Case study

Development of ecotourism sustainability assessment framework employing Delphi, C&I and participatory methods: A case study of KBR, West Sikkim, India

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Abstract

This paper proposes an assessment of “Ecotourism Sustainability” at an operational level utilizing Principles-Criteria-Indicators-Verifiers, common in forest and tourism sustainability evaluation. Initially criteria were identified based on a literature review. This was followed by a Delphi Study and Participatory Workshops in Sikkim, India. Finally expert opinions were elicited. 4 principles, 8 criteria, 58 indicators and their corresponding 58 verifiers were established and measures of agreement calculated across different prior stages. From these a framework of analysis for assessing sustainability at an operational level in ecotourism was then established.

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Criteria and indicator
Ecotourism sustainability
Delphi method
Participatory method
Consensus score
Chi-square “goodness-of-fit” test

1. Introduction

Ecotourism is responsible travel to natural areas which conserves the environment and improves the welfare of the local people. Based on sustainability principle, it primarily focuses on experiencing and learning about nature, is ethically managed, non-consumptive, locally oriented and contributes to conservation and preservation of such areas (Fennel, 1999; Page & Dowling, 2002; Newsome, Moore, & Dowling, 2002).

Ecotourism’s potential to conserve biodiversity, act as a driver for jobs creation for the indigenous people and local communities and promote local culture and products, in areas with high ecotourism potential is mentioned in the documents of—Millennium Development Goals ‘MDG’ (now extended to The 2030 Agenda for Sustainable Development), the Convention on Biodiversity (CBD, 1992), the Rio + 20 summit, 2012 (UNEP, 2012); they all identified ecotourism as a strategy to foster sustainable development in protected areas and their surroundings.

UNEP envisioned that ecotourism can support the three goals of CBD, then Rio + 20 summit propagated ecotourism as one of the prominent economic activities which can contribute towards converting the present ‘Brown Economy’ to ‘Green Economy’ (Ashok & Ashok, 2012; UNEP, 2002, 2011). This concept of Green Economy advocated attaching the economic value to our natural capital. The MDG and now the 15th agenda of “The 2030 Agenda for Sustainable Development” of UN has adopted Protection and Restoration of Ecosystems to promote sustainable use of terrestrial ecosystems, forests, combat desertification, halt degradation/biodiversity loss, for all these prophecies Ecotourism is an important tool and can play a significant role (UNDESA, 2015; UNDP, 2015).

Thus we see that ecotourism evolves from the concept of Sustainability with fostering sustainability through resource conservation, cultural revival, economic development and diversification being its primary goal. Tracing its history, we can infer that Ecotourism is a product of three phenomena:

• The Concept of Sustainability (WCED, Brundtland Report, 1987), which discusses natural habitat conservation and its development in such a
manner which can help it support itself.

- The Knowledge Based Platform proposed by Jafari (Weaver, 2001) which applies a more judicious approach to develop tourism, where the assessment of tourism products does not depend on the scale but on the effectiveness of the management practices at destination level (Backman, Petrick, & Wright, 2001; Boyd & Butler, 1996)

Above discussion suggests that, theoretically, ecotourism can contribute towards achieving Sustainable Development from Local to Regional and National to Global level as it falls within the larger concept of Sustainable Tourism.

1.1. Issues of ecotourism sustainability

Discussed above are ecotourism’s positive impacts wherein its negative impact is on - Environment, Socio-Economic and Cultural fabric of the Society, as witnessed in many ecotourism destinations. To name a few: Annapurna Area—Nepal (Mehta, 2000), Himalayan treks and trails (ENVIS, 2002), Nanda Devi Biosphere Reserve—India (Bosak, 2004), Amboseli National Park—Kenya (Cater, 1994), Lijiang County—China (Jiang, 2009), Masai Mara—East Africa and Bandi National Park—Canada (Newsome et al., 2002) etc. Adverse impacts are clearly visible in the form of trail proliferation, trail erosion and widening, disturbance to wildlife, damage to vegetation cover, soil and root exposure, spread of litter at recreation sites, pollution of water sources and also the occurrence of landslides (Sirakaya, Jamal, & Choi, 2001) at these destinations. These have a profound impact on the sustainability of resources, pressurizing environment and livelihood of the local communities (Newsome et al., 2002).

Additionally, a new phenomenon namely ‘Greenwashing’ is emerging which, basically is, an insincere promotion of ecotourism wherein the people involved, portray themselves as true promoters of environmental conservation. But on the contrary, they happen to use ‘ecotourism’ only as a new selling angle to maximize their profits (Self, Self, & Bell-Haynes, 2010). This has been witnessed mostly in prime ecotourism destinations viz. Costa Rica (Courvisanos and Jain (2006) Malaysia (Kau, 2007), The Galapagos Islands (Self et al., 2010), Kenya (Johnstone, 1999) etc.

Analysis of the adverse impacts of ecotourism and Greenwashing indicate that these arise due to non-adherence of ecotourism principles at the operational level, wherein Greenwashing is a misuse where principles and standards are intentionally not followed. Many studies carried out suggest that ecotourism activities based on sustainability principles only can solve these problems (Blamey, 1995, 2001; CDT, 1994; Newsome et al., 2002; Page & Dowling, 2002). Fundamental principles of ecotourism direct that it:

- should be nature-based.
- should be ecologically-sustainable.
- should be environmentally educative.
- should be economically beneficial to the local community.
- should offer optimum satisfaction to the tourists.

These principles advocate that environmental safeguard should be mandatory for achieving sustainability of ecotourism destinations (Buchsbaum, 2004; Hunter and Green, 1995; Villiers, 2001).

1.2. Research questions

Ecotourism not only conserves the environment, it actually provides for its betterment and through its revenue generation ability, helps in economic development and cultural revival as well. But all these are only possible when we judiciously plan ecotourism to be self-sustainable and properly implementable at the operational level. These call for development of such a practical methodology which can help evaluate ecotourism sustainability, its impacts or concerns under practical conditions and promote sustainable management of such activities in the future (Ross & Wall, 1999). Although some tourism academics measure sustainability at specific tourist destinations on the basis of their subjective judgments, while some others tried to develop Sustainability Assessment Procedure on the conceptual level for tourism destinations (Ko, 2005) but there is no study which can objectively guide Sustainability Assessment of Ecotourism at destinations.

This is where the present study fills the gap by addressing questions arising after the Ecotourism Summit 2002, namely: How can the progress towards sustainable ecotourism development be measured? How to link the Ecotourism Sustainability Principles to assess its sustainability performance at a practical level? Who can provide solution to ‘where to stop’ issue in ecotourism development (Popova, 2003; Zografas & Ogletree, 2004). Who can impose the restriction on the use level of natural resources, an outsider or the local people? etc.

This paper intends to develop an Ecotourism Sustainability Assessment Framework, based on scientific approaches, to measure the level of sustainability and its application in Forestry, Tourism and Ecotourism sectors, as discussed below.

1.3. Approaches to assess sustainability in the field of ecotourism, tourism and forest: a literature review

There are several approaches, methods and tools for assessment of progress towards Sustainability, as—Participatory and Reflective Analytical Mapping; Assessing Rural Sustainability; Planning Action for Rural Sustainability; Barometer of Sustainability etc. (IDRC, 2000; IUCN, 1997).

Among them, use of Criteria and Indicators (C&I) has been recommended and used by many National, International organizations like LIN, ISD, IUCN etc. for Sustainable Development in general, as well as Sustainability of Forestry and Tourism activities (Choi and Sirakaya, 2006).

1.3.1. Assessing sustainable development

The development of the Barometer of Sustainability by Robert Prescott-Allen using C&I in 2001 was a landmark study in the field of Sustainability Assessment in general. He developed the Well-Being Index of Nations, which assesses the sustainability of nations using 75 indicators with respect to humans as well as ecosystem well-being and it is considered the best method to assess sustainability (Prescott-Allen, 2001; Urbel, 2003). United Nations Commission on Sustainable Development (UNCSD) has released 96 indicators of Sustainable Development, which serve as reference for countries to develop or revise national indicators of sustainable development (DESA, 2007). IUCN and ISD with their collaborative partners have developed many sets of C&I for the assessment of sustainability like for Sustainable Tourism Development (STD) and Sustainable Forest Management (SFM) etc.

1.3.2. Sustainable tourism development (STD)

STD takes into consideration, quality of life for host communities, visitor satisfaction and conservative use of natural and social resources. In this regard, UNWTO has developed a set of indicators to assist local managers and decision makers to work effectively with ecotourism. Additionally, it can monitor the overall sustainability of the destination (Page & Dowling, 2002; Sirakaya et al., 2001). World Resource Institute (WRI) has developed Pressure-State-Response Indicators for tourism management (Hammond, Adrissane, Rodenburg, Bryant, & Woodward, 1995).

1.3.3. Sustainable forest management (SFM)

C&I approach is the most popular method for assessing Forest Sustainability and widely used at National, Regional, Local and Forest Management Unit (FMU) levels (Namkoong et al., 1996; Prabhu, Colfer, & Dudley, 1999; Ritchie, McDougall, Haggith, & Oliveira, 2000; Vacik et
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