

SPATIUM *International Review*No. 32, December 2014, pp. 15-21

UDC 712.2:502.131.1 502.2/.5(497.11) Review paper DOI: 10.2298/SPAT1432015M

SPATIAL AND SECTORAL PLANNING SUPPORT TO SUSTAINABLE TERRITORIAL AND TOURISM DEVELOPMENT OF PROTECTED MOUNTAIN AREAS IN SERBIA

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The starting point for easier resolution of conflicts between conservation and development should be the application of the concept of protected areas of natural heritage as social-ecological systems. This is also the precondition for attainment of strategic planning coordination for protected mountain areas (PMA). The objective of the paper is to provide the insight into the effectiveness of strategic planning support – spatial and sectoral planning – to sustainable territorial and tourism development of PMA in Serbia. The study area comprises Kopaonik and Derdap National Parks, and Stara Planina Nature Park. This paper evaluates the effectiveness of strategic planning for PMA by means of analysis and evaluation of spatial plans, Strategic Environmental Assessment (SEA) and sector plans in tourism for the study area. The effectiveness of spatial planning is checked based on the analysis and evaluation of sustainability of zoning and land-use regimes, and of tourism development proposed by spatial plans for the study area. The conclusion is that it is necessary to apply holistic approach to sector planning for nature conservation and tourism development, and to apply SEA for tourism planning as well. Reduction of the spatial coverage of PMA and spatial differentiation of protected zones from the ones planned for intensive development is recommended.

Key words: spatial and sectoral planning, protected mountain areas, sustainable territorial and tourism development, zoning and land-use regimes, evaluation.

INTRODUCTION

The objective of the paper is to provide the insight into the effectiveness of strategic planning support, namely of spatial and sectoral planning to sustainable territorial and tourism development of protected mountain areas with natural heritage (PMA) in Serbia.

Protected areas of natural heritage in Serbia currently cover 5,221 km² (i.e. 5.9% of its territory) with the tendency of increasing up to 12% of its territory by 2020. So far, the greatest efforts in Serbia have been brought together in the formal declaration of the protection status for protected areas, while very few efforts have been made regarding the effectiveness of planning

and management for protection and development of these areas. Significant part of these areas consists of protected mountain areas (PMA). as mountain areas in Serbia (above the height of 600 m) cover 34% of its territory (i.e. approximately 29,850 km²). Prevailing part of high mountains (elevations over 1,500 m with surrounding areas above 1,000 m account for only about 11% of Serbian territory, i.e. 9,680 km²), as well as part of semi-high and low mountains, have been declared protected areas with different status of protection (Milijić et al., 2013). The most attractive PMA are identified by the Spatial Plan of the Republic of Serbia (1996, 2010) as tourism destinations. Only a few of these PMA tourism destinations are developed or have been in the initial stage of development (Maksin and Milijić, 2013).

One of the critical issues is the need to balance

the economic, environmental and social dimensions of sustainable development and heritage protection. This balance is the basis of the new concept of biodiversity and protected areas of natural heritage as social-ecological systems (Tschanz *et al.*, 2013). These concepts should represent the starting point for easier resolution of conflicts between conservation and development in strategic planning and management of PMA.

The coordination between tourism, spatial and environmental planning is a crucial issue aiming at realizing an integrated strategic planning for

The paper represents the result of research carried out on projects TR36036 'Sustainable development of Danube area in Serbia', and III 47014 'The role and implementation of the National spatial plan and regional development in renewal of strategic research, thinking and governance in Serbia', financed by the Ministry of Education and Science of the Republic of Serbia in the period 2011-2015.

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sustainable territorial development of PMA. In this context, Peano (Peano *et al.*, 2013) points out that the general question is: 'Which missions can be assigned to planning, with the aim of a more effective integration of conservation policies into the overall territorial policies?' The next question concerns how effective strategic planning is as support to sustainable PMA management. This paper evaluates effectiveness of strategic planning for PMA in Serbia by means of analysis and evaluation of spatial plans for PMA and mutual-feedback coordination with Strategic Environmental Assessment and sector plans in tourism.

The first hypothesis is that the key precondition for achieving sustainable development and management of PMA - the coordination of strategic planning (spatial, sector and environmental) in Serbia has not been fulfilled yet. Spatial planning in Serbia establishes the main planning framework for sustainable territorial development. The Spatial Plan of the Republic of Serbia (SPRS, 1996, 2010) represents planning framework for coordinating strategic planning of a more balanced territorial development of Serbia on the state level, as well as on the level of PMA. The holistic approach to PMA as socioecological systems (SES) is applied only to spatial planning. The following limitations affect the effectiveness of strategic planning support to sustainable development of PMA: prevailing sector approach in PMA protection (ecological approach) and tourism development (economic approach); consequently, there insufficient is relativization of conflicts between natural heritage protection, tourism development and sustainable development of local communities; the coordination of sector planning in tourism with spatial planning is inadequate, as well as the application of SEA for assessment of tourism impact on the environment (Maksin, Milijić, 2010).

The second hypothesis is that the sustainability of the natural heritage protection, sustainable development and tourism sustainable development of local communities can be achieved in the spatial planning for PMA. Coverage of Serbian territory with spatial plans for special-purpose areas (SPSPA) provides a sound spatial planning framework for the coordination and integration of strategic planning and management of PMA sustainable development. The effectiveness of spatial planning will be checked based on the analysis and evaluation of sustainability of zoning and land-use regimes and of tourism development proposed by spatial plans for these areas. For PMA, spatial zoning and land-use regimes for the nature protection, natural resources use. tourism development and development of settlements are established. Conservation policy in Serbia is based exclusively on the goals of the natural heritage and biodiversity protection, which is not in accordance with the new concept of biodiversity and PMA as SES. It is rooted in restrictions rather than in possibility and creativity for new development, similar to planning policy for England National Parks (Thompson et al., 2013). Therefore, the zoning and land-use regimes for the nature protection are restrictive. Only controlled tourist visits are allowed in the first-degree protection zone, while the second-degree protection zone permits recreation of tourists and limited development of tourism and other types of infrastructure. The third-degree protection zone is permitted to have settlements, where the selective and limited development of tourist resorts and tourism infrastructure is also allowed. The land-use regime for the thirddegree protection zone has similarities with buffer zones, as defined by Wild and Mutebi (Ebregt & De Greve, 2000). A buffer zone, as defined in Serbian legislation, surrounds the protected area, similarly as the transition area defined in UNESCO's Man and Biosphere Program, but there is no obligation for this zone to be established. Adaptations of conservation policy for protected areas are realized in the process of spatial planning, primarily regarding the spatial coverage of these areas, protection zones and land-use regimes, by means of which partial relativization of conflicts between conservation and development is achieved. PMA management programs (PMAMP) are prepared based on SPSPA for PMA.

Research focus in this paper is on: the coordination of the spatial and sectoral planning for PMA, the sustainability and conflicts of the zoning and land-use regimes in spatial plans for PMA; and the sustainability of the proposed tourism development for PMA.

MATERIALS AND METHODS

Study area

The study area comprises the following PMA (Figures 1, 2) for which spatial plans for special purpose areas (SPSPA) and tourism master plans (TMP) were adopted: high mountains (Kopaonik National Park – Kopaonik and Stara Planina Nature Park – Stara Planina) and low mountains along the Danube river bank (Đerdap National Park – Đerdap).

Stara lanina occupies the area of 1,143 km², with 55 rural settlements. It is situated in the eastern part of Serbia, on the borderline between the Republic of Serbia and the Republic of Bulgaria. The Nature Park is designated as IBA and IPA area. This is an area with pronounced potential for the development of the all-year-round tourism offer. However, tourism is only in the initial phase of development.

Kopaonik occupies the area of 121 km², with tourist resorts (partly within the National Park) and with few hamlets, but without urban or rural settlements. It is situated in the central part of Serbia. This area is developing the all-year-round tourism offer. The buffer zone is established in the SPSPA of the Kopaonik National Park.

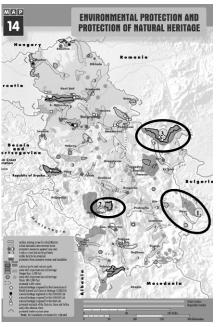


Figure 1. PMA within protected areas in Serbia

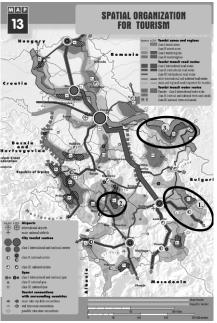


Figure 2. PMA as tourism destinations in Serbia

In terms of tourism, the most attractive part of the Danube flow through Serbia is Đerdap. It covers the area of 637 km², with 27 rural and small urban settlements. Đerdap is declared IBA, IPA and PBA area. The area is on the list of the Carphatian areas, with its tourism still being in the initial phase of development.

Materials and methods

This qualitative research is based on documentation study (SPSPA and TMP for the study area), field work and stakeholder involvement during the preparation of SPSPA (information feedback — briefs, focus groups and consultation, and joint planning — mediation and negotiation).

Starting from the chosen research focus and conducted qualitative research, the study procedure included three steps. In every step the evaluation criteria were proposed. Based on evaluation criteria and comparative analysis of SPSPA and TMP for the study area, the effectiveness of strategic planning coordination for sustainable territorial development of PMA in Serbia was carried out. Based on evaluation criteria and comparative analysis of spatial plans for the study area, the sustainability assessment of the zoning and land-use regimes, as well as of the proposed tourism development were carried out.

Evaluation was carried out by five professional planners involved in the preparation of SPSPA and average score for each criterion was calculated. Evaluation results were checked during public consultations and confirmed through the discussions and joint planning with stakeholders involved in the preparation of spatial plans.

RESULTS

Coordination of the strategic planning for PMA

The following evaluation criteria for the coordination (C) of the strategic planning are proposed for PMA (modified based on Maksin, 2012):

- C1 Planned PMA development (proposed plans: SPSPA, PMAMP and TMP) high (1) SPSPA, PMAMP and TMP are adopted; medium (2) one of the proposed plans is adopted, or two plans have been elaborated, but not adopted; low (3) none of the proposed plans is elaborated;
- C2 Coordination of the strategic plans for PMA (coordination of TMP with the SPSPA and PMAMP, as coordination of SPSPA with TMP and PMAMP with SPSPA is obligatory) — high (1) TMP is elaborated and adopted in

- compliance with SPSPA and PMAMP; *medium* (2) TMP is elaborated and adopted partly in compliance with SPSPA and PMAMP; *low* (3) TMP is not elaborated and adopted in compliance with SPSPA and PMAMP:
- C3 Controlled impacts of the strategic plans for PMA on the environment (Strategic Environmental Impact Assessment – SEA) – high (1) SEA is carried out for SPSPA and for TMP, and SPSPA and TMP are elaborated in compliance with SEA; medium (2) SEA is carried out only for SPSPA, and TMP is elaborated in compliance with SPSPA and SEA for SPSPA; low (3) SEA is carried out only for SPSPA, but TMP is not elaborated in compliance with SPSPA and SEA for SPSPA;
- C4 Participation of local stakeholders in the strategic planning for PMA (SPSPA, PMAMP, TMP, SEA) — high (1) Participation of local stakeholders is accomplished in the process of SPSPA, PMAMP, TMP and SEA elaboration; medium (2) Participation of local stakeholders is accomplished only in the process of SPSPA elaboration; low (3) Participation of local stakeholders is reduced on public review or consultations of draft versions of SPSPA, SEA, TMP and/or PMAMP.

Sustainability of the zoning and landuse regimes (Figure 3)

The evaluation was carried out on the basis of the following criteria for the sustainability of the zoning and land-use regimes (ZL) proposed in SPSPA for PMA:

 ZL1 — Coordination of zoning with land-use regimes for nature protection with available resources for the implementation of land-use regimes and adequate compensations for the limitations in land use — *high* (1) for zoning in

- accordance with available resources, with adequate compensations; *medium* (2) for zoning partially in accordance with available resources, with limited compensations for the limitations in land use; *low* (3) for zoning not in accordance with available resources;
- ZL2 Coordination of zoning with land-use regimes for nature protection with sustainable development of involved local communities (development of traditional and new activities) and settlements high (1) for zoning which enables sustainable development of local communities and settlements, medium (2) for zoning witch limits development of new activities and settlements, low (3) for zoning which limits further development of all activities and existing settlements;
- ZL3 Coordination of zoning with land-use regimes for tourism development with zoning for nature protection high (1) for zoning which is in complete accordance with zoning for nature protection, medium (2) for zoning which is not in accordance with zones of nature protection in less than 10% of the mentioned zones, low (3) for zoning which is not in accordance with zones of nature protection in 10-20% of the mentioned zones;
- ZL4 Coordination of zoning with land-use regimes for tourism development with zoning of natural resources (agricultural land, forest and water) and settlements high (1) for zoning which is in full accordance with zoning of natural resources and settlements; medium (2) for zoning which is not in accordance with zoning of natural resources and settlements in less than 20% of the mentioned zones, low (3) for zoning which is not in accordance with zoning of natural resources and settlements in more than 20% of the mentioned zones.

Table 1. Evaluation of coordination of the strategic planning for PMA

| Evaluation Criteria | 1. Kopaonik | 2. Đerdap | 3. Stara Planina |
|---------------------|-------------|-----------|------------------|
| C1 | 1 | 1 | 1 |
| C2 | 3 | 1 | 3 |
| C3 | 3 | 2 | 3 |
| C4 | 2 | 2 | 2 |
| Average | 2.25 | 1.5 | 2.25 |

Table 2. Sustainability evaluation of the zoning and land-use regimes in SPSPAs for PMA

| Evaluation Criteria | 1. Kopaonik | 2. Đerdap | 3. Stara Planina |
|---------------------|-------------|-----------|------------------|
| ZL1 | 2 | 2 | 2 |
| ZL2 | 2 | 2 | 2 |
| ZL3 | 2 | 1 | 3 |
| ZL4 | 1 | 1 | 2 |
| Average | 1.75 | 1.5 | 2.25 |

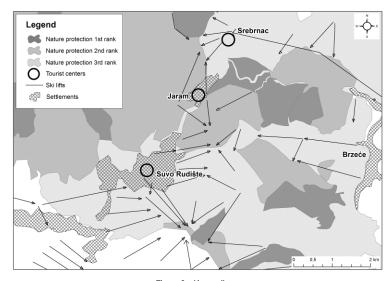


Figure 3a. Kopaonik Source: Spatial Plan of Kopaonik National Park, 2009

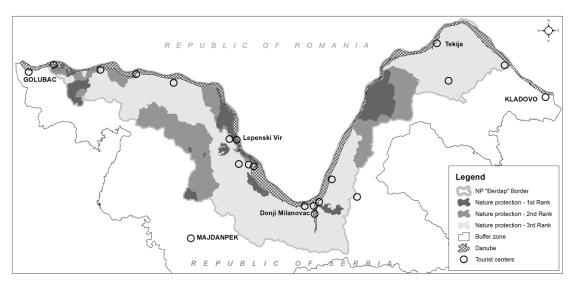


Figure 3b. Đerdap; Source: Spatial Plan of Đerdap National park, 2013

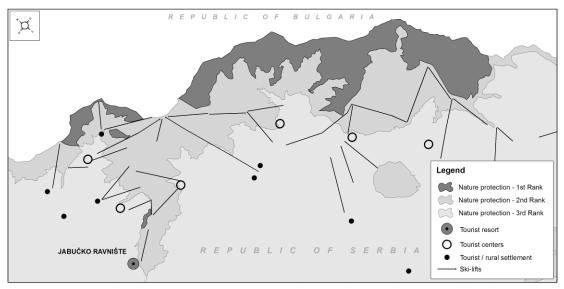


Figure 3c. Stara planina. Source: Spatial Plan of Nature Park and Touris Area of Stara Planina, 2008

Figure 3. Zoning of nature protection and tourism development in SPSPA for PMA

Sustainability of the proposed territorial development of tourism

The evaluation was carried out on the basis of the following evaluation criteria for sustainability of the territorial development of tourism (SPT) proposed in SPSPA for PMA:

- S-SPT 1 Sustainability of the proposed territorial development of tourism for the core area of natural heritage (first-degree and second-degree protection zones) high (1) proposed spatial development of tourism has no negative impacts on the core area; medium (2) proposed spatial development of tourism has no negative impacts on the first-degree protection zones and has limited negative impacts in less than 10% of the second-degree protection zones, which can be controlled; low (3) proposed spatial development of tourism has limited negative impacts on the core area which are difficult to control;
- S-SPT 2 Sustainability of the proposed territorial development of tourism for the thirddegree protection zones and sustainable development of the buffer zone - high (1) proposed spatial development of tourism has no negative impacts on the third-degree protection zones and enables sustainable development of the buffer zone; medium (2) proposed spatial development of tourism has limited negative impacts in less than 20% of the third-degree protection zones and buffer zone, which can be controlled; low (3) proposed spatial development of tourism has limited negative impacts on the third-degree protection zones and buffer zone which are difficult to control;
- S-SPT 3 Sustainability of the proposed territorial development of tourism for the sustainable natural resources use (agricultural land, forests and water) high (1) proposed territorial development of tourism has no negative impacts on sustainable natural resources use; medium (2) proposed territorial development of tourism has limited negative impacts on less than 10% of available natural resources, which can be controlled; low (3) proposed territorial development of tourism has negative impacts on the protection and use on more than 10% of available natural resources, which are difficult to control;
- S-SPT 4 Sustainability of the proposed territorial development of tourism for the sustainable development of local communities (local job creation, improved quality of life, development of traditional activities and settlements) high (1) proposed territorial development of tourism has overall positive impacts on sustainable development of local communities; medium (2) proposed

Table 3. Sustainability evaluation of the proposed territorial development of tourism in SPSPAs for PMA

| Evaluation Criteria | 1. Kopaonik | 2. Đerdap | 3. Stara Planina |
|---------------------|-------------|-----------|------------------|
| S-SPT 1 | 3 | 1 | 3 |
| S-SPT 2 | 3 | 1 | 2 |
| S-SPT 3 | 2 | 1 | 3 |
| S-SPT 4 | 2 | 2 | 3 |
| Average | 2.5 | 1.2 | 2.75 |

territorial development of tourism has limited positive impacts on sustainable development of local communities; *low* (3) proposed territorial development of tourism has limited negative impacts on sustainable development of local communities.

DISCUSSION

Coordination of the strategic planning for PMA

According to the first criterion, high level of strategic planning is achieved for all PMA.

According to all other criteria, mutual-feedback coordination of strategic plans for PMA was not applied consequently due to sector planning in tourism for two out of three study areas. The elaboration of TMP was conducted before the elaboration of SPSPA for Derdap, while for the other two study areas the elaboration of SPSPA was conducted before the elaboration of TMP.

According to the second and third criterion. a high level of non-coordination of strategic planning is identified for both high-mountain PMA, and a higher level of coordination for low-mountain PMA. The application of marketdriven approach in sector planning in tourism, as well as the obligation to implement TMP in the elaboration of SPSPA (proposed by the Law on Tourism, 2009) and reduced public participation in tourism planning process cause difficulties in the coordination of strategic planning for PMA. The obligation to consult TMP in the elaboration of SPSPA should be established, as well as the obligation to control the spatial, environmental and social impacts of tourism development proposed by TMP through the spatial planning process and SEA process. Non-implementation of SEA for tourism sector plans might jeopardize the realization of the integrative role played by spatial planning in directing and managing sustainable territorial and tourism development of PMA, namely in the case of the most attractive PMA for winter tourism. Despite this. the implementation of SEA in spatial plans contributed to achieving a certain balance between tourism development and protection for PMA. The implementation of SEA enabled in SPSPA for Stara Planina compromise solution with the tourist resort Jabučko ravnište whose capacities are reduced to medium-size (6,000 beds) instead of a mega-tourist resort.

An inadequate involvement of local communities and local stakeholders in the decision-making process during the elaboration of TMP and PMAMP is another weak point in the coordination of strategic planning for all PMA.

Sustainability of the zoning and landuse regimes

Sustainability evaluation of the zoning and land-use regimes in SPSPA shows lower level in the two analyzed high-mountain PMA, than in the case of low-mountain PMA.

According to the first and second criterion, the planning solutions of the SPSPA are equally suitable for all PMA. The problem partially lies in the topicality and viability of established protection zones, since they are not established on available financial resources for the application of land-use regimes, and adequate compensations for limitations in the land use. According to the third criterion, the planning solutions are lower for high-mountain PMA, but for different reasons, Relative to its altitude, the core area of the Kopaonik National Park is located below the zone of intensive winter tourism development (tourist resorts and ski zones), thereby exposed to direct negative effects of unpurified wastewater from tourist centers, polluted runoff from roads, trafficderived air pollution, air pollution from heating of accommodation facilities, etc. In a part of the Stara Planina Nature Park, due to inadequately located Jabučko ravnište skiresort (in relation to the core area and main ski zones), the problem of anthropogenic impacts on the environment jeopardizing the natural resources is pronounced. According to the fourth criterion, the planning solutions of the SPSPA of the Kopaonik and Derdap National Parks are more favorable than those of the SPSPSA of the Stara Planina Nature Park. In spatial planning the model of 'concentrated dispersion' for spatial development of tourism offer is implemented in all SPSPAs. The problems were caused by planning solutions for the Jabučko ravnište mega-tourist resort (23,000 beds) and ski zones covered by the

Stara Planina Resort Area Master Plan (Stara planina TMP, 2007). The conflicts were resolved and compromise solutions achieved through joint planning — mediation and negotiations in the process of SPSPSA and SEA elaboration.

Sustainability of the proposed territorial development of tourism

The evaluation of the proposed territorial development of tourism shows lower level of sustainability in the high-mountain PMA, as well as higher level in the low-mountain PMA than the evaluation of the zoning and land-use regimes for tourism development in SPSPA.

According to results for the first and second criterion, the zoning and land-use regimes proposed by SPSPA for high-mountains PMA should be questioned. Are there problems associated with the zoning and land-use regimes which have not been appropriately addressed in the spatial planning and in the evaluation of their sustainability? Zoning and land-use regimes for tourism development are principal methods to deploy visitors, and hence it is critical in achieving the appropriate combination of concentration and dispersion of tourism offer, and degree of the impact which a type of tourism causes (Eagles et al., 2002). One of the problems includes altitudinal zoning and overlapping of protection zones with zones of tourism development. In the Kopaonik National Park, the problem of altitudinal zoning is more pronounced. In a part of the Stara Planina Nature Park (Jabučko ravnište-Babin zub), the problem of overlapping of protection zones with zones of tourism development is pronounced. There is a pronounced problem of degradation and erosion of Babin zub natural landscape — the main tourist attraction in summer, due to inadequately located Jabučko ravnište ski-resort with ski connections on the slopes (according to the Stara Planina TMP).

According to the third criterion, the lowest level of sustainability is assessed for Stara planina. The development of accommodation capacities is over-dimensioned in relation to possibilities for their rational water supply (according to the Stara Planina TMP), contrary to solutions proposed in the SPSPA (2008). This conflict was partially resolved in the process of spatial planning and carrying out of SEA for SPSPA.

According to the forth criterion, the proposed tourism development might have limited positive impacts on sustainable local community development, because the tourism management has so far failed to give the adequate support to the development of local

agriculture and inclusion of rural settlements in tourism development. In the past 25 years, out of 16 planned settlements in the buffer zone of the Kopaonik National Park, only the settlement of Brzeće was included in the tourism offer. The engagement of human resources from surrounding areas of PMA for tourism development was proposed by Stara Planina TMP, without creating local jobs, improving the quality of life of local communities, etc.

CONCLUSION

Sustainable territorial and tourism development of PMA requires the establishment of coordination and integration of strategic planning and improvement of its implementation. In order for spatial planning for PMA to fulfill its role of coordination and integration, it is necessary to enhance sector planning for protection of natural heritage and tourism development by application of holistic approach.

SEA is an important control instrument for the support to coordination and integration of strategic planning with a view of achieving sustainable territorial development. integration of the SEA into spatial plans for PMA in Serbia has given positive results in the evaluation of different territorial development solutions, and has also contributed to the improvement of natural heritage protection and sustainability of planned development. A precondition for SEA to have a controlling and coordinating role is to initiate their application in tourism planning, using experiences related to SEA implementation and integration into the spatial planning process as the starting basis, as well as to enable their adequate integration into the strategic planning process – from preparation to implementation, monitoring and auditing.

One of the key issues of strategic planning for PMA as SES should be the achievement of higher quality of life and prosperity of local communities within PMA. For this reason we propose application of the Social Impact Assessment (SIA) process in strategic planning for PMA, as a part of SEA or separate process.

It is also of key importance to: improve governance support to the implementation of strategic planning for PMA; establish information and monitoring systems for spatial, tourism and natural heritage planning and management; provide an adequate involvement of local communities and local stakeholders in the decision-making process with respect to tourism development and conservation of natural heritage; etc.

The achieved sustainability of zoning in SPSPA is conditioned by restrictions and inadequate

performance of conservation policy and market-driven approach to tourism planning. In the case study of the Kopaonik National Park, the impact of tourism development on the core area will lead to lowering of the level and category of the natural heritage protection (nature park, landscapes of outstanding beauty), as well as to a reduction in its coverage. Based on the experiences of Alpine countries, prevention and relativization of these conflicts can be obtained by means of spatial differentiation of protected zones from the ones planned for intensive development. This proposal is similar to the spatial differentiation of European protected areas and MAB Biosphere Reserves on the Core, Buffer and Development zones (Köck et al., 2009). For the case studies of the Stara Planina Nature Park and Derdap National Park, the differentiation between core areas and tourism development zones is possible.

A trade-off can be achieved by reconsidering and reducing the spatial coverage of PMA and zones of natural heritage protection, as well as by spatial differentiation between development zones or multiple-use zones. e.g. for tourism. settlements, MSE, infrastructural corridors, and core zones (Naughton-Treves et al., 2005). The core zones can be interconnected through ecological corridors and buffer zones, thus forming an ecological network. Development or multiple-use zones imply their sustainable spatial development and should be a part of sustainable-use area and buffer zones (Bennett & Mulongoy, 2006). They should form a sustainable development network for tourism and local communities. The authors of this paper believe that protected areas with sustainable use of natural resources will interweave with buffer zones, taking into account the following functions of buffer zones: sustainable support to development; sustainable livelihoods and community benefits as an adequate compensation for more restrictive land uses in the protected area; provision of ecosystem services to the community (e.g. clean water); etc. (Martin & Piatti, 2009). It is necessary to provide a coordination of zoning with available financial resources for the implementation of land-use regimes and with adequate compensations to landowners and land users for the limitations in the land use (Milijić et al., 2013).

References

Bennett, G. & Jo Mulongoy, K. (2006) Review of Experience with ecological networks, corridors and buffer zones, CBD Technical Series No. 23, Quebec: Secretariat of the Convention on Biological Diversity.

- Eagles, P. F. J., McCool S. F. and Haynes C. D. A. (2002) *Sustainable Tourism in Protected Areas: Guidelines for Planning and Management.* Gland, Switzerland, and Cambridge, UK: IUCN.
- Ebregt, A. & De Greve, P. (2000) Buffer Zones and Their Management — Policy and Best Practices for Terrestrial Ecosystems in Developing Countries. Theme Studies Series 5, Wageningen: International Agriculture Centre.
- Ecosign Mountain Resort Planners Ltd. (2007) Stara Planina Resort Area Master Plan.
- Faculty of Economy (2007) *Master plan "Donje Podunavlje"*, Belgrade: Faculty of Economics.
- Horwath and Horwath Consulting (2009) Master plan for tourism destination "Kopaonik",
 Belgrade: Ministry of Economy and Regional Development.
- Government of the Republic of Serbia (2008) Spatial Plan of the Nature Park and Tourism Area of Stara Planina, http://195.250.98.80/ rapp_mape/113/Plan_Stara-pl.pdf, accessed on 14th Oct 2012.
- Goverment of the Republic of Serbia (2009) Spatial Plan of Kopaonik National Park, Official Gazzete of the Republic of Serbia, No. 95.
- Government of the Republic of Serbia (2013) Spatial Plan of Derdap National Park, Official Gazzete of the Republic of Serbia, No. 43.
- Institute of Architecture and Urban & Spatial Planning of Serbia (2009) *Izveštaj o strateškoj proceni uticaja Prostornog plana turističke regije i Parka prirode 'Stara planina' na životnu sredinu*, Belgrade: IAUS.
- Institute of Architecture and Urban & Spatial Planning of Serbia (2011) *Izveštaj o strateškoj proceni uticaja Prostornog plana područja posebne namene Nacionalnog parka 'Đerdap' na životnu sredinu*, Belgrade: IAUS.
- IUCN, WCPA (2002) Sustainable Tourism in Protected Areas, Best Practice Protected Area Guideline, Series No. 8.
- Köck, G., Koch, G. & Diry, C. (2009) The UNESCO Biosphere Reserve "Biosphärenpark Wienerwald" (Vienna Woods) – a Long History of Conservation, Journal of Mountain Areas Research and Management, Vol. 1, No. 1, pp. 51-56.
- Maksin, M. (2012) Sustainable heritage utilization in rural tourism development in Serbia, *SPATIUM International Review*, No. 28, pp. 37-44.
- 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. & Milijić, S. (2013) Sustainable spatial development of tourism destinations in the time of crisis in Serbia, in Vujošević, M, Milijić, S. (eds.) 2nd International Scientific Conference on Tourism in Southern and Eastern Europe: Crisis a Challenge of Sustainable Tourism Development? Conference Proceedings, Vol. 2, pp. 185-200.

- Martin, O. & Piatti, G. (eds.) (2009) World Heritage and Buffer Zones, World Heritage Papers, No. 25, World Heritage Centre.
- Milijić, S., Maksin, M. & Krunić, N. (2013)
 Priorities for Research, Planning and
 Management of Sustainable Spatial
 Development and Protection in Serbia, in
 Bauch, K. (ed.) 5th Symposium for Research in
 Protected Areas, Conference Proceedings, pp.
 515-520.
- National Assembly of the Republic of Serbia (2010) *Law on the Spatial Plan of the Republic of Serbia, 2010-2020,* No. 88/2010, http://www.rapp.gov.rs/media/spatial_plan_rs.pdf, accessed on 19th Oct 2014.
- National Assembly of the Republic of Serbia (1996) Law on the Spatial Plan of the Republic of Serbia, Official Gazzete of the Republic of Serbia, No. 13/96.
- Naughton-Treves, L., Buck Holland, M. & Brandon, K. (2005) The Role of Protected Areas in Conserving Biodiversity and Sustaining Local Livelihoods. *Annual Review Environment Resources*, Vol. 30, pp. 219-252.
- Peano, A., Gambino, R., Negrini, G. & Salizzoni, E. (2013) Parks & Landscapes in Europe: Towards an Integration of Policies and Management, in Bauch, K. (ed.) 5th Symposium for Research in Protected Areas, Conference Proceedings, pp. 567-570.
- Thompson, N., Garrod, G. & Raley, M. (2013) Planning in England National Parks, in Bauch, K. (ed.) 5th Symposium for Research in Protected Areas, Conference Proceedings, pp. 761-764.
- Tschanz, L., Tatoni, T. & Brun, J. (2013) Socio-Ecological Systems: towards a global approach of biodiversity observation in a Regional natural park of alpine territory, in Bauch, K. (ed.) 5th Symposium for Research in Protected Areas, Conference Proceedings, pp. 765-768.

Received October 2014; accepted in revised form November 2014