

SUSTAINABLE TOURISM INDICATORS FOR
MEDITERRANEAN ESTABLISHED DESTINATIONS

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ABSTRACT

Sustainable tourism is a recent concept used to reflect the need for a comprehensive analysis and management of tourism both as business and experience. However, this should not be the only consideration. Tourism is actually one part of the effort to achieve overall sustainable development. Already developed resorts are facing saturation problems and the challenge of reevaluating their developmental goals and patterns. One way for measuring sustainability patterns in tourism is through the use of indicators. Indicators for sustainable tourism are tools for assessing tourism development and estimate the economic, natural and socio-cultural environmental implications. In defining the various indicators the focus is placed on already developed resorts in the Mediterranean region and proposed indicators are for use in the local scale.

Key words: sustainable development, indicators, tourism.

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I. Introduction

Sustainable development in tourism

The notion of sustainable development has expanded to cover all forms of development and economic activities including tourism. The interpretation of the concept of sustainable development in tourism remains vague and a number of different approaches have been proposed in an effort to define what constitutes sustainable development in tourism and what not. Coccossis (1996) recognizes four different interpretations of sustainable tourism. These four perspectives are the “*economic sustainability of tourism*”, the “*ecologically sustainable tourism*”, “*sustainable tourism development*” –where although the need for environmental quality is apparent, the focus is on the long-term viability of the industry- and “*tourism as a part of a strategy for sustainable development*”.

The first three interpretations address only parts of sustainable tourism. It is contradictory to the concept of sustainable development to consider sustainability in tourism isolated from the different dimensions the concept implies. In order to stay close to the vision of sustainable development a holistic and integrated approach has to be adopted (Butler, 1998); this is the standpoint of this research.

Sustainable tourism and already developed resorts

Managing existing destinations is a key element of this research. The need to redefine tourism development in existing destinations on a more sustainable basis although may seem contradictory is actually a necessity. Sustainable tourism is

often perceived as the opposite of mass tourism, which is the dominant form in most of the resorts. Although, it may seem unreasonable to expect that resorts with an intensive form of tourism, large numbers of visitors and a total dependence of their economies on tourism will be transformed overnight to sustainability paradises, there is an acute need to shift their tourism development towards a more sustainable direction. Confronting and proposing solutions to the problems of already developed tourist areas is a key objective of sustainable tourism and not just creating new destinations even if these are considered sustainable (Butler, 1998). Moreover, mass tourism in many instances can be considered to have less impact than the new forms of tourism (Butler, 1998; Mowforth & Munt, 1998).

The Mediterranean Tourism

Mediterranean is considered to be the most popular destination worldwide with about 155 million of tourists in 1990 (Briguglio & Vella, 1995). In this area, tourism is considered a very significant economic activity contributing foreign exchange and leading to further economic gains. As a result, mass tourism, which brings in immediate economic gains, at the expense of long-term viability in many occasions, has flourished and often has been extensively promoted by the national authorities.

However, these characteristics along with the fragility of their ecosystems to receive and absorb the pressure posed by large numbers of tourists in relatively small areas and the lack of proper planning at an early stage are turning them vulnerable and forcing them to face the deterioration of their established markets.

II. Indicators for Sustainable Tourism

Indicators for sustainable tourism are a relatively new field of research and work interest. WTO since 1992 has been undertaking work on this field (WTO 1993, 1996). However, the indicators proposed, as well as the overall framework appear to be too tourism centric targeting on safeguarding tourism businesses. Although, this is a wishing component in sustainable development it should not be the only issue addressed. Moreover, it appears that the focus was on newly developed destinations, particularly in developing countries while, linkages between economic development and the environment are not clearly stated.

Sustainable tourism indicators alike the sustainability indicators are about integrating tourism to its environmental and socio-cultural context. Furthermore, sustainability indicators for already developed tourist destinations should be formulated in a way that the weak points where action must be taken and must examine the sector's relationship to the rest of the activities and the environment in an effort to achieve overall sustainability for the area.

One way of defining a set of indicators for sustainable tourism that perceive tourism in a more holistic approach, is to relate them to the principles of sustainable tourism, as these are discussed in the literature. This is the approach chosen to be followed in this paper.

III. Sustainable tourism principles and proposed indicators

Several sets of principles for sustainable tourism have been proposed in the literature in an effort to operationalize the term of sustainable tourism and facilitate its implementation. Bramwell & Henry (1996); Eber (1992); Gerken (1988); McIntyre (1993) as well as International Organizations (WTTC, WTO & Earth Council, 1996; WTO & UNEP, 1998) have proposed principles for sustainable tourism. Most of the sets refer to aspects such as involving local communities, sustainable use of the resources, planning for tourism, promoting information and research etc.

The set of principles proposed by Eber (1992) is chosen here to guideline the definition of indicators. The analysis and discussion provided in its original source for these principles might seem to be rather tourism-centric, focusing extensively in the tourism sector per se. In this paper the same principles are used to guideline the definition of indicators, but a broader interpretation is considered here to reflect the notion of sustainable development.

The principles of sustainable tourism are as follow:

1. Using resources sustainably
2. Reducing over-consumption and waste
3. Maintaining diversity
4. Integrating tourism into planning
5. Supporting local economies

6. Involving local communities
7. Consulting stakeholders and the public
8. Training staff
9. Marketing tourism responsibly
10. Undertaking research

Among several of the principles of sustainable tourism there is a strong relationship. This is not surprising given the complexity of tourism, the interrelation in the different components of sustainable development and the need for holistic approach. In the following discussion some principles are examined jointly since they are conceptually interrelated, and similar indicators can be used in measuring sustainability. Thus, the principles of “Integrating tourism into planning”, and “Marketing tourism responsibly”, are examined together. This is also the case in the principles”, “Involving local communities” and “Consulting stakeholders and the public”.

Indicators are defined for the local scale of application. The scale of application is significant since more detailed information could be considered as it gets lower while aggregations are mostly used in a broader scale of application. Moreover, different indicators are meaningful at different scales although some of them could be used in local as well as regional and/or national level. The local scale was chosen here in order to facilitate local communities and stakeholders to adopt sustainable practices. It is also believed that research in the local scale could help in clarifying theoretical as well as practical issues about sustainable development and facilitate in this way in its implementation.

The number of indicators vary from principle to principle according to the different dimensions this might have as well as the apparent lack of data or not. Data availability is a significant issue, especially in Mediterranean countries. For this reason, in some instances, more than one indicator may have been proposed which more or less refer to same parameter.

1. Using resources sustainably

As Hunter (1995) points out, *“for renewable resources, SD requires that the rate of utilization does not exceed the natural regenerative capacity”*. Resources can be interpreted as natural (water, energy, landscape, biodiversity etc), cultural and social. This principle is part of what elsewhere (Eber, 1992; Goodall & Stabler, 1997) is referred to as cultural or social sustainability.

For natural resources, water and energy are the key concerns for sustainability since both are extensively used by the tourism industry in the host areas, most often at rates far exceeding use by local population. Additionally, in the Mediterranean area these two resources are in scarcity and often are the object of conflicts due to competing demands for different uses. For renewable resources, recycling and/or regeneration rates are appropriate since they can be utilized to demonstrate some effort to manage consumption, as well as, emissions and littering. The indicator of water/energy consumption per tourist (or bed or night) is often suggested in the literature (WTO 1993, 1996) to measure key resource consumption. Although this measure could be utilized, particularly in situations

where no other data are available and/or when strategies for consumption reduction have been implemented, such an index should be compared to:

- a) some standard norms of consumption;
- b) the relative redundancy of the resource in the region;
- c) the amount of resources needed by other sectors of the economy (agriculture, industry) which are developed or could be developed in the area (opportunity cost).
- d) the consumption before the implementation of reduction policies

Landscape is another natural resource, to be considered. Overexploitation by the industry leads to deterioration of the landscape and the tourist. With large numbers of tourists visiting a beach, a park or other attractive site it should be expected that there would be loss of attractiveness, and disturbance of natural habitat because of the congestion and overuse. The large scale of infrastructure development also can limit the open space and dramatically alter the character of the area, the traditional ecosystems, the quality of life for the residents and of the experience for the visitors.

In most of the Mediterranean destinations the quality of bathing water is a major resource which should be considered as well. Measures such as continuous monitoring of water pollution, existence of some prize award (e.g. blue flag) or even number of locals swimming on a beach can be used to indicate the sustainable use of this resource.

The list of indicators for resources at the local scale includes:

- Renewable resources (solar, wind, etc.) used in tourist accommodations as a percentage of total fuels used,
- Amount of water recycled as a percentage of total water that could be potentially recycled,
- Water/energy consumption per tourist (or bed or night),
- Square meters beach (park or other site) per tourist (average and peak),
- Square meters of open space per tourist,
- “Open” space as percentage to that built for tourism infrastructure,
- Existence of procedures for continuous monitoring of the swimming water,
- Number of samplings of swimming waters exceeding safe limits, as these are defined nationally or internationally,
- Quality of water expressed as concentration of various pollutants,
- Blue Flag award (or similar awards if existed),
- Number of locals swimming on the beach

It is difficult to measure directly social and cultural sustainability. This is because most of the variables related to these are qualitative rather than quantitative. Another reason is that cultural changes are inevitable when people from different socio-cultural background come together in some degree of interaction. Growth in tourism is only one part of the development process. Although it appears that tourism accelerates cultural changes it is definitely not the only driving force of changes (Mathieson & Wall, 1982). Moreover, as Inskip (1991) claims the changes are not necessarily negative or undesirable.

An indirect measure for socio-cultural sustainability can be the involvement of local communities in the decision-making and other processes, along with the right information to tourists about the place they are visiting. These issues are examined in following principles.

List of proposed indicators includes:

- Ratio of local population to peak season tourists,
- Ratio of local population to annual number of tourists,
- Marriages between tourists and locals as a percentage of all marriages,
- Number of bars/discos per local population,
- Divorces as a percentage of marriages,
- Females employed as a percentage of the labor force,
- Rate of growth of population,
- Unemployment rates in the off-season periods
- Local unemployment compared to Regional or National unemployment

2. Reducing over-consumption and waste

Reducing over-consumption and waste has a two-fold dimension; saving the resources used by tourism for the production/consumption of other goods and reducing the pressure on the environment resulting from the waste treatment and disposal. In this sense, the first component is somehow related to the first principle mentioned above.

Related to this principle is the existence and adequacy of the infrastructure and the methods used for the safe waste –solid and liquid- treatment and disposal. Adequacy relates to the capacity of the existing infrastructure to handle the waste generated and the right method of treatment.

For waste and wastewater production, what is important to measure is the existence of sustainable patterns rather than the amount of waste produced per se. The low consumption patterns (increased efficiency, new technologies, responsible behavior) –adopted by both the industry and tourists-, as well as, recycling are indicators of responsible management and responsible tourists. They both lead to resources savings and a decrease in the cost –natural and in economic terms- of managing large amounts of waste. In case of existence of such methods the amount of waste per tourist can be used to indicate the effect.

The indicators proposed are as follows:

- % of materials which can be recycled and receive this kind of treatment,
- % of water recycled,
- Number of hotels, restaurants and other places offering tourist services which have enacted environmental sound systems for eliminating over-consumption of resources and waste generation as a percentage of all establishments,
- Readily available information for tourists and the industry in general for the adoption of low-consumption patterns,
- Solid/liquid waste generated per tourist,
- % generated solid waste treated with the landfill method,

- % generated solid waste in dump,
- % of wastewater receiving treatment

3. Maintaining diversity

Diversity is a multifaceted aspect and includes biodiversity, socio-cultural diversity as well as, diversity in terms of products and recreations offered to the tourists. The latter is discussed in the next section.

Biodiversity is important but possible loss should be compared to that caused by other activities. Since some kind of development is decided there will be some loss in different fields, unless an area is left unspoiled and without intensive activities around. For developed resorts it is practically impossible to measure changes in biodiversity as a result of tourism since data on the conditions that existed before development are in most cases not available.

Maintaining diversity is mostly a consideration at the regional level. Biodiversity is apparent and common in a larger area, while the impacts on biodiversity are spread out on a broader spatial scale. However, the indicators could be used on a local scale too in order to have a measure of this parameter. Moreover, when the scale of application is not limited in the tourist area itself but on the broader area where local activity is taking place, is a wishing component that diversity indicators are included.

Proposed indicators for the regional level:

- Number of special interest sites (natural, cultural) under protection Vs to those without any protection,
- Existence of legislation for species protection,
- Number of endangered/threatened species on the region,
- Monitoring of the number (e.g. ratio of species disappearance and/or Vs to the present numbers) and the patterns of species,
- Monitoring of the mobility patterns of the fauna

4. Integrating tourism into planning and Marketing tourism responsibly

Effective planning along with its marketing dimension and the focus on diversification needed can be used to rejuvenate and give a more sustainable future on the tourism product offered, the environment and the development in general.

To determine indicators for planning we look on the three dimensions of planning in tourism, planning in the traditional sense, marketing and providing a diversified product for the tourists. Indicators for traditional planning include the existence of:

- Master plan for the development of the area/resort,
- Established procedures to monitor continuously the progress of tourism development,
- EIA procedures for analyzing the impact of new developments

Marketing is actually part of the planning process whose goals and objectives can be established locally, regionally or nationally. The way an area is marketed can influence perceptions, expectations and attitudes of the tourists before and after they reach their destination. With a responsible marketing, resort could be able to attract responsible tourists who fit the goals and objectives established for the area.

Diversification is related to sector's sustainability, as well as economic, socio-cultural and ecological sustainability. Diversification should be examined in terms of:

- a) Who brings the tourists,
- b) The seasonality of tourism,
- c) The product offered,

Mass tourism -the predominant form of tourism in most Mediterranean resorts- and its reliance on few tour-operators may lead to an oligopoly which can limit substantially the profits for the host area and is not easy to be controlled locally or nationally. The number of different ways of distribution of the tourist product and the existence of local network of distribution are two proposed indicators.

Seasonal diversification is an important aspect as well. The pressures caused on the environment because of the high tourist numbers in a limited time period and the seasonal and non-career character of the jobs offered, are important considerations. On the other hand, the "winter" pause could be considered as

positive since locals could have some time to strengthen their family and social bonds while ecosystems could also take a period of “rest”.

The need for diversification of the tourism product in order to restructure development appears to be essential. The new consumer culture with the increasing awareness about environmental quality, make apparent the need for new alternatives to be promoted in areas which have developed a massive and undiversified product so far.

Proposed indicators:

- Tourists perception for the place they are visiting,
- Number of different products/activities supplied locally (historic-cultural tourism, sports based, conference, explorative tourism etc as well as recreational opportunities),
- Number of visitors and (and No of groups) in other than 3S places/activities comparing to total number of visitors,
- % of hotels (or beds) operating during winter,
- Ratio of activities available in off season period to activities offered at peak time,
- Percentage of tourists arriving with charter flights vs total arrivals,
- % of tourists having booked in three major T.O.,
- Number of tourists “moved” by independent tour operators vs those “moved” by large-scale mainstream T.O.,
- Percentage of tourists arriving with already booked accommodations vs total arrivals,

- Existence of legislation or zoning regulations determining the land use and the impregnated tourist areas,

5. Supporting local economies

In many areas in both developed and developing countries tourism has become the last 20 years one of the most significant economic activities. Employment growth and income generation are the two key economic benefits gained from tourism. Tourism is a labor-intensive sector that has direct, indirect and induced benefits on local incomes. On the other hand, tourism is an activity that may necessitate large amounts of investment, which usually are not available locally and have to be procured from abroad or other parts of the country. As a result, it is possible to have excessive expropriation of profits from the business interests that invested and gradual loss of control over local economic activities (Richards, 1996).

Employment and income generation for local people, compared to similar indicators for other economic sectors, is one indicator for this principle. However, when the proportion attributed to tourism is unevenly high, this could indicate a non-sustainable pattern of development.

It is common that large number of the businesses offering tourist services belong to non-locals. Also non-locals may take many of the jobs. Additionally, a large share of the expenditures made by tourists may never reach the host community. Finally, a very significant contribution of tourism to the local economy is the increased demand for the local products, agricultural, crafts, products of small artisans etc. The only way of measuring this impact is through an input-output

table that shows the interrelationships among the various sectors and the consumption patterns.

Proposed indicators:

- Employment in tourism as a percentage of total employment,
- Number of “locals” employed in tourism as a percentage of total employment in tourism,
- Revenues generated by tourism as a percentage of total revenues generated in the area,
- Business establishments offering tourist services and owned by locals as a percentage of all business establishments,
- Income multiplier for the tourism sector as estimated in an input-output table,
- Revenues exported as a percentage of total revenues in the business establishments owned by foreigners

6. Involving local communities and Consulting stakeholders and the public

Involving local communities is examined along with the seventh principle “Consulting stakeholders and the public”, as they are actually expressions of the need for communication, information and experience exchange.

As McIntyre (1993) states, community involvement in tourism can reinforce positive impacts while mitigating negative ones, as in this way residents understand tourism, participate in its decision-making and receive benefits from it.

Involvement of the local communities on the processes and the decision-making of tourism can better ensure locals' positive attitude to tourism as well as their commitment to developmental goals –where these later exist. As Bramwell and Henry (1996) points out consultation of all stakeholders is essential if they are to work alongside each other.

Local participation is also interrelated with educational elements, such as informing local communities for the processes and the impacts of tourism. Although, in already developed resorts it is likely that the host community will have some experience, it is important that they have the right information about the needs for the long-term impacts and the long-term viability of the industry.

Proposed indicators:

- Existence of educational/informational programs for the public,
- Number of local meetings to discuss issues before policies are implemented,
- Availability of procedures for public and stakeholders involved to suggest changes in policies,
- Public-private partnerships/investments

7. Training staff

Training and continuous education is important for the improvement of the tourism product offered. This later is important in its turn, for developed areas facing some stagnation or decline in their product.

There is a need for continuous training in every type of job related to tourism, from cooks to higher managers. Better quality, greater productivity, increased effectiveness, introduction of new technologies and environmental extensions should be some of the subjects to be worked on.

The training element is better reflected at the regional level or even more at a national level. Indicators, such as availability of vocational courses offered on tourism services, are more meaningful when measured regionally. It is not expected that each resort will organize courses while it is expected that in a broader area courses will be available for people from around the region. Therefore this principle is better examined in a regional scale. However, in order to have some kind of indication for the training element the indicators of a broader region could be used indicatively of the situation.

An indicator for the local scale is:

- Number of short-term courses realized locally concerning tourism

However it is better reflected in a broader scale. Proposed indicators for this are:

- Attendance in short term courses per 1000 employees,
- % of employees that are graduates of tourist schools,
- Initiatives by the public sector and/or the industry for training,
- Availability of short-term courses per 1000 tourists,
- Diversity of courses offered,
- Graduates of tourist schools per 1000 tourists

8. Undertaking research

“Governments, industry, authorities, and tourism-related NGOs should promote and participate in the creation of open networks for research, dissemination of information and transfer of appropriate knowledge on tourism and environmentally sustainable tourism technologies” (W.T.O. & U.N.E.P., 1998)

Tourism is similar to other economic sectors in that on-going research and monitoring using effective data collection and analysis techniques is essential to help solve problems, create new products, make efficient use of the resources, better implement sustainable development in practice.

Several issues of tourism and sustainability research are common in more than one resort. Furthermore, there are many implications that cross the narrow local boundaries and expand in a broader area. Therefore, it is expected that research will likely take place in a regional scale –or even more in a national scale. However, the following indicators could be used at the local level as well in order to reflect the local commitment to sustainable development principles.

Proposed indicators:

- Number of surveys made concerning tourist preferences and perceptions,
- Number of surveys made concerning locals perceptions for tourism,
- Number of research studies on the profitability of the industry / number of research studies on the impacts of tourism,
- Conferences and other activities attracting interest in tourism research organized locally

IV. Conclusions

This research was an effort to propose indicators for sustainable tourism in already developed resorts in the Mediterranean Basin. Sustainable tourism is an integral part of overall sustainable development. In order to stay close to the vision and goals of sustainable development the methodology for the extraction of the indicators was based on the principles of sustainable tourism. As it is illustrated in the Bellagio Principles (1996) for sustainable development *“Assessment of progress towards sustainable development should be based on an explicit set of categories or an organizing framework that links vision and goals to indicators and assessment criteria”*.

The indicators proposed here aim at offering a tool for evaluating the tourism development and the practices used so far in existing destinations linking tourism industry to the economic, environmental and socio-cultural context of a resort or a region. Although some characteristics of the Mediterranean tourist destinations were taken into consideration, it is apparent that some site specific indicators – related to the special characteristics and needs of each resort- may be added to the list.

Data availability is an important issue in most Mediterranean countries especially when talking about existing destinations, since in most cases, no early monitoring of some aspects and variables took place. Therefore, it is difficult to compare the pre- and after- tourism situation, simply because no data are collected for the

existing conditions before the tourism development. Nevertheless, data availability induced in some way the definition of indicators without however restricting it. Moreover, in order to overwhelm this problem emphasis was placed on the sustainable management practices adopted so far

It may still prove to be difficult to estimate some of them but as it stated in the Hart Environmental Data (1999) *“if you define a list of indicators and find that the data is readily available for every one of them, you have not thought hard enough about sustainability. Try to define the best indicators and only settle for less as an interim step while developing data sources for the better indicators”*.

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