Indicators for sustainable tourism development: crossing the divide from definitions to actions

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Abstract

Once the Brundtland Report on sustainable development was published in 1987, and "sustainable tourism" was accepted into the lexicon of tourism discourse, a substantial amount of so-called "sustainable tourism development planning" has occurred in a number of destinations. The use of indicators to monitor development and maintain sustainability were included in these plans, but rarely operationalized effectively. This problem was the result of a lack of agreement over what, exactly, "sustainable tourism development" means, and the resulting confusion over creating indicators for an undefined concept [1, 4, 13, 14, 18]. The purpose of this paper is to examine the current state of research in sustainable tourism development as it pertains to these indicators that point toward the sustainability of a destination. A substantial amount of literature exists regarding the problems involved in operationalizing the concepts of sustainable development and sustainable tourism [4, 2, 6, 15]. There is, however, evidence suggesting a positive movement toward not only an operational definition of sustainable tourism development, but feasible indicators as well. Several indicator frameworks have been developed by tourism researchers, some based on existing frameworks, such as the Limits of Acceptable Change [1], while others have been constructed according to the site-specific needs of a destination [18]. Research on indicators for sustainable tourism development can help tourism managers translate destination needs (areas in need of rehabilitation, protection, etc) into management actions. This paper will explore these differing indicators for sustainable tourism development, how managers and tourism developers can use these indicators to reach their sustainability goals, and determine the "next step" in the process of achieving sustainable tourism.
Keywords: sustainable tourism development, indicators.



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1 Introduction

Since the Bruntdland Report on sustainable development was published in 1987, and the concept of "sustainable tourism" was subsequently accepted into the lexicon of tourism dialogue, destinations and tour operators have hailed their movement toward sustainable plans for the future. Sustainable tourism has joined terms such as 'ecotourism,' 'nature-based tourism,' and 'alternative tourism' as an environmentally-friendly, culturally-friendly, and economically competitive alternative to mass tourism. Over the past decade, a substantial amount of so-called "sustainable tourism development planning" has occurred in a number of destinations. As these plans were penned, ideas of using *indicators* to monitor development and maintain sustainability were included, but rarely operationalized effectively. This problem was the result of a lack of agreement over what, exactly, "sustainable tourism development" means, and the resulting confusion over creating indicators for an undefined concept [1, 4, 13, 14, 18]. The purpose of this paper is to examine the current state of research in sustainable tourism development as it pertains to these indicators that point toward the sustainability of a destination.

2 Sustainable development and tourism

Sustainable development became a catch phrase among conservationists, environmentalists, and community developers as a concept that would, at its heart, allow us to "have our cake and eat it, too" [21]. Ideally, development would occur in such a way that "meets the needs of the present without compromising the ability of future generations to meet their own needs" [20]. According to Swarbrooke [17], sustainable development "was based on the idea that economic growth had to take place in a more ecologically sound and socially equitable manner." Hardy and Beeton [9] claim that sustainable development's origins are found in the convergence of economic development theory and environmentalism. As the concept evolved, there was a realization that sustainable development can be thought of as existing along a spectrum, from very weak to very strong, rather than as a rigid framework [10, 12]. While this evolution of thought on sustainable development has influenced the concept of sustainable tourism, researchers in the tourism field have been theorizing on the potential impacts of tourism on the environment and on host societies for decades [17]. It was not until 1997, when Agenda 21 saw its five-year review with the United Nations that the term "sustainable tourism" saw wider usage as a descriptive term for tourism that adhered to the principles of sustainable development [5, 19]. The two concepts appeared to fit well together, and the subsequent popularity of "sustainable tourism" followed closely behind that of "sustainable development."

Recently, authors in the tourism field have started to point out some fairly significant problems concerning the operational definitions of sustainable development and sustainable tourism. The concept of sustainability is criticized by many as vague and confusing. Berke and Conroy [2] conducted a comparative



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study of communities who actively use "sustainability" language in their strategic plans (using terms such as equity, equality, environmental protection, etc), and communities who do not include "sustainability" language. They found no significant differences over time between them. Cohen [6] points to certain dangers involved in the vagueness of the definitions of sustainable development and sustainable tourism. He contends that the imprecision of the term lends to its misuse by tourism entrepreneurs. This concern is echoed by Sirakaya et al. [15], who worry that the negative impacts of so-called sustainable tourism "seem to indicate business-as-usual, confirming the concerns raised by some tourism scholars." A second concern of Cohen's is that "the concept of sustainable tourism is frequently couched in apparently neutral, technical language of planning and management" [6]. Butler claims that a rigid look at the terms "sustainable" and "tourism" results in a relatively obvious definition: "tourism which is in a form which can maintain its viability for an indefinite period of time" [4].

Without a clear definition or conceptualization of sustainable tourism, there is only confusion regarding how to monitor the success of instituting a plan for sustainable tourism development [4, 14, 18]. Monitoring, according to Twining-Ward and Butler is:

> "…crucial to all sustainable development strategies as it provides the opportunity to assess the effectiveness of policies and actions, identifies the most successful and appropriate ones, and draws attention to most successful and appropriate ones, and draws attention to problem areas so that appropriate management responses are activated."

In a similar tone, Butler [4] claims that an absence of indicators (for residential impact, environmental quality, etc) renders the term "sustainability" meaningless. The question of "what is sustainability" is accompanied by questions of "what should tourism sustain" and "how do we measure sustainability." McCool et al. [14] in a 2001 study of tourism industry perceptions of indicators, found that there is wide-ranging inconsistency in the industry regarding what should be sustained, and even more of a "disconnect between preferences for what should be sustained by tourism and indicators that might measure progress toward this goal."

A standard, widely agreed upon definition of sustainability as it pertains to tourism may be unattainable for the time being. Hunter [12] reasoned that the concept of sustainability "is malleable and can be shaped to fit a spectrum of world views." He contends that this is not a disadvantage. While our definitions of sustainability may be broad and dynamic, a measurement of local definitions for the concept of sustainable tourism can be site specific and operationalized.

3 Indicators for sustainable tourism development

While the previous sections outline a somewhat pessimistic outlook in the literature regarding the success of sustainable tourism development, there is also

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evidence of hope regarding indicators of sustainability. Several studies suggest a movement toward not only finding operational definitions of sustainable tourism development, but feasible indicators as well. This section will explore current research being conducted in formulating indicators for sustainable tourism development, and provide examples of these efforts.

Some preliminary attempts at planning and monitoring sustainable tourism development were devised from concepts derived specifically for sustainable development. The Bellagio Principles – a set of sustainable development principles developed by the Rockefeller Foundation in 1996 – deal with four primary aspects of assessing progress toward sustainable development: enumerating clear goals for sustainability and practical definitions of those terms; merging a sense of an overarching system with specific, small scale issues; assessment of processes; and monitoring [8]. Other criteria for indicators were penned specifically for sustainable tourism development (see Table 1).

Table 1: Conditions for an ideal indicator [7,11].

- Be easy to identify and measure.
- Be functionally important in the ecosystem.
- Have a high imputed value.
- Be relatively sedentary.
- Have modest technological requirements.
- Be sensitive to the stress in question.
- Have mechanisms whose response should be understood.
- Be quick to respond.
- Be low in ambiguity.

A recent study conducted by Twining-Ward and Butler [18] utilizes the Bellagio Principles in an examination of the implementation of sustainable tourism development in the island nation of Samoa. The authors broke the process of indicator creation into one of first determining development themes, then objectives within each theme, followed by sub-objectives, and finally one or more indicators for each sub-objective. They derived 10 technical criteria from the literature (relevant, reliable, feasible, stable, trend, scope, historical, secondary, participatory, and simple) to screen indicators for their technical feasibility. If an indicator passed this process, it was screened additionally by an expert panel for relevancy. An example of this process is included in Table 2.

Following this process of indicator selection, study participants (expert panel and stakeholder groups) selected acceptable ranges for change in a process analogous to that of the Limits of Acceptable Change framework [16]. However, the authors applied the LAC process to this tourism setting in a manner similar to that used by Ahn, Lee, and Shafer [1]. Indicators were then taken into the field and used to measure current conditions against preferred conditions. The most critical step of the monitoring process, according to the authors, is "to establish a system whereby indicator results can actually be converted into management action." The monitoring process for Samoa resulted

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in 10 “priority areas” for action that required attention from tourism managers. A status report was another result of the process, and this document is being actively utilized, according to the authors, by the Samoan government to monitor tourism and determine management strategies.

Table 2: Example of technical screening table [18].

Theme	***Environment***				
OBJECTIVE	Encourage the sustainable management of land and in particular forest resources.				
Sub-objectives	Encourage the participation of village communities in conservation programs.		Promote the careful use of tourism as an income generating activity for conservation areas and other natural areas under protection.		
Indicator	Number of villages participating in land and forest conservation programs.	Amount of forest listed as ‘critical’ that is protected by law.	Proportion of protected areas gaining income from tourism.	Number of ecotourism activities in conser-vation areas.	Tourist visits to conserv-ation areas.
Criteria					
1. Relevant	✓	✓	✓	✓	✓
2. Reliable	✓	✓	✓	×	✓
3. Feasible	✓	✓	✓	✓	✓
4. Stable	✓	✓	×	✓	✓
5. Trend	✓	✓	✓	✓	✓
6. Scope	✓	✓	✓	✓	✓
7. RESULT	PASS	PASS	FAIL	FAIL	PASS
8. Historical	✓	✓			×
9. Secondary	✓	✓			✓
10. Participatory	✓	✓			✓
11. Simple	✓	✓			✓
TOTAL SCORE	4	3			3
RESULT	PASS	PASS			PASS

This study brought together a panel of experts (in ecology, visitor impacts, tourism management, etc), stakeholders, and the Samoan government to devise monitoring strategies based on site-specific indicators for tourism development. This process resulted in a status report on tourism in Samoa, as well as a set of guidelines for monitoring and management. This research can aid in the process of translating special needs (areas in need of rehabilitation, protection, development, etc.) into management actions. While the concept of sustainability may be difficult to translate into an operational definition, a broad definition of the term coupled with site-specific indicators may enable some sort of long-term, sustainable tourism product.

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