



INTERREG V-B ADRIATIC IONIAN PROGRAMME
ADRION

FRUŠKA GORA TOURISM STRATEGY

Promotion of natural and cultural heritage
to develop sustainable tourism in protected areas –
PRONACUL



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WORKPACKAGE	T1 – Common methodology for management of natural and cultural heritage
ACTIVITY	T1.5 – Common methodology application in pilot areas
DELIVERABLES	T1.5.8 – Fruška gora tourism strategy

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PREFACE

The project »**Promotion of natural and cultural heritage to develop sustainable tourism in protected areas**« (PRONACUL) emphasizes the idea on promotion and preservation of natural and cultural heritage and support for the development of transnational strategies for jointly promoting the ADRION area as a tourist destination. Partners and/or associated partners have heritage sights, protected by UNESCO or Natura 2000 or will become protected sights within PRONACUL's pilot areas. PRONACUL's main overall objective is to achieve level of capacity for the stakeholders in the fields of improved management of natural and cultural heritage for sustainable tourism development in ADRION area.

PRONACUL's activities will make changes to the current situation by developing new tourist products, that will drive PRONACUL partners into position, where natural and cultural heritage will be perceived as new content. Changes will be made by increasing management for preservation of natural and cultural heritage for other purposes, which are appropriate for this period of time and estimated development. This will be achieved through development, application and promotion of a common methodology for management of natural and cultural heritage in Adrion area based on a participatory approach to stakeholders. Common methodology will be tested and later applied in pilot areas, whose experiences will result in a joint proposal for identification of the Regional Route.

Activity will be supported by the virtual chamber established for promotion of the common methodology and its transfer to other ADRION areas. The chamber will be a consulting body for tourism developers, where regions will exchange experiences and best practices in managing natural and cultural heritage. In order to improve policies for better management of natural and cultural heritage the common methodology will be disseminated to policy makers in a form of recommendations for concrete local, regional and national policy documents.

The PRONACUL project is funded under the INTERREG V-B Adriatic-Ionian ADRION Programme 2014- 2020.

Specific details about the project are provided below:

Project duration: April 1st 2020 - March 31st 2023.

The total value of the project: 1 770 348.98 EUR.

European Union funding: 1 504 796.63 EUR.

Co-financing sources: European Regional Development Fund (ERDF).

Specific Objective: Promote the sustainable valorisation and preservation of natural and cultural heritage as growth assets in the Adriatic-Ionian area

Leading partner in the project:

Regional Development Agency Zasavje, Slovenia

Project partners:

1. Regional Development Agency Zasavje (Slovenia)
2. LAG EASTERN VENICE (Italy)
3. Rijeka Tourist Board (Croatia)
4. ILIA CHAMBER ΕΛΛΑΔΑ (Greece)
5. Region of Ionian Islands ΕΛΛΑΔΑ (Greece)
6. Entrepreneurship and Business Association LiNK (Bosnia and Herzegovina)
7. University of Novi Sad, Faculty of Sciences (Serbia)
8. Public Institution “Agency for Development of Small and Medium Enterprises of City of Trebinje” (Bosnia and Herzegovina)
9. Zagreb County Tourist Board (Croatia)
10. Municipality of Raška (Serbia)
11. Metropolitan City of Bologna (Italia)
12. Centre for the promotion of entrepreneurship Piran Ltd (Slovenia)

Associated partners:

1. Cultural center Zagorje ob Savi (Slovenia)
2. Public Institution „Nature Park Žumberak - Samoborsko gorje“ (Croatia).

1 INTRODUCTION

Fruška gora represents a unique mountain. This isolated mountain is located in the south-east peripheral part of Pannonian lowlands, that is on the territory Autonomous provinces of Vojvodina. Fruška gora is located on the south rim of Pannonia basin, between two large river flows, the Danube, on to the east and north, and Sava, in a broad sense on to the south. It is one of two mountains in AP Vojvodina, and its whole surface is located in Srem. Fruška gora, with its highest peak Crveni čot (539 m.a.s.l.) barely satisfies criteria to be characterized as a mountain, and belongs to the order of low mountain. The mountain mass has lenticular shape, running west to east in a length of about 80 km. It stretches to the east all the way to Stari Slankamen, in the form of narrow section of relatively small heights, just over 200 m, while on to the west, it extends to the steep section on the line Šid - Šarengrad, with its peak Telek, which is risen above Srem loess plateau by a 50 m high section. In the north is a loess plateau, which surrounds this mountain quite narrowly, and the Danube somewhere cuts through Fruška gora (Bugarski et al., 1998).

Position of Fruška gora, in relation to the more important tourist dispersives, represents a well- achieved component of mountains tourist potential. From that point of view, the biggest importance has the proximity of ours biggest cities Novi Sad and Belgrade and several other city settlements: Bačka Palanka, Šid, Sremska Mitrovica, Ruma, Indija, as well as other more distant cities of AP Vojvodina and peripannonian Serbia. Therefore, Fruška gora has a touristic contractive zone of a national extent, which includes almost half of its population of Serbia (Tomić et. al., 2004), while international highway and the Danube connect the other parts of Europe with this region. An advantage of this site in relation to other localities in Vojvodina is certainly cultural and natural treasure owned by Fruška gora. In addition to cultural and religious tourism, there are opportunities for development of ecotourism on this mountain, which is generally popular in the world. Likewise, there are opportunities for expansion of rural tourism, which could attract domestic tourists from the main dispersive city centers eager for rest, silence, nature and relaxation. Furthermore, this space is suitable for development of spa tourism due to existence of thermal springs, and thereby health-recreational tourism. It would be important to make some specific touristic product, which would



be different from other localities of the same character, and provide the appropriate marketing support, in order to be placed on the the market as good as possible (Tomić et al., 2004).

Strategy is the result of the work on the international PRONACUL project - Promotion of natural and cultural heritage to develop sustainable tourism in protected areas within the INTERREG V-B Adriatic-Ionian ADRION Programme 2014-2020. The project focuses on the promotion of sustainable valorization and preservation of natural and cultural heritage, as resources for development of tourism in the Adriatic-Ionian region areas (<https://pronacul.adrioninterreg.eu/>).

2 STRATEGIC AND PLANNING DOCUMENTS IN THE REPUBLIC OF SERBIA AND THE AUTONOMOUS PROVINCE OF VOJVODINA

2.1 EXTRACT FROM PLANNING DOCUMENTS

Spatial plan of the Republic of Serbia

Spatial plan of the Republic of Serbia sets the obligation of making spatial plans for areas of special purposes for spatial units, whose specificity is determined by one or more binding intentions, activities or functions in the area of the state interest, i.e., for: national park area and other areas of immovable cultural properties of the extraordinary significance outside construction areas of settlements (Prostorni plan Republike Srbije, 2010).

Protection and sustainable usage of natural and cultural heritage and natural resources will be element of the identity of Republic of Serbia and its regional units, as well as basis of future economic/touristic development. Natural and cultural heritage will be protected, organised and used according to European standards, with a special task of increasing protected natural units and systematization of cultural heritage, as well as implementation of Florentine convention on landscape, European and world conventions and declarations on protection of cultural heritage, which relate to the biodiversity, natural subsystems and other documents (Prostorni plan Republike Srbije, 2010).

Conception of development of protection of biodiversity of Republic Serbia will be based on (Prostorni plan Republike Srbije, 2010):

- system of protection of nature within protected natural goods;
- protection of large number of individual wild plant and animal species;
- establishment so-called “ecological networks” and
- identification of areas, which represent of international importance for individual taxa, vascular plants, birds and butterflies: internationally significant herbal areas - botanical significant areas (IPA), internationally signifi-

cant bird areas (IBA), internationally significant habitats - selected areas for butterflies (PBA).

In order to strengthen cross-border cooperation of the Republic of Serbia in the area of **nature protection**, in the planning period, special importance, among others, belongs to the protected area of Fruška gora. Nature protection priorities are: revision of status (type, mode and border protection) of previously declared protected areas and alignment with valid legal regulation; revision of status of protected wild flora and fauna species on the national level, in accordance with the law; establishment of national ecological networks and identification of areas for European ecological network NATURA 2000 through a special project (Prostorni plan Republike Srbije, 2010).

Protected areas will be mostly spatially included in areas of environmental significant territories, that is, in areas of European ecological network NATURA 2000. For the Republic Serbia the EMERALD network has special importance as well, since it represents expansion of the NATURA 2000 concept to European countries outside the EU (Prostorni plan Republike Srbije, 2010).

Based on research and valorization, which is carried out by Republican institute for protection of monument culture of Republic of Serbia, it was proposed that area of Fruška gora would be on the list of cultural areas, and on the list of monuments, which with immediate surroundings make the cultural entity, would be Sremski Karlovci and Petrovaradin fortress.

According to SPRS, the area of Fruška gora, Sremski Karlovci and Petrovaradin fortress is a priority culturally area, which should enjoy a special treatment, regardless to the status in the framework of protection services. In a relation to the specific characteristics of a macroregion, area of "Fruška gora" National Park belongs to Vojvodina - Pannonia - Danubian microregion of a unique **regional pattern**, which is built from large fields of arable land areas, cut off by rivers and canals, forest oasis and linear forests along river flows (Danube, Tamiš and Tisa), Fruška gora and Vršac mountains, as special entities in the region, loess sections and terraces, spacious sandstone, as well as settlements of Pannonian type. Such regional pattern demands preservation of existing remaining forest, between spacious arable lands, conservation and creation of linear green corridors and ecological networks (hedges along border, afforestation and greening of surface area along melioration channel and roads) in connection with existing linear forests, protection existing and recovery of lost aquatic ecosystem and wet biotopes, avoidance of geometric regulations of waterways, conservation of existing and arrangement of new regional and local "icons" and rappers (farmhouses, castles, monasteries, monastery settlements, architectural and industrial heritage, regionally conspicuous solitary trees and architectural objects of high



aesthetic values etc.) and preservation of specific Pannonian scenes (Prostorni plan Republike Srbije, 2010).

Basic goal of spatial development of tourism is realization of the concept of sustainable development of tourism, as well as protection and arrangement, with optimally satisfying spatial, ecological and cultural needs at national and local level. Operational goals of spatial development of tourism are: realization of tourism developmental projects on the existing and planned destinations; completion and encompassment of annual tourist offers; protection and activation of new tourist areas; strengthening existing and introduction of new tourist products based on the natural, cultural and historical and others motives; construction of tourist infrastructure and signalling; digital and research support of development of tourism; creation of missing municipal tourist organizations (Prostorni plan Republike Srbije, 2010)..

For development of tourism on the observed area the following touristic products are relevant: urban tourism (manifestations), touring (circular and linear touristic travels, Danube motifs, farmhouses, wines, gastronomy, cycling, hiking, hunting and fishing), spa tourism (health-balneological and wellness/recreational), nautical and other forms of water tourism, events, rural tourism (agritourism and rural tourism), and tourism of special interests (religious, sports-recreational tourism).

In a relation to the selected tourist destinations, the area treated by Spatial plan belongs to destination with smaller participation for annual offers (Fruška gora).

Area of Fruška gora with Novi Sad and Sremski Karlovci, is included in the spatial development priorities for the period until 2020, as area with formed tourist offer.

Regional spatial plan of Autonomous Province of Vojvodina

According to Regional spatial plan Autonomous provinces Vojvodina (hereinafter text: RSP APV), priority activities in the area of **nature protection** are: increase of a total area under protection on the territory of AP Vojvodina, through declaring new protected areas (Fruška gora loess plateau); revision of a status (type, mode and limits of protection) of previously declared protected areas and alignment with valid legal regulation (National Park “Fruška gora”) and establishment of ecological network on the area of AP Vojvodina, as well as wider ecological networks of the Republic of Serbia (Regionalni prostorni plan Autonomne pokrajine Vojvodine, 2011).

According to Regulation on ecological network, it is defined that it includes mutually connected, determined, ecological significant areas, ecological corridors and their protective zones in accordance with the law. Fruška gora is one of the

20 ecologically significant areas, which are established on the territory of AP Vojvodina.

Fruška gora was declared as Internationally important bird area (IBA), Prime butterfly area of Europe (PBA), Internationally important plant areas (IPA) and Territory of national network SMARAGD, which represents ecological network of *Area of Special Conservation Interest - ASCI* (Regionalni prostorni plan Autonomne pokrajine Vojvodine, 2011)

Network includes areas of the special ecological importance for the endangered species and types of habitats protected on the basis of Convention on the Conservation of European Wildlife and Natural Habitats.

In order to strengthen cross-border cooperation of AP Vojvodina in the area of nature protection, NP "Fruška gora" has special importance in the planning period.

Based on research and valorization of cultural heritage, which are carried out by republican, provincial, and other institutes for protection of monument of culture, a list of cultural areas is proposed, such as and list of monuments, which with immediate environment make perceptible cultural and landscape entities on the on the territory of AP Vojvodina (Regionalni prostorni plan Autonomne pokrajine Vojvodine, 2011).

In RSP APV Fruška gora is selected as specifically cultural area. A group of cultural and landscape units is formed, and one of them are "Fruška gora monasteries, Sremski Karlovci, Petrovaradin fortress and historic City of Novi Sad".

AP Vojvodina spatially includes six tourist destination, primary tourist areas, and the analyzed area belongs to tourist destination Novi Sad and Fruška gora. As stated by RSP APV, the following aspects **of tourism**/tourist products have been planned: manifestation tourism, hunting tourism, urban tourism, spa tourism, nautical tourism, rural tourism, cultural tourism, ethno-gastronomic tourism, business tourism, ecotourism (Regionalni prostorni plan Autonomne pokrajine Vojvodine, 2011).

Spatial plan of the area of special purpose for Special reserve of nature "Kovilj-Petrovaradin marsh"

Kovilj-Petrovaradin marsh has international protection status, as area of the international importance for preservation of biological diversity. Wider area of SRN "Kovilj-Petrovaradin marsh", along with with National Park "Fruška gora" area, is a part of the EMERALD network, which are covered by areas in AP Vojvodina of particular importance for protection and preservation of wildlife and its habitats, so called areas of special importance for protection of nature (Areas of Special Conservation Interest - ASCI) which are significant with the point of view of ap-



plications of Bern convention, which represent basis of future national ecological network and European ecological network NATURA 2000. Kovilj-Petrovaradin marsh is registered in Ramsar list. In this area certain specific forms of tourism, adapted conditions of unstable ecosystem and needs for its protection can take place: tourism of special interest (Sremski Karlovci and Čortanovci) and docking object of nautical tourism - mooring in Čortanovci (Prostorni plan područja posebne namene Specijalnog rezervata prirode „Koviljsko-petrovaradinski rit“, 2012).

Spatial plan overlaps with the special purpose of the Spatial plan of the area of special purposes of SRP “Kovilj-Petrovaradin” marsh on territory of the following local self-governments: City of Novi Sad (CM Petrovaradin) and municipality Sremski Karlovci (CM Sremski Karlovci).

Spatial plan of area of special purpose of cultural area of Sremski Karlovci

The coverage of the area of Spatial plan of the area of special purpose of cultural area of Sremski Karlovci includes Cultural area of Sremski Karlovci. The arrangement of Cultural area of Sremski Karlovci implies implementation a series of protection measures and activities, restoration and promotion of cultural and natural values and the character of the area, in order to preserve diversity of characteristic ambient entities and processes in the ecosystem. Inside of Cultural area of Sremski Karlovci three regional entities are chosen: Fruškogorsko prigorje with settlements, Forest slopes of Fruška gora (in which is National Park Fruška gora) and the Danube River with inundation area. Area of special purpose is an area consisting of nine sub-units, which are located inside the regional entity. Spatial sub-units are defined by: border of the area, rules for arrangement and rules for construction inside of them. The whole space outside the scope of special purpose is considered as a zone of influence on the special purpose. Rules for arrangement, construction and use the area of special purpose, will be implemented in accordance with decisions from Spatial plan of the area special purpose of cultural area Sremski Karlovci and will be binding for making spatial and urban planning plans of lower hierarchical level. Plans of lower hierarchical level can not make change the basic purpose of the space within the limits of special purpose. In case the special purpose of Cultural area overlaps with special purpose of another spatial plan, whose special purpose is protection of nature, rules and measures of protection related to the area with greater degree of protection will be valid. Aiming to the protection of structure and recognized values of the area, in the plans whose development is in progress, protection measures must be taken into account, that is guidelines defined by Spatial plan of the area of special purpose of cultural area

of Sremski Karlovci (Prostorni plan područja posebne namene kulturnog predela Sremski Karlovci, 2017).

Spatial plan of the area of special purpose of “Fruška gora” overlaps with Spatial plan of the area of special purpose of cultural area of Sremski Karlovci, on territory of the following local self-government units (Prostorni plan područja posebne namene kulturnog predela Sremski Karlovci, 2017):

- City of Novi Sad (CM Bukovac and CM Petrovaradin);
- Municipality Sremski Karlovci (CM Sremski Karlovci).

Spatial plan of the area of special purpose of “Fruška gora” overlaps with special purpose of Spatial plan of the area of special purpose of cultural area of Sremski Karlovci, on territory of the following local self-government units: City of Novi Sad (CM Bukovac) i municipality Sremski Karlovci (CM Sremski Karlovci).

2.2 EXTRACT FROM STRATEGIES

Obligations from others developmental documents represent guidelines given in national, regional and municipal strategies the most relevant are the following:

National strategy of sustainable development, 2018. defines sustainable development as goal- oriented, long-term, continuous, comprehensive and synergistic process, which affects all aspects of life (economic, social, ecological and institutional) at all levels. Sustainable development implies making a model, which satisfies socio-economic needs and interests of citizens in a quality manner, and at the same time remove or significantly reduce influences that threaten or damage environment and natural resources. Long term concept of sustainable development implies permanent economic growth, which except economic efficiency, technological progress, more cleaner technology, inventiveness of the whole society and socially responsible business provides reduction of poverty, long-term better usage of resources, improvement of health conditions and quality of life and reduction of pollution on the level, which can withstood by factors of the environment, prevention of new pollutions and preservation biodiversity. Obligations from this Strategy are balancing three key factors, i.e., three pillars of sustainable development: sustainable development of economics, economy and technology, sustainable development of the society based on social balance and protection of environment along with rational disposition of natural resources. At the same time, it is necessary to connect those three pillars into a whole, which will be supported by appropriate institutions, in order to align possible opposed goals established from different aspects of social-economic development, gap between sectoral politics, as well as the established system of mutual advantages.



Strategy of biological diversity of the Republic of Serbia, 2011 provides a short review biodiversity of the Republic of Serbia, through species, ecosystem, genetic biodiversity and describes the system of protection and protected areas in the Republic to Serbia. Legal, institutional and financial frame of protection of biodiversity, conceptual model of pressures, factors of threats and theirs causes are described and review of influence on the biodiversity of the Republic of Serbia is given. This Strategy defines strategic areas, goals and activities of protection of biodiversity, action plan with details about responsible institutions, dynamics of execution and potential sources of financing.

National strategy of sustainable use of natural resources and goods, 2012 gives definitions of natural resources and natural goods, classification of natural resources, and main, basic goals of National strategy are defined, with emphasized importance of coordinated intersectoral management of natural resources. This Strategy gives principles of sustainable development in the national politics of management of natural resources and good. Strategic determinations and data are given, which are related to the analysis of condition and current degree of research of natural resources and goods by types, spatial layout, variety, extent and quality, assessment of influence of their use on the environment, balance categories (spatial and temporal functions, quantities, quality, vulnerability, renewability, strategic reserves etc.) i predicting trends of change of conditions. Obligations from this Strategies are defined frameworks for sustainable use for key natural resources: mineral resources (metallic, non-metallic and fossil fuel); renewable sources of energy; forest resources; protected areas, biodiversity, geodiversity and areas diversity; fish resources; water resources and soil. Obligations that arise from this Strategy are methods of evaluation and terms of sustainable use of natural resources and goods, ecological-spatial basis on potentials of natural resources and goods, conditions for gradual substitution of natural resources, as well as guidelines for further research in the field of individual natural resources and goods and for needs for planning, that is enactment of plans and programs.

This strategy for each natural resource refers to the established ways of management, strategic, legal and institutional framework, goals (general and specific) and challenges for their sustainable use for the next one decade, as well as to the measures for realization of goals. This Strategy provides socio-economic and planning-development analysis of strategic priorities of research and use of natural resources, potential influences of National strategy on the social and economic sphere, as well as probable costs, sources of financing and challenges, which are set before implementation of this Strategy.

Strategy of development of tourism of the Republic of Serbia, 2016 is harmonized with the Law on Tourism. It contains analysis of the existing condition and current degree of development of tourism; comparative analysis of tourism of

competitive countries; analysis of advantages and shortcomings of tourism with defined touristic products of special importance for development of tourism; analysis of advantages and shortcomings of tourism with SWOT analysis; vision and goals of development of tourism of the Republic of Serbia, selection of priority tourist products; review on tourist destinations and activities; analysis of influence on cultural heritage and natural goods and the proposal of politics of development of tourism. The focus is on sustainable development of tourism, strengthening competitiveness in tourist economy, increase of participation of tourism in gross domestic product, as well as improvement of overall image of the Republic of Serbia in the region, Europe and world.

According to defined touristic destinations given in the Strategy, area treated by Spatial plan is within the separated tourist destinations “Novi Sad, Fruška gora and Sremski Karlovci”, which includes and NP “Fruška gora” with surrounding settlements and farmhouses. Novi Sad – the regional center, Danube, culture heritage (fortresses, monasteries), natural wealth, farmhouses, NP “Fruška gora”, spa Vrdnik stand out as key values of attractiveness. Settlements Petrovaradin, Sremski Karlovci, Sremska Mitrovica, Šid, Irig, Ruma, Beočin and Inđija are defined as special poles of development on the area that is covered by Spatial plan. As regards the tourist products, manifestations, navigation, cultural thematic routes, special interests, circular tours, health and spa tourism are significant.

Fruška gora Master Plan of sustainable development until 2022

Basic goal of production of the project “Master plan of sustainable development of Fruške gora” is aimed at defining areas of Fruška gora as modern developmental region with high standards of protection of environment and sustainable use integrated with the environment and cross-border regions. Production of this documents was aimed at proposing conceptual solutions and conceptions for protection of natural and cultural values and balanced and sustainable development of the area, that is proposing a model of sustainable management of development of the area of Fruška gora until 2022 (Fruška gora Master plan održivog razvoja, 2004.).

Scope of the Master Plan of sustainable development of Fruška gora completely overlaps with scope of Spatial plan of the area of special purpose of Fruška gora until 2022 (Fruška gora Master plan održivog razvoja, 2004.).

Master Plan of sustainable development of Fruška gora provides guidelines of development in nine areas:

1. Protection and improvement of environment;
2. Protection of cultural and historical heritage;
3. Protection and presentation of geo-heritage;



4. Protection of forest and hunting grounds;
5. Fishing, beekeeping and others agricultural activities;
6. Tourism;
7. Traffic, electric energy and electronic communications, infrastructure for protection of water, arrangement of water supply and communal infrastructure;
8. Renewable sources of energy.

Within each of mentioned areas, potentials for development on the area of Fruške gora are suggested through improvement of existing activities and contents, and, where it is possible, through defining and introduction of new ones.

3 LOCATION AND BASIC CHARACTERISTICS OF THE WIDER AREA OF THE FRUŠKA GORA NATIONAL PARK

3.1 NATURAL CHARACTERISTICS

Within the **relief** areas of National Park “Fruška gora”, three morphological entities, longitudinally observed, stand out: Fruška gora, Srem loess plateau and alluvial plateau of Danube. Above mentioned entities, mostly make a unique central mountainous massive of the National Park, with loess plateau, which surrounds it, with smaller ruptures. Only the central part, from Đipša on the west to Banstol on the to the east, there is characteristics the real mountain ridge, whose length amounts about 40 km, and medium absolute height is 440 - 460 m. Asymmetry of the mountain mass is especially expressed in the north-south direction, that is on the its transverse profile, which is broken by numerous stream valleys, with developed source headlands. This brokenness is especially expressed in higher parts, where series of deep valleys exist, which get under the bottom of mountain ridge. The valleys of Čerevići stream, Potoranj streams, Rakovački, Kamenarski and Čitluk stream particularly stand out, on the northern side and Black and White stream on the southern side. Except dominant fluvial form, underground karst forms of relief are developed on southern slopes. On the mountain range of Fruška gora entire geological past can be observed, from the oldest geological periods - Paleozoic, over Mesozoic to Cenozoic, as the youngest period which lasts to this day (Bugarski et al., 1998.a).

Climate characteristics. Based on data of air temperature per month, average annual air temperature is 11.8 °C, the coldest month is January, and the warmest month is July. Given the different height conditions in the National Park and particularly different configuration of terrain, temperature conditions are different. The lowest average monthly air temperature is 0.1 °C in January, and the highest is 21.4 °C in August, while the average annual air temperature is 11.0 °C. Frosty days occur from October to April. The average annual number of frosty days is 84.8. Icy



days occur most often in January, and least often in November and March. Their number increases with altitude. Summer days, with an average number of 94.8 days, are the most often in August, July and June. The average monthly and annual number of summer days decreases with increasing altitude (Bugarski et al, 1998.b; Prostorni plan područja posebne namene „Fruška gora“, 2019).

Based on data, about the average amount of precipitation per month, the following conclusions can be drawn: the lowest total annual amount of precipitation is 617.7 mm, and for the observed period, the highest amount of rain per month is in June (77.8 mm). Aside from amount of precipitation, it is particularly interesting look at average number of rainy days per year, that is 126.4 days. Based on presented data on the annual average number of days with snow precipitation it can be concluded that Fruška gora has on average 34.6 days with with snow, which is low and with a tendency of decline. Based on presented data on the number of days with strong wind over 6 Beaufort in the National Park “Fruška gora”, in 5.45 days wind occurs, whose strength is larger from the six Beaufort. Based on presented results of measurements the cloud cover in ten years period, is 5.4, and the number of cloudy days in the observed period is 8.6 days (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Hydrological characteristics. Hydrographic network of Fruška gora is very dense and relatively correctly distributed. Surface water are displayed by springs (more than 180 springs), hot springs, dense river network, ponds and artificial lakes. Hydrography of this mountain is a result of relatively large amount of precipitation, geological composition and larger number permanent sources. Most of the precipitation, which is excreted on the area of Fruška gora, is infiltrating the interior of mountain mass, while only their smaller part drains away on the surface passing into aquatic flows. Area is drained by two basins, namely: northern, which belongs the Danube basin (79 215 ha), and is richer in water, and southern, which belongs to the Sava basin (96 207 ha). Surface hydrography of Fruška gora is displayed, first of all, by numerous streams (over 50), which descend from northern (24 streams) and southern mountain slope (28 flooding streams), which have mostly periodic, and partly and permanent character. North slopes are abundant with deep valleys in the upper and medium flows, while in the lower flows the valleys are widened and they build narrow valley plateaus. On these slopes the longest streams and rivers are located, since they occasionally flow down all the way to the river bank of Danube from the ridge of elongated mountain slope. Patka bara, Ešikovački stream, Čerevički stream, Novoselski stream, Čitluk, Tekeniš, Almaš, Čedomir - stream, Potoranj, Lišvar, Neštinski stream and others stand out as the longest flows. Streams from southern slope are significantly shorter, in relation to the streams from the northern slope and they end at Srem loess plateau. The majority of these stream perform intensive deep erosion of terrain. Among streams

a relatively large belongs to flooding flows, which are more numerous on the northern slopes, where they, due to a high fall, carry a significant amount of material, which precipitates in front of confluence with the Danube River creating sediment accumulation. Eastern and western low parts of Fruška gora are poor in water, which is a consequence of changes in altitude, geological composition, annual amount of precipitation and vegetation. As regards the water regime, streams of Fruška gora carry the largest amounts water in the early spring and late autumn. The largest number of streams are dried up in the middle of summer and remains such until the middle autumn (Prostorni plan područja posebne namene „Fruška gora“, 2019).

In the period from 1965 to 1986, 14 reservoirs were built, whose main goal was, above all, irrigation of agricultural land area and defense from the flooding flows. They are created by partitioning stream valleys and their deepening on the sector upstream of the dam. Rehabilitated lakes are formed for the needs of protection from torrent and flood, they are presently mostly stocked with fish, hence they have a polyfunctional character. The largest lakes are created near Sot, Erdevik, Rivica, Dobrodol etc. (Bugarski, Davidović, Tomić, Bogdanović, Plavša, Lazić, Marković, 1998).

On Fruška gora, there are several sites of thermo-mineral water: Vrdnik, Stari Slankamen, Ljuba and Staro Hopovo monastery. All of them belong to the old, less or more used locations. While water of Vrdnik, Stari Slankamen and Ljuba, which are being used today, are a result of human intervention (natural sources are abandoned), thermal water of Staro Hopovo, flows out naturally. The remaining thermal spas are a result of deep drilling.

Vrdnik is a pleasant settlement of Fruška gora at 200 m above sea level around the perimeter of Vrdnik basin. The settlement, due to thermomineral water, received the status of a spa area in 1996, the water temperature is 30.7 °C, the water is clear, colorless, has a smell of “rotten eggs” (H₂S - hydrogen sulphide) and has no taste. Spring of mineral water is located in the valley of Vrdnički stream, upstream from the old Vrdnička colony, which is accidentally discovered in 1953. However, the spring has been operated with interruptions. The maximum flow provides 50 l/min. **Old Slankamen** is a settlement built in the northeast part of Fruška gora, immediately under tall loess section, next to the right bank of the Danube River. Spa in this settlement since the Ottoman period. The first scientific analysis of the water was conducted in 1899, and it was repeated in 1922, and on that occasion, it was established that the water contains gases methane (CH₄) and carbon (IV)-oxide CO₂. During 1952 and 1953 six new wells were drilled, of which only one well had mineral water, which belongs to salty iodine waters of chloride-sodium type, with mineralization of 6.9 g/l. Origin of mineral water is interpreted by metamorphosis of fossil sea water into infiltration water, which in entire Vo-



lvodina contain salty water, and are located within structures, in which are located beds of oil and natural gas. **Ljuba**, a small settlement is located in the western part of Fruške Gora, 36 km. Nearby spring of Banja emerges in one small quarry, where limestone is quarried. Here the phenomenon of thermal water has been known since the ancient times. Abundance of the spring is variable and it ranges between 3-6 l/s. Water is of total mineralization 0.73 g/l and of minimal radioactivity. Thermal spring near **Old Hopovo** monastery breaks out from the bed of Lipoovo stream, which is 200 m from the monastery. Abundance of the source is 0.3 l/s, and the temperature of water on the output is 18.5 °C. Today it is used only by local population, who considers it healing (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Pedological characteristics. Soil on the area of Fruška gora belongs to, mostly automorphic type (terrestrial, petromorphic), which are created exclusively by atmospheric precipitation. As a consequence of pedogenetic factors (parent substrate, vegetation, climate and relief) on Fruška gora, according to classification of soil, the following types soil are generated: undeveloped soil, humus - accumulative soil and cambial soil (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Biodiversity. Flora of National Park “Fruška gora” consists of 1500 species, which are characterized by its variety of specificity, due to diverse pedological substrate, numerous orographic features and phenomena and especially influence of climate. The microclimate is moderate-continental, but due to confronted cold, continental streams with influence of humid, Atlantic climate and noticable influx of sub-mediterranean climate, a specific and diverse herbal kingdom arose. Hence, on this small space exists a large floral diversity.

Of the total number of plants protected as natural rarities of Serbia, almost 70 species are growing on Fruška gora. Among them is a large number of orchids, 31 species, which belong to vascular flora of the international significance. In the latter group of plants, which are important in a wider scale from the aspect of preservation of global diversity, from the area of Fruška gora, only two herbal species are included, besides orchids. Those are Sadler cornflower (*Centaurea scabiosa* subsp. *sadleriana*) from groups of Pannonian endemics and Russian hibiscus (*Kitaibelia vitifolia*), which is significant as a representative of few Balkan elements of flora in this area (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Several species from the list of flora of Fruška gora are considered today as disappeared: Banatian peony (*Paeonia officinalis* subsp. *banatica*), mountain pasque flower (*Pulsatilla montana*), nodding sage (*Salvia nutans*), (*Ajuga laxmannii*), late spider-orchid (*Ophrys holoserica*) and others. Of course, these data should take with reservation, since newer researches confirmed presence of several rare species, which haven't been found in the last hundred years, that is: *Gymnadenia odo-*

ratissima, *Spiranthes spiralis*, *Lathyrus pannonicus*, *Peucedanum carvifolia*, *Cynosurus echinatus*, *Ranunculus illyricus* and *Veronica orchidea*. In addition to species which are considered disappeared, it is important to mention those who are in danger from the disappearance, like fern chaff (*Cheilanthes marantae*), which is growing only in three sites on Fruška gora (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Vegetation of National Park “Fruška goraa” is very diverse and it consists of numerous forest, meadow and pasture ecosystems. So far in this National the park over 40 associations are described. Among described phytocenoses, many of them are typical for Pannonian province holarctic. On Fruška gora in the belt of **alluvial-hygrophilic forests** four forest phytocenoses are recorded, that is: flooding forest willows (*Salicetum albae*), white and black poplars (*Populetum albo-nigrae*), common oak and hornbeam (*Carpino – Quercetum roboris*) and mixed the forest of linden, hornbeam and oaks (*Tilio – Carpino – Quercetom roboris cerridis*) (Обрадовић, 1978).

Forest community are mixed or pure composition. Monodominant forests are built by sessile oak, beech and sometimes linden or hornbeam, while in structure of bidominant forest are usually linden and beech, and rarely hornbeam and sessile oak. Pure beech forests, as well as pure grab forests rare are. Climate-regional type of forest on Fruška gora is forest consisting sessile oak and beech with false-brome – *Quercu-Carpinetum aculeotosum*, which covers the largest areas. In addition, in the vegetation of deciduous forests (*Quercu – Fagetea*) have an important place belong to beech trees and linden – *Tilio-Fagetum submontanum* (Prostorni plan područja posebne namene „Fruška gora“, 2019; Обрадовић, 1978).

In climat-zonal view, vegetation of Fruška gora belongs to forest-steppe (*Aceri Tatars – Quercion*). Steppe vegetation represent specific floristic rich communities from association *Festucion rupicolae*. This type of vegetation on Fruška gora, in relation to typical steppes, has more mesophilic nature and more forest-steppe feature. Due to centuries of negative anthropogenic influence, today areas covered by steppes are reduced at minimum and they are preserved in fragments mostly on the rim of the mountain (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Meadow vegetation is present with several communities of which an important place belongs to valley-mesophilic meadows from association *Arrhenatherion elatioris* and meadows from association *Agropyro - Rumicion crispis*, while marsh meadows from association *Deschampion caespitosae* are of distinctly limited range of a species. All meadow communities are of secondary origin and are created after clearing the forest (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Swampy vegetation is built by associations *Phragmition communis*, *Glycerio sparganion* and *Caricion gracilis*.

Faunistic diversity. We reviewed the wealth of faunistic diversity of national parks by display of conditions of: *butterflies, fish, amphibians, reptiles, birds* and *mammals*. Natural and geographical conditions, which characterize national parks of Serbia, correspond to survival and development of diverse fauna. Primarily, morphological differences (differences in altitude), exposure, fragmentation, interweaving meadow areas and forest complex and relatively dense representation of springs etc., stand out (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Table 1. Number of species of butterflies by family in National Park Fruška gora

Family	Number	%
<i>Hesperiidae</i>	14	12.39%
<i>Papilionidae</i>	4	3.54
<i>Pieridae</i>	14	12.39
<i>Lycaenidae</i>	38	33.63
<i>Nymphalidae</i>	43	38.05

Table 2. Display of total number of species of butterflies with a number of targeted and Natura 2000 species

National Park	Total number	Number targeted species	%	NATURA 2000	Targeted species
"Fruška gora"	113	12	10.62	<i>Leptidea morsei</i> <i>Colias myrmidone</i> <i>Lycaena dispar</i> <i>Nymphalis vaualbum</i>	<i>Zerynthia polyxen</i> , <i>Parnassius mnemosyne</i> , <i>Leptidea morsei</i> , <i>Colias myrmidone</i> , <i>Lycaena dispar</i> , <i>Pseudophilotes vicrama</i> , <i>Glaucopsyche alexis</i> , <i>Maculinea arion</i> , <i>Nymphalis xanthomelas</i> , <i>N. vaualbum</i> , <i>Apatura metis i</i> <i>Erebia medusa</i>

Area of the Danube River inhabits about 60 species of fish from 11 families with dominance of taxon from families of *Cuprinidae* (carp species), which occur with 12 species, and the remaining families occur with 48 species. Along left and right bank of the Danube River natural hatcheries are located, which are integral part of protected natural goods "Begečka rit" and "Kovilj-Petrovaradin marsh". This part of the Danube represents fishing area (Danube II) on which recreational and commercial fishing is allowed. Protection and usage of fish fauna of Danube is implemented according to the medium term and annual programs of users of the area,

integral management, with respect of ecological and economic principles, providing a rational use of space and natural resources, in accordance with the Law on Fishing and Regulation on protection of natural rarities (Prostorni plan područja posebne namene „Fruška gora”, 2019).

Fruška gora has specific, and for its own relatively small surface, very rich **herpetofauna**. The National Park “Fruška gora” is home to 13 species from classes of amphibians (*Amphibia*) classified into two orders, six families and seven genera and 11 species from classes of reptiles (*Reptilia*) classified into two orders with two suborders, six families and eight genera. Therefore, the area of Fruška gora is very significant, as reproductive center and center of biodiversity of amphibians and reptiles’ fauna. The majority of species of amphibians and reptiles, which live on the territory which is included in Spatial plan of the area of special purpose of Fruška gora are protected as natural rarities by Regulation on protection of natural rarities issued by the Government of the Republic of Serbia, “Official Gazette of the Republic of Serbia”, no. 50/93 (Prša, 1959).

Fruška gora is certainly the most important nesting ground of birds related to spacious hilly forest and meadow habitats in Vojvodina, which makes it especially significant and interesting for many species of birds, which are significantly less often in others areas. The fact that a large number of birds of the international significance according to various criteria, are nesting on Fruška gora, contributes to a special international status of Fruška gora.

By the latest researches, it was found that bird fauna of the entire massif of Fruška gora includes a total of 211 species. Within limits of National Park “Fruška gora” (forest habitats), around 150 bird species have been recorded. Ornithological value is, above all, reflected in wealth of rare and threatened bird species on nesting, as well as in the numerous presences of species at migration and wintering. Almost entire Fruška gora has uniform ornithological values, but some parts especially stand out. Generally speaking, the terminal southeastern slopes of the mountain, then southern and northern slopes of the central part, and terminal southwestern and western slopes are especially interesting.

Eight species of birds make this area internationally significant, among them the lesser spotted eagle (*Aquila pomarina*), the saker falcon (*Falco cherru*), the European scops owl (*Otus scops*), the woodlark (*Lullula arborea*). At present, over 170 species of bird is recorded, of what about 135 are nesting birds. Fruška gora represents sole national for eastern imperial eagle (*Aquila heliaca*) (three pairs) and only proven nesting ground for crnoglava. International importance of bird fauna of Fruške gora, was verified in 1989 through the inclusion in the IBA project. Since then, Fruška gora officially becomes internationally significant habitat for bird in Europe (YU031), on the area of 25,000 ha. Revision of the IBA project was performed in 1997, which increased the area of the space to 42,000 ha (YU006) (Simić and Puzović, 2008).

Basic *values of bird fauna* of Fruška gora are mainly preserved. However, due to permanent anthropogenic influence, on narrow and wider space, some species disappeared completely, while some others, due to formation of new artificial habitats, have conquered these spaces and in many cases, reproduce successfully (Pekić, 1978).

A large number of bird species on Fruška gora are significant on international and national extent, and therefore, it can be found on many lists, that is: The IUCN Red List, 1996; The European Red List, 1991; Spec category (IUCN, 1994); “Natural rarities” according to the Regulation issued by The Government of the Republic of Serbia, “Official Gazette of the Republic of Serbia”, no. 50/93; species that are protected according to the Law on Hunting, “Official Gazette of the Republic of Serbia”, no. 39/93.

Those are The European pied flycatcher (*Ficedula hypoleuca*), and also the only nesting ground in Vojvodina for the black-headed bunting (*Emberiza melanocephala*) and the common rock thrush (*Monticola saxatilis*). The black stork (*Ciconia nigra*) is nesting in old forests, in bays of streams. Up to 15 large eagles are gathering at the feeding ground for predators (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Although *theriofauna* of Fruška gora, at first, doesn't provide large wealth, neither qualitatively nor quantitatively, yet on the relatively small space the national park we find six members (of the total seven) orders and something more than the half (51) of the total number of species of mammal fauna of Carpathian basin and of the Balkan peninsulas. It indicates the importance of the area as one specific center of biodiversity in Vojvodina, and entire Serbia (Prostorni plan područja posebne namene „Fruška gora“, 2019).

3.2 SOCIO-GEOGRAPHIC CHARACTERISTICS

3.2.1 Population

The analysis of the demographic development of the area was carried out on the basis of the official statistical data of the population census in the period 1991-2011. It includes 50 settlements, namely: 48 entire settlements and peripheral parts of two settlements (Beška and Gibarac). The number of inhabitants, as official statistical data, refers to the entire settlement, so the settlements of Beška and Gibarac will be omitted from this analysis.

Accordingly, in a total of 48 settlements, according to the 2011 Census, there were 88,561 inhabitants, or 4.6% of the Vojvodina population. In the period 1991-2011, the total number of inhabitants of the observed area increased by about 12.0% or by 10,872 people. The mechanical component significantly influenced the move-

ment of the total number of inhabitants in the last decade of the 20th century, so that in 2002, an increase in the total population was recorded in most settlements, while depopulation was recorded in only twelve settlements. However, in the period 2002-2011 depopulation was recorded in 83,3% of settlements, which indicates that the mechanical component had a short-term impact on improving the vital characteristics of the population. In the period 2002-2011, the total number of inhabitants was decreased by 2,3%, i.e. by 2,120 people (Prostorni plan područja posebne namene „Fruška gora“, 2019).

The population in the area has unfavorable demographic characteristics, which also characterize AP Vojvodina as a whole. A special issue relates to qualitative demographic changes with regard to biological depopulation, which affects the aging of the population, and with the tendency to intensify this process, the problems of ensuring a sufficient number of working age, qualified population and caring for the elderly population will intensify (Prostorni plan područja posebne namene „Fruška gora“, 2019).

3.2.2 The network and functions of the settlement

There are 50 settlements within the scope of the Spatial Plan, with an average population of 1,804 inhabitants. The settlement with the largest number of inhabitants is Petrovaradin with 14,810 inhabitants, while the smallest settlement is Velika Remeta in the municipality of Irig, with 44 inhabitants. The units of local self-government, whose entire area is included in the Spatial plan are Beočin and Sremski Karlovci, and Sremska Mitrovica – the city and the City of Novi Sad, as well as the municipalities of Bačka Palanka, Indija, Irig, Ruma and Šid (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Observing the distribution of the population according to size categories in settlements, according to the data of the 2011 Census of population, households and apartments, the largest number of settlements (31) is in the category of up to 1,000 inhabitants, and the largest share of the total population of the observed area lives in settlements that belong to the size category of 10,001-20,000 inhabitants (30,58%) (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Within the gravity areas of large cities, low-ranking gravity centers are formed, which gather settlements from their immediate surroundings. The complexity of this phenomenon is reinforced by the fact that secondary gravity centers of several categories are formed within large gravity zones. The connections between the city and the surrounding settlements are mutual, and there are more numerous and stronger connections are between nearby settlements. The reach of the city's influence on the environment depends on the power of its functions and, as a rule, is greater in larger cities (Prostorni plan područja posebne namene „Fruška gora“, 2019).



3.3 INFRASTRUCTURE EQUIPMENT

3.3.1 Traffic infrastructure

Geotrafic position of National Park “Fruška gora” is very favorable considering the fact that all types of traffic capacity of different hierarchical importance are represented, which provide excellent availability to all potential users. Area of Fruška gora is cut through by the following road networks: European network of international roads (“European roads” or “E-roads”), highways, regional and local roads.

Through National Park “Fruška gora” so called local roads pass through, which enable fair to middling traffic accessibility to certain cities within National Park. Roads, which pass through the territory of National Park “Fruška gora” (two motorways, four highways and five regional roads) occupy an area of 1,56 km², which represents 1% of total surface of the National Park. Considering the fact that the northern border of National Park “Fruška gora” contains European highway – the Danube River with its length of 85 km. Consequently, passenger ships can dock at the port Bačka Palanka and Novi Sad, as well as the pier Sremski Karlovci, and cargo ships can dock at the port Beocin (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Railway traffic in the gravity zone of National Park “Fruška gora” is present across two international railway lines: Vienna – Budapest – Belgrade – Athens; and Sofia - Belgrade - Zagreb - Vienna. Thus, availability in almost to all parts National Park is enabled by this mean of transport.

It is possible to access integral connecting of road and air traffic, on route between the airport and National Park “Fruška gora” by Airport “Nikola Tesla” in Belgrade.

Based on factual state, it can be concluded that the National Park “Fruška gora” in the domain of traffic infrastructure is fully serviced. It is necessary to access integral connection of already mentioned means of transport in order to achieve desired level of service for all potential visitors, in such a way, so that the minimum negative influence on the environment of National Park “Fruška gora” is achieved (Prostorni plan područja posebne namene „Fruška gora“, 2019).

3.3.2 Plumbing infrastructure

National Park “Fruška gora”. Within the National Park “Fruška gora” there are numerous springs of capacity up to 0.1 l/s, which unfortunately until now are not sufficiently used. These springs serve for local (individual) supply inhabitants in the villages. Only some rare springs that are more abundant, which are found in Lajtovac limestones are captured for needs certain tourist objects (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Water supply is connected exclusively for peripheral centers of Fruška gora. Namely, through deep drilled wells aquifer is being exploited under pressure in Jazko and Vrdnik for needs of the “Termal” hotel. In the remaining settlements on the northern slopes of Fruška gora, the so-called “compacted aquifers” are exploited with free level in the alluvial plateau of Danube River near Beočin and Petrovaradin and “compacted aquifer” with level under pressure formed in the sand. The majority of settlements on the southern slopes of Fruška gora is supplied with water via plumbing system, which are attached on the regional waterworks in Ruma, Sremska Mitrovica and Šid. On certain cites there are industrial springs important for supply of certain companies (Prostorni plan područja posebne namene „Fruška gora“, 2019).

3.3.3 Sewerage infrastructure

National Park “Fruška gora”. The majority of settlements on the territory of Fruška gora don’t have developed sewerage network. Exceptions are Petrovaradin, Sremski Karlovci, Sremska Kamenica, Sremska Mitrovica, Beočin and Irig. However, these settlements do not have required systems for drainage and treatment of waste water, since they are discharged into containers without purification. In fact, septic pits of limited capacity are still in use for collection and evacuation of waste water are still in use, and which are mostly derived from the abandoned wells, which directly endangers immediate environment.

Falling behind the construction of sewage with plumbing network is very expressed on the territory of the National Park, what contributes to permanent pollution of environment. Hence the lag of communal standards and endangering water resources represent the biggest environmental problem. In addition, share of industrial waste water in public sewerage amounts about 25%, wherefore a large part of this waste water from industry flows into public sewerage (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Channel network. Aiming to enabling transit functions of water from the terminal points of Fruška gora to Sava and Danube, a canal network system was built, which except this basic function, allows and timely collection and transit of redundant water to pumps stations and construction outlet on the Sava River (Prostorni plan područja posebne namene „Fruška gora“, 2019).

Defensive embankments. Defense against large amounts of water from Danube and Fruška gora waterflows is performed by construction of defensive embankment with following facilities in Sremski Karlovci, Petrovaradin, Sremska Kamenica and Beočin. In addition, construction of regulatory objects is being carried out in stream beds, that is, confluence and accumulation in the basin is being controlled.



3.3.4 Gas pipeline infrastructure

Use of gas pipeline infrastructure within National Park “Fruška gora” enables rational usage and savings of non-renewable sources, savings of production energy and reduction of conflict between use of energy resources and protection of environment. Thus, currently, on the area of Fruška gora the main gas pipeline (MG), and regional gas pipelines (RG) are built. This enabled gasification of certain number settlements in municipalities Ruma and Irig, that is connection for certain consumers (Hopovo Monastery, “Varadin” hotel, mountain lodge, sanatorium and “Norcev”) (Prostorni plan područja posebne namene „Fruška gora“, 2019).

3.3.5 Electric power infrastructure

National Park “Fruška gora”. Regarding to electric energy supply the area of Fruška gora is not unique. Actually, some parts of the area are supplied from different directions, and for that reason on this area is built (Prostorni plan područja posebne namene „Fruška gora“, 2019):

- portable network with belonging substations of different voltage levels of 110 kV, 220 kV and 400 kV;
- distributive medium-voltage network of voltage levels of 35 kV, 20 kV and 10 kV;
- low voltage network of 0.4 kV; and
- belonging substations.

In the area of Fruška gora two 400 kV transmission lines are built: 409/2 Sremska Mitrovica - Obrenovac and 409/3 Sremska Mitrovica - Ernestinovo.

Secondary (low voltage) network directly supplies consumers in populated areas, and individual tourist cites, such as and monastery complexes. However, it is necessary to increase safety and quality of the power supply. In addition, it can be stated that public lighting on the individual tourist cites is not on the satisfactory level. Considering these facts, it can be stated that the existing electric power infrastructure with its own unsatisfactory characteristics represents a setback to further development of this protected area.

National Park “Fruška gora”. Landline telephony is carried out within network groups 021 and 022. However, total state of telecommunication network on the area of this national park mostly, are not on the satisfactory level, neither in terms of quality nor in terms of capacity. Actually, except in larger city centers (Novi Sad, Šid, Sremska Mitrovica...), as well and in a small number of smaller settlements, automation and digitization telecommunications equipment and system is not carried out (Prostorni plan područja posebne namene „Fruška gora“, 2019).

However, the network of public mobile telephony still does not always enable automatic management of telephone lines on the the whole territory of National Park “Fruška gora”.

4 NATIONAL PARK FRUŠKA GORA

National parks are the most valuable parts of nature, which are the pride of every nation, which is why more and more importance is attached to the preservation and protection of their natural values. The progressive increase in the demand for raw materials, energy sources, an increase in the amount of waste materials, tourism and certain production processes cause increased exploitation of the natural resources of national parks and thus lead to their degradation. In this way, national parks are threatened not only by natural causes (earthquakes, extreme temperatures, winds, snow drifts, erosion, atmospheric discharges, pests, etc.), but also by anthropogenic agents. The most significant anthropogenic influences on the quality of national parks are: occupation of space, collecting activity, mining, tourism, traffic, agriculture, hunting and fishing, energet objects, etc. These causes have led, or may lead to numerous changes in the national park, such as: the destruction and complete disappearance of extremely endangered species, the reduction of the number of certain species, the overpopulation of some species, the reproduction of lower species, etc.

After looking at the natural and created values, analyzing the number of inhabitants, the network of settlements and the cultural and historical resources of the national parks, there was a need to undertake certain activities in the field of legislation, education and, above all, the management of national parks.

A national park is an area with a large number of diverse natural ecosystems of national importance, prominent landscape features, cultural and historical heritage, where people live in harmony with nature, intended to preserve existing natural values and resources, the overall landscape, geological and biological diversity, as well as to satisfy scientific, educational, spiritual, aesthetic, cultural, touristic, health-recreational needs and other activities in accordance with the principles of sustainable development.

In the national park, shops and activities are allowed, which do not endanger the originality of nature, as well as the performance of hospitality-tourist and recreational activities, which are in the function of: education, health-recreational and tourist needs, extensive agriculture, fishing, in a way that does not endanger the survival of species and their natural balance, in accordance with the Law on Nature Protection and the National Park Management Plan.



In the national park, it is prohibited to carry out activities/activities, in accordance with the law, unless there is a general interest in doing so.

In the Republic of Serbia, the Law on Nature Protection, Article 30, defines a national park as “an area with a large number of diverse natural ecosystems of national importance, prominent landscape features and cultural heritage, where people live in harmony with nature, intended to preserve existing natural values and resources, overall landscape, geological and biological diversity, as well as the satisfaction of scientific, educational, spiritual, aesthetic, cultural, touristic, health-recreational needs and other activities in accordance with the principles of nature protection and sustainable development (Spatial Plan of the special purpose area “Fruška gora”, 2019) .

In the national park, shops and activities are allowed that do not endanger the originality of nature, as well as the performance of activities that serve the purpose of education, health-recreational and tourist needs, the continuation of the traditional way of life of local communities, and in a way that does not threaten the survival of species, natural ecosystems and landscapes, in accordance with this Law and the Management Plan, adopted by the manager. The measures for the protection of the national park and the manner of its use are determined in more detail by a special law (Spatial plan of the special purpose area “Fruška gora”, 2019).

Natural values

Natural assets include the National Park, as well as other areas of importance for the preservation of biological diversity. Given that parts of the Srem loess plain and the alluvial plain of the Danube are included, this has resulted in a wealth of bio and geodiversity.

In the observed area, apart from the National Park and its protective zone, there are also other areas of importance for the preservation of biological and geological diversity: other protected areas (part of the Special Nature Reserve “Koviljsko-Petrovaradinski rit” and natural monuments), areas in the process of protection, areas planned for protection, habitats of protected and strictly protected wild species of national importance, ecological corridors and geoheritage objects. By including a wider area in the coverage, all environmental influences on the National Park and its natural values were considered, in order to preserve them.

Protected areas

The smaller spatial units of the National Park consist of forest, steppe, forest-steppe and partly water habitats, which are separated as enclaves, and are located within the central areas of the ecological network of the Republic of Serbia, according to the Decree on the Ecological Network (“Official Gazette PC”, number 102/10). On

the northern slopes, there are meadows, hedgerows and groves, which most often rely directly on the central massif of the National Park. On the southern slopes, there are steppe pastures, which stretch along the stream valleys near the villages of Fruška gora. Valuable aquatic habitats in the Danube are also ecologically connected to Fruška gora, but due to fragmentation, they are not connected spatially.

Areas planned for protection are connected to these enclaves of the National Park through local ecological corridors, which ensures the preservation of ecosystem diversity. Fruška gora is primarily a forest area, with a smaller share of meadow-steppe and forest-steppe vegetation, thickets and hedges. What makes Fruška gora unique and special is precisely the combination of forest, forest-steppe and meadow-steppe habitats. The forests of Fruška gora are made up of a large number of species of trees and shrubs. Dominated by silver-leaved linden, oak, beech and hornbeam.

The basic natural and created values, for which the National Park is protected, are (Spatial Plan of the special purpose area “Fruška gora”, 2019):

- forest ecosystems with various types of oak forests, especially Pannonian thermophilic forests and relict thermophilic oak forests with a Mediterranean feature;
- unique primordial steppe and forest-steppe habitats in the Pannonian Plain, located on the slopes of Fruška gora;
- habitats and populations of wild flora of national and European importance with the presence of Pannonian endemic and numerous relict species from the Tertiary and Xerotherm periods, characterized by a wealth of species from the orchid family;
- a habitat for over two hundred species of birds, among which the golden eagle, golden eagle, black stork, wood pigeon, black buzzard, white-necked flycatcher and black-headed bunting stand out;
- a globally endangered species of waterfowl, whose habitats on the steppe pastures are disappearing;
- numerous fossil sites, numerous outcrops with discovered geological formations, significant for understanding the geological structure and historical-geological development of the lithosphere in the Pannonian region and the Danube region;
- a unique mountainous area in the Vojvodina plain with a ridge part under the forest and slopes with glades, vineyards and orchards, under the influence of traditional activities, folk creativity and construction and
- a large number of cultural and historical monuments.

The national park covers parts of the territories of: City of Novi Sad, Sremska Mitrovica - city and municipality: Bačka Palanka, Beočin, Indija, Irig, Sremski Kar-

lovci and Šid, within 45 cadastral municipalities: Beočin, Čerević, Rakovac, Banoštor, Sviloš, Grabovo, Remeta, Neradin, Jazak Prnjavor, Mala Remeta, Krušedol Prnjavor, Ledinci, Sremska Kamenica, Petrovaradin, Bukovac, Sremski Karlovci, Čortanovci, Indija, Stari Slankamen, Novi Slankamen, Ljukovo and Krčedin.

The total area of the National Park according to the Law on National Parks is 26,672 ha, of which 19,308 ha is in state property, and 7,364 ha in private and other forms of property, of which 3% is covered by the I degree of protection regime, 67% by II degree and 30 by III degree. % total area. The protection zone of the National Park was established on an area of 56,650 ha.

The manager of this protected area is the Public Enterprise “National Park Fruška gora”, with headquarters in Sremska Kamenica.

Special Nature Reserve “Koviljsko-Petrovaradinski Rit” The area of the Special Nature Reserve “Koviljsko-Petrovaradinski Rit” is protected on the basis of the Protection Regulation (“Official Gazette PC”, number 44/11), which established a three-level protection regime. The reserve represents a complex ecosystem with original, natural values, which are to a certain extent in the phase of disappearance, due to natural succession and decades of negative anthropogenic influence. The area includes the Petrovaradinski rit spatial unit, in which regime II and regime III of the protection level are represented (Spatial Plan of the Special Purpose Area of the Special Nature Reserve “Koviljsko-Petrovaradinski rit”, 2012).

4.1 NATURAL HERITAGE OF FRUŠKA GORA

Within the National Park there are:

- Nature monument “Oskoruša near Hopovo, municipality of Irig;
- Monument of garden architecture “Beočin Monastery Park”, municipality of Beočin;
- Nature monument “Ritska forest on Mačkovo Sprudu”, municipality of Beočin;
- Natural monument “Kamenički Park” in Sremska Kamenica, City of Novi Sad;
- Natural monument “Palace Garden” in Sremski Karlovci;
- Natural monument “Black Mulberry in Sremski Karlovci”;
- Natural monument “Wild Chestnut in Sremski Karlovci”;
- Natural monument “Platan in Sremski Karlovci”;
- Nature monument “Yew in the park of the Patriarch’s Palace” in Sremski Karlovci;
- Nature monument “Two yew trees in the courtyard of the Karlovac High School” in Sremski Karlovci;
- Natural monument “Two oak trees in Gibarac”, municipality of Šid.

Areas in the protection review process

Areas in the protection review procedure are:

- Nature monument Park Institute in Sremska Kamenica i
- Begečka Jama Nature Park (PP).

4.1.1 Geological heritage

Fruška gora is distinguished by its rich geological diversity, which makes it a unique geotype in the territory of the Republic of Serbia. On Fruška gora there are numerous fossil sites, numerous outcrops with discovered geological formations, significant for understanding the geological structure and historical-geological development of the lithosphere in the Pannonian Lowland and the Danube (the occurrence of deposits of various mineral raw materials, from semi-precious and decorative stones, various construction materials to coal and geothermal waters) (Milovanović, 2009).

The largest number of fossil sites in Fruška gora is related to Neogene deposits (sediments that were created slightly before the Pannonian Sea, about 20 million years ago, as well as sediments that were created in and during the Pannonian Sea, i.e. the period from 16 million years ago to 2 million years ago year) (Radojičić, 2016).

Geological diversity consists of an enviable number of geological heritage sites (of varying scope), complexes of geological entities of special scientific importance, rarity and beauty, which are representative of this and wider area and its geological history, events or processes (Milovanović, 2009).

The scope includes the following spatial units of importance for the preservation of geological diversity (Milovanović, 2009):

- Profile of the brick factory in Sremski Karlovci;
- Locality "Bukovac";
- Locality "Grgeteg";
- Locality "Paragovo";
- Locality "Stari Ledinci";
- "Rakovac Gallery";
- "Stratigraphic profile of Branch near Beocin";
- Locality "Sakotinac";
- Rock "Orlovac";
- Upper Cretaceous paleontological site in the basin of Orlovački, Dobra and Čerevići streams;
- Profiles with Pannonian Sea sediments discovered along the road Crveni Čot - Beocin;
- Profile of the brick factory in Iriga;



- Profile of the brick factory in Petrovaradin;
- "Mišeluk" profile;
- "Susek" profile;
- Dumbovački waterfall;
- Almash Waterfall;
- Gregory's Cave;
- Locality of Krečanska Jama";
- Locality "Ledinačko jezero";
- Abandoned Maidan near Stari Rakovac;
- Neogene locality near Vrdnik;
- Mutash site;
- Locality "Erdelj";
- Profile of the Paludin cpojes in Čerević;
- Locality "Goat Hill";
- Locality "Kiševa glava".

4.1.2 Areas of international importance for the preservation of biological diversity

Areas of international importance for the preservation of biological diversity have been recorded in the area (Prostorni plan područja posebne namene „Fruška gora“, 2019):

- Fruška gora and Koviljsko-Petrovaradinski rit - areas of international importance for the preservation of biological diversity of the EMERALD network;
- Fruška gora and Koviljsko-Petrovaradinski rit - an area of international importance for plants (IPA - Important Plant Area) set aside by the international Plantlife project;
- Fruška gora, Koviljski rit and Danube loess section - areas of international importance for birds (IBA - Important Bird Agea), separated according to the strict criteria of the IBA project, which is carried out by the international organization Bird Life International;
- Koviljsko-Petrovaradinski rit - area registered on the list of Wetlands of International Importance - Ramsar Areas, according to the Ramsar Convention (Convention on the Conservation and Sustainable Use of Wetlands of International Importance);
- Fruška gora - selected area of international importance for day butterflies (RVA Prime Butterfly Area).

4.1.3 Ecologically significant areas of the Ecological Network of the Republic of Serbia

Fruška gora and Koviljski rit form part of ecologically significant area number 14, which includes: protected areas of NP “Fruška gora” and SRP “Koviljsko-Petrovaradinski rit”; Emerald areas of Fruška gora and Koviljeko-Petrovaradin rit; IPA areas of Fruška gora and Koviljsko-Petrovaradin rit; IBA areas of Fruška gora, Koviljsko-Petrovaradin rit and Danube loess section and RVA area of Fruška gora.

Potential geocalities, which could be included in the potential Fruška gora geopark, as well as a complete list of geoheritage objects (53). For each locality, the type, value (purpose) and importance are determined.

4.2 CULTURAL HERITAGE OF FRUŠKA GORA

4.2.1 Historical context

At the foot of Fruška gora, people settled very early and mostly stayed on the banks of the Danube, its tributaries and Sava tributaries, which descend from the slopes of Fruška gora. The first material traces of the presence in this area come from the Mesolithic period (the end of the Mesolithic): the Kereska and Starčevac cultures. Material traces have also been preserved from: the younger Neolithic (Vinca culture), the copper, bronze and iron ages, the ancient period, the period of battles over the Roman northern borders and the fall of Sirmium, the period of the invasion of the Avars and Slavs and their struggle with Byzantium (entering the Middle Ages). . The battles of the Avars with the Franks at the end of the 8th century introduced this area into the sphere of expansion of the Western Empire.

The church organization is strengthened (Srem gets a bishopric, and in the 18th century a bishopric). Turkish incursions into Srem at the end of the 14th century herald a new turbulent chapter in history. The Turks organized their government mainly in cities, which thus acquired a Turkish character. After the conclusion of the Peace of Karlovac in 1699, the southern cities still remain under the Turks.

The population from them moved to Christian Hungary and stayed on the slopes of Fruška gora, in the ruins of built or renovated monasteries. A large number of monasteries were built in the area of Fruška gora in the Middle Ages. Some have not been preserved at all, and the rest have lost much of their original appearance. They were built mainly in the period up to the 18th century. Their significance for history and culture is great. They arose from religious motives, but their influence in the Middle Ages also extended to culture and economy. In the 18th and early 19th centuries, Fruškogorsk monasteries became, in addition to large spiritual centers, important icon painting workshops. In the Second World War,



all monasteries were more or less damaged or burned. For the last twenty years, they have been revitalized with the help of the state and donations. Apart from the monastery, the monumental treasure of Fruška gora consists of a number of known, protected and categorized cultural assets, but also of many remains of different cultures, which have since disappeared, whose previous existence has only been recorded or is still unknown, hidden and preserved in soil deposits (Vujko, Gajić, Kovačević, 2012).

During the Second World War, the National Liberation Movement of the people of Vojvodina against fascism was organized on Fruška gora. The most significant monument of this period is the “Freedom” monument on Iriški venac.

Material traces in the observed area are unevenly represented. From the point of view of protection and presentation of immovable cultural heritage, the most important is the peripheral area of the National Park with the contact part of the protection zone (Milovanović -Jović i Momirović, 1990):

- The southern slopes of Fruška gora, with complexes of monasteries (Kuveždin monastery and Divoš settlement, remains of Bešenovo monastery and Bešenovo Prnjavor settlement, monastery and settlement: Mala Remeta, Jazak, Vrdnik, etc.);
- the northern slopes of Fruška gora with the Beočin and Rakovac monasteries and settlements on the right bank of the Danube: Neštin, Susek, Banoštor, Čerević, Beočin, Rakovac, Ledinci, Sremska Kamenica and Bukovac;
- Petrovaradin with Petrovaradin fortress;
- Historical town of Sremski Karlovci;
- The loess section of the eastern slopes of Fruška gora with the settlement of Čortanovci, where there is a valuable architectural heritage and a large number of archaeological sites (the area of missing above-ground material traces of cultural heritage).

The central area of the National Park includes mostly monuments of recent history - historically significant places from the National Liberation Struggle on Fruška gora. The importance and multitude of material cultural assets on Fruška gora, as well as their variety and diversity, speak in favor of the fact that it is an extremely humane space for life, creation, and duration.

4.2.2 Immovable cultural assets

Immovable cultural assets can have the status of immovable cultural assets of exceptional importance, immovable cultural assets of great importance and immovable cultural assets.

All immovable cultural assets can be further divided into:

- spatial cultural-historical entities of exceptional importance
- cultural monuments of exceptional importance
- famous places of exceptional importance
- archaeological sites

In the observed area there is a total of (Prostorni plan područja posebne namene „Fruška gora“, 2019):

- five spatial cultural-historical units;
- 97 cultural monuments and their protected surroundings;
- three famous places;
- six archaeological sites.

Immovable cultural property of exceptional importance

In the area of Fruška gora, there are 27 immovable cultural assets of exceptional importance, namely: two spatial cultural-historical entities, 23 cultural monuments and two famous places.

An overview of the spatial cultural-historical entity of exceptional importance

1. The town center of Sremski Karlovac
2. Fruška Ropa with monasteries and other cultural monuments Bačka Palanka, Beočin, Indija, Irig, Novi Sad, Sr. Mitrovica, Šid;

Overview of cultural monuments of exceptional importance

1. House in Neština at Ul. Koče Popovića no. 34 Nestin Backa Palanka
2. Beočin Monastery Beočin Beočin
3. Rakovac Monastery Rakovac Beočin
4. Monastery Velika Remeta Velika Remeta Irig
5. Vrdnik-Ravanica Monastery Vrdnik Irig
6. Monastery Grgeteg Grgeteg Irig
7. Monastery Jazak Jazak Irig
8. Krušedol Monastery Krušedol Irig
9. Monastery Mala Remeta Mala Remeta Irig
10. Novo Hopovo Monastery near Irig Irig
11. Staro Hopovo Monastery near Irig Irig
12. Church of Cpetenj Krušedol Irig
13. Freedom monument on the Iriško venc near Irig Irig
14. Kuveždin Monastery near Divoš Sr. Mitrovica
15. Petkovic Monastery near Šišatovac Sr. Mitrovica
16. Manactip Šišatovac Šišatovac Sr. Mitrovica
17. 20 cultural monuments in the city center of Sremski Karlovac



18. Castle of Josif Rajačić Sr. Karlovci
19. The upper church dedicated to the Presentation of the Virgin Mary Sr. Karlovci
20. Home of Angelina Dejanović Sr. Karlovci
21. Đipša Monastery near Vizić Šid
22. Monastery Privina Glava Privina Glava Šid
23. Orthodox Church Molovin Šid

There are 23 cultural monuments of exceptional importance in the observed area. The monasteries of Fruško Gora with their accompanying facilities (prnjavori, water fountains, fountains, hermitages, etc.) stand out, which represent the special value and identity of this territory, and have been set aside as a special purpose. Their multiple dimensions - as spiritual and cultural - historical heritage and the value they represent require appropriate treatment and interpretation (Spatial Plan of the special purpose area “Fruška gora”, 2019).

Overview of famous places of exceptional importance

1. The monument on the hill “Vezirac”, the place of the battle near Petrovaradin in 1716. Petrovaradin - includes the tri-border Sr. Karlovac, Petrovaradin and Bukovac Novi Sad
2. Peace Chapel - Place of Peace of Karlovac in 1699. Sr. Karlovci Sr. Karlovci

Immovable cultural assets of great importance

There are 51 immovable cultural assets of great importance in the area, namely three spatial cultural-historical entities, 44 cultural monuments, one famous place and three archaeological sites (Spatial plan of the special purpose area “Fruška gora”, 2019).

An overview of spatial cultural-historical units of great importance

1. The old core of Irig Irig Irig
2. The upper and lower Petrovaradin fortresses with the suburb of Petrovaradin Novi Sad
3. Castle and park in Sremska Kamenica, Novi Sad

Overview of cultural monuments of great importance

1. Nestin Watermill Backa Palanka
2. Serbian Orthodox Church of St. Kuzman and Damjana Nestin Backa Palanka
3. Serbian Orthodox Church of St. Georgija Banoštor Beočin
4. Country house in Stankovićeva ul. no. 4 Beocin Beocin

5. Serbian Orthodox Church of the Transfiguration Beočin Beočin
6. Porch in Fruškogorska ul. No. 97 Sviloš Beočin
7. Serbian Orthodox Church of St. Archangel Gabriel Susek Beocin
8. Roman Catholic Church of St. Josipa Cerević Beočin
9. Serbian Orthodox Church of St. Save Čerević Beočin
10. Serbian Orthodox Church of St. Nikola Čortanovci Indjija
11. Serbian Orthodox Church of St. Save Maradik Indjija
12. Serbian Orthodox Church of St. Nikola Maradik Indjija
13. Vrdnik Tower Vrdnik Irig
14. The village where Milica Stojadinović, a Serb, lived, Vrdnik Irig
15. Serbian Orthodox Church of St. Jovana Preteče Vrdnik Irig
16. Thermal power plant of coal mine Vrdnik Irig
17. Serbian Orthodox Church of St. Nikola Irig Irig
18. Serbian Orthodox Church of St. Teodora Tirona Irig Irig
19. Serbian Orthodox Church of the Assumption of the Virgin Irig Irig
20. Serbian Orthodox Church of St. Nikola Jazak Irig
21. Serbian Orthodox Church of St. Nikola Neradin Irig
22. Watermill Rivica Irig
23. Serbian Orthodox Church of the Transfiguration Šatrinci Irig
24. Serbian Orthodox Church of the Ascension Bukovac Novi Sad
25. The house where Jovan Jovanović Zmaj Sr. lived. Novi Sad oyster
26. House from the 18th century, Karađorđeva street no. 21 Sr. Novi Sad oyster
27. Orthodox Church of the Nativity of the Blessed Virgin Mary Sr. Novi Sad oyster
28. "Turkish Fountain" St. Ledinci Novi Sad
29. "Turkish Fountain" St. Ledinci Novi Sad
30. The remains of the medieval church at the "Klisa" site of St. Ledinci Novi Sad
31. Serbian Orthodox Church of St. Nikole Stejanovci Ruma
32. Serbian Orthodox Church of St. chief strategist Mihaila Grgurevci Sr. Mitrovica
33. Serbian Orthodox Church of St. Georgija Divoš Sr. Mitrovica
34. Country house in Pinkieva street no. 27 Ležimir Sr. Mitrovica
35. Serbian Orthodox Church of St. Georgija Ležimir Sr. Mitrovica
36. Serbian Orthodox Church of St. Georgija Mandelos Sr. Mitrovica
37. Serbian Orthodox Church of St. Nikola Šuljam Sr. Mitrovica
38. Serbian Orthodox Church of St. Petar i Pavla Berkasovo Šid
39. Fortress of Berkasovo Šid
40. Roman Catholic Church of St. Mihajla Erdevik Šid
41. Serbian Orthodox Church of St. Nikola Erdevik Šid



42. Country house in JNA Street no. 5 Ljuba Šid
43. Serbian Orthodox Church of St. Dimitrija Ljuba Šid
44. Roman Catholic Church of St. Katarina Sot Sheed

An overview of famous places of great importance

1. The grave of Branko Radičević on Stražilovo Sr. Karlovci Sr. Karlovci

Overview of archaeological sites of great importance

1. Gradina - site of the medieval monastery Rakovac Beočin
2. Mihaljevac Forest Čortanovci Indjija
3. Locality in Grgurevci - remains of the monastery of St. Grgura Grgurevci Sr. Mitrovica

Immovable cultural property

In the area of Fruška gora, we have 34 immovable cultural assets, namely: 30 cultural monuments, one landmark and three archaeological sites.

Overview of cultural monuments

1. Castle in Beocin Beocin Beocin
2. Church of St. Archangel Michael and Gavril Grabovo Beocin
3. Serbian Orthodox Church of the Presentation of the Virgin Sviloš Beočin
4. Birthplace of national hero Dimitri Lazarov "Raša" Čerević Beočin
5. House from NOB in Peka Dapčević Street no. 60 Irig Irig
6. House of national hero Anka Matić Grozda in Anka Matić Street no. 32 Irig Irig
7. Monument "Statues" in memory of the Irig plague epidemic - Ruma Irig
8. Monument in NOB to the deceased members of the Jovičić Jazak Irig family
9. House with garden in Ul. Patriarch Rajačić no. 14 Petrovaradin Novi Sad
10. The Roman Catholic Church of Maria Snežna in Tekija, Petrovaradin, Novi Sad
11. "Špiler's house" in Ul. Vladimir Gortan no. 8 Petrovaradin Novi Sad
12. Parish Church of St. George and Parochial House of Petrovaradin Novi Sad
13. Burial sites with tombstones on the tranjament (Military Cemetery, Old Catholic and Major Cemetery) Petrovaradin Novi Sad
14. Two tombstones in the Serbian Orthodox cemetery (J. Jovanović Zmaj and Novak Radonić) Sr. Novi Sad oyster
15. Building from the 18th century, Dunavska street no. 5 Sr. Novi Sad oyster
16. Complex "English-Yugoslav Children's Hospital" Sr. Novi Sad oyster
17. Monument to Jovan Jovanovic Zmaj Sr. Novi Sad oyster
18. Birthplace of national hero Stevan Petrović Brile Stejanovci Rum

19. The chapel of the Nikolić family at the Gornji groblje in Cerat (an object of sacral architecture) Sr. Karlovci Sr. Karlovci
20. Two tombstones at Cerat Cemetery (memorial complexes, monuments and memorials) Sr. Karlovci Sr. Karlovci
21. Three tombstones at Cerat Cemetery (memorial complexes, monuments and memorials)
22. Sr. Karlovci Sr. Karlovci
23. Three tombstones on Magarčevo breg (memorial complexes, monuments and memorials)
24. Sr. Karlovci Sr. Karlovci
25. Birthplace of national hero Bok Palkovljević Pinki Mandelos Sr. Mitrovica
26. Rohalj base Divoš Sr. Mitrovica
27. Memorial complex Jabuka Bešenovo Sr. Mitrovica
28. Mošin's grave Grgurevci Sr. Mitrovica
29. Gypsy camp Ležimir Sr. Mitrovica
30. Lepinjca's grave Šuljam Sr. Mitrovica
31. Maksa's grave Shulyam Sr. Mitrovica
32. Ambar in Partizanska street no. 103 Berkasovo Šid

Overview of famous places

1. Monument to fallen fighters and victims of fascist terror, Čortanovci Indjija

Overview of archaeological sites

1. Marin to Rakovac Beočin
2. Necropolis from the 4th century on the route Kruševlja Sviloš Beočin
3. Gradac Čerević Beočin

4.2.3 Tourist Events

The most famous manifestations of this type in the area of Fruška gora are: "Karlova grape harvest" in Sremski Karlovci, "Pudarski dani" in Slankamenac vineyards, "Pudarski dani" in Irig, "Banoštorski grape days" in Banoštor, "Wine days" in Rivica, "Sremska vinijada in Berkasovo", "Dani sliva" in Vrdnik, "Autumn is coming, my quince, the corn is already ripe" in Jazko, "Eggplant" in Neradin, "Gusanijada" in Shatrinci and "Bazaar of wines, tambourines and handicrafts" in Beocin (Stankov, 1994; Šikora, 2012).

The most famous artistic manifestation is certainly the "Brank's Circle" which takes place in Novi Sad, Sremski Karlovci and Stražilovo. In addition to this manifestation, there are several others, namely: "Assembly of Librarians of Srem" in Irig,



“Milicia u pohode” in Vrdnik, “Sremci od Sremac” in Čortanovci and “Beščanska Guitarriada” in Beška (Stankov, 1994; Šikora, 2012).

Ethnographic manifestations represented in this area are: “Maradička jesen” in Maradik, “Slankamenac” in Stari Slankamen, “Vidovdanski sabor” in Vrdnik, “Al’ se nekad dobro jelo baš” and “Kolo Srem” in Grgurevci (Stankov, 1994; Šikora, 2012).

There are some other manifestations of a sporting nature: “Fruškogorsk MTB Marathon”, “Karlova Karate Cup” and “Martial Arts Evening” in Sremski Karlovci, “Transformation Football Tournament” in Beocin and “Youth Cup in Fishing” also in Beocin (Stankov, 1994; Šikora, 2012).

The most famous religious event is the “Karlova Christmas festivities”, and there is also the “Egg Beating Championship” in Beočin and the “Easter Assembly” in Iriga.

4.3 EXISTING FORMS OF TOURISM ON FRUŠKA GORA

One of the forms of tourism that is most represented in the area of Fruška gora is excursion tourism. This is also the most represented type of tourism on Fruška gora, and the proximity of the large broadcasting centers of Novi Sad and Belgrade, as well as surrounding cities such as Sremska Mitrovica, Ruma, Inđija and others, contributes to this. It is believed that the first excursions began at the end of the 19th century, when the remains of Branko Radičević were transferred from Vienna to Stražilovo and a monument was erected there. Excursions on Fruška gora are most often places next to traffic roads, cultural and historical monuments and catering facilities. In addition to picnic areas, spaces are also being arranged from which you can enjoy beautiful views of the immediate and further surroundings, such as, for example, viewpoint above the Vrdnik settlement. The most visited picnic spots in Fruška gora include (Vidić, 2007):

- Popovica, located 5 km south of Sremska Kamenica, in addition to the weekend resort, has terrains for walking, running on forest paths and a 3,900 m long route - “Slavicina staza”;
- Artiljevo, located about 1.5 km southwest of Sremska Kamenica, includes a weekend settlement and recreation grounds;
- Glavica, 5 km southeast of Sremska Kamenica, has forest paths, spacious glades suitable for walking and viewpoints;
- Kamenički Park, located east of Sremska Kamenica, a well-known picnic spot for the people of Novi Sad, has outdoor playgrounds and restaurants with fish specialties;

- Stražilovo, located 4.5 km from Sremski Karlovac, with the grave of Branko Radičević, is the most visited in spring and autumn, and is the most visited excursion site of Novosađians (Ćurčić, 2002).

In addition to the mentioned, the most visited picnic spots also include Iriški venac, Brankovac and TV tower, and there are some other picnic spots that are being developed (Čortanovačka šuma, Partizanski put, Hopovo, Andrevlje, Testera, Ležimir and others).

Weekend tourism in the area of Fruška gora began to develop intensively in the sixties of the last century, especially in the territories of the municipalities of Novi Sad and Inđija. Then, due to the favorable material situation and good natural conditions, mass construction of cottages began in the entire area of Fruška gora, and especially in the areas of the mentioned municipalities. Today, there are over 19,000 registered holiday homes in the area of Fruškogorsk. Weekend resorts make the Fruško Gora destination a special aesthetic landscape unit, unique in the country. This type of tourism lasts from early spring to late autumn, and together with excursion tourism, represents the most massive form of tourist movement on Fruška gora.

Sports and recreational tourism has good conditions for development in the area of Fruška gora, primarily in the summer part of the year. Recreation is one of the basic activities that take place in the National Park in various forms. The “One-day walking tours” program was formed, consisting of organized thematic walks with an educational character led by an expert. They include the following units (Vujko, Gajić, Kovačević, 2012):

- Plant Kingdom - in the period from April to July, a walk through the forests and meadows of Fruška gora is organized, finding and collecting plants and determining plant communities, plants and natural values;
- Bird watching - includes a boat ride on the Danube and a walk in the forests of Fruška gora, with bird watching, their determination, a story about the specifics of bird life and the natural values of the National Park;
- The wonderful world of insects - a walk in the National Park, collecting insects, the basics of determination, a story about insects and the natural values of the National Park.
- Game reserve - a walk along the forest trails in the Vorovo hunting reserve, watching game and talking about the natural and cultural values of the Park.
- We hike together - throughout the year, the program includes a walk along marked hiking trails with a tour of several Fruška gora monasteries, as well as a story about the natural and cultural values of the National Park.

The hiking trails on Fruška gora lead through beautiful deciduous and partly conifer forests, across pastures and meadows. Some of the trails offer easy hik-

ing with gentle ascents, while others require more effort due to their length and elevation. Most of the trails are marked, which ensures the safety of park visitors that they will not get lost, as well as the possibility of reaching the mountain lodges (Vujko, Gajić, Kovačević, 2012).

Health (spa) tourism is represented in Vrdnik and Stari Slankamen. In Vrdnik, apart from the thermo-mineral waters that were the basis for the creation of the balneological center, there are a number of natural and anthropogenic values. The tourist attraction is followed by a receptive, communication, infrastructural and suprastructural basis that enabled this space to be turned into a health-balneological and recreational center. The resources on the basis of which the center was formed have a high value, and if the construction continues in continuity, it has the possibility to overcome the borders of Srem with its contractive zone and become a center of national importance. The spa in Stari Slankamen is the oldest spa in Vojvodina and is located on the territory of the Municipality of Inđija. There was a spa at the salt springs as far back as the Turkish era.

Cultural tourism in the area of Fruška gora is represented in several types: cultural-historical, religious, demonstration, museum, while educational and rural tourism are in their infancy. Religious tourism - Fruškogorsk monasteries are designated as priceless treasures of Serbian cultural and spiritual heritage. The most common tourist tours are tours of monasteries in different combinations and from different directions. Today, monasteries are spiritual centers and places of pilgrimage, but also tourist destinations registered as indispensable for school and professional excursions, foreign and domestic visitors and excursionists. These are tours intended for the most part for pupils, students and specialized groups that have a pronounced cultural and educational component. For pilgrim visits, the monastery's glories, relics of saints, miraculous icons, as well as springs in the monastery itself and in the surrounding area are important (Stankov, 1994; Šikora, 2012).

Cultural and historical. The Petrovaradin Fortress is certainly among the most visited and representative tourist attractions. On it, tourists mostly visit the Museum of the City of Novi Sad, restaurant and terrace, Lookout on the Bastion of Ludwig Baden, underground military galleries, artists' studios, galleries on the Fortress. The suburb of Tvrdava-Gradić, despite its great potential to become a thematic tourist zone, has not yet been adequately valorized. The other fortresses in Stari Slankamen, Berskov and Vrdnik are not prepared for tourist visits either. The cultural heritage of the Serbian people is the most important tourist product of Sremski Karlovac. Gradić is an indispensable stop for excursions and trips with a cultural and educational component. Landmarks and archaeological sites of exceptional importance have not been valorized for tourism, except for the Peace of Karlovac and the Tomb of Branko Radičević. In the past, the Monuments from NOB had exceptional attendance, especially the Monument on Iriško venc, Rohalj base and Jabuka. Today,

the Monument on Iriški venc is more visited, but not because of its cultural and historical significance, but because of its location and picnic area. The monument to Branko Radičević, which is located at the well-organized and famous Stražilovo picnic area, has the highest number of visitors. While the other cultural and historical monuments are not valorized for tourism and have no visitors. Museum. The Museum of the City of Novi Sad, founded in 1954, is located on the Petrovaradin Fortress. Among the museums and galleries visited in Sremski Karlovci are: The Treasury of the Museum of the Serbian Orthodox Church, the City Museum of Novi Sad - The Native Collection of Sremski Karlovci, the Živanović Family Beekeeping Museum, founded by Borivoje Živanović in 1968 (Davidov et al., 2008). The museum exhibit is also located within the Information Center on Iriški venac, with exposed natural and cultural values of Fruška gora and the National Park, although the museum part is rarely visited (Stankov, 1994; Šikora, 2012).

Event tourism. This type of tourism is extremely popular in the Fruško Gora area, and this is evidenced by numerous events that are held in settlements throughout this area. Those manifestations are, as already mentioned, economic, artistic, sports, entertainment, religious and ethnographic. The most visited events are certainly: the Karlovy Vary grape harvest, the Pudarski Days in Iriga, the Brankovo Kolo on Stražilovo, the Fruškogorsk Marathon and others.

Hunting tourism in the area of Fruška gora has an exceptional perspective for further development, and this is made possible by the very rich forest complex in which the most diverse species of game are found. The hunting grounds of the Fruška gora National Park cover an area of 22,420 ha and consist of a closed (Voro vo reserve) and an open part. The fauna is very numerous and diverse, and the most common hunted are: fallow deer, mouflon, wild boar, jackals, golden martens, pheasants, etc. It is also important for this type of tourism that the hunting grounds are accessible by road, they are reached by an asphalt road and all their points are easily accessible. The hunting ground is managed by JP “National Park Fruška gora”, and each inhabited place has its own hunting society.

Fishing tourism on Fruška gora is represented mainly on lakes, and above all on lakes Moharač, Sot and Bruja. Also, recently fishing has become more frequent on other lakes as well (Šatrinci, Šelovrenac, Jarkovačko, Dobrodol, etc.). All the lakes mentioned so far are very rich in fish (carp, catfish, perch, walleye, whitefish, etc.). On all lakes, a daily permit is payable, and there is also the possibility to buy caught fish. Fishing tourism is also very common on the Danube, especially in Čortanovci, Beška, Krčedin and Stari Slankamen. This is evidenced by numerous sports and ethnographic events that are related to this type of tourism and that have been held for years.

Bathing tourism exists on almost all the lakes of Fruškogora, but on a smaller scale because there are no larger organized beaches and no adequate infrastruc-



ture, so this type of tourism has mostly local and narrowly regional importance. It is also represented on the banks of the Danube, but the infrastructure and superstructure are at a very low level. By arranging the beaches and building additional facilities that would complete the stay at the bathing destinations, this type of tourism would surely gain more importance. Almost all lakes have relatively good traffic connections, and it is also a good thing for them that they are located not far from cities (Ruma, Sremska Mitrovica, Inđija, etc.).

4.4 ACCOMMODATION AND CATERING OFFER

The analysis of tourist traffic in a territory is a very important indicator of the overall development of the tourist activity, as well as its efficiency, i.e. profitability. Therefore, in this section, special attention will be paid to this segment. There are several interrelated and dependent indicators, which must be analyzed when it comes to tourist traffic. These are the number of tourists, the number of overnight stays and the average length of stay in a place, municipality, district, province or republic. Apart from numerical data, which make up a specific time series, in this case a ten-year (2011-2020), growth or decline trends, average annual rates, indices and other similar indicators can be clearly observed, which make this type of analysis meaningful and analytically complete.

In order to have a clearer insight into what tourism in AP Vojvodina is like in general within the framework of the Serbian tourist market and what share of the total tourist activities is realized on its territory in Table 3 a comparative overview of tourist traffic for the Republic of Serbia, AP Vojvodina and Belgrade, as the capital city and in terms of the number of inhabitants approximately equal to the same demographic parameters of AP Vojvodina, is given. In this sense, it should be said that in the last year before the corona virus pandemic, a little over 0.5 million tourist visits and 1.4 overnight stays were made in accommodation and catering units throughout Vojvodina. However, it should be borne in mind that this is only 15.2% of the total number of tourists in Serbia and 13.7% of all overnight stays in the Republic.

During 2019, 124% more tourists flocked to Belgrade and almost 95% more tourists stayed overnight than in the northern Serbian province - Vojvodina. The segment in which Vojvodina leads, in relation to Belgrade, is the traffic of domestic tourists, which is 30% more in the province than in the capital, while in the same territory there are 32.2% more overnight stays by domestic tourists than in the capital. When looking at the average length of stay, it should be said that Vojvodina is slightly better than Belgrade, where tourists spend almost half a day longer.

When the amount and type of tourist traffic in AP Vojvodina is known, it is possible to analyze the multi-year time series of data on the number of realized tourist

Table 3. Comparative analysis of tourist traffic in the Republic of Serbia, AP Vojvodina and Belgrade, for the year 2019.

2019.	Tourists			Overnights			Average length of stay		
	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign
Serbia	3689983	1843432	1846551	10073299	6062921	4010378	2.7	3.3	2.2
Vojvodina	561657	287419	274238	1384344	774143	610201	2.5	2.7	2.2
Belgrade	1258348	201770	1056578	2696832	524529	2172303	2.1	2.6	2.1

Source: Republički zavod za statistiku, Opštine i regioni (2020)

arrivals and overnight stays in the observed territory. What is quite clearly noticeable is the growth trend of both domestic and foreign tourist visits and overnight stays, which is an exceptional indicator of success in the regional framework. It should be noted that the average annual growth rate for the period 2011/2019. year amounted to 10.5%, and that the number of foreign tourists annually grew by 14.3% on average. When it comes to trends regarding overnight stays in registered catering establishments on the territory of AP Vojvodina, the indicators are approximately the same, namely 9.2% annual growth in the total number of overnight stays and 13.2% growth in the number of overnight stays by foreign tourists. The turnover of domestic tourists also grew, but at slightly lower rates than foreign ones, at an average rate of 7.7%, when it comes to tourists and 6.9%, when it comes to overnight stays by domestic tourists. Observing the period until the pandemic of the virus KOVID-19, there was a growth in index percentages (base), where the base year is 2011 of 194.1%, when it comes to the number of tourists and 182.9%, when it comes to the number of overnight stays. This means that in the observed period the number of tourists increased by 94%, and overnight stays by almost 83%. Taking into account the foreign factor in tourist traffic, it should be said that the number of foreign guests increased by an incredible 128.5%, and the number of nights spent by foreigners in the area of the northern Serbian province by 119%. However, although the number of tourists stay in Vojvodina grew, the average number of days they spent on its territory was constantly decreasing, from 2.5 days (2013) to 2.1 days (2018), which can be seen in Table 4. The average stay of domestic tourists is variable, but certainly longer compared to foreign tourists, and ranges from 2.5 to 3.0 days, with the ten-year record of 3.0 days achieved in “Covid” 2020, when the citizens of the Republic of Serbia spent their annual vacations to a greater extent in their home country, precisely because of the pandemic and reduced opportunities to travel abroad, as well as because of the fear of infection.

The municipalities that occupy a significant area of the NP “Fruška gora” and enrich its tourist offer are: Srem-

Table 4. Tourist traffic in AP Vojvodina 2011-2021

Vojvodina	Tourists			Overnights			Average length of stay		
	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign
2011.	289398	169401	119997	756723	478068	278655	2.6	2.8	2.3
2012.	296360	173465	122895	758981	462672	296309	2.6	2.7	2.4
2013.	347138	195281	151857	928606	554777	373829	2.7	2.8	2.5
2014.	371490	202908	168582	929604	548866	380738	2.5	2.7	2.3
2015.	413332	227291	186041	994314	583399	410915	2.4	2.6	2.2
2016.	446492	243439	203053	1123923	660016	463907	2.5	2.7	2.3
2017.	496625	269025	227600	1159845	684394	475451	2.3	2.5	2.1
2018.	538472	278516	259956	1314968	756832	558136	2.4	2.7	2.1
2019.	561657	287419	274238	1384344	774143	610201	2.5	2.7	2.2
2020.	268805	197468	71337	764948	587903	177045	2.8	3.0	2.5
Average	402977	224421	178556	1011626	609107	402519	2.5	2.7	2.3

Source: Republički zavod za statistiku, *Opštine i regioni (2012-2021)*

ski Karlovci, Irig, Beočin, Sremska Mitrovica, Indija and Šid. Therefore, in the next two tables, Table 5 and Table 6, the tourism traffic of those local governments will be presented and analyzed below.

Also, as in the previous case, the last ten-year series was taken into consideration, for which there are collected and published data of the Statistical Office of the Republic of Serbia, from 2011 to 2020. It should be said that, in all cases, tourist traffic generally grew by the end of 2017/2018 year, followed by a moderate decline in 2018/2019 and then a serious decrease in tourist traffic in 2020. We would like to mention that some municipalities in their territory in the initial year of the analyzed series did not have tourist visits, which ended with an overnight stay, or this was not statistically documented. Such were the municipalities of Sremski Karlovci and Beočin.

When it comes to local self-governments, which have an attractive tourist base related to natural tourist motives, such as Fruška gora, or anthropogenic values, such as churches, fortifications, monasteries, castles, etc., they managed to attract very different tourists and make tourist traffic not only more stable, but also growing. Of the municipalities shown in the above tables,

Table 5. Tourist traffic in the municipalities of Fruška gora 2011-2020

Municipality/ Year	Sremski Karlovci		Irig		Beočin	
	Tourists	Overnights	Tourists	Overnights	Tourists	Overnights
2011	0	0	14382	66053	0	0
2012	218	326	14647	72556	304	653
2013	5061	12288	24894	91928	2039	4247
2014	5390	14799	15512	62074	1896	3505
2015	6138	11556	20672	71086	2098	4335
2016	7219	12926	25400	105953	1982	4700
2017	7309	13664	31696	113882	2105	5003
2018	7856	13255	31155	112075	1889	5367
2019	6830	13481	31017	113734	1876	4721
2020	4058	6722	33372	102751	881	2013
Average	5008	9902	24275	91209	1507	3454

Source: Republički zavod za statistiku, Opštine i regioni (2012-2021)

the municipality of Irig stands out, both in terms of quantity and quality of tourist products and tourist traffic. It is a local self-government in the heart of the national park, which increasingly uses the positive circumstances of its natural and anthropogenic potential, especially warm mineral water. Other local governments, such as Sremska Mitrovica, Inđija and Šid, have a more peripheral position in relation to the national park and occupy its peripheral parts, but international roads E-70 and E-75 pass through their territory, which is why transit tourism has a significant share in total tourist traffic.

Table 6. Tourist traffic in the municipalities of Fruška gora 2011-2020

Municipality/ Year	Sremska Mitrovica		Inđija		Šid	
	Tourists	Overnights	Tourists	Overnights	Tourists	Overnights
2011	4395	11010	4015	17747	2077	4165
2012	3848	6955	2826	3968	1876	4106
2013	3385	6535	2211	16860	1438	3782
2014	2999	9761	1883	9415	1696	3775
2015	5179	13312	1838	3076	2193	5457
2016	4676	18583	2503	4762	3097	7137
2017	3560	7042	1652	4238	3524	10966
2018	3059	4843	1671	8891	2607	6536
2019	4248	8772	1712	6564	3363	6460
2020	2340	5911	1068	5664	2923	5565
Average	3769	9272	2138	8119	2479	5795

Source: Republički zavod za statistiku, Opštine i regioni (2012-2021)

Table 7. Tourist traffic and number of beds in Vrdnik 2011-2020

Vrdnik	Tourists			Overnights			Length of stay			Beds	
	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Average
	2011	14382	13428	954	66053	64201	1852	4.6	4.8	1.9	406
2012	9743	9050	693	64415	61822	2593	6.6	6.8	3.7	406	6.6
2013	16570	15095	1475	76962	72869	4093	4.6	4.8	2.8	404	4.6
2014	14481	12210	2271	59744	52911	6833	4.1	4.3	3.0	396	4.1
2015	18094	15404	2690	64741	57410	7331	3.6	3.7	2.7	398	3.6
2016	23577	19959	3618	100609	92258	8351	4.3	4.6	2.3	549	4.3
2017	28798	23783	5015	104136	91848	12288	3.6	3.9	2.5	549	3.6
2018	27814	22691	5123	102082	90361	11721	3.7	4.0	2.3	544	3.7
2019	28700	23249	5451	104881	91978	12903	3.7	4.0	2.4	540	3.7
2020	31594	28746	2848	93035	86722	6313	2.9	3.0	2.2	919	2.9
Average	21375.3	18361.5	3013.8	83665.8	76238.0	7427.8	4.2	4.4	2.6	511	4.2

Source: Republički zavod za statistiku, Opštine i regioni (2012-2021)

It was stated that the municipality of Irig stands out compared to other municipalities on Fruška gora. Apart from tourist traffic and the total tourist product, which has been developing very rapidly in recent years, this local self-government in the area of national park “Fruška gora” has two very distinct tourist sites (Vrdnik and Iriški venac), which should be given special attention in the analysis of tourist traffic, just like Sremski Karlovci, as the cultural and wine pearl of Fruška gora. Therefore, the listed tourist places will undergo a more detailed statistical analysis of the expanded indicators of the tourism industry.

Vrdnik is one of the most attractive tourist spas in Vojvodina, with a tradition of almost a hundred years. In the past ten years, the tourist product of the Vrdnik spa has not only become recognizable and stable, but with over 30,000 tourists and around 90,000 overnight stays, it is a growing and very significant tourist factor in Vojvodina. What should be taken into account here is the fact that the majority of tourists and statistically recorded overnight stays are domestic guests, while the share of foreigners is below 10%. However, the data on the total ten-year growth of tourists of almost 120%, and almost 200% of

Table 8. Tourist traffic and number of beds in Iriški venac 2011-2020

Iriški venac	Tourists			Overnights			Length of stay			Beds
	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	
2011	6958	5967	991	12057	10043	2014	1.7	1.7	2.0	198
2012	4904	4118	786	8141	6675	1466	1.7	1.6	1.9	178
2013	6555	5711	844	10356	8589	1767	1.6	1.5	2.1	128
2014	4522	3871	651	8562	7210	1352	1.9	1.9	2.1	245
2015	2578	2356	222	6346	5462	884	2.5	2.3	4.0	460
2016	2754	2569	185	7854	7257	597	2.9	2.8	3.2	471
2017	2898	2750	148	9746	9350	396	3.4	3.4	2.7	474
2018	3341	3264	77	9993	9691	302	3.0	3.0	3.9	513
2019	2317	2264	53	8853	8721	132	3.8	3.9	2.5	501
2020	1778	1778	0	9716	9716	0	5.5	5.5	0.0	543
Average	3860.5	3464.8	395.7	9162.4	8271.4	891	2.8	2.7	2.4	371.1

Source: Republički zavod za statistiku, Opštine i regioni (2012-2021)

foreign tourists, shows that the product is growing rapidly. The growth of overnight stays for domestic tourists amounted to 35%, while for foreign tourists it was an exceptional 240%, so it is rightly believed that the share of foreign guests will increase in the coming period. Also, the average length of stay is very good. In the year of KOVID-19, it was significantly shorter, 2.9 days, but in some previous years, it reached almost 7 days, when it comes to domestic tourists. The turning point in the development of the tourist place was in 2016 and 2020, when two large, highly categorized hotels with a variety of spa and wellness services were opened, which increased the number of beds by 126%, and whose attractive facilities led to significantly higher demand.

Another important tourist spot on Fruška gora is Iriška venac, with tourist tradition that dates back to the time between the two world wars, when the first hotel was built, which became the backbone of the further development of tourism. Although a very popular excursion destination, Iriški venac has been losing its residential character in the last ten years, and in this sense, the number of registered tourists and overnight stays in the heart of the “Fruška

Table 9. Tourist traffic and number of beds in Sremski Karlovci 2011-2020

S. Karlovci	Tourists			Overnights			Length of stay			Beds	
	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Domestic	Foreign	Total	Average
2011	0	0	0	0	0	0	0.0	0.0	0.0	0.0	165
2012	218	182	36	326	273	53	1.5	1.5	1.5	1.5	187
2013	5061	3302	1759	12288	8769	3519	2.4	2.7	2.0	2.0	211
2014	5390	3558	1832	14799	11650	3149	2.7	3.3	1.7	1.7	213
2015	6138	4377	1761	11556	8276	3280	1.9	1.9	1.9	1.9	273
2016	7219	5059	2160	12926	8181	4745	1.8	1.6	2.2	2.2	282
2017	7309	5372	1937	13664	9800	3864	1.9	1.8	2.0	2.0	274
2018	7856	5728	2128	13255	9663	3592	1.7	1.7	1.7	1.7	287
2019	6830	5035	1795	13481	9588	3893	2.0	1.9	2.2	2.2	285
2020	4058	3670	388	6722	5898	824	1.7	1.6	2.1	2.1	302
Average	5007.9	3628.3	1379.6	9901.7	7209.8	2691.9	1.8	1.8	1.7	1.7	244.2

Source: Republički zavod za statistiku, Opštine i regioni (2012-2021)

gora” national park is decreasing year by year. There is a drastic drop in domestic tourists in the period 2011 - 2020 of 74% and overnight stays of 19%, although the number of beds in the observed locality has been steadily increasing since 2014. It should be noted here that the ratio of domestic and foreign tourists is extremely unfavorable compared to foreigners and that it is on average 90/10% both in terms of the number of tourists and the number of overnight stays. The year of the Covid-19 pandemic caused the length of stay to increase to an incredible 5.5 days, which is twice the average, but also for foreign tourists to be completely absent.

When it comes to Sremski Karlovci, they represent a place of exceptional culture, tradition and spirituality, which is reflected in their architecture and overall cultural heritage. The problem of Sremski Karlovac, if it can be called a problem, and in terms of tourism development, is the fact that it is very close to Novi Sad and that it, like Iriški venac, is to a greater extent a picnic spot, and to a lesser extent a tourist destination, so the registered number of tourists and overnight stays does not in any way reflect the crowding on the streets of this baroque town of Fruško gora. The number of reg-

istered tourist beds is increasing from year to year, so it can be said that in the observed period from 2011 to 2020 there was a 135% increase in tourist beds. The number of tourists, domestic and foreign, as well as overnight stays, generally increases until 2019, when the Covid-19 pandemic leads to a drastic drop in foreign tourists and overnight stays of about 78%, and domestic ones by about 40%.

By looking at the trends in the number of beds, accommodation and catering establishments for the years marked as “critical” points, 2011 and 2020, we can analyze general indicators of the development of the tourism industry in the area of the national park “Fruška gora”. The general indicator is that the number of beds increased by 23% in the entire territory, but some local self-governments also experienced a decrease: Beočin (-120%), Inđija (-145%), Sremska Mitrovica (-160%), Šid (-7%), while on the other hand, Sremski Karlovci (83%) and Irig (142%) achieved an increase in basic indicators and the bearer of tourist capacity. It is interesting that the number of catering establishments is decreasing, while the number of accommodation units and beds is increasing, which indicates the construction of new accommodation facilities with a significantly larger capacity than the ones that existed, and for that reason they were closed. It should be noted that in 2020, out of the total number of accommodation establishments in the area of the municipalities that gravitate to the national park, only 6 of them were hotels, so that the number of beds in private households is a total of 294, which is 13% of the total number of beds in the observed area. It is interesting that in 2011 there were no registered beds in private ownership, which confirms the fact that the tourism economy is rapidly developing in the area.

Table 10. Number of facilities, rooms and beds in the municipalities on Fruška gora in 2011

Municipality	Beočin	Sr. Karlovci	Inđija	Irig	Sr. Mitrovica	Šid	Total
Number of facilities	2	2	11	5	6	7	33
Number of rooms	54	57	198	224	157	100	790
Number of beds	128	165	452	567	276	226	1814

Source: Republički zavod za statistiku, Opštine i regioni (2021)

Table 11. Number of facilities, rooms and beds in the municipalities on Fruška gora in 2020

Municipality	Beočin	Sr. Karlovci	Inđija	Irig	Sr. Mitrovica	Šid	Total
Number of facilities	1	3	4	6	5	6	25
Number of rooms	31	137	84	565	55	96	968
Number of beds	58	302	184	1372	106	212	2234

Source: Republički zavod za statistiku, Opštine i regioni (2021)

When it comes to the seasonality of tourist traffic, it is difficult to analyze the entire area of National Park “Fruška gora”, because there are no statistical data on it. Although it would be very interesting to look at when any of the tourist locations or places are more or less burdened by tourists and in that way plan future development, i.e. by stretching the tourist season to the months that are in the pre- or post-season, we only have such data for the Vrdnik spa for 2019. Like every other spa town in Serbia, Vrdnik also has a certain number of “guaranteed” tourists, receiving treatment through the Republic Health Insurance Fund - RFZO. In this sense, there are no major seasonal fluctuations. Better weather, which starts in April and the possibility of a longer stay in nature, brings an increase in the number of tourists and overnight stays, a trend that persists until the end of September, when traffic starts to decrease. It should be noted that in December, due to the New Year’s holidays, the spa is more visited than in January, February and March.

5

TOURIST VALORIZATION

Natural predispositions, cultural and historical heritage and the material base of Fruška gora are factors that influence the development of tourism. The most significant potentials and factors of tourism development in the area of Fruška gora and beyond are: tourist-geographic position, natural and cultural values, and tourist and hospitality facilities. Due to its position and height, Fruška gora dominates the Srem-Bač plain. It is provided comparatively, and numerous longitudinal and transverse directions permeate this space and connect it with the surrounding area and city centers: Novi Sad, Belgrade, Sremski Mitrovica, Šida, Rum, Šabac, as emitting centers of potential tourists. However, the state of arrangement and equipment of roads, as well as informative markings, do not represent a stimulating factor for development (Obradović, 2006).

Geological structure and geomorphological forms, large complexes of linden forests and mixed stands, hunting game, Fruška gora vineyards, more or less arranged picnic areas, represent natural values as a significant potential and sufficient incentive for the arrival of tourists to Fruška gora. The comparative advantage lies in the variety of space and its difference from the surrounding Vojvodina plain. However, the touristic value of most natural values is not at a satisfactory level. The state of arrangement and equipment of these areas for a more meaningful and therefore longer stay of tourists is such that it represents a limitation for the further development of tourism.

The most significant cultural values are located around the perimeter of the National Park: Fruškogorsk monasteries, Sremski Karlovci, Petrovaradin, ambient values of certain rural settlements and monastery prnjavors and individual cultural monuments. Unlike natural values, cultural values have achieved greater attractiveness and attendance in recent years.

The comparative advantage of cultural values lies in their variety, concentration and recognition in cultural and even tourist areas. A large number of buildings have been built on the entire Fruška gora, which serve the purpose of tourism. However, a number of facilities have closed or changed their original purpose. Their equipment, arrangement and functioning are not at the appropriate level. For this reason, there is no real, modern tourism on Fruška gora, and there are no adequate effects of its development. The degree of development of tourism does not

correspond to the possibilities that Fruška gora has, nor does it correspond to the requirements of tourist demand.

The current development of tourism in the National Park and in the wider area of Fruška gora has been in a downward trend for years. Once a very famous and favorite mountain and recreational area of Belgrade and Novi Sad, in recent years it has experienced not only stagnation, but also a constant decline in all tourist activities. The area of Fruška gora is neglected, insufficiently decorated and unmarked. The biggest problem with the current development of tourism on Fruška gora is that the carriers of its development are not clearly defined, and the users of that area do not bear the consequences of insufficient or inadequate use of the area. The modern tourist market requires concrete development programs, which offer attractive, specific and rare programs to curious and discerning tourists.

Among the activities that most often take place in the wider area of Fruška gora are:

- student and other organized excursions, i.e., tours of localities, such as “Stražilovo” and Fruškogorsk monasteries;
- tours of wineries (wine routes) and events in the field of culture;
- stay in schools in nature, maintenance of ecological camps and visits to picnic areas;
- sports and recreational activities (cycling, hiking, hiking for nature lovers and swimming in Fruškogorje lakes and reservoirs);
- rest and climate treatment in Banja Vrdnik;
- stay in rural households, farms and ethno-houses;
- hunting on the grounds of the “Fruška gora National Park” hunting area and fishing on the Fruška gora lakes and reservoirs.

5.1 POTENTIALS FOR THE DEVELOPMENT OF TOURIST CENTERS ON FRUŠKA GORA

The area of the primary center of tourist development “Iriški venac”, with its position in space, natural features and the existing offer of accommodation facilities and facilities for recreation needs, represents the potential for the development of tourism of special interests, i.e., the potential for development into a “center of special interests”. Special interest tourism with gentle activities (hiking, cycling, camping, etc.) and special interest tourism with rough activities should be developed as a priority in the observed area: mountain biking, zip line, ski trail, bobsleigh, free climbing, i.e. ensure the conditions for the construction of other facilities for adventure activities (possibility of organizing activities in the domain of special interests throughout the year, especially specialized winter sports activ-

ities: sledding, ski-bob, jumps, snowmobiling, tire descent, skiing in deep snow, paragliding, skeleton and other similar winter sports activities).

Apart from special interests, other tourism products can be developed:

- cultural and thematic tours: cultural and historical heritage;
- health and spa & wellness tourism: health and spa & wellness facilities; hotels etc. Accommodation facilities; gastronomy; entertainment, etc.;
- business tourism: hotels and other accommodation facilities; meeting rooms, exhibitions, etc.;
- gastronomy; entertainment and going out.

In the primary center of tourist development “Iriški venac”, provide conditions for arrangement and construction of attractions (eg theme parks, adrenaline facilities, etc.), visitor center, etc. In the primary center of tourist development “Iriški venac”, provide conditions for performing communal activities, the quality of which depends on the level of tourist offer and service. In the area of the primary tourist development center “Iriški venac” there is also the management center “Iriški venac”.

The area of the primary tourist development center “Banja Vrdnik”, with the existing health-treatment facility “Special Rehabilitation Hospital Vrdnik”, with the existing offer of accommodation facilities, sports-recreational and other contents for the needs of recreation and rehabilitation, represents the potential for the development of health and spa & wellness tourism, i.e. the potential for development into a “health tourism center”. In addition to health tourism, other tourism products can be developed:

- special interests with mild activities (hiking, cycling, camping, activities related to nature, etc.) and special interests with rough activities;
- cultural themed routes: monasteries, cultural and historical heritage, wine route, etc.;
- business tourism: hotels, etc. accommodation facilities; meeting rooms, exhibitions, etc.; gastronomy; entertainment and going out; and in this sense it is necessary to further develop this primary center.

In the area of the primary center of tourist development “Banja Vrdnik” there is a center of religious tourism “Manastir Vrdnik - Ravanica”.

The area of the secondary center of tourist development “Čortanovačka šuma”, with its position in space, natural features and the existing offer of tourist capacities and contents for the needs of recreation, represents the potential for the development of business tourism, tourism of special interests, ecotourism, manifestations and events, i.e. the potential for development in “business tourism cent-



er”. Business tourism should be developed as a priority in the observed area: accommodation facilities, gastronomy, meeting rooms, exhibitions, entertainment, etc. and equip with facilities for the development of special interest tourism with mild activities (hiking, cycling, camping, fishing, swimming and other activities related to water, etc.), i.e., provide conditions for the construction of other facilities for adventure activities (possibility to organize activities in the domain of special interests throughout the year). Apart from special interests, other tourism products can be developed:

- ecotourism: education; hiking; cycling; activities related to nature (excursions, spatial orientation, animal watching, etc.); camping, etc.;
- manifestations and events;

The area of the secondary center of tourist development “Stražilovo” with its cultural and historical heritage, cultural and sports manifestations and natural values, with its spatial position, the existing offer of content for recreation and accommodation facilities, represents the potential for the development of cultural tourism: cultural goods, culture, history, archeology and other characteristics of the rural area (cultural themed tours).

In addition to cultural tourism, this secondary center should also develop:

- tourism of special interests, with mild activities (hiking, cycling, camping, activities related to nature, horseback riding, etc.);
- tourism of special interests with rough activities: extreme/adventure (alternative) sports (adrenaline park, bike park, zip line, paragliding, hang-gliding, etc.), that is, provide conditions for the construction of other facilities for adventure activities (possibility to organize activities in the domain of special interests throughout the year);
- ecotourism: education, activities related to nature (excursions, spatial orientation, animal watching, beekeeping, etc.), camping, etc.

Points of extreme/adventure sports (alpinism, free climbing, paragliding, etc.) should be arranged in appropriate natural locations, with access from public roads, hiking and hiking trails ensured.

The area of the secondary center of tourist development “Brankovac” with its spatial position, the existing offer of accommodation facilities and facilities for recreation needs, represents a potential for development:

1. tourism of special interests, with mild activities (hiking, cycling, activities related to nature, recreation and outdoor and indoor sports, etc.);
2. tourism of special interests with rough activities: extreme/adventure (alternative) sports (adrenaline park, bike park, zip line, paragliding, hang-gliding, etc.);

ing, etc.), that is, provide conditions for the construction of other sports facilities with the possibility of organizing activities in domain of special interests throughout the year.

In addition to special interest tourism, ecotourism can also be developed in this secondary center: education, activities related to nature (excursions, spatial orientation, animal watching, beekeeping, etc.), camping, etc.

The area of the secondary center of tourist development “Letenka” with its spatial position, the existing offer of contents for the needs of recreation and accommodation capacities, represents the potential for development:

1. tourism of special interests, with mild activities (hiking, cycling, activities related to nature, recreation and outdoor and indoor sports, etc.);
2. tourism of special interests with rough activities: extreme/adventure (alternative) sports (adrenaline park, bike park, zip line, paragliding, hang-gliding, etc.), that is, provide conditions for the construction of other sports facilities with the possibility of organizing activities in domain of special interests throughout the year.

In addition to special interest tourism, ecotourism should also be developed in this secondary center: education, activities related to nature (excursions, orientation in space, animal watching, etc.), camping, etc.

The area of the secondary tourist development center “Andrevlje”, with the existing offer of accommodation capacities and contents and its spatial position, represents the potential for the development of business tourism (meetings, conferences and exhibitions/events) and ecotourism: education, hiking, cycling, activities related to nature (picnic areas, spatial orientation, animal watching, beekeeping, etc.), camping, etc.

In addition to business tourism and ecotourism, tourism of special interests can also be developed here, with mild activities (hiking, cycling, horseback riding and other activities related to nature) and in this sense it is necessary to further develop this secondary center.

The area of the secondary center of tourist development “Neštín”, with its cultural and historical heritage, manifestations, natural values and spatial location, represents the potential for the development of cultural tourism: cultural goods, culture, history, archeology and other characteristics of the rural area (cultural themed tours) and ecotourism: activities related to nature (excursions, spatial orientation, animal watching, beekeeping, etc.), camping, etc.



In addition to cultural tourism and ecotourism in this secondary center, it is necessary to develop tourism of special interests, with mild activities (hiking, cycling, horseback riding, water sports: fishing, swimming and other activities related to nature).

The area of the secondary center of tourist development “Lipovača”, with its natural values, spatial position and manifestations, represents the potential for the development of tourism of special interests, with mild activities (hiking, cycling, horseback riding, and other activities related to nature) and ecotourism: activities related to nature (excursions, spatial orientation, animal watching, beekeeping, etc.), camping, etc.

In addition to tourism of special interests and ecotourism, this secondary center will also provide conditions for the holding of manifestations and events.

The area of the tertiary center of tourist development “Kišnjeva glava - Ledinačko jezero” with its spatial location and created conditions represents the potential for the development of special interest tourism with rough activities: extreme/adventure (alternative) sports (adrenaline park, bike park, zip line, paragliding, etc. .), that is, it provides conditions for the construction of other facilities for adventure activities (possibility of organizing activities in the domain of special interests throughout the year).

In addition to special interest tourism with rough activities, it is possible to develop special interest tourism with gentle activities (hiking, cycling, camping, activities related to nature, horse riding, etc.) in this tertiary center.

Points of extreme/adventure sports (alpinism, free climbing, paragliding, etc.) should be arranged in suitable natural locations, with access from public roads, hiking and hiking trails ensured.

The area of the tertiary center of tourist development “Ležimir”, due to its spatial position and created conditions, represents the potential for the development of business tourism: hotels and others. accommodation facilities, meeting rooms, exhibitions, etc., gastronomy; entertainment and going out etc.

In addition to business tourism, tourism of special interests should be developed in this tertiary center, with mild activities (hiking, cycling, camping, activities related to nature, horseback riding, etc.).

The area of the tertiary center of tourist development “Erdevička Jezera and Banja Kulina”, with its spatial location and created conditions, represents the potential for the development of tourism of special interests with mild activities: hiking, cycling, horseback riding, camping, water sports: fishing, swimming and other activities related to water etc.

In addition to tourism of special interests, this tertiary center can also develop health and spa & wellness tourism: health and spa & wellness facilities, hotels and other facilities for accommodation, gastronomy, entertainment and outings, etc.

The area of the **tertiary center of tourist development “Lake Sot”**, with its spatial position and created conditions, represents the potential for the development of tourism of special interests with mild activities: hiking; cycling; horse riding; camping; water sports: fishing, swimming and other activities related to water, etc. In addition to tourism of special interests, this tertiary center also develops eco-tourism: education; activities related to nature (excursions, spatial orientation, animal watching, beekeeping, etc.) and others.

5.2 FRUŠKA GORA MONASTERIES AS CENTERS OF TOURISM DEVELOPMENT

Fruška gora monasteries, monuments of cultural and historical heritage and guardians of cultural heritage in this area are destinations where religious tourism is the most developed (tourism related to faith). The areas of religious tourism centers Velika Remeta Monastery, Grgeteg Monastery, Jazak Monastery, Mala Remeta Monastery, Bešenovo Monastery, Vrdnik-Ravanica Monastery and Šišatovac Monastery stand out for their pleasant and well-organized semi-natural environment. Next to these monasteries, monastic settlements were formed, from which the settlements of the same name later developed, and these centers also have the potential for the development of ethno tourism. In this sense, it is possible to plan contents such as: ethnic galleries, facilities in the function of gastronomy, facilities for the presentation of customs and old crafts, etc (Stankov, 1994).

The Velika Remeta monastery hosts a summer art school and an icon painting workshop. The monastery has a collection of about 1,500 books and they aim to establish libraries in the monasteries of Fruša Gora.

The Vrdnik-Ravanica monastery is known for the glory of the monastery, when the Vidovdan Assembly is held, a tourist-cultural event that aims to contribute to the preservation of the tradition and material and spiritual values of Vrdnik. During the event, special attention is paid to the traditions of folk customs and beliefs, as well as the presentation of folk culinary art, folk costumes, hand crafts, souvenirs, antiques, and local folk products. Due to its historical values and excellent location next to the state road of the second order and the existing offer in “Banja Vrdnik” (accommodation capacities, sports-recreational and other facilities for the needs of recreation and rehabilitation), the Vrdnik monastery has a special status as a center of religious tourism “Vrdnik Monastery - Ravanica “.



The center of religious tourism “Grgeteg Monastery” has great tourist potential, as an area where there is a unity of natural and architectural heritage, with a beautiful visual corridor, a stream that flows through the preserved monastery property, with an authentic brick bridge, preserved residential buildings and a geological-paleontological site. The icon of the Virgin of Trojeručica is located in the monastery, so the monastery is visited by many pilgrims. What sets the Grgeteg monastery apart from other monasteries in Fruška gora is that famous personalities are buried in the monastery cemetery, among which the famous Serbian historian Ilarion Ruvarac stands out.

The center of religious tourism “Krušedol Monastery” is about 2 km away from the National Park. The area has a favorable traffic-geographic position, because it is located near the intersection of the “Partisan road” with the important traffic route Novi Sad - Belgrade, which connects the monastery with these two city centers. Another important route is Krušedol - Irig, which enables connection with the Grgeteg and Veliki Remet monasteries, which are in the immediate vicinity, as well as with the wider area. Krušedol Monastery with the Church of Happiness and authentic buildings in its surroundings form an inseparable historical and ambient whole. Due to its historical and cultural role, the wealth of the monastery treasury and its relics, Krušedol Monastery is one of the most important monasteries at Fruška gora. For a time, the monastery was the seat of the diocese of Srem, and the first Serbian elective Church-People’s Congress in Hungary was held in it. The monastery houses the remains of members of the Serbian ruling family Branković, and among others, Patriarch Arsenije III Čarnojević, Princess Ljubica Obrenović and King Milan Obrenović are buried in the monastery.

Centers of religious tourism: “Staro Hopovo Monastery” and “Novo Hopovo Monastery”, “Petkovic Monastery” and “Kuvezdin Monastery”, “Đipša Monastery” and “Beočin Monastery” as isolated, but not inaccessible, still kept the natural environment and as such they should be preserved. In addition to devotee tourism, ecotourism should be developed in them: education, hiking, cycling, activities related to nature (animal watching, beekeeping, etc.).

Throughout history, the Novo Hopovo Monastery has had a great role among the Serbs in Vojvodina, not only religiously, but also culturally. The first school in this area was founded there, where Dositej Obradović lived and studied, and later became a monk.

Staro Hopovo Monastery is characterized by its isolation, “tucked away” in the forest and untouched nature in the surroundings. By the way, through the forest, some 200 m from the Staro Hopovo monastery, there is a spring of the same name. A stone chapel was built above the spring.

Beočin Monastery stands out from the garden on the south side of the monastery, where a small copy of the Versailles Park with a fountain and a pool in the middle was

arranged and built. The park has a protected status as a Monument to Garden Architecture “Beočin Monastery Park”. Above the park there is a chapel that needs to be preserved in its original form, and the park rehabilitated according to the conditions of the competent institutions for the protection of cultural and natural monuments.

In the contact zones of the monasteries, apart from the cultural-thematic routes (monasteries, cultural-historical heritage, wine route, etc.), rural tourism has been developed, where, in addition to cultural goods, the following can also be offered:

- local culture, history, archeology and other characteristics of the rural area (live as locals; farms; activities related to nature (picking fruits, grapes, medicinal plants, etc.), getting to know the folklore and customs of the local population;
- ethnotourism: ethno galleries, gastronomy, customs, old crafts, etc.;
- events: celebrations, conferences, etc.

In order for these centers to develop further together with the surroundings (contact zone), it is necessary to improve the existing and build new tourist infrastructure and superstructure (reconstruction / construction and arrangement of: access roads, parking areas, bicycle paths, hiking and hiking trails, public green areas and village squares, equipping with tourist signage, conversion of family residential buildings and holiday homes into tourist apartments and guesthouses, construction of camps, etc.).

5.3 SELECTIVE FORMS OF TOURISM THAT COULD BECOME BEARERS OF TOURISM DEVELOPMENT ON FRUŠKA GORA

Considering the natural resources that the mountain has, **ecotourism** should be one of the leading forms of tourism in the Fruško Gora area. It is especially important that the development of ecotourism on Fruška gora should be, not only a means to achieve the overall sustainable development of tourism, but also an adequate approach for repositioning Fruška gora as a tourist destination on the market by creating a desirable image of a mountain rich in natural and cultural-historical resources. However, the initiation of ecotourism is quite demanding, because such arrangements require the full commitment of those in whose jurisdiction they are (Stojanović, 2006). Fruška gora represents an almost perfect area for the development of this type of tourism, and it should be the basic guideline for the further development of tourism in the “Fruška gora National Park”. Basic determinants indicate that ecotourism:

- contributes to the preservation of biodiversity,
- maintains the well-being of the local population,



- includes interpretation and learning experience,
- includes responsible action on the part of tourists and the tourism industry,
- it is directed primarily towards small groups by small businesses,
- requires the least possible consumption of non-renewable resources, emphasizes local participation, ownership and entrepreneurial opportunities especially for the rural population.

There is really a lot of space for ecotourism in the Fruška gora area, and these would primarily be areas that are in the II degree of protection. This refers primarily to the Vorovo reserve, Čortanovačka forest, Krčedin caves and other similar places, which with their forest complexes offer exceptional opportunities for photo safaris as well as mountain biking. With an adequate development plan and, above all, the training of personnel for the implementation of this type of tourism, with the help of the state, all of the above would have a realistic basis to soon come to life on Fruška gora (Govedarica, 2001).

Rural tourism is directly related to the offer of ecotourism, although the offer of ecotourism is still a bit wider, although some of its basic principles such as a preserved environment, a healthy lifestyle and diet are offered within rural tourism. On Fruška gora, every inhabited place has something specific, something that makes it stand out from the others. There are numerous manifestations of different character that can complete the offer of the stay as well as the experience of the participants in rural tourism. The villages of Fruško Gora try to preserve their old culture and traditions, customs and way of doing business in this way. All this is very interesting for tourists coming from other regions. It is of great importance that various actions are being launched in the villages to try to revive rural tourism. In Neradin, a project was launched on the basis of which the establishment of an ethnomuseum is planned. Households are organized in Iriga to produce healthy food in ecological gardens. An ecological section was established in Becin. Several households in Jazak, Vrdnik and Neradin have established accommodation facilities, and ethnic houses also contribute to rural tourism. Neradin and Jazak are developing into rural tourism destinations that include preserved nature, ethnological heritage and the possibility of participating in daily village activities, as well as learning old crafts, fishing, hiking. Recently, farms and ethno-houses have been opened in some villages (Maradik, Krušedol, Vrdnik, Jazak, Krčedin, etc.). In order for rural tourism to take on the shape it should have, it is necessary to establish cooperation between the competent tourist organizations in the area of Fruška gora in order to make the offer unique and to set certain standards. Without good promotion and adequate marketing activities, this type of tourism cannot have wider regional significance.

Wine tourism in this area has a long tradition, and the wine and viticulture of Srem and Fruška gora is one of the oldest and most important in this part of Europe. Most vineyards are located around Novi Sad (Petrovaradin, Sremska Kamenica and Sremski Karlovci), around Stari Slankamen (Stari and Novi Slankamen, Slankamenački Vinogradi, Krčedin), Irig (Irig, Vrdnik), Erdevik (Erdevik, Bingula), Ilok (Ilok, Šaregrad) and around Čerević (Čerević, Beočin). There are over 60 cellars of private wine producers in the area of Fruško Gora. As an integral part of rural tourism, wine tourism can be the driving force behind the revitalization of rural areas. Strong points can be households that base their existence on wine production and that market their products through tourism. When it comes to rural tourism projects, the so-called wine routes, which refer to the offer of wine in wine cellars in a limited geographical area, marked by special maps, are experiencing increasing popularity in the world. The most famous wineries that can be, or are already included in this wine route are: Vinarija Kovačević and Mačkov podrum in Iriga, Vinoprodukt in Neština, the cellar of the Kuzmanović family in Čerević, the Bononia winery in Beočin, the Salaksija wine cellar in Rakovac, as well as numerous wineries in Sremski Karlovci (winery Opalić, Bajilo, Kiš, Dulka, Živanović and many others) (Lazić, 1982).

5.4 TOURIST ASSESSMENT OF NATURAL AND CULTURAL HERITAGE SITES WITHIN THE PILOT AREA FRUŠKA GORA

For the purpose of determining the preferences of Serbian tourists, a survey to calculate the Importance factor (Im) for all 35 subindicators in the assessment model (the survey was administered among Serbian tourists from January to March 2022) was carried out online. A total of 172 respondents were included in the survey through a snowball sampling approach. The results for the Im values are presented in the table below.

Table 12. The Im values for Serbian tourists for each subindicator in the assessment model

Nº	Indicators/Subindicators	Importance factor (Im)
Cultural values		
1.	Rarity	4.09
2.	Historical value	4.29
3.	Social value	3.90
4.	Number of visually attractive places	3.88
5.	Landscape and nature in the surrounding area	4.68
6.	Current state / degree of reconstruction	3.79
7.	Protection level	3.80



Nº	Indicators/Subindicators	Importance factor (Im)
8.	Vulnerability	3.70
9.	Carrying capacity	3.96
Natural values		
10.	Rarity	4.26
11.	Number of visually attractive places	4.00
12.	Landscape and nature in the surrounding area	4.54
13.	Current state	4.06
14.	Protection level	4.00
15.	Vulnerability	3.85
16.	Carrying capacity	4.02
Tourist values		
17.	Accessibility	3.97
18.	Additional natural values	4.05
19.	Additional anthropogenic values	3.87
20.	Vicinity of emissive centers	3.15
21.	Vicinity to larger tourist centers	3.13
22.	Vicinity of important roads	3.82
23.	Promotion	3.59
24.	Organized visits	3.13
25.	Vicinity of visitor centers	3.29
26.	Interpretive panels and content	3.89
27.	Visitor number	2.79
28.	Tourist infrastructure	4.27
29.	Tour guide service	3.88
30.	Accommodation service	3.94
31.	Restaurant service	3.87
32.	The degree of involvement of the local population in tourism	3.82
33.	Proximity of the site to an existing tourist route	3.55
34.	Suitable for special needs	3.05
35.	Site maintenance and arrangement	4.42

Based on the values of the importance factor (Table 12), Serbian tourists consider historical values, rarity and the landscape and nature in the surrounding area as the most important when visiting cultural heritage sites. When visiting natural heritage sites, the most important elements are also the landscape and nature in the surrounding area, current state of the site as well as the rarity of the site. When it comes to tourist values, the most important are tourist infrastructure, additional natural values and site maintenance and arrangement.

Based on the importance factor and the assessment carried out by the project team (Table 13), the results indicate that the Fruška gora monasteries have the highest cultural values (Figure 1 and 1a) mainly due to their historical and social significance.

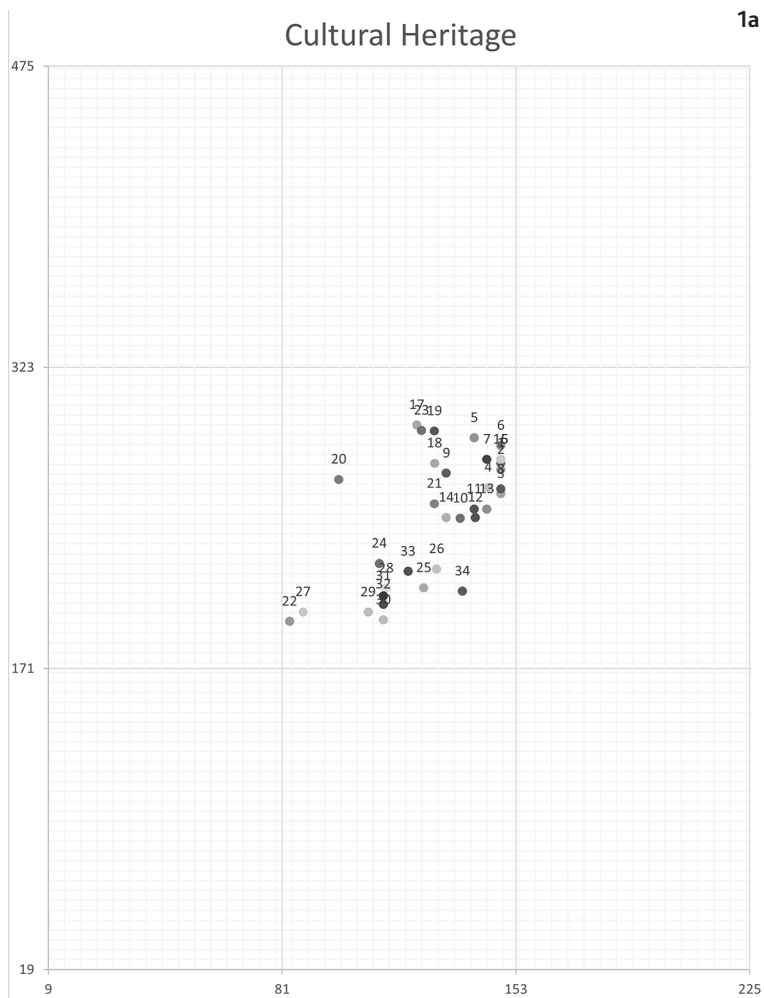


Figure 1a. and 1b. Location of analyzed cultural heritage sites in the two-dimensional assessment matrix

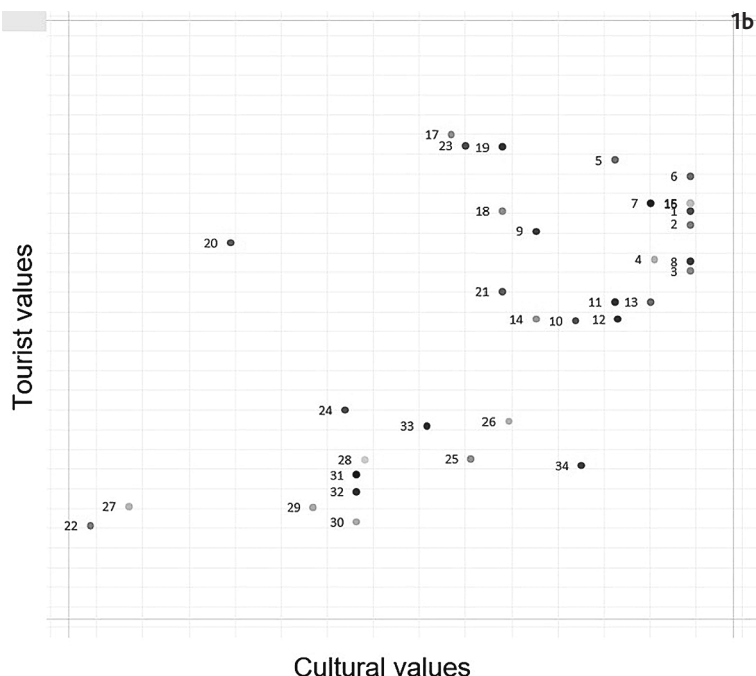


Figure 1a. and 1b. Location of analyzed cultural heritage sites in the two-dimensional assessment matrix

Table 13. Sums of cultural and tourist values of all analyzed cultural heritage sites

Nº	Site name	Sum of cultural values	Sum of tourist values
1	Monastery Velika Remeta	148.3313953	274.6337209
2	Monastery Grgeteg	148.3313953	271.2848837
3	Monastery Krušedol	148.3313953	259.1860465
4	Monastery Staro Hopovo	144.4476744	262.4127907
5	Monastery Novo Hopovo	140.1569767	287.4302326
6	Monastery Vrdnik	148.3313953	283.5348837
7	Monastery Jazak	144.0406977	276.5755814
8	Monastery Mala Remeta	148.3313953	261.6046512
9	Monastery Bešenovo	131.5755814	269.5290698
10	Monastery Šišatovac	135.8662791	246.75
11	Monastery Petkovića	140.1395349	251.5
12	Monastery Kuveždin	140.5465116	247.2267442
13	Monastery Đipša	144.0406977	251.5
14	Monastery Privina Glava	131.5755814	247.2267442

Nº	Site name	Sum of cultural values	Sum of tourist values
15	Monastery Beočin	148.3313953	276.5755814
16	Monastery Rakovac	148.3313953	276.5232558
17	Winery Kovačević	122.4767442	293.9883721
18	Winery Erdevik	127.9534884	274.6337209
19	Winery Deurić	127.9360465	290.8662791
20	Winery Mačkov podrum	98.45348837	266.4593023
21	Winery Salaxia	127.9186047	254.1744186
22	Winery Chichateau	83.30813953	194.7325581
23	Winery Veritas	123.9709302	291.1337209
24	Museum Sremska kuća	110.9244186	223.9825581
25	Villa Ravne	124.6395349	211.6976744
26	Vrdnik tower	128.6162791	221.2209302
27	Old church St. Đorđe	87.44767442	199.5232558
28	Anchoress of Isajja Parivodski	113.005814	211.4593023
29	Memorial site Rohalj	107.494186	199.4476744
30	Memorial site Lepinjica	112.1744186	195.5232558
31	Memorial site Jabuka	112.1744186	207.6104651
32	Memorial site Kamenolom	112.1744186	203.4011628
33	Branko's grave	119.7906977	219.9709302
34	Sloboda Monument	136.5465116	210.0174419

However, when it comes to tourist values, wineries have the highest scores mainly because of their infrastructure, accommodation, and restaurant services as well as promotional activities which are at a much higher level than the monasteries. Looking at the natural heritage sites, we can notice that the Fern Valley and Debeli Cer Quarry have the highest natural values but the lowest tourist values (Figure 2 and Table 14).

Table 14. Sums of natural and tourist values of all analyzed cultural heritage sites

Nº	Site name	Sum of natural values	Sum of tourist values
1	Dumbovački vodopad	115.0465116	193.9767442
2	Papratski do	131.3313953	190.5581395
3	Grgurevačka pećina	78.59883721	204.7848837
4	Kamenolom Debeli Cer	123.3197674	191.4883721
5	Orlove stene	115.0465116	201.3081395
6	Geološki lokalitet Grgeteg	106.7732558	241.4476744
7	Beli majdan kamenolom	114.9186047	233.2034884
8	Flišna serija Stražilovo	106.494186	210.377907

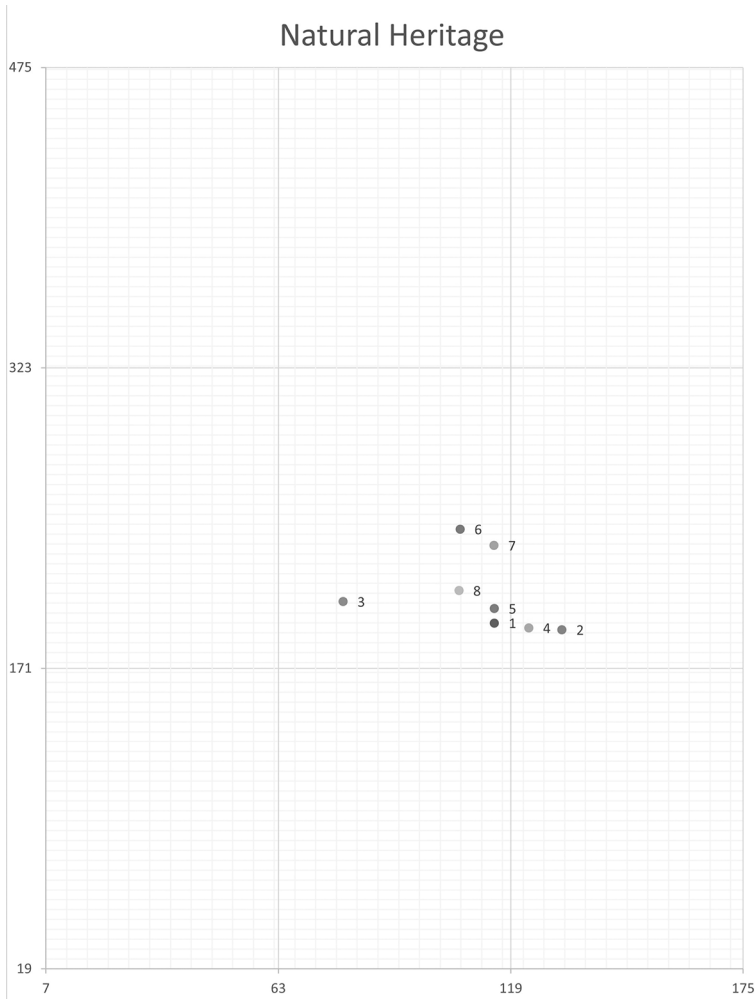


Figure 2. Location of analyzed natural heritage sites in the two-dimensional assessment matrix

This means that both of those sites possess the natural values and potential for tourism, but they are however neglected when it comes to tourist promotion, infrastructure, accommodation and catering facilities. Future tourism development should focus much more on these two sites as they are among the most attractive. Given the fact that Serbian tourists consider Landscape and nature in the surrounding area as one of the essential motives when choosing their destination, these two sites should receive much more attention in future tourism planning.

Looking at the final results (Figure 3) for the entire pilot area (destination), we can notice that Fruška gora National Park currently has medium natural, cultural and tourist values, and therefore further tourism development should be fo-

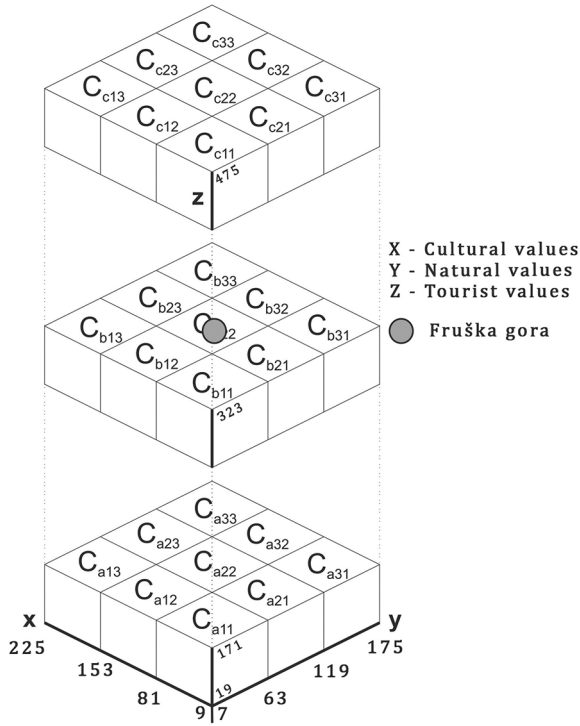


Figure 3. Location of the pilot area (Fruška gora) in the three-dimensional assessment matrix

cused towards improving the tourist values of the identified natural and cultural heritage sites, in accordance with the importance factor and the appropriate market segments.

6

SWOT ANALYSIS OF RESEARCH AREA

Based on an overview of all natural and created conditions and an analysis of the potential and limitations in the scope of the Spatial Plan, the positive and negative sides of the protection and development of the special purpose area, for which a swot analysis was given, were summarized.

STRENGTHS

- Wealth of natural values (natural goods and resources), cultural heritage and landscape diversity in the special purpose area;
- Cross-border cooperation in the field of nature protection;
- Large areas under the forest that have a positive effect on the recognizable image of the landscape and microclimatic characteristics;
- Favorable traffic and tourist location of the National Park;
- Natural assets and rich cultural and historical heritage as a basis for the development of various forms of tourism;
- Relatively dense road network of state and municipal roads;
- The Danube River as an international waterway - Corridor VII in the immediate environment of a special purpose;
- International cycle corridor 6 along the Danube and national cycle corridors along the slopes of Fruška gora;
- Significant areas of agricultural land in the function of viticulture and fruit growing;
- Preservation of agricultural land that provides a chance for the production of top quality organic agricultural products with protected geographical origin;
- The wealth of the area with surface and underground water and
- Infrastructural equipment of the space.

WEAKNESSES

- Usurpation of the National Park space by unplanned construction;
- Degraded land in the area of the National Park and in its surroundings, caused by the exploitation of mineral resources and inadequate disposal of waste;

- Fragmentation of natural habitats in the surroundings of the National Park, which negatively affects the recognizable image of the landscape;
- Devastated objects of cultural heritage and their immediate surroundings;
- Insufficient and inadequate tourism valorization and presentation of natural, cultural and created values and inadequate material base for tourism development;
- Inadequacy of the traffic network in terms of quality, condition, construction and equipment of traffic capacities;
- Non-integration of traffic modes and lack of institutional coordination;
- The absence of traffic connections between individual settlements in the National Park and its immediate surroundings;
- Insufficient construction of facilities for the regulation of watercourses and torrents and
- The unresolved issue of wastewater treatment and waste elimination.

OPPORTUNITIES

- Provision of spatial conditions for sustainable (balanced) development of the National Park area;
- Connecting fragmented habitats with the aim of preserving biological diversity and the connection with the National Park in the process of joining the European ecological network NATURA 2000;
- Affirmation of Fruška gora as a unique “Cultural area” with a specific and concentrated fund of cultural heritage;
- Arrangement of geoheritage sites in order to present them and include them in the network of geoparks;
- Preservation of the basic character types of the landscape, for the purpose of presentation and promotion of the landscape values of Fruška gora;
- Development of integrated (multimodal) traffic;
- Tourist positioning of the area of Fruška gora;
- Revitalization of cultural assets and intangible cultural heritage and their presentation as a unique tourist product;
- Provision of spatial conditions for the development of tourist infrastructure in order to improve the tourist offer;
- Involvement of the local population in the development of traditional ways of using space and the development of ecotourism;
- Valorization of agricultural products obtained from this area, through certification and branding;
- Protection of agricultural land through the application of anti-erosion measures;



- Coordination of research and exploitation of mineral resources with measures to protect natural resources and protect the environment;
- Recultivation of degraded areas by bringing them back to their former state or repurposing the areas;
- Provision of planning measures for the protection of forest, agricultural and water land from illegal construction and measures for the rational use of space and
- Greater use of OIE (biomass, hydro potential of watercourses, reservoirs, solar energy).

THREATS

- The devastation of the natural values of the National Park caused by adverse climatic and anthropogenic influences;
- Slow dynamics of restoration of immovable cultural assets, which contributes to their continuous deterioration;
- Insufficient investment in tourism;
- Non-implementation of completed tourism development programs;
- Reduced stability of sloping terrain and active landslides where there are certain restrictions on use (ban on construction, obligation to reforest);
- Abandoned and active surface mines for which protection measures should be provided with limited access until they are put to use;
- Negative impact of untreated municipal wastewater and filtered water from unorganized landfills on natural resources;
- Occurrence of torrential water, flooding and damage in settlements and communication facilities;
- Soil pollution due to inadequate application of chemical protection agents and agrometers in agriculture and
- Possible accidents at facilities in the wider environment of the special purpose area.

7 GENERAL AND OPERATIONAL GOALS OF THE SPATIAL DEVELOPMENT OF FRUŠKA GORA

The general goals of the spatial development of the area, which result from the adopted goals and determinations of the spatial development of higher-order plans, the adopted strategies and the specificity of this area in the spatial-functional sense, are:

- Protection and sustainable use of natural and cultural values in the function of tourism development, recreation, education and other complementary activities;
- Valorization, protection and presentation of immovable cultural heritage, arrangement of its protected environment and contact area, protection and presentation of intangible heritage as an integral part of architectural heritage and natural environment;
- Identification of landscape elements and preservation of the diversity and value of the landscape;
- Preservation of the specificity and ecological connection of the space;
- Achieving rational organization and arrangement of space, by harmonizing its use with the possibilities and limitations in the disposal of natural and created values and with the needs of long-term social and economic development;
- Defining the way of using construction land in accordance with the conditions of nature protection;
- Protection, rational use and improvement of the state of agricultural, forest and water land and flora and fauna population;
- Ensuring adequate prevention, minimization, monitoring and control of all forms of pollution.



The operational goals are:

- Improvement and improvement of general ecological conditions in protected areas, especially in the area of the National Park and creation of conditions for their use in accordance with the conditions of protection;
- Protection and preservation of biodiversity through spatial planning solutions that protect natural assets;
- Creation of conditions for improvement and presentation of the value of geodiversity - geoheritage objects, in order to be included in the European and global network of geoparks;
- Improvement and improvement of general ecological conditions in the area of habitats, areas planned for protection and ecological corridors, in order to create conditions for the development of specific functions, in accordance with the conditions of protection and sustainable development;
- Valorization of the observed area in order to recognize the Fruška gora area with monasteries and other tangible and intangible cultural heritage as a cultural area, with characteristic features derived from its natural configuration and human activities, in order to determine the long-term concept of protection, preservation and presentation of the planning area;
- Protection, arrangement and presentation established and intended for the protection and preserving the authenticity and their original environment;
- Protection of cultural heritage from all forms of uncontrolled construction;
- Inclusion of cultural heritage in European and national cultural paths;
- Establishing local and regional identity in accordance with European protection standards, where cultural heritage is a development resource;
- Repurposing of some valuable, historical buildings and their integration into the modern living environment;
- Tourist interpretation of immovable and intangible cultural heritage;
- Protection, arrangements and development of the landscape through the preservation of the original features, identity and diversity of the landscape and affirmation of the recognized values of the character of the landscape types, strengthening their structure and mitigating influences that disrupt their stability;
- Ensuring the basic guidelines of the landscape policy in terms of defining the strategy and guidelines that will enable measures to be taken in order to protect and manage the landscape;
- Provision of operational activities related to the management of the landscape as the bearer of the local and regional identity of the area, which will refer to procedures that will ensure regular maintenance of the character of the landscape with the aim of directing and harmonizing changes caused by social activities and processes in the environment.

8 VISION, MISSION AND GOALS OF TOURISM DEVELOPMENT OF RESEARCHED AREA

The gentle mountain landscape with a valuable natural complex between the two rivers Danube and Sava, pleasant, moderate and seasonally nuanced climate, rich flora and fauna, monuments of culture and heritage, multiculturalism and rich event content should attract tourists not only from the country but also from a wider European environment.

Based on the conducted research, the main advantages of the destinations of the municipalities in the area of Fruška gora and the national park can be seen. They can be divided into several basic groups:

- favorable location and good traffic connections,
- the mountain represents one of the most important tourist destinations in numerous plans and strategies,
- multiculturalism, multiethnicity and multiconfessionalism - represented by the centuries-old coexistence of several peoples and ethnic groups (with examples of intercultural mixing of peoples and ethnic communities),
- preservation of the original features of Pannonian-type rural settlements (morphology, internal and external physiognomy, appearance),
- wealth of national heritage and folklore - customs, costumes, diet, dialects, handicrafts,
- the interest of the local population, cultural institutions and prominent individuals in the development of sustainable forms of tourism,
- rich cultural heritage, cultural values and goods, many of which are under protection, but also those that should be put under a certain form of protection and certainly in a touristic function.



8.1 VISION

On the basis of the mentioned advantages, it is necessary to compile a picture of the future development of tourism and the position of the desired state (vision). The vision should also include the definition of basic strategic strongholds. Each destination must also determine strategic strongholds:

- Integration of municipalities into one tourist destination that would be divided into zones. In the development of tourism so far, the municipalities have acted mostly separately. Given that they are connected by the National Park, which is also their main tourist attraction, it is necessary to integrate tourism through joint management, propaganda and monitoring. That is why it is necessary to use the name NP Fruška gora or Srednje Dunavlje more seriously in marketing.
- Integration of the offer of sustainable forms of tourism. The basic tourist values of the municipalities are nature, rich cultural heritage and impressive multiculturalism of urban and rural settlements. In the future, it is necessary to integrate these values into a unique offer of tourism.
- Active participation of local communities. A scenario in which the local population does not participate and does not contribute to the development of tourism is not according to the standards of sustainable development. The population of all urban and rural settlements must be included according to the principle of (1) interactive participation or (2) self-initiation and association. In the first case, the population takes part in joint analyses, development of an action plan and creation of local associations. In the second, the population takes actions independent of external factors. External institutions are necessary only for the purpose of obtaining advice.
- Successful destination management. It must include a management concept in which all stakeholders will be represented. In addition to tourist organizations, hotels, owners of private accommodation, cultural and artistic societies, owners of ethno-houses, owners of private museum collections, prominent individuals (authorities) and representatives of all national communities belong here.
- Application of indicators of sustainable tourism. Application of indicators of sustainable tourism is the guarantor of the sustainability of the Fruška gora tourist destination. Indicators of sustainable tourism must be selected according to the type of destination and tourist activities. They must integrate a set of indicators for (1) destinations with natural landscapes and ecologically sensitive sites (2) rich cultural heritage and protected cultural assets (cultural monuments) and (2) destinations with traditional communities of the local population.

This vision was presented to the professional public, local institutions and the local population. Based on the accepted vision, it is necessary to carry out repositioning in the direction of the future development of tourism.

8.2 MISSION

The mission of tourism development in the future period is based on the following scheme.

The present

- Insufficiently recognizable destination,
- Unsatisfactory degree of inclusion of cultural values in the tourist offer, insufficient attention paid to the preservation of cultural values,
- Unsatisfactory degree of preservation of intangible heritage,
- Unsatisfactory level of cooperation among stakeholders.

The future

- A recognizable tourist destination,
- built image,
- Satisfactory tourist signage,
- Developed tourist propaganda that emphasizes cultural values, joint institutions of culture and tourism,
- Reliable and effective cooperation between all stakeholders in the field of development.

The main task of this strategy is to show that tourism can be one of the development activities of rural areas. In order for this task to be accomplished, and the mission fulfilled, it is necessary:

1. to break and remove the general disbelief that tourism makes sense so that it can bring significant and measurable benefits (education about sustainable forms of tourism, building trust among stakeholders and promoting positive results).
2. to convince those potentially interested in investments - that tourism is a unique development opportunity and to awaken the desire and motivation of people to engage their maximum energy and capital in the development of the tourism industry.
3. to objectively measure the value of resources and present quantitative indicators that tourism is desirable and possible (examples of good practice in regions with similar characteristics and promotion of positive results).

4. to determine the direction of development in this environment, but also to indicate possible detours in the development of tourism as a worldwide socio-economic process and a phenomenon in strong ascent and growth, which is also one of the key factors of the planned economic and social transformation of the area of Fruška gora mountain and the National Park itself.

8.3 TOURISM DEVELOPMENT GOALS

Based on conducted desk and field research and in communication with the relevant stakeholders in the area of Fruška gora, the following main goals of tourism development in this destination are identified:

- To preserve natural and cultural heritage in the area of Fruška gora and use it to create authentic tourist experiences in line with the sustainable tourism development
- To implement policies on national, regional and local level to promote sustainable tourism
- To enhance competitiveness of Fruška gora as a tourism destination on national, regional and European tourism market
- To inspire policy makers as well as local tourism service providers and tourism companies to incorporate sustainable tourism practices/principles into policy and financing frameworks
- To provide socio-economic benefits for local communities in the area of Fruška gora.

9 ACTION PLAN

During the stay in the field of NP Fruška gora, by studying the literature and various strategic documents (spatial plan, master plan, marketing strategy, etc.), then based on discussions with stakeholders during 6 separate workshops, consultations with authorities from municipalities and tourist organizations from the area of Fruška above, and based on the results obtained through the evaluation of examples of good practice and the valorization of natural and cultural heritage, we propose the following 5 short-term action plans with their activities. The general goal of these activities is to improve the quality of the supply of all available resources in the area of NP Fruška gora and beyond (on the territory of the entire mountain massif).

Activities should initially be financially supported by local self-governments, provincial institutions and secretariats and competent ministries, as well as through various cross-border cooperation funds and international projects (IPA, Interreg, Erasmus+, etc.). After that, a model can be defined that will achieve the self-sustainability of the activity in an economic and any other sense.

The persons responsible for implementation and monitoring should be individuals, enthusiasts, employees of the Fruška gora National Park, tourism workers from tourist organizations of all municipalities on the territory of which the National Park is located, civil servants dealing with the economy, tourism, protection of natural and cultural heritage, and certainly and the civil sector. It is necessary to refer specifically to the promotional activities of the entire area. We need to invest more in marketing - digital marketing, e-mail marketing, social networks. Every service provider should have a FB page, Instagram profile and YouTube channel, TikTok, etc. It is also very important to communicate with the media, invite entrepreneurs who are engaged in the same business, visit examples of good practice in other parts of Serbia and the region, and join associations that have greater accessibility to those who are decision makers.

It is important to permanently connect service providers of all kinds with tourist organizations, associations, associations that can help in the process of better visibility that leads to better placement of products and services on the market.

ACTION PLAN No. 1

Name: *Construction of the Geopark on Fruška gora.*

Specific goal: Presentation (interpretation) and promotion of internationally important geoheritage objects and all other natural and cultural-historical landmarks.

Deadline: 3 years are required for the realization of this activity.

Description of the implemented activity: All activities would be aimed at informing the general public about the various natural and cultural values of the given area through the development of tourism with the aim of improving the social status of the local population, encouraging their economic development and improving the protection of natural and cultural heritage. The future geopark would have an outdoor and indoor gallery space, a souvenir shop, a wet area and a restaurant.

The European network of geoparks was founded in 2000 and currently includes 71 areas in 23 countries. UNESCO's global network was founded a few years later, in 2004, and includes 140 areas around the world, including European geoparks. An unpolluted environment, a variety of natural resources, especially geological, attractive landscapes, a wealth of flora and fauna, numerous cultural and historical sights, kindness and hospitality of local residents are the main features of this mountain. The area of Fruška gora has the possibility of becoming a unique outdoor laboratory - in nature - where the geological, ecological and civilizational history of this part of the Balkans and Southeastern Europe will be presented and interpreted to visitors.

Outcome: Contribution to the development of tourism and service activities, promotion of geoheritage in the process of educating the youth, greater traffic and better income from the visit of domestic and foreign tourists, as well as the protection of geoheritage objects.

ACTION PLAN No. 2

Name: *Application for online payment of the fee for the use of the protected area.*

Specific goal: In accordance with the Law and with the consent of JP "National Park Fruška gora", the collection of annual and/or daily usage fees should be increased, which would more effectively and favorably implement obligations under the Law on Fees for the Use of Public Property.

Deadline: 6 months are required for the realization of this activity.

Description of the implemented activity: By creating the application, it would be achieved that there would no longer be a need for someone to search for information about who needs and where to pay a very modest monetary compensation for the use of public goods. With the help of an application that enables payment by card or the transfer of funds from the account to the account of JP NP Fruška

gora, time is saved, the fulfillment of the obligations prescribed by law and help JP NP Fruška gora can further use the collected funds for the improvement of the protected area, arrangement and revitalization of picnic areas, trails and picnic furniture. The application would be free and could be installed on any Android and IOS phone or other device - tablet, laptop.

Outcome: Greater collectability and a larger amount of funds that will be paid into a dedicated account and used for the protection and improvement of the protected area, arrangement and revitalization of picnic areas, trails and picnic furniture.

ACTION PLAN No. 3

Name: *Digital map with marked hiking trails based on GPS.*

Specific goal: To make it easier for tourists and everyone who likes to hike and hike on Fruška gora to find their way around the area, to move more easily from one destination to another along the marked hiking trails.

Deadline: 1 year is required for the realization of this activity.

Description of the realized activity: Creating a digital map that would be used via Android and IOS devices would encourage hiking and mountaineering on Fruška gora. It has been scientifically proven that recreation, relaxation, hiking encourages movement and a more pleasant bioclimatic factor. There is relief of mental fatigue, feelings of aggression, improved attention, lower blood pressure, lower cholesterol levels, lower levels of depression and stress, and recovery after surgery.

Outcome: Digital maps that could be used for a nominal fee for an unlimited period. They would enable easier movement and data on height profiles so that everyone could assess in advance which route they would take in relation to their psycho-physical abilities. And it would reduce the possibility of someone getting lost, getting hurt or losing strength to reach the final destination, which happens in mountainous areas.

ACTION PLAN No. 4

Name: *Establishment of a regional office for support in writing international and cross-border cooperation projects.*

Specific goal: To, with the support of the regional agency, educate and train people in the municipalities who could participate in writing and implementing projects.

Deadline: 1 year is required for the establishment of the Regional Agency.

Description of the realized activity: The work of this agency and its services are necessary for securing financial resources for investments in infrastructure, human resources and other necessary areas that would lead to the development of tourism and better preservation, promotion of natural and cultural heritage. Ser-

bia is in the pre-accession phase of joining the EU, and in the years to come, more and more opportunities will open up to withdraw funds from various European funds.

Outcome: A significant number of trained staff who could enable a greater number and continuity in obtaining international projects - infrastructure and others aimed at raising the capacity of human resources and all the necessary elements for more successful protection and promotion of the heritage of NP Fruška gora.

ACTION PLAN No. 5

Name: *Establishment of an office to monitor progress in the implementation of projects in the fields of agriculture, tourism, protection and promotion of natural and cultural heritage.*

Specific goal: To form a group of experts for the key areas of development of the NP Fruška gora - protection, tourism and catering according to the concept of sustainability, agriculture, promotion of natural and cultural heritage (conservation, revitalization, reconstruction).

Deadline: 1 year is required for the realization of this activity.

Description of the implemented activity: Within the office, there would be working groups of experts for all municipalities in Srem, and especially in those that include the territory of the protected area of the NP Fruška gora. Experts would meet regularly to exchange information on current projects and their progress, as well as on development plans in certain municipalities, which would lead to better cooperation and exchange of ideas of interest to neighboring municipalities. In the same way, experts would report on the situation on the ground, and through this type of business, residents of several municipalities were encouraged to join together and, through joint efforts, lead to an increase in the number of tourists and the development of other economic activities.

Outcome: Passive experts who have not had the opportunity to demonstrate their knowledge and experience in practice would be activated. Joint products would be created and a greater number of products and services would be designed, from which the neighboring municipalities would have multiple benefits. Likewise, new experts would be trained who would further help new providers of services and products to devise a way to better market themselves while the NP area remains protected and protection zones and other measures to preserve natural and cultural heritage are respected.

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