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SPATIAL PLANNING IN SERBIA: TOURISM DEVELOPMENT BASED ON WATER BODIES IN PROTECTED AREAS

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Abstract. Water resources such as rivers, lakes and even wetlands have always been elements that enrich an area and, in addition to undeniable ecological functions, they represent powerful attractions for tourists. Strategically valuable and ecologically significant water bodies are often simultaneously aesthetic jams in the landscape. For their multiply values, it is clear that planning of their use and protection requires careful and formalized actions in a form of public policies. Spatial purpose area spatial plans in Serbia represent one of the mechanisms for the protection of water resources, but also a tool for bringing added value through their use in the purpose of tourism development. This paper focuses precisely on the review of spatial plans that regulate the use and protection of water resources under constitutional state protection in Serbia. Therefore, the water bodies that are a central element of the spatial plans are the case studies – Uvac Special Nature Reserve (Uvac River and Zlatar, Radoinja and Sjenica reservoirs), Đerdap National Park (Danube River and Đerdap reservoir), Tisa River Multifunctional Ecological Corridor and Vlasina Outstanding Natural Landscape (Vlasina River and Vlasina reservoir). The application of this method is expected to reveal connections between water protection and tourism development. In the other segment, this research addresses nature/water protection and tourism development measures, hence commenting on their synchronization or contradiction. The results have shown that balancing between protection and development remains a challenge where the existence or absence of spatial planning documents does not cause that much damage to water bodies ecological functions as much as negligence of prescribed measures or their misinterpretation. Spatial plans in Serbia are rather united in protection and development measures for protected areas, but still always addressing specifics of each area individually.
Keywords: water tourism, water bodies, protected areas, spatial planning, Serbia

1.INTRODUCTION

A proclamation of the protection status of an area makes the area automatically attractive for visitors (Štetić & Trišić, 2018). Absolute nature conservation without any human activities allowed might be considered irrational from the human perspective. Enjoying visual stimulation, taking benefits out of a clean environment and finding economic benefits from selling these products give the natural environment an added value (Folgado-Fernández, 2019). However, the overuse of natural values might lead to irreversible damage in the process of perusing only economic benefits (Krunic et al., 2017; Pobihun et al., 2021). Therefore, the natural heritage, including water bodies, needs to be properly managed.

However, protection does not have to be in a form of absolute restriction of human activities in protected areas (PA). Moreover, except for specific and small portions of areas, there are cases where strict prohibition produces reverse effects such as poaching, biotope damaging or conflicts between the local population and PA management (Rastegar, Driml & Breakey, 2012). Tourism is widely accepted as one of the most complementing economic activities in PA, for which it was often claimed that could even improve local population attitude towards the environment because tourism attractiveness is correlated to nature quality (Rastegar, Driml & Breakey, 2012; Štetić & Trišić, 2018; Folgado-Fernández, 2019).

The desirable approach of water tourism development in protected areas is sustainable development (Štetić & Trišić, 2018; Danilović Hristić, Stefanović & Milijić, 2020; Pobihun et al., 2021). The balancing between ecological, economic and social aspects is to be set so that limitations in the use of water as a resource are accepted by stakeholders (Ćwikła, 2019; Pobihun et al., 2021). The awareness about the importance of the

water is not always sufficient (Folgado-Fernández et al., 2019), therefore, the call for research and practice with this regard is even more valuable, particularly having in mind that the success of environmental elements is positively related to the level of touristic attractiveness (Stojanović, Lazić & Dunjić, 2018).

Urban and spatial planning are seen as the main tools in solving the conflicts between the use and preservation of water as a resource. Planning for protected areas is specific in comparison to unprotected areas, and as they are physically isolated from high-density areas and administrative centres, they are more vulnerable and exposed to illegal interventions in space (Pantić, Milijić & Živanović Miljković, 2018; Pantić, Živanović Miljković & Milijić, 2019). Touristic destinations are usually in high demand of water (Foris & Pleşca, 2017), which is one of the possible negative impacts on the environmental values of an area. However, it is stated that responsible collection (and interpretation) of data, involvement of various stakeholders in the planning process, creation of a strategic environmental assessment and a holistic approach, in general, can significantly contribute to the sustainable development of a protected area (Maksin et al., 2016; Krunic et al., 2017; Liburd & Becken, 2017; Danilović Hristić, Stefanović & Milijić, 2020).

Therefore, it could be said that nature requires adequate protection simultaneously with the development of economic activities. This is where the principle of sustainable development takes place. Despite its neutral nature, some authors call for the precaution because, like many other international concepts, sustainability is also shaped by diverse actors and their interests (Brighton, 2017). According to Skjeggedal & Clemetsen (2018), land use planning is one of the means to control development over nature protection, therefore this paper focuses on spatial planning acts development in Serbia. Despite its controversy and the amalgam of ecological, economic and social interests, this topic has not to be addressed as often as it requires (Ćwikła, 2019; Folgado-Fernández, 2019). Therefore, the paper aims to identify and discuss complementarity and potential conflicts between water protection and the use of water bodies for water tourism purposes.

2.METHODOLOGY

The paper aims to review the selection of spatial plans addressing water protection and tourism development. The selection of the spatial plans and PA was limited to the example of Serbia. Taking into consideration existing planning system and a hierarchy of plans in the country, as well as the focus of the paper, the authors have chosen to review planning documents that are called special-purpose area spatial plans (SPASPs) because those are types of planning documents that target PAs the most specifically. Naturally, in the process of choosing case studies, the authors looked for those plans in which water bodies are the main object of protection. Another criterion in choosing case studies was the diversity of water body types and geography of the PA, which are located in different parts of Serbia.

2.1.Case studies

To cover different and specific systems, the choice of case studies fell on the Uvac, Đerdap, Tisa and Vlasina Pas (Figure 1). Each of the areas contains at least one water body that is in the focus of protecting or shaping the nature of ecosystem characteristics. Types of water bodies encompassed here are rivers, oxbow lakes, ponds, artificial or semi-artificial reservoirs and wetlands. They are different in area size, the number of local administrative unite (LAU) they encompass (Table 1), in population density and range of other social, economic and ecological specifics, which are going to be discussed in the following paragraphs.

The intent was also to take into consideration PAs covered by a spatial purpose area spatial plans (SPASP). Since the measures defined by a plan might depend on a team that is preparing it, four case studies were chosen to pertain to different teams and different time points, thus ranging from the SPASP adopted in 2010 to the SPASP adopted in 2019 (Table 1). Additionally, the choice allows investigation of different protection statuses – national park, special nature reserve, multifunctional ecological corridor and outstanding natural landscape.

Table 1: Basic information on case study PA

Case study	Area (km^2)	LAUs covered by SPASP	Main water body	Adoption of SPASP (year)
Uvac Special Nature Reserve	1,748	Ivanjica, Nova Varoš, Prijepolje, Sjenica, Tutin, Novom Pazar (west Serbia)	Uvac River (the upper course) and Zlatar, Radoinja and Sjenica reservoirs	2010

Đerdap National Park	1,542	Golubac, Kučevo, Majdanpek, Kladovo, Negotin (east Serbia)	Danube River (the lower course) and Đerdap reservoir	2013
Tisa River Multifunctional Ecological Corridor*	2,375	Ada, Bečej, Žabalj, Zrenjanin, Kanjiža, Kikinda, Novi Bečej, Novi Kneževac, Senta, Titel, Srbobran, Čoka (north Serbia)	Tisa River (the lower course)	2015
Vlasina Outstanding Natural Landscape	588	Bosilegrad, Surdulica, Crna Trava (southeast Serbia)	Vlasina River (the upper course) and Vlasina reservoir	2019

Source: SPASP for Uvac Special Nature Reserve (2010), SPASP for Đerdap National Park (2013), SPASP for Multi-Functional Ecological Corridor of the Tisa River (2015), SPASP for Vlasina Outstanding Natural Landscape (2019)
* Tisa River Multifunctional Ecological Corridor is not constitutionally protected as such, but the SPASP intentionally focuses on the entire corridor, consists of several PAs down the stream of the Tisa River, instead of only one PA.
Natural values and specifics of case study areas[1]

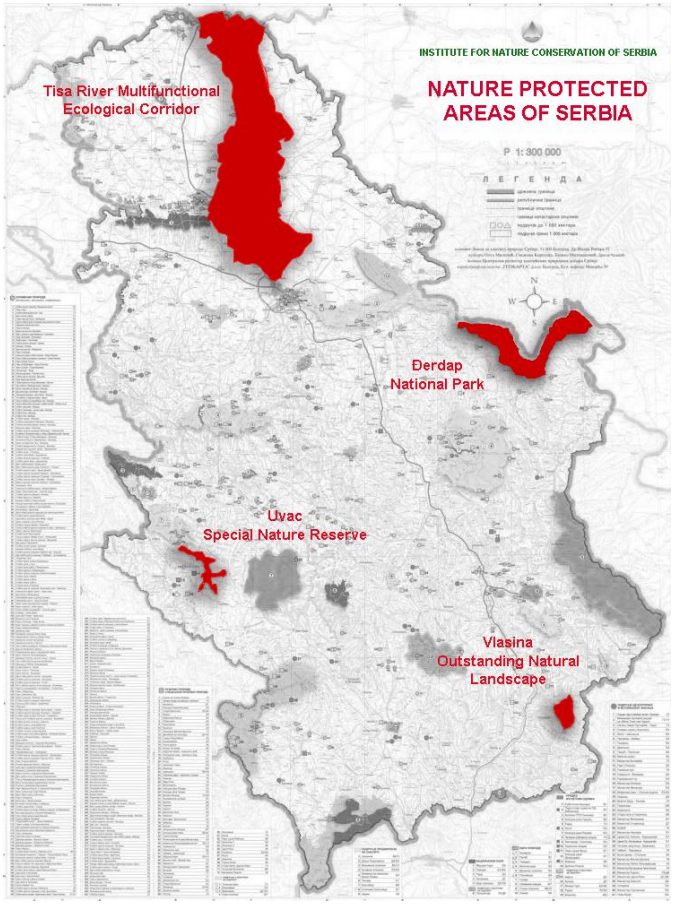

Figure 1. Case studies. Source: based on Institute for Nature Conservation of Serbia webpage, 2021.

The status of nature protection at the national level already speaks in favor of natural values and specifics of an area. However, the natural values of Uvac, Đerdap, Tisa and Vlasina areas are additionally confirmed by international nature protection statuses. The most prominent of all is the Đerdap National Park, which has been denoted status of an Important Bird Areas (IBA), Important Plant Areas (IPA), Prime Butterfly Areas (PBA), RAMSAR area (List of Wetlands of International Importance of the Convention on Wetlands) it is part of the Emerald Network of Areas of Special Conservation Interest – AsCI and part of the area encompassed by the Carpathian Convention (Framework Convention on the Protection and Sustainable

[1] Unless noted differently, all the data about four case studies are derived from the SPASPs of the PA: SPASP for Uvac Special Nature Reserve (2010), SPASP for Đerdap National Park (2013), SPASP for Multi-Functional Ecological Corridor of the Tisa River (2015) SPASP for Vlasina Outstanding Natural Landscape (2019).

Development of the Carpathians). This area is also nominated to join the UNESCO Global Geopark Network and World Network of Biosphere Reserves (Man and the Biosphere (MaB) Programme) and is placed on the preliminary list for the Worlds Cultural and Natural Heritage site (UNESCO). Đerdap National Park is followed by Vlasina Outstanding Natural Landscape, which also holds the status of a RAMSAR, IBA and IPA and belongs to the Emerald Network. The Uvac Special Nature Reserve is part of a broader Man and Biosphere area (Golija Nature Park and Golija-Studenica Biosphere Reserve) and in part of its territory holds Peštor Filed RAMSAR area. The portions of the Tisa River Multifunctional Ecological Corridor are declared as IPA and IBA areas.

As it was the aim of the study, all chosen areas contain a dominant water body. The Uvac is a river in the mountainous part of the country, on which humanmade constructions resulted in three reservoirs – Radoinja, Zlatar and Uvac, and a wetland. In contrast, Tisa is a lowland (flatland) river whose foreland is rich with both natural (oxbow) lakes and artificially induced ponds and wetlands. The Đerdap National Park holds the name after the gorge shaped by the Danube River, which is the second-largest river in Europe, which also the case with an artificially induced reservoir named Đerdap Lake. In this area, the Danube represents a border between Serbia and Romania, being rather mountainous (Šomrda, Liškovac and Miroč mountains) but at times enriched by wetlands. Finally, in the case of Vlasina, a previously natural lake that with time turned to a bog to be finally treated and transformed into the current Vlasina Lake. Due to its character, this area still has elements of a bog.

Attractive landscapes, forests and wild fauna are common natural values for all four case studies. Next to it, Đerdap, Uvac and Vlasina share the value of high-quality water. Although, in the case of the Danube River it should be taken conditionally because its water quality can be estimated as high (the II class) only when the relevance and numerous functions of the River are taken into account. The Tisa River is the only case elaborated here that is troubled by water quality due to intensive agriculture in its broader vicinity and wastewater that mainly ends in the stream untreated.

A common natural aspect for Đerdap National Park and Uvac Special Nature Reserve is karst. Both areas have been forged by water in the limestone, which has resulted in numerous shapes of karst geology – caves, karst springs, sinkholes, underground streams, etc. The imposing gorges of the Uvac River and the Danube River are also the results of combined water flows and geological specifics. On the other hand, each of the case studies has specific natural values that make them worth protecting. The Uvac Special Nature Reserve is a refugee for griffon vulture (*Gyps fulvus*) sheltering about 45 couples, thus representing the biggest colony in the Balkans. In the caves of this reserve are recently found new insect species. A specific of the Đerdap National Park is the 100 km long composite, polygenetic, polyphase and antecedent gorge valley, which consists out of four bottlenecks and three augmented sections. In one of the augmented sections was measured the spot of the deepest river in Europe. The Tisa Multifunctional Ecological Corridor is special in the fact that it aims to encompass a large area to secure an unfragmented (semi)natural environment for the species populating Pannonian Plain. Besides the river itself, a specifics of this area is also thermo-mineral springs and Danube-Tisa-Danube channels that fulfill not economic and social role only but also take relevant place in fulfillment of ecological system. Equally important for the nature and identity of the area is a mayfly that is known as *Palingenia longicauda* – the largest aquatic insect in Europe that populates this area and may be found in few other locations in Europe. Vlasina Outstanding Natural Landscape area is special for its high elevation, which results in being the most southern refugium from boreal plants living in aquatic conditions and becoming particularly attractive for wild blueberries. Regarding its history (used to be a bog), turf islands are floating on the surface of the lake. Although the area's capacity decreases, there are almost 150 natural springs registered on this relatively small territory.

Social values and their relation to water bodies

The population at the national level already decreases in Serbia. This is also the case with the population in case studies, with the difference that in the majority of SPASP territories decline has started a few decades sooner. After the census in 1991, the overall population number has started to decline in Đerdap. The decline in Uvac and Tisa has started even sooner – after the census in 1961. The most declining area is, however, Vlasina, where the population number started to decline already after the census in 1953. In Uvac and Tisa, the urban population started to decline after rural, while in Đerdap it happened parallel to the overall loss of population. Today, Uvac, Đerdap and Tisa have about 55% of the urban population, while the Vlasina area encompasses only rural settlements. This is one of the explanations for its extremely low population density (Table 2).

Table 2: Population number and population density in case studies (2011)

Case study	Population number	Population density (ihn./km^2)
Uvac Special Nature Reserve	41,208	23.6
Đerdap National Park	34,336	22.3
Tisa River Multifunctional Ecological Corridor	191,838	80.8
Vlasina Outstanding Natural Landscape	2,475	4.2

Source: Statistical Office of the Republic of Serbia, 2014.

When water bodies take a central place in an area, it is expected that social benefits related to water as a resource are various. The case studies confirm it. Some of the benefits are mutual for all areas, and most probably even beyond those four cases, while, on the other hand, each area carries specifics regarding the extent those resources are used or simply has developed a function that does not exist in other cases. Common social benefits that water bodies bring are water supply and reception of wastewater. Both activities might potentially harm the water capacity and quality of an area, which has already been proved in the case of the Tisa and Vlasina area. As the Tisa area has the highest population density among case studies, it suffers from the largest pressure regarding wastewater disposal into the river. Only a few settlements in the corridor treat the water before disposal, but it is concluded that their purification capacity is insufficient. Besides, groundwater in the area is under the pressure of pollutants coming from agriculture because groundwater is rather close to the surface. The problem in the Vlasina area also concerns groundwater, which is not close to the surface but still diminishes its capacity due to improper afforestation of the area and man-made changes of streams.

In Đerdap and Tisa areas, water bodies are also relevant in the field of agriculture. The farmers use the water not only for irrigation but rivers and channels also represent recipients in the case when drainage is needed. Đerdap and Vlasina found their way to the successful use of water bodies for electricity production. The Danube River hosts two large dams for the production of electric power on the border between Romania and Serbia, out of which one is located in the case study area. This production is not aimed at local needs but its relevance rises to the territories of those two countries. In addition to the large dam, there are also mini-hydropower plants. The Vlasina area has four smaller systems for electricity production, which depend on the water in the Vlasina reservoir and streams in the basin.

The Danube River is European corridor VII. Therefore, the Danube is classified as an international waterway, as well as is the case with the Tisa River. Naturally, for its incomparably larger capacity, the Danube represents leading potential in tourism and trade, although the Tisa River improves its significance by the Danube-Tisa-Danube channel system. The system is used for the transport of smaller boats, for fishing, melioration, etc.

In addition to the social functions of the case study areas directly related to their water bodies, those areas store other resources that are relevant in tourism development. Among chosen cases, the Đerdap National Park stands out with a cultural heritage of large value and from different epochs. The archaeological sites from the Neolith era, ancient Roman times or times of the Ottoman Empire represent extensile testimony of Europe's history. These values are enriched by the orthodox monasteries, preserved common national architecture and intangible heritage. The last listed values are also to be found in other case study areas.

Tourism, its economic value, obstacles and potentials

In the SPASPs where only PA is encompassed, tourism represents the basic economic activity. This is particularly the case with Uvac and Vlasina, which are less populated or contain larger portions of inhabited zones. However, in the case of each analysed case study their main and side water bodies (e.g. small gorges and rivers) represent the crucial element of tourism attraction. Highly or even solely relating to the rivers and reservoirs, all the cases have developed eco-tourism, rural tourism, tourism for sport and recreation, manifestation tourism, excursion tourism, hunting and fishing tourism. In some of the listed types of tourism activities, water bodies are an active object of the tourism activity (e.g. fishing, sport, recreation), while in other cases (e.g. excursions, eco-tourism) depend on the visual effect the water bodies have. For being on the international corridor VII, Đerdap is also an area for development of transit, nautical and especially cycling tourism (the length of the trail through Serbia that follows the course of the Danube is 1,040 km), similarly to Tisa (also international waterway) and Uvac (rather regional transit zone). Since Vlasina is sparsely populated and placed at a higher elevation than other cases, its position in the border area with Bulgaria does bring some, but not an extensive number of transiting tourists (which is expected in perspective because there is a border crossing nearby). In contrast to the other three case studies, Vlasina also has not developed a significant offer regarding cultural or historical tourism or all-year-round tourism for which it has given potential. In the area

of the Uvac River and its SPASP territory, types of tourism such as spa and health tourism (based on air quality) are in development, as well as winter (ski) tourism. However, its spa development does not depend on water as is the case with the Tisa area.

Although those areas develop diverse tourism offers regarding the type, the level they have reached is not estimated to be close to its maximum. Namely, for each area is reported the missing tourism infrastructure – e.g. visitor centres and info-points, ports and marinas for civil use and tourism, adequate capacity or quality of accommodation. Commonly, recreational activities cannot go further than self-organised walks and exploration of the area. For unresolved ownership issues in transition after the socialist regime, some capital investments, including hotels, are deteriorating instead of going to restoration and modernization processes. On the other hand, small-scale accommodation organized by the local population flourishes, but with no categorisation or registration to local authorities. This is one of the reasons that disable tracking of the actual number of tourists. However, the numbers reported by the statistics show undesirable fluctuations in the overall number of visitors and an insignificant share of foreign tourists.

The fact that accommodation in those areas is solved unofficially, often including illegal building and excluding wastewater treatment or sewage systems, actually harms the quality of the water bodies in their vicinity and overall environmental quality. This is certainly one of the outcomes of missing legislation on sustainable tourism development, but also is related to unawareness of local population on sustainability principle and an insufficient number of high quality (if at all) trained staff in the tertiary economic sector. The situation is not equal in all municipalities included in SPASPs, but with slight differences, it is noted that the regions' experience in tourism development is rather superficial, simple and raw than embedded in the local economies. A lack of external financial support and financial capacity weakness at the local level have never given the regions the chance. In contrast, they are still missing basic infrastructure endowment and suffer from low accessibility. These areas, which is the case with most areas in the country, have never really developed a strategically elaborated valorisation of their tourism potentials to be shaped as a unique and unified offer competitive even for the international market.

In contrast to the current state in terms of tourism development, those areas are considered to have rather high touristic potential. The combination of rivers, landscape, culture, history and mountains enables Uvac, Đerdap and Vlasina to develop an all-year-round offer. The Tisa's gastronomic potentials and spa centres could also find their way to the all-year-long engagement in tourism. The potential lies at the moment in their natural attractions – landscape, large rivers or reservoirs, geological forms, caves, bird watching, etc. – that are awaiting to be complemented with the right anthropogenic actions and activation of specific local customs, tangible and intangible heritage. As it was registered, the proclamation of protection over the nature areas made a change in the attractiveness of these areas, which is a good start.

Treatment of water bodies in protected areas regarding their protection, tourism development and construction for tourism

Nature protection and protection of the water bodies

According to analysed SPASPs, one of their purposes is the protection of natural values for which these areas were proclaimed to be PAs. Therefore, these documents not only analyse the current state but also define goals and measures for natural resources and water resources protection. Based on the case studies, those goals and measures are based not solely on ecological requirements, but on the principles of sustainability and integrative approach, which allow the use of the resources to the extent it does not harm its natural possibility to renew and by taking care that ecological component is considered together with economic and social development. Additionally, the integrative approach also means consideration of other levels, not only the level of the PAs and local communities but also regional, national and international perspectives. As a result, the SPASPs also bring to the foreground the principle of conflict relativization, which is again directed towards successful formula in balancing between protection and development.

To reserve the overall ecosystem and its components – air, water, soil, flora and fauna – defined measures can be distinguished as those that implicitly target water bodies and there is a group of measures that target water bodies explicitly. Preservation of biodiversity is, for example, an implicit measure from the perspective of water bodies – it predominantly targets living elements of the ecosystem, but since that loss of one water species might disturb the ecological balance and cause eutrophication of water, or loss of forest on steep hills could cause excessive erosion and filling water bodies in, their protection is implicitly related to the protection of water bodies. With this regard, all analysed SPASPs list the following measures:

1. Biodiversity preservation;
    a. Reintroduction of extinct autochthonous species;
    b. Control of invasive allochthonous species;

c. Afforestation for erosion prevention;
d. Creation of a network consisting of all relevant stakeholders in environmental protection;

2. Preservation of landscape;
    a. Reclamation of those locations which are disturbed by anthropogenic activities;
    b. Revalorization of natural and aesthetic values of the landscape;
3. Establishment of integral waste-collection (prevention of illegal dumps);
    a. Industrial waste disposal outside of the PA;
4. Strengthening human capital;
    a. Rising environmental awareness of (local) population;
    b. Increasing public participation in decision-making.

In contrast to those measures, which were listed in all analysed plans, there is a list of implicit measures proclaimed in one or two SPASPs. The reason behind this is that some of the areas are specific, thus requiring specific measures, or it can simply be a matter of chosen strategy. For example, spatial plans for the Đerdap and the Tisa areas proclaim transfer of part of the profit in tourism to environmental protection and research, or invitation to obey regulations in nature protection which has been already defined by national and international legislative acts. The SPASPs for the Đerdap and the Vlasina both call for precocious use of pesticides and other agrochemical products in agriculture. In the case of implicit measures proclaimed only by one of the analysed documents, there is securing of adequate compensation for the local population for the restraints nature protection regime causes to their regular activities (Đerdap); the establishment of institutions and organizations in change for ecological corridor consisting of several PAs and newly established network of such areas (Tisa); and creation of cadastre of polluters (Vlasina).

Water bodies specific measures traced in the analysed plans are the following:

1. Water protection against pollution:
    a. Creation of a sewage system in larger settlements or all the settlements near the water bodies;
    b. Creation of derivation system for atmospheric water;
    c. Establishment of wastewater treatment facilities;
    d. Establishment of permanent monitoring on water bodies and groundwater quality;
    e. Exclusion of industrial production with harmful pollution;
    f. Determination of permanent water quality level to be preserved at any time;
    g. Defining zones of sanitary protection around water sources;
    h. Regulatory document adoption for listing allowed and prohibited substances in use in the vicinity of the water bodies;
    i. Prohibited transporters with internal combustion motor in the reservoirs (in case of Vlasina);
2. Prevention of significant hydrological regime changes:
    a. Exclusion of industrial production that requires large amounts of water use;
    b. Water use regulation through charging the real costs and incentivising lower consumption;
    c. Economic incentives to stimulate recirculation of water;
    d. Prohibited derivation of streams into pipes for mini-hydropower plants (in the case of Đerdap);
    e. Protection of inundation land for other than water management purposes or unharmful activities;
    f. Protection of water from irrational privatisation;
    g. Controlled use of water sources before they would dry out;
    h. Controlled use of building materials (e.g. pebble);
    i. Designation of current water potential;
    j. Construction of torrential barriers to stop excessive erosion;
3. Biodiversity protection in water bodies:
    a. Protection of existing and reintroduction of extinct ecosystems and wetlands;
    b. Prohibition of fish breeding in cages to prevent eutrophication;
    c. Limited creation of ponds for fishing;
    d. Water management projects are allowed only after an ichthyological and environmental impact assessment.

Finally, it is worth mentioning that some of the measures listed above are defined by the legislative acts, but the spatial plans are here to confirm and integrate them within the SPASP by bringing to it the spatial component. One of the measures that are usually upgraded in spatial plans is the zoning of PAs. Namely, the Order on Protection Regimes (2012) determines three zones – starting with zone I, which is the strictest, and finishing with zone III, where activities such as tourism, construction, agriculture, etc. are allowed.

Tourism development

With no difference, all analysed SPASPs refer to tourism as one of the underdeveloped activities that should become leading economic activity if not for the entire area than for smaller settlements. Tourism is seen as the most prominent for balancing between modernization and increase of competitiveness on the one hand and nature protection on the other hand. Of course, the principle on which tourism development is set in the plans is sustainability. The goal is to take economical advantage of natural heritage for activating rural and marginalized areas but only to the extent that is not harmful to nature. Another reason for giving significance to tourism in such areas is the possibility to relate it to other more traditional activities of the areas such as agriculture or fishery, which also contributes to the preservation of these activities. Therefore, it is meant to be suitable for the engagement of the local population and the development of small and middle enterprises instead of large companies from outside the area.

All the SPASPs address that tourism development should be competitive at the international scale, which they expect to be achieved through modernization and reclamation of transport infrastructure and accessibility improvement. In some of the areas, this aspect is also addressed through the improvement of accommodation quality and capacity (Uvac, Đerdap, Tisa), in other through completion of entire tourism infrastructure (Uvac, Tisa) or empowerment of local population awareness on tourism relevance for the economic development, nature values and tourism know-how (Tisa, Vlasina). The attractiveness of the areas supposed to be increased through the creation of an offer for diverse interests of users over the entire year: from sport and recreation, over eco-, rural, ethno-tourism, manifestation, excursions, culture-based, nautical, agro- to MICE tourism. All the areas are to be offering the possibility of sports such as cycling, horse-riding, hunting and fishing while depending on the character of the area Uvac, Đerdap and Vlasina offer (or will offer) mountain hiking, Uvac, Tisa and Vlasina will offer bird-watching, Uvac and Vlasina will offer skiing and Uvac and Đerdap will offer speleological activities. The list of extensive tourism types does not end here. The spatial planners hope for some areas to gain benefits out of transit tourism (Uvac, Đerdap, Vlasina), health and rehabilitation (Uvac, Đerdap, Vlasina), education tourism (Uvac, Tisa Vlasina) or wellness & spa (Uvac, Tisa). The planning document for the Tisa area also mentions vine-based tourism.

Correlation between tourism development and nature preservation is also embedded in the effort that defined measures stay in accordance with the environmental capacity of the areas as well as in accordance with protection zones proclaimed by the Order on Protection Regimes (2012) and the plans themselves. Therefore, the plans tend to organize most of the activities with the permanent outcome (e.g. building, industry) into the III zone of protection or even outside the PAs. However, those activities that are attractive only for being realized in direct contact with water bodies found their way in the I and II zone of protection, too. Here belong predominantly temporary activities such as swimming, biking, walking, horse-riding, sailing (with boats with no internal combustion), etc. Thus, planned ski slopes and wellness centres are planned for the III zone of protection, as well as the most of new accommodation facilities (Tisa, Vlasina). Moreover, the plans tend to preferably use existing or renewed objects in rural areas and rural households for tourists (Uvac, Đerdap, Tisa, Vlasina). Alpine ski slopes are also limited to the III zone or area out of the PA (Vlasina). To loosen up the environmental impact, spatial plans define the "dispersed concentration" model, which means rather supporting development in several smaller centres than over the entire territory. Additionally, some of the SPASPs, e.g. Vlasina, stress the importance of plan implementation in phases, so that impact or unexpected excesses could be monitored and controlled over time. The SPASP for Uvac, for example, allows building outside of touristic centres but only under the condition of solving wastewater treatment issues.

Additional measures defined to balance development and protection are control of touristic activities by the bodies in charge for PA management, or other institutions such as clubs of hunters, fisherman, etc. (Uvac, Đerdap, Tisa). It is also suggested that part of the profit gained in tourism should go to environmental improvement – in the form of a compensation program. Similarly, a stakeholder that disturbs natural resources by its activity should finance reclamation. The SPASP for Vlasina states the issue of illegal building and invites the authorities to put the process under the control. In the case of this plan, the document also defined recommendations on the overall number of tourists accommodated simultaneously in the area.

The building rules for in the protected areas

It has been already mentioned that the SPASPs define several types of building zones. For this kind of document, it is common to limit the building of all kinds of objects outside of building land, with some exceptions such as water management buildings, tourism buildings and buildings for the needs of agricultural production of the local population. The most limited areas are the I zone of protection of the entire PAs and the I zone of the sanitary protection of the water source (relevant for water supply).

Another effort to release the burden of built objects on the ecosystem and natural heritage is the "decentralised concentration" principle – supporting the concentration of the local population and touristic accommodation facilities in several small centres. The small centres are also distinguishable from each other; therefore, municipal centres are usually taken as primary tourism centres where building land and rules are subject to regular urban documents. There are also secondary centres – rural settlements strategically chosen as centres of tourism development. In those centres, the building is regulated primarily by the SPASPs and additional plans of detailed building land plans suggested by the SPASPs. Thirdly, there are the smallest centres in smaller villages and tourism centres built outside of existing settlements. The creation of a tourism centre within PAs and outside of existing settlements was common in the 1970s and 1980s, which has recently changed. The contemporary concept of tourism development giver advantage to smaller accommodation units in adopted rural households or newly built buildings in the settlements. Anyhow, building outside of building land is discouraged but possible if the construction solves the issue of wastewater treatment and disposal.

Building for most of the tourism facilities, especially accommodation facilities, is allowed in the III zone of nature area protection or outside of the protection zones. Only objects that used to be built before the SPASPs were adopted are allowed to keep their location even if it is in the II or the I protection zone, but with necessary adaptation or used for the protection of water/nature. Except for the water management objects and public infrastructure, the building of permanent objects is also forbidden on the water land, which means in the area up to 10 m from the water body of a reservoir or in the inundation area of the river streams. The SPASP for Vlasina also forbids building on eroded land unless the investor has an official erosion reclamation project and obligation to conduct the measures (Vlasina).

Before building new objects, the SPASPs advocate restoration of existing ones. Therefore, the adaptation of an old house or another type of object to touristic purposes is allowed, including accommodation for tourists. Besides the location and purpose, the plans also define precise maximal or minimal measures for the entire range of building parameters, which differentiate depending on the type of touristic area and zone of protection (primary centre, secondary centre, etc.). Generally speaking, the advantage is given to touristic objects of modest volume and buildings in homogenized areas (lined up one next to another). The difference between central touristic zones and peripheral areas is in the larger volume and size in the less condensed zones.

The building parameters that are precisely given in the SPASPs may refer to parcels, the position of the object on the parcel, the object itself and delimitation possibilities between the parcels. The SPASPs for Đerdap and Vlasina define a minimum size of a parcel on the building land depending on its location – a larger settlement or village (5-30 ares). All the plans define floor space index (between 20-40%), land development index (0.4-0.8). The plans also define the minimal frontal width of a parcel. When it comes to the position of a building, there are rules for distancing from the regulation line (minimum 5 m), the distance for side borders of a parcel (minimum 2.5 m-10m) (Vlasina and Đerdap). Regarding volume, new buildings are limited in size so that they can be e.g. 50% larger than the existing/traditional object on the same parcel (Uvac), which refers to buildings for touristic purposes. In the Tisa area existing second home houses can be reconstructed only if not extended the previous volume. The control of size also includes a number of floors (maximum P+1+Pk+Pk) (Uvac, Vlasina, Tisa), height (7-12 m) (Đerdap) and gross floor area (38-150 m^2). In the case of Tisa and Đerdap, the height and type of a fence are defined, too (e.g. it should be transparent not higher than 1.4 m, or there should be no fence). Traditional and local architecture and materials for designing and building objects, especially if it is for tourism purposes, are recommended in the Uvac, Tisa and Vlasina areas.

Besides the general parameters, each plan defines some additional rules, which might depend on the creators of the plan or the specifics of each area. Thus, SPASP for Uvac limits a maximal number of stationary tourists per hectare (40 in the centre, and 75 in the periphery), SPASP for Đerdap defines obligation to secure parking lot for each parcel, SPASPs for Tisa and Vlasina declare a minimal percentage of greenery on a parcel (20-40%), etc.

4. DISCUSSION

By putting protection and development measures in the analysed SPASPs, a couple of questions arise: 1) is there enough experience and know-how to conduct balanced development; 2) is a construction of ski pistes and resorts justified in PAs; 3) can an illegal building be put under the control; 4) can be constriction of mini hydro-power plants justified; 5) can strictly control of the overall tourist number in PAs be justified?
Even though SPASPs set sustainability principle as the leading principle of designing tourism development, it is evident from practice and research that environment, landscape and ecosystems can be resistant to any kind of change (Maksin & Milijić, 2010; Rudsky et al., 2018). This dilemma is related also to the existing practices

and know-how of stakeholders. As in Serbia (Pantić, 2014), it is the situation in other cases that the local population and users of PAs have low awareness of their status, purpose and content (Khan & Bhagwat, 2010; Booth, Gaston & Armsworth, 2009). The awareness is still quite higher among those who are already involved in tourism and directly depend on it (Petrović, Maksimović & Karabašević, 2017). Public participation is key to success (Neumeier, 2016) but the question then is what are the key factors for successful participation. According to Primus et al. (2018), the success factors are a clear notion of participants of what the process looks like, what should they expect and what they should do; "relation to regular policymaking" and "sufficient financial and material resources". Since that the process of the more significant evolvement of stakeholders in decision-making is fresh, awareness of local population and potentially other stakeholders is weak and unprepared for strategic thinking (Bjeljac, Pantić & Filipović, 2013; Pantić, 2014), and that the SPASPs addressed difficulties of financing at the local level, the expectations of public participation should be low, at least for some time until it becomes common practice. Razak, Gani & Mahdzar (2018) stated that "the collaboration between stakeholders is highly needed for sustainable planning and development decision-making process", while Tamm (2014) stresses that higher engagement of NGOs and direct participation of local population requires conditions of success in decision-making combined with nature protection. Simply, the local population must be engaged also in nature protection and not only in decision-making to realize full awareness of their role and responsibility towards the environment and ecosystem (Ibid.).

Out of three reviewed spatial plans address the development of existing but also the creation of new ski pistes and touristic centres. Even though their construction is limited to the III protection zone (the loosest protection) it still rises the doubt if PAs should host them. Namely, change of ecosystem elements (vegetation, soil, soil moisture, etc.) affect biodiversity and species abundance on the pistes themselves, in close surroundings and some cases even further (Wipf et al., 2005; Rolando et al., 2006; Negro et al., 2010). Extensive research has been conducted for the Alps, where, for the most part, ski pistes are placed beyond the tree line, which indicates that impact of ski slopes in Serbia (including PAs of Uvac and Vlasina at the altitudes between 1,000 and 1,600 m) might be only larger because it requires significant forest clear-cutting if it is not planned and implemented sustainably and responsibly. Additionally, another issue that occurred by the construction of the newest international ski resort and ski pistes on Stara Planina is the irresponsible conduction of ski pistes and the treatment of ski slopes. Namely, due to clear-cutting and the absence of anti-erosion measures, the terrain suffered severe erosion and irreversible consequences (Ristić et al., 2009).

Another issue that needs to be put under control is illegal building. The phenomenon is widespread all over the country, including urban areas, but it is of significant relevance particularly for PAs where harm goes beyond visual. Mention of this issue is not limited to analysed plans, but other PAs in the country (Pantić, Milijić, Živanović Miljković, 2018; Pantić, Živanović Miljković, Milijić, 2019). The notion of the problem appears not to be sufficient in practice (e-Kapija, 2018):

> "Public companies that manage national parks, inspection organs and courts implement measures within their competence, but the result of these activities is very modest and ineffective. The attractiveness of PAs for the construction of individual facilities for rest and recreation and commercial investments in the construction of tourist and hospitality facilities, as well as other facilities, combined with the lack of urban plans, slow and expensive procedures of securing construction documentation and the lack of timely and efficient sanctions for activities and works in violation of the law, are the main reasons for the problems that national parks face – the Ministry of Environmental Protection says for our portal".

The mini hydro-power plants have been topical in Serbia in the last couple of years. Following a plan of MHPP created in 1986, investors have got incentivized by the governmental measures to get into realization. However, the action and their decision to build derivational power plants led to severe environmental deterioration (Ristić et al., 2018). The damage was limited to the environment and ecosystem but also jeopardizing the basic needs of the local population, which is never the beneficiary of the profit. The local population determinedly fought their battle by gaining support from people outside of the crisis's regions and support from professionals. Some of the professional estimations were that MHPP is "harmful to everyone – except investors" (Marković, 2018) and that "they produce an insignificant amount of energy for incomprehensible environmental damage" (Ristić et al., 2018). As a result, the president of Serbia stated that he would suggest the Government forbid the further building of MHPP in PAs (Bukvić, 2019). The outcome is yet to be seen as well the further development in spatial planning practice.

Some of the SPASPs defined recommendations of the total number of tourists by limiting the total number of beds in the area. A worldwide practice is also charging for PA entering, which helps to keep a record of the number of visitors. This method is in some cases also used to prohibit any new entry if it is estimated that the number of visitors exceeds safety for themselves and the ecosystem. The IUCN's Guidelines for

Sustainability (Leung et al., 2018), for example, recommend the application of this method combined with different pricing depending on visitors' age, place of residence, etc. The recommendation appears to be justified from the environmental point of view because it has been determined that highly visited areas can reduce the density of breeding pairs by up to 50% (Pouwels et al., 2017). However, a very vivid discussion took place in Serbia when the Đerdap National Park forbids a free visit to the PA. Instead, visitors must announce their visit in advance and be followed by a national park employee to visit the park (Đerdap National Park Webpage, 2020). It is seen as a violation of the right to freedom of movement as a basic human right, which the park management explains as care for the protection of natural heritage in the I protection zone, where most of the hiking paths are located (Ibid.).

5. CONCLUSION

To bring additional value to natural heritage on the one hand side and preserve the valuable resources on the other, a prudent balancing between protection and development is necessary. The use of visual and health benefits of a good quality environment is possible, but it has to be balanced with any kind of economic activity including tourism. Prudence depends on various factors. The ingredients are represented in clear devotion of responsibilities, high informativeness and awareness of all stakeholders and the local population the most. It also relies on protection documents such as legislative but also on spatial plans, which are the main responsible for the definition of land use protection of natural resources, especially water resources.

The analyses of the SPASPs and experiences shared in the state analysis in these documents show that the development of activities and omission of responsible behaviour might not depend on official acts but their responsible implementation and monitoring of environmental quality and potentially illegal activities (illegal dups, building, etc.). It has been also shown that responsible behaviour of the local population and visitors greatly depends on whether they are involved in decision-making, on the available knowledge and available precondition. By the precondition here is meant organization and construction of basic services and infrastructure such as introducing the waste-collection system, sewage system construction, water-supply and treatment investments. Those are preconditions that can be rarely supported by an individual or financially weak local communities in PA, therefore, financial and organizational support by the government is crucial.

According to the contents and measures presented in the analysed SPASPs, the planners have relevant knowledge for defining parameters of balanced development. However, their responsibility should rise at least for a level up to prevent activities with potential harm on the water bodies, their values and ecosystems. The precaution should come from the disability of the current system to control human actions that are usually busted in PA after the adoption of a spatial plan. It is predominantly relevant to be cautious in planning ski pistes, building land and derivational mini hydro-power plants. Besides, the discussion has shown that limitation or at least monitoring of visitor/tourist numbers is relevant for the protection of the water bodies and PA in general. However, it should be defined with the understanding of visitor needs and with no direct violation of the right to freedom of movement.

REFERENCES

Bjeljac Ž., Pantić M., Filipović M. (2013): The Role of Event Tourism Strategy of Serbia in Strategic Planning, in SPATIUM International Review, No. 30, pp. 54-60. DOI: 10.2298/SPAT1330054B.

Booth, J.E., Gaston, K.J., Armsworth, P. (2009): Public Understanding of Protected Area Designation. Biological Conservation 142(12), pp. 3196-3200. DOI: 10.1016/j.biocon.2009.07.024.

Brighton, C. (2017): Unlikely Bedfellows: The Evolution of the Relationship Between Environmental Protection and Development. International and Comparative Law Quarterly, 66(1), pp. 209-233. doi:10.1017/S002058931600052X.

Bukvić, LJ. (2019): Ratko Ristić: borac protiv MHE. Danas (30.09.2019). Accessible at www.danas.rs /ljudi/ratko-ristic-borac-protiv-mhe/.

Ćwikła, L. (2019): Legal Aspects of Territorial Restrictions in Water Tourism due to Environmental Protection. *Internetowy Przegląd* Prawniczy TBSP UJ 2019/1, pp. 5-14.

Danilović Hristić, N., Stefanović, N., Milijić, S. (2020): Danube River Cruises as a Strategy for Representing Historical Heritage and Developing Cultural Tourism in Serbia. *Sustainability* 12, no. 24: 10297. https://doi.org/10.3390/su122410297.

Đerdap National Park Webpage (2020): Frequently Asked Questions – FAQ. Accessible at https://npdjerdap.rs/en/faq/.

e-Kapija (2018): Illegal construction on the rise at national parks of Serbia – Number of illegal facilities unknown, negative impact growing. Accessible at www.ekapija.com/en/news/2083832/illegal-construction-on-the-rise-at-national-parks-of-serbia-number-of.

Folgado-Fernández, J.A., Di-Clemente, E., Hernández-Mogollón, J.M., Campón-Cerro, A.M. (2019): Water Tourism: A New Strategy for the Sustainable Management of Water-Based Ecosystems and Landscapes in Extremadura (Spain). *Land*, 8(2). https://doi.org/10.3390/land8010002.

Foris, D., Pleşca, M. (2017): Bulletin of the *Transilvania* University of Braşov Series II: Forestry, Wood Industry, Agricultural Food Engineering, Vol. 10 (59) No.1, pp.107-112.

Institute for Nature Conservation of Serbia webpage (2021). Available on: www.zzps.rs/wp/?script=lat

Khan, M.S., Bhagwat, S.A. (2010): Protected Areas: A Resource or Constraint for Local People? In Mountain Research and Development, 30(1), pp. 14-24.

Krunic, N., Josimovic, B., Milijic, S., Ristic, V. (2017): Strategic Environmental Assessment as an Instrument for Sustainable Spatial Planning of Water Accumulation Basins. *Fresenius Environmental Bulletin*, Vol. 26, No. 2/2017, pp. 1281-1290.

Leung, Y.F.i, Spenceley, A., Hvenegaard, G. & Buckley, R. (eds.) (2018). Tourism and Visitor Management in Protected Areas: Guidelines for Sustainability. Best Practice Protected Area Guidelines Series No. 27, Gland, Switzerland: IUCN. xii + 120 p.

Liburd, J., Becken, S. (2017). Values in nature conservation, tourism and UNESCO World Heritage Site stewardship. *Journal of Sustainable Tourism*, DOI:10.1080/09669582.2017.1293067.

Maksin, M., Milijić, S. (2010): Strategic Planning for Sustainable Spatial, Landscape and Tourism Development in Serbia. SPATIUM International Review, No. 23, pp. 30-37.

Maksin, M., Nenković-Riznić, M., Milijić, S., Ristić, V. (2016): The impacts of spatial planning on the sustainable territorial development of the Rhine-Danube Trans-European Transport Corridor through Serbia. *European Planning Studies*, DOI:10.1080/09654313.2016.1260691.

Marković, R. (2018): Small Hydro: Harmful to everyone - except investors. Heinrich Böll Stiftung BELGRADE (07.11.2018). Accessible at https://rs.boell.org/en/2018/11/08/small-hydro-harmful-everyone-except-investors.

Negro, M., Isaia, M., Palestrini, C., Schoenhofer, A. & Rolando, A. (2010): The Impact of High-Altitude Ski Pistes on Ground-Dwelling Arthropods in the Alps. Biodivers Conserv 19, pp 1853–1870. https://doi.org/10.1007.

Neumeier, S. (2016): Soca Innovation in Rural Development: Identifying the Key Factors of Success. The Geographical Journal, Vol. 183, Issue 1, pp. 34-46. https://doi.org/10.1111/geoj.12180.

Order on Protection Regimes (Uredba o režimima zaštite) (2012a), Official Gazette No. 31/2012.

Pantić, M. (2014): Sustainable Development Perspectives for Serbian Mountain Areas: Lessons from the European Context, doctoral thesis, retrieved from QUCOSA - Quality Content of Saxony. (urn:nbn:de:bsz:14-qucosa-144339). Accessible at http://tud.qucosa.de/api/qucosa%3A28110/attachment/ATT-0/.

Pantić, M., Milijić, S., Živanović Miljković, J. (2018): Spatial Planning as a Building Regulation Tool in Protected Natural Areas of Serbia. In ICUP2018 2nd International Conference on Urban Planning – PROCEEDINGS, 2nd International Conference on Urban Planning – ICUP2018, Niš, Serbia, pp. 331-338.

Pantić, M., Živanović Miljković, J., Milijić, S. (2019): Land Use and Building Regulations: The Case of Spatial Plans for Protected Natural Areas (Serbia). In Facta Universitatis. Series: Architecture and Civil Engineering Vol. 17, No. 2, pp. 173-187. doi.org/10.2298/FUACE190315010P.

Petrović, G., Maksimović, M. & Karabašević, D. (2017): Strategic Positioning of Rural Tourism on Stara Planina. Economics of Agriculture 2/2017, pp. 601-617.

Pobihun, O., Korobeinykova, Y., Nykodiuk, O., Melnyk, A. (2021): Mechanisms for ensuring the environmental safety of tourist destinations. *E3S Web of Conferences 280, 09015 (2021)*, https://doi.org/10.1051/e3sconf/202128009015.

Pouwels, R., Sierdsema, H., Foppen, R.P.B., Henkens, R.J.H.G., Opdam, P.F.M., van Eupen, M. (2017): Harmonizing Outdoor Recreation and Bird Conservation Targets in Protected Areas: Applying Available Monitoring Data to Facilitate Collaborative Management at the Regional Scale. Journal of Environmental Management, Vol. 198, Part 1, pp. 248-255.

Primus, N., Effing, R., Groot, B., Veenstra, M., de Vries, S. (2018): Innovative Public Participation in the Twenty-first Century: Assessing Initiatives with the I-Participation Index Based on Cases from Municipalities in the Netherlands. Virkar, S., Parycek, P., Edelmann, N., Glassey, O., Janssen, M., Scholl, H.J., Tambouris, E. (eds.) Proceedings of the International Conference EGOV-CeDEM-ePart 2018. Danube University, Austria, pp. 101-113.

Rastegar, H., Driml, S., Breakey, N. (2012): Does Tourism Development Change Local Communities' Attitudes towards the Environment? Paper presented at the 5th International Congress of Environmental Research, Kuala Terengganu, Malaysia.

Razak, I. R. A., Gani, A. A., & Mahdzar, M. (2018). Dimensions of Public Participation in Planning for Sustainable Tourism in Sungkai Wildlife Reserve: the Stakeholders' Perspectives. International Journal of Academic Research in Business and Social Sciences, 8(16), 267–286.

Ristić, R., Vasiljević, N., Radić, B., Radivojević, S. (2009): Degradation of Landscape in Serbia Ski Resorts – Aspects of Scale and Transfer of Impacts, in the SPATIUM No 20, pp. 49-52.

Ristić, R., Malušević, I., Polovina, S., Milčanović, V., Radić, B. (2018): Male hidroelektrane derivacionog tipa: beznačajna energetska korist i nemerljiva ekološka šteta. Vodoprivreda 0350-0519, Vol. 50 (2018) No. 294-296, pp.311-317.

Rolando, A., Caprio, E., Rinaldi, E. Ellena, I. (2006): The Impact of High-Altitude Ski-Runs on Alpine Grassland Bird Communities. Journal of Applied Ecology, Vol. 44, Issue 1, pp. 210-219.

Rudsky, V.V., Dugarskaya, T.A., Mechkovskaya, O.A., Sidorov, I.V. (2018): Tourism and Its Influence on the Environment and Living Standards of the Local Population. Proceedings of the International Symposium "Engineering and Earth Sciences: Applied and Fundamental Research" (ISEES 2018), Advances in Engineering Research, Vol. 177, pp. 85-90.

Skjeggedal, T., Clemetsen, M. (2018): Integrated and Decentralised Protection and Development of Mountain Landscapes. Landscape Research, 43:1, pp. 64-76. DOI: 10.1080/01426397.2017.1291923.

Special Purpose Area Spatial Plan for Đerdap National Park (2013). 66th Meeting of the Government of the Republic of Serbia, 30th April 2013. Accessible at www.srbija.gov.rs/prikaz/189036.

Special Purpose Area Spatial Plan for Multi-Functional Ecological Corridor of the Tisa River (2015). Official Gazette of the Autonomous Region of Vojvodina No. 14/2015.

Special Purpose Area Spatial Plan for Uvac Special Nature Reserve (2010). 344th Meeting of the Government of the Republic of Serbia, 21st October 2010. Accessible at www.srbija.gov.rs/prikaz/141207.

Special Purpose Area Spatial Plan for Vlasina Outstanding Natural Landscape - Draft Version (2019). In the process of adoption. Accessible at www.mgsi.gov.rs/lat/projekti/prostorni-planpodrucja-posebne-namene-predela-izuzetnih-odlika-vlasina.

Statistical Office of the Republic of Serbia (2014): Comparative Overview of the Number of Population in 1948, 1953, 1961, 1971, 1981, 1991, 2002 and 2011 – Data by Settlements. Belgrade: Statistical Office of the Republic of Serbia.

Stojanović, V., Lazić, L., Dunjić, J. (2018): Nature Protection and Sustainable Tourism Interaction in Selected Ramsar Sites in Vojvodina (Northern Serbia). *Geographica Pannonica,* vol. 22, iss. 3, pp. 201-207.

Štetić, S., Trišić, I. (2018): The Role and Importance of Ecosystems in Creating Tourism Activities. *Menadzment u Hotelijerstvu i Turizmu*, DOI: 10.5937/menhottur1802043S.

Tamm, M. (2014): What Innovative Techniques are Protected Areas Using to Deliver Important Conservation Messages? Report of the Alfred Toepfer Natural Heritage Scholarship. Accessible at www.europarc.org/wp-content/uploads/2015/02/ATS-2013_Innovative-techniques-in-Protected-Areas-to-deliver-important-Conservation-messages.pdf.

Wipf, S., Rixen, C., Fischer, M., Schmid, B., Stoeckli, V. (2005): Effects of Ski Piste Preparation on Alpine Vegetation. Journal of Applied Ecology, Vol. 42, Issue 2, pp. 306-316.