INDICATORS FOR SUSTAINABLE TOURISM DEVELOPMENT IN MACEDONIA

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Abstract

Due to the fact that sustainable tourism development means applying the concept of sustainability in the field of tourism, it is an idea economically viable, ecologically sustainable as well as socially equitable. Despite of its noticeable and inevitable value, there is no exact methodology for sustainability measurement, so the way out is detected in indicators assessment. With regards to application of sustainable tourism development indicators, various problems occur towards numerous criterions. This paper attempts to estimate sustainable tourism development indicators in Macedonia. In this respect, the research is based on various analyses made upon available secondary data collected through desk-research on descriptive statistics. The outcomes point out that Macedonia, opposite the most tourism-oriented countries, notes very modest results. Finally, the paper emphasizes the need for undertaking measures for improving the sustainability issue in general and particularly in tourism development. Moreover, it urges the necessity for identifying effective framework for enhancing tourism sustainability within all stakeholders involved in tourism process in Macedonia.

Key words: *Sustainability; Tourism development; Indicators; Macedonia.*

1. INTRODUCTION

Tourism as an important socio-economic phenomenon is characterized with distinctly largeness and dynamic development results with many positive direct as well as indirect economic effects. That is a measure for increasing the possibilities for encouragement of general economic development through tourism development. As a result of direct economic effects, tourism indirectly contributes for life standard and life quality increasing of the residents.

Next to positive economic aspects, tourism causes unfavorable consequences, like: degradation of natural resources, life style distortions, socio-cultural patrimony of destination and so forth. As a result of that, tourism development must be based on sustainability criteria, must be long term economically bearable and ethically and socially equitable for the residents of a tourist destination. All three sustainable development dimensions (preservation of natural and cultural resources, economic viability and social justice) can be measured and analyzed using indicators that are adapted to specific realities of each place and that consider environmental, socio-economic and tourist variables.

In this respect, the indicators for sustainable tourism development are an intrinsic component of tourism planning process. So, identification, monitoring and control of such indicators will assist in great manner towards more sustainable tourism and in promoting this objective in public and private sector decision-making.

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2. LITERATURE REVIEW

There is no widely known and accepted definition of sustainable tourism. One of the widely-used definition focuses on "leading to management of all resources in such a way that we can fulfill economic, social and aesthetic needs while maintaining cultural integrity, essential ecological processes, biological diversity and life support systems." (Diamantis and Ladkin, 1999: 35)

The aim of sustainable tourism in general is to upgrade residents' quality of life and tourists' experience, as well as to support the environmental resources on which the tourism system is based. So, "achieving sustainable tourism is a continuous process and it requires the constant monitoring of impacts, introducing the necessary preventive and/or corrective measures whenever necessary." (UNEP, 2009: 13). In this respect, "one of the problems that arise when applying the concept of sustainability to tourism is that there is not any exact and accepted methodology for measuring it. One of the tools recently proposed for measuring sustainability is the estimation of indicators." (Mowforth and Munt, 1998, cited in Silignakis, s.a., p.2).

Table 1: Summary of Selected Case Studies

Destination	Number of indicators	Comments
International (WTO, 2004)	768 indicators, 29 of which are basic	29 basic indicators ranked by main issues in sustainable tourism and applicable to all types of destinations
International (Vellas, 2000)	10 indicators	10 indicators compatible with all types of destinations, divided into several measures to encompass quantitative and qualitative aspects
European cities (European Environmental Agency, 2004)	11 indicators	11 key indicators compatibles with destinations in European countries and the West in general
Albufera de Valencia (WTO, 2004)	141 indicators	141 indicators of pressure, state and response to measure the capacity of an ecosystem of attractive but vulnerable natural landscapes
Balearic Island (WTO, 2004)	50 indicators	50 indicators for a destination where tourism is the main sector
Canary Island (WTO, 2004)	9 indicators	9 indicators that serve as a guide in the sustainable tourism planning process for a costal destination
Cape Breton Island, Canada (WTO, 2004)	30 indicators	30 indicators resulting from a participating approach compatible with all types of destinations
Caribbean Region (WTO, 2004)	14 normative indicators	14 normative indicators that demonstrate the progress toward a common set of indicators for regions where tourism is an important engine of the economy
Kukijuca, Croatia (WTO, 2004)	44 indicators	44 indicators resulting from a WTO workshop on indicators in 2001, applicable to all types of destinations
Samoan Islands ((WTO, 2004)	20 indicators	20 indicators adopted by the Project Advisor Committee made up of elected officials
Switzerland, 2007)	20 indicators	20 indicators defined in the DPSIR (Drivers, Pressure, State, Impact, Response) system applicable to all types of destinations

Source: Tanguay, G. A. *et al.* (2011).

To estimate whether tourism development at destination level is sustainable or not, and to what extent, there is a need to make a set of indicators that measure progress in achieving sustainable development. In this respect, it "measures the existence or severity of

current issues signals of upcoming situations or problems, measures of risk and potential need for action, and means to identity the results of our actions." (Griffin *at al.*, 2011: 204). Yet, in order to be useful, indicators for sustainable tourism must fulfill the criteria: relevance, availability, meaning, freshness, sensitivity, reliability, comparability and normativity.

Indicators for sustainable tourism may exist at national, regional and destination level and they have socio-cultural, economic and environmental dimension (Ceron, 2003; Gebhard *et al.*, 2007). Each dimension has one or more themes (issues). Also there are indicators developed from these themes. Furthermore, the literature alleges few or numerous indicators for sustainable tourism development. Their number varies and it can be from 9 till 768 indicators (Table 1).

In order to avoid the confusion and tourism's sustainable development data to be comparable for different tourist destinations and countries, WTO mentions 12 baseline issues and 29 baseline indicators for sustainable tourism of tourist destinations. (table 2). While the presented list of baseline issues for sustainable tourism is applicable to every region and every kind of tourism all over the world, the set of indicators belonging to each issue should be adjusted according to the special conditions of the area or country where the sustainability of tourism is evaluated.

Table 2: Baseline Issues and Indicators for Tourist Destinations

Baseline Issue	Suggested - Baseline Indicator (s)
Local satisfaction	- Local satisfaction level with tourism (Questionnaire)
Effect of tourism on communities	- Ratio of tourists to locals (average and peak period/days) - % who believes that tourism has helped bring new services or infrastructure (questionnaire - based) - Number and capacity of social services available to the community (% which are attributable to tourism)
Sustaining tourist satisfaction	- Level of satisfaction by visitors (questionnaire - based) - Perception of value for money (questionnaire - based) - Percentage of return visitors
Tourism seasonality	- Tourist arrivals by month or quarter (distribution throughout the year) - Occupancy rates for official accommodation by month (peak periods relative to low season) and % of all occupancy in peak quarter or month - % of business establishments open all year - Number and % of tourist industry jobs which are permanent or full – year (compared to temporary jobs)
Economic benefits of tourism	- Number of local people (and ratio of men to women) employed in tourism (also ratio of tourism employment to total employment) - Revenues generated by tourism as % of total revenues generated in the community
Energy management	- Per capita consumption of energy from all sources (overall, and by tourist sector – per person day) - Percentage of businesses participating in energy conservation programs, or applying energy saving policy and techniques - % of energy consumption from renewable resources (at destinations, establishments)
Water availability and conservation	- Water use: (total volume consumed and liters per tourist per day) - Water saving (% reduced, recaptured or recycled)
Drinking water quality	- Percentage of tourism establishments with water treated to international potable standards - Frequency of water – borne diseases: number/percentage of visitors reporting water – borne illnesses during their stay
Sewage treatment (wastewater management)	- Percentage of sewage from cite receiving treatment (to primary, secondary, tertiary levels) - Percentage of tourism establishments (or accommodation) on treatment system (s)
Solid waste management (Garbage)	- Waste volume produced by the destination (tones) (by month) - Volume of waste recycled (m^3)/ total volume of waste (m^3) (specify by different types)

	- Quantity of waste strewn in public areas (garbage counts)
Development control	- Existence of a land use or development planning process, including tourism - % of area subject to control (density, design, etc.)
Controlling use intensity	- Total number of tourist arrivals (mean, monthly, peak periods) - Number of tourists per m^2 of the site (e.g., at beaches, attractions), per square kilometer of the destination, mean number/peak period average

Source: UNWTO (2004).

3. METHODOLOGY

The paper makes an attempt to estimate sustainable tourism development indicators for Macedonia, based on basic sustainable tourism indicators given by the UNWTO. Therefore, to obtain quantitative data, several secondary data sources were applied, such as: State Statistical Office of Macedonia, Ministry of Economy (Department for Tourism and Hospitality), Ministry of Environment and Physical Planning (Department for Sustainable Development, Office for Environment and Macedonian Information Centre for Environment - MEIC) and Hotel Association of Macedonia (HOTAM).

Several limitations towards research outcomes occurred while undertaking research analyses. Namely, lack of official data regarding tourism industry in Macedonia, was the biggest obstacle. In this respect, some of data were generally referring to sustainable development in Macedonia or were unavailable. Due to modest research results, the paper emphasizes the need for undertaking measures to improve sustainability in general and specifically to improve sustainability in the field of tourism by all stakeholders involved in tourism process in Macedonia.

4. ANALYSIS, RESULTS AND DISCUSSION

Following the example for sustainable development basic indicators (Table 2), an overview is presented for the most specific indicators for the sustainable development of tourism in Macedonia (Table 3). Some of basis indicators are modified because of a lack of data. They are replaced by indicators with available data. Yet, they describe the same issues and cover the same aspects of sustainable development.

Table 3: Application of UNWTO indicators in Macedonia - Sustaining tourist satisfaction

Issue	Indicator (s)	Results
Effect of tourism on communities	➢ Ratio of tourists to locals (2010) Site pressure	12.73% of foreign tourists/resident population 2 316 700 persons/day 2 055 004 residents/day 261 696 tourists/day
Sustaining tourist satisfaction	➢ Level of satisfaction by visitors (questionnaire – based, 2009) *Nature and surroundings* Bad Good Very good *Personal security* Bad Good Very good *Services on the roads* Bad Good Very good *Comfort in accommodations* Bad Good Very good	 0.40 % 19.25 % 80.35 % 2.58 % 27.14 % 70.29 % 17.30 % 44.53 % 38.17 % 1.93 % 29.10 % 68.97 %

	Quality of services in restaurants	
	Bad	1.57 %
	Good	34.66 %
	Very good	63.78 %
	Quality of services from personnel	
	Bad	1.60 %
	Good	25.23 %
	Very good	73.18%
	Possibilities for excursions	7.47 %
	Bad	40.08 %
	Good	52.45 %
	Very good	
	Possibilities for holding conferences	7.26 %
	Bad	43.82 %
	Good	48.92 %
	Very good	
	Sport and cultural events	13.03 %
	Bad	48.27 %
	Good	38.70 %
	Very good	
	Quality of PPT connections	11.85 %
	Bad	39.42 %
	Good	48.73 %
	Very good	
	Ecological value	16.98 %
	Bad	40.59 %
	Good	42.42 %
	Very good	85.78 %
	➢ Percentage of return visitors (2009)	
	Numbers of previous stays	14.22 %
	None	25.69 %
	Once	23.01 %
	2-3 times	37.08 %
	4 and more	
	➢ Tourists who agree they would like to return (Intention for another stay in Macedonia) (2009)	72.01 %
		66.18 %
	In this place (in place of survey)	5.83 %
	In other place in Macedonia	27,20 %
	I don't know	0.78 %
	I will not come	
Tourism seasonality	➢ Tourist arrivals by month (distribution throughout the year)	Concentration of tourists during high season (May-September 2010) 28 401 (May) 27 220 (June) 28 738 (July) 32 231 (August) 28 144 (September)
	➢ Number and % of full-time employees in the tourist industry (compared to part-time employees)	11 670 full-time hotel employees (87.3 %) 1 701 part-time hotel employees (12.8 %) 13 371 total number hotel employees
Economic benefits of tourism	➢ Number of local people (and ratio of men to women) employed in tourism (also ratio of tourism employment to total employment)	13 371 total number hotel employees 5 230 women hotel employees (39.1%) 8 141 men hotel employees (60.9%) 1.56 ratio of men to women employed in hotels in 2010
	➢ Revenues generated by tourism as % of GDP	1.2% (share of sector "Hotels and Restaurants" in GDP in 2009)
	➢ Tourist numbers	586 241 total (in 2010) 324 545 foreign tourists

	➤ Average expenditure p/p (foreigners) (coefficient of variation) ➤ Average number of nights spent (foreigners) (coefficient of variation) ➤ Average number of days (foreigners)	261 696 domestic tourists 252 EUR 2.08 3.85 nights 3.08 4.76 days
Energy management	➤ Per capita consumption of energy from all sources (overall, and by tourism sector) ➤ % of energy consumption from renewable resources	871 kgoe (per capita final consumption of energy from all sources in 2010) 238 kgoe (final total energy consumption in the sector "services" in 2010) 11.2 % (Total share of renewable in gross inland energy consumption in 2009) 3.9% hydro 6.9% biomass 0.4% geothermal
Drinking water quality	➤ Drinking water quality	93.4% Safe 5.4% Physicochemical unsafe 1.2% Microbiologically unsafe
Sewage treatment - wastewater management	➤ Wastewater from mining and industry (2008) in '000 m^3	Total 679 275 Wastewater from production 546 386 Wastewater from cooling water 38 482 Wastewater from sanitary water 62 689 Other 31 718
Solid waste management (Garbage)	➤ Waste volume produced by the destination (tones) and annual amount of municipal waste p/p ➤ Waste generation, treatment, recycling and disposal (in 2008)	721 507 t total waste in 2010 351 kg (annually municipal waste 2010) 666 kg/per capita total waste 2008 663 kg/per capita non-hazardous waste 2008 3.1 kg/per capita hazardous waste 2008 157.8 kg/per capita total waste treated 156.1kg/per capita non-hazardous waste 1.7 kg/per capita hazardous waste treated 157.7 kg/per capita total waste recycled 156.0 kg/per capita non-hazardous waste recycled 1.7 kg/per capita hazardous waste recycled 577.1 kg/per capita total waste disposed 575.8 kg/per capita non-hazardous waste disposed 1.3 kg/per capita hazardous waste disposed
Controlling use intensity	➤ Total number of tourist arrivals (mean, monthly, peak periods)	28 401 (foreign tourists - May) 27 220 (foreign tourists - June) 28 738 (foreign tourists - July) 32 231 (foreign tourists - August) 28 144 (foreign tourists - September)

Source: State Statistical Office (various years and various publications)

Based on above noted, several interesting observations may be introduced:
- Although the biggest concentration of tourists in Macedonia is in summer season (June-September), still the site pressure is not so high since the number of tourists is in acceptable level boundaries;
- Average number of days and average number of nights pent of foreign tourists are very modest resulting with small quantum of revenues and low economic effects of tourism;
- Beside the relatively small number of foreign tourists, the results towards their experience during the visit to Macedonia (from aspect of nature, ecological value, quality of services, good personal security etc.) the number of those who have return to visit the country (85.78% of whom 37.01% four and more times) and those who intend to come again (72.01%) is on significant level with tendency for achieving higher tourism economic effects in future;

- Relatively small number of tourists results with small volume of waste annually produced (generally, the garbage is set into garbage dump), thus representing satisfactory protection of environment, cultural heritage and tourist surroundings in Macedonia.

Although the available data were with limited volume and modest in order to make more in-depth research towards the level of tourism sustainability in Macedonia, the research outcomes may be useful. Namely, one may conclude that despite the fact of having sustainable development in tourism in Macedonia, it is still in its introductory phase. The existent sustainability refers to ecological and socio-cultural aspect of living, but not to an adequate level of economic sustainability of tourism. All of this points to an emergency and necessary for taking measures for further tourism development by increasing the sustainability by all stakeholders. That should comprise increasing of all aspect of sustainability as ecological, socio-cultural as well as economic aspects of tourism sustainability. Moreover, one of the measures may be developing and promotion of different alternative types of tourism for which Macedonia has potentials. These will decrease the seasonality of tourism as well as the site pressure, while increasing the economic effects. Due to the fact that formulation of indicators is an evolving process, the indicators may transform from year to year and their list may be reviewed in the future.

5. CONCLUSION

Despite the research limitations mainly to the availability of data set, which prevented analyses in more in-depth manner towards the level of tourism sustainability in Macedonia, the paper argues its presence in modest line. Namely, although there is sustainable development in tourism in Macedonia, the research points that it is still in its stage of beginning. Moreover, the existent sustainability refers generally to ecological and socio-cultural aspect of living, but not to an adequate level of economic sustainability of tourism. As there are very modest results, the paper urges the need for undertaking measures to improve sustainability in general and specifically to improve sustainability in the field of tourism by all stakeholders involved in the tourism process in Macedonia.

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