minimum of outflow downstream of the hydrotechnical facilities. This in turn will help improve the conditions of existence of riverine, riverside and forest ecosystems within the Park immediately downstream of the extant deviations, catchment areas or canals. A system for monitoring the effectiveness of the thus proposed measures is also envisioned.

- Project: Conservation of priority sections of river- and lakeside ecosystems

The Project envisions a micro-topographic assessment of the specifics of lake- and riverside ecosystems with a view to identifying those sections of bank or shore that are most typical, most pristine, or the richest in invertebrate fauna. Having established the threats facing each of them, the Project is to devise concrete measures for their conservation.

- Project: Production of a hydrographic map of RMNP

The Project envisions the design and production of a comprehensive hydrographic map of the park, one that would reflect the basic characteristics of the river network.

2.2.5 Program for the conservation of wildlife species of conservation significance

- Project: Assessment of populations and measures for the conservation of species of conservation significance and their habitats

The Project envisions establishing distribution patterns, mapping, estimation of the size of populations, assessment of their reproductive potential and other vital parameters of species of plants and animals of high conservation significance (Rila rhubarb, *Anthemis sancti-johannis* Stoj., Steff. et Turri, common fir, alpine newt, predatory birds, capercaillie, bats, bear etc.). Special attention will be put on the endemic species' biological and ecological features in the park and measures for conservation of their habitats. On the basis of the threats identified for each of these species, the project also envisions devising concrete conservation measures for them.

- Project: Restoration of the local population of Balkan chamois

The proposed project envisions the development and implementation of concrete measures for ending the illegal hunting as well as disturbance of the Balkan chamois. This will include taking action for ensuring the free and unimpeded local migration between Rila Monastery Nature Park and Rila National Park, based upon the accomplishments of an ongoing project for the conservation of the Balkan chamois population in Rila National Park. The initiators do not rule out measures for the organized relocation of specimens from Rila NP into RMNP.

- Project: Restoration of the populations of Balkan trout

Development and implementation of comprehensive measures for providing proper conditions for natural growth in the populations of Balkan trout and re-stocking them with tank-bred fish. Measures are also envisioned for preventing a recurrent displacement of the local species by that of an alien species.

- Project: Artificial feeding of carrion-eating birds

This envisions the sporadic placement, following proper veterinary control, of cadavers of livestock animals for food to vultures (this may include those naturally deceased from herds grazing in the Park's territory). The Project is aimed at luring into the Park the pairs of black and/or bald vultures observed with increased frequency around the territory in recent years; this, in turn, would create favorable conditions for the natural return to the Park of the bearded vulture as well.

2.2.6 Program for landscape conservation

- Project: Additional landscape assessment and improving the measures for conservation of landscapes

The Project envisions complementing of the Rapid Landscape Assessment made during the planning process for identifying, describing and plotting, making a comprehensive and systematic evaluation of the present state of landscapes within RMNP and proposing concrete measures for their conservation.

2.2.7 Program for land reclamation and erosion control

- Project: Reclamation of terrains damaged or degraded as a result of construction of hydrotechnical facilities

Implementation of measures to mitigate the adverse effects of construction works in the area around the extant hydrotechnical facilities. The proposed activities include cleaning up of former construction grounds, reforestation with local species, restoration of the topsoil, etc.

- Project: Erosion control measures

Assessment of the state and condition of terrains within the Park where processes of surface erosion have been detected; identification of the worst affected locations with the intention of restoration and reclamation of terrains and slowing down or halting the erosion processes.

2.2.8 Complex monitoring program

- Project: Biological monitoring of forest ecosystems

Development and implementation of a program for long-term monitoring of the basic parameters of forest ecosystems with an emphasis on the Rila Monastery Forest

Reserve: degree of naturalness and succession phase; reproductive potential, sanitary condition, state and condition of forest species and communities of conservation significance, etc. Within the Sustainable Forestry Zone, monitoring of the impact of experimental economic uses is envisioned.

- Project: Monitoring of aquatic, river-and lakeside ecosystems and other wetlands

The Project envisions the development and implementation of a system for long-term continuous monitoring of the quality of waters within RMNP (in terms of basic abiotic and biological indicators) by monitoring the water basins and the above listed types of ecosystems, the discharge of a prescribed ecologically sound minimum of outflow, etc. The project includes monitoring of the condition and dynamic of the wetland vegetation in the Park.

- Project: Monitoring of climatic factors

Setting up of a system of weather stations for the systematic gathering of data about the basic climatic indicators in different portions of the Park, within different ecosystems and at different altitudes.

- Project: Monitoring of species of conservation significance and/or their communities

This includes the development and operation of a system for monitoring the basic indicators of the state and condition of populations of wildlife (plant and animal) species of conservation significance: of processes related to the distribution, population size, spatial and age structure, and other ecobiological parameters.

- Project: Monitoring of resources of medicinal plants, wild-growing fruits and mushrooms

Systematic monitoring over time of the state and condition of populations and stocks of medicinal plants, wild-growing fruits and mushrooms subject to commercial use within the Park territory.

- Project: Monitoring of pastures and control of grazing

Development and implementation of a biological monitoring scheme for high-mountain herbaceous communities (distribution, composition, state and condition of indicator species and species of conservation significance, etc.). The Project envisions monitoring the impact of grazing and hay-making at places where such activities are carried out, as well as the effect of Chamaecytisus absinthioides (Janka) Kuzm control measures.

- Project: Pollen and radiological monitoring

The project envisages the inclusion of the pollen and radiological monitoring, which are already conducted on the RMNP territory from different institutions, in the comprehensive monitoring system. For coordination of these types of monitoring,

supporting and ensuring their funding, the Nature Park Directorate will interact with the responsible individuals and organizations.

- Project: Landscape monitoring

Development and operation of a system for monitoring the state of, and changes in, selected landscapes within the Park.

- Project: Monitoring of the tourist flow and its impact

Development and implementation of a special program for long-term monitoring of some of the basic parameters of the tourist flow: distribution, size, daily and seasonal dynamics, forms of tourist presence, places of higher concentration, monitoring of impacts, etc. Special attention is to be given to defining the limits of admissible change in order to lay down norms of use and tourist activities.

- Project: Study of the visitors carrying capacity of the Park

The Project proposes to study the potential of RMNP to receive and 'comfortably' serve different types of visitors, depending on the different forms of recreation available within it. Special attention is to be given to the study, mapping and assessment of separate parts of the Park's territory in terms of the visitor saturation capacity.

2.2.9 Program for the study and assessment of biodiversity

- Project: Study of the possibilities for genetic exchange between Rila Monastery Nature Park and Rila National Park

Finding out about the means of biological exchange between populations in RNP and RMNP: seasonal migrations, the spatial integrity of vegetation populations, the existence of genetic 'bridges', the biological potential and specificity of populations and the possible threats to the occurrence of natural processes. Measures are to be defined to preserve the conditions in which such processes occur.

- Project: Taxonomic survey of the Rila oak and the King Boris's fir

A study of both species with a view to clarifying their origin and taxonomic status, and the kinship links of these two endemic species. The project will search for financing from external for NPD sources, but will rely on the Directorate for support with information and assistance.

2.3 Management of natural resources

2.3.1 Program for water management

- Project: Assessment and monitoring of water use within RMNP

Development and operation of a system for comprehensive assessment of water use within the Park; development and operation of a database for the storage of information and for tracing the levels of water use in the future. A separate part of the project envisions the drawing up of a forecast of the state of water resources in the future, which is to be used to define the parameters of future water use in the Park for the purpose of conservation of water resources and the ecological health of the Park as a whole.

2.3.2 Program for the management of forest complexes

- Project: Experimental sustainable forestry

The Project envisions experimenting with a series of ecologically sound methods of timber use within the Sustainable Forestry Zone. At the core of that is the implementation of suitable logging methods using extraction techniques that are as gentle as possible on biodiversity (e.g., by preserving hollow trees and part of the dead timber, as well as trees with nests of rare species, or with canopy used by colonies of bats, etc.). A demonstration of the use of sustainable forestry techniques for biodiversity conservation within the Park will be included in vocational training courses, as well as interpretation sessions for visitors.

2.3.3 Program for management of non-timber natural resources

- Project: Mapping and resources assessment of medicinal plants, forest fruits and mushrooms in RMNP

Mapping of the principal locations of medicinal plants, forest fruits and mushrooms in Rila Monastery Nature Park. Additional information gathered during the Rapid Ecological Assessment is to be used regarding the medicinal plants and forest fruits locations. The Project envisions drawing up an inventory for the use of non-timber natural resources within the Park, in compliance with the provisions of the Management Plan. The Plan is to specify the locations, quantities and duration of season for extraction of non-timber resources, while laying down measures for their conservation, etc.

2.4 Management of tourism

2.4.1 Program for devising a comprehensive strategy for the development of tourism

- Project: Strategy for the development of tourism in Rila Monastery Nature Park

Adoption of an all-round strategy for developing tourist activities, attracting visitors, tourism services and development of tourist infrastructure, depending on visitor profile; conservation of natural, spiritual and cultural-historical values and potential; basic guidelines for monitoring the tourist flow and its impact.

- Project: Drawing up of Detailed Zone Development Plans for the Tourism Zone

The project envisions the development of Detailed Zone Development Plans for the three sub-zones of the Tourism Zone, as well as site plans for specific sites and facilities within it.

2.4.2 Program of zone development activities for the Tourism Zone

- Project: Visitor safety

Development and implementation of a system of visitor safety including information, warning signs and safety facilities and a package of measures and prescribed actions in emergency situations. The latter envision the coordinated efforts of employees of Dams and Cascades, members of the Bulgarian Tourism Association, the police, gateway communities, and other persons permanently residing in and around the Park territory.

- Project: Setting up rest areas

Implementation of the part of the Detailed Zone Development Plan for the Tourism Zone which refers to designation of picnic areas (Obedishte, Bivolarnika, Studenata Cheshma, Kirilova Polyana) and other forms of recreation; installing in them fireplaces, tables, benches, waste receptacles, etc.

- Project: Marking, signposting and improvement of tourist trails

Applying or renewal of standard tourist marking, putting up of signposts, building of bridges, safety railings etc., along the tourist trails.

2.4.3 Program for diversifying and expanding opportunities for recreation and tourism

- Project: Development of specialized tourism in RMNP

Implementation of that part of the General Strategy for Tourism Development, which envisions using the possibilities of RMNP for the development of specialized tourist trails. On a phased basis, a number of tourist trails are to be developed, designated

and marked appropriately, relevant to the natural, religious and cultural-historical values of the Park (bird-watching, observation of butterflies and plants, horse back riding tourism, mountain biking, visits to the cultural and historical sites, observing the implementation of ecologically sound forestry practices, etc.). The trails are to be developed in line with the provisions of the Management Plan regarding the Park Zones and the respective regimes and norms.
The following are to be designated and built at the initial phase:

- Horse back riding trail;
- mountain biking trail;
- cultural-historical heritage in RMNP trail.

- Project: Building of an ethnographic theme park for showcasing traditional arts and crafts

Commissioning of an architectural design and site development plan for the construction of a complex of buildings in the traditional local style and appearance, suitable for live demonstrations of arts and crafts techniques characteristic of the area and the country at large; the actual building and operation of the complex. This form of a tourist attraction is expected to become a major source of income for the landowner.

- Project: Development of winter sports in Rila Monastery Nature Park

The project envisages investigating the possibilities for winter sports development in the frame of those allowed in the Management Plan– without building of ski runs. The Project also envisages setting up of tracks for snowshoes and Nordic ski, forming of natural open slopes for sleds and other appropriate forms of winter sports corresponding to the Parks management goals.

2.5 Interpretation and education

2.5.1 Program for cultural-historical and environmental education

- Project: Environmental education in RMNP

Development and operation of a comprehensive program of educational activities in the field of environmental protection. These will include different forms of class work and extracurricular activities: Green Schools, field trips, etc.

- Project: Environmental education in the schools

The Project envisions expanding the educational activity of the Directorate of RMNP for inclusion of information about the Park, its cultural and environmental significance, in the form of specialized classes within the curriculum of schools in the area. Also proposed is the setting up of partnerships with educational institutions on a national and regional level.

- Project: Setting up an educational and scientific research center

The project envisages establishment and development of a research and professional training center in the field of ecology, environmental protection, and protected area management. It includes evaluation of the existing infrastructure in the park aiming to insure the necessary facilities. This center will conduct student practices, training of professionals in the field of protected areas management, etc. The project envisages part of the activity to be located in Kirilova poliana.

A specialized part of the Project for environmental education is to deal with the development of the Sustainable Forestry Zone as a demonstration ground for training college students and forestry experts in the implementation of sustainable forestry practices.

- Project: Traditional festivals and celebrations in the Nature Park

Development of an Action Plan for organizing and holding celebrations of traditional holidays; development of a strategy for coordinating stakeholder activities in the effective management of the tourist flow and ensuring visitor safety. The project is to describe the locations, methods, fire control measures, transport arrangements, etc., relevant to the holding of such mass celebrations.

2.5.2 Interpretation program

- Project: Plan for interpretation in the Nature Park

This envisions the development of a unified, all-around plan/strategy for carrying out all kinds of interpretative activities within the Park. At its core will be the unity and harmony of the spiritual and natural components of RMNP. An analysis of the goals, objectives, target groups and the specifics of the territory will enable the formulation of concrete measures and forms for presenting to visitors the rich religious, cultural and natural heritage of the Park.

- Project: Information facilities

In conformity with the all-round interpretation plan for RMNP, this Project envisions the putting up of signposts, information and interpretative boards throughout the Park territory. Such information facilities include, most generally: (1) markings and signposting of boundaries, entry points; information about ground rules and norms (law enforcement); (2) direction signs and information boards about sites, landmarks and facilities, stating, among other things, approximate duration of routes, availability of services, etc.; (3) interpretative boards at places and sites providing more detailed background information about cultural, historical, religious and natural sites and values throughout the Park.

The following are envisioned as parts of this Project:

- Marking, signposting and setting up to a standard design of principal entry points and scenic view points;
- Signposting of cultural-historical sites (see 2.1.2) throughout the Holy Sites and Cultural-Historical Heritage Zone.

- Project: Building of a Visitors' Center in the Nature Park

Design and construction of a Visitors' Center for RMNP at Brichebor locality, to be properly furnished and provided with all necessary equipment. The project envisages, as a sub-project within the Visitor's center, the organization of a trained team of interpreters /guides for the Park.

- Project: Building of a tourist information booth at Kirilova Polyana locality

This Project envisions the setting up of a small information booth at Kirilova Polyana to serve and provide relevant information to pedestrian tourist traffic following routes to the higher sections of the mountain.

- Project: Putting up information boards in nearby communities

This envisions the design and placement at prominent places in gateway communities of information boards relevant to RMNP, promoting opportunities for recreation and tourism, publicizing the cultural and environmental significance of the Nature Park.

2.6 The Park in a regional context and setting up partnerships

2.6.1 Program for institutional and territorial coordination

- Project: Preparing of General Zone Management Plan of RMNP territory

The project envisages the development of a General Zone Management Plan, having in mind the national significance of the Park and its facilities and by virtue of Art. 107 of the Structure of the Territory Act. Development of the General Zone Management Plan for the territory (GZMP) will defined the structure of the territory, the structure regimes, and the requirements for esthetical composition building and etc. The GZMP will serve as a base for the preparation of Detailed Zone Management Plans, envisioned by the Management Plan.

- Project: Coordination with government institutions

This Project aims to devise the necessary measures in order to ensure that the Park is properly represented in regional planning efforts: regional and municipal plans, programs and projects. It envisions the development and implementation of a system and forms of regular exchange of information with local, regional and national institutions.

- Project: Involvement of NGOs, scientific research institutions, artists' guilds and other organization in protecting and publicizing RMNP

The Project envisions making an analysis of existing partnerships, identifying potential new partners, defining the parameters of interaction with each of them, as well as concrete steps for collaboration with those most important.

2.6.2 Program for providing economic incentives to local communities

- Project: Technical cooperation and encouragement of small businesses in the field of organic products and tourism in Rila and Kocherinovo municipalities

Identifying suitable target groups and development of private entrepreneurship in the area surrounding the nature park; providing information about RMNP-related opportunities for development of small businesses, ecotourism, services etc.; organizing training courses, joint projects and other initiatives in support of business activities in the gateway communities in conformity with the management objectives of RMNP.

2.7 Park management and infrastructure

2.7.1 Fire control program

- Project: Fire prevention

Development, approval by the competent authorities, and practical implementation of a set of activities aimed at minimizing the fire hazard in both the urbanized sections of the Park and its natural territories. The proposed measures should include a system of advising visitors about the fire regulations, safety precautions at high-risk places, enforcement of fire prevention requirements, etc. The specialized portion of this Project comprises the Fire Control Plan for Forests in the Park, which is the subject of a separate project.

- Project: Fire control and fire-fighting equipment

This envisions the actual provision of the required manpower, warning system, water sources, fire-control facilities and equipment for the entire Park territory in a way that would ensure proper and effective action in an emergency at any point throughout the Park.

2.7.2 Law enforcement program

- Project: Legal awareness and provision of information

Training of Park personnel and other law enforcement agencies (police, National Fire and Emergency Service, Rila National Park staff, etc.) in the basics of the applicable

legislation relevant to the conservation of the cultural and natural heritage within the Park territory. The Project also includes the development and implementation of an integrated action plan for maximizing coordination among the participants.

- Project: Law enforcement models

Experimenting with several models of action aimed towards preventing, recording and responding to legal offenses, with a special emphasis on poaching (illegal hunting and fishing), illegal building of campfires and pollution. The models are to take into account the specifics of Rila Monastery Nature Park, the territorial and seasonal dynamics of the tourist flow, as well as trends in the seasonal and territorial distribution of offenders by type of offense. The Project will also experiment with possibilities for providing additional manpower (by hiring additional personnel on busy days, volunteer participation, etc.).

2.7.3 Waste management program

- Project: Establishing a system for waste management

Development and implementation of a comprehensive system for management and disposal of household waste comprising three components: prevention (by increasing public awareness and encouraging visitors to apply the 'take in - take out' principle); ongoing removal of waste from designated waste receptacles (at camping sites, chalets etc.); as well as clean-up campaigns (involving volunteers).

- Project: Protection of water basins from pollution and management of sewage

The Project envisions an assessment of the state and sanitary condition of water basins (the river network, lakes and dams) in RMNP by seasonal and territorial distribution, as well as, where necessary, concrete measures for reducing and/or eliminating sources of pollution. Within the framework of this Project, all sources of water pollution within the Park are to be identified, together with the nature, range and degree of actual pollution caused, in order to define proper ways for eliminating or reducing their impact. The project also envisions building of water purifying installations at chalets and other sources of water pollution following an assessment of the state and needs of each facility.

2.7.4 Program for traffic management and maintenance of the road network

- Project: Research and assessment of the possibilities for ensuring alternative transport in the Park

The project includes examining alternatives such as railway transport in the Park, as well as other appropriate transport scheme decisions. The project results will give the possibility for designing and applying of environmentally sound transport in RMNP, with proved minimum impact on the biodiversity and the cultural monuments, economically efficient and with abilities to answer the visitors needs. Depending on the results of the conducted research, observations and assessment, it could be possible to proceed with the narrow gauge restoration if it is proved to be the most appropriate and economically considered type of transport for the Parks goals.

- Project: Building of parking lots

Survey of terrains, planning and building of parking lots in RMNP. The first stage of the Project envisions building parking facilities at Brichebor and Bachkova Cheshma localities, as a step towards re-distributing and deflecting vehicular traffic from the area around the Monastery.

At the second stage, more parking facilities are to be built at the Kravarski Dol, Obedishte, and Kirilova Polyana localities and at the former railway station.

2.7.5 Program for maintenance and improvement of the available, and for construction of new social infrastructure

- Project: Assessment and measures for improvement of the available social infrastructure

An overall assessment of the state and condition of all sites and facilities making up the Park's infrastructure, classification thereof in terms of the usability and operational load, and proposal of concrete measures for improvement of the facilities in each category. The project includes assessment and concrete proposals of the existing buildings' purpose and use, and changes for park administration needs in conducting its obligations to reach educational and scientific goals.
These may include activities pertinent to:

- overhaul and renovation of Ribni Ezera chalet and Kobilino Branishte tourist shelter;
- overhaul and renovation of Kravarski Dol camping site;
- first aid equipment at the appropriate place at Kirilova poliana and Brichebor;
- removal of disused or abandoned buildings and reclamation of the terrains.

- Project: Building of an eco-chalet at Bukovo Bardo locality

Survey of the terrain, planning and building of a small eco-chalet at Bukovo Bardo locality. The facility is to have a maximum capacity of no more than 30 beds, and will offer quality accommodation and a wide range of tourism services in conditions of seclusion, privacy and direct contact with nature.

- Project: Closing of the entrances to mining tunnels

The Project envisions securing with iron bars and wire mesh all entrances to tunnels used in the past for mining surveys, in order to prevent visitors from entering them.

2.7.6 Public relations program

- Project: A system of signs, symbols and markings

The Project envisions designing a unified system of signs, symbols, markings and recurring common elements of the Park design (uniforms, car and van liveries, etc.) in order to create an identifying common image for the Park.

- Project: A set of public relations materials

Development of an all-round concept of the forms, methods and means of building public relations, publicizing the Park and winning over supporters for attaining its management objectives. Part of the Project is about producing information bulletins, stationery (folders, letterheads, envelopes) and souvenirs bearing the Park logo; and of brochures, posters, calendars, etc., according to specific needs.

- Project: The Park's media image

Development and practical implementation of a unified strategy for interaction with the media for purposes of pubic relations and management of the Park. The Project envisions identifying target groups to which the respective messages are to be addressed; as well as the forms of messages and most appropriate media to broadcast them. The Project includes organizing promotional campaigns in the media in relation to the Park's ongoing activities and important events. An integral part of the Project is efforts to build lasting partnerships with journalists of the regional and national media with interests in environmental conservation issues.

- Project: Producing a multi-media product on Rila Monastery Nature Park

Production of a CD-ROM in Bulgarian and English containing information of the cultural, religious and environmental significance of Rila Monastery Nature Park. The product, which will be targeted for the broader public, will aim to improve ecological awareness and patriotic education, while enlisting public support for the conservation of cultural and natural assets.

- Project: National and international integration of Rila Monastery Nature Park

This envisions activities aimed at the proper inclusion of RMNP into the National Ecological Network (respectively, the European Ecological network and NATURA 2000); making a formal proposal for the inclusion of RMNP as a natural site on the List of the UNESCO Convention on the World Natural and Cultural Heritage Sites; as well as other steps towards the international recognition and integration of Rila Monastery Nature Park.

2.7.7 Program for development of the administration and human resources for purposes of Park management

- Project: Development of human resources

The project aims to provide for:

- General basic training of Park personnel (in safety precautions and techniques; conservation biology; tourist flow management, etc.) on the basis of identified needs and a course curriculum developed in advance;
- exploring the possibilities for exchange of experience and mutual training in similar protected areas in Bulgaria and abroad. The Project is envisioned for implementation in partnership with other protected areas, educational institutions, NGOs, etc.

2.7.8 Program for providing the requisite technical equipment and information technology to the Park administration and for information management

- Project: Maintaining a common database for nature components and sites of cultural and historical heritage in Rila Monastery Nature Park

Maintaining, updating and optimum use of the database on biodiversity in RMNP built during the planning process. Based upon the available information contained in the present database, a system for monitoring environmental components and the impact of the tourist flow is to be developed (see 2.2.8)

The database also contains information about available infrastructure in the Park and should therefore be used as a tool for managing that infrastructure.

The proposed database for monitoring the state and condition of religious, cultural and historical sites is to be incorporated as part of the common database (see 2.1.1)

- Project: Development of the Geographic Information System

This envisions the further development of the Geographic Information System created by the BCEG Project during the development of the Management Plan, its proper maintenance, operation, updating, and enrichment with new data; the introduction of rules of access of the digital models, and the exchange of information with other institutions in compliance with applicable legislation.

The Project also envisions developing an action plan and providing the necessary funds for purchasing the requisite hardware and software for the development and operation of GIS of RMNP.

- Project: Provision of the requisite material and technical equipment for the Park administration

Development and consolidation of the material base and technical equipment of the Park management; provision of the necessary office equipment and supplies, as well as of another all-terrain vehicle for fieldwork and three motorcycles.

The project also envisions providing suitable locations for offices and shelter for the Park rangers, two for each of the valleys of the Rilska and Iliyna Rivers and for the area of Kalin. As a first stage, initial contacts and negotiations will be initiated with the respective institutions for the use of existing facilities, e.g. the residential buildings of Dams and Cascades, Ribni Ezera Chalet, a.o.

- Project: Building of an internal communications system for RMNP

The Project aims to provide the necessary communications equipment (two-way radio) to the Park management, to some of its partners in the Park territory (Dams and Cascades, chalet-keepers, etc.); it also envisions setting up a system for the coordinated exchange of information and, when necessary, for interaction in emergencies, forest fires, rescue operations, etc.

3.0 Three-year work plan and budget

Programs & Projects	Contractor		Duration	Cost (lv.)			Source of financing
	Park Direct.	External		1	2	3	
2.1 Conservation of the religious and cultural-historical heritage							
2.1.1 Program for the conservation, protection, restoration and re-integration of monuments of culture and their environment in the territory of the architectural and historical complex Rila Monastery							
Project: Plan for the conservation of the cultural-historical values, the cultural landscape and the National Monument of Culture Rila Monastery and the Holy Sites		*	3 years	8000	6000	2000	
			Total:	**8000**	**6000**	**2000**	
2.1.2 Program for interpretation of the religious and cultural-historical sites							
Project: Marking and signposting of cultural-historical sites and facilities within the Rila Monastery religious and historical complex		*	3 years	**3000**	**1500**	**1500**	
			Total:	**3000**	**1500**	**1500**	
2.2 Conservation of nature components							
2.2.1 Program for marking and signposting of the Rila Monastery Forest Reserve							
Project: Marking and signposting of the Rila Monastery Forest Reserve	*	***RILA NPD**	***2 YEARS, CURRENT**	*1500*	*500*	-	
2.2.2 Program for the conservation of forests in their natural state							
Project: Environmental protection measures for sections of forest of conservation significance and for the protection of forest species of high conservation significance	*	*	3 years, current	**8000**	**8000**	**8000**	

Programs & Projects	Contractor		Duration	Cost (lv.)			Source of financing
	Park Direct.	External		1	2	3	
2.2.3 ***Program for the conservation of the high-mountain treeless zone***							
Project: Assessment, mapping and instituting measures for the conservation of high-mountain grassy, rocky and dwarf-pine communities		*	3 years, current	**2000**	**2000**	**2000**	
2.2.4 Program for the protection of water resources and wetlands in RMNP							
Project: Measures to ensure an ecologically sound outflow downstream of the extant hydro technical facilities	*	*	3 years, current	10000	10000	5000	
Project: Conservation of priority sections of river- and lakeside ecosystems	*	*	1 year, current	-	1000	-	
			Total:	**10000**	**11000**	**5000**	
2.2.5 Program for the conservation of wildlife species of conservation significance							
Project: Assessment of populations and measures for the conservation of wildlife species of conservation significance	*		3 years, current	15000	7500	7500	
Project: Restoration of the local population of Balkan chamois	*	*	3 years, current	4000	1000	1000	
			Total:	**19000**	**8500**	**8500**	
2.2.8 Comprehensive monitoring program							
Project: Biological monitoring of forest ecosystems	*	*	3 years, current	600	600	600	
Project: Monitoring of wildlife species of conservation significance and/or their communities		*	3 years, current	600	600	600	
Project: Monitoring of resources of medicinal plants, wild-growing fruits and mushroom	*	*	3 years, current	600	600	600	
Project: Monitoring of the tourist flow and its impact	*	*	3 years, current	1000	1000	1000	
			Total:	**2800**	**2800**	**2800**	

Programs & Projects	Contractor		Duration	Cost (lv.)			Source of financing
	Park Direct.	External		1	2	3	
2.3 Management of natural resources							
2.3.1 Program for water management							
Project: Assessment and monitoring of water use within RMNP	*	*	3 years, current	**5000**	**500**	**500**	
2.3.2 Program for the management of forest complexes							
Project: Experimental sustainable forestry	*	*	6 months, current	**3000**	**-**	**-**	
2.3.3 Program for management of non-timber natural resources							
Project: *Mapping and resources assessment of medicinal plants, forest fruits and mushrooms in RMNP*	*	*	3 years, current	**1200**	**1200**	**1200**	
2.4 Management of tourism							
2.4.1 Program for devising a comprehensive strategy for the development of tourism							
Project: Strategy for the development of tourism in Rila Monastery Nature Park	*	*	3 years	1500	750	750	
Project: Drawing up of Detailed Zone Development Plans for the Tourism Zone	*	*	3 years	3000	3000	3000	
			Total	**4500**	**3750**	**3750**	
2.4.2 Program of zone development activities for the Tourism Zone							
Project: Visitor safety	*	*	3 years	8000	6000	6000	
Project: Setting up rest areas	*	*	3 years, current	10000	5000	5000	
Project: Marking, signposting and improvement of tourist routes	*	*	3 years, current	1000	1000	1000	

Programs & Projects	Contractor		Duration	Cost (lv.)			Source of financing
	Park Direct.	External		1	2	3	
			Total:	**19000**	**12000**	**12000**	
2.4.3 Program for diversifying and expanding opportunities for recreation and tourism							
Project: Development of specialized tourism in RMNP	*	*	2 years, current	**2000**	**1000**	**-**	
			Total	**2000**	**1000**	**1000**	
2.5 Interpretation and education							
2.5.1 Program for cultural-historical and environmental education							
Project: Environmental education in RMNP	*	*	3 years, current	**1500**	**500**	**500**	
2.5.2 Interpretation program							
Project: Plan for interpretation in the Nature Park	*	*	1 year.	2000	-	-	
Project: Building of a tourist information booth at Kirilova Polyana locality	*	*	2 year	8000	8000	-	
Project: Putting up information boards in nearby communities	*	*	3 year	5000	4000	4000	
			Total:	**15000**	**12000**	**4000**	
2.6 The Park in a regional context and the setting up of partnerships							
2.6.1 Program for institutional and territorial coordination							
Project: Preparing of General Zone Management Plan of RMNP and Rila Monastery settlement			3 years,	10000	8000	6000	
Project: Coordination with government institutions	*	*	3 years, current	100	100	100	

Programs & Projects	Contractor		Duration	Cost (lv.)			Source of financing
	Park Direct.	External		1	2	3	
Project: Involvement of NGOs, scientific research institutions, artists' guilds and other organizations in protecting and publicizing RMNP	*		3 years, current	200	200	200	
			Total:	**10300**	**8300**	**6300**	
2.6.2 Program for providing economic stimuli to local communities							
Project: Technical cooperation and encouragement of small businesses in the field of organic products and tourism in Rila and Kocherinovo municipalities	*	*	3 years, current	**5000**	**2000**	**2000**	
2.7 Park management and infrastructure							
2.7.1 Fire control program							
Project: Fire prevention	*	*	3 years, current	10000	5000	5000	
Project: Fire control and fire-fighting equipment	*	*	3 years, current	15000	15000	15000	
			Total:	**25000**	**20000**	**20000**	
2.7.2 Law enforcement program							
Project: Law enforcement models	*	*	3 years, current	**5000**	**5000**	**5000**	
2.7.3 Waste management program							
Project: Establishing a system for solid waste management	*	*	3 years, current	5000	2000	1000	

Programs & Projects	Contractor		Duration	Cost (lv.)			Source of financing
	Park Direct.	External		1	2	3	
Project: Protection of water basins from pollution and management of sewage	*	*	3 years, current	10000	5000	5000	*
			Total:	**15000**	**7000**	**6000**	
2.7.4 Program for traffic management and maintenance of the road network							
Project: Building of parking lots	*	*	3 year.	20000	10000	5000	
Project: Research and assessment of the possibility for ensuring alternative transport in the Park			3 year	20000	5000	5000	
			Total:	**40000**	**15000**	**10000**	
2.7.5 Program for maintenance and improvement of the available infrastructure, as well as for the construction of new social infrastructure							
Project: Assessment and measures for improvement of the available social infrastructure	*	*	3 years	**20000**	**20000**	**20000**	
2.7.6 Public relations program							
Project: A set of public relations materials	*	*	3 years, current	3000	2000	2000	
Project: A system of signs, symbols and markings (branding)	*	*	2 years	1000	-	-	
Project: The Park's media image	*		3 years, current	300	300	300	
			Total	**4300**	**2300**	**2300**	

Programs & Projects	Contractor		Duration	Cost (lv.)			Source of financing
	Park Direct.	External		1	2	3	
2.7.7 Program for development of the administration and human resources for purposes of Park management							
Project: Development and streamlining of the structure of Park management	*	*	3 years	**5000**	**1000**	**1000**	
2.7.8 Program for providing the requisite technical equipment and information technology to the Park administration and for information management							
Project: Supporting a common database for nature components and sites of the cultural and historical heritage in Rila Monastery Nature Park	*	*	3 years, current	3000	2000	1000	
Project: Development of the Geographic Information System	*	*	3 years, current	3000	2000	2000	
Project: Provision of the requisite material and technical equipment for the Park administration	*	*	3 years, current	30000	20000	10000	
			Total	**36000**	**24000**	**13000**	
			Total cost by year	**271100**	**175850**	**138350**	
			TOTAL AMOUNT	**585300**			

PART V

MONITORING OF THE IMPLEMENTATION OF THE MANAGEMENT PLAN AND ASSESSMENT CRITERIA

1.0 Monitoring the implementation of this Plan

In the process of implementing the Management Plan, it is necessary to periodically review and reappraise its appropriateness with regard to changes as may occur over time both within the park territory and in a regional context. It is necessary to monitor the efficacy of already completed activities and interventions, and to ensure timely updating of the Management Plan in considering the changing environment in the attainment of goals. Such a review of the implementation of the Plan should include:

1.1 Ongoing inspection and monitoring of the state of the Nature Park

The present Management Plan envisions a comprehensive program for monitoring within the Park, which includes monitoring of the natural components, the tourist flow, the state of cultural and historical sites (see Programs 2.1.1 and 2.2.8 under subsection Programs and Projects). This program, alongside the unified GIS database for RMNP, are geared to ensure a constant flow of information of the state and condition of the most important components of biological diversity and other components in the Park, as well as of some of the more significant impacts on them. The aim is to enable the practical, real-time (and, moreover, technically feasible and fast) assessment of the overall condition of the Park, as well as of its main components.

1.2 Periodic reviews and revisions of the Management Plan

1.2.1 Annual review of the Management Plan

At the end of each year, every project is to be reviewed by the Park Director in collaboration with the members of the Consultative Council (CC) involved in its implementation, in order to assess its effectiveness and the extent to which the Ideal Goals and operational objectives formulated as per the Management Plan have been attained. Based upon such assessments, the Park Director is to write up an annual report on the current progress and the final results of the implementation of annual action plans in the territory, which is then to be reviewed and discussed at a meeting of the Consultative Council.

This reviewing mechanism will help the development of the Action Plan for the coming year. The time and money spent are evaluated. Changes and updates of the projects are possible with this current assessment if necessary.

Projects are to be evaluated in terms of whether they contribute towards attaining the ideal goals and operational objectives of the Management Plan and towards its all-round implementation. This will make it easier to assess, in the end of its ten-year term of validity, whether the implementation of the Management Plan has been successful and will help the preparation of the next ten-year plan.

1.2.2 Revising the Management Plan

Art. 60 (3) of the Protected Areas Act require that a public hearing be held every four years of the implementation of the Management Plan; such a public hearing is to be organized by MOEW.

The staff of the Park Directorate, in conjunction with the members of the Consultative Council involved in their implementation, are required to prepare a review of the projects implemented starting with the first up until the fourth year since the entry into force of the Management Plan, to assess the continued appropriateness of the operational goals and to prepare proposals for updating them, or for making corrections or launching new programs and projects, depending on the changed operational objectives. The entire information is then summarized by the Director of the Nature Park and is submitted to CC for review. The Consultative Council then discusses the information presented and, where necessary, makes proposals for changes in the Management Plan.

Discussed and approved, the report on the results of the implementation of the Management Plan over the four-year period and the updated management objectives, together with a proposal regarding the plans and projects for the next 4-year period are submitted to the Director to the National Forestry Board and MOEW no less than 40 days prior to the scheduled public hearing.

Once every four years the Directorate, supported by CC, reviews and approves the methods for the attainment of the operational objectives, i.e. of the strategies for the implementation of the Management Plan. During the public hearings, changes may be introduced in the strategies for attaining the operational goals.

1.3 The ten-year Management Plan update

Pursuant to Art. 55 (2) of the Protected Areas Act, the Management Plan is to be thoroughly updated once every ten years.

In the beginning of the ninth year, following the second fourth-year review of the Management Plan and the respective public hearing, a planning process is to begin for drawing up a Management Plan for the next ten-year period. The said planning process should comply with the provisions of the then applicable legislation.

2.0 Recommendations and criteria for assessing the effectiveness of the completed activities and the attainment of goals

For the purpose of the objective and appropriate updating of the Management Plan, it is necessary to implement a system of criteria for assessment and control of the effectiveness of the implementation of the operational objectives and ideal goals.

The main criteria for assessment of the successful attainment of the operational objectives that can guide the review of the implementation of the Management Plan, are listed in Appendix 31.

The criteria listed and the recommendations for assessment of the effectiveness of the completed activities are determined in view of the main themes under which the ideal goals (respectively, the operational objectives) are grouped together:

1. Conservation of the religious and cultural-historical heritage;
2. Conservation of nature components;
3. Management of natural resources;
4. Management of tourism;
5. Interpretation and education;
6. Partnerships and local communities;
7. Management of the Park.

The criteria have been identified to correspond to these seven main themes, and are designed to enable an assessment as to how appropriate the planned and implemented program and projects are for effectively attaining the operational objectives, as well as to the successful implementation of the Management Plan.

Bibliography

A classification of Palaearctic habitats, 1996

Andreev, N., M. Anchev, S. Kozhuharov, M. Markova, D. Peev, A. Petrova 1992 Bulgarian Vascular Plant Identification Guide 788 p. Science and Art Publishers, Sofia (in Bulgarian)

Arnaudov, N. 1911 Flora and Liver Moss in Bulgaria, Sofia University VI: 1-9 (in Bulgarian)

Bandzaitiene, Z., V. Butkus. 1996. Method for qualitative and quantitative estimation of some Vaccinium and Oxycoccus species and their habitats in Lithuania. In: Proceedings of Second Balkan Sci. Conference on study, conservation and utilization of forest resources. PSSA, Sofia, 363-366.

Barzakov, B. 1936. Several new and rare for Bulgaria taxa macromycetes. News of the Botanical Society 7: 108-109. (in Bulgarian)

Beron, P., Beshkov, V., Popov, V., Vasilev, M., Pandurska, R., Ivanova, T. 1999. Fauna Diversity of Small Vertebrates (Pisces, Amphibia, Reptilia, Insectivora, Chiroptera, Lagomorpha, Rodentia) in Rila National Park. – In: M. Sakalyan (edt.) Biodiversity in Rila National Park. Part II - Fauna Diversity in Rila National Park, USAID, 355-385. (in Bulgarian)

Beshkov V., Stoyanov A. 2000. The Amphibians of the Glacial Lakes in the Rila Mountains. - In: Biodiversity and evolution of glacial water ecosystems in the Rila Mountains. Golemansky, V & Naidenow, W. (Eds.) Sofia, Institute of Zoology: 79-82.

Birdlife International. 2000. Threatened birds of the world. Barcelona and Cambridge,UK: Lynx Editions and BirdLife International. 852 p.

Blondel J. 1979 Biogeographie et ecologie. Paris, New York. Masson.

Blondel J. 1995 Biogeographie. Approche ecologique et evolutive. Paris, New York. Masson.

Bondev, Iv. 1991 The Vegetation in Bulgaria. (in Bulgarian)

Bondev, Iv. /edt./.1985. Chorological Atlas of Medicinal Plants in Bulgaria. 272. Prof. M. Drinov Academic Publishing House. (in Bulgarian)

Braun-blanquet J., 1964 - Pflanzensoziologie. Ed. 3, Springer, Wien.

Delchev, H. P. Beron, G. Blagoev, V. Golemanski, V. Naidenov, V. Peneva, P. Stoev, M. Todorov and Z. Hubenov, 1999. Fauna Diversity of Invertebrate (non-insecta) in Rila National Park. In: Biodiversity in Rila National Park. Editor-in-chief. M. Sakalyan. Pensoft - Sofia. 267-305. (in Bulgarian)

Europian Committee for Conservation of Bryophytes 1995. Red Data Book of European Bryophytes. ECCB, Trondheim.

Evstatieva, L. 1983. Science Problems for Rational Use and Conservation of Medicinal Plants. Third National Conference of Botany. 552-559. BAS Publishing House. (in Bulgarian)

Evstatieva, L, Ch. Gusev. 1989. Instructions for Conservation of Medicinal Plants. 1-21. Sofia. (in Bulgarian)

Evstatieva, L., A. Vitkova. 1999.- In: Sakalian M. (Managing Editor) Biological Diversity of the Rila National Park, Part I. Biodiversity of Medicinal Plants in the Rila National Park

Evstatieva, L., R. Hardalova. 2000. In: Popov, A., T. Meshinev (eds.) High mountain treeless zone of the Central Balkan National Park. Biological diversity and problems of its conservation. Sofia, BSBCP, 2000, 440-454.

Ganchev, Sl. 1963. Vegetation cover of the orophitic belt in the west part of Northwest Rila. News of the Botanical Institute. N 12. (in Bulgarian)

Ganeva, A. 1997. Bryophyte Flora of the " Parangalitza" Biosphere Reserve, Rila Mountain. - Ann. Univ. Sofia, Fac. Biol., 89: 35-47.

Ganeva, A. 1998. Preliminary data on Bulgarian threatened bryophytes. - Lindbergia, 23: 33-37.

Ganeva, A. 1999a. Biodiversity of Bryophytes in Rila National Park. – In: M. Sakalian (Managing Editor) Biological Diversity of the Rila National Park, Part I. Plant Biodiversity of the Central Balkan National Park. Species and Coenotic Levels. USAID, 117-136.

Ganeva, A. 1999b. Biodiversity of Bryophytes in Central Balkan National Park. – In: M. Sakalian (Managing Editor) Biological Diversity of the Central Balkan National Park, Part I. Plant Biodiversity of the Central Balkan National Park. Species and Coenotic Levels. USAID, 106-124.

Ganeva, A., Dall, R. 1999. A contribution to the Bulgarian bryoflora. Checklist of Bulgarian bryophytes. – In: R. Dall, A. Ganeva, A. Martincic, Z. Pavletic: Contributions to the bryoflora of former Yugoslavia and Bulgaria. 1 Auflage. IDH-Verlag Bad Manstereifel, 111-199.

Georgiev, G., K. Tyufekchiev 1989. Rila Monastery Forests, Zemizdat, Sofia, 1-130. (in Bulgarian)

Georgiev St. 1890-1891 The Rodopi Mountain and Rila Mountain and their vegetation. In: Collection of Folklore, Science and Literature. T. 3-4. (in Bulgarian)

Grubac, B. 2000. The Lynx Lynx lynx (Linnaeus, 1758) in Serbia. Защита природе, 52/1, 151 – 173.

Gyosheva, M. & C. Denchev. 2000. Biodiversity of macromycetes in the Rila National Park. In: Sakalian, M. (Ed.), Biological diversity of the Rila National Park. Pensoft: 149-176.

Gyosheva, M., V. Fakirova, C. Denchev. 2000. Red list and threat status of Bulgarian macromycetes. Historia Natulalis Bulgarica, 11: 139-145.

Hardalova, R., L. Evstatieva, Ch. Gusev. 1994. Resource Characteristics of the Wild Growing Medicinal Plants in Bulgaria and Requirements for their Sustainable Development. National Biodiversity Conservation Strategy. Vol II. 41-72. Biodiversity Support Program, Bulvest Publishing House 2000 Ltd, Sofia. (in Bulgarian)

Hilton-taylor, C. – comp. 2000. 2000 IUCN Red List of Threatened Species. IUCN, Cambridge, UK, 61 ps + CD – ROM.

Hubenov. Z., V. Beshovski, M. Josifov, A. Popov, K. Kumanski,V. Sakalian, S. Abadjiev, Y. Vidinova, T. Lyubomirov. 2000. Entomofaunistic diversity of the Rila National Park. In: Biological diversity of the Rila National Park, Ed. M. Sakalian, publ.Pensoft, Sofia: 363-360.

Ilieva, St. I. Kolev, A. Boeva, S. Valchev. 1953. Contribution to the Research of Wild Growing Medicinal Plants in Northwest part of Rila Mountain. Journal of the science research institute with the Ministry of Agriculture. XX, issue 3: 61-94. (in Bulgarian)

Klika, J. 1926. Contribution a la connaissance de la flore mycologique de la Bulgaria. Acta Bot. Bohemica 4-5: 28-41.

Kostadinova, I. 1997. Important Bird Areas in Bulgaria. Bulgarian Society for the Protection of Birds. Nature protection series. Book 1. BSPB, Sofia, 176 p. (in Bulgarian)

Koune, G.P. 1999. Study on threatened mushrooms in Europe. Strasbourg. 65 p.

Kozhuharov, St. /edt./ 1995. Flora of Republic of Bulgaria, Volume X, Prof. Acad. Marin Drinov Publishing House , 416 (in Bulgarian)

Kozhuharov, St. (edt.) 1992. Guide to the Higher Plants in Bulgaria, Nauka I Izkustvo, Sofia, 1-789 (in Bulgarian)

Krilova, I.L. 1973. Number of Plots and Species Models for Defining the Medicinal Plants Extraction. Vegetation Resources. Vol. IX. 3:457-466. Nauka - Leningrad. (in Russian)

Kuthan, J. & F. Kotlaba. 1988. Macromyzeten der Bulgarischen Schwartzmeerkuste und einiger Orte im landesinner Bulgariens. Acta Mus. Nat. Pragae 44(3-4): 137-243.

Lindberg, H., 1946. Zur Frage der verticalen und horizontalen Vebreitung der europдischen Heteropteren. Notulae Entomologicae. 25: 119- 129.

Methodology for Defining the Medicinal Plants Reserves. 1986. USSR Governmental Forestry Committee, 50. (in Russian)

Nankinov, D. 1981. Some observations of Bulgarian diurnal birds of prey. – Bird Information Bulletin, BAS, 9, 25-35. (in Bulgarian)

Nedyalkov, N., 1908. Rhynchota (Proboscis). Third Contribution to the Entomological Fauna in Bulgaria. Journal of the Bulgarian Literary Society.69: 670- 692. (in Bulgarian)

Peev, D., 1981. Nature Conservation Efficiency Rates, Botanical Value and Biological Norms for Conservation of Vegetation Complexes or Individual Seed Plant Species. Regional Symposium for the Project on Conservation of Natural Areas and their Genetic Pool. October 20-24, 1980. Blagoevgrad 296-305 Sofia, Bulgaria. (in Bulgarian)

Peev, D., A. Artinjan, E. Nicolova, S. Tzoneva, N. Valjovska. 1995. Phytomonitoring in Rila Mountain - 1994. I. Microtopography, heavy metals, statistics and karyology of the control populations, Observatoire de montagne de Mussala, Sofia, 3, 150-162

Peev, D., A. Artinjan, E. Nicolova, S. Tzoneva, N. Valjovska. 1996. Phytomonitoring in Rila Mountain - 1995. I Microtopography, heavy metals, statistics and karyology of the control populations, Observatoire de montagne de Mussala, Sofia, 4, 142-152

Peev, D., S. Tzoneva, N. Valjovska. 1997. The role of karyology, stomata, pollen and statistical analysis in the biomonitoring system of Bulgaria, Biomonitoring - theory and practice, S., Enigma, 8-13

Peev, D., Ammann K., Artinian A. 1997. Ecomonitoring in Rozhen and Srednogorie – Bulgaria

Peev, D., V. Velev, S. Tzoneva, N. Valovska. 1999. Fertility of Pollen. Biomonitoring in Bulgaria National Program. Express and perspective methods for biological monitoring. MoEW - PHARE – Consortium BIOTA, Sofia. Gea Libris, 30-33. (in Bulgarian)

Peev, D., M. Pramatarova, S. Tsoneva, N. Valyovska, I. Vasileva 1999. Biodiversity of Vascular plants in Rila National Park. – In: M. Sakalian (Managing Editor) Biological Diversity of the Rila National Park, Part I. Plant Biodiversity of the Rila National Park. Species and Coenotic Levels USAID, 7-78

Peev, D., Chavdar Gusev, Dimitar Dimitrov, Malina Delcheva 2000. Biodiversity of Vascular plants in Central Balkan National Park. - In M. Sakalian (Managing Editor) Biological Diversity of the Central Balkan National Park, Part I. Plant Biodiversity of Rila National Park. Species and Coenotic Levels USAID

Peev, D., 2001. Rila National Park - Management Plan 2001-2010 ARD/BCEG Project on Term of Reference, assigned by MoEW, №48-00-8128, Sofia. 318. (in Bulgarian)

Petkov, S. 1908. Contribution to the studying of Liver Mosses in Bulgaria. – Journal of the Bulgarian Literary Society, 68: 115-123. (in Bulgarian)

Petkov, S. 1964. First formations of Frullania fragilifolia Taylor, Dicranum rugosum (Hoffm.) Brid., Grimmia unicolor Hook., Grimmia torquata Hornsch. In Bulgaria. – News of the Botanical Institute, BAS, 13: 161-163. (in Bulgarian)

Puchina, L. V., Yu. V. Zaharchenko. 1988. Phenology and productivity of bilberry and blueberry (*Vaccinium myrtillus L. u V. vitis idaea L.*) in Pinejskom Reserve. Plant resources Vol. 3, 373-382. (in Russian)

Red Book of PR Bulgaria. 1985. Vol. 2. Animals, BAS, Sofia, 183 c. (in Bulgarian)

Red Data Book of European Vertebrates. 1997. Final draft. WCMC, Cambridge, UK, 153 ps.

Rila National Park Management Plan, 2001. (in Bulgarian)

Roussakova V. 2000 Vegetation alpine et sous alpine superieure de la montagne de Rila (Bulgarie). Camerino

Simeonovski, M. 1965 The Vegetation of the Limy Terrains in Rila Mountain. Sofia University Annual Book, Faculty of Biology, 58 (2): 169-180. (in Bulgarian)

Simeonovski M. and V. Bochukov 1967 Grass societies in Marinkovitsa region. Sofia University Annual Book, Faculty of Biology, 60 (2): 1-16. (in Bulgarian)

Spasov, N., Mihailov, H., Georgiev, K., Ivanov, V. 1999. Status of the Big Mammals in Rila National Park. – In: M. Sakalyan (edt.) Biodiversity in Rila National Park. Part II. Fauna Diversity in Rila National Park, USAID, 415-461. (in Bulgarian)

Spiridonov, G., Spassov, N. 1989. The Otter (Lutra lutra L., 1758) in Bulgaria it status and conservation. – Historia naturalis bulgarica,

Spiridonov, J. 1999. Nesting Birds in Rila National Park and Their Conservation Significance. – In: M. Sakalyan (edt.) Biodiversity in Rila National Park. Part II. Fauna Diversity in Rila National Park, USAID, 385-415. (in Bulgarian)

Stoychev, G., M. Dimcheva. 1982. New Taxa and Chorological Data for the Mushroom Flora in Bulgaria. Phytology 20: 68-73. (in Bulgarian)

Stoychev, G., M. Dimcheva. 1984. New Chorological Data for the Mushroom Flora in Bulgaria. Phytology 24: 68-72. (in Bulgarian)

Stoychev, G., M. Dimcheva. 1987. New Taxa and Chorological Data for the Mushroom Flora in Bulgaria. Phytology 33: 67-69. (in Bulgarian)

Stoyanov, Neno. 1972. Medicinal Plants in Bulgaria. Part I. 344. “Nauka I Izkustvo” Sofia. (in Bulgarian)

Stoyanov, Neno. 1972. Medicinal Plants in Bulgaria. Part II. 552. “Nauka I Izkustvo” Sofia. (in Bulgarian)

Tucker, G.M. and M.F.Heath. 1994. Birds in Europe: their conservation status.Cambridge, U.K.: BirdLife International Conservation Series no. 3,600 p.

Vaiciuniene, J., V. Abrutis. 1996. Research and conservation projects of medicinal plants in forest ecosystems in Lithuania. . In: Procedings Second Balkan Sci. Conference on study, conservation and utilization of forest resources. PSSA, Sofia, 359-362..

Vanev, S. & D. Reid. 1986. New taxa and chorological data for the Bulgarian fungus flora. Fitologija 31: 63-69.

Vayda, L. 1960. Contribution to the Bulgarian Moss Flora. - News of the Botanical Institute, BAS, 7: 317-319. (in Bulgarian)

Velchev, V., St. Kozhuharov, M. Anchev /edt./ 1992. Atlas of the Endemic Plants in Bulgaria, BAS Publishing House, 204. (in Bulgarian)

Velchev, V. /edt./. 1984. Red Data Book of the Peoples Republic of Bulgaria. BAS Publishing House, 441. (in Bulgarian)

Velenovski, J. 1902. Neunter Nachtrag zur Flora von Bulgarien. - Osterr. bot. Zeitschr., LII, 3: 115-121.

Vitkova, A., L. Evstatieva. 1999. - In: Sakalian M. (Managing Editor) Biological Diversity of the Rila National Park. Part I. Biodiversity of Medicinal Plants in the Rila National Park. 58-105.

Walter, S. & H. Gillett. (Eds.) 1998. 1997 IUCN Red List of Threatened Plants. The World Conservation Monitoring Centre. IUCN - Gland & Cambridge. The World Conservation Union. LXIV. 862 p.

Yoakimov, D., 1909. From the Fauna Hemiptera in Bulgaria. Collection of Folklore, Science and Literature. 25: 1- 34. (in Bulgarian)

Yoakimov, D., 1926. New Species for the Bulgarian Fauna Hemiptera – Heteroptera. News of the Bulgarian Entomological Society, 3: 49- 58. (in Bulgarian)

Yordanov, D. /edt./ Kuzmanov, B./edt./ 1979. Flora of Peoples Republic of Bulgaria, Volume VII, BAS Publishing House, 529 (in Bulgarian)

Yordanov, D. /edt./ Velchev, V. /edt./ 1982 Flora of Peoples Republic of Bulgaria, Volume VIII, BAS Publishing House, 518 (in Bulgarian)

Yordanov, D. /edt./ Velchev, V., B. Kuzmanov /edt./ 1989. Flora of Peoples Republic of Bulgaria, Volume IX, BAS Publishing House, 539 (in Bulgarian)

Yordanov, D. /edt./ 1970. Flora of Peoples Republic of Bulgaria, Volume IV, BAS Publishing House, 748 (in Bulgarian)

Yordanov, D. /edt./ 1973. Flora of Peoples Republic of Bulgaria, Volume V, BAS Publishing House, 442 (in Bulgarian)

Yordanov, D. /edt./ 1976. Flora of Peoples Republic of Bulgaria, Volume VI, BAS Publishing House, 540 (in Bulgarian)

Yosifov, M., 1960. Species composition and spreading of insects from Heteroptera order in Bulgaria. Part I. News of the Zoological Institute. BAS. 9: 107- 177. (in Bulgarian)

Yosifov, M., 1960. Species composition and spreading of insects from Heteroptera order in Bulgaria. Part II. News of the Zoological Institute. BAS. 16: 83- 149. (in Bulgarian)

Yosifov, M., 1960. Species composition and spreading of insects from Heteroptera order in Bulgaria. Part III. News of the Zoological Institute. BAS. 9: 29- 82. (in Bulgarian)

APPENDICES

Appendix No. 1

Rila Monastery Forest Reserve Declaration and Expansion Orders

Environment Protection Committee
of the Council of Ministers
ORDER
No. 307
Sofia 10.04 1986

Pursuant to Articles 16 and 22 of the Nature Protection Act and in order to preserve the primary forest ecosystems of coniferous and mixed fir and oak forests typical of the Rila region, as well as habitats of rare species and species endangered with becoming extinct and the natural environment of the Rila Monastery Forest Architectural and Historical Reserve in the territory of the town of Rila, District of Kyustendil and with an area of 3,445.6 ha.

The Rila Monastery Reserve shall cover the following sections of the Rila Monastery Forestry Enterprise according to the 1978 forest development plan: 17 – except for д, е, ж, з, и 4, 5, 6; 18 – except з, и 7; 19 – а, б, в, г, д, ч, ш, щ, 1, 2, 3, 4; 20 – except л, м, н, о; 21 – except а, б, в, г, д, е, ж, к (а 21 ha section), м, т, у 1, 2, 3, 4, 5, 6; 22 – а, б в, г, д, е, м, 1, 2, 3; 23 – а, б, г, д, е, ж, з, т, у, ф, 1, 2, 3; 24 – а, б, с, 1; 25 – а, б (а 10.2 ha section), д, е, ж, з (а 16.7 ha section), и, л, 1, 5; 26 – а, б (а 7.7 ha section), в (а 6.1 ha section), г, 1, 2, 3, 4 (а 61.2 ha section), 5 (а 4 ha section); 27 – а (а 11.8 ha section), 1; 32 – в, г, д, е, 2; 33 – б, в, г, д, е; 34 – г, д, е; 35 – г, д; 36 – е, и, к, л, м, н; 37 – except а (а 2.3 ha section); 38 – в, г, д, е, ж, з, и, 3; 39 – е, ж, з, и, к, л, м, н, 3, 4, 5, 6; 40 – д, е, ж, з, и, к, 5; 41 – except а, б, 1; 42 – except а, 1; 43 – except а, б, 1, 2, 3, 4; 44 – except а, в, 1; 45 – в, г, д, е, ж, з, и, к, л, 2; I – а, 1 (а 405.5 ha section); IIIrd and the 8.1 ha self-forested meadow in section 41.

Boundaries of the Reserve: from the north-west – from the Manastirska River along the ridge serving as the western boundary of Section 17 as far as the upper forest line and along it to the side ridge outlining the western boundary of the rocky massif in Section I and along this up to the main ridge; from the north – along the main ridge through Malyovitsa Peak and Orlovets Peak as far as the eastern end of the rocky massif in Section I; from the north-east – along the boundary of the rocky massif as far as the gorge crossing the rocky massif and the forest in subsection 25-6 and along it as far as its entry into the Lake Suhoto draining gorge, following the latter as far as the tourist trail and along this as far as the meadow above the Suhia Gorge (subsection 25-4), and along the boundary between subsections 25-з and 25-г as far as the Suhia Gorge, following along the Suhia Gorge as far as Lake Suhoto, the upper forest line and the upper dwarf pine line as far as the side ridge going down from the Volnia Chal Peak towards the Suhia Gorge and along the upper boundary of sections 26 and 27; from the east – follows the gorge near Manastirska River and along the Dzhendema Gorge as far as the upper dwarf pine line; from the south – the upper dwarf pine line as far as Brichebor Peak and from the peak along the side ridge, reaching as far as Manastirska River.

The above boundaries do not include the Rila Monastery River Valley, wide from 0.3 to 2 km, which includes the Rila Monastery Architectural and Historical Reserve.
All activities that disturb the unique nature of the Reserve shall be prohibited therein.
Transit passing of tourists shall be allowed along the following traditional hiking paths:

1. From the Rila Monastery to the Eleshnitsa locality.
2. From the Brichebor Peak and Chaushka Chuka Peak along the Rila Monastery as far as the Dodov Peak and the Ivan Vazov lodge.
3. From the Manastirska River along the Chernei Gorge and along the Mandrenska River as far as the Studenia Kladenets locality.

Pursuant to Article 3 of Regulation 4 of the Committee for Environmental Protection at the Council of Ministers (SG, No. 77, dated 1980), I declare the following areas as a buffer zone belonging to the Reserve:

a) The forests of the Rila Monastery Forestry Enterprise – the parts of sections 17 through 27 and 32 through 45 that remain outside the Reserve, as well as I and III-2 – the section to the west of the Dzhendema Gorge, with a total area of 1,199.6 ha.
b) Agricultural lands: the treeless zone of the Drushliavitsa River watershed and of Cherkovishko Gorge; the treeless zone above sections 18 and 19 and the pasture spanning the main bridge between Brichebor and Baba Peaks, the side ridge from Baba Peak to the north and the Reserve boundaries, with a total area of 1,202 ha.

The following shall be prohibited within the buffer zone:

a) Mining and quarrying, river flow corrections, construction of new water catchments and other activities disturbing the water regime and the natural appearance of the area.
b) Burning of vegetation.
c) Forestation with plant and brush species atypical for the region.
d) Any construction works in the high mountain zone.
e) Camping and parking of automobiles outside the designated spaces.
f) Hunting.

The following shall be permitted within the buffer zone:

a) Construction under development projects concerning the functioning and development of the Architectural and Historical Reserve Rila Monastery and of tourism by the Bulgarian Tourist Union.
b) Short term recreation.
c) Selection and sanitary felling and using the seed bases as designated.
d) Grazing of livestock in the areas designated for this purpose.

This Order does not change the status of the Architectural and Historical Reserve Rila Monastery approved by Regulation No. 4 of the Committee for Culture (SG, No. 10/1979).

This Order revokes Order No. 407 dated November 9, 1966 of the Committee of Forests and Forest Industry at the Council of Ministers for the designation of the Rila Monastery Protected Locality.

This change shall be recorded in the State Register of Protected Nature Sites.

The Rila Monastery Forestry Enterprise shall, within five months from the promulgation of this Order in the State Gazette, designate the Reserve boundaries, the buffer zone, and the hiking paths in a permanent and visible manner.

Those who violate this Order shall be punished in accordance with Article 278 of the Penal Code and Article 31 of the Administrative Violations and Sanctions Act.

This Order becomes effective with its promulgation in the State Gazette.

CHAIRMAN:
(T. Bozhinov)

Order No. 114

Dated February 24, 1992

On the Declaration of the Rila People`s Park, the Central Rila Reserve and Expansion of the Area of Reserves in the Park

By the Minister of Environment,
promulgated, SG, No. 20 dated March 10, 1992.

Pursuant to Articles 17 and 22 of the Nature Protection Act and in order to preserve forever and for the benefit of society the complex of self-regulating ecosystems and their inherent diversity of species, habitats of rare and endangered species and communities and remarkable landscapes and nature sites of global significance for science and culture, I declare the Rila People`s Park including the following areas:

I. Forests with a total area of 67,358.7 ha, as follows:

Plovdiv District

1. From the Belovo State Forestry Enterprise, Belovo Municipality, according to the 1984 forest development project, sections: 1 - a through и, 1, 3; 2; 3 - а, б, в, г, д, з, и, к, 1, 2, 3, 4, 5; 5; from 9 through 15; 16 - а, н, 1, 2; 21 through 44; 59 - к, л, м, н, о, 7, 8, 9, 10; 60 - е, ж, з, и, к, л, 6, 7, 8; 61; 65; 66 - from a to к, п, 1 through 8; 67; 68; 69; 427; 428; 429; 430; 433; 434; 435; 436; 437 - а, б, д, е, ж, з, и; 438; 439; 440, with total area of 3,234.8 ha.

Sofia District

2. From the Kostenets State Forestry Enterprise, Kostenets Municipality, according to the 1984 forest development project, sections: 16; 17; 18; 19; 35; 37 through 42; 51; 53 through 77; 129 through 145; 339 through 361, with total area of 4,551.5 ha.

3. From the Borovets State Forestry Enterprise, Borovets Municipality, according to the 1986 forest development project, sections: 128; 129; 135; 136; 178; 179; 180; 181; 213 through 217; 229; 230; 231; 234; 235; 238; 239; 240; 339 - б (part 1.1 ha); 341 - а (part 3.0 ha), б; 346; 347 - а, б (part 12.0 ha), 1; 348; 349 - а (part 14.0 ha); 350; 351; 352; 353; 359; 361; 364; 365; 366; 370 through 445; 587 - г (part 12.4 ha), д, е, ж, з, и, 4, 5, 6; 588; 589 - б, в, г, 2, 3, 4; 590 - д, е, ж, 4, 5, 6; 591 - б (part 4.6 ha), в, г, 2, 3 (part 0.8 ha); 598; 599; 600; 601; 602; 603; 604 through 624; 628 - е, д, 3; 646 through 667, with total area 8,145.6 ha.

4. From the Samokov State Forestry Enterprise, Samokov Municipality, according to the 1982 forest development project, sections: 665 through 686; 702 through 707; 718; 721; 722; 723 - и, к, л, 5, 6, 7, 8; 724 - е, ж, 5, 6, 7, 8; 725; 726; 727 - к; 729; 730; 731; 734; 735; 736 - с, т, у, ф, 11; 740; 741 - except а, б, в, г (part 1.8 ha); 743; 744; 745; 746; 753 through 756; 758; 768 through 773; 781; 782; 783; 784 - з through н; 789; 790; 791; 793 through 808; 840 through 908, with total area 16,877.7 ha.

5. From the Stanke Dimitrov State Forestry Enterprise, Stanke Dimitrov and Sapareva Bania municipalities, according to the 1986 forest development project, sections: 85 through 96; 107 through 112; 115; 116; 132; 133; 134; 135; 144; 145;

146; 149; 154 through 158; 177 through 181; 184; 185; 186; 190; 191; 192; 200 through 224, with total area of 4,182.5 ha.

6. From the Rila Monastery State Forestry Board, Rila Municipality, according to the 1990 forest development project, sections: 1 - а, б, в, г, е, ж, 1, 2; 2; 3; 4 - а, б, в, г, д, 1, 2, 3; 7 - а, б, в, г, д, 1, 2, 3; from 8 through 12; 14 - а, б, в, 8, 9, 10, 11; 15 - а, б, 1, 2, 9; 16 - а, б, б1, в, г, д, е, ж, 1, 2, 3, 4, 5; from 17 through 45; 46 – except 6, 7; 75 – г, д, е, ж, з, и, к; 76, 77 – без 2; 78 – г through л, 6; 79 – except а, 1, 6; 80; 81; 82; 83 – except а, б, в, 1, 2, 3; 84 – з through ч; 9 through 19; 85; 86 – except 1; 87 – except а, б, в, г, 1; 88 – except 1, 2; 89; 90; 91; 101 through 108; 113 through 117; 119; 120; 121 – except ж, з, 3, 4, 1 through X, with total area of 14,366.3 ha.

7. From the Blagoevgrad State Forestry board, Blagoevgrad Municipality, according to the 1991 forest development project, sections: 1 through 33; I; II; III; IV; V; 10 – а through е, 1; 11 – а through е, 1, 2, 3, 4; 12; 13; 14; 22 – п, с, т, 5, 6; 23; 24; 29; 30; 31; 32; 35; 36; 52 through 58, with total area of 3,377.7 ha.

8. From the Simitli State Forestry board, Simitli Municipality, according to the 1988 forest development project, sections: 266 – г (part 15.3 ha), е through м, и (part 0.9) ha, о (part 0.5 ha), 5, 6; 267 – е, ж (part 0.4 ha), и (part 4.2 ha), к, л; 268 – а through к, л (part 6.5 ha), м, н, 1 through 7; 269 – а, б, в, г, д (part 7.0 ha), е (part 9.2 ha), 1 through 7; 270 з through и; 271 – except п (part 2.0 ha), 7; 272 – б (part 1.0 ha), в (part 1.5 ha), г (part 18.2 ha), д through л, м (part 4.3 ha), н (part 0.5 ha), 2, 3 (part 1.2 ha), 4 (part 0.3 ha),; 273 – ж, з (part 1.6 ha), и, к л (part 0.8 ha), м (part 1.2 ha), н through х; 274 – в (part 14.0 ha), г, д, е, ж, 3, 4, 5, 6; 275; 276; 289; 290; 291, with total area of 1,070.8 ha.

9. Razlog State Forestry Board, Razlog Municipality, according to the 1981 forest development project, sections: 16 – а, б, в, г, д, 1, 2, 3, 4; 17 through 25; 52; 53; 69 – а, 1; 70 – а; 71 – а; 72 – а, б; 74 through 78; 87 through 95; 99; 100; 108 through 114; 115 – except 3; 116 – except 6; 117; 118 – а through н, 1, 2, 3, 8; 119 – а through з, о, п, 1 through 9; 120 – а through и, 1 through 5; 121; 122; 123; 132 – а, б, в, 1, 2, 3, 4; 133 through 138, with total area of 2,735.6 ha.

10. Belitsa State Forestry board, Belitsa Municipality, according to the 1982 forest development project, sections: 1 through 29; 31 – а, б, в, г, д, 1, 2, 3, 32; 33; 34 – а through с, 1, 2, 3, 4; 35 – а through з, 1 through 6; 36; 37; 38; 39; 40 – а through п, 1 through 6; 41 – а through к, 1, 2, 3; 48; 49; 50; 52; 53; 55; 108; 109; 110; 114 – а, 1; 122; 123; 124; 125; 126 – а through к, 1 through 6; 127 – а, б; 134 – 145, with total area of 3,731.4 ha.

11. Yakoruda State Forestry board, Yakoruda Municipality, according to the 1981 forest development project, sections: 1 through 6; 8 through 18; 30 – 3; 48; 63; 64; 75 through 83; 94; 95 – а, б, в, д, 1; 96 – а, б, в, 2; 124; 125; 126; 127 – а through е, 1, 2, 3, 4; 136 through 142; 148 through 156; 369 through 410, with total area of 5,084.8 ha.

II. High mountain pastures and meadows with total area of 67,358.7 ha, as follows:

Plovdiv District

1. Belovo Municipality	1,650 ha

Sofia District

2. Kostenets Municipality	4,350 ha
3. Samokov Municipality	4,290 ha
4. Sapareva Bania Municipality	1,384 ha
5. Dupnitsa Municipality	3,158 ha
6. Rila Municipality	13,000 ha.
7. Blagoevgrad Municipality	3,800 ha.
8. Simitli Municipality	573 ha
9. Razlog Municipality	2,300 ha.
10. Belitsa Municipality	1,394 ha
11. Yakoruda Municipality	4,666 ha
Total area of the Rila Nature Park	107,923.7 ha

The following shall be prohibited in the Rila National Park:

1) construction unless provided for under the Management Plan and related to the needs of administration, science and education, tourism, animal breeding (shelters) and forest road maintenance;
2) research and use of ores and minerals and of aggregate;
3) pollution of water and areas with household, industrial and other waste;
4) bivouacking and lighting of fires outside specified locations;
5) damaging of rock formations, trees, bushes and picking of flowers, as well as intentional disturbance of wild animals;
6) grazing of goats;
7) use of fertilizers and plant protection chemicals;
8) introduction of plant and animal species not inherent to the region;
9) clear felling and forestation with species that are not inherent to the region or in the forest vegetation belts, as well as seeds and seedlings from other regions;
10) gathering of forest fruits and mushrooms for commercial and industrial purposes or in large quantities;
11) setting of traps, use of poison and sedatives in culling of wild animals;

The following shall be allowed in the Park:

1) hay-making and grazing of livestock (other than goats) in the pastures and in the meadows;
2) leading of livestock along specific trails;
3) gathering of herbs in certain quantities and in certain areas, as well as seeds, plants and animals for scientific purposes and when permitted by the park administration following agreement with the Committee of Forests, with the Ministry of Environment and with the Bulgarian Academy of Sciences;
4) renewal, selective cutting and improvement of the integral protective functions and sanitary condition of forests;
5) culling of wild animals where they endanger the existence of other species or ecosystems through processes of degradation, or the health of their own populations, allowed by the park administration and following agreement with

the Committee of Forests, with the Ministry of Environment and with the Bulgarian Academy of Sciences.

6) fishing in the areas defined in the Management Plan.

Until completion of the Management Plan:

1) construction for the needs of administration, science and education, tourism and animal breeding, shall be carried out following a written permission by the Ministry of Environment agreed with the Committee of Forests and with the Bulgarian Academy of Sciences.
2) forest management shall be brought into compliance with the Rules on Special-Purpose Forest Management and shall be approved by the Committee of Forests in agreement with the Ministry of Environment.

*

Pursuant to articles 16 and 22 of the Nature Protection Act and to preserve in unchanged state forest, sub-alpine and alpine ecosystems that form complexes that are unique for the Central and Southern European mountains, and the central part of the Rila floral speciation center and the habitats of scores of endangered rare plant and animal species, I declare the Central Rila Reserve with total area of 12,393.7 ha as follows:

1. From the Borovets State Forestry Enterprise, Samokov Municipality, according to the 1986 forest development project, sections: 214 through 217; 239 – б, 1, 2, 3; 391; 392; 403; 404; 413; 414; 423; 435 through 443; 444 – а, б, 2, 3 (part 25.0 ha), 4, with total area of 2,389.9 ha.

2. High-mountain pasture between sections 217 and 239 of the Borovets Forestry Enterprise with total area of 47.0 ha.

3. From the Samokov State Forestry Enterprise, Samokov Municipality, according to the 1982 forest development project, sections: 675 – except а, б, 1, 2, 3; 676 – except а, 1, 2, 3, 4; 677 – except а, б, в, г, и, к, л, м, 1 through 7; 840 – except а, 1; 841 – except а, б, л, м, н, о, 1, 2 (part 1.0 ha), 3, 9; 842 – except а, б, 1, 2, 3 (part 0.2 ha); 843 – except а, 1, 2; 844 – except а, 1, 2; 845 – except а, б, в, 1, 2, 3; 846 – except а, б, 1, 2, 3, 4, 5; 847 – except а, б, 1, 2, 3, 4, 5; 848 – except а, б, 1 through 7; 849 – except а, б, в, г, д, 1 through 7; 850 – except а, б, в, 1, 2, 10; 852 – except ж, 16; 857 – з, и к, л, м 7 through 15; 858 – ж, з, и, к, 4, 5, 6; 859 through 906; 907 – except а, 1 through 5, 908, with total area of 9,956.8 ha.

All activities disturbing the unique nature of the Reserve shall be prohibited.

Tourists can pass through the Reserve only along the tourist trail along the Maritsa River.

**

Pursuant to articles16 and 22 of the Nature Protection Act, I expand the territories of the following reserves in the Rila Nature Park:

I. Ibar Reserve, Kostenets Municipality, Sofia District – from 1,701.0 ha to 2,248.6 ha.

The Reserve shall include the following areas:

1. From the Kostenets State Forestry Enterprise, Kostenets Municipality, according to the 1984 forest development project, sections: 58 – а, л; 59 through 61; 64 through 67; 69 – г, е through и, 5; 70 – except а, г, к, 1, 5; 71; 132 through 139; 342; 343 – except 1; 344 – except 1; 345; 346; 347 – except в, 1; 348 – б, 4; 349 – а; 350 – а, б, 1; 351; 352; 353 – except с, 1; 354 – а, 2; 355 – а, б; 356 – а, б; 357 – а, б; 358 – а, 3; 359 – а, в, 3; 360 – а, б, 2; 361 – except 3, 5, with total area of 2,206.2 ha.

2. The high mountain pasture above Lake Belmeken with total area of 42.4 ha.

II. Rila Monastery Forest Reserve, Rila Municipality, Sofia District – from 3,445.6 ha to 3,676.5 ha.

The Reserve shall be expanded with the following sections of the Rila Monastery State Forestry Enterprise according to the 1990 forest development project:: 46 – а, б, в, г, е,1, 2, 3, 4, 5; 47 – а, б, в, г, д, е, и, 1, 2, 3; 48 – а, б, в, г, д, м, н, п, 1, 2 with total area of 230.9 ha.

All activities disturbing the unique nature of the territories annexed to the Ibar and Rila Monastery Reserves shall be prohibited.

***

Pursuant to article 22 of the Nature Protection Act, this Order revokes:

1. Order No. 99 dated February 12, 1985 of the Committee for Protection of the Environment concerning the Goliam Skakavets Reserve, which becomes part of the Central Rila Reserve.

2. Order No. 2319 dated September 14, 1961 of the Chief Department of Forests at the Council of Ministers concerning the Marichini Lakes Reserve, which becomes part of the Central Rila Reserve.

3. Order No. 358 dated February 9, 1973 of the Ministry of Forests and Protection of the Environment concerning the Skakavets Reserve.

The existing reserves and their buffer zones, natural landmarks and protected areas in the Rila Nature Park shall retain their regimes.

Not later than one year from the promulgation of this order in the State Gazette, the Committee of Forests shall make provisions for the marking of park boundaries and of the new borders of the reserves on the site with permanent and clearly visible signs.

The new protected sites and the changes under this Order shall be entered into the State Registry of Protected Nature Sites.

Any violator of this order shall be punished according to Article 31 of the Administrative Violations and Penalties Act, unless subject to heavier sanction.

This Order shall become effective as of its promulgation in the State Gazette.

Minister

V. Vasilev

Appendix № 2

List of changed geographical names within the territory of Rila Monastery Nature Park

According to the letters by the Deputy Chairman of the Language Policy Committee at the Council of Ministers to the State Mapping Company No. 02-0906/2710.1989 and 05-06-1/1.02.1989

No	Old Name	New Name
1.	Aladzhaslap	Pastri slap
2.	Vodniia chal	Vodniia rid (vrah)
3.	Vrah Vintcheto	Mestnost Vintcheto
4.	Vrah Damga	Vazov vrah
5.	Vrah Demirkapiia	Vrah ZHeleznik
6.	Vrah Gorna Kadiitsa	Vrah Markov kamak
7.	Vrah Dolna Kadiitsa	Vrah Vododela
8.	Vrah Kalugera	Vrah Baucher
9.	Vrah Kioravitsa	Vrah Ostrets
10.	Vrah Mermera	Vrah Mramorets
11.	Gramadlivsko dere	Dol Gramadlivitsa
12.	Dzhendemski dol	Diavolski dol
13.	Dzhendemski ezera	Diavolski ezera
14.	Diado Iliovo dere	Diadoiliov dol
15.	Elenin vrah	Eleni vrah
16.	Kalinin vrah	Kalinini varhove
17.	Karaomerichki ezera	CHernatishki ezera
18.	Karaomeritsa	CHernatitsa
19.	Kravarsko dere	Kravarski dol
20.	Malka Popova shapka	Malka Popova kapa
21.	Mestnost Razdelna	Mestnost Razdela
22.	Musov vrah	Vrah Belchevitsa
23.	Popova shapka	Popova kapa
24.	Radovichko-Mermerski raion	Radovichko-Mramoretski raion
25.	Reka Giolska	Reka Vodnitsa
26.	Reka Dzhendemska	Reka Diavolska
27.	Reka Kodzhakaritsa	Reka Kamenitsa
28.	Reka Manastirska	Reka Rilska
29.	Reka Radovitsa	Reka Radovichka
30.	Reka Tiha Rila	Reka Rilska
31.	Sospa dere	Sospa dol
32.	Cheresha dere	Chereshov dol
33.	Cherni giol	Chernoto ezero
34.	Chaushko dere	Padarski dol

List of infrastructure in the Rila Monastery NP, the Rila Monastery settlement and the territory along Rilska River neighboring the Nature Park

I. Infrastructure in the Rila Monastery Nature Park

Object type	Location	Forest/Land unit	F/L subunit	Object Description Condition Evaluation	Owner	Number of beds/accommodation	Utilities
1. Ribni lakes chalet	Ribni lakes	009000	cdu	Brick building poor	Pochivno Delo enterprise town of Sapareva Bania	120 beds, 40 seats for meals	- electricity - water - septic tank
2. Shelter	Kobilino branishte	007001	cdu	Wooden building Poor	Bulgarian Tourist Union	20 plank beds	-
3. Rilets hotel	Bivolarnika	43	1	Brick building average	Maktours town of Blagoevgrad	180 beds, 220 seats for meals	- electricity - water - septic tank - solid waste container - surfaced road - phone
4. Zodiac camping, restaurant	Bivolarnika	21	5	Semi-brick building and wooden bungalows, good	Private	20 beds, 200 seats for meals	- electricity - water - septic tank - solid waste container - surfaced road - phone
5. Restaurant Bai Kiro	Kirilova Poliana	24	2	Semi-brick building average	Private	100 seats for meals	- electricity - water - septic tank - solid waste container - surfaced road
6. Restaurant	Kirilova poliana	24	4	Sheet steel structure poor	Orbit Complex town of Rila	20 seats for meals	- electricity - water - septic tank - solid waste container - surfaced road

Object type	Location	Forest/Land unit	F/L subunit	Object Description Condition Evaluation	Owner	Number of beds/accommodation	Utilities
7. Recreation facility	Bivolarnika	40	1	Wooden bungalows with utilities, bath, toilet and canteen poor	Hleboproizvodstvo Enterprise town of Dupnitsa	80 beds, 40 seats for meals in a canteen	- electricity - water - septic tank - solid waste container - dirt road
8. Recreation facility	Bivolarnika	39	1	Wooden bungalows with utilities, bath, toilet and canteen poor	Tih Trud cooperative town of Dupnitsa	60 beds, 30 seats for meals	- electricity - water - septic tank - solid waste container - dirt road
9. Recreation facility	Bivolarnika	39	1	Wooden bungalows poor	Kinefikacia town of Dupnitsa	16 beds	- electricity - water - septic tank - solid waste container - dirt road
10. Recreation facility	Kirilova poliana	24	2	Wooden bungalows poor	IPF town of Sofia	52 beds	- electricity - water - septic tank - solid waste container - surfaced road
11. Recreation facility	Kravarski dol	75	8	Wooden bungalows, canteen poor	Paper and Cardboard Factory, village of Barakovo	36 beds, 20 seats for meals	- electricity - water -septic tank - solid waste container - dirt road
12. Recreation facility	Iavora	26	1	Brick buildings, canteen average	Pochivno Delo enterprise, town of Sapareva Bania	160 beds, 60 seats for meals	- electricity - water - septic tank - solid waste container - dirt road
13. Recreation facility	Kirilova poliana	24	4	Brick building average	Rilales Ltd. town of Dupnitsa	8 beds	- electricity - water - solid waste container -surfaced road

Object type	Location	Forest/Land unit	F/L subunit	Object Description Condition Evaluation	Owner	Number of beds/accommodation	Utilities
14. Recreation facility	Kalin hydro-power plant	114	7	Brick building poor	Granitoid Ltd. town of Sofia	40 beds	- electricity - water - septic tank - solid waste container - concrete road
15. Recreation facility	Turskoto parche	53	м, о	Unfinished brick building poor	Tobacco Industry, town of Dupnitsa		- water - dirt road
16. Concrete tower	Vintcheto	1000	3	Brick building poor	Granitoid Ltd. town of Sofia		- dirt road
17. Bungalow	Brichebor	45	2	Wooden frame poor	Valentin Balabanov town of Rila	2 beds	- electricity - dirt road
18. Bungalow	Bivolarnika	21	3	Wooden building poor	Dimitar Mavrov town of Rila	4 beds	-surfaced road
19. Bungalow	Bivolarnika	21	5	Wooden building poor	Asen Tupavicharski Town of Dupnitsa	4 beds	- electricity - surfaced road
20. Bungalow	Parva shatra	47	ж	Wooden building poor	Savov town of Rila	4 beds	- dirt road
21. Mini hydro-power plant	Ribni lakes	6	11	Brick building average	National Energy Complex, Sofia		- electricity - water
22. Hydro-power plant	Kalin hydro-power plant	114	7	Brick building good	Granitoid Ltd. Sofia		- electricity - water - septic tank - solid waste container - concrete road - phone
23. Iliyna residence	Elevation 2000	57	11	Brick building average	The National Energy Complex Dams and Cascades PLC, Blagoevgrad Branch	8 beds	- electricity - water - septic tank - solid waste container - dirt road
24.Manastirski residence	Quiet Rila	29	7	Brick building good	The National Energy Complex Dams and Cascades PLC, Blagoevgrad Branch	8 beds	- electricity - water - septic tank - solid waste container - dirt road

Object type	Location	Forest/Land unit	F/L subunit	Object Description Condition Evaluation	Owner	Number of beds/accommodation	Utilities
25. Chala residence	Chala	1000	3	Brick building average	The National Energy Complex Dams and Cascades PLC, Blagoevgrad Branch	12 beds	- electricity - water - septic tank - solid waste container - concrete road
26. Beloborski sport residence	Turskoto parche	53	м, о	Brick building good	The National Energy Complex Dams and Cascades PLC, Blagoevgrad Branch	6 beds	- water - septic tank - dirt road
27. Unusable building	Brichebor	75	4	Semi-derelict building, former dairy farm and transformer Poor	Unknown owner		- dirt road
28. Unusable building	Elevation 2000	57	17	Two unfinished derelict buildings Poor	Iavor Borisov Nikolov town of Blagoevgrad		- dirt road
29. Unusable building	Turskoto parche	ACF	ACF	Brick building Poor	Unknown owner		- dirt road
30. Unusable building	Chala	1000	3	Two unfinished buildings - sheds poor	Unknown owner		- dirt road
31. Unusable building	Brichebor	77	1	Derelict brick building, two stories Poor	The Rila Monastery		- dirt road
32. Unusable building	Rila Monastery – Kirilova poliana road	21	3	Six bungalow remains (concrete foundations) metal structure and a transformer poor	N. Vaptsarov Correctional School Town of Rila		- surfaced road
33. Building	Bachkova cheshma	1000	34	Residence of Archimandrite Teodosi, three buildings Good	Holy Rila Monastery	4 beds	- electricity - water - septic tank - solid waste container

Object type	Location	Forest/Land unit	F/L subunit	Object Description Condition Evaluation	Owner	Number of beds/accommodation	Utilities
34. Worship site	Rila Monastery – Kirilova poliana road	Reserve		St. Luka complex – two old buildings, chapels and a monastery school average	Holy Rila Monastery		electricity - water - septic tank - solid waste container - dirt road
35. Worship site	Rila Monastery – Kirilova poliana road	22	a	St. John of Rila chapel and cave, for worship good	Holy Rila Monastery		- water - path
36. Semi-brick building	Vladichina livada	68	2	Two sheep pens poor	Rilales Ltd. town of Dupnitsa		Dirt road
37. Semi-brick building	Vladichina livada	68	4	Two worker residence buildings poor	Rilales Ltd. town of Dupnitsa	10 beds	electricity - water - septic tank - solid waste container - dirt road
38. Semi-brick building	Kravarski dol	75	7	Sheep pen, used by Ivan Angelov from Pastra village poor	Unknown owner		- dirt road
39. Semi-brick building	Kravarski dol	75	7	One-story brick building poor	Dimitar Vezenkov from Barakovo village	6 beds	- dirt road
40. Fish farm	Brichebor	45	2	One semi-brick building and a complex of fish-farming pools poor	Union of Hunters and Fishermen, town of Dupnitsa	4 beds	electricity - water - dirt road
41. Van	Kirilova poliana	24	2	Mobile caravan poor	The National Energy Complex Dams and Cascades PLC, Blagoevgrad Branch	2 beds	- surfaced road
42. Van	Brichebor	45	2	Mobile caravan poor	Stoian Gorov Stob village	2 beds	- dirt road
43. Chlorination facility	Kirilova poliana	24	г	Brick one-story building poor	Maktorus town of Blagoevgrad		-dirt road

II. Infrastructure in the Rila Monastery settlement

Object type	location	object description	owner	number of beds/accommodation	utilities
1. Tsarev vrah hotel	Rila Monastery	Brick building good	Private	180 beds, 200 seats for meals	- electricity - water - septic tank - solid waste container - surfaced road - phone
2. Bor camping site	Bivolarnika	Wooden bungalows and a restaurant with an open-air barbecue poor	Maktours town of Blagoevgrad	20 beds, 30 seats for meals	- electricity - water - septic tank - solid waste container - dirt road
3. Bachkova cheshma restaurant	Bachkova cheshma	Semi-brick building poor	Maktours town of Blagoevgrad	60 seats for meals	- electricity - water - septic tank - solid waste container - surfaced road
4. Recreation facility	Bivolarnika	Wooden bungalows with utilities, bathrooms, a toilet and a canteen poor	National Center for Recreation, Tourism and Sports for Students town of Kyustendil	80 beds, 80 seats for meals in a canteen	- electricity - water -septic tank - solid waste container - dirt road
5. Recreation facility	Bivolarnika	Wooden bungalows poor	A secondary school in the town of Kocherinovo	36 beds	- electricity - water - septic tank - solid waste container - surfaced road
6. Recreation facility	Bachkova Cheshma locality	Brick building average	RPS, town of Dupnitsa	15 beds	- electricity - water - septic tank - solid waste container - surfaced road - phone

Object type	location	object description	owner	number of beds/accommodation	utilities
7. Camp	Bivolarnika	Wooden bungalows poor	Slavcho Vanev school town of Kocherinovo	8 beds	- electricity - dirt road
8. Monastery	Rila Monastery	Brick building good	Holy Rila Monastery	20 beds	- electricity - water - septic tank - solid waste container - surfaced road - phone
9. Unusable building	Rila Monastery	Brick building, former railway station poor	Holy Rila Monastery		- dirt road
10. Van	Bivolarnika	Two mobile caravans poor	Nikolai Iordanov, Kostadin Vazharov town of Rila	4 beds total	- dirt road

III. Infrastructure in the territory along Rilska River in the Rila Monastery Nature Park vicinity

Object type	Location	Forest/Land unit	F/L subunit	Object Description Condition Evaluation	Owner	Number of beds/accommodation	Utilities
1. Eleshnitsa chalet	Eleshnitsa	7	9	Brick building poor	Pochivno Delo enterprise town of Sapareva Bania	70 beds	- electricity - water - septic tank - solid waste container - surfaced road
2. Restaurant	Veli lag	6	9	Brick building with barbecue average	Private	60 seats for meals	- electricity - water - septic tank - solid waste container - surfaced road
3. Restaurant Rilski rai	Gorhim	1	4	Brick building poor	Private	40 seats for meals	- electricity - water - septic tank - solid waste container - surfaced road
4. Restaurant Pchelino	Pchelino	16	12	Brick building average	Private	30 seats for meals	- electricity - water - septic tank - solid waste container - surfaced road
5. Restaurant Gorski pat	Iagniloto	14	7	Semi-brick building poor	Nikolai Davidkov, sole trader	60 seats for meals	- electricity - water - septic tank - solid waste container - surfaced road - phone
6. Restaurant “Eleshnitsa”	Eleshnitsa	7	9	Semi-brick building, metal structure poor	Private unknown	60 seats for meals	electricity - water - septic tank - solid waste container - surfaced road - phone

Object type	Location	Forest/Land unit	F/L subunit	Object Description Condition Evaluation	Owner	Number of beds/accommodation	Utilities
7. Restaurant Fantasia	Eleshnitsa	7	9	Semi-brick building. poor	Private	30 seats for meals	- electricity - water - septic tank - solid waste container - surfaced road
18. Recreation facility	Eleshnitsa	7	8	Wooden bungalows, restaurant and central heating in building good	Bulgarian Tourist Union town of Sofia	80 beds, 30 seats for meals	- electricity - water - septic tank - solid waste container - surfaced road - phone
10. Mini hydro-power plant	Veli lag	6	11	Brick building average	Private/unknown		- electricity - surfaced road
11. Unusable building	Gorhim	1	4	Brick building poor	Rilales Ltd. town of Dupnitsa		- surfaced road
12. Unusable building	Pchelino	16	13	Derelict building, former office of the Monastery Forestry Enterprise Poor	Rilales Ltd. town of Dupnitsa		- electricity - water - surfaced road
13. Unusable building	Pchelino	16	13	Derelict building of the former Monastery Forestry Enterprise - residential Poor	Rilales Ltd. town of Dupnitsa		- electricity - water - surfaced road
14. Unusable building	Pchelino	16	13	Derelict building of the former Monastery Forestry Enterprise - residential Poor	Rilales Ltd. town of Dupnitsa		- electricity - water - surfaced road
15. Unusable building	Iagniloto	14	7	Derelict building, one story Poor	RPS town of Dupnitsa		- electricity - water - surfaced road
16. Unusable building	Pchelino	16	11	Two abandoned shepherd houses and two sheep pens Poor	Rilales Ltd. town of Dupnitsa		- dirt road

Object type	Location	Forest/Land unit	F/L subunit	Object Description Condition Evaluation	Owner	Number of beds/accommodation	Utilities
17. Unusable building	Pchelino	16	11	Hay loft Poor	Rilales Ltd. town of Dupnitsa		- dirt road
18. Unusable building	Kalin River	1	п	Derelict two story building without a roof poor	Rilales Ltd. town of Dupnitsa		- dirt road
19. Unusable building	Sheremeto River	84	3	Derelict shepherd house, a sheep pen and a shed Poor	Rilales Ltd. town of Dupnitsa		- dirt road
20. Building	Gorhim	1	4	Wooden house average	Private unknown	6 beds	- electricity - water - septic tank - solid waste container - surfaced road
21. Building	Gorhim	88	2	Two one story warehouse buildings poor	National Center for Recreation, Tourism and Sports for Students town of Kyustendil		- electricity - surfaced road
22. Building	Gorhim	5	3	Two one story buildings, a canteen and a warehouse, and two worker residences poor	National Center for Recreation, Tourism and Sports for Students town of Kyustendil	20 beds	- electricity - water - septic tank - solid waste container - surfaced road
23. Building	Gorhim	5	4	Two story brick building, a former office of the Gorhim factory average	National Center for Recreation, Tourism and Sports for Students town of Kyustendil		- electricity - water - septic tank - solid waste container - surfaced road
24. Building	Gorhim	5	4	Two-story brick building, former residence for workers and officials of the Gorhim factory average	National Center for Recreation, Tourism and Sports for Students town of Kyustendil	20 beds	- electricity - water - septic tank - solid waste container - surfaced road

Object type	Location	Forest/Land unit	F/L subunit	Object Description Condition Evaluation	Owner	Number of beds/accommodation	Utilities
25. Building	Eleshnitsa	6	6	One-story building with a yard and barbecue good	Private, Vasil Zhetchev from Blagoevgrad	8 beds	- electricity - water - septic tank - solid waste container - surfaced road
26. Building	Lomnitsa	78	3	One-story brick building with a yard and 8 wooden uninhabitable bungalows good	Private, Ivan Boiadzhiev from Sofia	12 beds	- electricity - water - septic tank - solid waste container - dirt road
27. Building	Iagniloto	14	7	Two-story building, offices of the Rila Monastery State Forestry Enterprise good	Rila Monastery State Forestry Enterprise		- electricity - water -septic tank - solid waste container - surfaced road - phone
28. Building	Gorhim	1	4	Old stone building with wooden fan windows poor	Holy Rila Monastery		- surfaced road
29. Worship site	Pchelino	16	17	Holy Mary Church poor	Holy Rila Monastery		- dirt road
30. Worship site	Pchelino	16	14	Set of buildings with a stone fence, serving the Rila Monastery farm good	Holy Rila Monastery	40 beds	- electricity - water - septic tank - solid waste container - surfaced road
31. Semi-brick building	Lomnitsa	84	7	Brick building for workers in the nursery of the Rila Monastery State Forestry Enterprise poor	Rilales Ltd. town of Dupnitsa		- dirt road
32. Semi-brick building	Lomnitsa	83	1	Wooden building for nighttime accommodation of hunters poor	Private unknown	8 beds	- dirt road

Object type	Location	Forest/Land unit	F/L subunit	Object Description Condition Evaluation	Owner	Number of beds/accommodation	Utilities
33. Semi-brick building	Gorhim	1	4	Wooden building with an apiary, Ilio Voivoda poor	Private unknown	4 beds	electricity - water - surfaced road
34. Fish farm	Iagniloto	14	7	One semi-brick building and 11 fish farming pools poor	Rilales Ltd., town of Dupnitsa	4 beds	electricity - water - dirt road
35. Concrete plant	Gorhim	6	p	Water deflection sluices on the Rilska River average	Granitoid Company town of Sofia		- surfaced road

List of abandoned, derelict and unusable infrastructure in the Rila Monastery Nature Park, proposed for removal

Site type	Location	Forest/Land unit	F/L subunit	Side Description Condition	Owner	Number of beds/accommodation	Utilities
1. Unusable building	Brichebor	75	4	semi-derelict building, a former dairy farm and a transformer Poor	Unknown owner		- dirt road
2. Unusable building	Elevation 2000	57	17	Two unfinished derelict buildings poor	Iavor Borisov Nikolov town of Blagoevgrad		- dirt road
3. Unusable building	Turskoto parche	ACF	ACF	Brick building poor	Unknown owner		- dirt road
4. Unusable building	Chala	1000	3	Two unfinished sheep pens poor	Unknown owner		- dirt road
5. Unusable building	Brichebor	77	1	A derelict two-story brick building poor	The Rila Monastery		- dirt road
6. Unusable building	Brichebor	77	1	One-story derelict building without a roof poor	Rilales Ltd. town of Dupnitsa		- dirt road
7. Unusable building	Rila Monastery – Kirilova poliana road	21	3	Six bungalow remains (concrete foundations), a metal structure and a transformer poor	N. Vaptsarov correctional school, town of Rila		- surfaced road
8. Unusable building	Kalin River	1	п	Derelict two-story building without a roof poor	Rilales Ltd. town of Dupnitsa		- dirt road
9. Unusable building	Sheremeto River	84	3	Derelict shepherd residence, a sheep pen and a shed poor	Rilales Ltd. town of Dupnitsa		- dirt road

Site type	Location	Forest/Land unit	F/L subunit	Side Description Condition	Owner	Number of beds/accommodation	Utilities
10. Semi-brick building	Vladichina livada	68	2	Two sheep pens poor	Rilales Ltd. town of Dupnitsa		Dirt road
11. Semi-brick building	Vladichina livada	68	4	Two worker residences poor	Rilales Ltd. town of Dupnitsa	10 beds	electricity - water - septic tank - solid waste container - dirt road
12. Semi-brick building	Kravarski dol	75	7	A sheep pen used by Ivan Angelov from Pastra village poor	Unknown owner		- dirt road

Appendix № 4

LIST OF DESIGNATED MONUMENTS OF CULTURE IN THE RILA HOLY MONASTERY AREA

Issued by the Minister of Culture,
promulgated, SG, No. 73 dated September 8,1992
item 4, section 3, No. 587

Pursuant to article 12, paragraph 4 of Regulation No. 5 of the Committee for Culture dated 1979 on the finding, studying and documenting of immovable monuments of culture (SG, No. 6 dated 1979) The Ministry of Culture declares the following monuments of culture:

I. The Rila Monastery including:
1. the Monastery;
1.1. the wings of the monastery building;
1.2. Holy Mary's Birth monastery chapel;
1.3. Hreliova tower;
1.4. monastery yard;
2. monastery utility buildings outside the monastery proper;
2.1. washing facility;
2.2. a two-story building – residence for servants and a school (post office);
2.3. bakery;
2.4. wood storage (shop and inn);
2.5. abbot's office (reception);
2.6. coal storage (hospital);
2.7. powder room (not used);
3. monastery cemetery;
3.1. church of the Presentation of the Blessed Virgin;
3.2. residential building;
3.3. cemetery;
4. James Boucher's grave;

as a group architectural, artistic and historic monument of culture, a complex of national significance, with the following boundaries: south-western, from point 1 (formed by the crossing of a perpendicular line from the middle of the western wing with the Rilska river bank – as far as point 2., which is 100m from the middle of the western wing and 120m away from point 1); north-western, passing at 40m along the northern wing – from point 2 to point 3, the distance between which is 280m; north, following at 90m along the bend in the northern wing – from point 3 to point 4, the distance between which is 90m, and from item 4 along the forest line as far as point 5 which is 180m from the northern corner of the eastern wing; north eastern, following along the eastern wing from point 5 to point 6, the distance between which is 90m; south-eastern – along the Manastirska river bank from point 6 to point 1.

II. The John of Rila Grave complex including:
1. the church Assumption of John of Rila;
2. John of Rila's bone vault;
3. yard;

as a group architectural, artistic and historic monument of culture, a complex of national significance, with the following boundaries: western, north-western and north-eastern – along the respective outer lines of the rock; south-eastern – along the property line of the lot, connecting the north-eastern and south-western end points of the rock contour.

III. The St. Luka hermitage, including:
1. the church St. Luka the Evangelist;
2. a monastery school;
3. the church The Shroud of the Holy Virgin;
4. yard;

as a group architectural, artistic and historic monument of culture, a complex of national significance, with boundaries coinciding with the property boundaries of the hermitage.

IV. The Pchelino cloister, including:
1. the outpost;
2. two-story residential buildings;
3. one-story farm building;
4. two-story wooden granary;
5. one-story sheep pen;
6. two yards;

as a group architectural and historic monument, a locally significant complex with boundaries coinciding with the property lines of the cloister.

V. The Orlitsa cloister including:
1. the church St. Peter and Paul;
2. kitchen;
3. three residential and farm buildings;
4. guard house;
5. farm buildings;

as a group architectural, artistic and historic monument, a locally significant complex with boundaries coinciding with the property lines of the cloister.

VI. The church of the Assumption of the Holy Virgin shall be an architectural, artistic and historical monument of national significance.

VII. The outpost shall be a locally significant monument of culture.

VII. The Pilgrim road, in its section between the town of Rila and the grave of St. John of Rila, shall be a nationally significant historic site.

The protective zone for the designated group and single monuments in the Holy Rila Monastery is located on both sides of the Rilska River – from the town of Rila to the Sospata Dol, and includes:

1. areas of the Rila Monastery Forestry Enterprise by section and subsection (according to the 1990 forest development project), as follows: 147 и, 3, 4; 134 д;

133 - а, и, к, л, м, н, о, п, 1, 2, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23; 132 и; 130 о; 129 - г, д, е, 12, 13, 14; 127 и; 125 - д, е; 124 - е, 2, 3, 4; 123 - д, е, ж; 118 - и, 8; 112 - с, 6, 7; 111 - г, е, ж; 110 е; 109 - г, д, е; 99 - л, м, н, 3, 4; 100 - з, и, к, 3, 4, 5; 1 - п, р, 3; 4 л; 5 - н, о, п, р, с, т, 5; 6 - д, е, с, 2, 7, 4, 5, 6; 12 - к, 4; 13 - г, д, е, ж, з, и, к, л, м, н, т, 2, 3, 4, 5, 6; 14 - с, т, у, ф, х, ц, 4, 5, 6, 7, 12; 15 - з, и, к, 5, 6, 7, 8, 11; 16 - е, ж, з, 8, 9, 10, 11; 17 - д, е, ж, з, и, 4, 5, 6; 18 - з, и, 7; 19 - е, ж, з, и, к, л, м, н, о, п, р, с, т, у, ф, х, ц, 5, 6; 20 - л, м, н, о; 21 - з, и, л, н, о, п, р, с, ф, х, 8, 9, 10, 11; 22 - ж, з, и, к, л, 4, 5, 6; 23 - и, к, л, м, н, о, п, р, с, 4, 5; 36 - а, б, в, г, д, ж, з, 1; 37 - а, б, 5; 38 - а, б, 1, 2; 39 - а, б, в, г, д, 1, 2, 4; 40 - а, б, в, г, л, 1, 2, 3, 4; 41 - а, 1; 43 - а, б, 1, 2, 3, 4; 44 - а, в, 1; 45 - а, б, 1, 3, 4, 5, 6, 7; 46 - з, и, 6, 7; 75 - а, б, в, 1, 2, 3; 76 - 2; 77 - б, в, 1, 2, 3, 4; 78 - а, б, в, 1, 2, 3, 4, 5; 79 - а, б, 6; 83 - а, б, в, 1, 2; 84 - а, б, в, г, д, е, ж, 1, 2, 3, 4, 5, 6, 7, 8; 86 - 1; 87 - а, б, в, г, 1; 88 - 1, 2; 92 а; 98 - а, б, г, д; 97 - б, 1; 96 - б, в, 1; 156 - 1; 157 - 1; 155 - а, 1, 2, 3; 154 - а, б, в, д, 1, 2, 3; 153 - а, б; 152 - а, б, 1, 2, 3; 151 - а, 1, 2; 150 - а, б, 1, 2; 148 - а, б, в; 165 - 1.

The total area of the forest lands is 1,092.8 ha.

2. Lands located along the river and between the forest lands described in item # 1. The total area of the non-forest lands is 24.4 ha.

Appendix to
a Protocol dated May 7, 1992

BOUNDARIES OF GROUP MONUMENTS OF CULTURE, COMPLEXES, BOUNDARIES OF THEIR SURROUNDING PROTECTIVE AREAS AND REGIMES OF PROTECTION AND USE

RILA HOLY MONASTERY

A. Proposed Boundaries

I. Boundaries of Group Monuments of Culture – Complexes

1. RILA MONASTERY COMPLEX:

South-western – from point 1. formed by the crossing of a perpendicular line from the middle of the western wing with the Rilska river bank – as far as point 2., which is 100m from the middle of the western wing and 120m away from point 1.; north-western, passing at 40m along the northern wing – from point 2 to point 3, the distance between which is 280m; north, following at 90m along the bend in the northern wing – from point 3 to point 4, the distance between which is 90m, and from item 4 along the forest line as far as point 5 which is 180m from the northern corner of the eastern wing; north eastern, following along the eastern wing from point 5 to point 6, the distance between which is 90m; south-eastern – along the Manastirska river bank from point 6 to point 1.

2. BOUNDARIES OF THE ST. JOHN OF RILA'S GRAVE COMPLEX:

Western, north-western and south-eastern – along the respective outer contours of the rock; south-eastern – along the property line of the lot connecting the north-eastern and the south-western end points along the concave rock contour.

3. St. Luka Hermitage Complex:

According to the property lines indicated in the graphic appendix.

4. Pchelino Convent Complex:

According to the property lines indicated in the graphic appendix.

5. Orlitsa Convent Complex:

According to the property lines indicated in the graphic appendix.

II. Protective Area Boundaries

This area covers the strip on both sides of Rilska River and the pilgrim road from the town of Rila to the Sospata Gorge (to the north-east of the Rila Monastery). The width of the strip changes depending on the specific natural features and on the cultural and historical sites. This zone has two parts: western – from the town of Rila to Iliyna River, including certain forests and arable lands, and eastern – from Iliyna River to the Sospata Gorge, entirely in the buffer zone of the Rila Monastery Forest Nature Reserve (SG No. 34, dated April 29, 1986).

1. AREAS OF THE RILA MONASTERY FORESTRY ENTERPRISE BY SECTION AND SUBSECTION (ACCORDING TO THE 1990 FOREST DEVELOPMENT PROJECT):

147 и, 3, 4; 134 д; 133 а, и, к, л, м, н, о, п, 1, 2, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23; 132 и; 130 о; 129 г, д, е, 12, 13, 14; 127 и; 125 д, е; 124 е, 2, 3, 4; 123 д, е, ж; 118 и, 8; 112 с, 6, 7; 111 г, е, ж; 110 е; 109 г, д, е; 99 л, м, н, 3, 4; 100 з, и, к, 3, 4, 5; 1 п, р, 3; 5 н, о, п, р, с, т 5; 6 д, е, с, 2, 7, 4, 5, 6; 12 к, 4; 13 г, д, е, ж, з, и, к, л, м, н, т, 2, 3, 4, 5, 6; 14 с, т, у ф, х, ц, 4, 5, 6, 7, 12; 15 з, и, к, л м, н о, п, р, с, т, у, ф, х, ц, 5, 6; 20 л, м, н, о; 21 з, и, л, н, о, п, р, с, ф, х, 8, 9, 10, 11; 22 ж, з, и, к, л, 4, 5, 6; 23 и, к, л, м, н, о, п, р, с, 4, 5; 36 а, б, в, г, д, ж, з, 1; 37 а, б, 5; 38 а, б, 1, 2; 39

а, б, в, г, д, 1, 2, 4; 40 а, б, в, г, л, 1, 2, 3, 4; 41 а, б, 1; 42 а, 1; 43 а, б, 1, 2, 3, 4; 44 а, в, 1; 45 а, б, 1, 3, 4, 5, 6, 7; 46 з, и, 6, 7; 75 а, б, в, 1, 2, 3; 76 2; 77 б, в, 1, 2, 3, 4; 78*, б, в, 1, 2, 3, 4, 5; 79 а, б, 6; 83 а, б, в, 1, 2; 84 а, б, в, г, д, е, ж, 1, 2, 3, 4, 5, 6, 7, 8; 86 1; 87 а, б, в, г, 1; 88 1, 2; 92 а; 98 а, б, г, д; 97 б, 1; 96 б, в, 1; 156 1; 157, 1; 155 а, 1, 2, 3; 154 а, б, в, д, 1, 2, 3; 153 а, б; 152 а, б, 1, 2, 3; 151 а, 1, 2; 150 а, б, 1, 2; 148 а, б, в; 165, 1.

2. AREAS ADJACENT TO MUNICIPAL LANDS:

Along Rilska River Valley to the south and south-east from the Pastra village, bordering to the south on sections and subsections 96 б, в; 97 а, б, д; 92 а, б and to the north – on the road between the town of Rila and the Rila Monastery; to the south-east from the village of Pastra – bordering to the east on 109 д; south of the village of Pastra – within 93 а; north of the village of Pastra – within 110 е and 111 е; north of Manastirska River – within 124 е; 123 д, ж; 154 в and 153 а; south and south-east from Rilska River – bordering to the south and south-east on 149 а and 165 а and between the river and the road between the town of Rila and the Rila Monastery; north from Manastirska River – bordering on 133 а; 133 и; 120 м, н; 129 г; within 99 к, included in 99 and 110 з; around the Rila Monastery complex and around the Kocherinovo camp.

3. PART OF THE LOW-MOUNTAIN BUFFER ZONE OF THE RILA MONASTERY NATURE RESERVE (SG 34 DATED 1986):

17 д, е, ж, з, и, 4, 5, 6; 18 з, и, 7; 19 е, ж, з, и, к, л, м, н, о, п, р, с, т, у, ф, х, ц, 5, 6; 20 л, м, н, о; 21 з, и, к, н, о, п, р, с, ф, х, 8, 9, 10, 11; 22 ж, з, и, к, л, 4, 5, 6; 23 и, к, л, м, н, о, п, р, с, 4, 5; 36 а, б, в, г, д, ж, з, 1; 37 а, б, 5; 38 а, б, 1, 2; 39 а, б, в, г, д, 1, 2, 4; 40 а, б, в, г, л, 1, 2, 3, 4; 41 а, б, 1; 42 а, 1; 43 а, б, 1, 2, 3, 4; 44 а, в, 1; 45 а, б, 1, 3, 4, 5, 6, 7, with a total area of 430.4 ha of forests and 8.8 ha land.

The total area of forests is 1,092.8 ha. The area of the Zone A forests is 430.4 ha, and Zone B is 662.4 ha.

The land area is 24.4 ha. The zone of monuments of culture excludes the village of Pastra as far as its limits.

4. The sections 12 к, 4; 16 е, ж; 46 з, и; 76 2; 77 б, в, 1, 3, 4; 75 б, в and the buffer zone subsections are included in the Rila National Park with Order No. 114 dated February 24, 1992, SG No. 20, 1992 by the Minister of Environment.

B. Proposed Protection Regimes

I. Regime of Protection within Grouped Monument Complexes

1. New multi-story construction is prohibited unless for restoration of lost volume and pursuant to documented proof. The restoration projects shall be preceded by specific engineering and geological studies and shall be coordinated with the National Institute for Monuments of Culture according to Article 20 and Article 21 of the Monuments of Culture and Museums Act, and with the owners according to Article 4 of Regulation No. 17 (SG, No. 35, April 4, 1979) of the Committee for Culture.

2. It shall be mandatory to conduct research, design and contracting activities related to protection of monuments of culture (conservation, restoration, adaptation and strengthening), which shall be coordinated at all phases with the Ministry of Culture (Council for Protection of the Monuments of Culture and the National Institute for Monuments of Culture), according to Article 20 and Article 21 of the Monuments of Culture and Museums Act.

3. Low-story construction requires coordination procedures under Article 2(1), item 2 of Regulation No. 17 (SG No. 35, April 4, 1979) of the Committee for Culture.

4. It shall be allowed to carry out archeological research in the above mentioned boundaries while preserving the existing monuments of culture and of the natural environment to a maximum degree.
5. The activities allowed by the regime shall not interfere with religious rites and rituals.

II. Regimes in the Protective Zone of the Monuments of Culture

ZONE A

Zone A covers the eastern area of the protective zone of the monuments of culture covering the part of the Rila Monastery Forest Nature Reserve buffer zone from the Sospata Gorge to the north-east and as far as the boundary between sections 16 and 17 and sections 75 and 76 to the south-west.
1. The Zone A regime includes the following limitations imposed by the low-mountain nature reserve buffer zone regime (SG No. 34, April 29, 1986), confirmed with Order No. 114 of the Ministry of Environment (SG No. 20, March 10, 1992) and prohibiting:
1.1 Mining and quarrying, river flow corrections, construction of new water catchments and other activities disturbing the water regime and the natural appearance of the area.
1.2 Burning of vegetation.
1.3 Forestation with plant and brush species untypical for the region.
1.4 Camping and parking of automobiles outside the designated spaces.
1.5 Hunting.
The Zone A regime is added to by a prohibition for:
1.6 Activities disturbing the livelihood and cult functions of the monastery.
2. The Zone A regime allows for the following activities permitted by the nature reserve buffer zone regime:
2.1 Construction related only to the maintenance, functioning and needs of the Rila Holy Monastery and of other legal facilities and their owners (users). Such construction shall be based on projects prepared in keeping with the Territorial and Urban Development Act, the Monuments of Culture and Museums Act, and agreed in accordance with Article 2 (1), item 2 of Regulation No. 17 (SG No. 35, April 4, 1979) of the Committee for Culture. Where facilities included in the group monuments and complexes, or in other monastery property, the projects shall be agreed also with the leadership of the Rila Holy Monastery. (The above text is proposed as correction for item 1 of the permitting section of the nature reserve buffer zone regime, as follows:
1. Construction under development projects concerning the functioning and development of the Architectural and Historical Reserve Rila Monastery and of tourism by the Bulgarian Tourist Union.)
2.2 One-day staying.
2.3 Main selection, sanitary and selection felling according to the Rules for Determining, Development and Management of Forests and Special Purpose Areas until the time of drawing up of the Rila Nature Park Development Project.
2.4 Grazing of livestock (except goats) in the locations designated with the forest development project.
The Zone A regime shall be added to by a permit for:
2.5 Archaeological digging in keeping with the nature conservation regime, and in the forests, in agreement with the Committee for Forests and with the Ministry of Environment.

ZONE B

The Zone B regime applies to the western part of the protective zone for monuments of culture – from the boundary between sections 16 and 17 and sections 75 and 76 to the east, and as far as the limits of the town of Rila to the west.

1. The Zone B regime prohibits:

1.1 Mining and quarrying, river flow corrections, construction of new water catchments and other activities disturbing the water regime and the natural appearance of the area.

1.2 Camping and parking of automobiles outside the designated spaces.

1.3 Clear felling of coniferous and deciduous high-stem forests.

2. The Zone B regime allows:

2.1 Development and construction in the zone shall be based on projects agreed in accordance with Article 2 (1), item 2 of Regulation No. 17 (SG No. 35, April 4, 1979) of the Committee for Culture. The above applies also to development plans for the village of Pastra.

2.2 Management of state forests shall be carried out by the Rila Monastery Forestry Enterprise in accordance with forest and park development projects drawn up by specialized organizations.

2.3 Main, selection and sanitary felling and felling for reconstruction of low-value and low-productivity plantations in keeping with the Rules for Determining, Development and Management of Forests and Special Purpose Areas.

2.4 Grazing of livestock (except goats) in the locations designated with the forest development project.

2.5 The owner shall be free to choose the manner of use of agricultural lands according to their purpose. When using the land, the owner shall not damage the soil and shall observe the sanitary and hygiene, fire protection and ecological standards (Article 4, item 1 of the Agricultural Land Ownership and Use Act).

2.6 The management of monastery lands (agricultural) shall be carried out by the monastery in accordance with the land purpose and in observation of the regime adopted by the Ministry of Environment and of the regulated cultural and historical regime, and for the monastery forest – according to the Forests Act, the forest development project and the park development project.

2.7 Archaeological digging. Digging in the forests shall be agreed with the Committee of Forests and with the Ministry of Environment.

NOTE:

The possibilities and conditions to legalize future use in keeping with the Territorial and Urban Development Act, the Monuments of Culture and Museums Act and other regulations, or removal of illegally constructed facilities in the protection zone shall be studied by a special committee including representatives of the Ministry of Territorial Development, Housing Policy and Construction, of the State Inspection for Territorial Development and Construction Control, of the National Institute for Monuments of Culture, of the Rila Municipality etc.

We propose to the Minister of Territorial Development, Housing Policy and Construction to issue an order appointing such a committee pursuant to these rulings.

The committee recommends to the Ministry of Culture and to the Ministry of Territorial Development, Housing Policy and Construction that pursuant to the Monuments of Culture and Museums Act and these rulings, they issue a joint Regulation on the Protection and Use of Monuments of Culture in the Rila Holy

Monastery and their protective zone, with regard to their exceptional national and supranational significance. The draft of this Regulation shall be agreed upon between the Ministry of Environment, the Committee of Forests, the Ministry of Agricultural Development, Land Use and Restoration of Land Title and the management of the Rila Holy Monastery.

Until the Regulation is issued, these rulings shall be considered final instructions for the protection and use of monuments of culture and of their protective zone pursuant to Article 3, paragraph 3 of Regulation 17 (SG No. 35, April 4, 1979) of the Committee for Culture and shall be brought to the attention of the concerned and interested institutions, units and persons.

Appendix № 5

Ministry of Environment and Water
Order No RD-310 dated June 26, 2000

Pursuant to article 42, paragraph 5 in relation to Article 41, item 4, article 29 and paragraph 2, item 1 of the Protected Areas Act

1. I re-categorize the Rila Nature Park designated with Order 114 dated February 24, 1992 (SG, No. 20 dated 1992), amended with Order RD-247 dated July 19, 1999 (SG, No. 67 dated 1992), into a nature park called the Rila Monastery.

2. The Rila Monastery Nature park covers 27,370.7 ha as follows:

2.1. forests of the Rila Municipality, Kyustendil area, according to the 1990 forest development project of the Rila Monastery State Forestry Enterpries, sections: 1 а-г, е, ж, 1, 2; 2; 3; 4а-д, 1-3; 8-12; 14а-в, 1, 8-11; 15а, б, 1, 2, 9; 16а-ж, м, 1-5; 17-45; 46а-и, 1-5; 47-74; 75г-к; 76; 77а-к, 1, 3-5; 78г-л, 6; 79б-п, 2-5; 80-82; 83г-т, 4-9; 84з-ч, 8(part), 9-19; 85; 86а-я, 2-5; 87д-п, 2-5; 88а-т, 3-6; 89-91; 101-108; 113-117; 119; 120; 121а-е, 1, 2; 400-410, with total area of 14,370.7 ha;

2.2. high-mountain pastures and meadows in the Rila Municipality, area of Kyustendil, with total area of 13,000 ha.

3. The Rila Monastery Forest Reserve, now in the Nature park, shall retain its regime.

4. Apart from the activities under Article 31 of the Protected Areas Act, I prohibit in the Rila Monastery Nature Park:

4.1.construction unless provided for under the Management Plan and related to the needs of administration, science and education, tourism, animal breeding (shelters) and forest road maintenance;

4.2. damaging of rock formations, trees and bushes, and picking of flowers, as well as intentional disturbance of wild animals;

4.3. grazing of goats;

4.4. use of fertilizers and plant protection chemicals;

4.5. clear felling and forestation with species that are not inherent in the region or in the forest vegetation belts, as well as seeds and seedlings from other regions;

4.6. gathering of herbs, forest fruits and mushrooms in quantities and manner causing their destruction or harmful to their renewal;

4.7. setting of traps, use of poisons and sedatives when culling of wild animals.

5. I allow in the Rila Monastery Nature Park:

5.1. hay-making and grazing of livestock (other than goats) in the pastures and in the meadows;

5.2. leading of livestock along specific trails;

5.3. gathering of herbs, forest fruits and mushrooms in quantities, regions and manner defined in the park Management Plan and in the park development projet;

5.4. renewal, selective cutting and improvement of the integral protective functions and sanitary condition of forests;

5.5. culling of wild animals where they endanger the existence of other species or ecosystems through processes of degradation, or the health of their own

populations, allowed by the park administration and following agreement with the Ministry of Agriculture and Forests, with the Ministry of Environment and with the Bulgarian Academy of Sciences.

5.6. fishing in the areas defined in the Management Plan.

6. I revoke Order No. 358 dated February 24, 1992 (SG, No.20 dated 1992) and Order No. 247 dated July 19, 1999 (SG, No.67 dated 1999) in the park section described in item 2.

7. The change shall be entered into the State Registry of Protected Areas.

8. Any violator of this order shall be punished according to Article 31 of the Administrative Violations and Penalties Act, unless subject to heavier sanction.

9. This Order shall become effective as of its promulgation in the State Gazette.

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Minister **E. Maneva**

Appendix № 6

List of the Documents Restoring and Protecting the Rights of the Rila Monastery and its Property

No	Document	Year	Source
1.	Royal decree by Tzar Ivan Shishman	1378	Encyclopadeia Bulgaria, vol. 5, 1986
2.	Royal decree by Sultan Baiazid I	1389 – 1402	Hr. Hristov, G. Stoikov and K. Mitiaev, The Rila Monastery. History. Architecture. Carvings. Murals. Bulgarian Academy of Sciences, 1957
3.	Royal decree by Sultan Mohamet I	1413 – 1421	Hr. Hristov, G. Stoikov and K. Mitiaev, The Rila Monastery. History. Architecture. Carvings. Murals. Bulgarian Academy of Sciences, 1957
4.	Royal decree by Sultan Baiazid II	1498	Hr. Hristov, G. Stoikov and K. Mitiaev, The Rila Monastery. History. Architecture. Carvings. Murals. Bulgarian Academy of Sciences, 1957
5.	Royal decree by Sultan Selim I	1519	Hr. Hristov, G. Stoikov and K. Mitiaev, The Rila Monastery. History. Architecture. Carvings. Murals. Bulgarian Academy of Sciences, 1957
6.	Decree 842 of His Magesty Prince Ferdinand I	5.XII.1894	SG, No. 284/1894
7	Boris III, king of the Bulgarians, issued a law adopted by the XIX Parliament	1923	SG, No. 237/23.I.1923
8	Forests Act	1932	SG, No. 66/9.IV.1932 and No. 71/1.VII.1932
9	Decree 403 of the National Assembly	Nov 2,1961	Archives of the National Assembly
10	Decree 75 of the Council of Ministers	April 29, 1991	SG, No. 36/7.V.1991
11	Compensation for State Appropriated Property, Including Monastery Property Act	Nov 7,1997	SG, No. 107/18.XI.1997

Appendix № 7

Addresses and Phone Numbers of Interested Parties Responsible for the Protection and Management of the Nature Park

No	*Institution*	*Contact Point*
1	Rila Monastery	2643 Rila Monastery Kyustendil Area phone: 07054/22-08 – reception
2	Rila Monastery NP Directorate	2 Benkovski St., 2630 Rila phone: 07054/2293 dpp_rilski_manastir@mail.bg dpprilski_manastir@nug.bg
3	Rila Monastery State Forestry Board	Town of Rila 2630 Phone: 07054/2040
4	Fishing and Aquacultures Executive Agency	Hristo Botev Bld. № 17 1040 Sofia phone: 951 57 18, 953 02 41, 952 61 08 press@nafa-bg.org
5	Rila National Park	12B Bistritsa St. Varosha, 2700 Blagoevgrad phone: 073/880 537 office@rilanationalpark.org www.bulgariannationalparks.org
6	MOEW-RIEW Town of Sofia	136 Tzar Boris III blvd. 1618 Sofia 940-64-40, 855-70-75 fax/phone 955-72-18 riew-sofia@riew-sofia.government.bg
7	Basin Directorate Blagoevgrad	18 Mitropolit Boris St, POB 441 2700 Blagoevgrad phone:073/88-29-9, fax 073/88-29-93 bd-blgr@pirin.com
8	National Institute for Monuments and Culture	16 Dondukov blvd. 1000 Sofia phone: 987-48-01-exchange
9	Regional Administration Kyustendil	44 Demokracia St. 2500 Kyustendil phone: 078/5-06-70, 078/5-06-50 fax: 078/ 5-06-90 oblast@kn.government.bg www.kn.government.bg
10	Rila Municipality	1 Vazrazhdane Square Kyustendil Area 2630 Rila phone: 07054/22-30 - mayor phone: 07054/20-20 – secretary, archives

Appendix № 7

No	*Institution*	*Contact Point*
11	The National Energy Complex Dams and Cascades PLC, Blagoevgrad Branch	36 Г Dame Gruev St Water reservoir region 2700 Blagoevgrad 073/88-48-81
12	Regional Road Department Dupnitsa	2600 Dupnitsa phone: 0701/5-02-53, 5-12-08
13	Profilaxis, rehabilitation and recreation, Sapareva Bania	2 Germaneia St 2650 Sapareva Bania 0707/23-30
14	Mountain Rescue Service Blagoevgrad	048 778642 048 778636
15	Union of Hunters and Fishmermen Dupnitsa	2 Loza St. 2600 Dupnitsa phone: 0701/5-08-38

Table of Geological Eras and Periods and their Main Geological Manifestation in the Park

Geological era	Period	Main Geological Manifestation throughout the World	Main Geological Manifestation in Rila
Precambrian	**Archaic** beginning more than 4,000 million years – end 2,600 million years	Occurrence of the first organisms – bacteria and blue-green algae Formation of stable parts of the Earth's crust – shields and protoplatforms. Formation of the first aquatic and gaseous shell around the Earth. The terrestrial areas are lifeless deserts. Severe tectonic movements and active magma activity, ubiquitous rock metamorphism	
	Proterozoic Beginning 2600-end 570 million years	Occurrence of the first animals – jellyfish, worms. Formation of stable areas (shields) – Baltic, Canadian, Brasilian, Indian, Australian and other mobile belts. Heavy magma and tectonic activity. Severe rock metamorphism. The atmosphere is enriched in oxygen. Differentiation of climate, vast continental ice caps.	Introduction of metamorphous rocks Formation of the basis of the Rila pluton.
Paleozoic	**Cambrian** Beginning 570 – end 490 million years	Occurrence of trilobites, shells, cephalopods. Marine basins cover the Siberian and Chinese platforms almost entirely, and partially the Russian and Canadian. Gondwana land remains dry. Folding occurs in the moving belts: Saalic glaciation phase (Mongo-Ochotsk belt) and Vermontian orogeny (Appalachian belt).	The territory of the Rhodopides is entirely terrestrial.

Geological era	Period	Main Geological Manifestation throughout the World	Main Geological Manifestation in Rila
Paleozoic	**Ordovician** Beginning 490 – end 435 million years	Occurrence of the first vertebrates, corals etc. and of the first terrestrial vegetation (psylophytes) Subsidence of the northern continents and marine transgression over them. At the end of the period – tectonic folding phase (Appalachian, Grampian, Alpine-Himalayan belt). Vast continental glaciations over northern Africa.	The area is subject to severe tectonic movements.
	Silurian Beginning 435 – end 400 million years	Occurrence of shelled fishes and terrestrial insects. Transgression over the western part of the Russian platform. The Siberian and part of the Canadian platforms are under water. The Chinese platform and Gondwana land are dry. Folding of the entire Grampian belt and partial folding of the Ural-Tienshan and Mongol-Ohotsk belts. Formation of new mountain systems – caledonides. Formation of two paleocontinents in the north – Laurasia and Angaraland. Raising of the continents and marine regression at the end of the period.	Transgression of the Ordovician sea water in the early Silurian owing to slow dry-land subsidence. Beginning of sediments forming graptoloid schists and this subsidence of the Earth's crust has formed the so-called Protothetic geosyncline.
	Devonian Beginning 400 – end 345 million years	Occurrence of goniatites, terrestrial (stegocephalians), ferns etc. During the middle Devonian – another raising and regression of the northern continents and transgression of the sea on parts of them. Another raising and regression at the end of the period. Weak folding (Bretonian orogeny) in the moving belts, marking the beginning of a new Tectonic cycle. Vegetation covers significant portions of the earth's surface.	Continued development and lengthening of the protothetic geosyncline. The Rhodopides is subject to folding in the Caledonian folding orogeny.

Geological era	Period	Main Geological Manifestation throughout the World	Main Geological Manifestation in Rila
Paleozoic	**Carboniferous** Beginning 435 – end 280 million years	Occurrence of belemnites and reptiles. In the early Carboniferous – subsidence of the northern continents and marine transgression over the caledonites, the Russian, Canadian and, partially, the Siberian and Chinese platforms. Folding of parts of the Alpine-Himalayan, Ural-Tienshen, Mongol-Ohotsk and Appalachian belts. Thick formation of coal. In Gondwanaland – vast glaciations.	Slow raising of the Earth's crust early in the period with partial protrusion above water. Formation of shallow fresh-water basins in the periphery where lush Carboniferous vegetation evolves and sediments, including coal, form. Severe folding movement at the end of the period causing folding of the Carboniferous sediments and their intrusion into the plutonic bodies of the Rhodopides.
	Permian Beginning 280– end 235 million years	Occurrence of ammonites and predacious reptiles. General trend toward raising of the continents and marine regression. The southern continent Gondwanaland breaks in the area of EasternAfrica and the island of Madagascar. Occurrence of the final Hercynian folding in the moving belts. Final folding of the Ural-Tienshen, Mongol-Ohotsk, and Appalachian belts and of large parts of the Alpine-Himalayan belts. Occurrence of mountain systems – Hercynides – in their place. Fusion of all northern continents in one – Laurasia.	Continuing raising of the Rhodopides above the sea level as a mountainous area, part of the Hercynian mountain system.

Geological era	Period	Main Geological Manifestation throughout the World	Main Geological Manifestation in Rila
Mesozoic	**Triassic** Beginning 235 – end 185 million years	Occurrence of hexactinal corals, dinosaurs, mammals. Extinction of ceratites, stegocepahlians and synapsid reptiles. The continents are highly raised early in the period and dry land prevails. The relief is severely segmented. Insignificant transgressions over the Hercynides, the Russian and the Canadian platforms during the middle and late Triassic. Continuing fissuring of Gondwanaland in the area of today's Indian Ocean. Severe magma activity in the Cordillera belt.	The Triassic seas have covered almost the entire territory of Bulgaria except for the southernmost parts, the Rhodopides, where increasing denudation occurred.
	Jurassic Beginning 185– end 132 million years	Occurrence of flying lizards, birds etc. Subsidence of the northern continents and marine transgression. Continued fissuring of Gondwanaland accompanied by basic volcanic processes (Africa, South America). By the end of the period – severe folding (early Kimmerian ogoreny) in the Cordillera and in the East Asian belt.	Continuing raising of the Rhodopides, remaining dry and above the Jurassic sea during the entire period. Formation of deep (approximately 1,000m) flyschoid sediments caused by the denudation.
	Cretaceous Beginning 132– end 66 million years	Occurrence of toothless birds and angiospermous plants. Extinction of ammonites, dinosaurs, flying reptiles, ichthyosaurs, toothed birds etc. In the beginning – little continental subsidence. During the late Cretaceous – huge transgression. Fissuring of Gondwanaland and Laurasia and formation of the Atlantic Ocean. Completion of the old alpine (Pacific) tectonic stage and formation of a ring of mountains surrounding the Pacific ocean.	During the lower Cretaceous – the area is part of the socalled large Thracian dry land. Formation of deep sediments (deeper than 2,000m) in the surrounding seas. During the entire Cretaceous period the Rhodopides remain dry.

Geological era	Period	Main Geological Manifestation throughout the World	Main Geological Manifestation in Rila
Neozoic	**Paleogene** Beginning 66– end 25 million years	Occurrence of late ungulates, late raptors, primates. By the middle of the period – the last large transgression over the continent (Western Europe, the Ukraine, Middle Asia, NorthernAfrica, the Arabian peninsula). By the end (during the Oligocene) – regression. The Alpine-Himalayan belt is fissured into sea firths. Occurrence of severe folding movements there: Illyrian, Pyrenean and Savian orogeny. Formation of the base of today's Alpine-Himalayan mountain system.	Elevation and opening of the granite body of the Rila mountain. The continental dry area is relatively small. The proto Rila mountain was a hilly area, closely connected to the western Rhodopes. Its highest parts are around the Musala Peak.
	Neogene Beginning 25– end 1.5 million years	Occurrence of new predators, mastodons, rhinoceros, hiparions, apes. Gradual elevation of the continents, releasing of the water basins and formation of their current outline. Folding movements in the moving belts (mainly the Alpine-Himalayan) Styrian, Attic, Rhodanian and Vlachian orogeny. Final raising and folding of the Alpine-Himalayan mountain system. Formation of the largest petrol and gas deposits.	By the end of the Miocene, the proto Rila mountain had risen by about 500m. Beginning of a new process of denudation and the early Miocene surface is leveled by the end of the early Miocene. Proto Rila towered over the surrounding water basins. During the late Pliocene, the mountain had risen by another 600m. Formation of the Saparevo and Govedartsi saddles, and of the kettle depressions along the Struma and Mesta Rivers. Gradual sedimentation of the upper Pliocene basins. Another raising during the late Pleistocene along a concentric fault system creating the current boundaries of the Rila mountain.

Geological era	Period	Main Geological Manifestation throughout the World	Main Geological Manifestation in Rila
Neozoic	**Quaternary** Beginning 1.5– on-going	Occurrence of the human race. Extinction of mammoths, wooly rhinoceros, saber-tooth tiger, cave bear, cave lion, giant deer etc. Formation by continental undulations of the current relief and insignificant changes in the outline of continents. Formation of the current shape of the Mediterranean, Black and Caspian seas. Vast and several continental glaciations in the northern hemisphere. Severe human impact on the environment (including on the geological and geomorphologic processes and phenomena).	Continuing elevation of the Rila pluton by 3 mm on average anually. Denudation changes of the mountain caused by the Pleistocene glaciations. Deposition in the foot of the mountain of deep fluvial-glacial cones such as the Iskar, Samokov, German, Sapareva bania, Rila, Kocherinovo and Maritsa cones. Formation of many glacial forms in Rila such as moraines, moraine material, trough valleys, cirques, cirque lakes etc. caused by the regression of glaciers after the last glaciation.

Appendix № 9

Types and Varieties of Minerals Established in the Rila Monastery Nature Park

1.	**Actinolite** 3	21.	**Magnetite** 1, 2, 3, 4, 5
2.	Alanite 1, 4, 5	22.	**Microcline** 1, 4, 5
3.	**Albite** 1, 5, 7	23.	**Muscovite** 1, 4, 5
4.	**Almandine** 1, 4, 5	24.	**Oligoclase** 1, 4, 5
5.	**Amphibole** 1, 3, 4, 5	25.	**Orthoclase** 1, 4, 5
6.	Andalusite 1	26.	Pyrite 1, 4, 5, 6
7.	Apatite 1, 2, 4, 5	27.	Serpentine 3
8.	Beryl 5	28.	Scapolite 5, 6
9.	**Biotite** 1, 4, 5	29.	Specularite 5, 6
10.	Vesuvianite 6	30.	Staurolite 1
11.	Wollastonite 6	31.	Sphene 1, 2, 4, 5
12.	**Granite** 1, 2, 4, 5, 6	32.	Talc 3
13.	**Grossular** 2, 5, 6	33.	Tremolite 3, 5, 6
14.	**Diospide** 2, 3, 5,6	34.	Thulite 5, 6
15.	Dolomite 2	35.	**Phlogopite** 2, 3, 5, 6
16.	**Epidote** 1, 3, 5, 6	36.	Chematite 1, 5, 6
17.	Ilmenite 1, 2, 3, 5	37.	**Chlorite** 3, 5
18.	**Calcite** 1, 2, 3, 6	38.	**Chloritoid** 1
19.	**Quartz** 1, 4, 5	39.	Zirconium 1, 2, 4, 5
20.	Cyanite 1	40.	Zoisite 5, 6

* The minerals shown in bold face occur more frequently.

Base rocks:
1 – Gneiss, amphibolites, schists
2 – Marbles
3 – Ultrabasite rocks
4 – Granitoids
5 – Pegmatites, alpites
6 – Skarns

List of Habitats in the Rila Monastery Nature Park according to the CORINE Habitats Classification

No	Code	Habitat name	Habitats Directive Appendix I	Resolution No. 4 of the Bern Convention	Biodiversity Act
1	22.1	Permanent lakes and ponds			
2	22.2	Temporary fresh waterbodies			
3	24.1	Rivers and streams			
4	24.17	Waterfalls			1
5	24.21	River rubble embankments without vegetation			
6	24.22	Vegetation on river rubble embankments			
7	24.6	River bottoms made of rock, cobblestones and large stones			
8	31.431	Mountain Juniperus nana scrub *(Juniperus sibirica)*	I		
9	31.44	High mountain *Empetrum nigrum* and *Vaccinium uliginosum* heaths	I		
10	31.461	Rhodopide Bruckentalia heaths *(Bruckenthalia spiculifolia)*	I	+	1
11	31.47	Alpide bearberry heaths *(Arctostaohyllos uva-ursi)*	I		1
12	31.4915	Carpatho-Balkanide Dryas mats *(Drias octopetala)*	I		
13	31.4917	Rhodopide mountain avens mats *(Geum sp.)*	I		
14	31.4A2	Balkano-Hellenic dwarf bilberry heaths *(Vaccinium myrtillus, V. vitis-idaea)*	I		
15	31.4B2	Balkano-Rhodopide Chamaecytisus absinthioides heaths	I		
16	31.58	Balkano-Rhodopide dwarf mountain pine scrub *(Pinus mugo)*	I		1
17	31.6115	Rhodopide green alder brush *(Alnus viridis)*			
18	31.621631	Rhodopide subalpine lapland willow (*Salix lapponum)*			
19	31.621632	Rhodopide small willow brush (*Salix waldsteiniana) etc.*			

20	31.621633	Rhodopide tall willow brush *Salix caprea, Salix silesiaca* etc.			
21	31.631	Subalpine Sorbus brush *(Sorbus aucuparia)*			
22	31.633	Subalpine bramble brush *(Rubus sp.)*			
23	31.8C2	Boreal hazel thickets *(Corylus avellana)*			
24	31.88	Common juniper thickets *(Juniperus communis)*	I		1
25	35.73	Balkanic montane Agrostis Festuca grass swards			
26	36.1112	Alpide *Salix herbacea* snow patches on acidic soil			
27	36.1113	Alpide *Omalotheca supina* snow patches on acidic soil			
28	36.1114	Alpide *Luzula spadicea* snow patches on acidic soil			
	36.3116	Alpide snow buttercup snow-patch communities *(Ranunculus crenatus)* on acidic soil			
	36.3117	Alpide *Alopecurus riloensis* snow-patch communities on acidic soil			
29	36.11212	Oro-boreal *Polytrichum norvegicum* snow-patch communities on acidic soil			
30	36.12211	Alpide *Salix retusa-reticulata* snow patches on limestone			
31	36.1234	Snow grass snow-patch communities on limestone			
32	36.318	Oro-Moesian mat-grass swards *(Nardus stricta)*			
33	36.391	Oro-Moesian *Festuca paniculata* grasslands			
34	36.3921	Oro-Moesian *Festuca valida* grasslands			
	36.3924	Oro-Moezian *Festuca amethystima ssp. Kummeri* grasslands			
35	36.393	Oro-Moesian Poa-violacaea grasslands *(Bellardiochloa violacea)*			
36	36.3941	Oro-Moesian crooked sedge grasslands *(Carex curvula)*			
37	36.39421	Rhodopide *Festuca riloensis* grasslands			
38	36.3943	Oro-Moesian *Festuca airoides* grasslands			
39	36.3944	Oro-Moesian *Sesleria comosa* grasslands			
40	36.3945	Oro-Moesian *Agrostis rupestris* grasslands			
41	36.427	Pirin *Juncus Trifidus* windswept grasslands (communities with *Elyna bellardii,Carex rupestris, Arenaria ciliata*)	I		1
42	37.872	Sub-Alpine Moesian tall herb communities *(Trolius europaesus)*	I		

43	37.8721	Moesian Balkan thistle tall herb communities *(Cirsium sp. and Carduus sp. dominated)*	I		
44	37.8722	Moesian white butterbur tall herb communities (*Petasites albus)*	I		
45	37.8723	Moesian hogweed tall herb communities *(Heracleum sp. dominated*)	I		
46	37.8724	Moesian scarlet avens tall herb communities *(Geum coccineum*)	I		
47	37.88	*Rumex alpinus* communities	I		
48	41.1911	South-Western Moesian beech forests (with *Luzula sp.)*		+	1
49	41.1912	South-Western Moesian fir-beech forests (*Fagus sylvatica)*		+	1
50	41.19122	South-Western Moesian fir-beech forests (*Fagus sylvatica, Abies alba)*		+	1
51	41.19123	South-Western Moesian hornbeam-beech forests (*Carpinus betulus, Fagus sylvatica)*		+	1
52	41.46213	Moesian Ash-Sycamore forests on slopes (*Fraxinus-Acer pseudoplatanus)*	I	+	1
53	41.763	Hellenic-Moesian Durmast oak forests (*Quercus dalechampii)*		+	1
54	41.7372	Moesian Pubescent oak forests (*Quercus pubescens)*		+	1
55	41.73721	Moesian Pubescent oak-Oriental hornbeam forests (*Quercus pubescens-Carpinus orientalis)*		+	1
56	41.762	Hellenic-Moesian *Quercus frainetto* forests		+	1
57	41.7641	Hellenic-Moesian mountain *Quercus petraea* forests		+	1
58	41.7642	Rila oak *Qurcus protoroburoides* forests		+	1
59	41.813	Mountain hornbeam *Ostrya carpinifolia* forests		+	1
60	41.A22	Dacio-Moesian hornbeam forests *(Carpinus betulus)*			
61	41.B3511	Rhodopide birch forests *(Betula pendula)*			
62	41.D3	Montane aspen stands *(Popupus tremula)*			
63	42.1613	Western Rhodopide fir forests *(Abies alba)*		+	1
64	42.171	*Abies borisii-regis* forests		+	1
65	42.2413	Moeso-Macedonian spruce forests *(Picea abies)*		+	1
66	42.5C2	Rhodopide Scots pine forests *(Pinus sylvestris)*		+	1
67	42.6618	Rhodopide Pallas' pine forests *(Pinus nigra ssp. Pallasiana)*	I	+	1

68	42.723	Rila and Pirin Macedonian pine forests *(Pinus peuce)*		+	1
69	44.217	Rhodopide gallery alder forests (*Alnus incana)*		+	
70	52.22	Mountain cottongrass bogs *(Eriophorum sp., div.)*	I	+	
71	52.23	Mountane sphagnum blankets	I	+	
72	54.1113	Boreal-Alpide spring-side *Phylonotis* communities			
73	54.1114	Boreal *Drepanocladus* dominated springs			
74	54.4263	*Carex nigra* dominated fens			1
75	61.1116	Rhodopide mountain sorrel screes *(*with *Rumex scutatus)*	I		1
76	61.115	Carpatho-Balkanic saxifrage-speedwell-ragwort screes *(Saxifraga sp., Veronica sp.,Senecio sp.)*	I		1
77	61.25	Rhodopide calcareous screes	I		1
78	62.1A122	Calcareous vertical walls in Rila	I		1
79	62.252	Carpatho-Balkano-Rhodopide vertical rocks with *Silene*	I		1
80	62.41	Calcareous vertical walls without vegetation	I		
81	62.42	Silicate vertical walls without vegetation	I		
82	83.3111	Native fir, spruce, larch forests			
83	83.312	Exotic conifer plantations			
84	87.2	Ruderal communities			
85	95	Upper forest line ecotones	28	22	30

Key:

I – Habitats according to Appendix 1 of Directive 92/43 dated 21.05.1992 of the EU Council on Protection of Natural Habitats of the Wild Flora and Fauna.

+ - Resolution No. 4 (6.12.1996) – endangered natural habitats requiring specific conservation measures

1 – Habitats included in Appendix 1 under Article 6, paragraph 1, item 1 of the Biodiversity Act (2002), for the protection of which protected areas are designated.

Characteristic and Evaluation of the Health Status of Forests in the RMNP Determined During the REA in 2001

Station No.	Habitat code	Tree species	% presence	Cp.d cm	Cp. h m	Above sea level (m)	Health Status					Degree of damage			K	Evaluation
							0	1	2	3	4	Pathol. causes	Enthom. causes	Abiotic damage		
I. Elder forests																
1BB	42.217	*Al. incana*	10	18.5	17.0	1,015	90.0	5.0	0.0	2.5	2.5	+	+	++	24.5	good
		F.s.,Salix,Acer	r													
2I-1	42.217	*Al. incana*	10	11.5	16.0	1,080	72.6	27.4	0.0	0.0	0.0	+	+	++	25.4	good
		Salix,Acer	r													
5I-2	42.217	*Al.incana*	10	15.9	17.0	1,250	55.0	30.0	7.5	0.0	7.5	++	+	+	35.0	good
		Salix,Acer,Ab.	r													
8I-3	31.6115	*Al.viridis*	4	12.0	6.0	1,423	0.0	56.0	24.0	4.0	16.0	+	+	++	46.1	satisfactory
		Salix sp.	6	10.5	5.0		27.0	27.0	24.0	25.0	3.0	+	++	++	50.0	satisfactory
II. Beech forests																
32K-3	41.1912	*F.silvatica*	10	37.0	26.0	1,285	17.5	67.5	10.0	2.5	2.5	+	++	++	41.0	good
		Q.s.,Ac.c.,Ac.p.	r													
31.K201	41.1912	*F.silvatica*	10	35.5	16-18	1,546	0.0	47.6	38.1	4.7	9.6	+	++	+	36.6	good
		P.tr.	r													
36BUK	41.1912	*F.silvatica*	10	36.0	20-22	1,321	7.0	44.1	47.1	2.3	2.5	+	++	++	49.8	good
		P.tr.	r													
LZ-1	41.1912	*F.silvatica*	10	31.5	20-22	1,050	-	-	-	-	-	+	+	+	-	good
		P.tr., Carp.	r													
III. Oak forests																
35QR1	41.7642	*Q.protoroboroides*	10	45.0	15-17	1,429	2.5	37.5	40.0	2.5	17.5	+	+	++	59.0	satisfactory
		Q.petraea														good
41RD	41.7642	*Q.protoroboroides*	10	70-80/	15-17	1,340	13.3	43.3	30.0	3.4	10.0	+	+	++	50.7	satisfactory
		Q.petraea		36-40												good
		F.s.,Cr.	r													
IV. Scots pine forests																
30K2	42.5C2	*P.silvestris*	10	25.4	20-22	1,621	2.5	57.5	37.5	0.0	2.5	+	-	+	53.0	good
		B.a.	r													

Station No.	Habitat code	Tree species	% presence	Cp.d cm	Cp. h m	Above sea level (m)	Health Status					Degree of damage			K	Evaluation
							0	1	2	3	4	Pathol. causes	Enthom. causes	Abiotic damage		
40DB4	42.5C2	*P.silvestris*	10	35.0	12-13	1,813	-	-	-	-	-	+	-	+	-	-
		S.ar.	r													
46ZIM	42.5C2	*P.silvestris*	9	42.0	18.0	2,024	0.0	32.3	61.3	3.2	3.2	+	-	+	55.3	good
		P.peuce	1													
11RR02	425C2	*P.silvestris*	7	29.0	19.0	1,576	11.6	50.0	30.8	0.0	7.6	+	-	+	48.4	good
		Al.alba	1				40.0	60.0	-	-	-	+	-	+	32.0	good
		P.abies	1				-	-	-	-	-	-	-	-	-	-
		B.alba	1				14.3	28.6	42.9	0.0	14.2	+	+	++	73.7	satisfactory
V. Mixed coniferous fir and spruce forests																
18FHM	42.1613	*Al.alba*	7	40.4	26.0	1,576	37.0	37.0	11.0	0.2	14.8	+	++	++	43.0	satisfactory
		P.abies	3				54.5	45.5	0.0	0.0	0.0	+	+	-	29.1	
		B.a.,F.s.,P.tr.	r													
27RZ2	42.1613	*Ab.alba*	8	30.0	21.0	1,464	20.8	50.0	16.6	0.0	12.6	++	++	++	47.3	satisfactory
		P.abies	2				80.0	20.0	0.0	0.0	0.0	+	+	-	45.0	
		F.s.	r													
28RZ01	42.1613	*Ab.alba*	6	37.3	28.0	1,660	31.6	36.8	15.8	0.0	15.8	++	++	++	46.3	satisfactory
		P.abies	4				40.0	30.0	10.0	0.0	20.0	+	+	-	46.0	
9RR	42.1613	*Ab.alba*	6	35.4	29.0	1,576	37.5	50.0	12.5	0.0	0.0	++	+	+	24.8	good
		P.abies	3	14.7			58.6	32.1	0.5	0.0	0.0	+	++	+	35.0	
		B.a., F.s.	1													
16FH	42.2413	*P.abies*	5	48.6	29.0	1,795	33.3	52.3	4.7	0.0	9.7	++	+	+	40.0	good
		Ab.alba	4	46.8			0.0	76.9	15.3	0.0	7.8	++	++	++	47.7	
		F.silvestris	1	31.0												
13MR	42.2413	*P.abies*	5	45.7	30.0	1,719	61.9	33.3	37.5	0.0	0.0	+	++	+	28.5	very good
		Ab.alba	2	41.7			12.5	37.5	37.5	0.0	12.5	+	+	+	52.5	good
		P.silvestris	3	36.0			30.0	50.0	20.0	0.0	0.0	+	+	-	58.0	
		B.a.,S.ar.	r													
26RZ1	42.2413	*P.abies*	10	38.1	24.0	1,748	16.6	52.7	19.4	0.0	11.3	+	+	+	47.3	good
		Ab.alba	r													
VI. Macedonian pine forests																
23TR1	42.723	*P.peuce*	8	33.9	22.0	1,994	33.3	43.4	16.6	0.0	6.7	+	+	+	40.6	good
		P.abies	2													

Station No.	Habitat code	Tree species	% presence	Cp.d cm	Cp. h m	Above sea level (m)	Health Status					Degree of damage			K	Evaluation
							0	1	2	3	4	Pathol. causes	Enthom. causes	Abiotic damage		
22TR2	42.723	*P.peuce*	8	41.1	18-20	2,100	19.3	48.4	24.6	3.2	6.5	+	+	++	45.8	good
		P.abies	2													
38DB3	42.723	*P.peuce*	10	38.0	12-16	2,049	7.7	79.4	19.9	0.0	0.0	+	+	+	41.0	very good
		Ab.a., P.ab.	r													
43BX4	42.723	*P.peuce*	6	34.0	16-17	2,024	19.1	80.9	0.0	0.0	0.0	+	-	+	34.0	very good
		P.silvestris	4	50.8			0.0	36.5	63.5	0.0	0.0	-	-	-		
49BAR	42.723	*P.peuce*	10	47.0	22.0	1,856	5.1	59.0	30.7	5.2	0.0	+	+	+	47.0	good
VII. Dwarf pine communities																
45MER	31.58	*P.mugo*	10	-	-	2,219	-	-	-	-	-	+	+	-	-	very good

Key: I. Abbreviations: - in column 1: number and name of the REA station where the evaluation was carried out;
- in column 3: *F.s. - Fagus silvatica; Ab.a. - Abies alba; Q.s. - Quercus sesiliflora; Ac.c. - Acer campestris; Ac.p. - Acer pseudoplatanus; P.tr. - Populus tremula; Carp. - Carpinus* sp.; *Cr. - Crataegus* sp.; *B.a. - Betula alba; S.ar. - Sorbus aria*

II. Health status (assessed by defoliation and leaf/needle colors): 0 – healthy (defoliation – 0-10%, color – 0-10%); 1 – light damage (defoliation – 11-25%, color – 11-25%); 2 – average damage (defoliation – 26-60%, color – 26-60%); 3 – severe damage (defoliation – над 60%%, color – over 60%); 4 – dry (defoliation – 100%, color – 100%).

III. Degree of damage: + - light; ++ - average; +++ - severe

IV. K (column 16) – average weighted damage ratio

Appendix № 12

List of sections and subsections of the Rila Monastery NP according to the 2000 Forest Management Plan, affected by fire in 2000

Section	Sub-section
2	а, б, в,г, д, е, ж, з, р, с
3	а,б, в, г, д, з, и, к, н
4	б, г, д, е
7	а, б, в, г
8	а, б, в, ж, з, и, к, л
9	г, д, е, ж, з, н, о, п, р
28	г, м
29	а
48	н
49	б, в, г, д
50	е
51	а
53	е, м, н, р, с
54	р, с
67	о
68	ж, з, л
69	т
102	в, г, д, е, ж, з,
115	д
116	в, г, д
117	а, в, г, д, е
119	а, б, в, г, д, е, ж, з, и
120	а, б, в, г, д, е
121	а, б, в, г, д, е, ж, з, и

List of higher plant species of conservation significance in Rila Monastery Nature Park

No	Taxon	Endemic			Relict	BDA	RDB	IUCN	E/ECE 1249	Bern	D92/43	CITES
		Local	Bulg.	Balkan								
1.	*Abies alba* Mill.				+							
2.	*Abies borisii-regis* Mattfeld			+	+							
3.	*Acer campestre* L.				+							
4.	*Acer heldreichii* Orph. ex Boiss.			+		3	R	I				
5.	*Acer hyrcanum* Fisch. et C. A. Mey				+							
6.	*Acer pseudoplatanus* L.				+							
7.	*Acer tataricum* L.				+							
8.	*Achillea chrysocoma* Friv.			+								
9.	*Achillea clypeolata* Sibth. et Sm.			+								
10.	*Alchemilla bulgarica* Rothm.			+								
11.	*Alchemilla catachnoa* Rothm.			+			R					
12.	*Alchemilla erythropoda* Juz.						R					
13.	*Alchemilla fissa* Gunter et Schummel						R					
14.	*Alchemilla gracillima* Rothm.			+			R					
15.	*Alchemilla pyrenaica* Dufour						R					
16.	*Alchemilla straminea* Buser						R					
17.	*Alchemilla viridiflora* Rothm.			+			R					
18.	*Allium melanantherum* Pancic			+								
19.	*Alnus incana* (L.) Moench.				+							
20.	*Alopecurus riloensis* (Hack.) Pawl.		+									
21.	*Alyssum pulvinare* Vel.						R					
22.	*Anagallis minimus* (L.) Krause						R					
23.	*Anchusa davidovii* Stoj.	+										
24.	*Androsace hedraeantha* Griseb.			+			R					

No	Taxon	Endemic			Relict	BDA	RDB	IUCN	E/ECE 1249	Bern	D92/43	CITES
		Local	Bulg.	Balkan								
25.	*Androsace villosa* L.				+							
26.	*Anemone narcissiflora* L.				+	2, 3	R					
27.	*Anemone sylvestris* L.					3	P					
28.	*Angelica pancicii* Vand.			+			R					
29.	*Antennaria dioica* (L.) Gaerth.				+							
30.	*Anthemis orbelica* Panc.		+			3	R	R	R			
31.	*Anthemis sancti-johannis* Stoj., Steff. et Turrill		+			3	R	R	R			
32.	*Anthemis tenuiloba* (DC.) Fernand			+								
33.	*Aquilegia aurea* Janka			+		3	R					
34.	*Aquilegia vulgaris* L.					3	R					
35.	*Arabis alpina* L.				+							
36.	*Arabis allionii* DC						R					
37.	*Arctostaphylos uva-ursi* (L.) Spreng.				+		R					
38.	*Arenaria biflora* L.				+							
39.	*Armeria alpina* Willd.				+		R					
40.	*Armeria rumelica* Boiss.			+								
41.	*Artemisia eriantha* Ten.						R				V	
42.	*Athyrium alpestre* (Hoppe) Rylands						R					
43.	*Atropa belladonna* L.						R					
44.	*Barbarea balcana* Pancic			+								
45.	*Barbarea bracteosa* Guss.						R					
46.	*Bartsia alpina* L.				+		R					
47.	*Betula pendula* Roth				+							
48.	*Bistorta major* S. Gray				+							
49.	*Bistorta vivipara* (L.) S. Gray				+							
50.	*Bupleurum gerardii* All.						R					
51.	*Callitriche hamulata* Kutz ex Koch						R					
52.	*Campanula lanata* Friv.			+		2, 3		R		I		

No	Taxon	Endemic			Relict	BDA	RDB	IUCN	E/ECE 1249	Bern	D92/43	CITES
		Local	Bulg.	Balkan								
53.	*Campanula moesiaca* Vel.			+								
54.	*Campanula rotundifolia* L.				+							
55.	*Campanula sparsa* Friv.			+								
56.	*Campanula transsilvanica* Schur					3	R	R				
57.	*Campanula trojanensis* Kovanda et Ancev		+									
58.	*Campanula velebitica* Borb.			+								
59.	*Carex atrata* L.				+							
60.	*Carex bulgarica* (Domin.) Lazare		+									
61.	*Carex ericetorum* Poll.				+							
62.	*Carex flava* L.				+							
63.	*Carex fuliginosa* Schkuhr					3						
64.	*Carex rostrata* Stockes				+							
65.	*Carex rupestris* Bell.				+	3	E					
66.	*Carex tricolor* Vel.		+									
67.	*Carpinus betulus* L.				+							
68.	*Carum multiflorum* (Sibth. et Sm.) Boiss. ssp. *strictum* (Griseb) Tutin						R					
69.	*Centaurea kernerana* Janka		+			2, 3	R	R	R			
70.	*Centaurea pallidor* Hall.			+								
71.	*Cephalaria flava* (Sibth. et Sm.) Szabo			+								
72.	*Cerastium alpinum* L.				+							
73.	*Cerastium decalvans* Schloss. et Vuk.			+								
74.	*Cerastium moesiacum* Friv.			+								
75.	*Cerastium petricola* Pancic			+								
76.	*Cerastium lanatum* Lam.				+							
77.	*Chamaecytisus absinthioides* (Janka) Kuzm.			+								
78.	*Chamaecytisus jankae* (Velen.) Rothm.			+								
79.	*Cicerbita pancicii* (Vis.) Beauv.			+								

No	Taxon	Endemic			Relict	BDA	RDB	IUCN	E/ECE 1249	Bern	D92/43	CITES
		Local	Bulg.	Balkan								
80.	*Cicerbita plumeri* (L.) Kirschl.						R					
81.	*Cirsium appendiculatum* Griseb.			+								
82.	*Cirsium heterotrychum* Pancic			+								
83.	*Clematis alpina* (L.) Mill.					3	R					
84.	*Clematis vitalba* L.				+							
85.	*Coeloglossum viride* (L.) Hartm.											+
86.	*Corothamnus agnipilus* (Velen.) Klask.			+								
87.	*Crocus veluchensis* Herb.			+								
88.	*Cryptogramma crispa* (L.) R.Br.					3	R					
89.	*Cystopteris alpina* (Lam.) Desv.					3	R					
90.	*Dactylorhiza cordigera* (Fr.)Soo											+
91.	*Dactylorhiza incarnata* (L.) Soo					2, 3						+
92.	*Dactylorhiza saccifera* (Brongn.) Soo											+
93.	*Dactylorhiza sambucina* (L.) Soo											+
94.	*Daphne mezereum* L.				+							
95.	*Dianthus cruentus* Griseb.			+								
96.	*Dianthus pelviformis* Heuff.			+								
97.	*Dianthus microlepis* Boiss.			+								
98.	*Dianthus moesiacus* Vis. et Pancic			+								
99.	*Dianthus tristis* Velen.			+								
100.	*Digitalis viridiflora* Lindl.			+								
101.	*Diphasium alpinum* (L.) Rothm.				+	3	R					
102.	*Draba carinthiaca* Hoppe				+		R					
103.	*Drosera rotundifolia* L.					3	R					
104.	*Dryas octopetala* L.				+							
105.	*Empetrum nigrum* L.				+	3	R					
106.	*Epilobium alsinifolium* ssp. *parviflorum* I. Gancev.		+		+							
107.	*Epilobium anagalidifolium* Lam.				+							

No	Taxon	Endemic			Relict	BDA	RDB	IUCN	E/ECE 1249	Bern	D92/43	CITES
		Local	Bulg.	Balkan								
108.	*Epilobium palustre* L.				+							
109.	*Epipactis helleborine* (L.) Crantz.											+
110.	*Epipactis microphylla* (Ehrh.) Sw.											+
111.	*Epipactis purpurata* Sm.											+
112.	*Epipogium aphyllum* Sw.											+
113.	*Erysimum drenovskyi* Degen			+								
114.	*Festuca riloensis* Markgr.-Dannb.			+								
115.	*Festuca picturata* Pils.				+							
116.	*Festuca valida* (Uechtr.) Penz.			+								
117.	*Fraxinus ornus* L.				+							
118.	*Fritillaria gussichiae* (Degen & Doerfler) Rix			+		2, 3		R		I	IV	
119.	*Galanthus elwesii* Hook					3						+
120.	*Galanthus nivalis* L.					3	P				V	+
121.	*Galium boreale* L.						R					
122.	*Gentiana frigida* Haenke					3	R					
123.	*Gentiana lutea* L.					3	P				V	
124.	*Gentiana nivalis* L.				+							
125.	*Gentiana punctata* L.					3	P					
126.	*Gentiana verna* L.				+							
127.	*Gentianella bulgarica* (Vel.) Holub			+	+							
128.	*Gentianella engadinensis* (Wettst.) Holub					3	R					
129.	*Geranium bohemicum* L.					3	R					
130.	*Geum bulgaricum* Panc.			+		3	R			I		
131.	*Gladiolus palustris* Gaud.					3		I				
132.	*Gymnadenia conopsea* (L.) R. Br.											+
133.	*Hedera helix* L.				+							
134.	*Heracleum verticillatum* Panc.			+								
135.	*Herniaria nigrimontium* Herm.			+								

No	Taxon	Endemic			Relict	BDA	RDB	IUCN	E/ECE 1249	Bern	D92/43	CITES
		Local	Bulg.	Balkan								
136.	*Hesperis dinarica* G. Beck.			+								
137.	*Hieracium sericophyllum* Nejc.			+								
138.	*Iris reichenbachii* Heuff.			+								
139.	*Jasione bulgarica* Stoj. et Stef.		+			2, 3		R				
140.	*Juncus alpinus* Vill.				+							
141.	*Juncus filiformis* L.				+							
142.	*Juncus trifidus* L.				+							
143.	*Juncus triglumis* L.				+		R					
144.	*Juniperus communis* L.				+							
145.	*Juniperus oxycedrus* L.				+							
146.	*Juniperus sibirica* Burgsd.				+							
147.	*Knautia dinarica* (Murb.) Borb.			+								
148.	*Knautia midzorensis* Form.			+								
149.	*Koeleria macrantha* (Ledeb.) Schult. et Schult.f.			+								
150.	*Koeleria simonkai* Adamovi¦			+								
151.	*Leontodon rilaensis* Hayek						R					
152.	*Lathyrus alpestris* (Waldst. et Kit.) Kit. ex Celak			+								
153.	*Lathyrus grandiflorus* Sibth. et Sm.						R					
154.	*Ligularia glauca* (L.) Hoffm.					3	R					
155.	*Lilium jankae* Kern.			+		2, 3	R			I		
156.	*Listera cordata* (L.) R. Br.					3						+
157.	*Lloydia serotina* (L.) Reichenb.				+	3	R					
158.	*Luzula congesta* (Thuill.) Lej.				+							
159.	*Luzula deflexa* Koz.		+			3	R					
160.	*Luzula italica* Parl.				+							
161.	*Melampyrum scardicum* Wettst.			+								
162.	*Menyanthes trifoliata* L.					2, 3	P					

No	Taxon	Endemic			Relict	BDA	RDB	IUCN	E/ECE 1249	Bern	D92/43	CITES
		Local	Bulg.	Balkan								
163.	*Minuartia bulgarica* (Velen.) Grbn.		+									
164.	*Minuartia recurva* (All.) Schinz et Thell. ssp. *orbelica* (Vel.) Koz. et Kuzm		+									
165.	*Minuartia saxifraga* (Friv.) Graebn.						R					
166.	*Minuartia verna* (L.) Hiern.				+							
167.	*Myosotis jordanovii* N. Andr. et Peev	+										
168.	*Myosotis orbelica* (Velen.) Peev et N. Andr.		+									
169.	*Myosotis suaveolens* Waldst. et Kit. ex Willd.			+								
170.	*Nigritella nigra* (L.) Rchb. f.											+
171.	*Omalotheca norvegicum* (Gunn.) Schultz-Bip. et F. Schultz				+							
172.	*Omalotheca supina* (L.) DC				+							
173.	*Orchis mascula* L.											+
174.	*Orchis militaris* L.					3						+
175.	*Orchis pallens* L.											+
176.	*Orchis simia* L.											+
177.	*Orchis tridentata* Scop.											+
178.	*Orchis ustulata* L.											+
179.	*Ostrya carpinifolia* Scop.				+							
180.	*Oxyria digyna* (L.) Hill.				+							
181.	*Oxytropis campestris* (L.) DC.				+							
182.	*Parnassia palustris* L.				+							
183.	*Pastinaca hirsuta* Pancic			+								
184.	*Pedicularis brachyodonta* Schloss. et Vuk.			+								
185.	*Pedicularis hoermanniana* Maly			+								
186.	*Pedicularis leucodon* Griseb. ssp. *occulta* (Janka) E. May			+								
187.	*Pedicularis oederi* Vahl.				+		R					

No	Taxon	Endemic			Relict	BDA	RDB	IUCN	E/ECE 1249	Bern	D92/43	CITES
		Local	Bulg.	Balkan								
188.	*Pedicularis orthantha* Griseb.			+	+							
189.	*Pedicularis verticillata* L.				+							
190.	*Peucedanum aegopodioides* (Boiss.) Vand.			+								
191.	*Peucedanum oligophyllum* (Griseb.) Vand.			+			R					
192.	*Phleum alpinum* L.				+							
193.	*Picea abies* (L.) Karst.				+							
194.	*Pinguicula balcanica* Casper			+								
195.	*Pinus mugo* Turra				+							
196.	*Pinus peuce* Griseb.			+	+			R				
197.	*Platanthera bifolia* (L.) Rich.											+
198.	*Platanthera chlorantha* (Cust.) Reichenb.											+
199.	*Pleuropteropyrum undulatum* (A. Murr.) A. et D. Love				+							
200.	*Poa alpina* L.				+							
201.	*Poa laxa* Haenke				+							
202.	*Poa macedonica* (Acht.) Stoeva et Kozuharov			+								
203.	*Poa media* Schur				+							
204.	*Populus tremula* L.				+							
205.	*Potentilla montenegrina* Pant.			+		3	R					
206.	*Potentilla regis-borisii* Stoj.		+									
207.	*Primula deorum* Vel.	+			+	3	R	R		I		
208.	*Primula farinosa* L. ssp. *exigua* (Velen.) O. Spach.		+		+							
209.	*Primula halleri G. F. Gmel.*					3	R					
210.	*Primula minima* L.				+							
211.	*Pseudorchis albida* (L.) A. et D. Love				+							+
212.	*Pseudorchis frivaldii* (Hampe ex Griseb.) P.E.Hunt											+
213.	*Pulsatilla vernalis* (L.) Mill.					3	R					

No	Taxon	Endemic			Relict	BDA	RDB	IUCN	E/ECE 1249	Bern	D92/43	CITES
		Local	Bulg.	Balkan								
214.	*Pyrola media* Swartz						R					
215.	*Quercus dalechampii* Ten.				+							
216.	*Quercus protoroburoides* Donc. et Bourov	+			+							
217.	*Ranunculus aquatilis* L. var. *riloense* (Vel.) Stoj. et Stef.		+									
218.	*Ranunculus incomparabilis* Janka			+								
219.	*Rheum rhaponticum* L.	+			+	2, 3	R	R	R	I		
220.	*Rhodiola rosea* L.					3						
221.	*Rorippa lippizensis* (Wulf.) Reichenb.			+								
222.	*Sagina saginoides* (L.) Karsten				+							
223.	*Salix alba* L.				+							
224.	*Salix appendiculata* L.				+							
225.	*Salix caprea* L.				+							
226.	*Salix fragilis* L.				+							
227.	*Salix hastata* L.						R					
228.	*Salix purpurea* L.				+							
229.	*Salix reticulata* L.				+							
230.	*Salix retusa* L.				+	3	R					
231.	*Salix triandra* L.				+							
232.	*Salix waldsteiniana* Willd.				+							
233.	*Saxifraga androsacea* L.				+	2, 3	P					
234.	*Saxifraga adscendens L.* ssp. *discolor(* Vel.) Kuzm.		+									
235.	*Saxifraga bryoides* L.				+							
236.	*Saxifraga carpatica* Rchb.				+							
237.	*Saxifraga oppositifolia* L.				+							
238.	*Saxifraga paniculata* Mill.				+							
239.	*Saxifraga retusa* Gouan				+	3	R					

No	Taxon	Endemic			Relict	BDA	RDB	IUCN	E/ECE 1249	Bern	D92/43	CITES
		Local	Bulg.	Balkan								
240.	*Saxifraga sancta* Griseb. ssp. *pseudosancta* (Janka) Kuzmanov			+								
241.	*Saxifraga sempervivum* C. Koch.			+								
242.	*Saxifraga stellaris* L.				+							
243.	*Scabiosa triniifolia* Friv.			+								
244.	*Scabiosa webbiana* D.Don.			+								
245.	*Scrophularia aestivalis* Griseb.			+								
246.	*Secale montanum* Guss. ssp. *balcanum* (Gancev) Kozuharov			+								
247.	*Sedum kostovii* Stef.		+			2, 3	R	R	R			
248.	*Sedum stefco* Stef.		+			3	R		R			
249.	*Sedum tuberiferum* Stoj. et Stef.		+									
250.	*Sempervivum ciliosum Craib*			+		3	R					
251.	*Sempervivum erythraeum* Velen.		+									
252.	*Sempervivum velenovskyi* Ceschm.			+			R					
253.	*Senecio pancicii* Deg.			+			R					
254.	*Sesleria comosa* Vel.			+								
255.	*Sesleria latifolia* (Adam.) Degen			+								
256.	*Sibbaldia procumbens* L.				+		R					
257.	*Silaum silaus* (L.) Schinz et Thell.						R					
258.	*Silene acaulis* L.				+							
259.	*Silene heuffelii* Soo						R					
260.	*Silene romeri* Friv.			+								
261.	*Silene stojanovii* P.Pan.		+									
262.	*Silene velenovskyana* D. Jord. et P. Pan		+				R					
263.	*Silene waldsteinii* Griseb.			+								
264.	*Silene frivaldskyana* Hampe			+								
265.	*Silene gigantea* L.			+								
266.	*Soldanella carpatica* Vierch.				+		R					

No	Taxon	Endemic			Relict	BDA	RDB	IUCN	E/ECE 1249	Bern	D92/43	CITES
		Local	Bulg.	Balkan								
267.	*Soldanella pusilla* Baumg.				+							
268.	*Sorbus aria* (L.) Crantz.				+							
269.	*Sparganium angustifolium* Michx.					3	R					
270.	*Spiranthes autumnalis* Rich.					3	R					
271.	*Stipa balcanica* (Martin.) Kozuharov			+								
272.	*Subularia aquatica* L.					3	R					
273.	*Symphyandra wanneri* (Rochel) Heuff.						R					
274.	*Taraxacum bithynicum* DC.						R					
275.	*Taxus baccata* L.				+	3	P					
276.	*Thesium linophyllon* L.						R					
277.	*Thymus albanus* H. Braun.			+								
278.	*Tozzia alpina* L.				+							
279.	*Trifolium caespitosum* (L.) Hartm.				+							
280.	*Trifolium heldreichianum* Hausskn.			+								
281.	*Trifolium medium* L. ssp. *skorpilii Vel.*		+									
282.	*Trifolium trichopterum* Pancic			+								
283.	*Trifolium velenovskyi* Vand.			+								
284.	*Trollius europaeus* L.					3	R					
285.	*Turritis pseudoturritis* (Boiss. et Heldr.) Vel.						R					
286.	*Utricularia vulgaris* L.						R					
287.	*Vaccinium myrtillus* L.				+							
288.	*Vaccinium uliginosum* L.				+							
289.	*Valeriana montana* L.						R					
290.	*Veratrum lobelianum* Bernh.				+							
291.	*Verbascum jankaeanum* Panc.	+				3	P	V				
292.	*Veronica alpina* L.				+							
293.	*Veronica kellererii* Deg. et Urum.		+				R					
294.	*Veronica bellidioides* L.				+							

No	Taxon	Endemic			Relict	BDA	RDB	IUCN	E/ECE 1249	Bern	D92/43	CITES
		Local	Bulg.	Balkan								
295.	*Veronica rhodopea* (Velen.) Degen ex Stoj. et Stef.			+								
296.	*Viburnum lantana* L.				+							
297.	*Vicia amphicarpa* Dorth.					3	P					
298.	*Vicia dumetorum* L.						R					
299.	*Viola biflora* L.				+							
300.	*Viola rhodopeia* Becker		+				R					
301.	*Viola orbelica* Panc.		+			3	R					
	TOTAL	6	27	90	110	57	96	14	6	6		24

Key:
BDA – species included in Appendix 2 under Article 6, paragraph 1, item 2 and Appendix 3 under Article 37 of the Biodiversity Act, 2002;
RDB – Bulgaria's Red Data Book: **R** – rare, **P** – protected, **E** – extinct;
IUCN: species listed in Walter K.S. & Giullett H.J. (eds.), 1998, 1997 IUCN Red List of Threatened Plants "V" – vulnerable; "R" – rare; "I" – undefined status;
E/ECE/1249 - European Red List of Animals and Plants under Threat of Becoming Extinct Globally, 1992: R - rare; E - in the process of becoming extinct;
Bern: species, included in Appendix I – Flora of the Bern Convention;
D92/43 - Directive 92/43 of the EEC Council dated 21.05.1992, on the Conservation of Natural Habitats of the Wild Flora and Fauna (Habitats Directive)
CITES – The Convention on the International Trade in Endangered Species of the Wild Flora and Fauna.

Appendix № 14

Species diversity and conservation significance of mosses in Rila Monastery Nature Park

No	Taxa	Established during the Management Plan research	Known from the park	Degree of being endangered
	Marchantiopsida			
	Antheliaceae Schust.			
1.	*Anthelia juratzkana* (Limpr.) Trev.	x		K
	Aytoniaceae Cavers			
2.	*Mannia fragrans* (Balbis) Frye et Clark		x	
3.	*Reboulia hemisphaerica* (L.) Raddi		x	
	Calypogeiaceae (K. Müll.) H. Arn.			
4.	*Calypogeia azurea* Stotler et Crotz	x		
	Cephaloziaceae Migula			
5.	*Nowellia curvifolia* (Dicks.) Mitt.		x	
	Conocephalaceae K. Müll. ex Grolle			
6.	*Conocephalum conicum* (L.) Underw.	x		
	Cleveaceae Cavers			
7.	*Athalamia hyalina* (Sommerf.) Hatt.		x	
	Frullaniaceae Lorch			
8.	*Frullania dilatata* (L.) Dum.	x		
	Geocalycaceae Klinggr.			
9.	*Chiloscyphus pallescens (Ehrh. ex Hoffm.) Dum.*	x		
10.	*Lophocolea heterophylla* (Scrad.) Dum.	x		
11.	*L. minor Nees*	x	x	
	Gymnomiriaceae Klinggr.			
12.	*Marsupella emarginata* (Ehrh.) Dum. var. *aquatica* (Lindenb.) Dum.	x		
	Jungrmanniaceae Reichenb.			
13.	*Jungermannia exsertifolia* Steph. ssp. *cordifolia* (Dum.) Váňa	x		
14.	*J. leiantha* Grolle	x		
15.	*Nardia compressa* (Hook.) S. Gray	x		
	Lejeuneaceae Cas.-Gil, nom. cons.			
16.	*Lejeunea cavifolia* (Ehrh.) Lindb..		x	
	Lepidoziaceae Limpr.			
17.	*Lepidozia reptans* (L.) Dum.	x	x	
	Lophoziaceae (Joerg.) Vanden Berghen			
18.	*Barbilophozia hatcheri* (Evans) Loeske	x		
19.	*B. lycopodioides*(Wallr.) Loeske	x		
20.	*Lophozia ascendens* (Warnst.) Schust.	x		R
21.	*L. incisa* (Schrad.) Dum.	x		
	Metzgeriaceae Klinggr.			
22.	*Metzgeria conjugata* Lindb.	x		
23.	*M. furcata* (L.) Dum.	x		
	Plagiochilaceae (Joerg.) K. Müll.			
24.	*Plagiochila porelloides* (Torrey ex Nees) Lindenb.	x		
	Porellaceae Cavers			
25.	*Porella baueri* (Schiffn.) C. Jens.		x	K
26.	*P. cordaeana* (Hüb.) Moore	x	x	
27.	*P. platyphylla* (L.) Pfeiff.	x		
	Pseudolepicoleaceae Fulf. et J. Tayl.			
28.	*Blepharostoma trichophyllym* (L.) Dum.	x	x	

Appendix № 14

No	Taxons	Established during the Management Plan research	Known from the park	Degree of being endangered
	Radulaceae (Dum.) K. Müll.			
29.	*Radula complanata* (L.) Dum.	x	x	
	Ricciaceae Reichenb.			
30.	*Riccia ciliifera* Link. ex Lindenb.		x	
31.	*R. nigrella* DC.		x	
	Scapaniaceae Migula			
32.	*Scapania undulata* (L.) Dum.) var. *dentata* (Dum.) K. Müll.	x		
	BRYOPSIDA			
	Amblystegiaceae (Broth.) Fleisch.			
33.	*Amblystegium riparium* (Hedw.) B., S. & G.	x		
34.	*Calliergon sarmentosum* (Wahlenb.) Kindb.	x		
35.	*Calliergonella cuspidata* (Hedw.) Loeske	x		
36.	*Campylium stellatum* (Hedw.) Lange & C. Jens.	x		
37.	*Cratoneuron commutatum* (Hedw.) G. Roth var. *commutatum*	x		
38.	*C. commutatum* (Hedw.) G. Roth var. *irrigatum* (Zett.) Moenkem.	x		
39.	*C. decipiens* (De Not.) Loeske	x		
40.	*C. decipiens* (De Not.) Loeske	x		
41.	*C. filicinum* (Hedw.) Spruce	x		
42.	*Drepanocladus exannulatus* (B.,S.&G.) Warnst.	x		
43.	*D. uncinatus* (Hedw.) Warnst.	x		
44.	*Hygrohypnum duriusculum* (De Not.) Jamieson	x		
45.	*H. luridum* (Hedw.) Jens.	x		
46.	*H. smithii* (Sw.) Broth.	x		
	Andreaeaceae Dum.			
47.	*Andreaea rupestris* Hedw.	x		
	Bartramiaceae Schwaegr.			
48.	*Bartramia halleriana* Hedw.	x	x	
49.	*B. ithyphylla* Brid.	x		
50.	*B. pomiformis* Hedw.	x		
51.	*Philonotis fontana* (Hedw.) Brid.	x		
52.	*P. tomentella* Mol.	x		
53.	*Plagiopus oederi* (Brid.) Limpr.		x	
	Brachytheciaceae Schimp.			
54.	*Brachythecium albicans* (Hedw.) B., S.&G.	x		
55.	*B. rivulare* B.,S.&G.	x		
56.	*B. rutabulum* (Hedw.) B.,S.&G.	x	x	
57.	*B. salebrosum* (Web.&Mohr) B.,S.&G.	x		
58.	*B. velutinum* (Hedw.) B.,S.&G.	x		
59.	*Cirriphyllum tenuinerve* (Lindb.) Wijk.& Marg.		x	
60.	*Eurhynchium angustirete* (Broth.) T. Kop.	x		
61.	*Homalothecium lutescens* (Hedw.) Robins.	x		
62.	*H. sericeum* (Hedw.) B., S. & G.	x		
63.	*Isothecium alopecuroides* (Dubois) Isov.	x		
64.	*Rhynchostegium riparioides* (Hedw.) Card.	x		
	Bryaceae Schwaegr.			
65.	*Bryum alpinum* With. var. *alpinum*	x		
66.	*B. argenteum* Hedw.	x		
67.	*B. caespiticium* Hedw.	x		

Appendix № 14

No	Taxons	Established during the Management Plan research	Known from the park	Degree of being endangered
68.	*B. capillare* Hedw.	x		
69.	*B. capillare* var. *flaccidum* (Brid.) B.,S.&G.	x		
70.	*B. muehlenbeckii* B., S. & G.	x		
71.	*B. pallescens* Schleich. ex Schwaegr.	x		
72.	*B. pseudotriquetrum* (Hedw.) Gaertn., Meyer & Scherb.	x		
73.	*B. schleicheri* Lam. & DC.	x		
74.	*Pohlia cruda* (Hedw.) Lindb.	x	x	
75.	*Pohlia drumondii* (C. Müll) Andr.	x		
76.	*P. filum* (Schimp.) Mårt.	x		
	Climaciaceae Kindb.			
77.	*Climacium dendroides* (Hedw.) Web. & Mohr	x		
	Dicranaceae Schimp.			
78.	*Ceratodon purpureus* (Hedw.) Brid.	x		
79.	*Cynodontium polycarpon* (Hedw.) Schimp.		x	
80.	*Dicranella heteromalla* (Hedw.) Schimp.	x		
81.	*D. palustris* (Dicks.) Crundw. ex E. Warb.	x		
82.	*Dicranoweisia crispula* (Hedw.) Milde	x		
83.	*Dicranum bonjeanii* De Not.	x		
84.	*D. scoparium* Hedw.	x		
85.	*D. spadiceum* Zett.	x		
86.	*D. tauricum* Sap.	x		
87.	*Distichium capillaceum* (Hedw.) B.,S.&G.	x	x	
88.	*Ditrichum heteromallum* (Hedw.) Brid.	x		
89.	*Kiaeria starkei* (Web. & Mohr) I.Hag.	x		
90.	*Oncophorus virens* (Hedw.) Brid	x		
91.	*Paraleucobryum longifolium* (Hedw.) Loeske	x		
92.	*Rhabdoweisia fugax* (Hedw.) B., S. & G.	x		
	Encalyptaceae Schimp.			
93.	*Encalypta ciliata* Hedw.	x		
	Fissidentaceae Schimp.			
94.	*Fissidens cristatus* Wils. ex Mitt.	x		
95.	*F. taxifolius* Hedw.	x		
	Fontinalaceae Schimp.			
96.	*Fontinalis antipyretica* Hedw.	x		
	Grimmiaceae Arnott			
97.	*Grimmia alpestris* (Web.&Mohr) Schleich. ex Hornsch.	x		
98.	*G. holleri* Mol.	x		
99.	*G. laevigata* (Brid.) Brid.	x	x	
100.	*G. ovalis* (Hedw.) Lindb.	x	x	
101.	*G. pulvinata* Sm.	x		
102.	*G. trichophylla* Grev.	x		
103.	*G. unicolor* Hook.	x		R
104.	*Racomitrium canescens* (Hedw.) Brid.	x		
105.	*R. sudeticum* (Funck) B. & S.	x		
106.	*Schistidium agassizii* Sull. & Lesq.	x		R
107.	*S. apocarpum* (Hedw.) B. & S.ssp. *strictum* (Turn.) Pilous	x		
	Hedwigiaceae Schimp.			
108.	*Hedwigia ciliata* (Hedw.) P. Beauv.	x		
	Hypnaceae Schimp.			

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No	Taxons	Established during the Management Plan research	Known from the park	Degree of being endangered
109.	*Hylocomium splendens* (Hedw.) B., S.&G.	x		
110.	*Hypnum cupressiforme* Hedw.	x		
111.	*Pleurozium schreberi* (Brid.) Mitt.	x		
112.	*Rhytidiadelphus squarrosus* (Hedw.) Warnst.	x		
113.	*R. triquetrus* (Hedw.) Warnst.	x		
	Leskeaceae Schimp.			
114.	*Lescuraea incurvata* (Hedw.) Lawt.	x		
115.	*Pseudoleskeella catenulata* (Schrad.) Kindb.	x		
116.	*P. nervosa* (Brid.) Nyh.	x		
117.	*Pterigynandrum filiforme* Hedw.	x		
	Leucodontacecae Scimp.			
118.	*Antitrichia curtipendula* (Hedw.) Brid.	x		
119.	*Leucodon sciuroides* (Hedw.) Schwaegr.	x		
	Mniaceae Schwaegr.			
120.	*Mnium stellare* Hedw.	x	x	
121.	*Plagiomnium affine* (Bland.) T.Kop.	x		
122.	*P. cuspidatum* (Hedw.) T. Kop.	x		
123.	*P. undulatum* (Hedw.) T. Kop.	x		
124.	*Rhizomnium pseudopunctatum* (B.&S.) T. Kop.	x		
125.	*R. punctatum* (Hedw.) T. Kop.	x		
	Orthotrichaceae Arnott			
126.	*Amphidium mougeotii* (B.&S.) Schimp.		x	
127.	*Orthotrichum affine* Brid.	x		
128.	*O. anomalum* Hedw. var. *anomalum*	x		
129.	*O. rupestre* Schleich. ex Schwaegr. ssp. *rupestre*	x		
130.	*O. striatum* Hedw.	x		
131.	*O. tenellum* Bruch ex Brid.	x		
132.	*Ulota hutchinsiae* (Sm.) Hammar		x	
	Plagiotheciaceae (Broth.) Fleisch.			
133.	*Herzogiella seligeri* (Brid.) Iwats.	x		
134.	*Plagiothecium nemorale* (Mitt.) Jaeg.	x		
135.	*Taxiphyllum wissgrillii* (Garov) Wijk.&Marg.		x	K
	Polytrichaceae Schwaegr.			
136.	*Atrichum undulatum* (Hedw.) P. Beauv.	x		
137.	*Oligotrichum hercynicum* (Hedw.) Lam.&DC.	x		
138.	*Pogonatum aloides* (Hedw.) P. Beauv.	x	x	
139.	*P. urnigerum* (Hedw.) P. Beauv.	x	x	
140.	*Polytrichum alpinum* Hedw.	x		
141.	*P. commune* Hedw.	x		
142.	*P. formosum* Hedw.	x		
143.	*P. piliferum* Hedw.	x		
	Pottiaceae Schimp.			
144.	*Tortella tortuosa* (Hedw.) Limpr.	x		
145.	*Tortula muralis* Hedw. var. *muralis*	x		
146.	*T. ruralis* (Hedw.) Gaertn., Meyer & Scherb.	x		
147.	*T. subulata* Hedw.	x		
	Seligeriaceae Schimp.			
148.	*Blindia acuta* (Hedw.) B.,S.&G.	x		
	Sphagnaceae Dum.			
149.	*Sphagnum capillifolium* (Ehrh.) Hedw.	x		
150.	*S. centrale* C. Jens.	x		
151.	*S. compactum* Lam.&DC.	x		

Appendix № 14

No	Taxons	Established during the Management Plan research	Known from the park	Degree of being endangered
152.	*S. contortum* K.F.Schultz	x		
153.	*S. fallax* (Klinggr.) Klinggr.	x		
154.	*S. girgensohnii* Russ.	x		
155.	*S. lescurii* Sull.	x		
156.	*S. platyphyllum* (Lindb. ex Breithw.) Sull.ex Warnst.	x		
157.	*S. russowii* Warnst.	x		
158.	*S. squarrosum* Crome	x		
159.	*S. subsecundum* Nees	x		
160.	*S. teres* (Schimp.) Aengstr.	x		
161.	*S. warnstorfii* Russ.	x		
	Tetraphidaceae Schimp.			
162.	*Tetraphis pellucida* Hedw.	x		
	Thuidiaceae Schimp.			
163.	*Anomodon viticulosus* (Hedw.) Hook.&Tayl.	x		
164.	*Thuidium abietinum* (Hedw.) B.,S.&G.	x		

Key:

Degree of being endangered (expert opinion):

R – rare

K – insufficiently studied chronology in Bulgaria (analogous to the Data Deficient category of the IUCN)

List of the Medicinal Plants
Found in the Rila Monastery NP during REA in 2001 and their Conservation Significance

No	*Taxon*	Endemic			Relict	RDB	IUCN	D92/43	ERL	Bern	BDA	Special Regime
		L	BG	B								
1.	Achillea millefolium complex											
2.	Aconitum variegatum L.											
3.	Agrimonia eupatoria L.											
4.	Agrostis capillaris L.											
5.	Alchemilla vulgaris complex											+
6.	Allium schoenoprasum L.											
7.	Anchusa officinalis L.											
8.	Angelica pancicii Vand.			+		rare						+
9.	Anthemis tinctoria L.											
10.	Arctium lappa L.											
11.	Artemisia absinthium L.											
12.	Arctostaphyllos uva ursi					rare		+				+
13.	Artemisia vulgaris L.											
14.	Asplenium trichomanes L.											+
15.	Astragalus glycyphyllos L.											
16.	Atropa belladona L.					rare						+
17.	Betula pendula Roth											
18.	Calamintha sylvatica Bromf.											
19.	Capsella bursa-pastoris(L.) Medic.											
20.	Carlina acanthifolia All.											+
21.	Centaurium erythraea Rafn											
22.	Cetraria islandica											+
23.	Chamomilla recutita(L.) Rauschert											

No	*Taxon*	Endemic			Relict	RDB	IUCN	D92/43	ERL	Bern	BDA	Special Regime
		L	BG	B								
24.	Chelidonium majus L.											
25.	Chenopodium bonus-henricus L.											
26.	Cichorium intybus L.											
27.	Cirsium ligulare Boiss.											
28.	Clematis vitalba L.				+							
29.	Clinopodium vulgare L.											
30.	Colchicum automnale L.											
31.	Corylus avellana L.											
32.	Crataegus monogyna Jacq.											
33.	Cuscuta campestris Yunck.											
34.	Cuscuta europaea L.											
35.	Daucus carota L.											
36.	Digitalis lanata Ehrh.											
37.	Dryopteris filix-mas(L.) Schott										4	
38.	Echium vulgare L.											
39.	Epilobium angustifolium L.											
40.	Erodium cicutarium(L.) L.											
41.	Eryngium campestre L.											
42.	Euphrasia officinalis complex											
43.	Filipendula ulmaria(L.) Maxim.											
44.	Fragaria vesca L.											
45.	Fraxinus ornus L.				+							
46.	Galeopsis tetrachit L.											
47.	Galium aparine L.											
48.	Galium odoratum(L.) Scop.											+
49.	Galium verum L.											
50.	Genista tinctoria complex											

No	*Taxon*	Endemic			Relict	RDB	IUCN	D92/43	ERL	Bern	BDA	Special Regime
		L	BG	B								
51.	Gentiana asclepiadea L											
52.	Gentiana cruciata L											
53.	Gentiana lutea L.					endangered					3	
54.	Gentiana punctata L.					endangered					3	
55.	Geranium macrorrhizum L.											
56.	Geranium robertianum L.											
57.	Geranium sanguineum L.											
58.	Geum coccineum Sibth. et Sm.											
59.	Geum urbanum L.											
60.	Hedera helix L.				+							
61.	Heracleum sibiricum L.											
62.	Herniaria glabra L											
63.	Hieracium pilosella L.											
64.	Huperzia selago (L).Berh									+		+
65.	Hypericum maculatum Crantz											
66.	Hypericum perforatum L.											
67.	Juniperus communis L.				+			+				
68.	Juniperus sibirica Burgsd.				+							
69.	Leonurus cardiaca L.											
70.	Licopodium clavatum L.											+
71.	Linaria vulgaris Mill.											
72.	Malus sylvestris Mill.											
73.	Mentha spicata L.											
74.	Nasturtium officinalis R. Br.											
75.	Origanum vulgare L.											
76.	Petasites albus(L.) Gaertn.											
77.	Petasites hybridus(L.) P. Gaertn., B. Mey. et Scherb.											
78.	Pinus silvestris L.							+				

No	*Taxon*	Endemic			Relict	RDB	IUCN	D92/43	ERL	Bern	BDA	Special Regime
		L	BG	B								
79.	Plantago lanceolata L.											
80.	Plantago major L.											
81.	Polygala major Jacq.											
82.	Polygonum aviculare L.											
83.	Polypodium vulgare L.											
84.	Potentilla erecta(L.) Raeusch.											
85.	Potentilla reptans L.											
86.	Primula veris L.										4	+
87.	Pteridium aqulinum(L.) Kuhn											
88.	Pulmonaria officinalis L.											
89.	Pulsatilla vernalis(L.) Mill.					rare					3,4	
90.	Quercus dalechampii Ten.				+							
91.	Quercus protoroburoides	+										
92.	Rheum rhaponticum L.	+				rare	5		rare	+	2,3	
93.	Rhodiola rosea L.										3	
94.	Rosa canina L.		+									
95.	Rosa canina complex											
96.	Rubus caesius L.											
97.	Rubus idaeus L.											
98.	Rumex acetosa L.											
99.	Rumex acetosella L.											
100.	Rumex alpinus L.											
101.	Salix alba L.				+							
102.	Salix purpurea L.				+							
103.	Sambucus ebulus L.											
104.	Sambucus nigra L.											
105.	Sanicula europaea L.											
106.	Saponaria officinalis L.											
107.	Scrophularia nodosa L.											

No	*Taxon*	Endemic			Relict	RDB	IUCN	D92/43	ERL	Bern	BDA	Special Regime
		L	BG	B								
108.	Sedum acre L.											+
109.	Sedum maximum (L.) Suter											
110.	Solanum nigrum L.											
111.	Solidago virga-aurea L.											
112.	Sorbus aucuparia L.											
113.	Stachys officinalis (L.) Trev											+
114.	Stellaria media(L.) Vill.											
115.	Tanacetum vulgare L.											
116.	Taraxacum officinalis Web.											
117.	Taxus baccata L.				+	endangered		+			3	
118.	Telekia speciosa(Schreb.) Baumg.											
119.	Teucrium chamaedrys L.											
120.	Thalictrum aquilegifolium L.											
121.	Thymus officinale complex											
122.	Tilia cordata Mill.											
123.	Trifolium pratense L.											
124.	Tussilago farfara L.											
125.	Urtica dioica L.											
126.	Urtica urens L.											
127.	Vaccinium myrtilus L.				+							
128.	Vaccinium vitis-idaea L.											
129.	Valeriana officinalis L.											+
130.	Veratrum lobelianum Bernh.				+							
131.	Verbascum longifolium Ten.											
132.	Veronica chamaedrys L.											
133.	Veronica officinalis L.											
134.	Viola tricolor L.											
135.	Viscum album L.											

Key:

Endemic

L – local;
BG – Bulgarian;
B – Balkan;

IUCN: species listed in the World's Red List of Threatened Plants (Walter K.S. & Giullett H.J. (eds.), 1998, 1997 IUCN Red List of Threatened Plants);
D92/43 - Directive 92/43 of the EEC Council dated 21.05.1992, on the Conservation of Natural Habitats of the Wild Flora and Fauna (Habitats Directive):
"IV" – Appendix IV: Plants and Animals Requiring Strict Protection and the Species Level;
ERL **– SPECIES LISTED IN THE EUROPEAN RED LIST**

Bern: species, included in Appendix I (Flora) of the Bern Convention;
BDA **– SPECIES INCLUDED IN APPENDICES TO THE BIODIVERSITY ACT: APPENDIX 2 – HABITATS OF SPECIES FOR THE PROTECTION OF WHICH PROTECTED AREAS ARE DESIGNATED, APPENDIX 3 – PROTECTED SPECIES, APPENDIX 4 – WILD PLANTS UNDER PROTECTION REGIME AND REGULATED USE OF NATURE;**

Special Regime ***– special regime of protection and use according to Article 10 of the MPA***

Appendix № 16

Medicinal Plants Allowed for Non-Commercial Gathering

The table lists the medicinal plant species allowed for non-commercial gathering in the Park. The localities indicated in the table were evaluated during the 2001 Rapid Ecological Assessment. They are presented in two groups based on resource quantities. The habitats were named after the REA control station (see the Non-timber nature resources map).

No	Species	REA station with a habitat allowing gathering	REA station with a habitat of limited resource
1.	Achillea millefolium /yarrow/	-	BB, RHO, ZB
2.	Chenopodium bonus henricus /Good king Henry/	-	OV
3.	Coryllus avellana /hazel/	I1	-
4.	Crataegus monogyna /whitethorn/	GLOG	-
5.	Cyrsium lonchitis /thistle/	-	MAG
6.	Dryopteris filix mas /male fern/	-	I2
7.	Euphrasia officinalis compl. /eyebright/	-	OCH
8.	Galium odoratum /woodruff/	-	I2
9.	Galium verum /yellow galium/	-	RAV
10.	Geranium macrorhizum /cut-leaved cranesbill/	I3, FHM, CHOO, K1, K3	-
11.	Geranium sanguineum /bloody cranesbill/	-	K2
12.	Juniperus communis /common juniper/	-	DB4
13.	Origanum vulgare /oregano/	-	KAM, QR1
14.	Petasites hybridus /butterbur/	I2, BAZ, CHOO	-
15.	Pteridium aquilinum /bracken/	K1	-
16.	Rosa canina /dog rose/	GLOG	-
17.	Rubus caesius /dewberry/		KAPI
18.	Rubus idaeus /raspberry/	FHM	-
19.	Rumex alpinus /monk's rhubarb/	FH01, TR2, KB, OV, GE	-
20.	Sambucus ebulus /danewort/	VLL1, BAZ	-
21.	Sambucus nigra /common elder/	BB, I1	-
22.	Solidago virgaurea /golden rod/	-	ZLPR
23.	Tanacetum vulgare /common tansy/	I3, VRAT	-
24.	Teucrium hamaedrys /water germander/	-	Q
25.	Tussilago farfara /coltsfoot/	BB, MR	-

Appendix № 16

No	Species	REA station with a habitat allowing gathering	REA station with a habitat of limited resource
26.	Thymus sp. /wild thyme/		TR2, K1, SIP, S1, MV, MV1
27.	Urtica dioica /stinging nettle/	VLL1, CHOO	-
28.	Urtica urens /small nettle/	-	I3
29.	Vaccinium myrtillus /whortleberry/	TR2, TBOR, TR1	-
30.	Verbascum longifolium /mullein/	-	TR2, K2, MV1
31.	Veronica officinalis /common speedwell/	-	FH1

Medicinal plants allowed for commercial gathering

1. Vaccinium myrtillus /whortleberry/ - fruit
2. Sambucus nigra /common elder/ - blossom
3. Sambucus ebulus /danewort/ - fruit
4. Crataegus monogyna /whitethorn/ - fruit
5. Rubus caesius /dewberry/ -fruit
6. Coryllus avellana /hazel/ - fruit
7. Rubus idaeus /raspberry/ - fruit
8. Juniperus communis /common juniper/ - fruit
9. Rosa canina /dog rose/ - fruit

Regions where commercial gathering of medicinal plants is allowed

High Conservation Significance Zone

Commercial gathering of whortleberries (*Vaccinium sp.*) allowed only in the Tiha Rila locality, along Rilska River between Dyavolska River to the confluence of Marinikovitsa River and Rilska River to the east.

Environmentally Sound Use Zone

Along Iliyna River, in the localities Kravarski Dol, the Bukovo bardo road, Diadov Dol, Turskoto parche, Vladichina meadow.

The locations allowing for gathering of resources in the Environmentally Sound Use Zone are pre-defined. Provisions are made for drawing up of a development project defining precisely the resource use locations and quantities of medicinal plants allowed for commercial gathering within the entire zone.

Macromycettes of Significance for Conservation in the Rila Monastery Nature Park

Species	IUCN Threat Category	Rila NP Red List	Bulgaria's Red List	Europe's Red List	Appendix I of the Bern Convention
Amanita battarrae Boud.	r	–	+	+	–
Boletus aestivalis Paulet : Fr.	v	–	–	–	–
Boletus edulis Bull. : Fr.	v	+	–	–	–
Cantharellus tubaeformis Fr.	v	–	–	–	–
Chroogomphus helveticus (Singer) Moser	r	–	–	+	–
Craterellus cornucopioides (L.) Pers.	v	–	–	–	–
Didimium nigripes (Link) Fr.	r	–	–	–	–
Helvella crispa Fr.	v	–	–	–	–
Hericium flagellum (Scop.) Pers.	r	–	–	+	–
Hygrocybe cantharellus (Schw.) Murrill	r	+	–	+	–
Lactarius badiosanqiuneus Kuhn. & Rom.	r	–	–	–	–
Omphalina epichysium (Pers. : Fr.) Quel.	r	–	–	+	–
Polyporus tuberaster (Pers. : Fr.) Fr.	r	–	–	+	–
Russula aquosa Leclair	r	–	–	+	–
Strobilomyces strobilaceus (Scop. : Fr.) Berk	r	–	+	+	–
Suillus sibiricus Singer	r	–	+	+	+

Key:

IUCN Threat Category r – rare v – vulnerable

Note: the species without indicated name in Bulgarian have no official Bulgarian name.

Appendix № 18

List of edible mushrooms in the park

Species	Areas where the species was established during the REA
Amanita rubescens	Beliia ulei, Iliyna reka, Kalugerski dol
Agaricus comptulus	Kalin
A. sylvaticus	Beliia ulei
Armillaria mellea	Bukovo burdo, Kalugerski dol
Boletus aestivalis	Kalugerski dol, Kalin, Riavanitsa
B. edulis	Iliyna reka, Riavanitsa
Calvatia utriformis	Kalin
Cantharellus tubaeformis	Tiha Rila
Clitocybe gibba (Лисичка)	Kalin, Radovichka reka
Laccaria laccata	Iliyna reka - Turskoto parche, Radovichka reka
Lactarius deterrimus	Iliyna reka, Radovichka reka
L. mitissimus	Dobro pole, Radovichka reka, Riavanitsa
Leccinum scabrum	Iliyna reka
Lycoperdon perlatum	Iliyna reka
L. pyriforme)	Iliyna reka
Pluteus atricapillus	Bukovo burdo, Iliyna reka - Turskoto parche, Kalin, Radovichka reka
Russula aeruginea	Iliyna reka, Radovichka reka
R. cyanoxantha	Beliia ulei, Iliyna reka, Kalin, Kalugerski dol
R. grisea	Kalugerski dol
R. rosea	Kalin, Radovichka reka
R. vesca	Kalugerski dol
R. xerampelina	Dobro pole, Radovichka reka
Suillus bovinus	Iliyna reka
S. luteus	Diavolski vodi, Iliyna reka
Tricholomopsis rutilans	Radovichka reka
Xerocomus chrysenteron	Kalin, Riavanitsa
X. subtomentosus	Diavolski vodi, Kalin
Total: 27 species	

List of invertebrate animal taxa of conservation significance in Rila Monastery Nature Park

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
	Protozoa													
1.	Centropyxis gibba (Deflandre, 1929)	+												
2.	Centropyxis orbicularis (Deflandre, 1929)	+												
3.	Centropyxis vandeli (Bonnet, 1958)	+												
4.	Difflugia hiraethogii (Ogden, 1983)	+												
5.	Difflugia stoutii (Ogden, 1983)	+												
6.	Difflugia tenuis (Penard, 1890) (Ogden, 1983)	+												
7.	Difflugia ventricosa (Deflandre, 1926)	+												
8.	Euglypha aspera (Penard, 1891)	+												
9.	Heleopera sphagni (Leidy, 1879)	+												
10.	Gromia nigricans (Penard, 1902)	+												
11.	Loxophyllum meleagris (O. F. Muller, 1773)	+												
12.	Microchlamys sylvatica (Golemansky, Skarlato & Todorov, 1987)	+												
13.	Nebela carinata (Archer, 1867) (Leidy, 1879)	+												
14.	Nebela tubulata (Brown, 1911)	+												
15.	Lesquereusia gibbosa (Thomas & Gauthier-Lievre, 1859)	+												
16.	Ophrydium versatile (O. F. Muller, 1786)	+												
17.	Paulinella chromatophora (Lauterborn, 1895)	+												
18.	Placocista spinosa (Carter, 1865) (Leidy, 1879)	+												
19.	Playfairina valkanovi (Golemansky, 1966)	+												
20.	Stentor amethystinus (Leidy, 1880)	+												
21.	Tokophrya lemnarum (Stein, 1859)	+												
22.	Valkanovia delicatula (Valkanov, 1962)	+												
23.	Vorticella globularia (O. F. Muller, 1773)	+												

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
	Insecta: Heteroptera													
24.	Acalypta musci (Schrank, 1781)					+								
25.	Acompocoris alpinus (Reuter, 1875)					+								
26.	Adelphophylus balcanicus (Kormilev, 1939)s				+	+								
27.	Aelia klugi (Hahn, 1833)					+								
28.	Aelia sibirica (Reuter, 1886)					+								
29.	Alloenotus egregius (Fieber, 1864)	+				+								
30.	Anthocoris nemorum (Linnaeus, 1761)					+								
31.	Aradus versicolor (Herrich-Schaeffer, 1835)					+								
32.	Atractotomus magnicornis (Fallén, 1807)					+								
33.	Bryocoris pteridis (Fallen, 1807)					+								
34.	Calocoris affinis (Herrich-Schaffer,1835)					+								
35.	Calocoris alpestris (Meyer-Dur, 1843)					+								
36.	Calocoris sexguttatus (Fabricius, 1776)					+								
37.	Camptozygum aequalis (Vuillefroy, 1789)					+								
38.	Canthophorus impressus (Horvath, 1881)					+								
39.	Carpocoris melanocerus (Mulsant & Rey, 1852)					+								
40.	Carpocoris purpureipennis (De geer, 1773)					+								
41.	Chlamydatus pulicarius (Fallen, 1807)					+								
42.	Coriomeris scabricornis (Panzer, 1809)					+								
43.	Cremnocephalus alpestris (Wagner, 1942)					+								
44.	Derephysia foliacea (Fallen, 1807)					+								
45.	Dichrooscytus valesianus (Fieber 1861)					+								
46.	Dicranocephalus medius (Mulsant & Rey, 1870)					+								
47.	Dictyla convergens (Herrich-Schaeffer, 1875)					+								
48.	Dictyonota strichnocera (Fieber, 1844)					+								
49.	Dicyphus digitalis (Josifov, 1958)			+										
50.	Dicyphus pallidus (Josifov, 1958)					+								

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
51.	Dimorphocoris fuscus (Joakimoff, 1909)			+		+								
52.	Dionconotus neglectus (Fabricius, 1798)					+								
53.	Elasmucha fieberi (Jakovleff, 1864)													
54.	Eurygaster dilaticollis (Dohrn, 1860)					+								
55.	Gastrodes abietum (Bergroth, 1914)					+								
56.	Gastrodes grossipes (De geer, 1914)					+								
57.	Geocoris grylloides (Linnaeus, 1761)					+								
58.	Globiceps flavomaculatus(Fabricius, 1794)					+								
59.	Lygocoris contaminatus (Fallen, 1807)					+								
60.	Lygocoris pabulinus (Linne,1761)					+								
61.	Lygus wagneri (Remane, 1955)					+								
62.	Macrosaldula scotica (Curtis, 1835)					+								
63.	Macrotylus quadrilineatus (Schrank, 1875)	+				+								
64.	Mecomma ambulans montanus (Josifov,1969)			+										
65.	Mecomma dispar (Boheman, 1852)					+								
66.	Megalocoleus pilosus (Schrank, 1801)					+								
67.	Megalonotus antennatus (Schilling, 1829)					+								
68.	Megalonotus dilatatus (Herrich-Schaeffer, 1840)					+								
69.	Monalocoris filicis (Linne, 1758)					+								
70.	Montanorthops montanus (Schilling, 1837)					+								
71.	Nabicula flavomarginata (Scholtz, 1847)					+								
72.	Nabicula limbata (Dahlbom, 1854)					+								
73.	Nabis brevis (Dahlbom, 1854)					+								
74.	Nabis rugosus (Linnaeus, 1958)					+								
75.	Nithecus jacobaeae (Schilling, 1829)					+								
76.	Nysius thymi (Wolff, 1804)					+								
77.	Omphalonotus quadriguttatus (Kirschbaum, 1856)					+								
78.	Oncotylus punctipes (Reuter, 1873)					+								
79.	Orthops basalis (Costa, 1852)					+								

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
80.	Orthotylus obscurus (Reuter, 1875)					+								
81.	Peritrechus geniculatus (Hahn, 1832)					+								
82.	Phoenicocoris obscurellus (Fallen, 1829)					+								
83.	Phytocoris longipennis (Flor, 1861)					+								
84.	Phytocoris pini (Kirschbaum, 1856)					+								
85.	Picromerus bidens (Linnaeus, 1758)					+								
86.	Pinalitus rubricatus (Fallen, 1807)					+								
87.	Pitedia juniperina (Linnaeus, 1758)					+								
88.	Placochilus seladonicus (Fallen, 1807)					+								
89.	Plagiognathus arbustorum (Fabricius, 1794)					+								
90.	Psalus salicis (Kirschbaum, 1856)					+								
91.	Rhinocoris annulatus (Linnaeus, 1758)					+								
92.	Salda littoralis (Linnaeus, 1758)	+				+								
93.	Saldula orthochila (Fieber, 1859)					+								
94.	Sigara (Arctocorisa) carinata (C. Sahlberg, 1819)	+				+								
95.	Stenodema holsatum (Fabricius, 1787)					+								
96.	Stictopleurus crassicornis (Linnaeus, 1758)					+								
97.	Stygnocoris pygmaeus (R. Sahlberg, 1848)					+								
98.	Stygnocoris rusticus (Fallen, 1807)					+								
99.	Stygnocoris sabulosus (Schilling, 1829)					+								
100.	Trapezonotus desertus (Seidenstuecker, 1951)					+								
101.	Trochiscocoris rotundatus (Horvath, 1895)					+								
102.	Troilus luridus (Fabricius, 1775)					+								
103.	Velia saulii serbica Tam.				+									
	Insecta: Lepidoptera													
104.	Agrotis fatidica (Hubner, 1824)					+					+			
105.	Apamea furva (Denis & & Shiffermuller, 1775)					+					+			
106.	Apamea michelii (Varga, 1976)				+						+			

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
107.	Apamea rubrirena marginepicta (Varga, 1977)				+						+			
108.	Apamea zeta cyanochlora (Varga, 1976)			+							+			
109.	Apatura iris iris (Linnaeus, 1758)									+	+	+		
110.	Apatura ilia										+			
111.	Arctia flavia (Fuessiy, 1779)					+					+			
112.	Aricia allous macedonica (Verity, 1938)				+						+			
113.	Aricia eumedon rumeliensis (Eitschberger, Steiniger,1975)				+						+			
114.	Boloria graeca balcanica (Rebel, 1903)				+						+			
115.	Boloria pales rilaensis (Varga, 1976)			+							+			
116.	Boloria selene ([Denis & Schiffermueller], 1775)					+					+			
117.	Brentis hecate										+			
118.	Carterocephalus palaemon palaemon (Pallas, 1771)									+	+			
119.	Catascia dilucidaria (Denis & Shiffermuller, 1775)					+					+			
120.	Chersotis cuprea (Denis & Shiffermuller, 1775)										+			
121.	Colias caucasica balcanica (Rebel, 1901)						2,3			+	+			
122.	Diarsia brunnea (Denis & Shiffermuller, 1775)					+					+			
123.	Discestra melanopa (Thunberg, 1791)					+					+			
124.	Entephria caesiata ([Denis & Schiffermueller], 1775)					+					+			
125.	Entephria flavicinctata (Hubner, 1813)					+					+			
126.	Epipsilia grisescens (Fabricius, 1794)					+					+			
127.	Erebia cassioides macedonica (Buresh, 1918)			+							+			
128.	Erebia Dol pirinica (Buresh, 1918)					+					+			
129.	Erebia melasschawerdae (Fruhstorfer, 1918)				+						+			
130.	Erebia oeme vetulonia (Fruhstorfer, 1917)				+						+			
131.	Erebia pandrose ambicolorata (Varga, 1971)			+							+			
132.	Erebia pronoe fruhstorferi (Varren, 1933)				+						+			
133.	Erebia rhodopensis (Nicholl, 1900)				+		2,3			+	+	+		
134.	Eriogaster catax										+			

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
135.	Euchalcia variabilis fuscolivacea (Varga, Ronkay, 1984)			+							+			
136.	Euphya luctuata ([Denis & Schiffermueller], 1775)					+					+			
137.	Euphydryas aurinia bulgarica (Fruhstorfer, 1917)								VU	+	+	+		
138.	Eupitecia fenestrata (Milliere, 1874)					+					+			
139.	Gnophos glaucinarius peruni (Varga, 1975)			+							+			
140.	Gnophos obscuratus ([Denis & Schiffermueller], 1775)					+				+	+	+		
141.	Hadena caesia bulgarica (Boursin, 1959)					+					+			
142.	Hypodryas cynthya leonhardi (Fruhstorfer, 1917)			+							+			
143.	Leptidea morsei (Fenton, 1881)										+			
144.	Limenitis populi populi (Linnaeus, 1758)									+	+	+		
145.	Lycaena candens leonhardi (Fruhstorfer, 1917)				+						+			
146.	Lycaena virgaurea balcanicola (Graves, Hemming, 1928)				+						+			
147.	Lycophotia porphirea ([Denis & Schiffermueller], 1775)					+					+			
148.	Maculinea alcon										+			
149.	Maculinea arion										+			
150.	Melitaea trivia trivia ([Denis & Schiffermueller], 1775)									+	+	+		
151.	Mythimna andereggii pseudocomma (Rebel, Zerny, 1931)				+						+			
152.	Nebula nebulata pirinica (Reisser, 1936)				+						+			
153.	Neptis rivularis										+			
154.	Paradrina suscianja (Von Mentzer, 1981)				+						+			
155.	Parasemia plantaginis interrupta (Schawerda, 1910)				+						+			
156.	Parnassius apollo bosniensis (Stichel, 1899)						2,3		VU	+	+	+		
157.	Parnassius mnemosyne caucasia (Verity, [1911])								VU	+	+	+		
158.	Photedes captiuncula (Threitschke, 1825)					+					+			
159.	Pieris ergane										+			
160.	Polyommatus eroides (Frivaldszky, 1835)									+	+	+		
161.	Pyrgus cacaliae (Rambur, 1839)					+					+			

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
162.	Scolitantides orion										+			
163.	Syngrapha devergens rilaecacominum (Varga, Ronkay, 1984)			+							+			
164.	Syngrapha interrogationis (Linnaeus, 1758)					+					+			
165.	Xestia speciosa (Hubner, 1813)					+					+			
166.	Zerynthia polyxena gracilis (Schultz, 1908)									+	+	+		
	Insecta: Coleoptera													
167.	Amara municipalis bischoffi Jedlicka				+									
168.	Amara quenseli Schonherr				+									
169.	Anaspis kriegei Ermisch (species new in Bulgaria)	+												
170.	Anaspis rambouseki Roubal				+									
171.	Anthophagus alpinus Fabricius					+								
172.	Astenus bulgaricus Coiffait			+										
173.	Atheta knabli Benick (species new in Bulgaria)	+												
174.	Bembidion bipunctatum nivale Heer					+								
175.	Bembidion rhodopense Apfelbeck				+									
176.	Calathus metallicus aeneus Putzeys				+									
177.	Calosoma sycophanta (Linnaeus, 1758)								VU	+	+	+		
178.	Carabus intricatus (Linnaeus, 1761)								VU	+	+	+		
179.	Carabus montivagus bulgaricus Csiki				+									
180.	Gymnetron vestitum Germar	+												
181.	Helophorus glacialis Villa					+								
182.	Leptacinus luperus bulgaricus Coiffait			+										
183.	Leptusa pulchella Mannerheim (species new in Bulgaria)	+			+									
184.	Leptusa rhilensis Pace			+										
185.	Malthinus bulgaricus Svihla			+										
186.	Malthodes serbotae macedonicus Svihla				+									
187.	Miarus campanulae Linnaeus	+												

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
188.	Miarus monticola Petri	+												
189.	Mordellistena pseudobrevicauda Ermisch				+									
190.	Morimus funereus (Mulsant, 1863)									+	+	+		II
191.	Nebria eugeniae Daniel			+										
192.	Nebria hybrida Rottenberg			+										
193.	Nebria rhilensis Frivaldsky			+										
194.	Nudobius lentus Gravenhorst	+												
195.	Obrium brunneum Fabricius	+												
196.	Olibrus bulgaricus Reitter				+									
197.	Otiorrhynchus demirkapensis Apfelbeck			+										
198.	Otiorrhynchus lithanthracinus hospitus Reitter			+										
199.	Otiorrhynchus rhilensis Stierlin			+										
200.	Otiorrhynchus serdicans Apfelbeck	+												
201.	Phyllobius aetolicus Apfelbeck			+										
202.	Phyllobius pinicola Kiesenwetter				+									
203.	Phyllobius rhodopensis Apfelbeck			+										
204.	Philonthus marginatus Strom	+												
205.	Philonthus tenuicornis Mulsant & Rey	+												
206.	Procerus gigas (Creutzer, 1799)									+	+	+		
207.	Pterostichus rhilensis Rottenberg			+										
208.	Quedius rhodopianus Coiffait			+										
209.	Scymnus silesiacus Weise	+												
210.	Sphaerosoma csiki Apfelbeck				+									
211.	Spaerosoma sturanyi Apfelbeck			+										
212.	Tapinopterus balcanicus balcanicus Ganglbauer			+										
213.	Tapinoterus kaufmanni kulti Maran			+										
214.	Trechus rambouseki Breit			+										
215.	Trechus rhilensis Kaufmann			+										
216.	Trechus rambouseki Breit			+										

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
217.	Trechus rhodopeius Jeannel			+										
218.	Xenion ignitum Kraatz				+									
219.	Zabrus balcanicus Heyden			+										
220.	Zabrus rhodopiensis Apfelbeck				+									
	Insecta: Neuroptera													
221.	Libelloides macaronius (Scopoli, 1765)										+			
	Insecta: Hymenoptera													
222.	Formica (Formica) lugubris (Zetterstedt, 1840)								EN	+	+	+		
223.	Formica (Formica) pratensis (Retzius, 1783)									+	+	+		
224.	Formica (Formica) rufa (Linnaeus, 1758)						2,3		EN	+	+	+		
	Arachnida													
225.	Atypus piceus (Sulzer, 1776)	+												
226.	Dysdera longirostris (Doblika, 1853)	+												
227.	Eresus cinnaberinus (Oliver, 1789)													
228.	Hyptiotes paradoxus (C.l.Koch, 1834)	+												
229.	Achaearanea lunata (Clerck, 1757)					+								
230.	Achaearanea ohlerti (Thorell, 1870)					+								
231.	Dipoena melanogaster (C.L. Koch, 1837)	+												
232.	Euryopis flavomaculata (C. L. Koch, 1836)	+												
233.	Robertus frivaltzkyi (Chyzer, 1894)	+			+	+								
234.	Robertus mediterraneus (Eskov, 1987)	+				+								
235.	Simitidion simille (C.L.Koch, 1836)	+												
236.	Theridion nigrovariegatum (Simon, 1873)					+								
237.	Theridion petraeum (L.Koch, 1872)	+				+								
238.	Theridion pinastri (L.Koch, 1872)	+												
239.	Theridion varians, (Hahn 1831)	+												

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
240.	Araeoncus clivifrons (Deltshev, 1987)	+		+										
241.	Bolyphantes alticeps (Sundevall, 1833)					+								
242.	Bolyphantes luteotus (Blackwall, 1833)					+								
243.	Centromerus lakatnikensis (Drensky, 1931)	+		+										
244.	Centromerus silvicola (Kulczynski, 1887)					+								
245.	Cinetata gradata (Simon, 1881)					+								
246.	Diplocephalus foraminifer (O.P.-Cambridge, 1875)					+								
247.	Diplocephalus picinus (Blackwall, 1841)					+								
248.	Entelecara media (Kulczynski, 1887)	+				+								
249.	Erigone pirini (Deltshev, 1983)	+		+										
250.	Frontinellina frutetorum (C.L.Koch, 1834)					+								
251.	Gonatium orientale (Fage, 1931)													
252.	Gonatium rubens (Blackwall, 1833)	+												
253.	Lepthotrix hardyi (Blackwall, 1850)	+												
254.	Lepthyphantes alacris (Blackwall, 1853)					+								
255.	Lepthyphantes alutacius (Simon, 1884)					+								
256.	Lepthyphantes lithoclasicolus (Deltshev, 1985)	+		+										
257.	Linyphia hortensis (Sundewall, 1829)					+								
258.	Macrargus rufus (Wider, 1834)					+								
259.	Maso sundevalli (Westring, 1851)					+								
260.	Mecynargus paetulus (O.P.-Cambridge, 1875)					+								
261.	Meioneta fuscipalpis (C.L. Koch, 1836)	+												
262.	Pelecopsis elongate (Wider, 1834)					+								
263.	Pityohyphantes phrigianus (C.L. Koch, 1836)					+								
264.	Porrhomma convexum (Westring, 1861)					+								
265.	Stemonyphantes lineatus (Linnaeus, 1758)	+												
266.	Tapinociba pallens (O.P.-Cambridge, 1872)	+												
267.	Tiso vagans (Blackwall, 1834)					+								
268.	Trichoncoides piscator (Simon, 1884)	+				+								

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
269.	Aculepeira talishia (Zawadsky, 1902)	+				+								
270.	Araniella alpica (L. Koch, 1869)	+												
271.	Larinioides folium (Schrank, 1803)	+												
272.	Alopecosa taeniopus (Kulczynski, 1895)	+												
273.	Alopecosa trabalis (Clerck, 1757)	+												
274.	Arctosa latithorax (Lugetti & Tongeorgi, 1965)	+												
275.	Pardosa albatula (L. Koch, 1870)					+								
276.	Pardosa drenskii (Buchar, 1968)	+		+										
277.	Pardosa incerta (Nosek, 1905)	+				+								
278.	Pardosa mixta (Kulczynski, 188)7					+								
279.	Pardosa morosa (L. Koch, 1870)					+								
280.	Pardosa nigra (C.L. Koch, 1834)	+				+								
281.	Pardosa tashevi (Buchar, 1968)					+								
282.	Histopona luxurians (Kulczynski, 1897)					+								
283.	Histopona myops (Simon, 1885)	+			+									
284.	Tegenaria rilaensis (Deltshev 1993)	+		+										
285.	Cybaeus angustiarum (L. Koch, 1868)					+								
286.	Amaurobius fenestralis (Stroem, 1768)					+								
287.	Coelotes jurinitschi (Drensky, 1915)	+			+									
288.	Coelotes kulczynskii (Drensky, 1915)				+									
289.	Anyphaena accentuate (Walckenaer, 1802)	+												
290.	Cheiracanthium montanum (L. Koch, 1878)	+				+								
291.	Clubiona alpicola (Kulczynski, 1882)					+								
292.	Clubiona coerulescens (L. Koch, 1867)	+												
293.	Clubiona frutetorum (L. Koch, 1866)					+								
294.	Clubiona juvenis (Simon, 1878)	+												
295.	Clubiona neglecta. (P.-Cambridge, 1862)	+												
296.	Clubiona similis (L. Koch, 1867)	+												
297.	Clubiona trivialis (C.L. Koch, 1841)	+												

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
298.	Zodarion pirini (Drensky, 1921)			+										
299.	Aphantaulux cincta (L.Koch, 1866)	+				+								
300.	Callilepis nocturna (Linne, 1758)	+												
301.	Drassodes lapidosus (Walckenaer, 1802)					+								
302.	Drassodes pubescens (Thorell, 1856)					+								
303.	Gnaphosa bicolor (Nahn, 1833)					+								
304.	Haplodrassus signifer (C.L. Koch, 1839)					+								
305.	Micaria pulicaria (Sundevall, 1831)	+												
306.	Nomisia exornata (C. L. Koch, 1839)	+												
307.	Scotophaeus scutulatus (L.Koch, 1866)	+												
308.	Philodromus collinus (C.L. Koch, 1835)					+								
309.	Philodromus longipalpis (Simon, 1870)	+												
310.	Philodromus vagulus (Simon, 1875)					+								
311.	Xysticus bifasciatus (C.L.Koch, 1837)	+												
312.	Xysticus macedonicus (Silhavi, 1944)	+			+									
313.	Euophrys petrensis (C.L. Koch, 1837)	+												
314.	Sitticus guttatus (Thorell, 1875)	+												
	Crustacea													
315.	Dissotrocha macrostyla (Ehrenberg, 1838)	+												
316.	Acantholeberis curvirostris (O.F.Mueller,1776)	+												
317.	Bosmina coregoni (Baird, 1857)	+												
	Gastropoda													
318.	Vertigo alpestris (Alder, 1830)	+												
319.	Alinda biplicata euptychia (Ehrmann, 1960)		+											
320.	Alinda biplicata distinctor (A. Wagner, 1915)		+											
321.	Columella edentula (Draparnaud, 1805)	+												
322.	Vitrea bulgarica Damjanov & Pinter, 1969				+									
323.	Oxychilus hydatinus (Rossmaessler, 1838)					+								

No	Taxon	Rare	Endemic			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	D92/ 43
			L	BG	B									
324.	Limax macedonicus (Hesse, 1928)				+									
325.	Lehmania brunneri (Wagner, 1931)				+									
326.	Deroceras agreste agreste (Linnaeus, 1758)	+												
327.	Deroceras bureschi (Wagner, 1934)				+									
328.	Tandonia serbica (Wagner, 1931)				+									
329.	Lindholmiola corcyrensis pirinensis (Jaeckel, 1954)				+									
330.	Helicigona trizona haberhaueri (Rossmassler, 1835)			+										
331.	Helix vulgaris (Rossmassler, 1839)					+								
332.	Helix pomatia (Linnaeus, 1758)						4				+			
	Total:	96	2	41	52	146	5	-	7	19	72	17	-	-

Key:

Endemic species: **L** – Local;
BG – Bulgarian;
B – Balkan;

BDA – species, included in an annex of the biodiversity act: appendix 2 – habitats of species for the protection of which protected areas are designated; appendix 3 – protected species; appendix 4 – wild animals under a protection regime and regulated use in nature.

IUCN – species included in the World's Red Data Book: **EN** – endangered species,
VU – vulnerable species

ERL – European Red Data Lists (E/ECE/ 1249, ECE/ ENVWA/20 etc.)

CORINE – Corine Biotopes-a pan-European program for collection, coordination and provision of constant information about the condition of the environment and natural resources in Europe**.**

Bern – Bern Convention: strictly protected species and species subject to protection by regulation of their use.

Bonn – Bonn Convention: includes the species endangered with becoming extinct and the species that would benefit from international cooperation for their protection.

D92/43 – Species included in Annex II of Directive 92/43 of the of the EU Council on Protection of Natural Habitats of the Wild Flora and Fauna (EU Habitats Directive)

List of vertebrate animal species of conservation significance in Rila Monastery Nature Park

No	Taxon	Rare	Endemic species			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	BD	D92/43
			L	BG	B										
	Pisces														
1.	Balkan trout *(Salmo trutta)*					+									
2.	Rainbow trout *(Oncorhynchus mykiss)*														
3.	Brook trout *(Salvelinus fontinallis)*														
4.	Common minnow *(Phoxinus phoxinus)*														
5.	Barbel *(Barbus cyclolepis)*				+				DD						
	Amphibia														
6.	Spotted salamander *(Salamandra salamandra)*						3					III			
7.	Alpine newt *(Triturus alpestris)*					+	2,3	+				III			
8.	Spotted newt *(Triturus vulgaris)*						3				+	III			
9.	Warty newt *(Triturus cristatus)*						2,3		LR:cd		+	II			II
10.	Yellow-bellied toad *(Bombina variegata)*						2				+	II			II
11.	European tree frog *(Hyla arborea)*						2,3		LR:nt			II			
12.	Great toad *(Bufo bufo)*						3					III			
13.	Green toad *(Bufo viridis)*						3				+	II			
14.	Big water frog *(Rana ridibunda)*						4					III			
15.	Common frog *(Rana temporaria)*					+	2,4					III			
16.	Agile frog *(Rana dalmatina)*						2				+				
	Reptilia														
17.	Tortoise *(Testudo hermanni)*						2,3		LR:nt		+	II			II
18.	Slow worm *(Anguis fragilis)*						2,3					III			
19.	Sand lizard *(Lacerta agilis)*										+	II			

No	Taxon	Rare	Endemic species			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	BD	D92/43
			L	BG	B										
20.	Wall lizard *(Lacerta muralis)*										+	II			
21.	Green lizard *(Lacerta viridis)*										+	II			
22.	Viviparous lizard *(Lacerta vivipara)*					+	3					III			
23.	Smooth snake *(Coronella austriaca)*						3				+	II			
24.	Aesculapian snake *(Elaphe longissima)*						3	+			+	II			
25.	Grass snake *(Natrix natrix)*											III			
26.	Dice snake *(Natrix tesselata)*										+	II			
27.	Green whip snake *(Coluber caspius)*						3				+	II			
28.	Viper *(Vipera berus)*					+						III			
	Aves														
29.	White stork *(Ciconia ciconia)*						2,3			2	+	II	II	I	
30.	Black stork *(Ciconia nigra)*						2,3	+		3	+	II	II	I	
31.	Garganey *(Anas querquedula)*						4			3		III	II	II/1	
32.	Wasp eater *(Pernis apivorus)*						2,3	+		4	+	II	II	I	
33.	Bearded vulture *(Gypaetus barbatus)*						2,3	+		3	+	II	II	I	
34.	Griffon vulture *(Gyps fulvus)*						2,3	+		3	+	II	II	I	
35.	Black vulture *(Aegypius monachus)*						2,3	+	LR:nt	1	+	II	II	I	
36.	Short-toed eagle (Circaetus gallicus)						2,3	+		3	+	II	II	I	
37.	Goshawk *(Accipiter gentilis)*						3	+				II	II		
38.	Sparrow hawk *(Accipiter nisus)*						3	+				II	II		
39.	Common buzzard *(Buteo buteo)*						3					II	II		
40.	Great spotted eagle *(Aquila clanga)*						2,3	+	VU	1	+	II	II	I	
41.	Imperial eagle *(Aquila heliaca)*						2	+	VU	1	+	II	II	I	
42.	Golden eagle *(Aquila chrysaetos)*						2,3	+		3	+	II	II	I	
43.	Booted eagle *(Hieraaetus pennatus)*						2	+		3	+	II	II	I	
44.	Kestrel *(Falco tinnunculus)*						3			3		II	II		
45.	Hobby *(Falco subbuteos)*						3	+				II	II		

No	Taxon	Rare	Endemic species			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	BD	D92/43
			L	BG	B										
46.	Lanner falcon *(Falco biarmicus)*						3	+		3	+	II	II	I	
47.	Peregrine falcon *(Falco peregrinus)*						2,3	+		3	+	II	II	I	
48.	Hazel hen *(Bonasa bonasia)*					+	2,3	+			+	III		I	
49.	Capercaillie *(Tetrao urogallus)*					+	2,4	+			+	III		I	
50.	Rock partridge *(Alectoris graeca)*						2,4			2	+	III		II/1	
51.	Quail *(Coturnix coturnix)*						4			3		III	II	II/1	
52.	Rock dove *(Columba livia)*						3							II/1	
53.	Stock dove *(Columba oenas)*						3	+		4		III		II/2	
54.	Wood pidgeon *(Columba palumbus)*						4			4		III		II/1	
55.	Turtle dove *(Streptopelia turtur)*									3		III		II/2	
56.	Cuckoo *(Cuculus canorus)*						3					III			
57.	Barn owl *(Tyto alba)*						3	+		3		II			
58.	Pygmy owl *(Glaucidium passerinum)*					+	2,3	+			+	II		I	
59.	Little owl *(Athene noctua)*						3			3		II			
60.	Tawny owl *(Strix aluco)*						3			4		II			
61.	Tengmalm's owl *(Aegolius funereus)*					+	2,3	+			+	II		I	
62.	Nightjar *(Caprimulgus europaeus)*						2,3			2	+	II		I	
63.	Swift *(Apus apus)*						3					III			
64.	Pallid swift *(Apus pallidus)*						3					II			
65.	Alpine swift *(Apus melba)*						3					II			
66.	Hoopoe *(Upupa epops)*						3					II			
67.	Wryneck *(Jynx torquilla)*						3			3		II			
68.	Grey headed woodpecker *(Picus canus)*						2,3			3	+	II		I	
69.	Green woodpecker *(Picus viridis)*						3			2		II			
70.	Black woodpecker *(Dryocopos martius)*						2,3	+			+	II		I	
71.	Greater spotted woodpecker *(Dendrocopos major)*						3					II			
72.	Middle spotted woodpecker *(Dendrocopos medius)*						2,3			4	+	II		I	

No	Taxon	Rare	Endemic species			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	BD	D92/43
			L	BG	B										
73.	White backed woodpecker *(Dendrocopos leucotos lilfordi)*					+	2,3	+			+	II		I	
74.	Lesser spotted woodpecker *(Dendrocopos minor)*						3					II			
75.	Three toed woodpecker *(Picoides trydactylus alpinus)*					+	2,3	+		3	+	II		I	
76.	Wood lark *(Lullula arborea)*						2,3			2	+	III		I	
77.	Sky lark *(Alauda arvensis)*						3			3		III		II/2	
78.	Shore lark *(Eremophila alpestris balcanica)*				+		3					II			
79.	Crag martin *(Ptyonoprogne rupestris)*						3					II			
80.	Swallow *(Hirundo rustica)*						3			3		II			
81.	Red rumped swallow *(Hirundo daurica)*						3					II			
82.	House martin *(Delichon urbica)*						3					II			
83.	Tree pipit *(Anthus trivialis)*						3					II			
84.	Meadow pipit *(Anthus pratensis)*						3			4		II			
85.	Water pipit *(Anthus spinoletta)*						3					II			
86.	Grey wagtail *(Motacilla cinerea)*						3					II			
87.	White wagtail *(Motacilla alba)*						3					II			
88.	Dipper *(Cinclus cinclus)*						3					II			
89.	Wren *(Troglodytes troglodytes)*						3					II			
90.	Dunnock *(Prunella modularis)*						3			4		II			
91.	Alpine accentor *(Prunella collaris subalpina)*				+		3					II			
92.	Robin *(Erithacus rubecula)*						3			4		II	II		
93.	Nithgingale *(Luscinia megarhynchos)*						3			4		II	II		
94.	Black redstart *(Phoenicurus ochrurus)*						3					II	II		
95.	Whinchat *(Saxicola rubetra)*						3					II			
96.	Isabelline wheateater *(Oenanthe isabellina)*						3					II	II		
97.	Wheateater *(Oenanthe oenanthe)*						3					II			
98.	Rock thrush *(Monticola saxatilis)*						3			3		II	II	I	

No	Taxon	Rare	Endemic species			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	BD	D92/43
			L	BG	B										
99.	Ring ouzel *(Turdus torquatus)*						3			4		II	II		
100.	Blackbird *(Turdus merula)*						3			4		III	II	II/2	
101.	Song thrush *(Turdus philomelos)*						3			4		III	II	II/2	
102.	Mistle thrush *(Turdus viscivorus)*						3			4		III	II	II/2	
103.	Incterine warbler *(Hippolais icterina)*						3			4		II	II		
104.	Lesser whitethroat *(Sylvia curruca)*						3					II	II		
105.	Whitethroat *(Sylvia communis)*						3			4		II	II		
106.	Garden warbler *(Sylvia borin)*						3			4		II	II		
107.	Blackcap *(Sylvia atricapilla)*						3			4		II	II		
108.	Wood warbler *(Phylloscopus sihilatrix)*						3			4		II	II		
109.	Chiffchaff *(Phylloscopus collybita)*						3					II	II		
110.	Willow warbler *(Phylloscopus trochillus)*						3					II	II		
111.	Goldcrest *(Regulus regulus)*						3			4		II	II		
112.	Firecrest *(Regulus ignicapillus)*						3			4		II	II		
113.	Spotted flycatcher *(Muscicapa striata)*						3			3		II	II		
114.	Red-breasted flycatcher *(Ficedula parva)*						2,3				+	II	II	I	
115.	Long-tailed tit *(Aegithalos caudatus)*						3					II			
116.	Marsh tit *(Parus palustris)*						3					II			
117.	Somber tit *(Parus lugubris)*						3			4		II			
118.	Willow tit *(Parus montanus)*						3					II			
119.	Crested tit *(Parus cristatus)*						3			4		II			
120.	Coal tit *(Parus ater)*						3					II			
121.	Blue tit *(Parus caeruleus)*						3			4		II			
122.	Great tit *(Parus maior)*						3					II			
123.	Nuthatch *(Sitta europaea)*						3					II			
124.	Wall creeper *(Tichodroma muraria)*						2,3					II			
125.	Tree creeper *(Certhia familiaris)*						3					II			
126.	Oriole *(Oriolus oriolus)*						3					II			

No	Taxon	Rare	Endemic species			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	BD	D92/43
			L	BG	B										
127.	Red-backed shrike *(Lanius collurio)*						2,3			3	+	II		I	
128.	Jay *(Garrulus glandarius)*													II/2	
129.	Nutcracker *(Nucifraga caryocatactes)*						3					II			
130.	Alpine chough *(Pyrrhocorax graculus)*						2,3					II			
131.	Hooded crow *(Corvus corone cornix)*						4							II/2	
132.	Raven *(Corvus corax)*						3					III			
133.	Starling *(Sturnus vulgaris)*						4							II/2	
134.	House sparrow *(Passer domesticus)*														
135.	Tree sparrow *(Passer montanus)*						3					III			
136.	Chaffinch *(Fringilla coelebs)*						3			4		III			
137.	Serin *(Serinus serinus)*						3			4		II			
138.	Green finch *(Carduelis chloris)*						3			4		II			
139.	Foldfinch *(Carduelis carduelis)*						3					II			
140.	Siskin *(Carduelis spinus)*						3			4		II			
141.	Linnet *(Carduelis cannabina)*						3			4		II			
142.	Crossbill *(Loxia curvirostra)*						3					II			
143.	Skarlet grosbeak *(Carpodacus erythrinus)*						3					II			
144.	Bullfinch *(Pyrrhula pyrrhula)*						3					III			
145.	Hawkfinch *(Coccothraustes coccothraustes)*						3					II			
146.	Yellow bunting *(Emberiza citrinella)*						3			4		II			
147.	Cirl bunting *(Emberiza cirlus)*						3			4		II			
148.	Rock bunting *(Emberiza cia)*						3			3		II			
149.	Corn bunting *(Miliaria calandra)*						3			4					
	Mammalia														
150.	Hedgehog *(Erinaceus concolor)*						3					III			
151.	Mole *(Talpa europaea)*														
152.	Common shrew *(Sorex araneus)*											III			

No	Taxon	Rare	Endemic species			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	BD	D92/43
			L	BG	B										
153.	Pybmy shrew *(Sorex minutus)*											III			
154.	Water shrew *(Neomys fodiens)*										+	III			
155.	Mediterranean water shrew *(Neomys anomalus)*										+	III			
156.	Lesser white-toothed shrew *(Crocidura suaveolens)*														
157.	White-toothed shrew *(Crocidura russula)*														
158.	Bicoloured white-toothed shrew *(Crocidura leucodon)*														
159.	Greater horseshoe bat *(Rhinolophus ferrumequinum)*						2,3		LR:cd	+	+	II	+		II,IV
160.	Lesser horseshoe bat *(Rhinolophus hipposideros)*						2,3		VU	+	+	II	+		II,IV
161.	Mediterranean horseshoe bat *(Rhinolophus euryale)*						2,3		VU	+	+	II	+		II,IV
162.	Large mouse-eared bat *(Myotis myotis)*						2,3		LR:nt	+	+	II	+		II,IV
163.	Lesser mouse-eared bat *(Myotis blythi)*						2,3			+	+	II	+		II,IV
164.	Netterer's bat *(Myotis nattereri)*						2,3		VU	+		II	+		II,IV
165.	Whiskered bat *(Myotis mystacinus)*						2,3			+		II	+		II,IV
166.	Daubenton's bat *(Myotis daubentoni)*						2,3			+		II	+		II,IV
167.	Long-eared bat *(Plecotus auritus)*						2,3			+		II	+		II,IV
168.	Barbastelle *(Barbastella barbastellus)*						2,3		VU	+	+	II	+		II,IV
169.	Serotine *(Eptesicus serotinus)*						2,3			+		II	+		II,IV
170.	Serotine*(Eptesicus nilssoni)*						2,3			+		II	+		II,IV
171.	Bat *(Hypsugo savii)*						2,3			+		II	+		II,IV
172.	Common pipistrelle *(Pipistrellus pipistrellus)*						2,3			+		II	+		II,IV
173.	Giant noctule *(Nyctalus lasiopterus)*						2,3		LR:nt	+		II	+		II,IV
174.	Hare *(Lepus europaeus)*											III			
175.	Squirrel *(Sciurus vulgaris)*								LR:nt			III			
176.	Forest dormouse *(Dryomys nitedula)*						2		LR:nt		+	III			II,IV
177.	Fat docmouse *(Glis glis)*								LR:nt	+		III			
178.	Common dormouse *(Muscardinus avellanarius)*						2,3		LR:nt		+	III			II,IV
179.	Yellow-necked field mouse *(Apodemus flavicollis)*														

No	Taxon	Rare	Endemic species			Relict	BDA	RDB	IUCN	ERL	CORINE	Bern	Bonn	BD	D92/43
			L	BG	B										
180.	Common field mouse *(Apodemus sylvaticus)*														
181.	House rat *(*Rattus rattus*)*														
182.	House mouse *(Mus musculus)*														
183.	Common redbacked vole *(Clethrionomys glareolus)*														
184.	Norway rat *(Rattus norvegicus)*														
185.	European wter vole *(Arvicola terrestris)*														
186.	Snow vole *(Chionomys nivalis)*					+			LR:nt			III			
187.	Common vole *(Microtus arvalis)*														
188.	European pine vole *(Microtus subterraneus)*											III			
189.	Lesser mole rat *(Nannospalax leucodon)*								VU						
190.	Wolf *(Canis lupus)*						2,4	+	LR:lc	+	+	II			
191.	Jackal *(Canis aureus)*						4			+	+				
192.	Fox *(Vulpes vulpes)*														
193.	Bear *(Ursus arctos)*				+		2,3	+		+	+	II			II
194.	Badger *(Meles meles)*											III			
195.	Weasel *(Mustela nivalis galinthias)*				+		3					III			
196.	European polecat *(Mustela putorius)*						4					III			
197.	Marbled polecat *(Vormela peregusna peregusna)*						2,3	+	VU	+		II			
198.	Otter *(Lutra lutra)*						2,3	+	VU	+	+	II			II
199.	Pine marten *(Martes martes)*						3	+		+		III			
200.	Beech marten *(Martes foina)*											III			
201.	Wild cat *(Felis silvestris)*						4			+	+	II			
202.	Lynx *(Lynx lynx)*						3	+		+	+	III			II
203.	Wild boar *(Sus scrofa)*														
204.	Red deer *(Cervus elaphus)*											III			
205.	Roe deer *(Capreolus capreolus)*											III			
206.	Chamois *(Rupicapra rupicapra balcanica)*				+	+	2,4	+	LR:lc		+	III			II
207.	Total:	-	-	-	6	13	164	33	24	86	57	178	56	41	24

Key:

Endemic species:

L – Local;
BG – Bulgarian;
B – Balkan;

BDA – species, included in an Annex of the Biodiversity Act:

APPENDIX 2 – habitats of species for the protection of which protected areas are designated;

APPENDIX 3 – protected species;

APPENDIX 4 – wild animals under a protection regime and regulated use in nature.

IUCN – species included in the World's Red Data Book, including the publication by BirdLife International (2000). The threat categories for each species is presented as follows:

DD – insufficiently studied species
LR:nt – semi-endangered species,
LR:cd – dependent on nature conservation measures
LR:lc – recently endangered species
VU – vulnerable species
NotEval – species whose conditions was not evaluated.

ERL – European Red Lists (E/ECE/ 1249, ECE/ ENVWA/20 etc.). Concerning birds, the BirdLife International categories for species of particular significance for nature conservation in Europe (SPEC) were used as follows:

1 (**SPEC1**) **–** globally endangered species

2 (**SPEC2**) **–** species whose global population is concentrated in Europe and whose nature conservation status is unfavorable**.**

3 (**SPEC3**) **–** species whose global population is concentrated in Europe but whose nature conservation status in Europe is not favorable.

4 (**SPEC4**) **–** species whose global population is concentrated in Europe and whose nature conservation status is favorable.

CORINE – Corine Biotopes-a pan-European program for collection, coordination and provision of constant information about the condition of the environment and natural resources in Europe.

Bern – Bern Convention:

II – species from Appendix II of the Convention, i.e. strictly protected fauna species

III – species from Appendix III of the Convention, i.e. species subject to protection by regulation of their use.;

Bonn – Bonn Convention: includes the species endangered with becoming extinct and the species that would benefit from international cooperation for their protection.

BD – Birds Directive

I – Species from Appendix I of the Directive, for whose habitats the parties shall take special nature conservation measures;

II/1 – species from Appendix II of the Directive that could be the subject of hunting in all countries of the European Union;

II/2 – species from Appendix II of the Directive that could be the subject of hunting in those EU countries who have proposed them;

D92/43: Directive 92 of the EEC Council dated 21.05.1992, on the conservation of natural habitats of the wild flora and fauna (Habitats Directive)

II – Appendix II-vertebrate animal species (except birds) of interest to the Community and whose protection requires designation of specially protected zones;

IV – Appendix IV-vertebrate animals (except birds) requiring strict protection at the species level.

Appendix № 21

Groups of Birds in the Rila Monastery NP According to the Population Size and Distribution Patterns in the Park

Groups of Birds by Size of their Portions of the National Populations Represented in the Park

There are more than 27 species represented in the Park with 1-5% of their national populations, as follows: wasp eater *Pernis apivorus*, griffon vulture, black vulture, short-toed eagle *Circaetus gallicus*, goshawk *Accipiter gentiles,* sparrow hawk *A. nisus*, imperial eagle, golden eagle *Aquila chrysaetos* and booted eagle, hobby *Falco subbuteo*, capercaillie *Tetrao urogallus*, rock partridge *Alectoris graeca*, stock dove *Columba oenas*, barn owl *Tyto alba*, middle spotted woodpecker *Dendrocopos medius*, alpine accentor *Prunella collaris*, rock thrush *Monticola saxatilis*, ring ouzel *Turdus torquatus*, crested tit *Parus cristatus*, nutcracker *Nucifraga caryocatactes*, rock bunting *Emberiza cia* etc.

More than five species inhabit the park with 6-10% of their national populations in the Park: peregrine falcon *Falco peregrinus*, hazel hen *Bonasa bonasia*, black woodpecker *Dryocopos martius*, water pipit *Anthus spinoletta*, the wall creeper *Tichodroma muraria* and others.

More than six species occur in the Park with 11 to 50% of their national populations. These are pygmy owl *Glaucidium passerinum*, Tengmalm's owl *Aegolius funereus*, white-backed woodpecker *Dendrocopos leucotos lilfordii*, three-toed woodpecker *Picoides trydactilus*, shore lark *Eremophila alpestris balcanica* and alpine chough *Pyrrhocorax graculus*.

Two main groups of these birds deserve attention. One is the group of species inhabiting comparatively limited areas but are of high significance for conservation (black vulture and griffon vulture, short-toed eagle, wasp eater, imperial eagle, golden eagle and booted eagle, lanner falcon and peregrine falcon). The other group includes the species occupying habitats of significant size, quality and location in the Park and whose preservation would bring indirect conservation benefits to other species (hazel hen, capercaillie, pygmy owl and Tengmalm's owl, black woodpecker, middle spotted woodpecker, white-backed woodpecker and three-toed woodpecker, wood lark, rock thrush, red-breasted flycatcher).

Groups of Birds by their Distribution in the Park

More than 43 species have relatively numerous populations and are densely distributed throughout the Park (throughout the entire respective habitats or altitude sectors). Typical representatives of this group are the chaffinch, the blackbird, the nuthatch, the cross-bill, the dipper, and others.
Other 22 species or so are dispersed in significant areas in the Park. Typical here are the sparrow hawk, the common buzzard, the tawny owl, the black woodpecker and others.

A third group is that of the birds occurring in concentrations in individual locations, often at significant distances from one another. These are the species nesting in colonies or species related to specific and isolated habitats in the Park. Typical representatives are the three swifts, the alpine chough, the house martin and others.

A fourth group is that of the species with singular nests, frequently with clearly defined nesting and hunting areas. A typical representative is the golden eagle continuously observed in the same territory since 1981. Of interest here is the lanner falcon observed on July 28, 2001 hunting in the same region where the species was first observed in 1975.

Appendix № 22

Numbers and Distribution of Large Mammals in the Park

Common species

There are approximately six mammal species that can be considered common in the Park based on their widespread occurrence and irrespective of the comparatively low density of some of them. Some of these are the **fox** (*Vulpes vulpes*), the **pine marten** (*Martes martes*), the **stone marten** (*Martes foina*), the **weasel** (*Mustela nivalis*), the **badger** (*Meles meles*), and the **wild boar** (*Sus scrofa*). The wild boar population density (70 animals) is optimal for a protected area such as the Rila Monastery NP.

Species in Small Numbers

More than 11 species occur in small numbers in the Park, although some occur in different parts there.

The wolf (*Canis lupus*) inhabits the Park in one pack numbering 4-6 animals by the end of the winter. The wild ungulates totaling at approximately 150 individuals can not provide for its food in the Park. This is the reason for the regular sightings and killings of wolves in the areas around the park, most frequently during the fall and the winter, when some ungulates leave the Park as well.

The bear (*Ursus arctos*) still occurs in some of the least visited parts of the Park with old forests unaffected by forestry (Rizvanitsa, Lake Smradlivoto, Bukovo bardo, Radovichka River).

The marbled polecat (*Vormela peregusna*) has been reported as sighted in the Rila Monastery Forestry Enterprise in a 1988 questionnaire, although no particular data about its location has been indicated, and has been confirmed as occurring in the Park during the recent years from Sofia University biology students practicing in the Rila Monastery NP.

The otter (*Lutra lutra*) occurs during the year only in the lowest parts of Rilska and Iliyna Rivers during the summer, and up to approximately 1,700m above sea level.

The European polecat (*Mustela putorius)* has been sighted only in few locations in the Park – two on the northern slope above Iliyna River between 1,300 and 1,650m above sea level and twice in the beech and oak forests on the southern slopes, in the Rila Monastery Forest Reserve.

The pine marten (*Martes martes*) has its best Bulgarian habitats in the Rila Monastery nature park owing to the old age of the forest (on average 160 years in the Reserve and 100 years for the remaining area of the Park). The micropopulation of the species in the Park is estimated at about 30 animals (with densities of 1 male per 300 ha and 1 female at 150 ha).

The lynx (*Lynx lynx*) was established experimentally in the oak forest in the western end of the Rila Monastery Forest Reserve and near Kirilova poliana.

The wild cat (*Felis silvestris*) inhabits most of the forests in the Park (occurring even at altitudes above 1,600m). The local population of this species is estimated at 10 to 15 individuals at a density (below normal) of one female per 200 ha and one male per 400 ha, and the species depends to a significant degree on the presence of 'sunny' forests 100-150 years of age and older.

The red deer *(Cervus elaphus)* is one of the least numerous ungulates occurring presently in the Park. It has been sighted in the areas around the Bukovo bardo, the Rila Monastery Forest Reserve and Lake Smradlivo, and its total numbers do not exceed more than ten individuals and its density is one individual per 1,200 ha is at least 7-8 times lower than the normal for any natural ecosystem. Red deer has been observed in 1998/99 only twice in the Reserve.

The Balkan chamois *(Rupicapra rupicapra balcanica)* is particularly rare – less than 20 individuals with traces of singular animals found around the Kalin water reservoir, the Teodosievi karauli locality, the Devil cirque, Lake Smradlivo and certain rocky sections of the Rila Monastery Forest Reserve. Its sightings during the recent years indicate that a chamois population in the Park is unlikely and the presence of the species there is due to the proximity of the Rila National Park from where the animals cross into the RMNP.

The roe deer (*Capreolus capreolus*) in the Park numbered 60 animals in the spring, with a very low density of one individual per more than 200 ha of forest area, as a result of the exceptionally severe poaching in the area.

The jackal (*Canis aureus*) is also among the rare mammals in the Park that has not been observed to breed there but enters sporadically from the low western slopes of the mountain covered with xerophytic brush vegetation and brush forests. It has been sighted several times in the high mountain, at altitudes higher than 2,000m, including during the winter.

Appendix № 23

Description of the Recreation Facilities in the Rila Monastery Nature Park

The area with the highest concentration of human impact is along both banks of the Rilska River between Pastra village and the Kirilova poliana locality. Most communications (roads, power lines and telephone lines), and tourist facilities, monuments of culture and holy places are concentrated there.

The development of this area concerns completely or partially the objectives of three zones and is based on the following guidelines:

1. consideration of the admissible loading levels;
2. priority – protection of nature and of monuments of religion and culture;
3. minimum damage of the ecosystems;
4. balance between revenue generating activities and nature conservation;
5. creation of employment for the local communities;
6. efficient control on the tourist flow and its impact.

The area indicated above contains a range of territorial and functional complexes, some of which comprise individual sites. The vision about the purpose, image and composition, and about certain other characteristics of the complexes and sites are described as follows.

Description of the Brichebor Complex

The Brichebor complex will be built near the confluence of Rilska and Iliyna Rivers. Provisions are made for a new parking site to take most of the vehicles and, therefore, reduce traffic around the Monastery. During the busy summer days and weekends park automobiles will travel to the Monastery and to the sites further along the valley towards the Kirilova poliana locality. A visitor center and an ethnographic complex will be constructed near the parking lot for the following:

(1) The visitor center will present information about the nature park and about its specific cultural, historic and religious values. It will illustrate the history of the Monastery and its role in the history of Bulgaria and in preserving the orthodox faith and values. The center will provide visitors with information about the nature in the Park, about tourist trails and night-time accommodation.

(2) The ethnographic complex will present the local cultural heritage, traditions and crafts. Suitable crafts will be presented, animal farming examples, and the visitors will be able to take part in traditional rural practices.

The Brichebor complex will also be a transport center for access to all other parts of the nature park. It will provide various types of transportation such as horses, carts, bicycles, automobiles, or the visitors can use the hiking trails starting there.

The proposal for the operation of the site is that it should be constructed and operated in strict observation of the environment protection requirements, of the architectural style and of particular operations.

The more detailed description of the facilities in the complex is as follows:

1. Visitor center

Location
Near the bridge at the confluence of Rilska and Iliyna Rivers, to the northwest from there.

Area and boundaries
0.5 ha, between the fish-farm road and Iliyna River at the foot of the Brichebor ridge.

Internal structure and functional sectors
A reception hall for film shows (lectures), administration, exhibition hall.

Area around the visitor center
An outlook with an alcove.

Solid waste handling
Two times weekly, removed in metal containers.

Handling of fecal waste
Septic tanks cleaned in mid season and at the end of the season.

Seasonal use
Year-round.

Auxiliary infrastructure
A fence, a barrier, a cashier's desk, a tourist kitchen, a bath and toilet facility/facilities.

Design
Lightweight collapsible structures in accordance with the local construction traditions with domineering wooden shells and stone masonry.

Tourist experience
The center is located in a high-quality natural environment (two rivers, a forest) in the beginning of a valley opened towards north-east. The natural view causes delight. The direct contact with nature increases the romantic feeling. The center itself allows a view toward the outlines of peaks higher than 2,000m above sea level, green forests, green fields and fresh rivers. The combination of accurate and interesting information and peace, quiet, and fresh air give satisfaction and enjoyment from the visit to the RMNP.

2. Ethnographic village

Location
On the southern bank of Rilska River at its the confluence with Iliyna River (near the fish-farm).

Area and boundaries
1.0 ha; Rilska River to northwest, the fish-farm to northeast, and the old houses to southwest.

Crafts
Fulling mill, coppersmith, woodcarving, weaving, pottery.

Solid waste handling
Two times weekly, removed in metal containers.

Handling of fecal waste
Septic tanks cleaned in mid season and at the end of the season.

Seasonal use
May-September.

Auxiliary infrastructure
Five workshops, each 36 sq.m. in area.

Design
Lightweight collapsible structures in accordance with the local construction traditions with domineering wooden shells and stone masonry.

Tourist experience
The village is located in high quality natural environment (river, forests) and diverse landscape. The demonstration and practicing of crafts (in the copper smith shop, the fuller mill and the weaving room) etc., brings forth knowledge about the Bulgarian way of life and mentality. This active recreation in a natural environment will help tourists for faster restoration with simultaneous learning of skills. Foreign tourists will experience this as part of the contact with the unique culture of this region and of Bulgaria.

3. Brichebor parking lot

Location
A concrete site near the southern bank of Iliyna River, near its confluence with Rilska River.

Area and boundaries
1.5 ha, between Iliyna River and Macadam Road.

Capacity
100 motor vehicles.

Solid waste handling
Two times weekly, removed in metal containers.

Handling of fecal waste
Septic tanks cleaned in mid season and at the end of the season.

Seasonal use
May-September.

Auxiliary infrastructure
A fence, a barrier, a cashier's desk, a bath and toilet facility/facilities.

Design
Lightweight collapsible structures needed for the parking lot, in accordance with the local construction traditions with domineering wooden shells.

Tourist experience
The parking lot is located on a plain on the southern bank of Iliyna River, east of its confluence with Rilska River. The good services combined with proximity to sporting grounds and the beach in this area will bring satisfaction to the visitors even before reaching the heart of the RMNP.

4. Brichebor picnic area

Location
Natural eastward continuation of the Brichebor parking lot along the bank of Iliyna River.

Area and boundaries
0.5 ha, between the southern river bank and the macadam road.

Capacity
50 persons.

Solid waste handling
Two times weekly, removed in metal containers.

Handling of fecal waste
Septic tanks cleaned in mid season and at the end of the season.

Seasonal use
May-September.

Auxiliary infrastructure
One toilet facility, three feeding tables, two fireplaces, a shelter, barbecue.

Tourist experience
The parking lot is located on a plain on the southern bank of Iliyna River, east of its confluence with Rilska River. The river water noise, the green riverside forest and the pure air bring enjoyment from the contact with nature. The easy access, the safe conditions (particularly concerning families with children) combined with the picnic and proximity to sporting grounds and the beach bring particular satisfaction to the visitors even before reaching the heart of the RMNP.

5. Kravarski Dol camping

Location
Kravarski Dol bungalow camp.

Area and boundaries
1.0 ha, in the physical boundaries of the present camp.

Capacity
15 motor vehicles, 40 persons.

Solid waste handling
Two times weekly, removed in metal containers.

Handling of fecal waste
Septic tanks cleaned in mid season and at the end of the season.

Seasonal use
April-October.

Auxiliary infrastructure
A fence, a barrier, a cashier's desk, a bath and toilet facility/facilities.

Design
Lightweight collapsible structures in accordance with the local construction traditions with domineering wooden shells.

Tourist experience
The location provides for quiet, peace, pleasure from the pure air and abundant water, relative isolation from the 'civilized' world, and pleasure from the proximity of the Rila Monastery. The colorful meadows full of blooming plants are a pleasure to the eye and to the soul.

Description of the Iliyna River Valley Complex

One of the most easily accessible and, at the same time, most 'wild' section of the Nature park, the Iliyna River Valley offers possibilities for well organized and equipped (with regard to the nature conservation requirements) specialized tourist services. They include specialized tourist services: bicycle trails, horse-back riding trails and trekking. A well thought out watch tower system is proposed to be used as a destination for short-distance hiking, outlooks and wild animal watching hides.

The free access for motor vehicles will be limited to the Brichebor and Kravarski Dol localities. Entering the park further from these points will be possible only with special permits.

Description of the Bukovo Bardo Eco-Lodge

"The eco-lodge is a new concept for Bulgaria and its parks." The eco-lodge is a lodge constructed in harmony with the environment. It offers very high-quality services and accommodation at high prices and provides to the visitor seclusion in exceptional natural environment. The tourists are provided for by tour operators and the visitors leave their vehicles at the Brichebor parking lot. Provisions will be made for horse-back riding, mounting bike riding and hiking along various trails under the conditions described above for the Iliyna River Valley complex. All services will meet high quality standards. The eco-lodge will also provide for accommodation of (two) guards working in shifts. Their role is to serve as guides and guardians of the law. They will be representatives of the management.

Description of the Bachkova Cheshma-Kirilova poliana Complex

Four marked rest stops will be located along the Bachkova Cheshma-Kirilova poliana road. They will include easily accessible marked motor vehicle parking lots, toilet facilities and picnic sites. In the cases of exceptionally busy periods access will be allowed only by public transport.

There are two sites of cultural, historical, and religious importance in this part of the Park (the grave of St. John of Rila and the St. Luka complex) and they form part of the zone of holy places and cultural and historic heritage. Provisions are made to improve the existing parking site, to introduce a visitor flow management system, to provide information and interpretation to visitors without damage to the architectural unity or to the spiritual atmosphere of these locations.

1. Obedishte Picnic Site

Location
The Obesihte locality south of the St. Luka monastery school.

Area and boundaries
1.0 ha, on the upper plain of the north bank of Rilska River, next to the Kirilova poliana road.

Capacity
100 persons.

Solid waste handling
Two times weekly, removed in metal containers.

Handling of fecal waste
Septic tanks cleaned in mid season and at the end of the season.

Seasonal use
June-September.

Auxiliary infrastructure
An information board with a situation plan, ten tables for ten persons each and five fireplaces, a toilet facility and a water tap.

Tourist experience
Allows a short break by the river, a view of the outcrops of Orlovets Peak, and admiration of the peaks along the northern park boundary that are higher than 2,000m above sea level. Respite, relief from a busy week, direct contact with pure water, green forests and pure air in well-organized conditions. Responsible behavior is also generally expected here. The visits to the St. Luka Hermitage or to the St. John of Rila's grave allow spiritual experience and a feeling of respect for the eternal values and history.

2. Bivolarnika Picnic Site

Location
On the southern bank of Rilska River opposite the school camp of the town of Kocherinovo.

Area and boundaries
0.3 ha, between Rilska River and the dirt road alongside it.

Capacity
30 persons.

Solid waste handling
Two times weekly, removed in metal containers.

Handling of fecal waste
Septic tanks cleaned in mid season and at the end of the season.

Seasonal use
May-September.

Auxiliary infrastructure
An information board with a situation plan, four tables and three fireplaces, a toilet facility and a water tap.

Tourist experience
Allows a short break by the river, a view of the outcrops around Orlovets Peak, and admiration of the peaks along the northern park boundary that are higher than 2,000m above sea level. Respite, relief, direct contact with pure water, green forests and pure air in a well-organized conditions. It can be seen here that even a bridge can make the difference between a busy life and solitude and relief among nature.

3. Studenata Cheshma Picnic Site

Location
The Studenata Cheshma locality.

Area and boundaries
2.0 ha, along the northern bank of Rilska River and the Kirilova poliana road.

Capacity
200 persons.

Solid waste handling
Two times weekly, removed in metal containers.

Handling of fecal waste
Septic tanks cleaned in mid season and at the end of the season.

Seasonal use
May-September.

Auxiliary infrastructure
Three information boards with a situation plan, 20 feeding tables and 10 fireplaces, three toilet facilities.

Tourist experience
Allows a short break by the river, a view of the outcrops of Orlovets Peak, and admiration of the peaks along the northern park boundary that are higher than 2,000m above sea level. The fresh water spurting from the tap will cool even the hottest visitor. Respite, relief from the busy week, direct contact with pure water, green forests and pure air in well-organized conditions. Responsible behavior is also generally expected here.

Description of the Kirilova poliana Complex

The plan improves the chalet and the management of the site by providing for construction of marked parking sites, and of picnic and rest areas. Plans are made for construction of a small information point for visitor and tourists coming along the hiking trails along the ridges or from high-mountain hikes. Public toilet facilities will

be constructed and water supply will be provided. Only one restaurant is envisioned to remain in the area.

A shelter for the visitors in bad weather will be constructed. The remaining available infrastructure will be removed from this locality rich in beautiful views. The new construction will be in harmony with the environment without disturbance of the beautiful landscape of the area.

1. Kirilova poliana Picnic Site

Location
In the southern end of Kirilova poliana next to the road, at the fork for the Iavora locality.

Area and boundaries
0.5 ha, between the Iavora locality road and Rilska River.

Capacity
100 persons.

Solid waste handling
Two times weekly, removed in metal containers.

Handling of fecal waste
Septic tanks cleaned in mid season and at the end of the season.

Seasonal use
May-September.

Auxiliary infrastructure
Twenty information boards with a situation plan, ten feeding tables and ten fireplaces, three toilet facilities.

Tourist experience
One of the most beautiful places in the RMNP. A combination of the highest mountain peaks (over 2,000m), centuries old coniferous forests, pure water, clean air and sun. Satisfaction is heightened as visitors learn names of various tree species marked on special boards. The few yew trees are particularly astonishing. The sign boards seem to 'invite' the visitor toward Ribni lakes in the heart of the Park.

2. Kirilova poliana Visitor Information Center

Location
In the place of the fast grill food kiosk.

Area and boundaries
0.5 ha, between the asphalt surface road and the old water taps along the Lake Suhoto trail.

Internal structure and functional sectors
Multifunction reception hall.

Solid waste handling
Two times weekly, removed in metal containers.

Handling of fecal waste
Septic tanks cleaned in mid season and at the end of the season.

Auxiliary infrastructure
One toilet facility.

Tourist experience
Located in the north-western end of the meadow, this center will be regarded as the 'fulcrum' prior to the mountain trails. Accurate and abundant information gives visitors peace of mind and opens their eyes to the beauy of the area. Prior to starting along the trail, tourists may admire the giant mountains along the northern boundary. In the Park Administration's concern for the health and safety of the tourists, a wide variety of goods are available here.

Description of the Tiha Rila Bivouac Complex

Allows for tenting near Kirilova poliana but no direct access for motor vehicles. Tenting spots will be established, with fire places and toilet facilities without damage to the environment or to the overall look of the valley.

1. Tiha Rila Tent Camp

Location
In the northern end of the Rilska River floodplain, after the last road bend.

Area and boundaries
0.5 ha.

Capacity
Ten tents.

Solid waste handling
To be removed by the campers.

Handling of fecal waste
Septic tanks cleaned in mid season and at the end of the season.

Seasonal use
June-August.

Auxiliary infrastructure
Light fence and two fire places.

Tourist experience
The location of the camp creates a broad range of feelings – from reverence to the rocky peaks and crags to tranquility and relief for the person in isolation from the heavy tourist flow, as well as love for the high mountain, refreshment from the pure air, enjoyment of movement, a sense of soaring above the valley.

Description of the Ribni Lakes Complex

The goal of this complex is to provide continued and improved quality of services such as food for tourist and sleeping accommodation in the facilities maintained in keeping with nature conservation requirements. Provisions are made for renovation of the lodge and provision of 120 beds in improved conditions. The lodge will operate only seasonally but under significantly better environmentally sound standards. The derelict buildings will be removed and the surrounding areas will be reclaimed.

Demographic and Employment Trends

Demographic Trends

Region/area/ municipality		Below working capacity age			At working capacity age			Above working capacity age		
	Total	**Total**	**Men**	**Women**	**Total**	**Men**	**Women**	**Total**	**Men**	**Women**
Bulgaria	8,190,876	1,411,374	723,744	687,630	4,752,804	2,491,594	2,261,210	2,026,698	775,823	1,250,875
Kyustendil	170,559	26,884	13,880	13,004	95,490	51,539	43,951	48,185	18,334	29,851
Kocherinovo Muicipality	6,746	798	401	397	3,133	1,822	1,311	2,815	1,032	1,783
Rila Municipality	4,203	546	286	260	2,223	1,276	947	1,434	511	923

Age ratios in 1999

Region/area/ municipality	0-14/15-64	65+/15-64	0-14 65+/15-64	65+/0-14	60-64/15-19
Bulgaria	23.4	23.8	47.2	101.8	80.3
Kyustendil	21.9	28.6	50.5	130.9	94.2
Kocherinovo Muicipality	18.5	49.0	67.4	265.2	166.4
Rila Municipality	18.5	36.7	55.2	198.4	117.4

Demographic and Employment Trends

Natural Population Growth in 1999

REGION/AREA/ MUNICIPALITY	Liveborn			Dead			Dead children below 1 year of age			Natural increase			
	Total	Boys	Girls	Total	Men	Women	Total	Boys	Girls	Total	Men	Women	Ratio
Bulgaria	72,291	37,058	35,233	111,786	59,968	51,818	1,057	633	424	-39,495	-22,910	-16,585	-4.81
Kyustendil	1,220	642	578	2,698	1,420	1,278	9	7	2	-1,478	-778	-700	-8.63
Kocherinovo Muicipality	28	18	10	157	68	89	0	0	0	-129	-50	-79	-19.01
Rila Municipality	26	14	12	79	48	31	0	0	0	-53	-34	-19	-12.64

Population Movement by Gender in 1999

Region/area/ municipality	Settled			Resettled			Mechanical Increase		
	Total	Men	Women	Total	Men	Women	Total	Men	Women
Bulgaria	180,211	85,552	94,659	180,211	85,552	94,659	0	0	0
Kyustendil	3,903	1,879	2,024	3,812	1,836	1,976	91	43	48
Kocherinovo Muicipality	218	109	109	168	86	82	50	23	27
Rila Municipality	148	78	70	75	35	40	73	43	30

Appendix № 25

Types of Landscapes in the Rila Monastery Nature Park

The assessment of landscapes in the RMNP was based on a 2002 Rapid Landscape Evaluation (RLE) and the landscapes were assessed by a team of landscape architects and forestry engineers on the site and from photographs. The landscapes were evaluated using the existing facts (presence or lack of certain elements such as relief, vegetation, infrastructure, water bodies and flows, rocks etc.), and based on the feelings they induce in the observer. Thus, the overall assessment of the landscape reflects the actual environment and, at the same time, the psychological effect on its observer. Complex indicators were used such as definiteness (dominance), spaciousness (spatial dynamics), colors, color combinations, perspective, shades and general landscape characteristics. The landscape types in the Park are presented in the following table:

Landscape types by macrorelief and vegetation	**Altitude**	**Natural landscapes**		**Natural landscapes with dominant water bodies**	
		without other dominant features	**with culture sites**	**natural**	**artificial/ damaged**
		form No	*form No*	*form No*	*form No*
1. Mid-mountain landscapes	**1,000 – 1,600**				
1.1. broad-leaved forests		2, 3		1	
1.2. mixed coniferous and broad-leaved forests		4	7		
2. High-mountain landscapes	**1,600 – 2,200**				
2.1. mixed coniferous and broad-leaved forests				5, 6, 24	30 (damaged)
2.2. coniferous forests		13, 27		9, 10, 11, 12, 26	25 (damaged)
2.3. rare low-stemmed forests and brush		8, 29			31 (damaged)
2.4. meadows and brush		28			
3. Sub-Alpine landscapes	**2,200-2,500**				
3.1. meadows and dwarf pine		14		15, 16, 17, 19, 20	32 (damaged)
4.Alpine landscape	**higher than 2,500**				
4.1. rocks, screes and stone rivers				18, 21, 23, 26	

Appendix № 26

Ranking of Landscape Quality Indicators According to the Expert Assessment

Landscape quality indicators	evaluations								total	average	basic evaluation
	1st	2nd	3rd	4th	5th	6th	7th	8th			
1. Picturesqueness (graphical and pictorial quality)	2	1	1	1	2	2	1	1	11	**1.4**	8
2. Naturalness (state of preservation)	2	2	3	2	2	1	2	1	15	**1.9**	7
3. Stability	1	5	1	3	1	4	2	2	19	**2.4**	6
4. Uniqueness (rarity, exotic quality)	1	4	2	2	4	3	3	2	21	**2.6**	5
5. Landscape diversity	1	6	4	1	5	6	2	3	28	**3.5**	4
6. Typicality (for the Rila Monastery NP)	5	8	4	4	5	7	6	4	43	**5.4**	1
7. Vulnerability (existing damage and potential threat damage of the landscape by human activity)	4	7	8	2	1	8	4	2	36	**4.5**	3
8. Accessibility, use (tourist and road infrastructure)	3	3	8	2	6	5	5	5	37	**4.6**	2

Form No	Studied area	Outlooks	Landscape types by macrorelief and vegetation	Landscape quality indicators, graded																total complex evaluation rating	
				Picturesqueness (graphical and pictorial quality)		Naturalness (state of preservation)		Stability		Uniqueness (rarity, exotic quality)		Landscape diversity		Typicallity		Vulnerability		Accessibility, use			
				8	rate	7	rate	6	rate	5	rate	4	rate	1	rate	3	rate	2	rate		
1	Kalugerski Dol	The river in Kalugerski Dol	Mid-mountain broad-leaved forests	high	3	high	3	high	3	average	2	average	2	average	2	average	2	high	3	**83**	high
2	Kalugerski Dol	Rila oak	Mid-mountain broad-leaved forests	high	3	high	3	high	3	high	3	average	2	high	3	low	1	high	3	**92**	very high
3	Kalugerski Dol	Beech forest	Mid-mountain broad-leaved forests	high	3	high	3	high	3	high	3	average	2	average	2	low	1	high	3	**91**	very high
4	Kalugerski Dol	The ridge opposite of Tsarev Peak	Mid-mountain mixed coniferous and broad-leaved forests	high	3	high	3	high	3	high	3	high	3	high	3	low	1	high	3	**96**	very high
5	Kalugerski Dol	Prior to Ravna	High-mountain mixed coniferous and broad-leaved forests	high	3	high	3	high	3	high	3	high	3	high	3	high	3	high	3	**90**	high
6	Below Ravna	Rock opposite of Brichebor	High-mountain mixed coniferous and broad-leaved forests	high	3	high	3	high	3	high	3	high	3	average	2	low	1	high	3	**95**	very high
7	Rila Monastery	Inner and back yards	Mid-mountain mixed coniferous and broad-leaved forests	high	3	high	3	high	3	high	3	high	3	high	3	high	3	high	3	**90**	high
8	Kirilova poliana	View to the Zlia zab	High-mountain rare low-stemmed forests and brush	high	3	average	2	high	3	high	3	high	3	high	3	average	2	high	3	**86**	high
9	On the Vodnia ridge road	Trough valley	High-mountain coniferous forests	high	3	high	3	high	3	high	3	high	3	high	3	low	1	high	3	**96**	very high
10	Diavolska River	Waterfall	High-mountain coniferous forests	high	3	high	3	high	3	high	3	high	3	high	3	low	1	average	2	**94**	very high

Form No	Studied area	Outlooks	Landscape types by macrorelief and vegetation	Landscape quality indicators, graded																total complex evaluation rating	
				Picturesqueness (graphical and pictorial quality)		Naturalness (state of preservation)		Stability		Uniqueness (rarity, exotic quality)		Landscape diversity		Typicallity		Vulnerability		Accessibility, use			
				8	rate	7	rate	6	rate	5	rate	4	rate	1	rate	3	rate	2	rate		
11	Tiha Rila	Yosifitsa Peak	High-mountain coniferous forests	high	3	high	3	high	3	high	3	high	3	average	2	low	1	high	3	**95**	very high
12	Tiha Rila	Hydro	High-mountain coniferous forests	average	2	average	2	average	2	average	2	high	3	average	2	high	3	high	3	**63**	low
13	Hydro-Smradlivoto lake road	Rumelian pine forest	High-mountain coniferous forests	average	2	high	3	high	3	high	3	average	2	average	2	low	1	average	2	**81**	high
14	Smradlivoto lake road	Prior to the Skrezhko spring	Sub-Alpine meadows and dwarf pine	high	3	high	3	high	3	high	3	average	2	average	2	low	1	high	3	**91**	very high
15	Lake Smradlivoto	Lake Smradlivoto	Sub-Alpine meadows and dwarf pine	high	3	high	3	high	3	high	3	high	3	high	3	average	2	average	2	**91**	very high
16	Above the Ribni lakes valley	Glacial lakes	Sub-Alpine meadows and dwarf pine	high	3	high	3	high	3	high	3	high	3	high	3	low	1	average	2	**94**	very high
17	Ribni lakes	Ribni lakes chalet	Sub-Alpine meadows and dwarf pine	high	3	high	3	high	3	high	3	high	3	high	3	high	3	high	3	**90**	high
18	Saddle below Mramorets Peak	Iliyna River	Alpine landscape of rocks, screes and stone rivers	high	3	high	3	high	3	high	3	high	3	average	2	low	1	average	2	**93**	very high
19	The Ribni lakes Chalet-Tiha Rila road	Dwarf pine formations	Sub-Alpine meadows and dwarf pine	high	3	high	3	high	3	high	3	high	3	high	3	high	3	high	3	**90**	high
20	The Ribni lakes-Tiha Rila road	Rilska River	Sub-Alpine meadows and dwarf pine	high	3	high	3	high	3	high	3	high	3	high	3	low	1	high	3	**96**	very high
21	Along the Rilets Peak road	Below Mramorets Peak	Alpine landscape of rocks, screes and stone rivers	high	3	high	3	high	3	high	3	high	3	high	3	low	1	average	2	**94**	very high

Form No	Studied area	Outlooks	Landscape types by macrorelief and vegetation	Landscape quality indicators, graded																total complex evaluation rating	
				Picturesqueness (graphical and pictorial quality)		Naturalness (state of preservation)		Stability		Uniqueness (rarity, exotic quality)		Landscape diversity		Typicallity		Vulnerability		Accessibility, use			
				8	rate	7	rate	6	rate	5	rate	4	rate	1	rate	3	rate	2	rate		
22	Along the Rilets road	View to Lake Mramoretsko and Ribni lakes	Alpine landscape of rocks, screes and stone rivers	high	3	high	3	high	3	high	3	high	3	high	3	low	1	low	1	**92**	very high
23	Below Rilets Peak	Devil lakes	Alpine landscape of rocks, screes and stone rivers	high	3	high	3	high	3	high	3	high	3	high	3	low	1	low	1	**92**	very high
24	Iliyna River road	Turskoto parche	High-mountain mixed coniferous and broad-leaved forests	average	2	high	3	high	3	average	2	average	2	average	2	average	2	high	3	**75**	average
25	The Elevation 2000 road	View toward Kamenitsa	High-mountain coniferous forests	high	3	high	3	high	3	average	2	average	2	average	2	low	1	high	3	**86**	high
26	Radovitsa locality	Radovitsa	Alpine landscape of rocks, screes and stone rivers	average	2	high	3	high	3	high	3	low	1	average	2	low	1	high	3	**79**	average
27	Radovitsa River	The rocks above Turskoto parche	High-mountain coniferous forests	high	3	high	3	high	3	high	3	high	3	average	2	low	1	average	2	**93**	very high
28	Bukovo bardo	Brichebor, Ravna and Rilska River	High-mountain meadows and forests	high	3	high	3	high	3	high	3	high	3	average	2	low	1	high	3	**95**	very high
29	Kalin Hydropower plant	Kalin Hydropower plant	High-mountain rare low-stemmed forests and brush	high	3	average	2	average	2	high	3	average	2	high	3	high	3	high	3	**73**	average

Form No	Studied area	Outlooks	Landscape types by macrorelief and vegetation	Landscape quality indicators, graded																total complex evaluation rating	
				Picturesqueness (graphical and pictorial quality)		Naturalness (state of preservation)		Stability		Uniqueness (rarity, exotic quality)		Landscape diversity		Typicallity		Vulnerability		Accessibility, use			
				8	rate	7	rate	6	rate	5	rate	4	rate	1	rate	3	rate	2	rate		
30	Kalin	Above the Kalin Hydro power plant	High-mountain mixed coniferous and broad-leaved forests	high	3	high	3	high	3	average	2	high	3	average	2	low	1	average	2	**88**	high
31	Kalin	Solunski preslap	High-mountain rare low-stemmed forests and brush	average	2	high	3	high	3	high	3	low	1	high	3	low	1	average	2	**78**	average
32	Kalin water reservoir	Kalin water reservoir	Sub-Alpine meadows and dwarf pine	high	3	average	2	high	3	high	3	average	2	high	3	high	3	average	2	**77**	average

Key:

The maximum rating is 96 and the minimum is 24.

The rating can be distributed among five levels:

very high	more than 90
high	80 to 90
average	70 to 80
low	60 to 70
very low	less than 60

Complex Landscape Assessment by Ranked Quality Indicators

Form No	Studied area	Observation point (outlook)	Landscape types by macrorelief and vegetation	Landscape features										Emotional perception								Landscape quality indicators							
				Rocks and rock formations	Forests and brush	Meadows	Water bodies-lake, river, waterfall	Landscape diversity – near, distant, average	Beautiful or rare plant species	Animal species	Cultural elements (monuments of history)	Tourist and infrastructure facilities (chalets)	Harmonious sounds – river, stream, waterfall, bird songs	Exultation, enchantment	Calmness	Spiritual uplifting (inspiration)	Joy, aesthetic pleasure	Perplexity	Sadness	Fear	Indifference	Picturesqueness (graphical and pictorial quality)	Naturalness, degree of preservation	Stability	Uniqueness, rarity (exotic quality)	Landscape diversity	Typicality	Vulnerability	Accessibility, use
1	Kalugerski Dol	The river in Kalugerski Dol	Mid-mountain broad-leaved forests	no	yes	no	waterfall	near	yes	no	no	no	no	no	yes	no	yes	no	no	no	no	high	high	high	average	average	average	average	high
2	Kalugerski Dol	Rila oak	Mid-mountain broad-leaved forests	no	yes	no	no	near, distant, average	yes	yes	no	trail	bird songs	yes	yes	yes	yes	no	no	no	no	high	high	high	high	average	high	low	high
3	Kalugerski Dol	Beech forest	Mid-mountain broad-leaved forests	no	yes	yes	no	near	no	no	no	trail	no	yes	yes	yes	yes	no	no	no	no	high	high	high	high	average	average	low	high
4	Kalugerski Dol	The ridge opposite of Tsarev Peak	Mid-mountain mixed coniferous and broad-leaved forests	yes	yes	yes	no	near, distant, average	yes	yes	no	trail	bird songs	yes	yes	yes	yes	no	no	no	no	high	high	high	high	high	high	low	high
5	Kalugerski Dol	Prior to Ravna	High-mountain mixed coniferous and broad-leaved forests	no	yes	yes	no	near and average	yes, Petro v cross	no	no	trail	bird songs	no	yes	no	yes	no	no	no	no	high	high	high	high	high	high	high	high
6	Below Ravna	Rock opposite of Brichebor	High-mountain mixed coniferous and broad-leaved forests	yes	yes	yes	no	near, distant, average	yes	yes	yes	trail	bird songs	yes	no	yes	yes	no	no	no	no	high	high	high	high	high	average	low	high
7	Rila Monastery	Inner and back yards	Mid-mountain mixed coniferous and broad-leaved forests	no	yes	no	yes, river, waterfall, water taps	near, average	no	no	yes	hotel, restaurant, shops	noise and disharmonious sounds	no	no	yes	no	no	no	no	no	high	high	high	high	high	high	high	high
8	Kirilova poliana	View to the Zlia zab	High-mountain rare low-stemmed	yes	yes	yes	no	near, average	no	yes	no	chalet, restaurant,	bird songs	no	yes	no	yes	no	no	no	no	high	average	high	high	high	high	average	high

Form No	Studied area	Observation point (outlook)	Landscape types by macrorelief and vegetation	Landscape features										Emotional perception								Landscape quality indicators							
				Rocks and rock formations	Forests and brush	Meadows	Water bodies-lake, river, waterfall	Landscape diversity – near, distant, average	Beautiful or rare plant species	Animal species	Cultural elements (monuments of history)	Tourist and infrastructure facilities (chalets)	Harmonious sounds – river, stream, waterfall, bird songs	Exultation, enchantment	Calmness	Spiritual uplifting (inspiration)	Joy, aesthetic pleasure	Perplexity	Sadness	Fear	Indifference	Picturesqueness (graphical and pictorial quality)	Naturalness, degree of preservation	Stability	Uniqueness, rarity (exotic quality)	Landscape diversity	Typicality	Vulnerability	Accessibility, use
			forests and brush									bungalows, signs																	
9	On the Vodnia ridge road	Trough valley	High-mountain coniferous forests	yes	yes	yes	river	near, average, far	yes	yes	no	road	river sounds	yes	no	yes	no	no	no	no	no	high	high	high	high	high	high	low	high
10	Diavolska River	waterfall	High-mountain coniferous forests	yes	yes	no	river, waterfall	near	yes	yes	no	signs, road, bridge	river sounds, waterfall	yes	no	yes	yes	no	no	no	no	high	high	high	high	high	high	low	average
11	Tiha Rila	Yosifitsa Peak	High-mountain coniferous forests	yes	yes	yes	river	near, distant, average	yes	yes	no	signs, road, picnic site	river sounds, bird songs	no	yes	yes	yes	no	no	no	no	high	high	high	high	high	average	low	high
12	Tiha Rila	Hydro	High-mountain coniferous forests	yes	yes	yes	river	near, distant, average	yes	no	no	road, building	river sounds, stream	no	yes	no	yes	yes	no	no	?	average	average	average	average	high	average	high	high
13	Road to from Hydro Lake Smradlivoto	Rumelian pine forest	High-mountain coniferous forests	no	yes	no	no	near, average	yes	yes	no	trail, signs	river sounds, stream	no	yes	no	yes	no	no	no	no	average	high	high	high	average	average	low	average
14	Lake Smradlivoto road	Prior to the Skrezhko spring	Sub-Alpine meadows and dwarf pine	yes	yes	yes	river	near, distant, average	yes, alpine flowers	yes	no	trail, chalet in the valley	river sounds, waterfall	yes	no	yes	yes	no	no	no	no	high	high	high	high	average	average	low	high
15	Lake Smradlivo	Lake Smradlivo	Sub-Alpine meadows and dwarf pine	yes	yes	yes	lake	near, distant, average	yes	yes	no	support wall, shelter remains	waterfall sounds	yes	yes	yes	yes	no	no	no	no	high	high	high	high	high	high	average	average
16	Above the Ribni lakes valley	Glacial lakes	Sub-Alpine meadows and dwarf pine	yes	yes	yes	lake	near, average	yes	yes	no	roads, signs	bird songs	yes	yes	yes	yes	no	no	no	no	high	high	high	high	high	high	low	average
17	Ribni lakes	Ribni lakes chalet	Sub-Alpine meadows and dwarf	yes	yes	yes	lake	near, average,	yes	yes	no	chalet	river sounds, bird songs	yes	yes	yes	yes	no	no	no	no	high	high	high	high	high	high	high	high

Form No	Studied area	Observation point (outlook)	Landscape types by macrorelief and vegetation	Landscape features										Emotional perception								Landscape quality indicators							
				Rocks and rock formations	Forests and brush	Meadows	Water bodies-lake, river, waterfall	Landscape diversity – near, distant, average	Beautiful or rare plant species	Animal species	Cultural elements (monuments of history)	Tourist and infrastructure facilities (chalets)	Harmonious sounds – river, stream, waterfall, bird songs	Exultation, enchantment	Calmness	Spiritual uplifting (inspiration)	Joy, aesthetic pleasure	Perplexity	Sadness	Fear	Indifference	Picturesqueness (graphical and pictorial quality)	Naturalness, degree of preservation	Stability	Uniqueness, rarity (exotic quality)	Landscape diversity	Typicality	Vulnerability	Accessibility, use
			pine					far																					
18	The saddle below Mramorets Peak	Iliyna River	Alpine landscape of rocks, screes and stone rivers	yes	yes	yes	river	near, average, far	yes	yes	no	roads, signs	wind sounds, bird songs	yes	yes	no	yes	no	no	no	no	high	high	high	high	high	average	low	average
19	The Ribni lakes-Tiha Rila road	Dwarf pine formations	Sub-Alpine meadows and dwarf pine	yes	yes	yes	river	near, average	yes	yes	no	roads, signs	river sounds, bird songs	no	yes	yes	yes	no	no	no	no	high	high	high	high	high	high	high	high
20	The Ribni lakes-Tiha Rila road	Rilska River	Sub-Alpine meadows and dwarf pine	yes	yes	yes	river	near, average	yes	yes	no	roads, signs	river sounds, resonant	no	yes	no	yes	no	no	no	no	high	high	high	high	high	high	low	high
21	Along the Rilets Peak road	Below Mramorets Peak	Alpine landscape of rocks, screes and stone rivers	yes	yes	yes	lake	near, average, far	no	no	no	no	no	yes	no	yes	yes	no	no	no	no	high	high	high	high	high	high	low	average
22	Along the Rilets road	View to Lake Mramoretsko and Ribni lakes	Alpine landscape of rocks, screes and stone rivers	yes	yes	yes	lake	near, average, far	yes	yes	no	no	bird songs	yes	no	yes	no	no	no	no	no	high	high	high	high	high	high	low	low
23	Below Rilets Peak	Devil lakes	Alpine landscape of rocks, screes and stone rivers	yes	no	yes	lake	near, average, far	yes	yes	no	no	quiet	yes	no	yes	no	no	no	no	no	high	high	high	high	high	high	low	low
24	Iliyna River road	Turskoto parche	High-mountain mixed coniferous and broad-leaved forests	yes	yes	yes	river	near, average	yes	no	no	yes, abandoned buildings	no	no	yes	no	yes	no	no	no	no	average	high	high	average	average	average	average	high
25	The elevation2000 road	View toward Kamenitsa	High-mountain coniferous forests	yes	yes	yes	river, waterfall	near, average, far	yes	yes	no	road, abandoned building	river sounds, stream, waterfall, bird songs	yes	yes	no	yes	no	no	no	no	high	high	high	average	average	average	low	high
26	Radovitsa	Radovitsa	Alpine landscape of	no	yes	no	no	near,	yes	yes	no	road, signs	river sounds,	yes	yes	no	yes	no	no	no	no	average	high	high	high	low	average	low	high

Form No	Studied area	Observation point (outlook)	Landscape types by macrorelief and vegetation	Landscape features										Emotional perception								Landscape quality indicators							
				Rocks and rock formations	Forests and brush	Meadows	Water bodies-lake, river, waterfall	Landscape diversity – near, distant, average	Beautiful or rare plant species	Animal species	Cultural elements (monuments of history)	Tourist and infrastructure facilities (chalets)	Harmonious sounds – river, stream, waterfall, bird songs	Exultation, enchantment	Calmness	Spiritual uplifting (inspiration)	Joy, aesthetic pleasure	Perplexity	Sadness	Fear	Indifference	Picturesqueness (graphical and pictorial quality)	Naturalness, degree of preservation	Stability	Uniqueness, rarity (exotic quality)	Landscape diversity	Typicality	Vulnerability	Accessibility, use
	locality		rocks, screes and stone rivers					average					bird songs																
27	Radovitsa River	The rocks above Turskoto parche	High-mountain coniferous forests	yes	yes	yes	no	near, average, far	yes	yes	no	road, signs	river sounds, bird songs	yes	yes	yes	yes	no	no	no	no	high	high	high	high	high	average	low	average
28	Bukovo bardo	Brichebor, Ravna and Rilska River	High-mountain meadows and forests	yes	yes	yes	no	near, average, far	yes	no	no	road	no	yes	yes	no	yes	no	no	no	no	high	high	high	high	high	average	low	high
29	Kalin Hydropower plant	Kalin Hydropower plant	High-mountain rare low-stemmed forests and brush	yes	yes	yes	river, stream	near, average	no	yes	no	road	river sounds	yes	no	yes	yes	yes	no	no	no	high	average	average	high	average	high	high	high
30	Kalin	Above the Kalin Hydro power plant	High-mountain mixed coniferous and broad-leaved forests	no	yes	yes	no	near, average	yes	yes, birds	no	chalet, worker residence	bird songs	no	no	no	yes	no	no	no	no	high	high	high	average	high	average	low	average
31	Kalin	Solunski preslap	High-mountain rare low-stemmed forests and brush	yes	no	yes	no	near	no	no	no	no	bird songs	no	no	no	yes	no	no	no	no	average	high	high	high	low	high	low	average
32	Kalin water reservoir	Kalin water reservoir	Sub-Alpine meadows and dwarf pine	yes	no	yes	water reservoir	near, average	no	no	no	road	no	yes	no	yes	yes	no	no	no	no	high	average	high	high	average	high	high	average

Appendix № 29

Livestock Trails
and area, defined for pasture and hay collecting

High Conservation Significance Zone

Pastures
- High-mountain pasture, the southern slopes of Dodov Peak
- High-mountain pasture along the Vodnia Ridge
- High-mountain pasture, in the Marinkovitsa River Valley

Environmentally Sound Use Zone

Pastures:
- High-mountain pasture, the southern slopes of Kalin Peak
- High-mountain pasture, Ravna locality
- High-mountain pasture, the ridges between Diavolski vodi River and Gorna kadiitsa Peak
- The pastures around the Voloveto Peak
- The meadows in the Iliyna River Valley between Kravarski Dol and Diadoiliov Dol

Hay-making:
- The meadows in the Obedishte locality
- The meadows in the Kirilova poliana locality
- The meadows in the Tiha Rila locality
- The meadows in the above pastures

Tourist zone

Pastures:
- Meadows in the Gorhim locality.
- Meadows in the Veli lag locality.
- Meadows in the Lomitsata locality.
- Meadows in the Iagniloto locality.
- Meadows in the Pchelino locality.

Hay-making:
- Hay-making in the above pastures

Leading of livestock to the pastures (trails)

The paths of these trails entail movement in more than one zone.

* Along the Rilska River road, along the Iliyna River road, by Kravarski Dol toward the high mountain pasture between Diavolski vodi River and Gorna kadiitsa Peak
* Along the road following Iliyna River and to Diadoiliov Dol.
* Along the road following Manastirska River through the Tiha Rila locality towards Marinkovitsa River Valley and the Vodnia Rid ridge
* Along Eleshnitsa River Valley toward the Ravna locality and the southern slopes of Dodov Peak
* Along the road from Pastra village toward the southern slopes of Kalin Peak
* Along Iliyna River Valley through Beloborski Dol toward the ridge between Baba Peak and Brichebor Peak.

Appendix № 30

Flora, Fauna and Cenotic Complexes Near the Main Tourist Trails and Near Ribni Lakes Chalet

Specific natural complexes can be observed along the hiking trails in the Nature Park, as well as some plant and animal species of interest to tourists. The trail descriptions here aim to help the park administration in developing and organize specialized hiking trails.

1. From the Rila Monastery to the north-west, through the western section of the Rila Monastery Forest Reserve, through Kalugerski Dol, and north toward Ivan Vazov chalet

The trail goes through an old beech forest and cuts through the main Rila oak habitat. Prior to exiting the Park, the trail follows along open grass areas and Boris fir communities. The dominant habitats are forest, rock and grass, and grass with about 8 - 10 higher plant species of significance for conservation, 3- 4 mammal species and around 15-17 bird species of significance for conservation. The trail is one meter wide. It is marked red for the summer. Its overall condition is good. Duration 8-9 hours.

2. From Kirilova poliana to the north-northwest towards Lake Suhoto– Kobilino branishte

The trail goes through the central part of the Rila Monastery Forest Reserve, crosses the main community of Boris fir in the lower sections, and communities of Rumelian pine and dwarf pine in the higher part. The dominant habitats are forest, grass, rock and, rock and scree with approximately 15 - 30 of higher plant species significance for conservation, 2-3 mammal species and 12-13 bird species of significance for conservation.

The trail is one meter wide. It is marked green for the summer. Its overall condition is good. Duration 3 hours.

3. From Kirilova poliana to the east-southeast towards the Ribni lakes chalet

The road follows Rilska River (during the first half) crossing the entire forest complex of Boris fir, spruce, and Rumelian pine in immediate proximity to a Rila rhubarb habitat; the trail cuts through a dwarf pine complex from Tiha Rila locality to the Ribni lakes chalet. The dominant communities are forest and grass with 20 - 50 higher plant species of significance for conservation, 4-5 mammal species and 15 -17 bird species of significance for conservation. The trail is one meter wide. It is marked yellow for the summer. Its overall condition is good. Duration 6-7 hours.

4. Ribni lakes chalet to the east, toward Granchar chalet

Prior to leaving the park, the trail goes through dwarf pine communities, rock and rock-scree habitats with 15 - 45 higher plant species of significance for conservation, 2-3 mammal species and 7 - 10 bird species of significance for conservation. The trail is clearly marked with old signs. Its overall condition is good. Duration 6-7 hours.

5. Ribni lakes chalet to the west toward Diavolski lakes

The trail follows through the dwarf pine communities north of Ribni lakes chalet and into the Mramorets area, and to the west among communities of glacial relict species and very rare calciphytic species. The dominant habitats are rock, rock-scree, grass, and snow-patch with 25 - 50 higher plant species of significance for conservation, 4-5 mammal species and more than 20 bird species of significance for conservation. The trail is not marked and difficult. Its overall condition is good. Round trip duration 9 hours.

6. Ribni lakes chalet, west toward Lake Smradlivo

The trail crosses through dwarf pine and lake-side communities. The dominant communities are rock, rock-scree and grass communities with 20 - 35 higher plant species of significance for conservation, 3-5 mammal species and 14-15 bird species of significance for conservation. The trail is well marked yellow for the summer. Its overall condition is good. Duration 1.5-2 hours.

7-10. The zone around Ribni lakes chalet (8. Ribni lakes chalet, southwest toward Macedonia chalet (Route E-4); 9. Ribni lakes chalet, north toward Malyovitsa chalet through Kobilino branishte; 10. Ribni lakes chalet, north-east toward Yosafitsa Peak (secondary, unmarked); 11. Ribni lakes chalet, south toward Kanarata Peak (secondary, unmarked)

The zone around Ribni lakes chalet (2,230m above sea level) is a point along European route E-4. It is located in the area where the dwarf pine communities change give way to Alpine grass communities and lake-side groups of small brush and sour grass. The dominant communities are rock, rock-scree, grass, and lake-side small brush and sour grass with around 30 - 50 higher plant species of significance for conservation, 3-4 mammal species and approximately 16 bird species of significance for conservation. Trail No 7 is well marked red for the summer. Its overall condition is good. Duration 9 hours.

Trail No 8 is partially marked. Its overall condition is poor. Round trip duration 14 hours.

Trail No 9 is unmarked and narrow. Its overall condition is good. Round trip duration 3-4 hours.

Trail No 7 is well marked green for the summer. Its overall condition is good. Round trip duration 6 hours.

11. From the confluence of Iliyna and Rilska River, east-southeast through Radovichka River toward Macedonia chalet

The road goes through the riparian communities of gray alder along Iliyna River (in the western part of its valley), cuts through the entire coniferous complex from the level of Iliyna River to the upper flow of Radovichka River and crosses the dwarf pine communities in the foot of Goliam Mechi Peak and Malak Mechi Peak. A new community of mountain peony and cinquefoil have been established at the point where the road enters into the dwarf pine complex in the upper stretch of Radovichka River. This trail allows a vertical movement with a height difference of approximately 1,200m above sea level and occurrence of 20 - 30 higher plant species of significance for conservation, more than 10 mammal species and more than 25 bird species of significance for conservation.

12. Pastra village, north toward Kalin water reservoir

The road crosses the deciduous and coniferous belt and reaches the Alpine treeless zone. A hornbeam community is immediately close to the road (in is lower section). In its middle section, the road goes through the only (new) confirmed community of St. John's chamomile and through a large community of Boris fir, and through Rumelian pine forests in its upper stretch. This trail allows a vertical movement with a height difference of approximately 1,500m above sea level and occurrence of 15 - 30 higher plant species of significance for conservation, 7-10 mammal species and 18-20 bird species of significance for conservation.

Goal Performance Indicators

Goals	Indicators criteria	Measurement and evaluation tools	Participants
1. Conservation of the religious and cultural and historical heritage			
Preserve and develop the unique Orthodox religious and cultural and historical complex of the Rila Monastery and the holy places around it as a center of spiritual culture and education. • Create conditions around the holy places to preserve an atmosphere not in contradiction with the traditions of the Orthodox faith and is conducive to admiration, spiritual uplifting and purification. - bring the existing infrastructure (coffee shops, restaurants, shops etc.) around the religious sites in conformity with the spiritual significance of the place); - introduce rules for the range of goods (including food and drinks) and manner of their offering in the area around the holy places; • develop and equip a system of trails connecting holy places and allowing the worshippers solitude.	• The atmosphere around the Monastery and its image of a holy place and spiritual center are restored • Trails connecting the holy sites in the park are set up and marked in an appropriate way	• The commercial outlets and the insubstantial infrastructure (stands, shops, restaurants) are moved from the Monastery. Only infrastructure of religious purpose or related to tourist interpretation is present. • A measure of satisfaction to visitors by the image and atmosphere around the holy places and around the Monastery – sociological survey (once in 3 years) • Evaluation of the condition of the sites – technical reports;	The National Institute for Monuments Culture, Nature Park Directorate, the Ministry of Regional Development and Public Works, local and regional authorities, NGOs
Protect the archaeological, architectural and other items of cultural and historical importance as part of Bulgaria's national wealth. • Continue activities for preservation, conservation and restoration of historical and cultural values in the holy places in the Park; • Undertake studies, conservation and restoration of archeological and historical sites outside the holy places (remains from the first monastery buildings, Roman roads etc.);	• The historical and cultural sites (such as the Guard house, the remains from the first monastery buildings) are restored and presented on display • Instructions for protection of sites and tourist behavior rules are prepared. • The sites of cultural and historical importance are marked and interpreted for their content, purpose, value and rules of protection	• Number of sites restored and presented in public display • Condition of the sites – reports (appearance, restoration quality, structural features, threats) • Map of the cultural landscapes in the park	The National Institute of Monuments of Culture, Nature Park Directorate, tourist companies

Goals	Indicators criteria	Measurement and evaluation tools	Participants
• Mark and interpret sites of culture and history in a manner ensuring their protection and the required tourist behavior; • Identify, study and map the different types of cultural landscape and to define measures for their conservation.	• A site condition monitoring system is implemented • The cultural landscapes are mapped and evaluated, and their requirements developed and applied		
2. Protection of Natural Components			
Preserve the harmony between the natural, cultural and historical, and religious heritage in the Rila Monastery NP. • Avoid interventions damaging the natural condition of existing natural complexes that create the overall image of the area; • Implement specific rules and standards for the architectural image of sites in harmony with the natural, religious, and cultural and historical elements and guarantee infrastructure reduction down to the most necessary items allowing preservation of the naturalness of the area and reduction of human impacts; • Begin gradual elimination and restoration of the natural appearance of the sites with artificial forest plantations disharmonious with the overall image of the Park. • Remove the remains of past (finished) human activities (unused buildings, concrete platforms, hydrotechnical equipment and etc.) so to prevent visual pollution of the landscape	• The natural landscape is preserved and maintained, human impacts are limited. • A plan for gradual replacement of artificial forest plantations with natural plantations is developed and its implementation begun. • The infrastructure status is evaluated and program for removing the remains from past activities is implemented	• A measure of satisfaction to visitors by the image and atmosphere around the holy places and the degree of preservation of the surrounding nature – sociological survey (once in 3 years) • Evaluation of the condition of the sites – technical reports; degree of compliance with the Detailed Management Plan requirements – every 5 years • Report on the removal of artificial plantations – annual. • Number of removed remains of demolished/unusable infrastructure objects and number of recultivated hectares	Nature Park Directorate, MAF, MOEW, scientific advisory council of the Rila NP, the academic and scientific communities, NGOs, special interest groups
Preserve the natural condition of forest habitats; unique Rila oak and Boris fir communities, and their biological potential. • Develop and implement a fire-control plan (in consideration of the nature conservation	• A forest fire-control plan is developed and implemented. • Forest complexes are preserved and their natural condition maintained. • Forests older than 100 years are mapped	• Number of planned annual activities carried out. Fire-control activity reports. • Park forest monitoring reports – evaluation of activities, annual	Nature Park Directorate, MAF, MOEW, scientific advisory council of the Rila NP, the academic

Goals	Indicators criteria	Measurement and evaluation tools	Participants
objectives of the Park); • Implement a program to preserve the natural condition of the forests in the Park: - prepare a map of the forests older than 100 years by age, succession phase, degree of naturalness of the structure etc.; - leave parts of old forests unaffected by human intervention to allow for natural processes; - implement measures to preserve the natural succession in the sections of forests below 100 years of age; • Create and maintain a forest ecosystem database and monitoring system; • Implement a program to preserve the Rila oak and Boris fir communities: - map out and mark the habitats and communities of both species; - conduct annual condition monitoring for the communities of both species; - conduct a biosystematic study of the Rila oak and of the Boris fir; - collect seed materials from both species for a gene bank, for exhibitions etc.	out, evaluated and described. • A forest monitoring system and database are created and implemented in the Park. • The Rila oak and Boris fir communities are mapped out and planned measures for their preservation are implemented. • The biosystematic status of the Rila oak and Boris fir is studied. • A seed bank for both species is created.	recommendations. • Distribution maps and on-going evaluation of the condition of old forests and of Rila oak and Boris fir forests. • Scientific information in Bulgarian and foreign publications concerning the results from the study of the taxonomic status of the Rila oak and of the Boris fir. • Number of established and sanctioned violations of the regimes and standards set out in the Management plan.	and scientific communities, NGOs, special interest groups
Preserve the natural condition and the potential of sub-Alpine and Alpine communities and rock habitats. • Map out and undertake specific measures to preserve the natural condition of rock walls and complexes and of rock habitats - describe the habitats of rare, endangered, biome-limited, endemic, relict, sensitive or vulnerable species related to the rock habitats. - discontinue activities causing destruction or damage of rock walls and complexes and/or	• The sub-Alpine and Alpine communities and rock habitats, and the plant and animal species of significance for conservation there are mapped out. Their natural condition is maintained. • Measures are described to preserve the rock plant and animal communities and of the rock complexes themselves. • A system for monitoring of the sub-Alpine and Alpine communities and	• Maps of the sub-Alpine and Alpine communities and rock habitats. • Maps of the plant and animal species of significance for conservation. • A list of measures for their preservation and reports on the annual maintenance of their condition.	Nature Park Directorate, MAF, MOEW, Executive Environment Protection Agency, RIEW, scientific advisory council of the Rila NP, the academic and scientific community, NGOs,

Goals	Indicators criteria	Measurement and evaluation tools	Participants
plant and animal communities - monitor their condition and results of the measures; • Maintain the grass vegetation in the sub-Alpine and Alpine grass communities (by means of suitable grazing and hay-making regimes and standards) in a manner preserving the overall biodiversity by monitoring the effect of the maintenance measures; • Implement a *Chamaecytisus* monitoring and control program; • Implement a program for rehabilitation and re-cultivation of sub-Alpine and Alpine areas in the Park damaged by hydro-facility construction or by other anthropogenic intervention.	rock habitats in the Park as well as a database are created and used. • The *Chamaecytisus* monitoring possibilities are studied and specific measures implemented. • The areas damaged by hydro-facility construction or by other anthropogenic intervention are rehabilitated and re-cultivated.	• Grazing management plan and annual evaluation reports on the results from its implementation. • Annual monitoring and database updating reports. • On-going evaluation of *Chamaecytisus* distribution in the Park and evaluation of the effect of its restriction measures. – number of locations and area occupied by it. • Number of rehabilitated damaged areas, total area – annual report. Evaluation of the efficiency of the measures. • Number of established and sanctioned violations of the regimes and standards set out in the Management plan.	special interest groups, the National Energy Complex PLC
Preserve the natural condition, the biological potential and diversity of lake, lake-side and riparian habitats and other wetlands in the Park. • Improve the technical condition of hydro technical facilities in the Park to meet the requirements of the environmental legislation (including ensuring releases of the ecological water minimum); • Implement measures preserving the river network and other wetland sites preserving microhabitats and species of significance for conservation: - map out and mark the sites of significance for conservation around water bodies; - lay down and undertake specific measures to preserve the most endangered elements of the wetlands in the Park;	• The needs for repair and upgrading of the hydro-technical facilities in the Park are assessed and the technical measures required for their improvement are implemented. • A system for hydrometric and hydro-technical monitoring of water in the Park and a database are created and used. • The areas of significance for conservation around the water bodies are mapped and specific measures for their protection are laid down and implemented. • The Management Plan and the effective legislation on wetland, water-body and water-body bank protection are enforced.	• Annual plan and report on the repair and upgrading of the hydro-technical facilities in the Park. • Annual monitoring and database updating reports. • Maps of sites of significance for conservation around water bodies. Annual evaluation of the areas of significance for conservation around the water bodies and of the trends. • Report and number of scientific publications on the studies of the effect of water removal on the ecosystems in the Park.	Nature Park Directorate, MAF, MOEW, Executive Environment Protection Agency, RIEW, scientific advisory council of the Rila NP, the academic and scientific community, NGOs, special interest groups, the National Energy Complex PLC

Goals	Indicators criteria	Measurement and evaluation tools	Participants
• Implement a hydrometric and hydro chemical monitoring program for the water in the Park; • Evaluate the effect of human impact on rivers, lakes and other water bodies in the Park and lay down measures to improve the condition of wetlands and of the related ecosystems: - study and evaluate the effect of water removal on ecosystems in the sections downstream of water catchments; - study the eutrophication and sedimentation in lakes;	water-body bank protection are enforced. • The effect of water removal on the ecosystems in the Park is studied and evaluated. Impact minimization measures are laid down. • The lake eutrophication and sedimentation processes are assessed. Impact minimization measures are laid down.	ecosystems in the Park. • Report on the annual impact minimization measures and evaluation of their effect. • Report on the eutrophication in lakes, evaluation of sedimentation processes and management measures. • Bi-annual report on the effect of eutrophication reduction measures. • Number of established and sanctioned violations of the regimes and standards set out in the Management Plan.	
Preserve the natural condition and the biological potential of the populations of the species of significance for conservation and their habitats • Describe the distribution of the main species of significance for conservation in the Park; Evaluate and monitor the condition of their populations; • Implement programs for preservation of the habitats of plant and animal species of significance for conservation: - lay down measures for protection of the most vulnerable blooming plant species in the Park; - carry out activities restoring the natural condition of the populations of Balkan trout and of chamois in the nature park; - Study the condition and implement measures preserving the lanner falcon, the capercaillie and other animal species of significance for conservation; - implement measures to restore the populations of vultures and of other rare species;	• A monitoring system for the populations of species of significance for conservation and of their habitats is created and implemented. • The habitats of the most vulnerable species are mapped out and measures for their preservation are implemented. • Measures to restore Balkan trout and chamois populations are laid down and implemented.	• Annual monitoring program implementation report and evaluation of the effect of the measures prescribed as a result of this monitoring. • Number of established and sanctioned violations of the regimes and standards for protection of the species of significance for conservation in accordance with the Management Plan and the effective legislation. • Number of vulnerable species populations with positive development trends. • Maps of the habitats of species of significance for conservation and assessments of their condition updated every 3 years.	Nature Park Directorate, MAF, MOEW, Executive Environment Protection Agency, scientific advisory council of the Rila NP, academic and scientific community, NGOs, special interest groups, the National Energy Complex, PLC

Goals	Indicators criteria	Measurement and evaluation tools	Participants
	3. Natural Resource Management		
Preserve the water resources in the Park and use them only in quantities and in a manner that does not endanger the ecosystems inside its boundaries. • Evaluate and monitor the type, size and condition of water reserves in the Park; • Implement a water-use monitoring program in the Park;	• The total quantity of water resources in the park is preserved. • The ratio between contained and uncontained water is preserved. • A water-use monitoring system is implemented • Technical facility improvements are carried out.	• Annual water quantity/flow. • Existing indicators and number of indicators of draught induced impacts on the ecosystems. • Reports with annual water use data. • Number and type of the technical improvements on the facilities improving their environmental performance.	Nature Park Directorate, the National Energy Complex, PLC MOEW, the academic community
Create and implement a sustainable management and use model for suitable forest sections in the Rila Monastery NP preserving their biological diversity in a manner that does not contradict the main nature conservation objective of the Park. • Create and implement a sustainable management and use model for the forests around Lomnitsite and Mravuliako localities while preserving their biological diversity. • Use the experience gained from the sustainable management of the forests in the Park for professional training and demonstration;	• The biodiversity in the commercial forests is preserved and/or increased. • A sustainable forest use model is created and implemented in the sustainable forestry zone. • Sustainable forestry practices are demonstrated to professionals and to specialized tourist groups. • A forest monitoring system is implemented. • Conflicts between timber use in the sustainable forestry zone and tourism and access of tourists in the park. • Revenue is generated and/or the needs of wood of the Monastery are met.	• Scientific research and reports on the number of local animal and plant species and habitats in the sustainable forestry zone. Condition of populations and habitats. • Forest condition reports – monitoring results. • Number of forest age classes and development phases in the sustainable forestry zone. • Annual reports on the period and manner (technology) of forest use in the sustainable forestry zone – expert assessment and annual report on the quantities of timber (sold, used). • Number of people trained in the principles and methods of sustainable forestry practices. • Number of tourists showing interest in observing sustainable forestry practices.	Nature Park Directorate; MAF, the academic community Private business

Goals	Indicators criteria	Measurement and evaluation tools	Participants
		• Number of tourist complaints/ incidents and number of trucks transporting timber noticed along the tourist trails.	
Preserve the natural condition and the biological potential of fish resources; medicinal plant, forest fruit and mushroom populations in the Park • Implement a fish resource restoration and maintenance system in the Park. • Conduct periodical medicinal plant and forest fruit reserve evaluations and plan the annual quantities allowed for use; • Elaborate picking instructions for particular species and introduce a system for their enforcement; • Enforce a special mushroom resource protection regime in the Park with stricter requirements for their use;	• Annual or periodic evaluation of resources is conducted and locations and quantities for use are determined. • The fish resources in the Park are increased. • An instruction on the species allowed for gathering in the Park and their locations and manner of picking is created and enforced. It is promoted among the local people and is enforced. • The public is informed periodically about the implemented non timber nature resources protection measures and their results.	• Quantity of exploitation resources and resource development trends in the consecutive resource assessments. • Quantities permitted for use. • Quantitative evaluation of fish stock • Balkan trout to brook trout ratio. • Number of established infringements of natural resource gathering regimes, standards and practices. Trends in the number of established violations. • Number of meetings, leaflets and other public information materials. • Bi-annual expert reports on resource condition and on the effect of the measures for their protection.	Nature Park Directorate; the academic community, local gatherers, local authorities, RIEW
4. Tourist Management			
Guarantee only those forms of tourism that do not compromise the preservation of the spiritual significance of the Rila Monastery and other holy places as well as the cultural and historical heritage and landscapes in the Park. • Develop and implement a uniform tourism development strategy and program in the park (types, forms, ratio, distribution of areas etc.);	• A tourism development strategy is developed and implemented in the Park. • The distribution of tourists is optimal/ no impacts are observed. • Alternative park transport system is developed and applied. • A motor vehicle access control and tourist guidance system is enforced.	• Degree of compliance of tourist distribution with the zones, regimes and standards in the Management plan. • Annual reports (number of motor vehicles in different zones; seasons/weekdays), analyses, recommendations on motor vehicle	Nature Park Directorate, the Mountain Rescue Service, NGOs, private businesses; regional and local authorities, the academic community, the Bulgarian Union of Tourists etc.

Goals	Indicators criteria	Measurement and evaluation tools	Participants
• Develop an improved visitor safety and emergency action system jointly with the Mountain Rescue Service at the Bulgarian Red Cross, the Fire Safety National Service, the Bulgarian Army, the National Police and others; • Reorganize the tourism and recreation related buildings and provide levels and forms of tourism that do not threaten the naturalness of natural complexes, religious and cultural values of the Rila Monastery and their unity; • Introduce a system for monitoring and management of motor vehicle access in the Park (including motor vehicle entry permits, traffic redirection etc.); • Improve existing and create new tourism infrastructure (camping sites, recreation sites and outlooks, marking and other items ensuring visitor information and safety.). The marking to be considered with the national and international requirements and standards; • Introduce tourist and visitor behavior rules and a system for their promotion and enforcement; • Elaborate and implement a solid household waste and waste water management system; • Implement a tourism promotion program for the Park (including information boards at the main entry points, in near-by settlements and by presentation of suitable materials in tourist information centers);	• A system for monitoring of the limits of admissible change/and of tourist load is introduced. • Unnecessary infrastructure is removed, the new infrastructure is optimized, recreation sites are constructed (camping sites, picnic sites, outlook etc.) • Waste water treatment facilities are constructed. • Information boards are placed in the urban areas around the Park. • Tourism and recreation related materials of the Rila Monastery NP are distributed. • A tourist safety system is implemented.	and tourist distribution in the Park; as well as problems. • Degree of compliance of the capacity and purpose of the infrastructure with the Management Plan requirements (norms). • Annual analysis and report on the degree of tourist load and the results of monitoring the limits of acceptable change. • Number of buildings (complexes) with functional waste water treatment facilities. • Number of information carriers/ distribution points. • Number of violators of the Management Plan regimes and standards – annual report. • Number of tourist accidents in the Park – annual report. • Number of uncontrolled dump sites. Number of cases of waste collected in the prescribed locations in excess of their annual capacities. • Degree of tourist awareness of the effective regimes. Degree of tourist satisfaction from the tourist services – sociological survey every 3 years.	

Goals	Indicators criteria	Measurement and evaluation tools	Participants
Encourage new forms of tourism that do not contradict the preceding goal and that ensure additional revenue generation opportunities. • Build a cultural and ethnographic complex representing traditional crafts and ensuring natural separation of visitors arriving for recreation and amusement from those seeking solitude and contact with the wild; • Build an eco-lodge in a suitable location and in observation of the internationally accepted standards as a special form of tourism and as a source of significant revenue; • Diversify the tourist services by interest and orientation (nature, history, recreation, horse-back riding etc.), specialized interest trails etc.; • Create and develop an environmentally sound transport system and means for transportation in the Park (road trains, carts, park automobiles etc.); • Build special wild life look-outs in suitable locations and in observation of nature conservation requirements;	• An ethnography complex is built. The complex meets nature protection requirements and generates revenue for the Rila Monastery. • An eco-lodge is built. The eco-lodge meets nature protection requirements and generates revenue for the Rila Monastery. • The proposed tourist services and activities in the Park are diversified and their number and quality are maintained. • A park transportation system is in effect with forms of attractive transportation such as carts, rickshaws, riding horses, mountain bycicles. The forms of park transport meet environmental protection requirements.	• Number and type of tourist services offered and practiced – sociological survey every 5 years. • Number of constructed wild animal look-outs. • Number and profile of tourists seeking and using different specialized forms of tourism, sociological survey every 5 years.	Nature Park Directorate, the Mountain Rescue Service, NGOs, private businesses; regional and local authorities, the Bulgarian Union of Tourists etc.
5. Interpretation and Education			
The natural, religious and cultural heritage in the Rila Monastery NP should be presented in a manner contributing toward maximal spiritual enrichment of the people and toward the integration of the protection of both Orthodox values and of nature. • Develop and implement an overall interpretation plan for the Park reflecting the unity and harmony between the religious, natural and cultural values of the Rila Monastery NP; - determine the main factors of nature, religion and culture in the Park as the basis for	• A technical plan for integrated interpretation of the religious, cultural, historical and natural riches of the Park is created and implemented. • The main facts regarding the Rila Monastery NP are determined and included in the education programs. • A proposal to include the Rila Monastery NP in the UNESCO List of Global Natural and Cultural Heritage Sites is made.	• Number and type of forms of interpretation that simultaneously reflect the natural and spiritual values of the Rila Monastery NP. • Degree of use of materials and of other forms of interpretation by the tourists and by the local population, degree of satisfaction - sociological survey on occasion, but not less often than	Nature Park Directorate, MOEW, Ministry of Education, Ministry of Culture, NGOs, local authorities etc.

Goals	Indicators criteria	Measurement and evaluation tools	Participants
complex interpretation materials (printed, audio, video, CD etc.); - use traditional forms of interpretation (information centers, printed materials, boards etc.), and new forms (Internet, other modern audiovisual means etc.); • Implement a program utilizing interpretative means and approaches that unite people around the protection of spiritual and natural values; - use the potential of the Rila Monastery and of the holy places in the Park as a source of national pride and self-confidence to provoke feelings of duty and desire for their protection; - determine which plant and animal species emblematic of the Park can be used to create positive attitudes in people and desire to become included in the program; • Propose to the competent authorities that the Rila Monastery NP should be included in the UNESCO list of sites of global natural and cultural heritage;		5 years. • Number of distribution and interpretation outlets. • Degree of awareness and understanding of the need to preserve the values of the Rila Monastery NP – sociological survey on occasion, but not less often than 5 years.	
Ensure optimal possibilities to transform the RMNP into a center for education on issues of natural sciences; • develop an overall concept as the basis for gradual development and transformation of the complex into a facility for science and education; - use the natural features of the Park for education and scientific research in a manner not contradicting its objectives; - carry out specialized courses on the use of natural resources, tourist and nature	• A nature education and research center is created and functioning. The center is financially sustainable and has established contacts and agreements with international research centers and universities. • A marketing plan for the Rila Monastery NP as a center for education and research is developed and implemented.	• Number of studies – reports on research/ projects in the Park. • Number of infrastructure use and education contracts. • Number of visitors in the education centers in the Park. • Number of students in the education activities in the Park. • Number of conducted scientific seminars/conferences • Number of scientific publications	Nature Park Directorate, MOEW, Ministry of Education, Ministry of Culture, NGOs, local authorities, learning and scientific research institutions etc.

Goals	Indicators criteria	Measurement and evaluation tools	Participants
conservation activities, protected area management etc.; • Organize forms of ecological and cultural education;		as a result of research in the Rila Monastery NP in the field of historical and natural sciences. • Number and type of advertisement. • Number and type of actual attracted customers (research units, universities, private business etc.)	
6. Partners and Local Communities			
The resources and the potential of the Park should be used in consideration of the interests, rights and responsibilities of the owner and of other stakeholders. • Implement sustainable environmentally sound resource use mechanisms in the Park as a tool for its nature conservation objectives - hold specialized courses with stakeholders on non-timber natural resource use, development and offering of tourist products and services etc; - employ alternative natural resource use methods by means of cultivated growing around the park, higher level of local processing, certification for environmentally clean products etc.; • Implement a program for the development and use of the Rila Monastery NP to potentially satisfy the economic needs of the owner jointly with local communities; - create conditions and give technical assistance to the owner and to local communities (consultancy, projects, business plans etc.) to conduct economic activities in compliance with the management goals of the Park in consideration of the effective legislation - develop mechanisms and approaches	• A mechanism and an annual plan for coordination and interaction of stakeholder Park management activities are developed and implemented. • Effective partnerships are established and contracts with different persons and institutions are carried out to meet Park objectives. • Forms of alternative resource use are developed. • The forests in the Park and in the sustainable forestry zone are certified.	• Number of stakeholder meetings. • Number of joint initiatives organized and conducted by the partners. • Number of persons and institutions involved in resource use related activities and trends. • Number of conflicts between partners. • Number of people employed in the Park or in park related activities. • Revenue amounts for the local communities from activities in, or related to, the Park (net profit, turnover). • Number of schools that are partners of the Park, conducting annual activities. • Number of cultural institutions that are partners of the Park and number of park related events/ activities.	Nature Park Directorate, MAF, regional and local authorities, users of resources, schools, cultural institutions etc.

Goals	Indicators criteria	Measurement and evaluation tools	Participants
allowing local people to benefit from employment positions in the Park, offer services to the visitors etc.; • Implement a program promoting cultural and natural riches in the education and cultural life of local communities; - develop and implement methods and tools for joint education and instructive activities in schools and in other institutions of education in the region for cultural-historical and environmental education;			
7. Park Management			
Use a management model for the Rila Monastery NP matching the interests of the Holy Synod of the Bulgarian Orthodox Church with those of the Rila Monastery, the State and the local communities and ensuring coordination among all stakeholders to achieve the management goals of the Park. • Introduce a system for on-going mutual provision of information and coordination of the park-related activities of the stakeholders; • Guarantee the implementation of joint activities among the partners on the basis of clear rules and responsibilities of the parties; • Implement a plan for institutional optimization, strengthening and capacity building for the Park Administration, including creation of mobile guards for the Nature Park, formation of park sections with offices and people in charge present in the sections; - develop and maintain the park infrastructure for efficient achievement of the management goals of the Park; - develop revenue generation mechanisms for the	• A system for provision of information and for setting priorities for action mutually by partners is developed and implemented. • The Nature Park Directorate is staffed and equipped so as to meet its needs for efficient management. • National, local and regional level public relations plans are elaborated and implemented. • Symbols and signs of the Rila Monastery NP are registered and used (in facilities, in Park promotion materials etc.) • The coordination and cooperation in Park activities and in the Management Plan implementation are evaluated as positive and are beneficial for all partners and stakeholders.	• Number of the forms and manner of information exchange between the stakeholders. • Number of joint activities. • Number of partner conflicts arising and resolved. • Number of experts and officials in the Nature Park Directorate. • Number of trainings of the Nature Park Directorate staff and of others partners for better management of the RMNP. • Ensured equipment, staff and annual budget. • Degree of public awareness about the Park signs and symbols – sociological survey.	Nature Park Directorate, MAF, MOEW, Ministry of Culture, regional and local authorities, NGOs, others.

Goals	Indicators criteria	Measurement and evaluation tools	Participants
park administration to ensure its activities; - provide an efficient communication system in the Rila Monastery NP and create a system to coordinate the activities of various services in the event of natural calamities, fire and other emergencies; • Introduce a uniform public relations strategy for park management, maintain a public awareness program for the values, potential and specific resources of the Park, and a system for regular access to information and for provision of information to the public; - implement a program for involvement of NGOs, scientific institutions, artistic unions, the media, management circles, businesses and others to cooperate in the protection and promotion of the Park and of its religious, natural and cultural values; - develop and register a system of identification systems and signs; - enlarge the partnerships with suitable national and international organizations;			
The Rila Monastery NP protection and development requirements should be reflected in the regional planning scheme for the Southwestern planning region. • Implement mechanisms for exchange of information between the Rila Monastery NP and the regional planning authorities; - A permanent representative of the Rila Monastery NP should participate in the work of the Regional Development Council in Kyustendil and in the Regional Expert Council on Territorial Development; - the Rila Monastery NP representative should ensure coordination of the activities envisioned for the Southwestern planning	• A general zone mangement plan for Rila Monastery NP is developed. Detailed development plans are developed as its part. • A municipal and regional level Action Plan is implemented to include the Rila Monastery NP in the regional planning. • A representative of the Park is included in the Regional Development Council.	• Number of regional and municipal planning meetings with the participation of the RMNP representative. • Number and type of regional projects taking into account the RMNP.	Nature Park Directorate, MAF, MOEW, Ministry of Culture, Ministry of Regional Development, and Public Works, regional and local authorities

Goals	Indicators criteria	Measurement and evaluation tools	Participants
region in such a manner that eliminates threats for the preservation of the religious, natural and cultural values of the Park; • Develop general zone Management Plan and detailed development plans for individual parts of the Park (the Tourist Zone) using an up-to-date cadastral survey and in consideration of the Territorial Development Act.			
Maintain and optimize the infrastructure in the Park in keeping with the special laws and in observation of the nature protection goals of the Rila Monastery NP. • Evaluate the condition and purpose of the infrastructure in the Park and implement measures for its harmonization with the environment and for implementation of the management goals (reconstruction; removal of unusable facilities and reclamation, laying of underground communications etc.); • Guarantee carrying out of routine activities for maintenance of roads, hydro-technical and electrical facilities in the Park and of the social infrastructure by increasing their environmentally sound performance.	• The condition of the infrastructure is evaluated and measures for its optimization are implemented. • An infrastructure condition and impact monitoring system is implemented • Instructions for improving the function and maintenance of environmentally sound facilities are implemented.	• Evaluation of the infrastructure – report. • Number of removed unnecessary infrastructure facilities – report on the 5th and 10th years from the Management Plan implementation. • List of measures for item by item optimization of the infrastructure every 5 years. • Number of constructed facilities in accordance with the Management Plan, the General Zone Management Plan and with the Detailed Development Plans. • Number of sites with changed purpose. • Number of repaired and improved sites. • Degree of compliance of the sites with the environment protection requirements and with the requirements and standards of the Management Plan – expert assessment.	Nature Park Directorate, MAF, MOEW, Ministry of Regional Development and Public Works, regional and local authorities, private businesses

Goals	Indicators criteria	Measurement and evaluation tools	Participants
Maintain close coordination in the management of the Rila Monastery NP and of the Rila NP as an inseparable natural complex. • Carry out regular exchange of information and mutual activities in both protected areas in fire control, ensuring of ecological corridors, tourist management and safety, law enforcement etc. • The Rila Monastery NP should use the Scientific Advisory Council of the Rila NP to resolve complex issues and issues of importance for both parks.	• Regular exchange of information is carried out between both Directorates. • The action plans are reviewed and synchronized every year. • The Scientific Advisory Council at the Rila NP advises the Nature Park Directorate.	• Annual number of meetings • Number of planned and conducted joint activities benefiting both parties. • Type and frequency of information exchange. • Report/analysis/self-evaluation of the joint activities of the NPD and Nature Park Directorate, and of their results – annual.	Nature Park Directorate, NPD, MOEW, MAF

MAPS

Rila Monastery Nature Park
Base Map

This Base Map displays the principal geographical elements: mountain peaks, lakes, rivers, roads, populated communities, tourist trails, chalets and lodges, as well as the location of the architectural and historical complex of Rila Monastery.

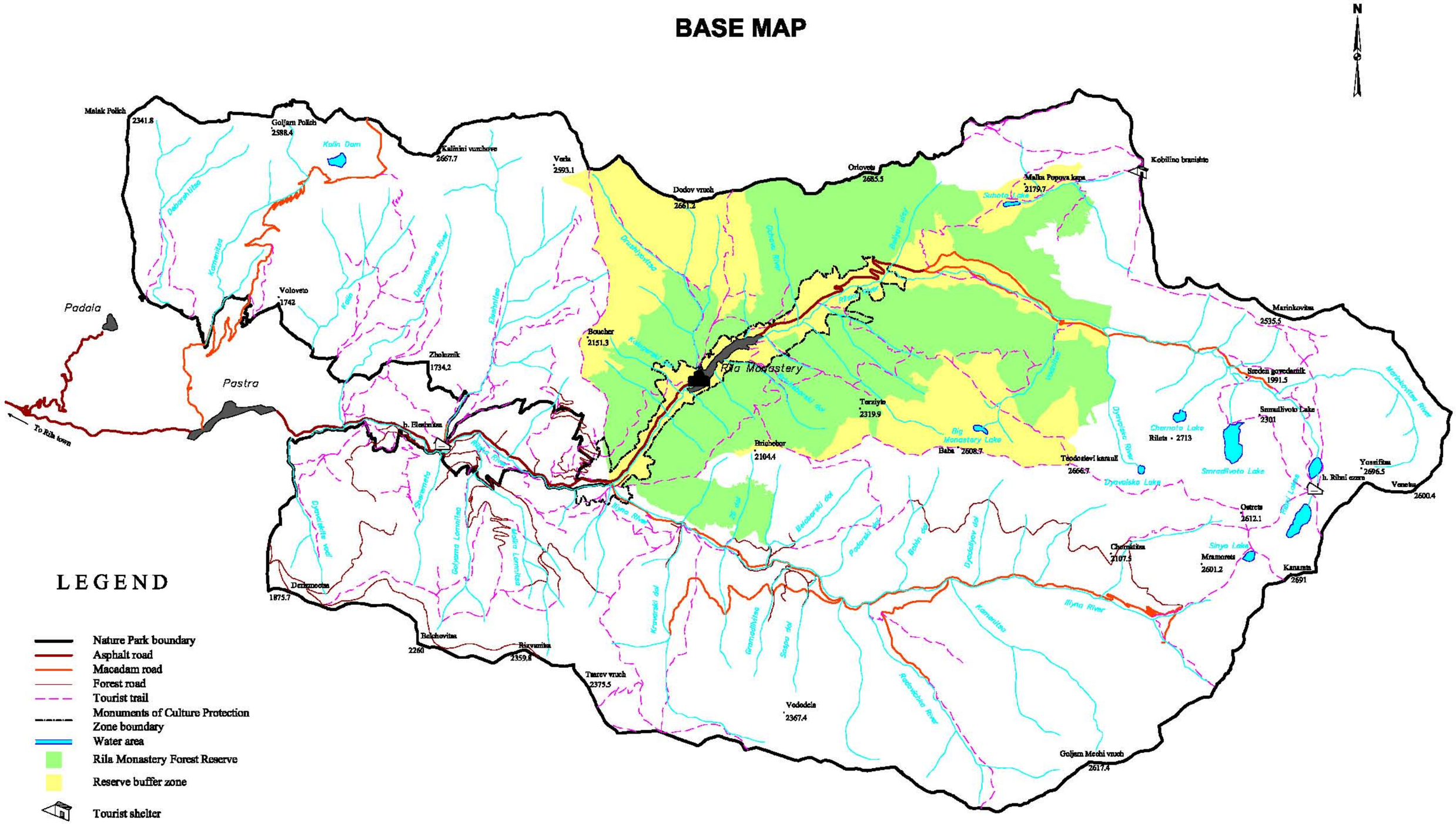
The map shows the total Park territory, the territory of Rila Monastery Forest Reserve, and the territory of the buffer zone around.

Similarly marked on the map is the dense river network formed by the two principal rivers in the Park territory, the Rilska and the Iliyna, and their numerous tributaries, while the Ribni Lakes complex, as well as the Smradlivo, Mramoretzko and Chernatishko lakes (a total of 25 lakes altogether) along the eastern boundary of the Park outline the area with the most pronounced post-glacial elements in its territory.

Incorporated as the basis for the Base Map are digital models compiled by Agrolesproject PLC.

RILA MONASTERY NATURE PARK

BASE MAP



LEGEND

- Nature Park boundary
- Asphalt road
- Macadam road
- Forest road
- Tourist trail
- Monuments of Culture Protection Zone boundary
- Water area
- Rila Monastery Forest Reserve
- Reserve buffer zone
- Tourist shelter
- Rila monastery
- Tourist hut
- Padala — Settlement
- Baba 2608.7 — Peak name and elevation

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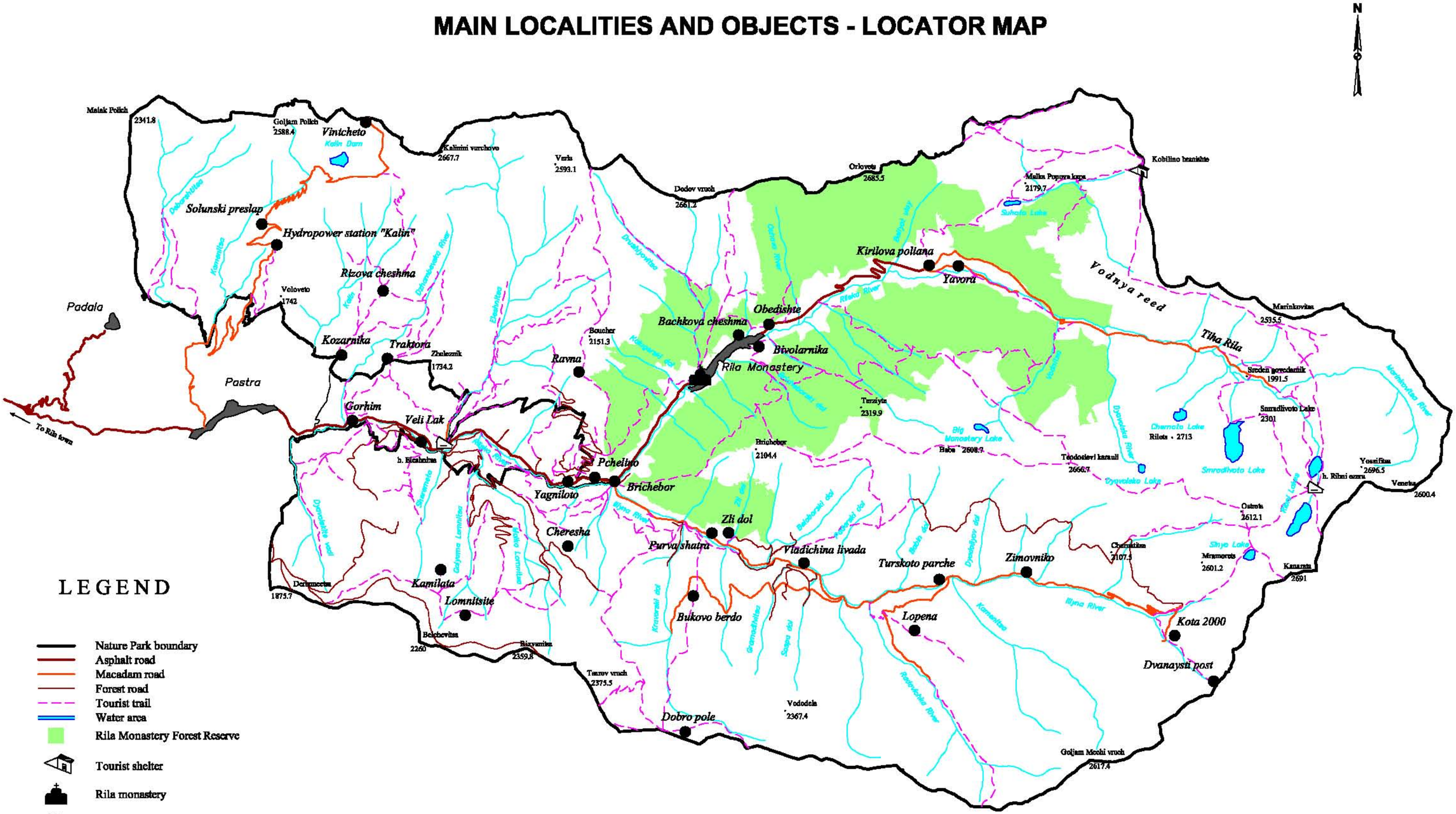
Rila Monastery Nature Park
Principal Localities, Sites and Facilities

The map displays the location of the principal localities, sites and facilities within the Park territory, a total of 28 in number, as mentioned in the text of the Management Plan. The map is intended to facilitate orientation around the Park territory both in relation to the descriptive and the prescriptive parts of the Management Plan. This map is designed to supplement the information borne by the above listed maps.

The remaining object categories are as per the Base Map.

Digital models by Agrolesproject PLC, as well as data provided by consultants to the BCEG Project, have served as the basis for compiling this map.

RILA MONASTERY NATURE PARK
MAIN LOCALITIES AND OBJECTS - LOCATOR MAP



LEGEND

- Nature Park boundary
- Asphalt road
- Macadam road
- Forest road
- Tourist trail
- Water area
- Rila Monastery Forest Reserve
- Tourist shelter
- Rila monastery
- Tourist hut
- Padala — Settlement
- Baba 2608.7 — Peak name and elevation
- Lomnitsite — Locality name

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Rila Monastery Nature Park
Geology

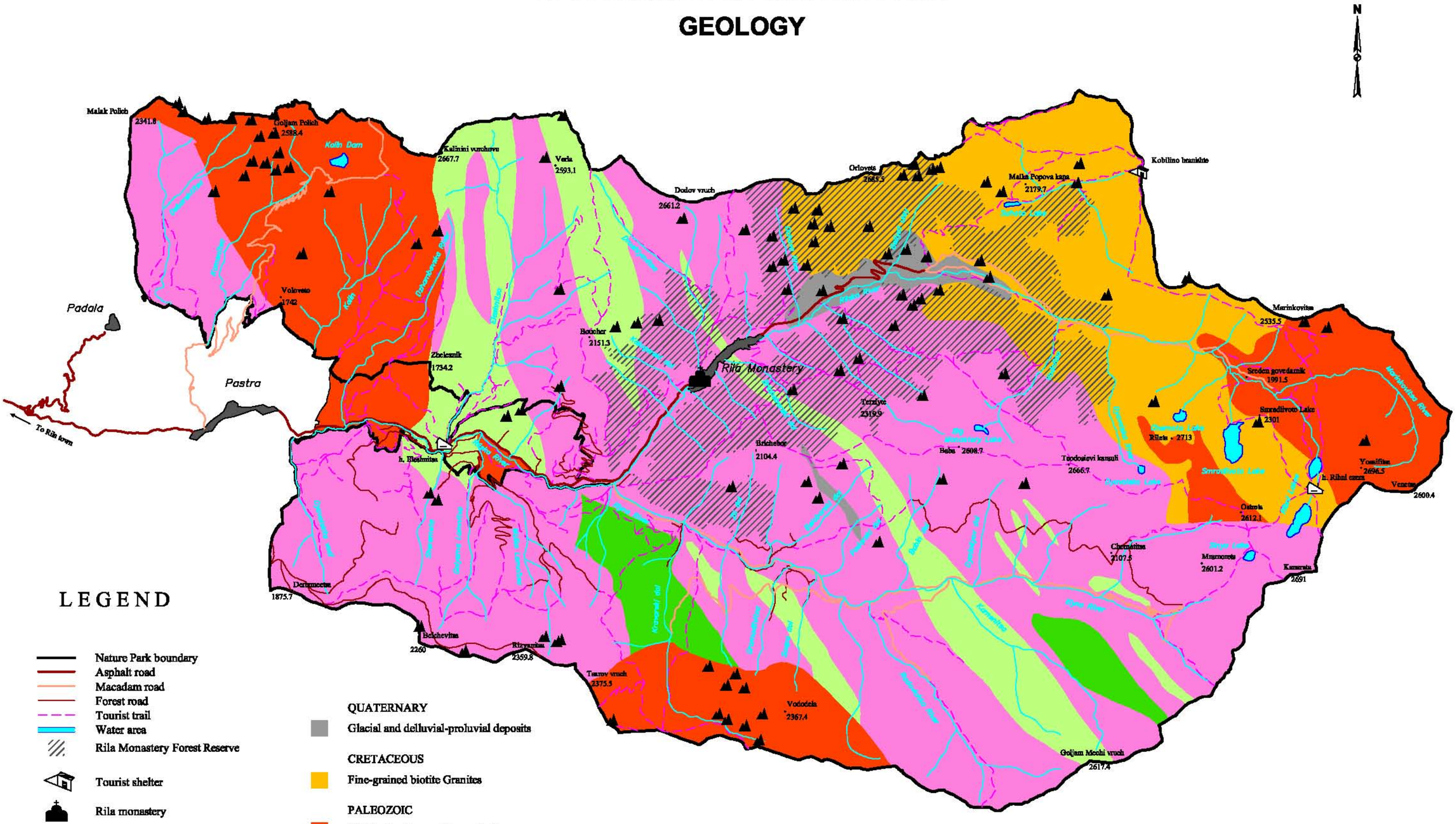
The map indicates the location of the 6 most important geological formations within Rila Monastery Nature Park, as described in the Descriptive Section of the Management Plan, which characterize the main geological periods. The map shows a clear predomination of biotite gneisses and schists dating from the Proterozoic. Other common types of rock are the biotite granites and granodiorites, which occupy the northwestern, eastern and some areas of the southern portion of the Park. Almost the entire northeastern portion of RMNP is made up of fine-grained biotite granites.

The remaining object categories are as per the Base Map.

Digital models by Agrolesproject PLC, as well as data provided by consultants to the BCEG Project, have served as the basis for compiling this map.

Note: The map shows also the territory along Rilska River neighboring the Nature Park

RILA MONASTERY NATURE PARK
GEOLOGY



LEGEND

- Nature Park boundary
- Asphalt road
- Macadam road
- Forest road
- Tourist trail
- Water area
- Rila Monastery Forest Reserve
- Tourist shelter
- Rila monastery
- Tourist hut
- Settlement (Padala)
- Peak name and elevation (Beba 2608.7)
- Rock outcrops

QUATERNARY

- Glacial and delluvial-proluvial deposits

CRETACEOUS

- Fine-grained biotite Granites

PALEOZOIC

- Biotite Granites and Granodiorites

PROTEROZOIC

- Meta-basic volcanics
- Meta-gabra and meta-diorits
- Biotite gneisses and kyanite schists

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Rila Monastery Nature Park
Altitudinal Distribution of the Park Territory

The map illustrates the distribution of the Park's territory according to altitude; it clearly shows the substantial differences in altitude between different portions of the Park.

Situated at the lowest altitudes within the Park (800 to 1,000 meters above sea level) are the river valleys of the Iliyna and Rislka rivers. Along the northern and western Park boundary there are eight mountain peaks rising to over 2,300 meters a.s.l. Another six peaks of comparable height dot the Park's southern boundary; the only exception, Derizmiytza Peak, being somewhat lower (1,875 m.). The central Park zone is characterized by great altitudinal differentials, the incline of the steeper slopes often-exceeding 70%. To the south of the rivers Iliyna and Rilska, the transition from lower to higher altitudes is somewhat smoother.

The areas with the highest altitude (2,341-2,685 m. a.s.l.) are located in the northern, central and southeastern portions of the Park, while the southwestern portion is by 300 to 500 meters lower (with average altitudes 1,800 to 2,300 m. a.s.l.).

As a whole, the territory of RMNP can be described as a valley that opens to the south-southwest, therefore receptive to a mild, sub-Mediterranean climatic influence. The diversity of ecological conditions that vary with the altitudinal factor also determines the diversity of biotic complexes adapted to those conditions.

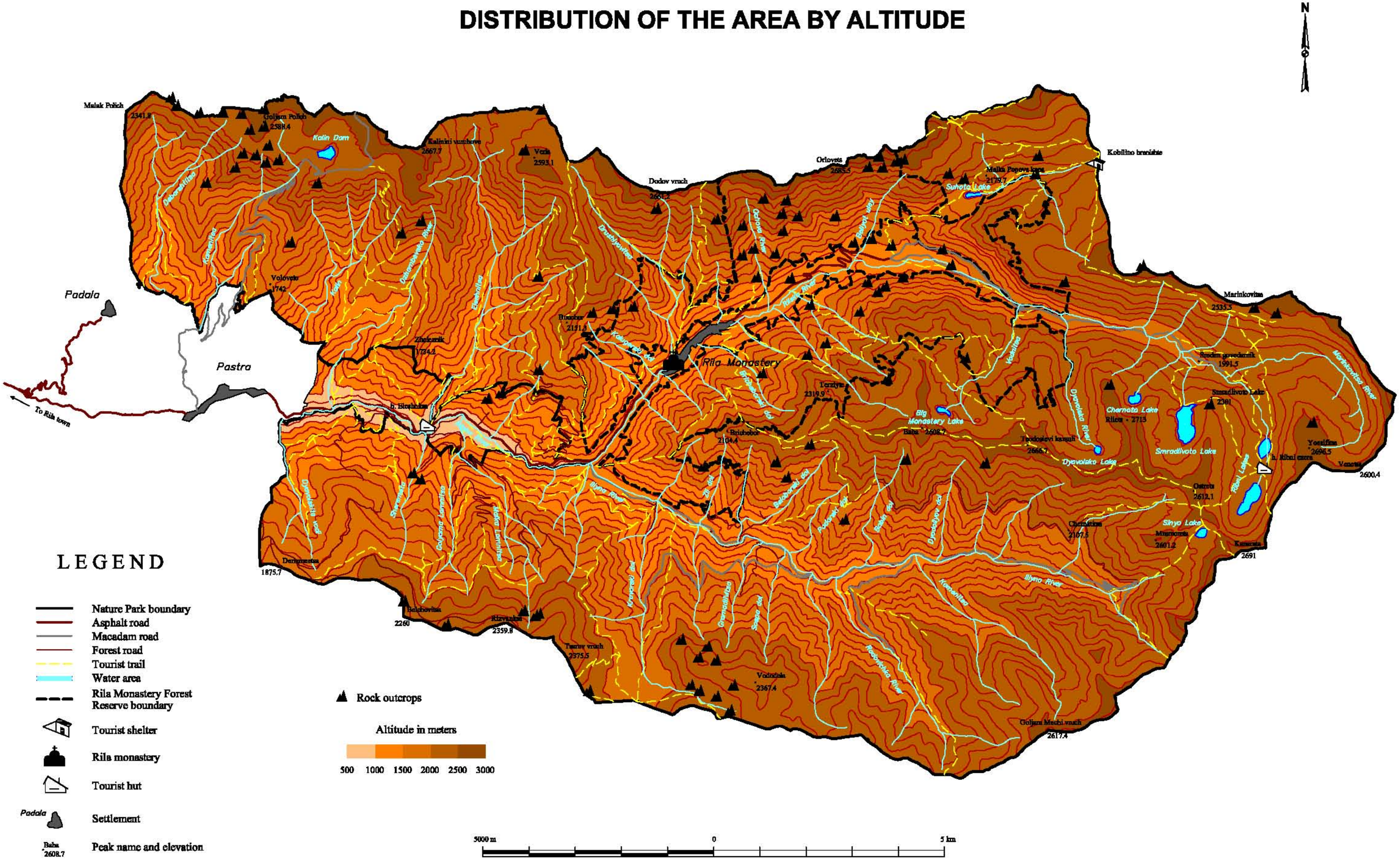
The map also shows characteristic rock complexes predominantly located in the 2,000-meter-plus altitude zone and in Rila Monastery Forest Reserve.

The remaining object categories are identical to those on the Base Map

Digital models compiled by Agrolesproject PLC and OM2 Project has served as the basis for compiling this map.

Note: The map shows also the territory along Rilska River neighboring the Nature Park

RILA MONASTERY NATURE PARK
DISTRIBUTION OF THE AREA BY ALTITUDE



LEGEND

- Nature Park boundary
- Asphalt road
- Macadam road
- Forest road
- Tourist trail
- Water area
- Rila Monastery Forest Reserve boundary
- Tourist shelter
- Rila monastery
- Tourist hut
- Padala — Settlement
- Baba 2608.7 — Peak name and elevation

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Rila Monastery Nature Park
Hydrographic Characteristics and Hydrotechnical Infrastructure

The map presents the principal and secondary watersheds, as well as the river network, the lakes and water reservoirs within the Park. An analysis of the distribution of water resources is crucial to an accurate assessment of the state and condition of natural ecosystems. It is characteristic of the territory of RMNP that in both the northern and the southern portions of the Park the river networks are of approximately equal density.

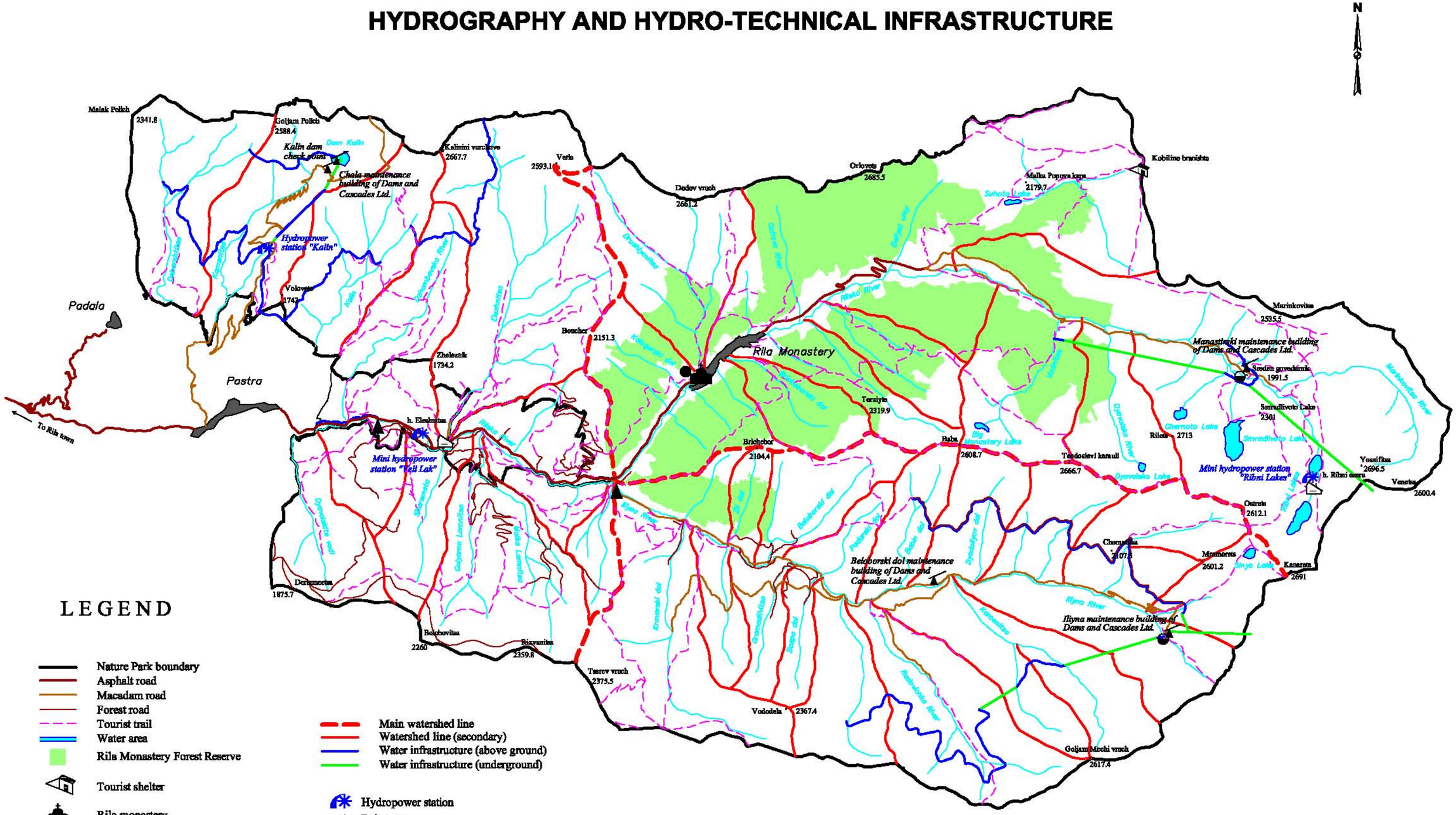
Indicated on the map are the locations of the three hydrometric stations: at Veli Lak mini-powerhouse, at the point of confluence of the rivers Iliyna and Manastirska, and at Kalin Dam; also marked are the locations of all hydropower stations within the Park territory. Outlined on the map are the under- and above-ground routes of canals and diversions (e.g., at Elevation 2000), used to divert waters from the Park watershed to the Belmeken-Sestrimo Hydropower Cascade, while supplying water to the hydropower stations of the Rila group.

A total of 26 high-mountain glacial lakes are scattered throughout the eastern portion of the Park. Some of these are: Ribni Lakes, Smradlivoto Lake, and Djendemski Lakes, all located in the 2,300 to 2,500 m. altitude zone. These lakes feed a number of streams and rivers, forming the largest river systems in the territory: Rilska, Iliyna, Dyavolska a.o. Of these lakes, only Suhoto (Dry) Lake dries up seasonally and has no visible discharge into a water stream.

The remaining object categories are as per the Base Map.

Digital models compiled by Agrolesproject PLC, as well as information from Dams and Cascades PLC, have served as the basis for drawing up this map.

RILA MONASTERY NATURE PARK
HYDROGRAPHY AND HYDRO-TECHNICAL INFRASTRUCTURE


N
Malak Polich
2341.8
Goljam Polich
2588.4
Dam Kalin
Kalin dam check point
Chala maintenance building of Dams and Cascades Ltd.
Hydropower station "Kalin"
Kalinini vurchove
2667.7
Verla
2593.1
Dodov vrush
2661.2
Orlovets
2685.5
Kobilino branishte
Malka Popova kapa
2179.7
Suhoto Lake
Padala
Pastra
To Rila town
Volovets
1742
Zheleznik
1734.2
Boucher
2151.3
Rila Monastery
Terziyte
2319.9
Brichebor
2104.4
Baba
2608.7
Big Monastery Lake
Teodosievi karauli
2666.7
Dyavolsko Lake
Riloto
2713
Chernoto Lake
Smradlivoto Lake
Smradlivoto Lake
2301
Murinkovitsa
2535.5
Manastirski maintenance building of Dams and Cascades Ltd.
Sroden gryodarnik
1991.5
Yossifitsa
2696.5
h. Ribni ozera
Venetsa
2600.4
Ostrets
2612.1
Mramorets
2601.2
Sinya Lake
Kanaresa
2691
h. Elenitsa
Mini hydropower station "Veli Lak"
Belchorski dol maintenance building of Dams and Cascades Ltd.
Iliyna maintenance building of Dams and Cascades Ltd.
Mini hydropower station "Ribni Lakes"
Derlumcetsa
1875.7
Belchovitsa
2260
Rizvanitsa
2359.8
Tsarev vrush
2375.5
Vododela
2367.4
Goljam Mechi vrush
2617.4
Iliyna River
Rila River
Rilsko River
Dyavolska River
Dyavolsko Lake
Marinkovitsa River
Kamenitsa
Kalin
Zelezniteto River
Dodov vrut
Dyavolsko vrut
Belchorski dol
Kraiserski dol
Granodiritsa
Sapso dol
Podarski dol
Dyavolyov dol
Kamenitsa
Rodovolsko River
Sivolyaro
Golyamo Lamnitsa
Malko Lamnitsa
Ribni Lakes
Ribni Lake
Chernitsa
2107.8
Kamenitsa
Vodoslivitsa
Vodoslivitsa
Vodosliv

Rila Monastery Nature Park
Vegetation and Main Types of Habitats

The map illustrates the distribution of the main types of habitats within the territory of Rila Monastery Nature Park, as per the CORINE Program classification system. A total of 85 types of habitats have been identified in the Park's territory (see Appendix 11).

A total of 28 map table units have been determined, representing separate habitats or habitat complexes. The boundaries of these map table units were laid out on a 1:25,000-scale map, then digitized and entered into the Park's digital model; the above mentioned 28 units are all listed in the Key to the A3-format illustrative map attached to the Management Plan. The complex units, together with a list of habitats comprised in them, are shown in the Table below.

The remaining object categories are as per the Base Map.

Digital models by Agrolesproject PLC, as well as information provided by consultants to the BCEG Project, have served as the basis for compiling this map.

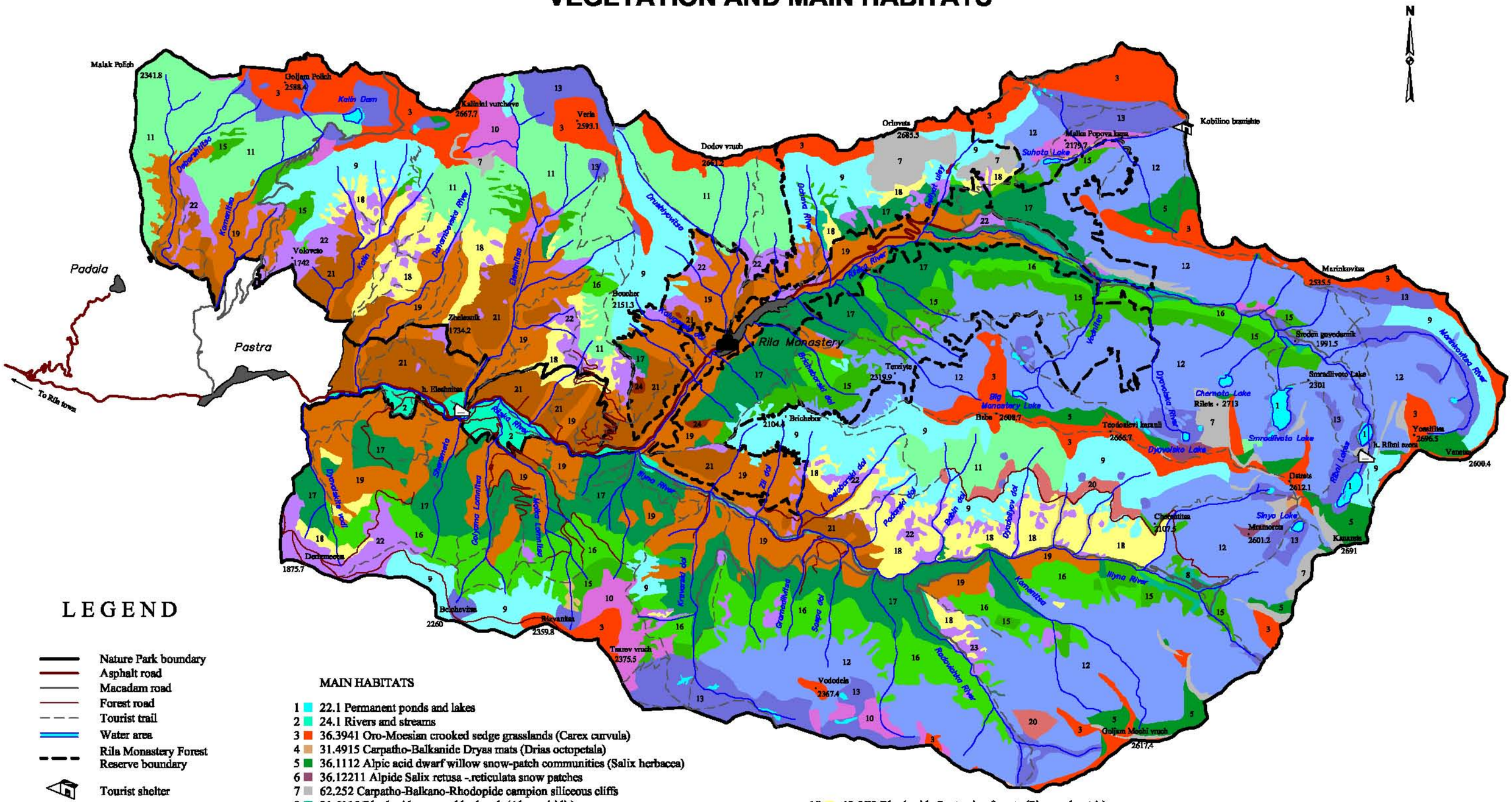
Note: The map shows also the territory along Rilska River neighboring the Nature Park

Habitats and habitat complexes in Rila Monastery Nature Park and in Rila Monastery Forest Reserve

1. 22.1 Non-drying lakes and water reservoirs
2. 24.1 Rivers and streams
24.21 Riverside gravel dikes barren of vegetation
24.22 Vegetation on riverside gravel dikes
24.6 River beds made up of rocks, pebbles and boulders
41.813 Mountain forests of water hornbeam (*Ostrya carpinifolia*)
87.2 Ruderal communities
3. 36.3941 Oro-Moesian crooked sedge grasslands (*Carex curvula*)
36.39421 Rhodopide *Festuca riloensis* grasslands (*Festuca riloensis*)
36.3943 Oro-Moesian *Festuca airoides* grasslands (*Festuca airoides*)
36.3944 Oro-Moesian *Sesleria comosa* grasslands (*Sesleria comosa*)
36.3945 Oro-Moesian *Agrostis rupestris* grasslands (*Agrostis rupestris*)
31.41231 Rila-Rhodope wind-exposed shrub communities of *Vaccinium*
31.431 Mountain shrub communities of Siberian juniper (*Juniperus sibirica*)
4. 31.4915 Carpatho-Balkanide *Dryas* mats (*Dryas octopetala*)
36.427 Pirin wind-exposed communities of *Juncus trifidus* (in association with c *Elyna bellardii, Carex rupestris, Arenaria ciliata*)
5. 36.1112 Alpine snow-drift communities of grassy willow (*Salix herbacea)* on acid soil
36.1113 Alpic acid cudweed snow-patch communities (*Omalotheca supina*)
36.11212 Oro-boreal snow-drift communities of moss (*Polytrichum norvegicum*) on acid soil
36.1116 Alpine snow-drift communities of Crowfoot (*Ranunculus crenatus*) on acid soil
36.1117 Alpine snow-drift communities of *Alopecurus riloensis* on acid soil
6. 36.12211 Alpine snow-drift limestone communities of willow (*Salix retusa-reticulata*)
36.1234 Snow-drift herbaceous communities on limestone
7. 62.252 Carpatho-Balkan-Rila-Rhodope vertical rock faces with *Silene*
61.1116 Rhodope mountain sorrel screes (*Rumex*)
61.115 Carpatho-Balkan screes with *Saxifraga, Veronica, Senecio*
8. 31.6115 Rila-Rhodope green elder sub-alpine communities (*Alnus viridis*)
31.621631 Rila-Rhodope sub-alpine communities of Lapland willow (*Salix lapponum*)
31.621632 Rila-Rhodope sub-alpine shrubbery of *Salix waldsteiniana* etc.
31.621633 Rila-Rhodope sub-alpine shrubbery of *Salix caprea, Salix silesiaca* etc.

9. 36.3921 Oro-Moesian *Festuca paniculata* grasslands (*Festuca valida)*
36.393 Oro-Moesian *Poa violacaea* grasslands (*Bellardiochloa violacea*)
31.431 Mountain shrub communities of Siberian juniper (*Juniperus sibirica*)
10. 31.431 Mountain shrub communities of Siberian juniper (*Juniperus sibirica*)
31.41231 Rila-Rhodope wind-exposed shrub communities of *Vaccinium*
11. 36.391 Oro-Moesian *Festuca paniculata* grasslands (*Festuca paniculata*)
36.3921 Oro-Moesian *Festuca valida* grasslands (*Festuca valida*)
36.393 Oro-Moesian *Poa violacaea* grasslands (*Bellardiochloa violacea*)
12. 31.58 Balkan-Rila-Rhodope communities of dwarf-pine (*Pinus mugo*)
31.431 Mountain shrub communities of Siberian juniper (*Juniperus sibirica*)
36.3921 Oro-Moesian *Festuca valida* grasslands (*Festuca valida*)
13. 31.58 Balkan-Rila-Rhodope communities of dwarf-pine (*Pinus mugo*)
31.6115 Rila-Rhodope green elder sub-alpine communities (*Alnus viridis*)
31.633 Sub-alpine tall-grass communities mixed with shrubs of *Rubus* sp.
36.318 Oro-Moesian turf meadows on acidophilic soils (*Nardus stricta*)
14. 36.318 Oro-Moesian turf meadows on acidophilic soils (*Nardus stricta*)
52.22 Mountain Cotton grass swamps (*Eriophorum* sp. div.)
52.23 Mountain sphagnum carpets
54.1113 Boreal-alpine spring-side communities of *Phylonotis*
54.1114 Boreal springs with *Drepanocladus*
54.4263 Marshes with *Carex nigra*
15. 37.8721 Sub-alpine Moesian-Balkan tall grass communities of *Cirsium*, *Carduus* etc.
37.8722 Sub-alpine Moesian tall grass communities of (*Petasites albus)*
37.8723 Sub-alpine Moesian tall grass communities of subspecies of Cow Parsnip (*Heracleum* sp. div.)
37.8724 Sub-alpine Moesian tall grass communities of Red Avens (*Geum coccineum*)
16. 42.723 Rila-Pirin and Macedonian forests of Macedonian pine (*Pinus peuce*)
42.2413 Moesian-Macedonian spruce (*Picea abies*) forests
42.5C2 Rhodope forests of Scots pine (*Pinus sylvestris)*
42.171 Forests of King Boris's fir (*Abies borisii-regis)*
17. 42.2413 Moesian-Macedonian spruce (*Picea abies*) forests
42.1613 Western-Rhodope common fir (*Abies alba*) forests
18. 42.1613 Western-Rhodope common fir (*Abies alba*) forests
41.19122 Southwestern-Moesian beech-cum-fir (*Fagus sylvatica, Abies alba*) forests
19 42.5C2 Rhodope forests of Scots pine (*Pinus sylvestris)*
20. 41.1912 Southwestern-Moesian neutrophilic beech (*Fagus sylvatica*) forests
41.19122 Southwestern-Moesian beech-cum-fir (*Fagus sylvatica, Abies alba*) forests
41.19123 Southwestern-Moesian hornbeam-cum-beech (*Fagus sylvatica, Abies alba*) forests
21. 31.4B2 Balkan-Rila-Rhodope communities of (*Chamaecytisus absinthioides)*
22. 41.763 Heleno-Moesian communities of durmast (*Quercus dalechampii)*
41.7372 Moesian forests of hairy oak (*Quercus pubescens)*
41.73721 Moesian forests of Hairy Oak and Carpinus orientalis (*Quercus pubescens-Carpinus orientalis)*
41.762 Heleno-Moesian forests of (*Quercus frainetto)*
23. 35.73 Balkan mountain herbaceous communities of *Agrostis-Festuca*
31.88 Communities of common juniper (*Juniperus communis)*
24. 44.217 Rhodope gallery forests of white alder (*Alnus incana)*
25. 41.7642 Forests of Rila oak (*Quercus protoroburoides)*
26. & 36.3924 Oro-Moesian communities of Amethyst Fescue (*Festuca amethystima ssp. Kummeri)*
27. 37.872 Sub-alpine Moesian tall grass communities (in association with *Trolius europaeus*)
28. 24.22 Vegetation of riverside gravel dikes (single specimens of *Rheum rhaponticum*)

RILA MONASTERY NATURE PARK
VEGETATION AND MAIN HABITATS



LEGEND

- Nature Park boundary
- Asphalt road
- Macadam road
- Forest road
- Tourist trail
- Water area
- Rila Monastery Forest Reserve boundary
- Tourist shelter
- Rila monastery
- Tourist hut
- Padala — Settlement
- Buba 2608.7 — Peak name and elevation

MAIN HABITATS

1 22.1 Permanent ponds and lakes
2 24.1 Rivers and streams
3 36.3941 Oro-Moesian crooked sedge grasslands (Carex curvula)
4 31.4915 Carpatho-Balkanide Dryas mats (Drias octopetala)
5 36.1112 Alpic acid dwarf willow snow-patch communities (Salix herbacea)
6 36.12211 Alpide Salix retusa -.reticulata snow patches
7 62.252 Carpatho-Balkano-Rhodopide campion siliceous cliffs
8 31.6115 Rhodopide green alder brush (Alnus viridis)
9 36.3921 Oro-Moesian Festuca valida grasslands
10 31.431 Mountain Juniperus nana scrub
11 36.391 Oro-Moesian Festuca paniculata grasslands
12 31.58 Balkano-Rhodopide dwarf mountain pine scrub (Pinus mugo)
13 36.318 Oro-Moesian mat-grass swards (Nardus stricta)
14 37.8721 Moesian Balkan thistle tall herb communities (Carduus sp. and Cirsium sp. dominated).
15 42.723 Rila and Pirin Macedonian pine forests (Pinus peuce)
16 42.2413 Moeso-Macedonian spruce forests (Picea abies)
17 42.1613 Western Rhodopide fir forests (Abies alba)
18 42.5C2 Rhodopide Scots pine forests (Pinus sylvestris)
19 41.1912 South-Western Moesian neutrophile beech forests (Fagus sylvatica)
20 31.4B2 Balkano-Rhodopide Chamaecytisus absinthioides heaths
21 41.763 Helleno-moesian Quercus dalechampii forests
22 35.73 Balkanic montane mat-grass swards (Agrostis-Festuca)
23 44.217 Rhodopide grey alder galleries (Alnus incana)
24 41.7642 Rila Quercus protoroburoides forests
25 n36.3924 Oro-moesian Festuca amethystina ssp. kummeri grasslands
26 37.872 Moesian tall herb communities (with Trolius europaeus)
27 24.22 Vegetated river gravel banks (with individual plants of Rheum rhaponticum)

5000 m — 0 — 5 km

Biodiversity Conservation and Economic Growth Project
Sponsored by USAID
Sofia, November 2003

Rila Monastery Nature Park
Forest Vegetation and the Treeless Zone

The forest vegetation map shows the distribution of the seven principal types of forest in the Park's territory, determined according to the predominance of coniferous or deciduous tree specimens within them. Also indicated on the map is the spread of the treeless zone, which is home to a great diversity of herbaceous plants inhabiting various ecological niches and terrains richer in silicates and limestone. This zone is best represented at higher altitudes (2,200 meters and over) in the northern and eastern portions of the Park.

The map also shows the proportional distribution of old forests, which constitute 33 % of all forests within the Park. Within the central areas of the Park are the main locations of the endemic Rila oak. The distribution and quality of forest vegetation throughout RMNP territory indicates that the forests preserved in Rila Monastery Forest Reserve are by no means the only ones in the Park territory that are unique in their conservation significance. In terms of its structure, richness and diversity, the entire forest complex of Rila Monastery Nature Park is a key component of the forest ecosystems of Rila Mountain.

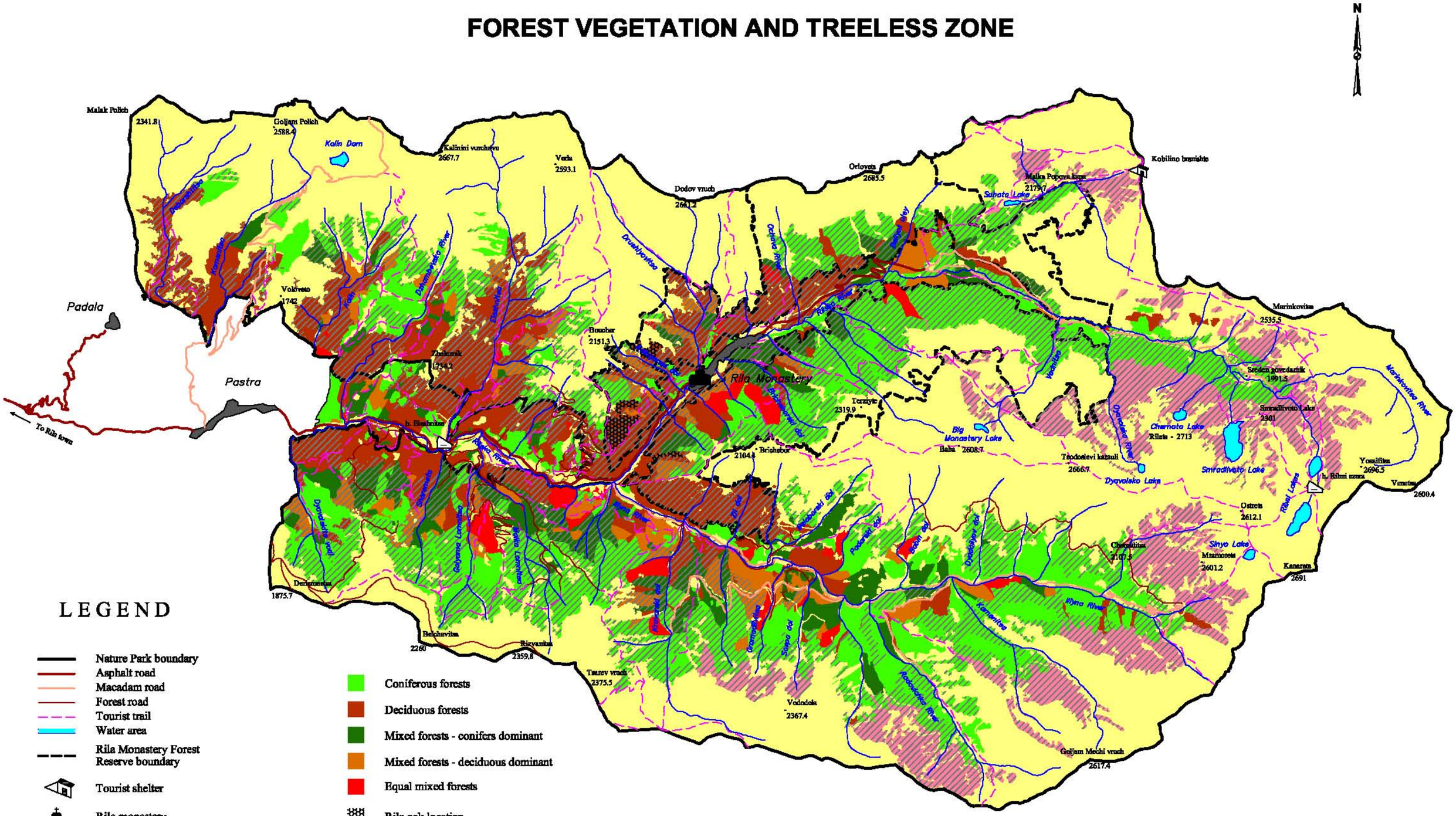
The remaining object categories are as per the Base Map.

Digital models compiled by Agrolesproject PLC, have served as the basis for compiling this map.

Note: The map shows also the territory along Rilska River neighboring the Nature Park

RILA MONASTERY NATURE PARK

FOREST VEGETATION AND TREELESS ZONE



LEGEND

- Nature Park boundary
- Asphalt road
- Macadam road
- Forest road
- Tourist trail
- Water area
- Rila Monastery Forest Reserve boundary
- Tourist shelter
- Rila monastery
- Tourist hut
- Padala — Settlement
- Baba 2608.7 — Peak name and elevation

- Coniferous forests
- Deciduous forests
- Mixed forests - conifers dominant
- Mixed forests - deciduous dominant
- Equal mixed forests
- Rila oak location
- Dwarf pine forests
- Forests over 100 years
- Treeless zone (pastures and meadows)

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Rila Monastery Nature Park
Distribution of Plant Species of Conservation Significance

The map shows the distribution of four categories of plant species of conservation significance: endemic, relict, rare and endangered. The former two categories are indicative of the processes of form generation having taken (and continuing to take) place in this territory, while the latter two are indicative of the state and condition of populations and the identified threats to their continued existence. The map is based upon information gathered in the field in 2001 throughout the Park territory, as well as on literary sources.

A dominant group among the wildlife species of conservation significance are the so-called Balkan endemics. Species endemic to Bulgaria are relatively fewer, and ones that are locally endemic (to Rila Mountain), fewer still. The number of endemic species is by ca. 10% larger than that of relict species (mostly glacial relicts).

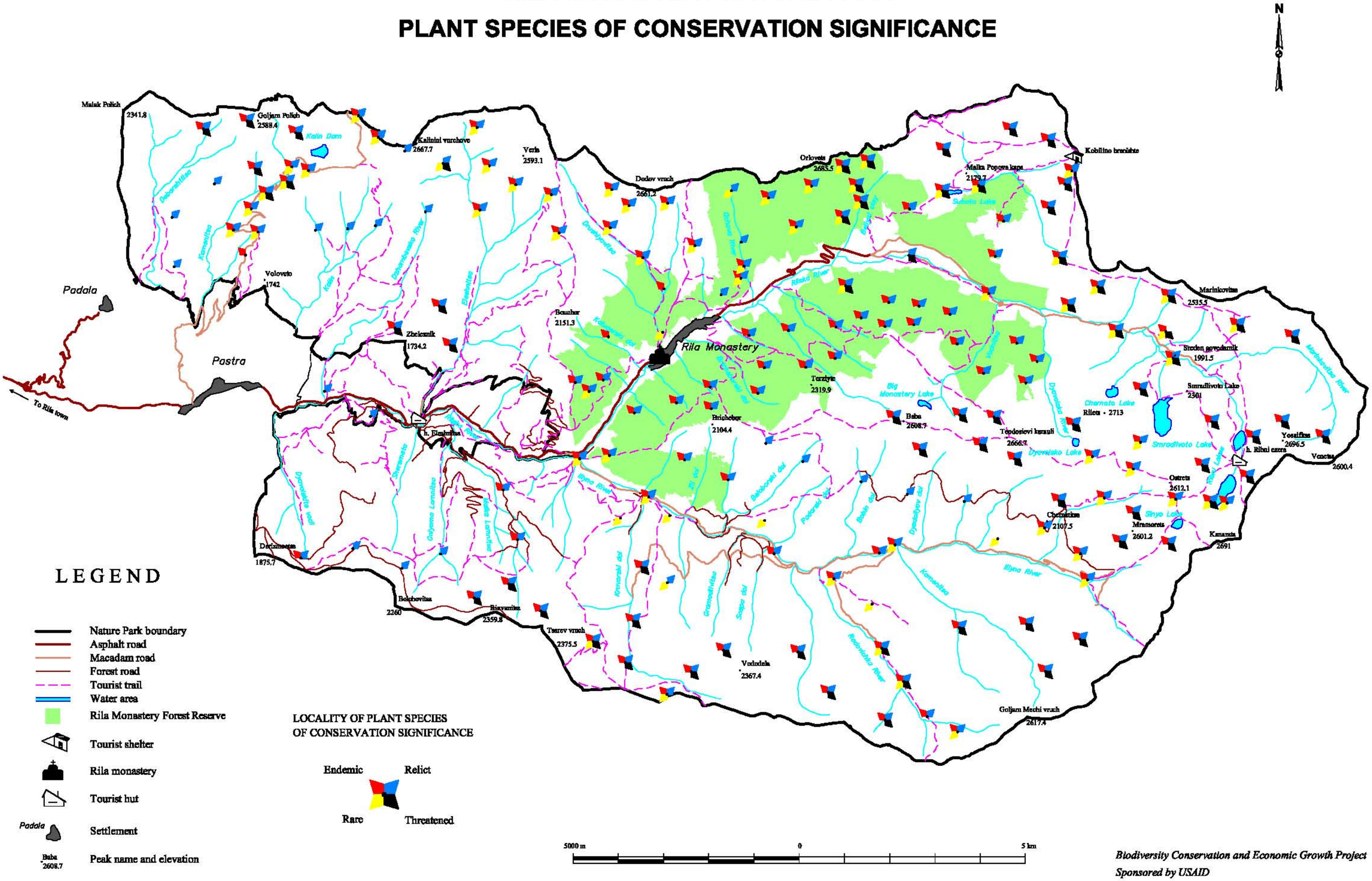
An analysis of the distribution and concentration of the above mentioned plant species is bound to show that there are territories within the Park where the diversity and concentration of species of conservation significance is higher. Examples are the areas located along the Mermera-Djendema-Theodossievi Karauli line; around Ribni Lakes; along the Golyam Mechi Peak-Tzarev Peak line; in the area around Kalin Peak; along the upper reaches of the river Radovichka, etc. These areas can be seen as natural ecological corridors facilitating the genetic exchange between populations inhabiting Rila Monastery Forest Reserve, the Central Rila and Parangalitza Reserves (the latter two located in Rila National Park), as well as with populations outside the reserve territories.

The remaining object categories are as per the Base Map.

Digital models by Agrolesproject PLC, as well as data provided by consultants to the BCEG Project, have served as the basis for compiling this map.

RILA MONASTERY NATURE PARK

PLANT SPECIES OF CONSERVATION SIGNIFICANCE



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Rila Monastery Nature Park
Distribution of Animal Species of Conservation Significance

Represented on this map are the principal locations of four categories of animal species, both vertebrate and invertebrate, of conservation significance: endemic, relict, rare and endangered. Clearly distinguished are species endangered on a national, European and world scale, and their locations are shown accordingly. The locations marked on the map are not the only ones where the respective species are encountered; they merely indicate the locations of the sampling stations used in the Rapid Ecological Assessment or are based on additional literary data about the species in question. A considerable proportion of the species of conservation significance are in fact spread over much larger areas than indicated on the map.

Dominant among the invertebrate species of conservation significance are the endemic, relict (mostly glacial) and rare species. The former two groups can be encountered primarily at higher altitudes within the Park and serve as an illustration of ongoing evolutionary processes in its territory. Rare species can be encountered at all altitudes and in all types of habitats.

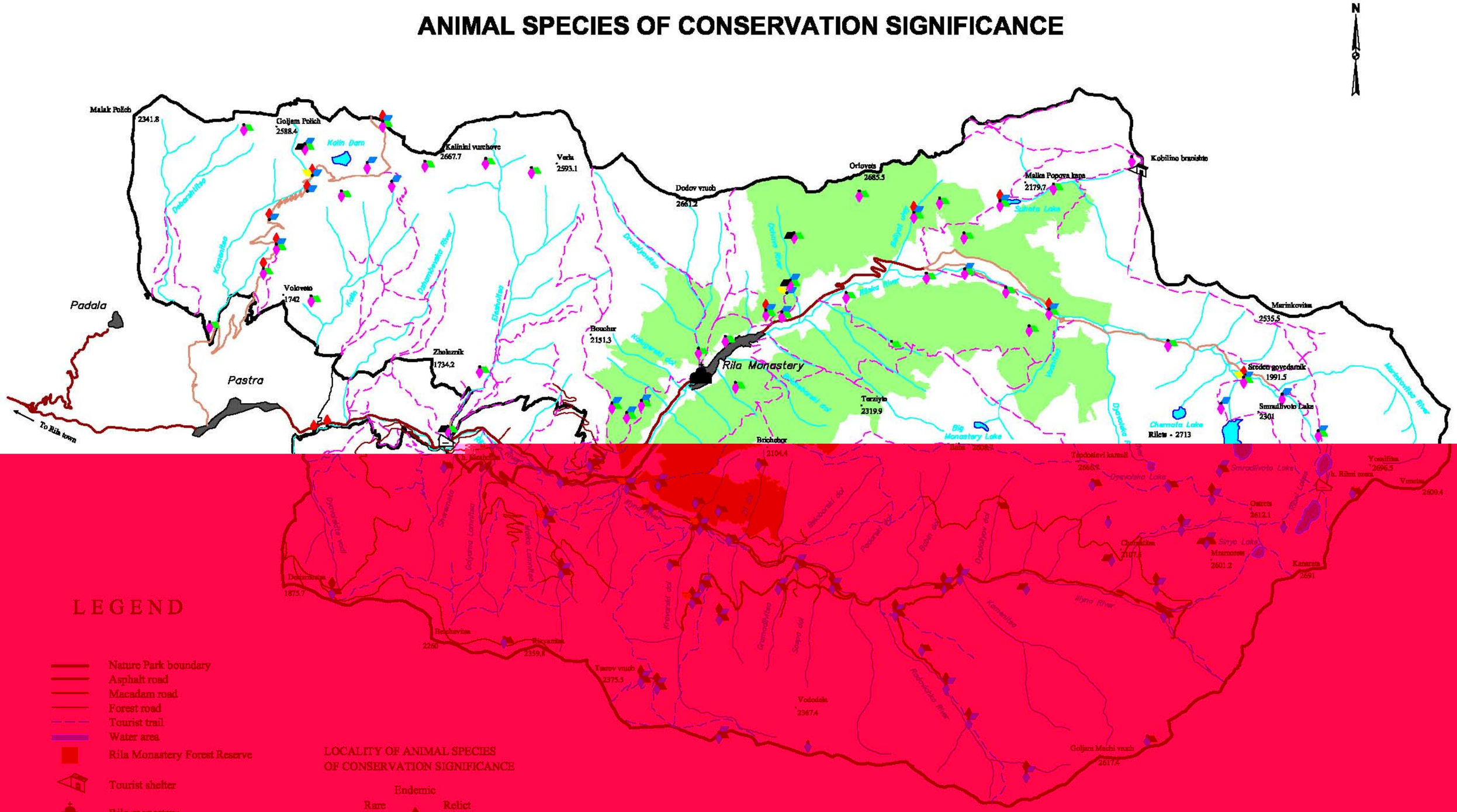
Among the vertebrate species of conservation significance, the endangered ones clearly dominate. The most numerous of those are species endangered on a European level, followed by ones endangered on a national and world level. Although animal species of conservation significance are spread practically throughout the entire Park territory, there are areas where their relative concentration is higher (around Kalin Dam, at Varla Peak, in the northeastern, eastern ad southeastern ridges and portions of the Park, in the area of Bukovo Bardo, along the river valleys, in the area between Mramoretz and Theodossievi Karauli peaks, etc.). Some of these areas actually abut similar ones in the territory of Rila National Park (especially the Central Rila and Parangalitza reserves), which is evidence of the coexistence of both Parks as one integral nature complex of high conservation significance.

The remaining object categories are as per the Base Map.

Digital models by Agrolesproject PLC, as well as data provided by consultants to the BCEG Project, have served as the basis for compiling this map.

RILA MONASTERY NATURE PARK

ANIMAL SPECIES OF CONSERVATION SIGNIFICANCE



LEGEND

- Nature Park boundary
- Asphalt road
- Macadam road
- Forest road
- Tourist trail
- Water area
- Rila Monastery Forest Reserve
- Tourist shelter
- Rila monastery
- Tourist hut
- Padala — Settlement
- Babe 2608.7 — Peak name and elevation

LOCALITY OF ANIMAL SPECIES
OF CONSERVATION SIGNIFICANCE

Endemic
Rare
Relict
Globally threatened
Threatened in Bulgaria
Threatened in Europe

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Rila Monastery Nature Park
Non-timber Natural Resources

The map shows the main locations of non-timber natural resources as the local population has indicated them as places from where such resources (medicinal plants, mushrooms, wild-growing fruits, or fish) are extracted. The data were gathered during a socioeconomic survey of the area carried out in 2001.

Also marked on the map are locations of medicinal plants and forest fruits known from literary sources, as well as ones investigated during the field assessment conducted in 2001. In terms of quantities of the available resource, these locations fall in one of two categories: locations of relatively small stocks, and locations of relatively larger stocks, suitable for use (see the Table below).

Most of the locations are situated in the forest zone, on the riverside terraces along the rivers Iliyna and Rilska and their tributaries. The quantitative estimate refers both to the point marked and to the adjacent areas where similar conditions for the development of the resource are available.

The areas, as well as the regimes and norms governing the extraction of non-timber natural resources in the entire territory of Rila Monastery Nature Park, are determined and described in the prescriptive part of the management Plan, Chapter "Zoning".

The remaining elements are as per the Base Map.

Digital models by Agrolesproject PLC, as well as data gathered during the field study carried out in 2001 by consultants to the BCEG Project, have served as the basis for compiling this map.

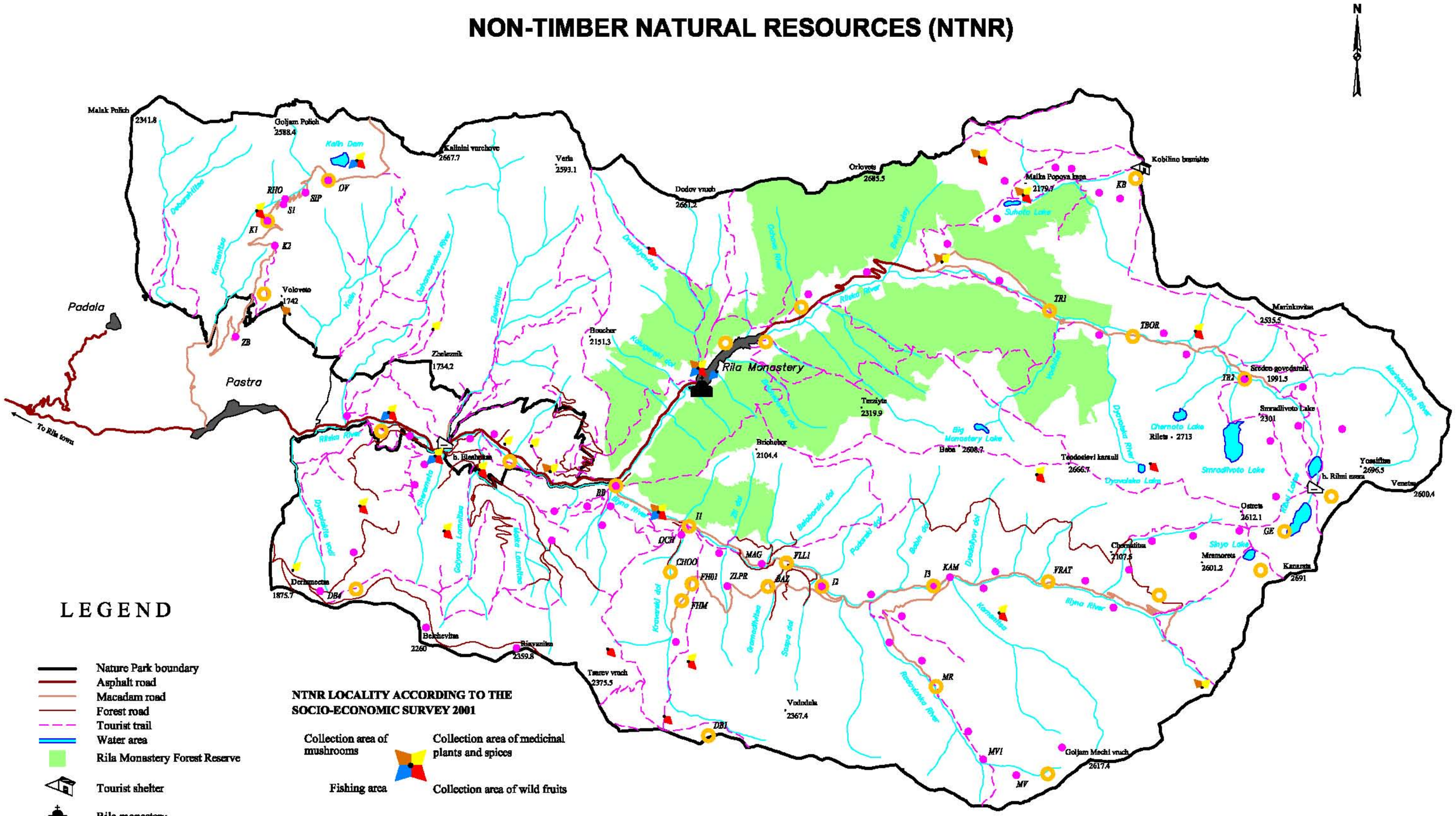
The locations are named after the sampling station used during the 2001 Rapid Ecological Assessment; the same name is used in marking the location on the map.

#	Species	Location allowing resource extraction	Limited stock location
1	Achillea millefolium (Yarrow)	-	BB, RHO, ZB
2	Alchemilla vulgaris compl. (Lady's Mantle)	-	OCH
3	Chenopodium bonus henricus (All-good)	-	OV
4	Coryllus avellana (Hazelbush)	I1	-
5	Crataegus monogyna (Hawthorn)	GLOG	-
6	Cyrsium lonchitis (Thistle)	-	MAG
7	Dryopteris filix mas (Male Fern)	-	I2
8	Euphrasia officinalis compl. (Eyebright)	-	OCH
9	Galium odoratum (Woodruff-asperule)	-	I2
10	Galium verum (Yellow Galium)	-	RAV
11	Geranium macrorhizum (Cut-leaved Cranesbill)	I3, FHM, CHOO, K1, K3	-
12	Geranium sanguineum (Bloody Cranesbill)	-	K2
13	Juniperus communis (common juniper)	-	DB4
14	Origanum vulgare (Wild Marjoram)	-	KAM, QR1
15	Petasites hybridus	I2, BAZ, CHOO	-
16	Pteridium aquilinum (Bracken)	K1	-
17	Rosa canina (Hip)	GLOG	-
18	Rubus caesius (Blackberry)		KAPI

19	Rubus idaeus (raspberry)	FHM	-
20	Rumex alpinus (Monk's Rhubarb)	FH01, TR2, KB, OV, GE	-
21	Sambucus ebulus (Danewort)	VLL1, BAZ	-
22	Sambucus nigra (Elder)	BB, I1	-
23	Solidago virgaurea	-	ZLPR
24	Tanacetum vulgare (Tansy)	I3, VRAT	-
25	Teucrium chamaedrys (Common Germander)	-	Q
26	Tussilago farfara (Coltsfoot)	BB, MR	-
27	Thymus sp. (Thyme)		TR2, K1, SIP, S1, MV, MV1
28	Urtica dioica (Great Nettle)	VLL1, CHOO	-
29	Urtica urens (Small Nettle)	-	I3
30	Vaccinium myrtillus (Bilberry)	TR2, TBOR, TR1	-
31	Veratrum lobelianum (Hellebore)	KB	-
32	Verbascum longifolium (Mullein)	-	TR2, K2, MV1
33	Veronica officinalis (Common Speedwell)	-	FH1

RILA MONASTERY NATURE PARK

NON-TIMBER NATURAL RESOURCES (NTNR)



LEGEND

- Nature Park boundary
- Asphalt road
- Macadam road
- Forest road
- Tourist trail
- Water area
- Rila Monastery Forest Reserve
- Tourist shelter
- Rila monastery
- Tourist hut
- Settlement (Padala)
- Peak name and elevation (Baba 2608.7)

NTNR LOCALITY ACCORDING TO THE SOCIO-ECONOMIC SURVEY 2001

- Collection area of mushrooms
- Collection area of medicinal plants and spices
- Fishing area
- Collection area of wild fruits

NTNR AREAS KNOWN FROM LITERATURE AND REA 2001

- Localities with collectable quantities of NTNR
- Localities with limited NTNRs
- FHM NTNRs data collection station

5000 m 0 5 km

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Rila Monastery Nature Park
Holy Sites, Historical and Cultural Monuments

The map pinpoints the locations of the Holy Monastery of Rila; the Tomb of St. John and the cave; the monastery cemetery, the Dormition of the Virgin Church, the St. Luke complex, and the Pchelino nunnery.

Most of these Holy Places are situated either within the buffer zone to Rila Monastery Forest Reserve, between the two parts of the Reserve, or in its immediate vicinity, this making up a complete complex of harmoniously blended historical significance and natural scenery.

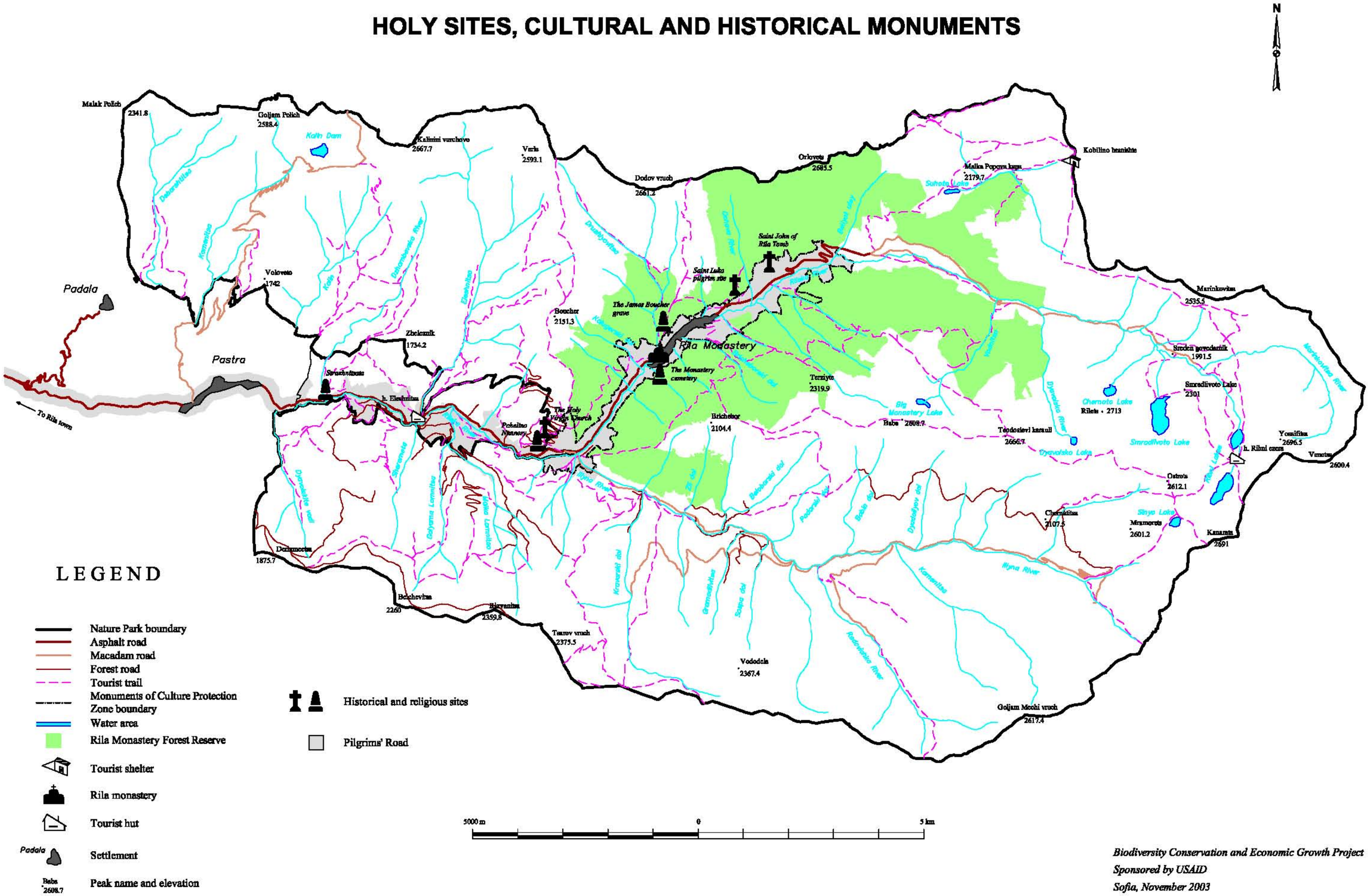
The map also indicates the locations of historical monuments, e.g. the tomb of James Boucher and the Guardhouse. Also marked is the territory traversed by the Pilgrims' Road, the main thoroughfare connecting the cultural and spiritual center of Rila Monastery with nearby areas.

The remaining object categories are as per the Base Map.

At the basis of this map are digital models compiled by Agrolesproject PLC, as well as information provided by the National Institute for Monuments of Culture under the Ministry of Culture.

RILA MONASTERY NATURE PARK

HOLY SITES, CULTURAL AND HISTORICAL MONUMENTS



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Rila Monastery Nature Park
Distribution of the Park Territory according to Landscape Quality

The map shows the distribution of the territory of RMNP according to the quality of landscapes represented in it. It was compiled using a Park-specific methodology for rapid landscape assessment (RLA) specifically developed for Rila Monastery Nature Park on the basis of international landscape assessment experience and national standards (BDS 17.8.1.02-89). According to experts, this method belongs to the group of 'visual methods' of landscape assessment. A detailed description of the findings of the landscape assessment carried out in the Park is included in the Management Plan for RMNP under the Chapter "Structure and Aesthetic Qualities of the Landscape".

Four main categories of landscape have been identified for Rila Monastery Nature Park, according to landscape quality:

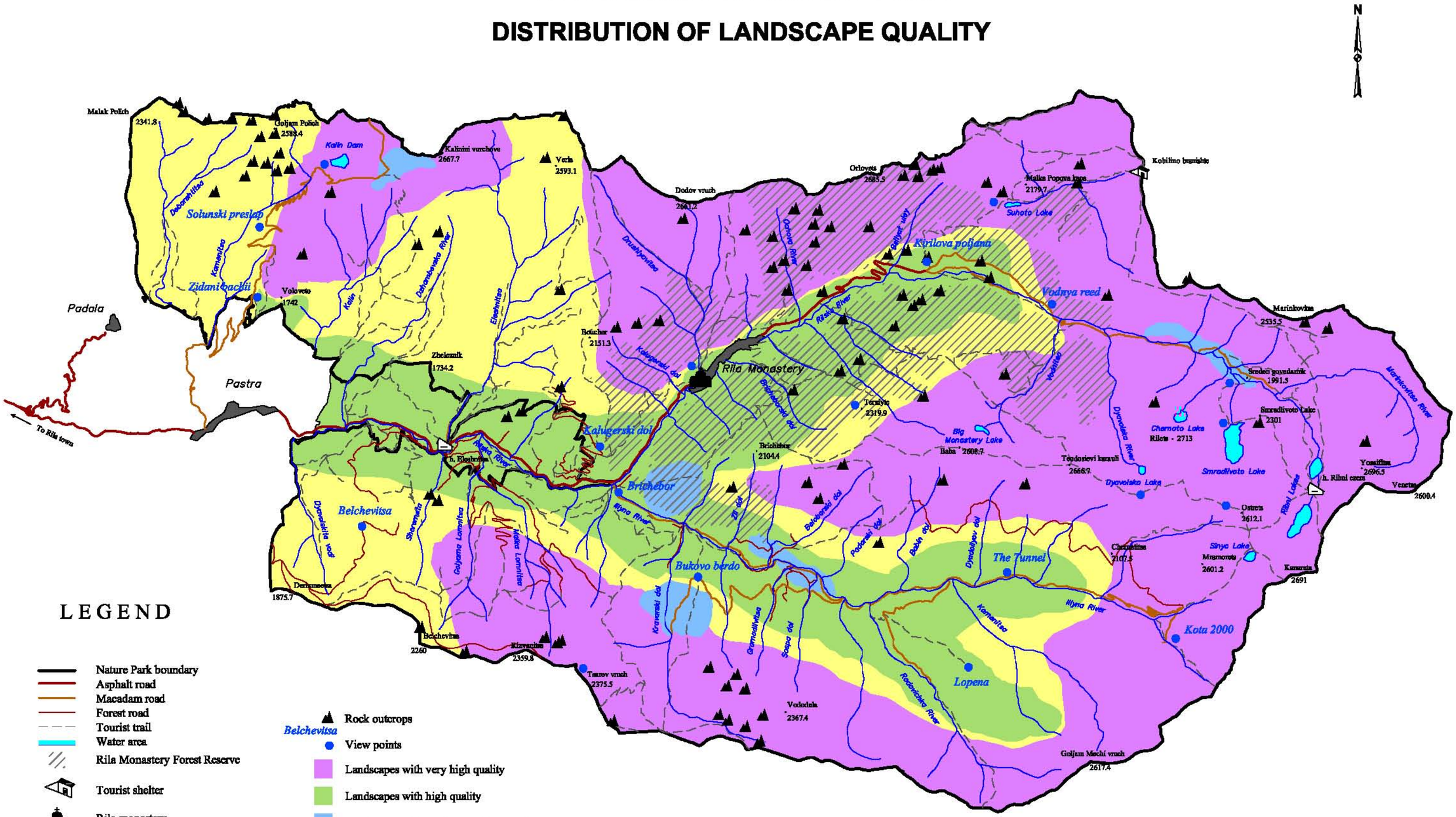
The remaining object categories are as per the Base Map

Digital models compiled by Agrolesproject PLC, as well as information provided by hired consultants to the BCEG Project, have served as the basis for drawing up this map.

Note: The map shows also the territory along Rilska River neighboring the Nature Park

RILA MONASTERY NATURE PARK

DISTRIBUTION OF LANDSCAPE QUALITY



LEGEND

- Nature Park boundary
- Asphalt road
- Macadam road
- Forest road
- Tourist trail
- Water area
- Rila Monastery Forest Reserve
- Tourist shelter
- Rila monastery
- Tourist hut
- Padala — Settlement
- Baba 2608.7 — Peak name and elevation
- Belchevitsa — Rock outcrops
- View points
- Landscapes with very high quality
- Landscapes with high quality
- Landscapes with medium and low quality
- Landscapes without evaluation

5000 m 0 5 km

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Rila Monastery Nature Park
Zoning

The map shows the zoning pattern of Rila Monastery Nature Park. The following seven zones are identified: the Reserves Zone; the High Conservation Significance Zone; the Environmentally Sound Use Zone; the Technical Infrastructure Zone; the Sustainable Forestry Zone; the Holy Sites and Cultural and Historical Heritage Zone; and the Tourism Zone (with three sub-zones).

The designation of a Reserves Zone, a Technical Infrastructure Zone and a Tourism Zone is mandatory, pursuant to the Protected Areas Act.

The remaining zones, each with its specific regimes and norms, have been determined in light of the specific conditions within the Park. The zones are defined in such a way as to allow the ever more effective protection and conservation of the biotic complexes (the High Conservation Significance Zone); the practicing of environmentally sound forestry (the Sustainable Forestry Zone); the generation of income from non-timber natural resources (the Environmentally Sound Use Zone); as well as harmonizing the management of the natural and spiritual assets in the Park's territory while protecting the Holy Places and the cultural and historical heritage (the Holy Places and Cultural and Historical Heritage Zone).

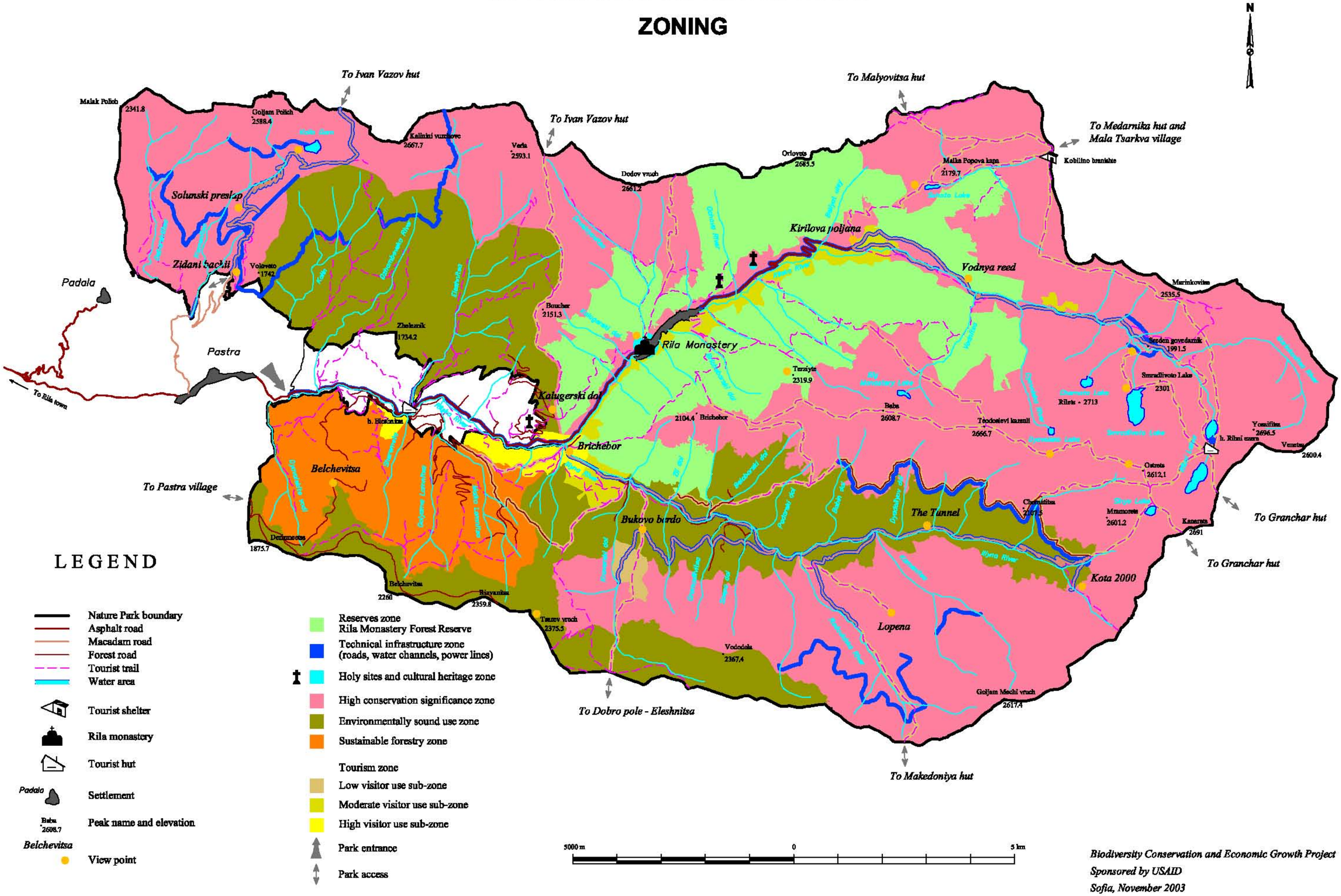
Zoning is a key tool towards implementing the underlying idea of the management of Rila Monastery Nature Park: the unity of cultural and natural values and their environmentally sound use.

The remaining object categories are as per the Base Map.

Digital models by Agrolesproject PLC, as well as data provided by consultants to the BCEG Project, have served as the basis for compiling this map.

RILA MONASTERY NATURE PARK

ZONING



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