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OPPORTUNITIES FOR DEVELOPMENT OF TOURIST POTENTIALS IN PROTECTED AREAS OF THE WATER STORAGE RESERVOIRS, ON THE EXAMPLE OF SPATIAL PLANS OF THE SPECIAL PURPOSE AREAS IN SERBIA

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Abstract. *Areas of large and medium-sized water storage reservoirs whose hydro-potential is used for water supply of settlements and/or as part of the energy system, at the same time, and under certain conditions and limitations, can represent the locations for the development of tourism. This potentially conflicting situation may be resolved through the planning process and development of Spatial Plans of the Special Purpose Areas (SPSPAs). A major challenge with water storage reservoirs of multiple purposes is in "sharing" water amongst competing users with an aim of providing sustainable development of a wider territory and, simultaneously, to safeguard the health safety of the water at the source (water storage reservoir).This paper deals with planning treatment - by a new generation of SPSPAs in Serbia - of the areas that cover new and already formed water storage reservoirs and with prudent activation of their tourist potentials.*

Key words: *water storage reservoir, tourism, spatial plan, protection*

1. INTRODUCTION

1.1. Sustainable spatial development

Guiding principles of sustainable development are founded on regionally balanced development goals: promotion of territorial and social cohesion through steady social and economic development and competitiveness; improvements in traffic communication and accessibility; development of various urban functions, access to information and knowledge; mitigation of the negative environmental impacts; protection of natural resources and cultural heritage, energy resource base development; incentives to sustainable tourism

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development, and limitation of the natural hazard's impact. Globally, a scarcity of freshwater represents a pressing issue ever since the disturbing figures on groundwater depletion throughout the world (1) were revealed. Reliability of water delivery is the key reason for water storage reservoirs becoming such an important element in a water supply system. They were built more than 4,000 years ago and it should be stressed that decline of any civilization in the past began with neglecting and ruining of these systems (2). Water storage reservoirs, which are dominantly multipurpose ones, can advance sustainable development objectives if they are carefully planned, constructed, put in operation, managed and governed. This implies fostering equity across water storage reservoir users and ecosystems in line with agreed sustainability objectives (3). From the aspect of touristic facilities development in the areas of water storage reservoirs, since the functions and expressed needs overlap territorially, sustainable development principles presume the protection and rational use of natural resources with respect to constraints deriving from planning of the infrastructure facilities that meet the population requirements, alongside simultaneous promotion of the high-quality varieties of tourism (4), and with respect to the analysis of potentials for development of recreation and weekend zones to meet the urban population needs without compromising implementation of natural and cultural heritage protection and promotion. Key prerequisites for this are fundamental knowledge on ecosystems and number of visitors which can be sustained by a certain territory, as well as the implementation of control instruments such as Strategic Environmental Assessment.

1.2. Spatial Plans of the Special Purpose Areas

The current Law on Planning and Construction (5) defines on which territories of interest determined by the Spatial Plan of the Republic of Serbia (6), and topics of relevance it is necessary to develop a Spatial Plan of the Special Purpose Area (hereinafter: SPSPA): an area with natural, cultural, historical or ambient values; an area with the possibility of exploiting mineral resources; an area with the capacity for using tourism potentials; an area with the possibility of using hydro-potential; realisation of projects for which the Government of the Republic of Serbia determines significance; and construction of facilities for which a building permit is issued by a Ministry in charge of construction or by a competent authority of the autonomous province. The overlapping and matching of the needs of protection and exploitation, i.e. of more intensive use in any form, is the essence of making these plans. The protection of their potential is defined by a certain regime, which determines any other type of use. SPSPAs have a dual role – contextually they make a strategic development framework and provide protection of the space, of its characteristics and special values, and by introducing the elements of detailed elaboration, i.e. rules of use, arrangement and construction, in the models of implementation, they enable realization of structures and systems (7, 8). It is not a rare case that the protected areas are indeed the zone of interest for possible expansion of tourist regions and complexes, therefore they represent the brand and target for development, and require planning of accommodation capacities, accompanying infrastructure and road network. Estimate on how and to what extent the protected areas will be developed, e.g. what the limit is, according to what structure and dynamics, or phases of development, all that is crucial for synchronisation with constraints of prescribed regimes of protection. For this reason, it is compulsory to develop a Strategic Environmental Assessment (SEA) of the planned environmental solutions (9), which should indicate the capacity of the space in terms of changes which are introduced by the SPSPA.

Indeed, there is a continuing dilemma whether protection or development should take a lead in this process; what is the price of regulation and improvements; and therefore a compromise solution is needed, while the sustainability of the system, in all of its forms, is an indispensable factor for each SPSPA, especially if within the scope of the SPSPA there are multiple attractive and significant aspects.. In such cases, as a rule of thumb, the inclination is towards reduction of conflicts and balance between the modern demands of life and economic efficiency on the one hand and the quality of the environment on the other. In these SPSPAs, there is evidently a symbiosis of spatial and urban planning, including even the details from the project documentation, which is certainly a positive fact and contributes in a way that, alongside guidelines for further elaboration, SPSPAs contain already prepared elements for direct implementation (10).

2. PLANNING THE AREA OF WATER STORAGE RESERVOIRS

2.1. Methods, sample and choice of a case-study area

In the current practice of spatial planning in the Republic of Serbia, the development of SPSPAs for the areas of water storage reservoirs is distinguished as a special group of plans by the importance and number of plans (around ten adopted SPSPAs). The purpose is related to the use of water as the most important potential and irreplaceable resource (hydro potential) in the zones of large and medium water storage reservoirs. Knowing that the functions of water storage reservoirs are typically to provide water for one or more purposes, such as water supply, flood and drought management, irrigation, electricity generation, environmental services, fisheries and recreational activities (amenity use), the development of SPSPAs has the following aims: for the purpose of water supply (source of potable water) for the settlements (including a dam, water catchment with a sanitary catchment area, water treatment plant and a distribution system; and as part of the water management and energy system, for the needs of electricity generation (dam, pumped storage type and in-stream hydroelectric power plants with a distribution system).

As the examples for the analysis of applied rules of arrangement, construction and use of space, preferably with two functions at least, the following spatial plans have been chosen: SPSPA of water supply source within the regional sub-system Rzav (11), SPSPA of the catchment of the water storage reservoir „Stuborovni" (12), SPSPA of the catchment of the water storage reservoir „Ćelije" (13), and SPSPA of the catchment of the water storage reservoir „Grlište" (14). SPSPAs contain a set of rules and measures that define the arrangement of space and construction, but the degree of detail varies depending on the period when SPSPAs were made. Plans of the "latest generation" have a number of defined rules, criteria and standards, while older plans provide orienting guidelines for the planned locations and corridor routes. Another factor influencing the level of detail is the availability of supporting technical documentation that is incorporated into the planning solution.

2.2. Impact of the special purpose on the scope and content of the SPSPA

SPSPAs for water storage reservoirs are specific in a way that they involve the redefinition of the existing land use and potential resettlement, but also they presume a quite limited but still certain possibility of introducing some new uses and functions, such as, the definition of tourist zones and recreational space for a part of the coast and aquatic

surface. A special purpose of these plans is represented in two main aspects: their technical nature relating to the system and facilities in the function of electricity production or water supply, and protection of the area of the water source, i.e. sanitary protection of the catchment in case the basic function of the water storage reservoir is water supply. More complex are the SPSPAs in which exist the aspect of water source protection, and where as an additional or accompanying purpose there can be elaborated the tourism development, choice of its type, locations and capacities. Also, the aspect of protection may include the protection of natural areas (15) and cultural goods (16) located within the scope of the planned catchment. The development of this type of SPSPAs is determined as well by the Law on Water (17), the Rulebook on the way of determining and maintaining the sanitary protection zones of water supply sources (18) and Water Master Plan of the Republic of Serbia (19). The Law on Water defines aquatic land for the public use, i.e. as public good, applying to all surfaces that are permanently or occasionally covered by water and where special hydrological, geomorphological and biological relations are formed, and it distinguishes aquatic land of running water (which consists of the river basin in case of high water and of coastal land) and aquatic land of stagnant water (consisting of basin and of belt of land by the basin up to the highest recorded water level). Coastal land is in function of the aquatic one and is primarily used for protection and maintaining of the accompanying facilities and for water management in general. Defining an integral water supply system in the entire territory of the Republic, results in the regional organization of the water systems and subsystems. This concept has an impact on determining the boundary of an SPSPA, which is more in line with the geographical and hydrological characteristics of the basin and terrain than with the administrative division of municipalities and regions. The area in the scope of an SPSPA encompasses the water storage reservoir's catchment area, which represents the water source and the wider zone of protection of the water source, hence in the practice, the boundaries of an SPSPA are determined by the cadastre municipalities' boundaries or by morphological boundaries of the catchment. The area by the dam where the facilities of the water source system are planned is also included in the scope of an SPSPA.

2.3. Typical characteristics of the analysed SPSPAs

SPSPAs for "Rzav" and for "Stuborovni" were developed for the planned water storage reservoirs, while the SPSPAs for "Ćelije" and for "Grlište" were developed for the existing water storage reservoirs. A striking example is the SPSPA for "Rzav" in which the concept of water use and the regulation of the water regime is considered within two regional systems of water supply, with their subsystems, which are in a planned and functional interaction because they are the only "export" systems of water of macro regional scale, thus conditioning realisation of a long-term development of the region. In addition, these systems have considerably greater potentials for regulating the flow of all other catchment areas in Serbia, first by allowing for annual regulation of flows and then, in the later phases, for several years regulation of flows.

Key themes in this type of SPSPAs are the protection of the water catchment basin and ensuring the required level of quality of water for the systematic water supply of settlements (according to the projected gross consumption norm expressed in L/user per day, with an estimated net loss within the network reaching at maximum 15 ÷ 18% and with approximation which is aligned with the periods of necessary reductions). This purpose also includes flood

protection measures in the vicinity of the water storage reservoir, in particular mitigation of possible flood waves in the downstream part, then protection of soil from erosion, as well as protection from wastewaters, i.e. providing conditions for plants for water treatment if the regime of protection in the zone of water source allows this, and it prescribes special conditions in the surroundings, e.g. for agricultural land. Within the analysed SPSPAs, one can distinguish the following key principles of planned development of these areas: protection and improvement of water quality in the water storage reservoir, sustainable use and protection of water, agricultural and forest land and relativisation of conflicts between the use of water source and sustainable development of communities. The main goals which can be identified are:

- sustainable use of water resources, provision of permanent and integrated protection and improvement of water quality of water supply sources,
- spatial provision for the functioning and construction of water management infrastructure and facilities,
- improvement of water quality parameters in water storage reservoir by permanent provision of class I and class I/II quality of all watercourses within catchment area,
- water supply of the settlements in the coverage of the system with more than 97% security of supply, alongside compulsory water supply of at least 70% of the required quantities, while in the periods of necessary reductions, the planned gross consumption norms are 300 L/user per day,
- regulation of water regimes and protection of settlements from floods of fifty years water peaks, mitigation of flood waves in downstream parts,
- improvement of the low water regimes and achievement of complete ecological protection of the watercourses,
- creation of conditions for compensation to the local communities, and
- creation of conditions for leisure, recreation and education of visitors.

The determined zones of sanitary protection of water storage reservoirs are the starting points for preparing the planning conceptions, land-use and regimes of protection (Table 1). The report on the zones of sanitary protection of a water source contains analytically defined boundaries of these zones, and by the SPSPA the zones are elaborated in more detail and the regimes of land-use and their maintenance are determined.

Table 1 Zones of sanitary protection

Zones of sanitary protection	*Land-use and regimes of protection*
The immediate protection (I)	the artificial lake (including the top of barrier construction – dam), its coastal area whose width is 10 m in horizontal projection from the point of maximum level of water achieved, tributary river along its entire course and the zones on both sides of it, at least 10 m in horizontal projection from the water level which occurs once in ten years.
The zone of inner protection (II)	the zone around the artificial lake whose width is 500 m in horizontal projection from the boundary of the zone of immediate sanitary protection.
The wider zone of protection (III)	area beyond the zone of inner protection up to the boundary encompassing the territory of the water catchment area.

The zone I of immediate sanitary protection features the regime of strict sanitary control which prohibits any construction of facilities and plants that are not in the function of water supply system or which do not serve the preservation and maintenance of dams and water storage reservoir's facilities. It is planned to remove all existing facilities that are not in the function of water supply system or sanitary repair or grassing of terrain. It is also prohibited: to dig deeper water beds, to extract gravel and sand, to allow movements of vehicles that are not in the function of water storage reservoir, to allow disposal of any type of waste and to take cattle to drink water from the water storage reservoir. It is forbidden to: conduct water sports that involve swimming of people, have caged fish farming or to fish with fishing nets. In the zone II of inner sanitary protection it is forbidden to construct residential and catering facilities or facilities which endanger the health safety of the water at the source, however it is possible to keep here the existing residential and economic facilities of households, the existing holiday homes (with possibility of their reconstruction) if they do not endanger the health safety of the water at the source, and with the obligation of provision of sanitary safety collection and water treatment of all waste waters. In case the state roads of the categories I and II intersect this zone, they remain in function until the realisation of the planned bypasses. The construction of infrastructure network should be in line with the regime of protection. It is prohibited to use pesticides, or to use chemical fertilizers. Regarding the types of vegetation cultivation, preference is given to meadows with more precious and medical herbs. The use of forests is in the function of protection from the erosion, and only their selective cutting is permitted. It is prohibited to form municipal waste landfills in this zone as well as cemeteries, to exploit stone or other mining works. In both zones (I and II), with the prior acquisition of water conditions, it is allowed to organise the coastal area, to construct pedestrian and bicycle paths, areas for rest and viewpoints, all with the aim of tourist-recreational use of the water storage reservoir's coast, as well as to use electrically powered vessels, or vessels with oars and sails only and to allow fishing for recreational purposes. In the zone III the following activities are forbidden: uncontrolled disposal of municipal waste; the production, storage and transportation of dangerous materials, oil and petroleum products, with the exemption of stations for the fuel supply; conduction of the mining works, entering in the layer which covers the underground water and removing the layer which covers the aquifer, the exploitation of radioactive materials and mineral resources; construction of roads which are not accompanied by drainage channels; and intensive use of pesticides and chemical fertilizers. It is allowed to develop production facilities which use "clean" technology, and which do not represent large water consumers and do not generate solid or liquid waste and hazardous substances. Here is also permitted to build facilities for the processing of agricultural products, where it is possible to apply water recirculation during technological process, e.g. having smaller quantities of wastewater purified to the prescribed class of quality before they are discharged into the recipient. In settlements and zones with residential, tourist and other facilities, it is necessary to provide a sanitary secure collection and treatment of waste waters, or drainage of waste waters outside the water storage reservoir catchment area, which requires construction of a sewage system and appropriate wastewater treatment plants with tertiary treatment.

The construction of the dam and of the accompanying infrastructure facilities for water supply, and in particular the formation of a water storage reservoir, implies the permanent occupation of significant areas. In the analysed SPSPAs, the coverage of existing or planned aquatic land varies between 140 and 900 hectares. Also, the analysis shows that the share of

protection zones in the total area of the SPSPAs for water storage reservoirs varies from 45% to almost 100% (Table 2). Within the total area encompassed by each of the analysed SPSPAs, land-uses which are dedicated to "other" land (not aimed as agriculture or forest land) vary between 2% and 8%. These shares of "other" land include: water storage reservoirs (lakes), dams and accompanying facilities, residential area, public facilities, industry and tourism facilities and infrastructure.

Table 2 Balance of surfaces according to the zones of sanitary protection

SPSPA	Zone of immediate protection - I (km^2)	Zone of inner protection - II (km^2)	Wider zone of protection - III (km^2)	Outside zones of protection (km^2)	Total area (km^2)
Rzav	9,04	34,71	393,08	0,44	437,27
Stuborovni	3,35	8,24	104,58	54,41	170,58
Ćelije	4,66	13,66	592,48	323,99	934,79
Grlište	1,41	6,95	174,53	217,31	400,20

The methodological approach to the development of SPSPAs for protected catchment areas of water storage reservoirs is such that in special focus of the planning concept is the impact of special purpose on other functions in the area, and that ultimately is also a legal obligation. However, the particularity of these plans is the emphasis on the importance of planned technical solutions, which mostly relate to facilities in the function of water supply – water storage reservoirs (lakes), dam facilities, hydro power plants, various types of pipelines, water treatment plants, reservoirs, etc.

3. TOURIST POTENTIALS

3.1. Planned tourism development and diversity of proposals

Considering that tourism (20), i.e. leisure-related industry, is in the expansion because it has a significant share in income, this particular purpose is gaining in importance in planning as well. At the same time, tourism is an initiative for the development, revitalisation and preservation of particular environments, which due to their inaccessibility, lack of contents which influence living (and employment) conditions, experience depopulation and noticeable outflow of the inhabitants. From the aspect of the development of modern tourism for domestic and foreign users, especially in the case of steady tourism, which implies longer stay in the place of tourist attraction, the existence of smaller or bigger sites with the original, well-preserved and protected environment is very important. The goal is to enrich the tourist offer with new contents – even in the tourist places traditionally known for one of their special features with the aim of attracting various categories of guests throughout the year (21). The size of any type of a tourist region (homogeneous/ heterogeneous) depends on spatial concentration of tourist assets, their identification, valorisation, functions and elements of the complementary development of various sectors of the economy. Since tourism is nowadays one of the main drivers of economic growth, there should be emphasised that sustainable tourism, which is a special and highly desirable category of tourism, should be carefully planned and moderated, that it should differ from a mass

tourism on the basis of acknowledging principles of respecting the size, nature, characteristics and capacities for accommodating tourists and the needs of local population, i.e. it should establish a tolerance threshold. Also, sustainable tourism requires development of preliminary environmental impact analysis for each tourist project; it takes a responsible analysis of choice and creation of new economic activities as well as of the local jobs; it uses local potentials and at the same time it informs tourists about the importance of appreciation of cultural heritage (22, 23).

3.2. Potential tourist activities in the area of water storage reservoir

In addition to the aforementioned facilities and infrastructure systems, a special aspect in all analysed SPSPAs is the development of tourism and tourist sites as accompanying or additional special purposes in the area. On one hand, the lake's aquatic surface, due to the attractive water element, as well as the predominantly natural surroundings and hilly-mountainous relief represent added benefits, while on the other hand, binding and strict sanitary protection regimes of the water storage reservoirs do limit the development of other activities or narrow down the scope of potential activities (at the water storage reservoir, tributary rivers and in the parts by the dam), which is why the planning of water storage reservoir's catchment area is a particularly demanding task. The dominant forms of tourism that are planned in the catchment areas of protected water storage reservoirs are: aquatic tourism with mostly summer season offer (swimming, rowing, sailing, fishing); mountain tourism in the surrounding area with a variety of all year-round offer; then hunting, ecological, ethnological and other forms of tourism on other natural surfaces; rural tourism with all year-round offer, including the production of eco-food and craft products with ethno motives; transit tourism, etc. Excluding the transit tourism, during the first stages, all other tourism modalities are typically planned as of visitors type and just to a smaller extent as steady tourism, however, in the following development stages, there should be an emphasis on enhancement of steady tourism share which should be in balance with the concept of protection and requirements of the water source protection. This includes the organization of various sports and recreation activities on water, boat rides, fishing, tourist accommodation in vicinity of water (hotels, weekend settlements, campsites), and it is possible to use the surrounding land for the purpose of ethno/rural tourism, hunting or eco-tourism. Certainly, some of preconditions are: easy traffic accessibility and good infrastructure supply, presence of a visitor centre (24), abundance of contents and offer, combined with various cultural manifestations, educational programs and integrated and harmonised degree of service according to the regime of protection. An example of the detailed concept of tourism development, both in the area of the protected water catchment area and in the wider regional context, is set in the SPSPA of the catchment area of the water storage reservoir "Ćelije" (Table 3), which supplies the inhabitants of Kruševac and surrounding settlements with high quality drinking water. The artificial lake "Ćelije" consists of three morphologically different parts (basins): the deepest basin for water catchment; Vasićki basin (in the canyon); and Zlatarski basin (the most upstream one, which is the shallowest and the widest of all three basins). The total surface of the lake is around 3 km^2 (water catchment area is 592.5 km^2), and the deepest part of the lake goes to approximately 41 m.

Table 3 The SPSPA "Ćelije" - operative goals in the domain of tourism development

	The SPSPA "Ćelije" - operative goals in the domain of tourism development:
1	improvement of integrated tourist offer of the area, which is harmonized with the regimes and measures of protection of water quality, of natural and cultural values;
2	provision of conditions for satisfying all year-round demand of urban population from nearby bigger towns for specialized sports and recreational, health, cultural and leisure activities and amenities;
3	advance of tourism and recreation activities on the water, on the banks of water storage reservoir and by its larger tributaries, development of mountain, rural and ecological tourism and recreation hunting;
4	modernisation, communal provision and commercialisation of the accommodation capacities, particularly in the rural households, as well as in the weekend houses;
5	improvement of the efficiency in tourism development management, with a priority to coordinate the activities and harmonization of the interests of protection of the water storage reservoir and nature;
6	development of geological tourism in order to provide the tourists with basic knowledge of geo objects

Further, based on the main potentials, the initiated and planned development of tourism in the area of the SPSPA "Ćelije" follows a dispersed model. An integral tourist offer is based on ethno-tradition, through genuine accommodation facilities and organisation of commercial clubs for individual sports and recreation as parts of the tourist offer, and on production and positioning of traditional and environmentally-friendly food, craft products, etc. The scope of the water catchment area of the water storage reservoir is planned as a visitor and transit destination on the main existing tourist route towards the mountain centre of Kopaonik, in the function of summer sports and recreation locations. The development of visitors' places is based on the gravitation zone of demand, which includes the towns and cities: Kruševac, Niš, Prokuplje, Trstenik, Aleksandrovac, Brus and Blace. The following amenities are planned within the water storage reservoir "Ćelije" area:

- in the area by the dam, outside the water catchment area, there shall be established aqua-location with the capacity of up to 2,000 one-time visitors, and this facility shall consist of capacities for swimming, water-polo, water jumps, recreation and leisure programmes, canoe descents, program for children entertainment, terrains for mini sports, camping site with the capacity of 500 visitors, accompanied by appropriate leisure, restaurant, sanitary and service facilities, parking lots etc.;
- the transit location for the accommodation "Ćelije", at the northern border of the water catchment area, outside the zone II of the water storage reservoir, with tourist apartments and guest houses with a capacity of up to 300 beds, and with the required accompanying facilities, provided that their waste waters are treated and taken away from these facilities and out of the water catchment area; rural villages with an average capacity of 600 beds in rural households;
- rural tourism settlement Majdevo/Suvaja, which is inspired by the aqua-location by the dam, which consists of guest houses and lodgings with the approximate capacity of 500 beds;
- the location of water and in-land sports on the west-southwest coast of the water storage reservoir within the zones I and II of protection, with a capacity of up to 2,000 one-time visitors (in the zone I – with beach for swimming, swimming pools, rowing,

sailing and boarding, driving in electric boats, etc.; in the zone II - with a camp for 200 campers, with small sport grounds, accompanied by the required catering, sanitary and service facilities);

- organised fishing trails and places – envisaged to be positioned along the coast but outside the location of water and in-land sports.

In this way, the necessary intervention in space, which is related to providing stable water supply and/or energy production, and which causes a significant impact on the landscape, can attract users and become in some other way cost-effective and incentive economic category.

4. Conditions and Constraints for the Overlapping of Purposes

The concept of planning the development of tourism, tourist capacities and infrastructure inside or in vicinity of the protected areas, makes a special mark when planning the area of special purposes. The practice so far has shown that the need for development and for keeping the attractiveness of protected goods of a territory inflicts the planning of tourism development as an accompanying special purpose, which is why resolving the conflicts and achieving a balance between development and protection is an imperative in future planning of the special purpose areas in the Republic of Serbia. The forms of "soft tourism", e.g. eco-tourism, which are carefully adapted to the local and regional contexts, can offer significant opportunities and future perspectives to many regions, especially to the less developed ones. The implementation of integral policies is at the same time focused on the protection, management and planning of the area and on raising the awareness of residents, organisations and local/regional governances about the value of the territory, its economic importance and the possibilities of preserving sensitive ecosystems. Priority is given to the requirement for nature protection and landscape conservation as well as to the integration with housing and other related functions, then with agriculture and forestry, through the payment of compensation and incentives to local communities in order to adapt land use to local conditions, keeping in mind preservation of biodiversity and landscapes. When it comes to combining and overlapping uses of the area, it can be said that water management and tourism have not yet achieved a higher level of mutual coordination or the more permanent one. This situation is the consequence of the fact that tourism is still an activity with low level of accumulative capacity and under the conditions of fragmentation of economic subjects, touristic activity is not ready to commission and finance appropriate water management studies and terrain work. Namely, this relates to the water supply systems for tourist centres, as well as to hydrographic entities that can be used for tourist recreation, sports and nautical purposes. Consequently, there are still centres and regions that have not yet solved the issue of water supply, the ones which bear a lack of drinking water, of water for households, communal and tourist needs, and this situation negatively affects the quality of touristic services, as well as the length of tourist stay and the content of tourist offer. Certainly, it is important to define through the SPSPA not just what, where and under which conditions the activity can be conducted alongside the main (special) purpose, but also it is important to define stages/phases of realization, in order to create realistic conditions for the comprehensive encompass of the offer and employment of all potentials of a location.

5. CONCLUSIONS

The new generation of SPSPAs for water storage reservoirs, with their methodological approach, content and documentation base, provided the possibility for multiple use of space in order to meet the priority needs of water supply (or electricity production) as well as to activate tourist potentials. The underlying conditions are observance of all restrictions related to the establishment of the water protection regimes and for planning of content and locations which are aimed at tourism development. In this way, the attractiveness of new aquatic surfaces is additionally used without compromising the basic function and without disturbing the established balance in a natural environment. In previous practice, according to the analyzed SPSPAs, when demonstrating the capacity for tourism development, the standards which are dominantly applied are either the number of one-time visitors or the number of tourist beds. The proposal is to introduce urbanistic way of presenting the balance of areas by purposes, expressed in hectares (ha) or in gross building area of the planned facilities (GBA, in sq. m). This would allow, inter alia, a better perception of the relation between different uses in the area, of their share in the total area of the SPSPA, and of the capacity to sustain different uses or the load of space. Further improvements to the methodological model can be expected in the sphere of coordinated initiation of a more active participation of the public and different stakeholders, as well as in a closer cooperation between the institutions for protection and planners regarding the evaluation of priorities, finding a compromise and establishing the common goal, especially where the purposes and constraints for the use of space overlap. Certainly, most is expected from the phase of implementation of the planned solutions and in future monitoring of situation at the terrain.

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MOGUĆNOSTI RAZVOJA TURIZMA U ZAŠTIĆENIM PODRUČJIMA VODOAKUMULACIJA, NA PRIMERU PROSTORNIH PLANOVA PODRUČJA POSEBNE NAMENE U SRBIJI

Područja velikih i srednjih akumulacija čiji hidropotencijal služi za potrebe vodosnabdevanja naselja i/ili kao deo energetskog sistema, mogu istovremeno, pod određenim uslovima i ograničenjima da predstavljaju i lokaciju za razvoj turizma. Ova potencijalno konfliktna situacija se rešava kroz proces planiranja i izradu prostornih planova područja posebne namene (PPPPN). Najveći izazov u višenamenskom tretmanu vodoakumumacija, je deljenje resursa među korisnicima, a sa ciljem da se postigne održivi razvoj šireg područja, istovremeno očuva kvalitet vodoizvorišta i vodozahvata. Rad se bavi planskim pristupom u novoj generaciji PPPPN, za planirane i već postojeće vodoakumumacije i osmišljenom aktivacijom njihovih turističkih potencijala.

Ključne reči: *vodoakumulacije, turizam, prostorni plan, zaštita*