

## COMPARATIVE INDICATORS OF SUSTAINABLE TOURISM

**Cristina BURGHELEA, Carmen UZLĂU, Corina Maria ENE**

Hyperion University, 169 Calea Călărași, Bucharest, E-mails: [crystachy@yahoo.com](mailto:crystachy@yahoo.com)  
[carmen\\_uzlau@yahoo.com](mailto:carmen_uzlau@yahoo.com), [corina.maria.ene@gmail.com](mailto:corina.maria.ene@gmail.com)

**Corresponding author:** [crystachy@yahoo.com](mailto:crystachy@yahoo.com)

### *Abstract*

*As we all know, tourism means one of the most important socio-economic sectors of the world that is in a constantly expansion, which in the second half of the 20th century, recorded an average rate of 4-5% per year. This article aimed to highlight the existence of complexity of the tourism systems, thanks to which there are an infinite number of indicators that can quantify sustainable tourism development. According to the literature review there are quite many authors who have tried to develop such indicators and create some specific theories and methodologies of sustainable tourism. However, regardless the model or method applied the need for estimation and forecasting of tourism activity will remain an essential advantage in adopting strategic decisions in order to maintain the sustainable development of tourism.*

**Key words:** *comparative indicators, eco-sustainability, sustainable tourism*

### INTRODUCTION

Due to the complexity of the tourism systems, we can identify theoretically an infinite number of tourism related indicators of which we could get an interesting selection. The defining elements influence a selection of actual indicators working in a particular destination or business include political relevance, approach to sustainability is adopted (weak or strong, minimalist or global, measurable, financial) and other limitations of resources, interests parties involved, the level of public support effective policy, etc. [3].

Details reveal that while the selection process should result in the definition of sustainability adopted, possibly creating a set of indicators may be used in turn to improve this definition. Therefore, the literature helped me to identify the existence of authors who have tried to develop indicators and create theories and methodologies related to sustainable tourism.

Miller (2001) focused on the development of indicators to measure the tourism sustainability [7]. Like other studies related to the physical and human, Miller provides information about several indicators showing all aspects of sustainability, namely: environmental problems (physical and human), employment, leaked financial aspects of satisfaction of needs and customer

requirements.

Ko (2004) is another theorist concerned about this topic, offering an alternative of creating a comprehensive methodology to assess the idea of sustainable tourism. Reviewing existing literature, the author mentioned above, argues that "systematic sustainability assessment methods are not used in tourism" [6]. He believes that most studies on sustainable tourism development are descriptive, based on qualitative and subjective in their conclusions without being a rigorous methodology for assessing the tourism eco-sustainability aspects [9].

In this context, the paper aimed to highlight the existence of a complex tourism systems, which has determined an infinite number of indicators allowing to quantify sustainable tourism development.

### MATERIALS AND METHODS

Dissemination of research conducted through this article was based on a wide range of statistical information provided by the international literature with European Union vision on the topic discussed. The information was processed through analysis, evaluation, comparison, having a high coefficient of synthetic truth.

The obtained information was systematized through an extensive documentation, with a clear application ensuring proper understanding of the subject under discussion. The research was conducted through the table no. 1 that allows an easy identification of the conclusions which provides arguments for identifying the correlations between the addressed concepts.

This research started from the European Union vision on comparative indicators of sustainable tourism [5].

The list of comparable indicators of sustainable tourism suggested by the union experts focuses on the economic situation. However, the reality is that each of the indicators produces a number of different factors such as: satisfaction of economic, environmental, social, cultural and tourism. All these could provide a very good picture on the sustainability of tourism in the area.

Under such a system colors have the following meaning:

**The red zone** suggests a critical situation that must be addressed immediately with an appropriate measure or a halt to further tourism development;

**The yellow zone** suggests a situation bearable, but in the future, should increase substantially the number of tourists. They can also be encountered problems and will require application of preventive measures;

**The green zone** suggests a sustainable situation that may reflect the success of the measures taken previously of good practice.

According to the literature, in the idea of supporting the mentioned system, we have identified that there are five groups of comparable indicators of sustainable tourism.

**1. Economic indicators** reflecting the contribution of tourism to the local economy.

Examples of economic indicators:

(i) *The seasonal nature of the change* is an indicator of the economic and environmental implications.

(ii) *The ratio of the number of overnight stays and tourist accommodation capacity* is an indicator of economic turnover achieved at the destination.

(iii) *The coefficient of increase local tourism* summarizes all the influences direct and

indirect tourist consumption and employment at their local level because it is a familiar idea that the primary use of tourists induce the whole cycle of consumption still having an favorable effect on the economy as a whole, tourist place and region to which it belongs.

**2. Tourist satisfaction** based essentially on surveys conducted on tourist destination such as:

(a) Perception of value for money considering the number of repeated visits;

(b) Tourist perception of the quality of tourist facilities, environmental quality (water, traffic congestion, garbage, noise) and cultural/social conditions (general cultural interests of the residents, crime levels).

**3. Social indicators refer to social integrity** [1] should be judged on the subjective wellbeing of the host population.

Examples of social indicators:

(a) *The share of tourism in local net national product* is an indicator that shows the extent to which local communities gain realized tourism development.

(b) *The percentage of tourists who travel through tour operators / agencies* is a useful indicator of tourism to the local community.

**4. Cultural indicators** measure the cultural integrity on the diversity, individuality and beauty of cultures and architectural heritage.

Examples of cultural indicators:

(a) *Report of the accommodation capacities and the local population* is an indicator of both cultural influence, in terms of tourist region architectural appearance and request for necessary infrastructure, which the local community budget is burdened [4].

(b) *The intensity of tourism cultural shows and degree of saturation of the local community.*

Extremely high level of cultural saturation has a negative effect on the local community, such as the destruction of its cultural identity and lesser quality tourist experience. This indicator can be interpreted as the ratio between the annual number of tourist overnight stays (expressed in thousands) and the number of inhabitants at home (in hundreds).

**5. Environmental indicators** measure the quality of the environment and the demands made by tourists regarding different

environmental media (water, air, biodiversity, landscape, etc.).

Examples environmental indicators:

(a) *The percentage of land where building is permitted*, but is not performed is an indicator of a possible accelerated and uncontrolled development in the next period. This necessitates the need to compare urban spatial plans and maps showing the concentration of constructed objects.

(b) *The use and occupation of land.*

(c) *The percentage of tourists who arrive with their private cars* is an important indicator of potential traffic jam problem parking, noise and air quality in some regions.

(d) *Other environmental status indicators* refer to the use of energy, drinking water consumption, wastewater treatment, solid waste creation which are very hard to collect them at the place or tourist region.

## RESULTS AND DISCUSSIONS

According to the study conducted by Ilic (2009) [5] on the European Union's vision of comparative indicators of sustainable tourism in the villages community Kosjeric, Serbia, application of such indicators may be synthesized according to Table 1.

Following the analysis carried out, the social indicators highlighted the low participation of local tourism in the net domestic product. To remedy this situation it is necessary that the number of rural households included in tourist activities to grow.

Regarding the state of the environment indicators, the weaker party is played by most of tourists visiting villages using their private cars. It is known that this is difficult to change, but as a solution, it is necessary that tourists to be converted to public transportation, so their cars are used increasingly less. It must be insisted on this case because it is one of the most harmful effects on the environment (pollution).

The increase of the number of the cars found in the rural areas will adversely affect the ecological environment, and undoubtedly it is the ideal image against peace, green space, attractive landscapes and fresh air in the region under research.

Table 1. The application of sustainable tourism indicators in the villages of Kosjeric, Serbia community

Type of indicator	Indicator	Interpretation
<i>Economical</i>	Seasonality of tourism: % visits in full season (3 months)	76% red zone
	Ratio between nights and tourist beds	11.2 red zone
	Coefficient of local multiplication	-
<i>Tourist satisfaction</i>	Repeated visits: % of tourists visited any village in Kosjeric community more than once	40% yellow zone
<i>Cultural</i>	Ratio between tourists beds and local population	0.032:1 green zone
	Intensity of tourism: Number of nights (000)/Number of local residents	0.01:1 green zone
<i>Social</i>	The participation of tourism in local net product	1.3% red zone
	% of tourist arrivals without services of tour-operators	90% green zone
<i>Ecological</i>	% of land on which tourist building is allowed, but not realized	- Green zone
	Using and occupation of land: % of changes in the extent of building area within 5 years	-
	% tourist visits realized without using a private car	<10% red zone

Source: Ilic, 2009 [5]

Rural tourism planners and managers focus their activities in the idea of exhibiting alternative means of transport and environmentally suitable. As an example, in some rural areas and protected natural assets in Europe, like national parks, roads are closed to motor traffic, and visitors are encouraged to meet and investigate those special assemblies through cycling.

Developing and promoting an efficient, economical and integrated public transport in the modern world is considered to be the best option for reducing the negative effects of transport on the natural environment. This idea is supported by the fact that cycling and walking, are part of ecological sustainable means of transport, favorable rural areas.

Rural areas are specific in many ways different from other tourist destinations,

particularly in urban areas.

It should also be pointed out, that there is a complexity of determining limit values related indicators of sustainable tourism, which I mentioned to the materials and methods, as manifested particularly in tourist destinations weak or underdeveloped confirmed case of rural communities Kosjeric. Tourism here has not been developed to the extent that could cause some disturbance to ecological, social and cultural grave complexity of the procedure for determining the limit values of the indicators is even more pronounced.

## CONCLUSIONS

As a first conclusion, it should be noted that "sustainability" means property of a system, where the emphasis is on maintaining a particular state of the system in time [10].

Tourism sustainability is a concept quite complex, because of its latent multi-dimensions and relativity.

Where an indicator describes a specific process control (and not just numeric information), its scope is strictly related to the process.

The approaches proposed so far offer only the existence of partial comparisons or making them (variable to variable or indicator to indicator), because they do not establish any form of global composite-homogenous implementation of their various territories or savings [2]. In addition, most proposals were concentrated on the construction of indicators to assess separately one or more of the various dimensions of sustainability. There has been little progress in designing indicators that integrate its four dimensions [8].

Therefore, regardless the model or methodology, estimation and forecasting of tourism activity will remain an essential advantage in adopting strategic decisions in the idea of sustainable tourism development for a sustainable existence.

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