The model of prioritization of strategies for regional developement of ecotourism in Eastern Serbia

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Abstract: Development of the tourism, especially ecotourism as a sector which provides one of the biggest potentials for growth in Serbia, is based on the strategic planning of sustainable regional development. Based on the analysis of spatial distribution of natural resources in Serbia, the Eastern region of the country showed the biggest potential for the development of this type of tourism. One of fastest emerging types of accommodation in ecotourism is eco-lodging. Due to the fact that accommodation units of this type do not require large financial investment, this type of accommodation presents a very promising strategy for improvement ecotourism in Serbia. Strategic planning of development of all forms of tourism, especially ecotourism, requires a detailed analysis of all external and internal factors that influence the local environment. The aim of this paper is to detect the most significant natural resources of the selected region by using SWOT analysis. This enables establishment of the reliable foundation for strategic planning of the development of ecotourism in this area, while minimizing the negative anthropogenic impact on the regional natural resources. Furthermore AHP method was used to define the sequence of prioritization of defined strategies for tourism development in the region in regards to the construction of eco-lodges.

Keywords: strategic planning, ecotourism, eco-lodging, SWOT, AHP

1. Introduction

The rapid increase of the population during the 20th century contributed to the constant reduction of available natural resources and living space, as well as to the endangering of environmental factors. Recognizing the urgency of solving the existing and preventing the further development of ecological problems has led to the emergence of the concept of sustainable development. Sustainable development is most often defined as "... a development that meets current needs, without compromising the ability of future generations to meet their needs" [1]. The concept of sustainable development has gained its greatest affirmation in the UN Convention on Environment and Development in Rio de Janeiro in 1992. It is primarily based on the need for integrating socio - economic development and improving the quality of the environment. Therefore, when individuals make plans or decisions about future economic activities, it is necessary to maximally respect the needs of the environment, because only in this way long-term development can be ensured. This refers particularly to tourism as an activity that takes place in the natural environment and uses significant amounts of natural resources [2]. The degree of preservation and attractiveness of the environment is a basic precondition for tourism development. Enhancement of environmental awareness has led to the fact that, nowadays, when tourists choose a touristic destination they pay much more attention on true values, such as ecology, tradition and similar. Ecotourism, or green tourism, is one of the responses to the consumers' new needs. Ecotourism's destinations should satisfy the basic principles of sustainability, both in ecological and socio-economic terms. The preconditions for the development of these destinations are:

- the presence of protected natural resources or areas with preserved natural characteristics and rich biodiversity;
- areas and facilities intended for recreation of guests in accordance with natural capacities;
- accommodation facilities owned by the local community;
- local population aware of its cultural identity and ready to participate in the promotion of local heritage;
- friendly relationship between eco-tourists and local population.

In line with the new tourist trends, there has been also a change in the business policy of accommodation facilities. Hoteliers and caterers are more and more dealing with measuring and controlling impacts they have on the environment. Several reasons contributed to the beginning of the implementation of environmental practice. The most important are the recognition of the negative impact which this activity has on nature, that is reflected in the reduction of the number of natural habitats, water pollution, waste production and contribution to

global warming [3, 4]. Other reasons are reflected in the managers' tendency to achieve a competitive position and respond to legislative regulations.

Countries as Sri Lanka, Mexico, Belize, Peru, Australia, Brazil have a great ecotourism potential, because of its rich biodiversity. One of the types of accommodation that is consistent with the philosophy and principles of ecotourism are the eco lodges [5]. Eco lodge is a service and accommodation unit located within or near natural areas [6]. In recent years, numerous studies of eco-lodges in tourist destinations from all over the world has been conducted [7, 8, 9, 10, 11]. In Europe, some of the most popular eco-lodges are located in England, Iceland, Finland, Sweden, Greece and Austria. It is characterized by modest equipment and the need for small financial investments. Programs that the real eco-lodges should offer to their guests are based on sightseeing of natural and cultural sights, direct contact with the local population, sports activities, all with respect to basic ethical principles and minimizing the impact on the environment. The diversity of natural and cultural heritage of Serbia offers a great opportunities for the development of ecotourism. Unfortunately, in Serbia, strategies of this type have not been fully implemented. There are no real eco lodges yet. Considering that they do not require large investments and include the local community, the construction of these facilities in natural and culturally authentic areas would enable the economic development of the whole region. However, the development of ecotourism must be based on a thorough analysis of all environmental conditions and clearly defined strategic goals and activities.

The development of eco-tourism as a result of strategic planning is a complex multidisciplinary task based on the principles of the sustainability concept. Clearly defined and set goals can be achieved only with well-conceived environmental management in tourism. The tasks of the environmental management of the tourist destination are directed towards preserving the living environment of the area, which implies the application of global standards, active involvement in relevant ecological actions and the creation of a partnership with other participants in the realization of goals [12]. Sustainable development, in this sense, represents the general framework of environmental management.

The aim of this paper is to present the process of creating an adequate strategic planning model in order to develop ecotourism on a practical basis. For this purpose, integrated SWOT (Strengths, Weaknesses, Opportunities, Threats, engl) and AHP (Analytic Hierarchy Process,) methods were applied. The task of the SWOT analysis was to determine, based on the estimated strengths, weaknesses, opportunities and threats that prevail at the selected site, strategies that can be most effective for the development of eco destination and the construction of the eco lodge. Using AHP method, based on SWOT analysis, prioritization of strategic alternatives according to their degree of significance, was performed.

The SWOT-AHP hybrid model based analysis was used in various areas such as the energy, agriculture and machine industries, but there are not many studies in

the field of tourism in which it was used [13]. SWOT-AHP analysis phases are: (1) SWOT analysis, (2) comparative analysis of SWOT factors within each SWOT group, (3) comparative analysis of four SWOT groups and (4) defining the strategy based on the obtained results.

2 Methodology

2.1 Research area

By analyzing the natural and cultural potentials in the territory of the Republic of Serbia, numerous regions can be identified for the development of ecotourism and the construction of eco lodges. One of them is the area located in the eastern part of Serbia, about twenty kilometers away from Bor. It is located between the mountains of Veliki Krš, Mali Krš and Stol, known as the "Alps of Eastern Serbia". This landscape is characterized by the carefully preserved and untouched nature. The diversity of the relief provides shelter and represents a habitat to numerous plant and animal species, indicating a large biodiversity and the existence of several endemic species. In this region there are over 70 speleological objects, caves, pit and this region represents habitat for 11 species of predators. Also, nearby is the archaeological site called Manastiriste. The highlands with meadows, arable land and foresters, are suitable for the development of animal husbandry, the collection of medical herbs and mushrooms. Thanks to this, excellent conditions for the production of organic food are created (cheese, honey, milk, vegetables and fruits). This mountain region provides the opportunity for the development of extreme and winter sports (cycling, paragliding, hiking, skiing).

Based on the abovementioned, numerous advantages of this region for the development of ecotourism have been recognized. Preserved nature can attract a large number of environmentally oriented tourists who want to spend an active holiday, enjoy in nature and get to know the culture of the local population.

2.2 SWOT analysis

SWOT analysis is an acronym of its main components: strength, weaknesses, opportunities and threats [14]. SWOT analysis of external opportunities and threats, as well as internal strengths and weaknesses, is important for the formulation and development of strategy [15]. If it is properly used, SWOT analysis can provide a good basis for successful formulation of the strategy, and the main purpose of its application in strategic decisions is to select or present and implement a strategy that will result in good fit between internal and external

factors [16]. The chosen strategy must also be in line with the objectives of the decision maker. However, the result of SWOT analysis is often only a list or incomplete qualitative examination of internal and external factors, without concrete end-use in the decision-making process [17]. It implies systematic thinking and a comprehensive diagnosis of factors related to new product, technology, management or planning, while for the decision-making process it is necessary to apply one of the multi-criteria decision-making methods.

2.3 AHP method

The Analytical Hierarchical Process is one of the most famous multi-criteria methods established in 1980 by Thomas L. Saaty. Many studies have confirmed that the AHP method is a very useful, reliable and systematic MCDM (Multi Criteria Decision Making) tool for solving complex decision-making problems [16, 18, 119, 20, 21, 22]. The AHP method performs expert analysis of scenarios and decision-making by consistently evaluating hierarchies that consist of goals, scenarios, criteria, and alternatives. It first allows the interactive design of the hierarchy of problems as preparation of the decision-making scenarios, and then evaluating the pairs of elements of the hierarchy (goals, criteria, and alternatives). In the end, an analysis of all grades is performed and according to a strictly defined mathematical model the weight factors of all elements of the hierarchy are determined. Frequent application of the AHP method is recognized in various areas of strategic management in which decisions have high significance and where decision makers are given high-quality and reliable advice at the stage of analyzing possible alternatives and determining their impact on set goals [18].

3 Results

The first step in defining potential strategies and selecting the most effective strategies for the development of eco-tourism by the means of construction of eco-lodges at a selected locality is a situational analysis, which includes internal analysis of strengths and weaknesses and external analysis of opportunities and threats. Based on the defined SWOT analysis, the TOWS matrix was formed (Table 1), in which criteria, sub-criteria and generated strategies are defined.

Table 1. SWOT-TOWS matrix

	Strengths	**Weaknesses**
	S_1 Interest of the local community towards the development of ecotourism **S_2** Activities of local self-government towards more intensive development of the region **S_3** Significant natural and cultural potentials **S_4** Alpine-like mountain range	**W_1** Inadequate protection of natural resources in the region **W_2** Insufficient utilization of the tourist potential of the region **W_3** Low level of awareness about the existence of this destination on the regional and international market **W_4** The current interest of investors to invest in the region
Opportunities	**SO**	**WO**
O_1 Tourism development in the region **O_2** Lack of eco-lodges in the region **O_3** The potential to practice extreme sports (cycling, paragliding, mountaineering…) **O_4** Attracting foreign and domestic tourists throughout the year	**SO_1** Strategy for maintaining and improving the level of interest of the local community for the development of ecotourism **SO_2** Strategy for creating tourist offers which will provide opportunities for tourists' accommodation throughout the year	**WO_1** Strategy for attracting tourists by highlighting the natural and cultural potentials of this region in promotional activities, in order to familiarize them with the destination **WO_2** Strategy for utilizing the increasing number of visits of foreign tourist in order to attract foreign investors to develop an eco-tourism destination
Threats	**ST**	**WT**
T_1 Poor development of tourism in this region and unfamiliarity of the local residents regarding the concept of ecotourism **T_2** Failure to attract domestic and foreign investors **T_3** Insufficient state interest and unsatisfactory level of implementation of tourism development strategy **T_4** Prejudice about environmental pollution due to the operation of the Mining and Smelting Basin in Bor	**ST_1** Strategy for the integration of all stakeholders in the construction and development of eco-lodges **ST_2** A strategy for promoting the destination in order to break prejudices about the pollution of the industrial environment	**WT_1** Implementation of tourism development strategy for the period of 2016-2025, adopted by the Government of Serbia with an emphasis on the development of ecotourism **WT_2** Strategy for influencing local self-government to create a fund for development of eco-destinations

In further analysis, the significance of the criteria and sub-criteria was determined by the expert team using the AHP methodology. During the group decision making process experts had been evaluating the criteria and sub-criteria, while taking the mean values for each, and made the decision on the basis of the final ranking. The obtained results provide information on the mutual importance of individual SWOT factors. In this case, Opportunities have the biggest importance (0.519), followed by Weaknesses (0.295), Strengths (0.133) and Threats (0.053).

$$W_1=\begin{bmatrix} S \\ W \\ O \\ T \end{bmatrix}=\begin{bmatrix} 0.133 \\ 0.295 \\ 0.519 \\ 0.053 \end{bmatrix}$$

The local and global priorities of the SWOT factor are calculated, and the results are presented in Table 2.

In this way normalized results were obtained, indicating the dominant influence of the following sub-criteria within each SWOT group: S_4 - Alpine-like mountain range (0.506); W_3 - Low level of awareness about the existence of this destination on the regional and international market (0.527); O_2 – Lack of eco-lodges in the region (0.401); T_4 -Prejudice about environmental pollution due to the operation of the Mining and Smelting Basin in Bor (0.501).

Figure 1 contains a graphic representation of the situational analysis of the SWOT results based on the data in Table 2. The obtained results indicate the size of the impact of SWOT criteria in the following descending order: O → W → S → T. The value of the overall significance of the SWOT sub-criterion with the greatest significance within a factor, are presented in the following descending order: $O_4 \rightarrow W_3 \rightarrow S_2 \rightarrow T_1$. Given the most significant role of the Opportunities in the considered case (importance weight of 51.9%), as well as the sub-criteria O_1 and O_2 (their cumulative global importance is 37.6%), it is expected that the strategies generated for the purpose of exploiting the opportunities from environment will have priority over other strategies in the model.

Table 2. The importance of the criteria and sub-criteria of the SWOT analysis, determined by AHP methodology

SWOT groups	Importance of the SWOT factors	SWOT sub-criteria	Local importance	The overall importance
Strengths (S)	0.133	**S_1** Interest of the local community towards the development of ecotourism	0.070	0.009
		S_2 Activities of local self-government towards more intensive development of the region	0.294	0.039
		S_3 Significant natural and cultural potentials	0.130	0.017
		S_4 Alpine-like mountain range	**0.506**	0.067
Weaknesses (W)	0.295	**W_1** Inadequate protection of natural resources in the region	0.131	0.039
		W_2 Insufficient utilization of the tourist potential of the region	0.064	0.019
		W_3 Low level of awareness about the existence of this destination on the regional and international market	**0.527**	0.155
		W_4 The current interest of investors to invest in the region	0.279	0.082
Opportunities (O)	0.519	**O_1** Tourism development in the region	0.325	0.168
		O_2 Lack of eco-lodges in the region	**0.401**	0.208
		O_3 The potential to practice extreme sports (cycling, paragliding, mountaineering ...)	0.088	0.046
		O_4 Attracting foreign and domestic tourists throughout the year	0.106	0.055
Threats (T)	0.053	**T_1** Poor development of tourism in this region and unfamiliarity of the local residents regarding the concept of ecotourism	0.132	0.007
		T_2 Failure to attract domestic and foreign investors	0.271	0.014
		T_3 Insufficient state interest and unsatisfactory level of implementation of tourism development strategy	0.097	0.005
		T_4 Prejudice about environmental pollution due to the operation of the Mining and Smelting Basin in Bor	**0.501**	0.027

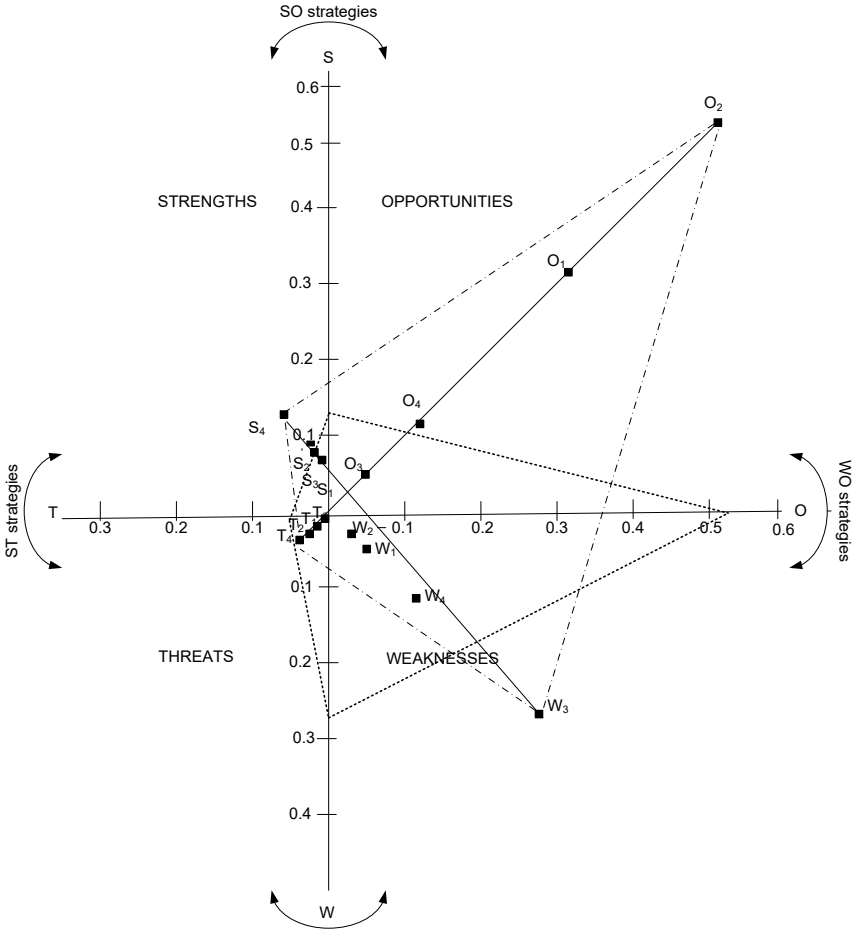

Figure 1.

Situation analysis of comparison of weighted SWOT criteria and overall importance of SWOT sub-criteria based on the AHP procedure

Subsequently, based of expert evaluation, importance weights were assigned for each alternative strategy (SO_1, SO_2, WO_1, WO_2, ST_1, ST_2, WT_1, WT_2) in relation to the defined SWOT sub-criteria, where the overall priority of the considered strategies were calculated as following:

$$W_{alternatives} = \begin{bmatrix} ST1 \\ SO2 \\ SO1 \\ WO1 \\ ST2 \\ WO2 \\ WT2 \\ WT1 \end{bmatrix} = W_3 \times W_{SWOTsub\text{ - }factors(global)} = \begin{bmatrix} 0.312 \\ 0.202 \\ 0.172 \\ 0.100 \\ 0.068 \\ 0.054 \\ 0.054 \\ 0.038 \end{bmatrix}$$

The obtained results define the prioritization of the proposed alternative strategies in the following descending sequence: $ST_1 \rightarrow SO_2 \rightarrow SO_1 \rightarrow WO_1 \rightarrow ST_2 \rightarrow WO_2 \rightarrow WT_2 \rightarrow WT_1$ ($ST_1 = 0.312$; $SO_2 = 0.202$; $SO_1 = 0.172$; $WO_1 = 0.100$; $ST_2 = 0.068$; $WO_2 = 0.054$; $WT_2 = 0.054$; $WT_1 = 0.038$)

The dynamic role of the strategy implies that after achieving a certain result using the chosen strategy, a new stage of growth and development of the organization is entered, which requires the implementation of a new strategy. According to the established model for determining the priorities of the proposed alternative strategies, the strategy ST_1 has the priority in implementation (Figure 2).

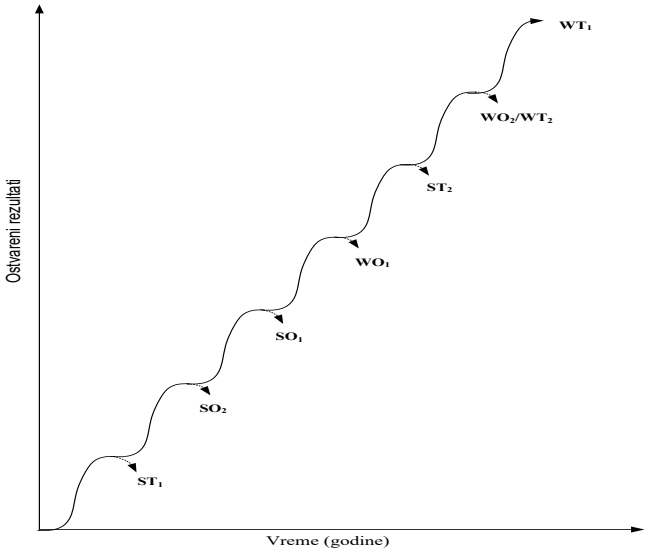

Figure 2.

Life cycle of strategies for the development of ecotourism in the analyzed region

4 Discussion

Based on the previous analysis, several strategic alternatives can be outlined. The strategy for the integration of all stakeholders in the construction and development of eco-lodges (ST_1) is the key to success in the development of sustainable tourism. Implementation of this strategy should enable the establishment of cooperation between all stakeholders (local self-government, local population, tourist organizations, etc.), thus achieving their synchronous functioning and realization of defined strategic goals.

Successful implementation of this strategy would represent the basis for creating tourist offer that would provide opportunities for tourists' accommodation throughout the year (SO_2). The result of the joint cooperation of stakeholders would, among other things, contribute to the successful planning and realization of activities for creating a diverse and rich tourist offer. In this way, conditions for the successful operation of eco-lodges would be ensured beyond the tourist season. Services provided to tourists would have to comply with the requirements of the *"Environmental Management System ISO 14001:2004",* thus meeting the criteria prescribed by international standards.

As the implementation of this strategy would come to an end, the implementation of the strategy for maintaining and improving the level of interest of the local community for the development of ecotourism (SO_1) would follow. The goal of the SO_1 strategy could be achieved by stimulating the participation of the local population in the development of ecotourism by creating opportunities for realizing their entrepreneurial activities and raising the quality of life. After the realization of the strategy, there is a need to implement the strategy of attracting tourists by emphasizing the natural and cultural potentials of this region in promotional activities, in order to familiarize them with the destination (WO_1). Since the WO_1 strategy is used to raise awareness about the existence of a destination on the regional and international market, conditions are created for continuation of the successful development using the strategy of promoting the destination and breaking prejudices about the high level of industrial pollution in the region (ST_2).

By realizing the ST_2 strategy, it is possible to implement and fulfill the strategic goal of proclaiming the locality as a protected natural resource. The following strategies, which according to the obtained equal values of weight factors in the AHP analysis, need to be implemented simultaneously, represent the strategy for utilizing the increasing number of visits of foreign tourist in order to attract foreign investors to develop the eco-tourism destination (WO_2) as well as the strategy for influencing local self-government to create a fund for development of eco-destinations (WT_2). The influx of foreign capital will positively influence the local government authorities to contribute to the development of the eco-destination with the existing fund. The last in a series of strategies to be

implemented is the implementation of the tourism development strategy for the period 2016-2025, adopted by the Government of Serbia [21], in which emphasis is placed on the future development of ecotourism (WT_1).

Conclusion

The eco-lodge represents a form of the accommodation facility which fully meets the requirements of the ecotourists. The construction of this type of facility at the considered location in eastern Serbia could contribute to the realization of the idea of ecotourism development, defined by the official Strategy for the Development of Tourism 2016-2025 which was adopted by the Government of the Republic of Serbia. Considering that the construction of accommodation units of this type does not require large material investments, this type of accommodation can be considered as an ideal way of improving ecotourism in Serbia, a country of limited financial resources. Increase in the number of visits of this region, both by domestic and foreign tourists, would significantly increase state and local revenues. Also, there would be a need for increased employment and development of entrepreneurship among the local population. The surrounding villages in the region where the construction of eco-lodges is planned are characterized by the presence of problems regarding aging population and migration of young people to nearby cities. By developing tourism, problems of this kind could be solved, as this would provide young people the opportunity of self-employment in the field of rural tourism and also the opportunity to sell domestic organic food products. This would significantly increase the standard of the population and partially solve the problem of unemployment.

The specificity of the observed region is also reflected in the vicinity of the Bulgarian and Romanian borders. This fact creates the conditions for establishing strong cross-border cooperation. The adoption of EU standards and the harmonization of legislative regulations in the field of tourism and environmental protection is an indispensable and priority task of the Government of Serbia in the forthcoming period, all with the aim of joining the EU, therefore any progress and initiatives in this regard can bring multiple benefits.

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