

Residents' perceptions of and satisfaction with tourism development: A case study of the Uvac Special Nature Reserve, Serbia

Tourism and Hospitality Research
2021, Vol. 21(1) 31–43
© The Author(s) 2020
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/1467358420946789
journals.sagepub.com/home/thr



Sanja Obradović , **Aleksandra Tešin** and **Tamara Božović**¹

Department of Geography, Tourism and Hotel Management, Faculty of Science,
University of Novi Sad, Novi Sad, Serbia

Dragan Milošević

Faculty of Science, Climatology and Hydrology Research Centre, University of Novi Sad,
Novi Sad, Serbia

Abstract

One of the core elements of tourism development is to encourage local communities' participation, as this is crucial to the sustainability of tourism industry. This study seeks to explore the perception of and satisfaction with tourism development in the Uvac Special Nature Reserve among local communities. The paper examines the relationships among the four dimensions of sustainability (ecological, economic, institutional and socio-cultural) and perceptions of tourism development held by the residents of the communities in the Uvac Special Nature Reserve in southwestern Serbia. A survey has been conducted among 152 residents. Building on previous studies, the hypothesis that ratings for the four dimensions of sustainability would contribute to resident satisfaction has been put forward. Regression analyses reveal that all of four dimensions of sustainability are significant predictors of residents' satisfaction with tourism development in the Uvac Special Nature Reserve. The findings reveal that local communities want to be involved in tourism development in order to ensure that their needs are addressed. This confirms that successful and sustainable development of tourism is impossible without taking into account local residents' needs and this is in accordance with the tourism development strategy guidelines in Serbia, which are compliant with the United Nations Sustainable Development Goals.

Keywords

Sustainable tourism development, local residents' perception, residents' satisfaction, nature protected areas, Serbia

Introduction

Sustainable development is a dynamic concept and process. The understanding of this process has been changing with societal development. In the initial phases, a stronger focus was placed on environmental and economic issues. Over time, an increasing number of researchers have come to recognize that equality, justice, poverty alleviation, and local community empowerment (institutional context) should be the core of sustainable development (Ahn et al., 2002; Dymond, 1997; Khanna et al., 1999; McCool et al., 2001). Various definitions, views, and forms of

sustainable tourism have been identified as the ideal form of what is needed (Hardy and Beeton, 2001; Mowforth and Munt, 1998; Sharpley, 2000; Swarbrooke, 1999; World Tourism Organization/Earth Council, 1995).

Corresponding author:

Sanja Obradović, Department of Geography, Tourism and Hotel Management, Faculty of Science, University of Novi Sad, Novi Sad, Serbia.

Email: sanjaobradovic992@gmail.com

Since the 1990s, the research on sustainable tourism development has been intensified (Bramwell and Henry, 1996; Bramwell and Lane, 1993; Butler, 1993, 1999; Gunn, 1994; Miller, 2001; Sirakaya et al., 2001). As a specialized international agency in tourism, the United Nations World Tourism Organisation (UNWTO) set forth the concept of sustainable tourism. Sustainable tourism should make optimal use of environmental resources, respect the socio-cultural authenticity of host communities, and provide socio-economic benefits to all stakeholders (UNWTO, 2004). Similarly to the evolution of sustainability, the focus in sustainable tourism development has shifted from governments and enterprises to local communities, from economic growth and environmental conservation to poverty alleviation and local resident empowerment (Fallon and Kriwoken, 2003; Hardy and Beeton, 2001; Mitchell and Reid, 2001; Sofield, 2003).

Local residents' attitudes and perceptions are crucial for successful and sustainable tourism development. The study of communities' attitudes and perceptions and of the formation of perceptions of tourism development could provide valuable information for decision-makers (Choi and Sirakaya, 2005). Studies dealing with residents' attitudes toward tourism and its impacts have become increasingly topical over the past decades. Local residents have an important role in the process of sustainable development in tourism. Resident support for tourism development contributes to the robustness of tourism industry and successful community improvement in developed (Bello et al., 2016; Castela, 2018; Kapsalis and Kapsalis, 2020; Park and Kim, 2016; Rasoolimanesh et al., 2017) and developing countries (Albu, 2020; Hai and Alamgir, 2017; Khoalenyane and Ikechukwu, 2016; Kihima and Musila, 2019; Thetsane, 2019).

Previous studies suggest that residents are major actors in the tourism development process since they are directly affected by it (Ap, 1992; Gunn, 1994; Murphy, 1985). The understanding of residents' perceptions of the impact of tourism is substantially important for the successful development of tourism (Zhang and Chan, 2016), local support for tourism development (Ap, 1992; Gunn, 1994; Látková and Vogt, 2012; Murphy, 1985; Nicholas et al., 2009; Rasoolimanesh et al., 2017) and the satisfaction of local residents with tourism development (Ribeiro et al., 2017; Xie et al., 2014). Numerous studies of residents' perceptions of tourism development have been conducted in Europe (Akis et al., 1996; Bramwell and Sharman, 2000; Buono et al., 2012; Cavus and Tanrisevdi, 2003; García et al., 2015; Sharpley, 2000, 2014; Vargas-Sanchez et al., 2015),

as well as in Africa (Lepp, 2007; Muganda et al., 2013; Mugizi, et al., 2017; Nunkoo and Gursoy, 2012; Pigram and Wahab, 1997), Asia (Alrwajfah et al., 2019; Budhiasa and Riana, 2019; Zamani-Farahani and Musa, 2008), and Australia and Oceania (Diedrich and Aswani, 2016; Hardy and Beeton, 2001; Wijaya, 2017) and America (Andereck et al., 2005; Butler, 1993, 1999; Cattarinnich, 2001; Gursoy et al., 2002; Huayhuaca, et al., 2010; Jurowski and Gursoy, 2004; Lankford and Howard, 1994; Lindberg and Johnson, 1997; Liu and Var, 1986; McCool and Martin, 1994; McGehee and Andereck, 2004; Mowforth and Munt, 1998; Nicholas et al., 2009; Perdue et al., 1990; Ritchie, 1988; Sirakaya et al., 2002; Smith and Krannich, 1998; Stabler, 1997).

According to Moscardo (2015) the absence of local participation in tourism development and the exclusion of local communities from tourism planning is an issue that requires attention. This exclusion of residents from tourism development may be due to the external nature of funding and implementation of projects, especially in developing countries (Stone and Nyaupane, 2019; Teye et al., 2002). For this reason, communities have to participate in tourism-related decisions if their livelihood priorities are to be reflected in the way tourism is developed (Thetsane, 2019). Local communities often depend on natural resources for livelihood. The possibility of access denial to environmental resources as a result of conservation initiatives may trigger negative perceptions about sustainable tourism development (Bragagnolo et al., 2016). For example, disgruntled local communities near the Digya National Park in Ghana intentionally set the park on fire when they were totally banned from collecting forest products from the park (Abukari and Mwalyosi, 2018; Ayivor, et al., 2013). Conflicts often arise when local residents express dissatisfaction with the regulations imposed by the protected area managers (Hayes, 2006; Tosun, 2002). Although local communities usually support the conservation of natural areas because their survival is highly dependent on the existence and accessibility of natural resources (Gibson et al., 2005), it is still necessary to impose regulations on local populations' activities in protected areas. If local people do not get the benefits of tourism straightly, they may come to resent the presence of visitors (Payen, 2014). In turn, if the locals start to see the income that tourism can generate for their community, they become aware of the importance of protecting the fragile eco-systems and cultural monuments that tourists are coming to experience. They oppose excessive development and strive for a better infrastructure for waste, traffic and water management. This is particularly important in

less developed countries where environmental regulations are often lax (Moynul and Zillur, 2016; Pillai, 2011).

Resident participation in decision-making during tourism planning can contribute to the development of more positive attitudes towards tourism (Vargas-Sánchez et al., 2015). This is due to the acknowledged fact that residents' satisfaction is one of the key factors leading to successful tourism development (Andereck et al., 2005; Harrill, 2004; Ribeiro, et al., 2017; Shen et al., 2008; Vargas-Sánchez et al., 2008; Xie et al., 2014). Residents' satisfaction relates to the benefits of tourism, residents' quality of life, their involvement in decision-making, involvement for the development of their community (Fakhrana and Zafran, 2020).

The sustainable tourism development paradigm has three dimensions: economic, socio-cultural, and environmental (Spangenberg et al., 2002). However, it is difficult to strike a balance among these three classic dimensions of sustainable tourism without an institutional perspective towards managing, mediating and facilitating growth (Huayhuaca et al., 2010; Spangenberg et al., 2002; Spangenberg and Valentin, 1999). The prism of sustainability (PoS) (Figure 1), theorized by Spangenberg, combines these four dimensions into a single framework with clearly defined links among the dimensions (Huayhuaca et al., 2010; Spangenberg and Valentin, 1999).

According to the PoS model, the economic dimension means that an economy should satisfy residents' needs for material welfare and support employment. The ecological dimension calls for reducing the

pressure on the physical environment. The social dimension acknowledges that all individuals should have access to the resources and supports their need to live a healthy life. Societal interaction and associated social norms are important preconditions for economic activities. The institutional dimension indicates participatory decision-making processes, including public participation and involvement. The PoS model provides a relatively holistic framework for thinking about, understanding, and analyzing tourism sustainability (Spangenberg and Valentin, 1999). One of the crucial elements of tourism development is to encourage local residents' participation in tourism as it is central to the sustainability of the tourism industry (Muganda et al., 2013). In this regard, the participation of local residents is imperative for the sustainability of the tourism industry at any destination (Gursoy et al., 2010). Understanding residents' perspective can facilitate the adoption of policies that minimize potential negative impacts of tourism development and maximize its benefits, leading to community development and greater support for tourism, particularly in developing countries and countries where tourism is still at an infant stage of development (Li et al., 2014; Thetsane, 2019).

The aim of this research is to explore the perceptions of and satisfaction with tourism development among local communities in the Uvac Special Nature Reserve. Accordingly, we have examined the context of sustainability for the local residents by analyzing the relationship between the four dimensions of sustainability and perceptions of tourism development held by the residents of the municipalities located close to the Uvac Special Nature Reserve in southwestern Serbia. If the four dimensions of sustainable tourism (ecological, economic, socio-cultural, institutional) are generalisable, as suggested by prior research (Spangenberg et al., 2002; Spangenberg and Valentin, 1999; Van den Berg et al., 2004), all four predictors should influence the local residents' satisfaction with tourism in a variety of settings in the Uvac Special Nature Reserve.

Case study area – Uvac special nature reserve

The Uvac Special Nature Reserve (SNR) is situated in southwestern Serbia, within the Starovlaško-Raška highlands, between the mountain ranges of Zlatar in the southwest and Javor in the southeast. The protected natural area includes the Uvac river gorge and its tributaries Veljušnica, Kladnice and Tisovica (Veljić et al., 2006) (Figure 2). The minimum and maximum altitudes within the reserve are 760 m and 1322 m, respectively. About two-third of the reserve is located

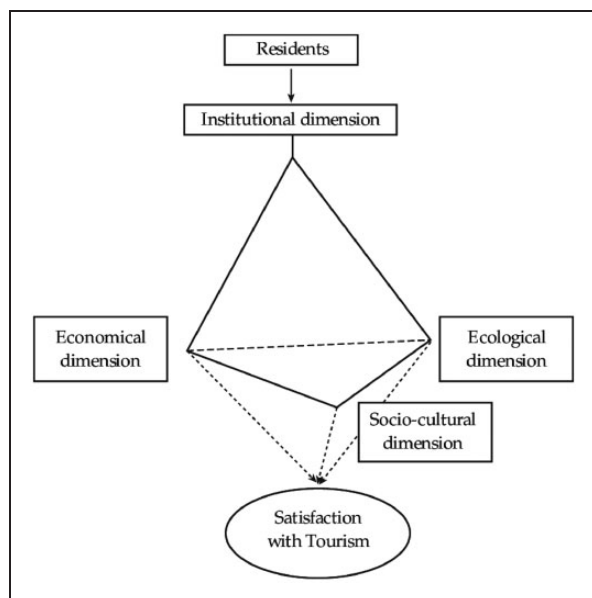


Figure 1. Prism of sustainability. Source: Cottrell et al. (2007).

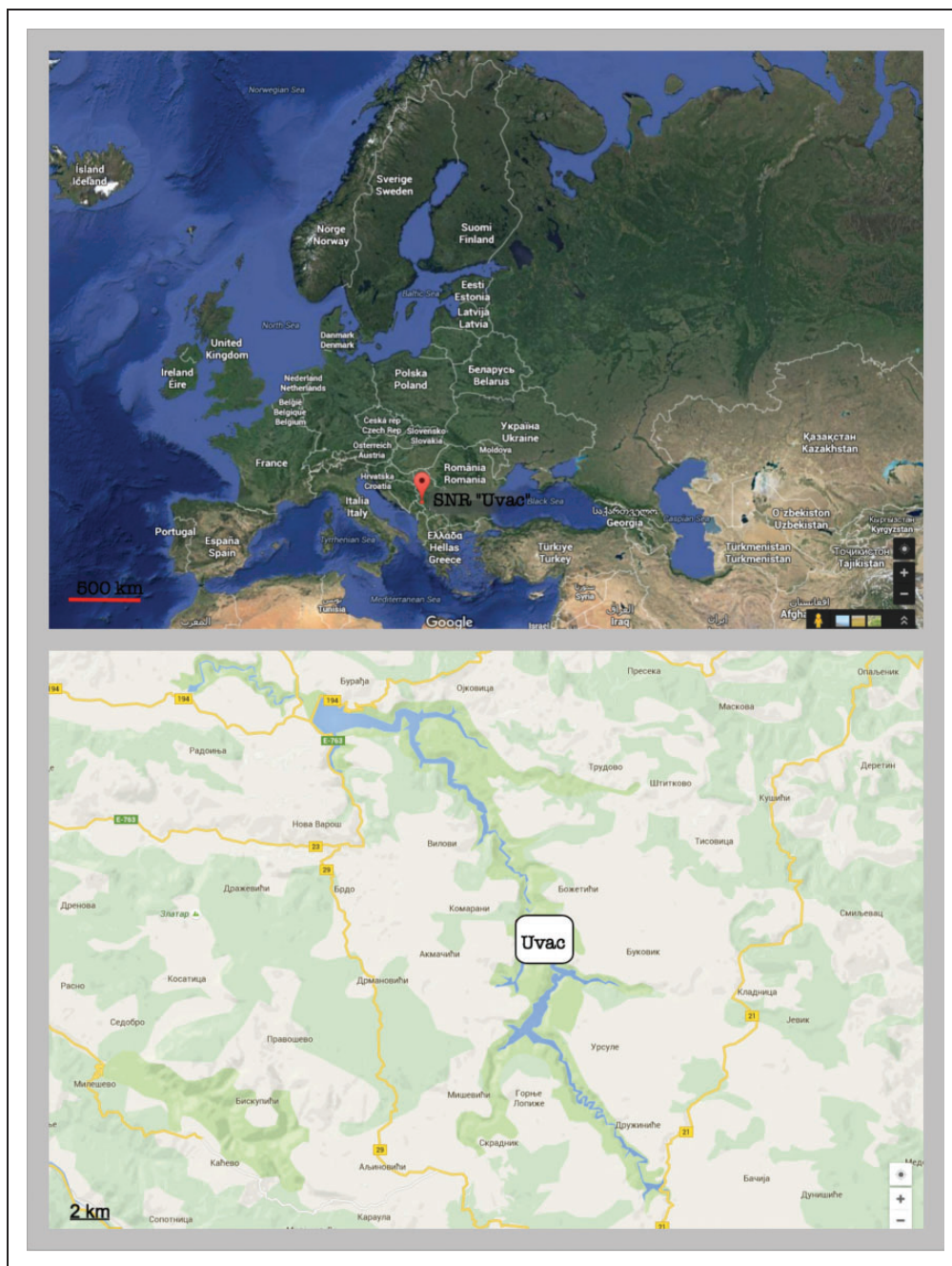


Figure 2. Location of the Uvac Special Nature Reserve in the Republic of Serbia and in Europe.
Source: Google Earth and Google Maps images edited by authors

in the territory of the Nova Varoš Municipality, while one-third is located in the territory of the Sjenica Municipality. The Nova Varoš municipality has a population of approximately 17,000 inhabitants, while the population of the Sjenica Municipality is approximately 26,000.

The Reserve Uvac Limited Liability Company has been managing the SNR since 2006. Before that, the Griffon Vulture Fund for the Protection of Birds of

Prey, based in Nova Varoš, managed the SNR. However, both teams faced challenges regarding the management of the SNR. The area has been affected by the exploitation of minerals, solid waste disposal, water quality vulnerability in rivers and lakes, insufficient sewerage coverage and unplanned construction. At the same time, tourism development and scientific and educational activities have contributed to the popularization of nature protection in the Uvac SNR.

The variety of intact habitats and the presence of endemic, relict and endangered plant and animal species, are of particular importance for the development and promotion of the SNR's tourism potential (Lazić, 2007).

The Uvac SNR has been included in several international nature protection lists: the Important Plants Areas (IPA), Important Bird and Biodiversity Areas (IBA) and Prime Butterfly Areas (PBA) (Management plan of the Uvac Special Nature Reserve 2013–2022, 2012). Furthermore, the Uvac SNR has been officially nominated as an Emerald site (Council of Europe, 2015). Tourism in protected areas can unite protection, economic income and the social wellbeing of the local population (Stojanović et al., 2014).

The SNR has been under protection for more than four decades. The main objective of the protection is to preserve the habitat and the population of griffon vulture (*Gyps fulvus*), a rare bird species of vultures, as well as to ensure the preservation of geo-diversity (Figure 3). The Uvac SNR was first put under protection in 1971 and the protected area, covering 267 ha, included the gorge of the river. After that, the Uvac SNR has been expanded to include all habitats of

griffon vulture in order to save the birds. This has been enabled by the Decree of the Government of the Republic of Serbia as of 1992, which put all active habitats of griffon vulture in the country under protection (Uvac Special Nature Reserve, 2019).

The local community of Nova Varoš supported the protection of griffon vulture and established feeding areas for these birds in 1994. There was a rapid growth of nests in the canyon Uvac 'since 1995' (Matijević, 2008). A few pairs of griffon vulture made the neighboring Mileševka River Canyon their home. This led to the expansion of the protected area to 2717 ha in 1995. The number of birds continued to increase (30 pairs) in the gorges of the Uvac and the Mileševka until 1999 (Matijević, 2008). The recovery of vultures was stopped by the NATO aggression, which led to the eviction of birds with migration. The NATO aggression (bombing) of Yugoslavia was the North Atlantic Treaty Organisation's (NATO) military operation against the Federal Republic of Yugoslavia during the Kosovo War. Air raids lasted from 24 March 1999 to 10 June 1999. Furthermore, bird hunting occurred in the Mileševka gorge in 2001. Fortunately, the number of individual birds has risen



Figure 3. Griffon vultures flying over the meanders of River Uvac.
Source: Green Activist (2004).

since 2002 and the Uvac colonies became the largest in the Balkan Peninsula with 100 pairs of griffon vulture in the Reserve (Management Plan of the Uvac Special Nature Reserve 2013–2022, 2012).

The latest expansion of the Uvac SNR was done in 2006, when it was expanded to 7,543 ha. Out of the total area of the reserve, 5,525 ha is located in the Municipality of Nova Varoš and 2,018 ha is located in the Municipality of Sjenica (Decree on the Spatial Plan for the Uvac Special Nature Reserve, 2010).

According to the Law on Nature Protection three zones with different protection regimes have been established in the area of the Uvac SNR:

- The strict protection zone under the Ib protection degree – strict protection with the ability to manage populations. The total area of the zone is 940 ha;
- The zone under the II degree protection regime – limited and strictly controlled use of natural resources within an area covering 6,583 ha, and
- The zone under the III degree protection regime – a liberal model of governance with a possibility for SNR expansion.

Furthermore, the protection zone covering 113,000 ha around the SNR was established in 2006 (Decree on the Spatial Plan for the Uvac Special Nature Reserve, 2010).

Methodology

A questionnaire survey consisting of a series of questions was used as a research instrument to explore local residents' perceptions of and satisfaction with sustainable tourism development in the Uvac Special Nature Reserve. It was divided into two sections: Socio-demographic characteristics of the respondents and Perceptions of sustainable tourism.

The data were obtained during September 2019 in 13 villages: Radoinja, Kokin Brod, Burađa, Ojkovica, Vilovi, Trudovo, Božetići, Akmačići, Bukovik, Ursule, Gornje Lopize, Skradnik in two municipalities – Nova Varoš and Sjenica. The two municipalities have a total population of 46,374 inhabitants. Representative, purposeful sampling was used to select respondents for the survey in each village. Samples were collected from all villages. In the total population of the 13 villages ($N=3,616$), the total sample included 152 respondents. These villages were closest to the Uvac SNR and that was the reason why they were chosen for the survey. A representative of each household was surveyed (Local Sustainable Development Strategy, 2010). The small number of respondents was due to the lack of interest of the local population in this

research, which can also be considered a limitation of this study.

The survey was adapted from previous studies developed for the European Protected Area Network (Font and Clark, 2007) to test the PoS (Huayhuaca et al., 2010). Drawing on previous research (Cottrell et al., 2004; Dymond, 1997; Huayhuaca et al., 2010; Mitchell and Reid, 2001; Sirakaya et al., 2001), 8–10 survey items – economic, institutional, ecological and socio-cultural statements, were used to measure each dimension of sustainability (independent variables) on a five-point Likert-type scale (strongly disagree to strongly agree, where 3 was a neutral point) (Table 2).

The perceived overall satisfaction (dependent variable) was initiated as the average of 4 items by asking respondents about their satisfaction with various aspects of tourism in this area (benefits of tourism, importance of sustainable tourism for locals, the impact of tourism on the residents' quality of life, the influence of tourism on the attractiveness of the area) (Table 3).

These items, derived from previous studies to test the PoS framework (Cottrell et al., 2007; Cottrell and Vaske, 2006; Huayhuaca et al., 2010), were adapted as satisfaction measures used in this study.

The quantitative data were analyzed using the Statistical Package for the Social Science (SPSS). Reliability analyses (Cronbach's alpha) were run to test the internal consistency of items, measuring each sustainability dimension, as well as the satisfaction items for the Uvac SNR. Indices were computed as the variable means comprising each dimension (independent variables). Finally, a regression analysis revealed the predictive power of each of the four dimensions of sustainability for satisfaction.

Results and discussion

Respondents' sociodemographic profiles

The total sample included 152 respondents. There was an almost equal gender ratio with 53.3% women and 46.7% men; the average age was 38 (range = 17–19, $SD = 11.2906$). The majority of the respondents had a bachelor degree (51.3%) and a secondary school degree (30.3%). Most respondents were employed (74.3%), but the study also included the unemployed (11.8%), students (9.2%), retirees (3.9%) and housewives (0.7%). Almost half of the respondents had an average monthly income smaller than 380 € (47.4%) (Table 1).

Table 1. Respondents' sociodemographic characteristics (n = 152).

Variables	Percent (%)
Gender	
Male	53.3
Female	46.7
Employment status	
Employed	74.3
Unemployed	11.8
Student	9.2
Retiree	3.9
Housewife	0.7
Education	
Elementary school	0.7
Secondary school	30.3
Bachelor's degree	51.3
Master or PhD degree	17.8
Income	
Less than 380€	47.4
380–760€	26.3
760–1150€	11.2
Over 1150€	15.1
Age range	Average age
17–79	38

Reliability analyses of sustainability dimensions

In order to test the internal consistency of sustainability dimensions and satisfaction, reliability analyses were conducted. The indices were computed as variable means comprising each dimension (independent variables). Finally, a regression analysis revealed the predictive power of each of the four dimensions of sustainability for satisfaction.

The Cronbach reliability alpha scores were 0.88 for the institutional dimension (9 items), 0.82 for the ecological dimension (5 items), 0.91 for the economic dimension (5 items), 0.89 for the socio-cultural dimension (9 items) and 0.76 for the satisfaction index (see Tables 2 and 3). All alpha scores were acceptable (Nunnally and Bernstein, 1994) at 0.65. Multi-item indices were computed to provide the mean scores on a five-point scale with 3 as a neutral point for each sustainability dimension. The economic dimension had the highest mean ($M=3.59$); it was followed by the ecological ($M=3.33$), the socio-cultural ($M=3.14$) and the institutional ($M=2.99$) dimensions. The overall mean for the four-item satisfaction index was 3.25, slightly higher than the socio-cultural and the institutional dimensions.

Descriptive statistics of the dimensions of sustainability and satisfaction

Table 2 shows the results of descriptive statistics for sustainability dimensions. Within the institutional

dimension, the statements *Tourism services are developed in cooperation with local businesses in the region* (3.91) and *Tourism facilities are developed in cooperation with local businesses in the region* (3.78) have the highest mean values. Despite being the highest mean values, the two statements' values, are still low, which means that greater residents' involvement is still necessary. As far as the ecological dimension is concerned, the respondents agreed that the diversity of nature in the Uvac SNR must be protected (4.66). Most of them did not believe that tourism was developed in harmony with the natural and cultural environment (2.82). Within the third dimension, all statements had approximately mean values (below 4), which means that residents perceived themselves as not actively involved in tourism in their community. According to the data relating to the last dimension (Socio-Cultural dimension), it may be concluded that tourism development in the SNR leads to an increasing number of tourists in the area, which was confirmed by local residents (4.38). Among the lowest-rated statements was *Park operators take into consideration the concerns of local people in their management decisions* (2.11).

This study confirms that most people in this region find sustainable tourism important (4.30). Also, residents believe that the attractiveness of the area has been improved thanks to tourism (4.0), which is meaningful. On the other hand, residents do not find tourism in the area of the SNR beneficial for themselves (2.06) and do not think that the quality of life has improved due to the development of tourism (2.63) (Table 3). Destination management and tourist organizations should enable access to information for local community members and allow them to participate in decision-making. This would ensure sustainable tourism development in the Uvac SNR, local residents would benefit more from tourism, and their life quality would be improved.

Predictors of resident satisfaction with tourism

To examine the core question with assumptions that each dimension would contribute to resident satisfaction with tourism (Cottrell et al., 2007; Huayhuaca et al., 2010), regression analyses were run. The assumption was supported with all four dimensional scores, and significant predictors of resident satisfaction with tourism, accounting for 28.4% of the variance, were explained ($R^2=0.284$) (Table 4). The strongest predictor was the socio-cultural dimension ($\beta=0.635$; $p=0.000$), followed by the economic ($\beta=0.589$; $p=0.000$), ecological ($\beta=0.495$; $p=0.000$), and the institutional ($\beta=0.374$; $p=0.000$)

Table 2. Respondents' perceptions of the dimensions of sustainable tourism (Uvac Special Nature Reserve).

Dimensions of sustainable tourism	Uvac Special Nature Reserve (n = 152)	
	α	Mean
Institutional dimension	0.881	2.99
Community residents have an opportunity to be involved in tourism decision-making		3.32
The communication among individuals involved in policy and decision making process is good		2.42
Entrepreneurship in tourism is encouraged by the local community administration		2.70
I can access the decision-making process to influence tourism development in the SNR		1.97
Tourism facilities are developed in cooperation with local businesses in the region		3.78
Tourism services are developed in cooperation with local businesses in the region		3.91
Tour guides at the park are well trained		3.03
There is sufficient information available about conservation efforts in the park		2.93
The information disseminated by the SNR accurately reflects the history of the park		2.85
Ecological dimension	0.817	3.325
As a result of tourism, residents' awareness of environmental protection has improved		3.01
Tourism in the park is developed in harmony with the natural (and cultural) environment		2.82
Tourism activity in the park is directed into areas with suitable facilities		2.89
The diversity of nature in the SNR must be protected		4.66
Good examples of environmental protection are shown in the SNR		3.24
Economic dimension	0.914	3.586
Tourism brings new income to local communities		3.42
Tourism diversifies the local economy		3.47
Tourism creates job opportunities for local people		3.68
Tourism creates new markets for our local products		3.97
Tourism is a strong economic contributor to the community		3.38
Socio-cultural dimension	0.885	3.143
There are more educational opportunities for the locals due to tourism		2.86
More people visit the area because of the SNR		4.38
Tourism in the SNR has a positive influence on the cultural values of the area		3.77
Local traditions have become more important thanks to tourism		3.66
Tourism has created more jobs for women		2.61
Visitors to the park are encouraged to learn about local cultures		3.38
Park operators take into consideration the concerns of local people in their management decisions		2.11
Tourism supports the maintenance of local museums		2.60
Tourism promotes the restoration of historical sites		2.91

Note: Items measured on a five-point Likert agreement scale.

dimensions, meaning that the increase of the dimensional scores was accompanied with a slight increase in satisfaction with tourism. A regression analysis revealed the predictive power of each of the four dimensions of sustainability for residents' satisfaction with sustainable tourism development in the Uvac SNR.

Conclusion

The primary focus of this study has been to examine the predictive contribution of the sustainability dimensions as index variables for overall resident satisfaction with tourism. This is an interesting research topic,

Table 3. Scale items for the satisfaction index.

Satisfaction with tourism items	Uvac Special Nature Reserve (n=152)	
	α	Mean
Tourism in the area of the park is beneficial for me	0.759	3.245
It is important to me to have sustainable tourism in this region		2.06
For me, the attractiveness of the area has been improved thanks to tourism		4.30
My quality of life has improved thanks to the tourism in the park		4.00
		2.63

Table 4. Regression analysis of the predictive contribution of each dimension on resident satisfaction.

Index	B ^a	p-value
Institutional	0.374	0.000
Ecological	0.495	0.000
Economic	0.589	0.000
Socio-cultural	0.635	0.000

^aStandardised β value used.

$R^2 = 0.284$.

previously addressed in numerous studies (Cottrell and Vaske, 2006; Huayhuaca et al., 2010; Shen and Cottrell, 2008). Furthermore, indicators measuring residents' satisfaction with tourism have been developed (Cottrell et al., 2007). In the present study, the dependent variable, satisfaction with tourism, is based on four items drawn from previous studies to represent satisfaction; accordingly, the application of the scale is exploratory. The items are internally consistent and they reflect residents' satisfaction with tourism in the content validity context.

The regression analyses show that all of the four dimensions of sustainability are significant predictors of residents' satisfaction with tourism development in the Uvac Special Nature Reserve.

The study shows that local residents do not have access the decision-making processes related to tourism development in the Uvac SNR. It is evident that there is a lack of communication and interaction between the locals and the management. However, it is necessary to overcome this situation in order to achieve sustainable tourism development. It is very important that the locals are aware that nature should be protected. As far as local residents' benefits of tourism are concerned, it has been established that income is insufficient, whereas job opportunities and the quality of life are not significantly improved. Alrwajfah et al. (2019) presented similar results for the economic dimension. It is frequently assumed that economic development automatically promotes sustainability and that is why residents' perceptions and satisfaction are important. Still, it may be

concluded that this is related to the lack of the local people's involvement in the activities implemented by the management of the Uvac SNR. Therefore, destination management should focus on the greater involvement of the local population. The destination's management and tourist organizations should enable residents to access information and participate in decision-making. This would make it easier to achieve sustainable tourism development in the Uvac SNR and both the local population and all other stakeholders would benefit more from tourism. Tourism development can create and provide job opportunities, generate foreign exchange earnings, and increase income for the destination community in the form of tax revenue. These benefits can improve the community's quality of life, leading to better individual quality of life. Therefore, tourism developers and managers need to help residents understand how tourism development may improve their quality of life by creating access to better amenities.

This study indicates that the local community finds sustainable tourism important for the region. Local residents already took the initiative when they supported the preservation of griffin vulture. Also, they believe that the attractiveness of the area has been improved thanks to tourism. Moreover, lower values should warn managers to reconsider the ways in which they are implementing their strategies, particularly in regard to the institutional and socio-cultural dimensions. This point is also emphasized in the study on the Frankenwald Nature Park in Germany (Huayhuaca et al., 2010).

Tourists have recognized the attractiveness of the Uvac SNR, but this is not enough, having in mind that sustainable development requires local residents' involvement and satisfaction. Vargas-Sánchez et al. (2008) confirm that local residents' participation is of great importance for tourism development, planning, and decision-making. The limitation of this research is that it covers merely residents' perceptions, while it is also important to analyze the perception of visitors and managers (Abdelgadir et al., 2017; Adongo et al., 2018). Further research on the

sustainable development of this area (planning, management – questionnaire or interview, and tourist perceptions and satisfaction) is necessary.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This research was supported by the Serbian Ministry of Education, Science and Technological Development (grant 176020).

ORCID iD

Sanja Obradović  <https://orcid.org/0000-0001-9339-1570>

References

- Abdelgadir FAA, Halis M and Halis M (2017) Tourism stakeholders attitudes toward sustainable developments: Empirical research from Shahat city. *Ottoman Journal of Tourism and Management Research* 2(3): 182–200.
- Abukari H and Mwalyosi RB (2018) Comparing conservation attitudes of Park-Adjacent communities: The case of mole national park in Ghana and Tarangire national park in Tanzania. *Tropical Conservation Science* 11(4): 1–14.
- Adongo C, Taale F and Adam I (2018) Tourists' values and emphatic attitude toward sustainable tourism development in tourism. *Ecological Economics* 150: 251–263.
- Ahn BY, Lee B and Shafer CS (2002) Operationalizing sustainability in regional tourism planning: An application of the limits of acceptable change framework. *Tourism Management* 23(1): 1–15.
- Akis S, Peristianis N and Warner J (1996) Residents' attitudes to tourism development: The case of Cyprus. *Tourism Management* 17(7): 481–494.
- Albu R (2020) Study on the effects of tourism development on the local community of Brasov. *Series V – Economic Sciences* 12(2): 37–42.
- Alrwajfah MM, Almeida-García F, Cortés-Macías R, et al. (2019) International aid to tourism planning and stakeholder participation in the Petra region. *Cogent Social Sciences* 5(1): 1616362.
- Andereck KL, Valentine KM, Knopf RC, et al. (2005) Residents' perceptions of community tourism impacts. *Annals of Tourism Research* 32(4): 1056–1076.
- Ap J (1992) Residents' perceptions on tourism impacts. *Annals of Tourism Research* 19(4): 665–690.
- Ayivor JS, Gordon C and Ntiamoa-Baidu Y (2013) Protected area management and livelihood conflicts in Ghana: A case study of Digya National Park. *Parks* 19(1): 37–50.
- Bello FG, Carr N and Lovelock B (2016) Community participation framework for protected area-based tourism planning. *Tourism Planning & Development* 13(4): 469–485.
- Bragagnolo C, Malhado A, Jepson PR, et al. (2016) Modelling local attitudes to protected areas in developing countries. *Conservation and Society* 14(3): 163–182.
- Bramwell B and Henry I (1996) A framework for understanding sustainable tourism management. In: Bramwell B, Straaten JVD and Prat. Tilburg AG (eds) *Sustainable Tourism Management: Principles and Practice*. The Netherlands: Tilburg University Press, pp.23–71.
- Bramwell B and Lane B (1993) Sustainable tourism: An evolving global approach. *Journal of Sustainable Tourism* 1(1): 1–5.
- Bramwell B and Sharman A (2000) Approaches to sustainable tourism planning and community participation: the case of the hope valley. In: Hall D and Richards G (eds) *Tourism and Sustainable Community Development*. London: Routledge, pp.17–35.
- Budhiasa I and Riana I (2019) Managing local community participation to foster sustainable tourism development, the case of Bali destination, Indonesia. *Journal of Engineering and Applied Sciences* 15(1): 291–298.
- Buono F, Padiaditi K and Carsjens G (2012) Local community participation in Italian national parks management: Theory versus practice. *Journal of Environmental Policy & Planning* 14(2): 189–208.
- Butler RW (1993) Tourism: An evolutionary perspective. In: Nelson JG, Butler R and Wall G (eds) *Tourism and Sustainable Development: Monitoring, Planning, and Managing*. Waterloo, ON: University of Waterloo Department of Geography, pp.27–43.
- Butler RW (1999) Sustainable tourism: A state of the art review. *Tourism Geographies* 1(1): 7–25.
- Cavus S and Tanrisevdi A (2003) Residents' attitudes toward tourism development: A case study in Kusadasi, Turkey. *Tourism Analysis* 7(3–4): 259–269.
- Castela A (2018) Impacts of tourism in an urban community: The case of Alfama. *Athens Journal of Tourism* 5(2): 133–148.
- Cattarinnich X (2001) PPT Working Paper No. 8 – Pro-Poor tourism initiatives in developing countries: Analysis of secondary case studies. University of Alberta, Canada, 97. Available at: www.Propoortourism.org.uk/initiatives.cs. PDF (accessed 23 April 2020).
- Choi HSC and Sirakaya E (2005) Measuring residents' attitude toward sustainable tourism: Development of sustainable tourism attitude scale. *Journal of Educational Technology Systems* 43(4): 111–121.
- Cottrell SP and Vaske JJ (2006) A framework for monitoring and modeling sustainable tourism. *Electronic Review of Tourism Research* 4(4): 74–84.
- Cottrell SP, Van der Duim R, Ankersmid P, et al. (2004) Measuring the sustainability of tourism in Manuel Antonio and Texel: A tourist perspective. *Journal of Sustainable Tourism* 12(5): 409–431.
- Cottrell SP, Vaske J and Shen F (2007) Modeling resident perceptions of sustainable tourism development: Comparison between Holland and China. *Journal of China Tourism Research* 3(2): 219–234.

- Council of Europe (2015) *Updated List of Officially Nominated Candidate Emerald sites*. Convention on the conservation of European wildlife and natural habitats, Strasbourg: Author, pp.61.
- Decree on the spatial plan for Special Nature Reserve Uvac (2010) Nova Varoš, pp.207.
- Diedrich A and Aswani S (2016) Exploring the potential impacts of tourism development on social and ecological change in the Solomon Islands. *Ambio* 45(7): 808–818.
- Dymond SJ (1997) Indicators of sustainable tourism in New Zealand: A local government perspective. *Journal of Sustainable Tourism* 5(4): 279–293.
- Fakhrana A and Zafran R (2020) Sustainable cultural tourism development: A strategic for revenue generation in local communities. *Journal of Economic and Tropical Life Science* 4(2): 47–56.
- Fallon LD and Kriwoken LK (2003) Community involvement in tourism infrastructure: The case of the Strahan Visitor Centre, Tasmania. *Tourism Management* 24(3): 289–308.
- Font X and Clark S (2007) Certification of protected areas: The case of PAN parks in Europe. In: Black R and Crabtree A (eds) *Quality Assurance and Certification in Ecotourism*. Wallingford: CABI, pp.299–315.
- García FA, Vázquez AB and Macías RC (2015) Resident's attitudes towards the impacts of tourism. *Tourism Management Perspectives* 13(1): 33–40.
- Gibson RB, Hassan S, Holtz S, et al. (2005) *Sustainability Assessment: Criteria and Processes*. London: Earthscan.
- Green activist – Project “Environment in Youth Policy in Serbia” (2014) Algae threaten Uvac canyon. Available at: <http://zeleniaktivista.com/wp-content/uploads/ssss.jpg> (accessed 28 September 2019).
- Gunn CA (1994) *Tourism Planning: Basics, Concepts, Cases*. Washington, DC: Taylor and Frances.
- Gursoy D, Chi C and Dyer P (2010) Locals' attitudes toward mass and alternative tourism: The case of sunshine Coast, Australia. *Journal of Travel Research* 49(3): 381–394.
- Gursoy D, Jurowski CA and Uysal M (2002) Resident attitudes: A structural modelling approach. *Annals of Tourism Research* 29(1): 79–105.
- Hai A and Alamgir B (2017) Local community attitude and support towards tourism development at Saint Martin island, Bangladesh: Local community attitude and support. *International Journal of Tourism and Hospitality Management in the Digital Age* 1(2): 32–41.
- Hardy AL and Beeton RJS (2001) Sustainable tourism or maintainable tourism: Managing resources for more than average outcomes. *Journal of Sustainable Tourism* 9(3): 168–192.
- Harrill R (2004) Residents' attitudes toward tourism development: A literature review with implications for tourism planning. *Journal of Planning Literature* 18(3): 251–266.
- Hayes T (2006) Parks, people, and Forest protection: An institutional assessment of the effectiveness of protected areas. *World Development* 34(12): 2064–2075.
- Huayhuaca C, Cottrell S, Raadik J, et al. (2010) Resident perceptions of sustainable tourism development: Frankenwald Nature Park, Germany. *International Journal of Tourism Policy* 3(2): 125–141.
- Jurowski C and Gursoy D (2004) Distance effects on residents' attitudes toward tourism. *Annals of Tourism Research* 31(2): 296–312.
- Kapsalis T and Kapsalis VC (2020) Sustainable development and its dependence on local community behavior. *Sustainability* 12(8): 3448.
- Khanna P, Babu PR and George MS (1999) Carrying-capacity as a basis for sustainable development: A case study of national Capital region in India. *Progress in Planning* 52(2): 101–163.
- Khoalenyane N and Ikechukwu E (2016) Local community and Ts'ehlanyane national park in Lesotho: Perception of participation. *African Journal for Physical Activity and Health Sciences* 22(2.1): 445–453.
- Kihima B and Musila P (2019) Extent of local community participation in tourism development in conservation areas: A case study of Mwaluganje conservancy. *Parks* 25(25.2): 47–56.
- Lankford SV and Howard DR (1994) Developing a tourism impact attitude scale. *Annals of Tourism Research* 21(1): 121–139.
- Látková P and Vogt C (2012) Residents' attitudes toward existing and future tourism development in rural communities. *Journal of Travel Research* 51(1): 50–67.
- Lazić L (2007) Hike to prayer – Special Nature Reserve Uvac. *GEA* 35: 20–29 (in Serbian).
- Lepp A (2007) Residents' attitudes towards tourism in Bigodi Village, Uganda. *Tourism Management* 28(3): 876–885.
- Li X, Hsu CHC and Lawton LJ (2014) Understanding residents' perception changes toward a mega-event through a dual-theory lens. *Journal of Travel Research* 54(3): 396–410.
- Lindberg K and Johnson RL (1997) Modeling resident attitudes toward tourism. *Annals of Tourism Research* 24(2): 402–424.
- Liu JC and Var T (1986) Resident attitudes toward tourism impacts in Hawaii. *Annals of Tourism Research* 13(2): 193–214.
- Local Sustainable Development Strategy 2010–2020 (2010) Accessed at: <http://Novavaros.Rs/Dokumenta/Ler/Guide%20for%20investors.pdf> (accessed 3 October 2019).
- Management plan of the Uvac Special Nature Reserve 2013–2022 (2012) Accessed at: www.uvac.org.rs/dokumenta (accessed 7 August 2019).
- McCool S, Moisey N and Nickerson N (2001) What should tourism sustain? The disconnect with industry perceptions of useful indicators. *Journal of Travel Research* 40(2): 124–131.
- McCool SF and Martin SR (1994) Community attachment and attitudes toward tourism development. *Journal of Travel Research* 32(3): 29–34.
- McGehee NG and Andereck KL (2004) Factors predicting rural residents' support of tourism. *Journal of Travel Research* 43(2): 131–140.
- Matijević J (2008) ‘The Kingdom of Griffon vulture’. Fund for the protection of birds of prey “Griffon Vulture”. Nova Varoš: Faculty of Law. pp.108 (in Serbian).
- Miller D (2001) Distributing responsibilities. *Journal of Political Philosophy* 9(4): 453–471.

- Miller G (2001) The development of indicators for sustainable tourism: Results of a Delphi survey of tourism researchers. *Tourism Management* 22(4): 351–362.
- Mitchell RE and Reid DG (2001) Community integration: Island tourism in Peru. *Annals of Tourism Research* 28(1): 113–139.
- Moscardo G (2015) *Building Community Capacity for Tourism Development*. Wallingford, UK: Cabi Publications.
- Mowforth A and Munt I (1998) *Tourism and Sustainability: New Tourism in the Third World*. London: Routledge.
- Moynul H and Zillur RS (2016) Impacts of tourism development on local community: A study on Shalban Vihara. *Bangladesh Journal of Tourism* 1(1): 74–82.
- Muganda M, Sirima A and Ezra PM (2013) The role of local communities in tourism development: Grassroots perspectives from Tanzania. *Journal of Human Ecology* 41(1): 53–66.
- Muganda MJ, Mgonja J and Backman F (2013) Desires of community participation in tourism development decision making process: A case study of Barabarani, Mto Wa mbu, Tanzania. *American Journal of Tourism Research* 2(1): 84–94.
- Mugizi F, Ayorekire J and Obua J (2017) Factors that influence local community participation in tourism in Murchison falls conservation area. *Journal of Environmental Science and Engineering A* 6: 209–223.
- Murphy PE (1985) *Tourism: A Community Approach*. New York: Methuen.
- Nicholas L, Thapa B and Ko Y (2009) Residents' perspectives of a world heritage site e the pitons management area, St. Lucia. *Annals of Tourism Research* 36(3): 390–412.
- Nunkoo R and Gursoy D (2012) Residents' support for tourism. An identity perspective. *Annals of Tourism Research* 39(1): 243–268.
- Nunnally JC and Bernstein IH (1994) *Psychometric Theory*. New York: McGraw-Hill.
- Park E and Kim S (2016) The potential of Cittaslow for sustainable tourism development: Enhancing local community's empowerment. *Tourism Planning & Development* 13(3): 351–369.
- Payen A (2014) The role of local populations in tourism development projects: The case of Loango national park in Gabon. *Via – Tourism Review* 4(5)
- Perdue RR, Long PT and Allen L (1990) Resident support for tourism development. *Annals of Tourism Research* 17(4): 586–599.
- Pigram JJ and Wahab S (1997) *Tourism, Development and Growth: The Challenge of Sustainability*. Hove: Psychology Press.
- Pillai R (2011) Benefit of tourism to local community: Result or residue? *Indian Journal of Tourism and Hospitality Management* 2(2): 149–161.
- Rasoolimanesh SM, Ringle CM, Jaafar M, et al. (2017) Urban vs. rural destinations: Residents' perceptions, community participation and support for tourism development. *Tourism Management* 60: 147–158.
- Ribeiro MA, Pinto P, Silva JA, et al. (2017) Residents' attitudes and the adoption of pro-tourism behaviours: The case of developing island countries. *Tourism Management* 61: 523–537.
- Ritchie JRB (1988) Consensus policy formulation in tourism: Measuring resident views via survey research. *Tourism Management* 9(3): 199–212.
- Sharpley R (2000) Tourism and sustainable development. *Journal of Sustainable Tourism* 8(1): 1–19.
- Sharpley R (2014) Host perceptions of tourism: A review of the research. *Tourism Management* 42: 37–49.
- Shen F and Cottrell SP (2008) A sustainable tourism framework for monitoring residents' satisfaction with agritourism in Chongdugou village, China. *International Journal of Tourism Policy* 1(4): 368–375.
- Sirakaya E, Jamal T and Choi HS (2001) Developing tourism indicators for destination sustainability. In: Weaver DB (ed.) *The Encyclopedia of Ecotourism*. New York: CAB International, pp.411–432.
- Sirakaya E, Teye V and Sonmez S (2002) Understanding residents' support for tourism development in the Central region of Ghana. *Journal of Travel Research* 41(1): 57–67.
- Smith MD and Krannich RS (1998) Tourism dependence and resident attitudes. *Annals of Tourism Research* 25(4): 783–802.
- Sofield THB (2003) *Empowerment for Sustainable Tourism Development*. Amsterdam: Pergamon.
- Spangenberg JH, Pfahl S and Deller K (2002) Towards indicators for institutional sustainability: Lessons from an analysis of agenda 21. *Ecological indicators* 2(1–2): 61–77.
- Spangenberg JH and Valentin A (1999) Indicators for sustainable communities. *Wuppertal Institute for Climate, Environment and Energy*. Available at: <https://epub.wuppertinstitute.org/frontdoor/deliver/index/docId/721/file/WP81.pdf> (accessed 4 October 2019).
- Stabler MJ (1997) *Tourism and Sustainability: Principles to practice*. Wallingford, UK: Cab International.
- Stojanović V, Đorđević J, Lazić L, et al. (2014) The principles of sustainable development of tourism in the special nature reserve “GornjePodunavlje” and their impact on the local communities. *Acta Geographica Slovenica* 54(2): 391–400.
- Stone LS and Nyaupane G (2019) Local residents' pride, tourists' playground: The misrepresentation and exclusion of local residents in tourism. *Current Issues in Tourism* 23(11): 1426–1442.
- Swarbrooke J (1999) *Sustainable Tourism Management*. Wallingford, UK: CAB International.
- Teye V, Sönmez SF and Sirakaya E (2002) Residents' attitudes toward tourism development. *Annals of Tourism Research* 29(3): 668–688.
- Thetsane R (2019) Local community participation in tourism development: The case of Katse villages in Lesotho. *Athens Journal of Tourism* 6(2): 123–140.
- Tosun C (2002) Host perceptions of impacts: A comparative tourism study. *Annals of Tourism Research* 29(1): 231–253.
- UNWTO (2004) *Sustainable Development of Tourism: Conceptual Definition*. Available at: <https://sdt.unwto.org/content/about-us-5> (accessed 4 October 2019).
- Uvac Special Nature Reserve (2019) Official web-site of the Special Nature Reserve Uvac. Available at: www.uvac.org.rs/eng/index_eng.html (accessed 4 October 2019).

- van den Berg GJ, van der Klaauw B, van Ours JC, et al. (2004) Punitive sanctions and the transition rate from welfare to work. *Journal of Labor Economics* 22(1): 211–241.
- Vargas-Sánchez A, do Valle PO, da Costa Mendes J, et al. (2015) Residents' attitude and level of destination development: An international comparison. *Tourism Management* 48: 199–210.
- Vargas-Sánchez A, Plaza-Mejía M and Porras-Bueno N (2008) Understanding residents' attitudes toward the development of industrial tourism in a former mining community. *Journal of Travel Research* 47(3): 373–387.
- Veljić M, Marin PD, Krivošej Z, et al. (2006) Vascular flora of the Uvac river gorge of Serbia. *Archives of Biological Sciences* 58(2): 125–133.
- Wijaya A (2017) The relationships between Indonesian fourth graders' difficulties in fractions and the opportunity to learn fractions: A snapshot of TIMSS results. *International Journal of Instruction* 10(4): 221–236.
- World Travel and Tourism Council/Wild Tourism Organisation/Earth Council (1995) *Agenda 21 for the Travel and Tourism Industry – Towards Environmentally Sustainable Development*. Oxford: WTTC/WTO/EC.
- Xie HJ, Bao J and Kerstetter DL (2014) Examining the effects of tourism impacts on satisfaction with tourism between native and non-native residents. *International Journal of Tourism Research* 16(3): 241–249.
- Zamani-Farahani H and Musa G (2008) Residents' attitudes and perception towards tourism development: A case study of Masooleh, Iran. *Tourism Management* 29(6): 1233–1236.
- Zhang S and Chan CS (2016) Nature-based tourism development in Hong Kong: Importance–performance perceptions of local residents and tourists. *Tourism Management Perspectives* 20: 38–46.

Author Biographies

Sanja Obradović is a Research Trainee and a Ph.D. candidate at the University of Novi Sad (Serbia). Her main research interests are sustainable tourism development, tourism in protected areas and nature protection.

Aleksandra Tešin is a PhD student at the University of Novi Sad (Serbia). She does research in cultural tourism, motivation, psychology, modern trends in tourism and ecotourism.

Tamara Božović is a PhD student at the University of Novi Sad (Serbia). She researches the field of cultural tourism, rural tourism, slow tourism, and modern trends in tourism.

Dragan Milošević is an Assistant Professor at the University of Novi Sad (Serbia). He does research in human biometeorology, urban climate, climate-sensitive urban design & nature-based solutions.